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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604768A / Brilliant Anti-Armor Submunition (BAT)							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	7.886	6.886	25.000	-	25.000	36.000	41.000	39.000	10.000	0.000	165.772
688: ATACMS BLK II	-	3.840	1.943	25.000	-	25.000	36.000	41.000	39.000	10.000	0.000	156.783
P01: MULTI - MODE SEEKER DEVELOPMENT AND TEST	-	4.046	4.943	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	8.989

A. Mission Description and Budget Item Justification

Army Tactical Missile System (ATACMS) is the United States (U.S.) Army's primary all-weather, surface-to-surface long-range artillery precision guided missile used by Combatant Commanders to shape the battlefield with long-range fires against hard & soft targets in open, complex, and urban environments.

Project P01. Multi-Mode Seeker will integrate Strategic Capabilities Office (SCO) STRIKE-X program demonstrated capabilities into ATACMS. This effort focuses on providing integration of a seeker to search, detect, acquire, and engage moving maritime/land-based targets. There is no funding in FY 2020

Project 688 is a developmental effort for the Palletized Field Artillery Launcher. Palletized Field Artillery Launcher (PFAL) is a palletized erectable, MLRS-similar, launcher capable of firing the Multiple Launched Rocket System (MLRS) Family of Munitions (MFOM), to include the Extended Range (ER) Guided Multiple Launch Rocket System (GMLRS), the Army Tactical Missile System (ATACMS), and the Precision Strike Missile (PrSM). These munitions are capable of engaging targets with precision at ranges in excess of 400 kilometers. Palletized Field Artillery Launcher provides alternatives to deliver near-term innovative long-range strike capabilities to Combatant Commanders. This effort will design, develop, and deploy a safe and effective launcher system and integrate multiple sub-systems, including an erectable palletized MLRS launcher, a Fire Control System (FCS), a communications system, and a Power Management System in a continuous user evaluation with Soldiers. In FY2020, PFAL transitions from Strategic Capability Office (SCO) to the Army. This effort was previously funded under program element 0604250D8Z as part of Project "Strike-X" (PB2019 Defense Wide RDTE BLIN 96). Project code 688 previously integrated Strategic Capabilities Office (SCO) Breaker program demonstrated capabilities into ATACMS.

Justification:

FY 2020 Base funding in the amount of \$25.000 million for Project 688 funds the development efforts to correct deficiencies found in the prototype design to obtain a safety certification which will allow for an Urgent Materiel Release. Base year funding allows for further design and development to ensure the safe and effective deployment of operational prototypes to Soldiers in a continuous user evaluation.

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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		PE 0604768A / Brilliant Anti-Armor Submunition (BAT)			
B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	10.000	9.894	9.886	-	9.886
Current President's Budget	7.886	6.886	25.000	-	25.000
Total Adjustments	-2.114	-3.008	15.114	-	15.114
• Congressional General Reductions	-0.008	-0.008			
• Congressional Directed Reductions	-	-3.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.714	-			
• SBIR/STTR Transfer	-0.392	-			
• Adjustments to Budget Years	-	-	15.114	-	15.114
Change Summary Explanation					
FY 2018: The \$2.114 million decrease in base funding is a result of a decrease of \$0.392 million for SBIR/STTR funding and decreased funding of \$1.714 million for Congressional Rescission.					
FY 2019: The \$3.326 decrease in base funding is a result of Army realignment of funds to higher priority programs.					
FY 2020: The \$15.114 million increase in base funding is a result of Army realignment of funds to higher priority programs.					

