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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2019 Air Force											<b>Date:</b> February 2018	
<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 5: System Development &amp; Demonstration (SDD)</i>					<b>R-1 Program Element (Number/Name)</b> PE 0604932F / <i>Long Range Standoff Weapon</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	26.417	102.350	451.290	614.920	0.000	614.920	722.539	475.297	359.301	396.032	1,394.375	4,542.521
657011: <i>LONG RANGE STAND-OFF</i>	26.417	102.350	451.290	614.920	0.000	614.920	722.539	475.297	359.301	396.032	1,394.375	4,542.521
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
<b>Program MDAP/MAIS Code:</b> 489												
<p><b><u>A. Mission Description and Budget Item Justification</u></b></p> <p>The Long Range Standoff (LRSO) Cruise Missile is a long range survivable standoff weapon capable of delivering lethal nuclear effect on strategic targets. LRSO will replace the currently fielded Air Launched Cruise Missile (ALCM) and will be integrated on both legacy and future bomber aircraft. The LRSO weapon system will be capable of penetrating and surviving advanced Integrated Air Defense Systems (IADS) from significant stand-off range to prosecute strategic targets in support of the Air Force's global attack capability and strategic deterrence core function.</p> <p>Funds may be used to address emerging or short-notice Diminishing Manufacturing and Material Shortage (DMSMS) issues.</p> <p>This program element may include necessary civilian pay expenses required to manage, execute, and deliver LRSO weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.</p> <p>This program is in Budget Activity 5, System Development and Demonstration (SDD), because it is conducting technology maturation and risk reduction (TMRR) development tasks aimed at meeting validated requirements prior to the engineering &amp; manufacturing phase.</p>												

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Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604932F I Long Range Standoff Weapon				
B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	
Previous President's Budget	95.604	451.290	619.547	0.000	619.547	
Current President's Budget	102.350	451.290	614.920	0.000	614.920	
Total Adjustments	6.746	0.000	-4.627	0.000	-4.627	
• Congressional General Reductions	0.000	0.000				
• Congressional Directed Reductions	0.000	0.000				
• Congressional Rescissions	0.000	0.000				
• Congressional Adds	0.000	0.000				
• Congressional Directed Transfers	0.000	0.000				
• Reprogrammings	10.000	0.000				
• SBIR/STTR Transfer	-3.254	0.000				
• Other Adjustments	0.000	0.000	-4.627	0.000	-4.627	
Change Summary Explanation						
FY17: Below Threshold Reprogrammings totaling \$10M; - \$3.254M for Small Business Innovative Research (SBIR)						
FY19: -\$4.627M inflation adjustment						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2017	FY 2018	FY 2019
Title: LRSO Materiel Solution Analysis (MSA)				31.083	0.000	0.000
Description: Conduct LRSO Weapon Milestone A and pre-TMRR activities						
FY 2018 Plans:						
Material solution analysis efforts conclude in FY17. N/A						
FY 2019 Plans:						
Material solution analysis efforts conclude in FY17. N/A						
Title: LRSO Weapon Development				40.000	352.888	560.751
Description: Conduct LRSO Weapon Development activities						
FY 2018 Plans:						
Continue Prime TMRR contracts. LRSO will continue to design, develop, integrate and test the LRSO system. System requirements reviews and functional reviews will be conducted to ensure the design adequately meets the warfighter's performance requirements in the draft Capabilities Development Document, System Requirements document, and TMRR						