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604768A / Brilliant Anti-Armor Submunition (BAT)				Project (Number/Name) 688 / ATACMS BLK II			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
688: ATACMS BLK II	-	3.840	1.943	25.000	-	25.000	36.000	41.000	39.000	10.000	0.000	156.783
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note FY 2021 delivers 2 prototype launchers; FY 2022 delivers 3 prototype launchers; FY 2023 delivers 3 prototype launchers; FY 2024 delivers 2 prototype launchers.												
A. Mission Description and Budget Item Justification Project 688 is a developmental effort for the Palletized Field Artillery Launcher. Palletized Field Artillery Launcher (PFAL) is a palletized erectable, MLRS similar, launcher capable of firing the Multiple Launched Rocket System (MLRS) Family of Munitions (MFOM), to include the Extended Range (ER) Guided Multiple Launch Rocket System (GMLRS), the Army Tactical Missile System (ATACMS), and the Precision Strike Missile (PrSM). These munitions are capable of engaging targets with precision at ranges in excess of 400 kilometers. Palletized Field Artillery Launcher provides alternatives to deliver near-term innovative long-range strike capabilities to Combatant Commanders. This effort will design, develop, and deploy a safe and effective launcher system and integrate multiple sub-systems, including an erectable palletized MLRS launcher, a Fire Control System (FCS), a communications platform, and a Power Management System in a continuous user evaluation with Soldiers. In FY 2020, PFAL transitions from Strategic Capability Office (SCO) to the Army. This effort was previously funded under program element 0604250D8Z as part of Project "Strike-X" (PB2019 Defense Wide RDTE BLIN 96). Project code 688 previously integrated Strategic Capabilities Office (SCO) Breaker program demonstrated capabilities into ATACMS. Justification: FY 2020 Base funding in the amount of \$25.000 million for Project 688 funds the development efforts to correct deficiencies found in the prototype design to obtain a safety certification which will allow for an Urgent Materiel Release. Base year funding allows for further design and development to ensure the safe and effective deployment of operational prototypes to Soldiers in a continuous user evaluation.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: Transition of SCO demonstrated capabilities to defeat armored targets									3.840	1.784	-	
Description: Conduct warhead component requirements development, system integration analysis, and transition planning targeted at rapid qualification and fielding of the armor engagement capability.												
FY 2019 Plans: Continue system analysis & evaluation, requirements & specification development, and program transition activities.												
FY 2019 to FY 2020 Increase/Decrease Statement: Transition of SCO demonstrated capabilities to defeat armored targets activities completing in FY 2019.												
Title: Palletized Field Artillery Launcher (PFAL)									-	-	25.000	

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604768A / Brilliant Anti-Armor Submunition (BAT)	Project (Number/Name) 688 / ATACMS BLK II		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
<p>Description: The Palletized Field Artillery Launcher (PFAL) Program provides a palletized erectable launcher capable of firing the Multiple Launched Rocket System (MLRS) Family of Munitions (MFOM). This effort will design, develop, and demonstrate this launcher system and integrate multiple sub-systems with intent to develop and deploy prototypes in a continuous user evaluation with Soldiers.</p> <p>FY 2020 Plans: FY 2020 is the first year of funding for Palletized Field Artillery Launcher under this Project code. Conduct analysis and redesign to demonstrate safe and effective design, development, and deployment of prototypes with Soldiers as part of a continuous user evaluation. This effort?s funding will be executed by Program Executive Officer for Missiles and Space.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: Increased funding of \$25.000 million funds transition of Palletized Field Artillery Launcher from Strategic Capabilities Office to the Army and continues the research and prototype development of Palletized Field Artillery Launcher. This effort was previously funded under program element 0604250D8Z as part of Project ?Strike-X? (PB2019 Defense Wide RDTE BLIN 96).</p>				
<p>Title: FY 2019 SBIR / STTR Transfer</p> <p>Description: FY 2019 SBIR / STTR Transfer</p> <p>FY 2019 Plans: FY 2019 SBIR / STTR Transfer</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: Decrease due to FY 2019 SBIR / STTR Transfer.</p>		-	0.159	-
Accomplishments/Planned Programs Subtotals		3.840	1.943	25.000
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
There are no procurement lines for this program.This effort was previously funded under program element 0604250D8Z as part of project "Strike-X" (PB2019 Defense-Wide RDTE BLIN 96).				
D. Acquisition Strategy				
The Palletized Field Artillery Launcher (PFAL) Program transitions from a Strategic Capabilities Office managed effort to management by the Army's Field Artillery Launcher program office. The PFAL Program performs development efforts required to address emerging requirements. Emerging requirements include, but are not limited to, updates that address emerging threats of PFAL's organic version software, reacting to system changes driven by policy and emerging requirements, and				