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<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 5: System Development &amp; Demonstration (SDD)</i>		<b>R-1 Program Element (Number/Name)</b> PE 0604932F / <i>Long Range Standoff Weapon</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b> contracts. Robust systems engineering will ensure the USAF owns the technical baseline for requirements traceability as well as reliability, manufacturability, and maintainability.  <b>FY 2019 Plans:</b> Continue Prime TMRR contracts. LRSO will continue to design, develop, integrate and test the LRSO system. System requirements reviews and functional reviews will be conducted to ensure the design adequately meets the warfighter's performance requirements in the draft Capabilities Development Document, System Requirements document, and TMRR contracts. Robust systems engineering will ensure the USAF owns the technical baseline for requirements traceability as well as reliability, manufacturability, and maintainability.  <b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> Funding increase due to Technology Maturation and Risk Reduction ramp up.		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<b>Title:</b> All-Up-Round  <b>Description:</b> Conduct All-Up-Round activities to support weapon development  <b>FY 2018 Plans:</b> Continue program practices that ensure the following are met: requirements flow down, requirement allocation to hardware and software, requirements compliance matrix, system performance, reliability, maintainability, product assurance, testability, producibility and supportability. Continue facility and security infrastructure upgrades to enable secure connectivity and communication between Department of Defense (DoD), Department of Energy (DOE), and industry. Continue efforts to conduct parallel development, design, and test activities with the DOE to ensure the LRSO adequately integrates the DOE designed warhead into the system. Continue to perform Aircraft Integration efforts including activities associated with integration on threshold aircraft and aircraft mission planning system upgrades to accommodate the new weapon. Furthermore, these efforts include activities related to weapon design compatibility with both threshold and objective aircraft. Other activities falling under these efforts include: developing mission planning upgrade needs, OFP development and integration to deliver the OFP test tapes, planning activities necessary to integrate LRSO with aircraft using MIL STD 1760D based aircraft/store interface, and ensuring the logical, electrical, and physical interfaces of the LRSO as defined in the ICD.  <b>FY 2019 Plans:</b> Continue program practices that ensure the following are met: requirements flow down, requirement allocation to hardware and software, requirements compliance matrix, system performance, reliability, maintainability, product assurance, testability, producibility and supportability. Continue facility and security infrastructure upgrades to enable secure connectivity and communication between Department of Defense (DoD), Department of Energy (DOE), and industry. Continue efforts to conduct parallel development, design, and test activities with the DOE to ensure the LRSO adequately integrates the DOE designed warhead into the system. Continue to perform Aircraft Integration efforts including activities associated with integration on		14.797	33.685	24.000

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Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)				R-1 Program Element (Number/Name) PE 0604932F I Long Range Standoff Weapon							
C. Accomplishments/Planned Programs (\$ in Millions)							FY 2017	FY 2018	FY 2019		
threshold aircraft and aircraft mission planning system upgrades to accommodate the new weapon. Furthermore, these efforts include activities related to weapon design compatibility with both threshold and objective aircraft. Other activities falling under these efforts include: developing mission planning upgrade needs, OFP development and integration to deliver the OFP test tapes, planning activities necessary to integrate LRSO with aircraft using MIL STD 1760D based aircraft/store interface, and ensuring the logical, electrical, and physical interfaces of the LRSO as defined in the ICD.											
FY 2018 to FY 2019 Increase/Decrease Statement: Funding decreased due to Technology Maturation and Risk Reduction focus on other major thrusts.											
Title: Test Support							16.470	64.717	30.169		
Description: Conduct Test Support activities to support weapon development											
FY 2018 Plans: Continue to perform Test Support efforts, including test activities and support for design validation and verification and nuclear certification, as well as system qualification (includes design and operational certification activities). Furthermore, these efforts will continue test planning and execution activities to support LRSO weapon development, All-Up-Round technical integration, and aircraft integration.											
FY 2019 Plans: Continue to perform Test Support efforts, including test activities and support for design validation and verification and nuclear certification, as well as system qualification (includes design and operational certification activities). Furthermore, these efforts will continue test planning and execution activities to support LRSO weapon development, All-Up-Round technical integration, and aircraft integration.											
FY 2018 to FY 2019 Increase/Decrease Statement: Funding increase due to Technology Maturation and Risk Reduction ramp up.											
Accomplishments/Planned Programs Subtotals							102.350	451.290	614.920		
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• MILCON PE 0604932: Long Range Standoff Weapon	-	38.000	0.000	-	0.000	0.000	0.000	9.628	-	Continuing	Continuing
Remarks											