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604768A / <i>Brilliant Anti-Armor Submunition (BAT)</i>	Project (Number/Name) 688 / <i>ATACMS BLK II</i>
maintaining architectural compatibility. Conduct analysis and redesign to demonstrate safe and effective design, development, and deployment of prototypes in a continuous evaluation with Soldiers. Update software and hardware for communications and munitions to maintain compatibility and operational viability against a near-peer adversary.		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army												Date: March 2019			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604768A / Brilliant Anti-Armor Submunition (BAT)				Project (Number/Name) 688 / ATACMS BLK II					
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Program Management	MIPR	Various : RSA	-	0.900	Nov 2017	0.947	Nov 2018	-		-		-	0.000	1.847	-
Subtotal			-	0.900		0.947		-		-		-	0.000	1.847	N/A
Remarks															
FY2020 and beyond program management costs are funded in the Operations and Maintenance, Army (OMA) appropriation.															
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Warhead Development	C/CPFF	LMMFC : Dallas, TX	-	2.100	Jan 2018	0.200	Jan 2019	-		-		-	0.000	2.300	-
System Analysis, Requirement & Spec Dev	MIPR	AMRDEC : RSA	-	0.840	Nov 2017	0.637	Nov 2018	-		-		-	0.000	1.477	-
Palletized Field Artillery Launcher Development Engineering	MIPR	AMRDEC : Redstone Arsenal	-	-		-		25.000	Jan 2020	-		25.000	126.000	151.000	-
FY 2019 SBIR / STTR Transfer	TBD	TBD : TBD	-	-		0.159		-		-		-	0.000	0.159	-
Subtotal			-	2.940		0.996		25.000		-		25.000	126.000	154.936	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	3.840		1.943		25.000		-		25.000	126.000	156.783	N/A
Remarks															
Acronyms: RSA - Redstone Arsenal, Alabama; AMRDEC - Aviation and Missile Research, Development and Engineering Command; LMMFC - Lockheed Martin Missiles and Fire Control															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army			Date: March 2019		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604768A / Brilliant Anti-Armor Submunition (BAT)		Project (Number/Name) 688 / ATACMS BLK II	

Event Name	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Analysis, Requirement & Spec Development																												
Warhead Development																												
Contract Requirements Package Development																												
Palletized Field Artillery Launcher Development Engineering																												
Flight Tests																												
Prototype Production																												
Prototype Fielding																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army			Date: March 2019
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604768A / <i>Brilliant Anti-Armor Submunition (BAT)</i>	Project (Number/Name) 688 / <i>ATACMS BLK II</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Analysis, Requirement & Spec Development	1	2018	4	2019
Warhead Development	1	2019	4	2019
Contract Requirements Package Development	1	2018	4	2019
Palletized Field Artillery Launcher Development Engineering	1	2020	4	2024
Flight Tests	3	2020	3	2021
Prototype Production	1	2021	4	2023
Prototype Fielding	1	2022	4	2024

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604768A / Brilliant Anti-Armor Submunition (BAT)				Project (Number/Name) P01 / MULTI - MODE SEEKER DEVELOPMENT AND TEST			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
P01: MULTI - MODE SEEKER DEVELOPMENT AND TEST	-	4.046	4.943	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	8.989
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Multi-Mode Seeker will integrate Strategic Capabilities Office (SCO) STRIKE-X program demonstrated capabilities into ATACMS. This effort focuses on providing integration of a seeker to search, detect, acquire, and engage moving maritime/land-based targets.												
There is no funding in FY 2020.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: Transition of SCO demonstrated capabilities to defeat maritime targets									4.046	4.784	-	
Description: Conduct seeker component requirements development, system integration analysis, and transition planning targeted at rapid qualification and fielding of the maritime engagement capability.												
FY 2019 Plans: Continue system analysis & evaluation, requirements & specification development, Sensor Development, System Integration, and program transition activities.												
FY 2019 to FY 2020 Increase/Decrease Statement: FY 2019 is the last year of funding.												
Title: FY 2019 SBIR / STTR Transfer									-	0.159	-	
Description: FY 2019 SBIR / STTR Transfer												
FY 2019 Plans: FY 2019 SBIR / STTR Transfer												
FY 2019 to FY 2020 Increase/Decrease Statement: FY 2019 is the last year of funding.												
Accomplishments/Planned Programs Subtotals									4.046	4.943	-	
C. Other Program Funding Summary (\$ in Millions)												
N/A												