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<b>E. Acquisition Strategy</b> The acquisition strategy focuses on the development and integration of subsystem technologies with a robust reliability and manufacturing approach in a competitive environment. The program obtained a successful MS A decision in July 2016 and subsequently released a Request for Proposals. The program competitively selected two prime contractors in August 2017 to execute a 54-month Technology Maturation and Risk Reduction (TMRR) phase. The selected prime contractors will execute cost-plus-fixed-fee contracts during TMRR with activities focused on developing and maturing subsystem and system designs culminating in a final TMRR design review, delivery of Controlled Test Vehicles and conducting a vehicle configuration audit. A follow-on source selection for Engineering and Manufacturing Development (EMD) and Production phases will be conducted near the end of TMRR to select a single prime contractor to execute the EMD and Production phases of the program.		
<b>F. Performance Metrics</b> Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force													Date: February 2018		
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0604932F / Long Range Standoff Weapon				Project (Number/Name) 657011 / LONG RANGE STAND-OFF					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Long Range Standoff Weapon Development	C/CPFF	Various : TBD	-	40.000	Aug 2017	331.004	Jan 2018	533.943	Jan 2019	-		533.943	2,328.905	3,233.852	-
Subtotal			-	40.000		331.004		533.943		-		533.943	2,328.905	3,233.852	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Materiel Solution Analysis Support	Various	Various : TBD	11.384	12.033	Nov 2016	0.000		0.000		-		0.000	0.000	23.417	-
Aircraft Integration Planning	Various	Various : TBD	0.872	6.284	Jan 2017	23.136	Jan 2018	13.454	Jan 2019	-		13.454	347.837	391.583	-
All-Up-Round Activities	Various	Various : TBD	0.000	8.513	May 2017	10.549	Jan 2018	10.546	Jan 2019	-		10.546	90.108	119.716	-
Subtotal			12.256	26.830		33.685		24.000		-		24.000	437.945	534.716	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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	Various	Various : TBD	-	16.470	May 2017	64.717	Jan 2018	30.169	Jan 2019	-		30.169	207.900	319.256	-
Subtotal			-	16.470		64.717		30.169		-		30.169	207.900	319.256	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Program Management Administration	Various	Various : TBD	14.161	19.050	Oct 2016	21.884	Oct 2017	26.808	Oct 2018	-		26.808	372.794	454.697	-
Subtotal			14.161	19.050		21.884		26.808		-		26.808	372.794	454.697	N/A

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	<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
<b>Project Cost Totals</b>	26.417	102.350		451.290		614.920		-		614.920	3,347.544	4,542.521	N/A	
<b>Remarks</b>														

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force										Date: February 2018									
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604932F / Long Range Standoff Weapon					Project (Number/Name) 657011 / LONG RANGE STAND-OFF									

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
<b><i>Long Range StandOff Weapon</i></b>																												
Materiel Solution Analysis Phase																												
Technology Maturation and Risk Reduction Phase																												
Technology Maturation and Risk Reduction Contract Award																												
Milestone B Decision																												
Engineering and Manufacturing Development Phase																												
Engineering and Manufacturing Development Contract Award																												



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Air Force			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604932F / <i>Long Range Standoff Weapon</i>	<b>Project (Number/Name)</b> 657011 / <i>LONG RANGE STAND-OFF</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Long Range StandOff Weapon</i></b>				
Materiel Solution Analysis Phase	1	2017	3	2017
Technology Maturation and Risk Reduction Phase	4	2017	2	2022
Technology Maturation and Risk Reduction Contract Award	4	2017	4	2017
Milestone B Decision	2	2022	2	2022
Engineering and Manufacturing Development Phase	2	2022	4	2023
Engineering and Manufacturing Development Contract Award	2	2022	2	2022