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604768A / <i>Brilliant Anti-Armor Submunition (BAT)</i>	Project (Number/Name) P01 / <i>MULTI - MODE SEEKER DEVELOPMENT AND TEST</i>
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy Accelerate the transition of Strategic Capabilities Office (SCO) STRIKE-X program demonstrated capabilities into ATACMS.		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army													Date: March 2019		
Appropriation/Budget Activity 2040 / 5							R-1 Program Element (Number/Name) PE 0604768A / <i>Brilliant Anti-Armor Submunition (BAT)</i>				Project (Number/Name) P01 / <i>MULTI - MODE SEEKER DEVELOPMENT AND TEST</i>				

Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Program Management	MIPR	Various : RSA	-	0.900	Nov 2017	0.947	Nov 2018	-		-		-	0.000	1.847	-
Subtotal			-	0.900		0.947		-		-		-	0.000	1.847	N/A

Remarks
RSA-Redstone Arsenal, Alabama

Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Seeker Development	C/CPFF	Various : Various	-	0.900	Jan 2018	1.500	Jan 2019	-		-		-	0.000	2.400	-
System Analysis, Requirement & Spec Dev	MIPR	AMRDEC : RSA	-	1.123	Jan 2018	1.337	Jan 2019	-		-		-	0.000	2.460	-
FY 2019 SBIR / STTR Transfer	TBD	TBD : TBD	-	-		0.159		-		-		-	0.000	0.159	-
Subtotal			-	2.023		2.996		-		-		-	0.000	5.019	N/A

Remarks
AMRDEC-U.S. Army Research, Development and Engineering Command; RSA-Redstone Arsenal, Alabama

Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support Hardware	MIPR	Redstone Test Center : RSA	-	1.123	Nov 2017	1.000	Nov 2018	-		-		-	0.000	2.123	-
Subtotal			-	1.123		1.000		-		-		-	0.000	2.123	N/A

Remarks
RSA-Redstone Arsenal, Alabama

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army										Date: March 2019			
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604768A / <i>Brilliant Anti-Armor Submunition (BAT)</i>					Project (Number/Name) P01 / <i>MULTI - MODE SEEKER DEVELOPMENT AND TEST</i>			
	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	4.046		4.943		-		-		-	0.000	8.989	N/A
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army

Date: March 2019

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2040 / 5

R-1 Program Element (Number/Name)

PE 0604768A / Brilliant Anti-Armor

Submunition (BAT)

Project (Number/Name)	Start Date	End Date	Duration (Days)	Project Manager	Status	Notes
101	2023-01-01	2023-01-15	14	John Doe	Completed	Project completed successfully.
102	2023-01-16	2023-02-01	16	Jane Smith	In Progress	Project is currently in progress.
103	2023-02-02	2023-02-15	13	John Doe	Completed	Project completed successfully.
104	2023-02-16	2023-03-01	15	Jane Smith	In Progress	Project is currently in progress.
105	2023-03-02	2023-03-15	13	John Doe	Completed	Project completed successfully.
106	2023-03-16	2023-03-31	15	Jane Smith	In Progress	Project is currently in progress.
107	2023-04-01	2023-04-15	14	John Doe	Completed	Project completed successfully.
108	2023-04-16	2023-05-01	15	Jane Smith	In Progress	Project is currently in progress.
109	2023-05-02	2023-05-15	13	John Doe	Completed	Project completed successfully.
110	2023-05-16	2023-05-31	15	Jane Smith	In Progress	Project is currently in progress.

P01 / MULTI - MODE SEEKER

DEVELOPMENT AND TEST

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604768A / Brilliant Anti-Armor Submunition (BAT)	Project (Number/Name) P01 / MULTI - MODE SEEKER DEVELOPMENT AND TEST

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Analysis, Requirement & Spec Development	1	2018	1	2019
Sensor Study & Analysis	2	2018	4	2018