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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 Air Force **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0305182F / <i>Spacelift Range System (SPACE)</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	10.134	6.881	11.867	0.000	11.867	10.518	10.716	10.913	11.105	Continuing	Continuing
674137: <i>Launch and Test Range System (LTRS) Modernization</i>	-	10.134	6.881	11.867	0.000	11.867	10.518	10.716	10.913	11.105	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Spacelift Range System (SLRS), also known as the Launch and Test Range System (LTRS), provides public safety and assured access to space. SLRS operates at the Eastern Range (ER) at Patrick AFB/Cape Canaveral AFS, FL and the Western Range (WR) at Vandenberg AFB, CA. SLRS provides tracking, telemetry, communications, flight safety, and other capabilities to support launch of national security space (NSS), civil and commercial space payloads, Intercontinental and Sea Launched ballistic missile and missile defense evaluations, and aeronautical and guided weapon tests. SLRS enables national security, civil, and commercial spacelift operations to be conducted safely; together with national security space launch capability, SLRS provides assured access to space for the nation. The ER and WR are part of the Department of Defense Major Range and Test Facility Base (MRTFB).

SLRS is comprised of twelve subsystems that together provide this capability to the ranges. The Range Safety and Command Destruct subsystems provide the capability to destroy an errant rocket, if necessary to protect public safety. These subsystems rely on the Telemetry, Radar, and Optics subsystems to provide tracking data. The Weather and Surveillance subsystems allow range operators and customers to determine if conditions are safe for launch. The Communications, Data Handling, and Timing & Sequencing subsystems ensure critical data is expeditiously routed from remote sensors (e.g. radars, optics, etc.) to range operators and customers. Finally, the Planning and Scheduling subsystem ensures all assets are available when needed for a launch or test operation.

As aging range systems exhibit decreasing reliability, leading to higher operations and maintenance costs and increasing the risk of launch delays, the Air Force requires RDT&E funds to conduct architecture analyses to optimize investment planning.

BA 7 - This program activity is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	
Previous President's Budget	13.318	6.902	12.521	0.000	12.521	
Current President's Budget	10.134	6.881	11.867	0.000	11.867	
Total Adjustments	-3.184	-0.021	-0.654	0.000	-0.654	
• Congressional General Reductions	0.000	-0.021				
• 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	-2.000	0.000				
• SBIR/STTR Transfer	0.000	0.000				
• Other Adjustments	-1.184	0.000	-0.654	0.000	-0.654	
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>				<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> Systems Engineering Support to Operational Baseline				5.572	1.409	8.304
<b>Description:</b> Provides Advisory and Assistance Services (A&AS) support of the operational baseline (all twelve subsystems) to include configuration management of all range assets, requirements analyses, and special studies. Provides support for Systems Program Office operations, Systems Engineering and Technical Assistance (SETA), and Federally Funded Research and Development Centers (FFRDC).						
<b>FY 2015 Accomplishments:</b> Managed the baseline (all twelve subsystems) to include configuration management of all range assets, requirements, analysis, and special studies.						
<b>FY 2016 Plans:</b> Manage the baseline (all twelve subsystems) to include configuration management of all range assets, requirements, analysis, and special studies.						
<b>FY 2017 Plans:</b> Manage the baseline (all twelve subsystems) to include configuration management of all range assets, requirements, analysis, and special studies.						
<b>Title:</b> Systems Engineering and Integration to Support Government-Controlled Baseline				4.562	5.472	3.563
<b>Description:</b> SE&I manages the government controlled system and subsystem level baseline requirements including analysis of future changes to the fielded baseline. SE&I provides "government as the integrator" engineering support to ensure multiple separate modernizations and the sustainment baseline are synchronized. SE&I will develop and recommend investment						

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2015	FY 2016	FY 2017
strategies to keep the Eastern and Western Ranges operating well beyond the FYDP. The current contract will transition to a Range and Network (RN) Enterprise SE&I contract in FY16.			
<b><i>FY 2015 Accomplishments:</i></b> Continued independent SE&I efforts as required to integrate modernization and sustainment efforts into future ranges. Provide systems and subsystem level definition, baseline, architecture, integration planning and support for future ranges.			
<b><i>FY 2016 Plans:</i></b> Continue independent SE&I efforts as required to integrate modernization and sustainment efforts into future ranges. Provide systems and subsystem level definition, baseline, architecture, integration planning and support for future ranges. Award RN Enterprise SE&I contract.			
<b><i>FY 2017 Plans:</i></b> Continue independent SE&I efforts as required to integrate modernization and sustainment efforts into future ranges. Provide systems and subsystem level definition, baseline, architecture, integration planning and support for future ranges.			
<b>Accomplishments/Planned Programs Subtotals</b>	10.134	6.881	11.867

<b>D. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>			<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• OPAF: BA03: Line item # 836770: <i>Spacelift Range System Space</i>	62.525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• SPAF: BA01: Line Item #SPRNGE: <i>Spacelift Range System Space</i>	0.000	103.275	123.088	0.000	123.088	123.615	133.474	123.248	110.325	Continuing	Continuing
• OPAF: BA05: Line Item # 86190A: <i>Spares and Repair Parts</i>	3.136	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Remarks**

**E. Acquisition Strategy**  
Due to the fielded LTRS age and obsolescence issues, many systems need to be replaced (e.g. communications systems at ER & WR). These major modifications will be competed, typically among small business contractors, and selected through best value source selections. The competitively-selected SE&I contractor will manage government-controlled requirements and processes as well as provide support to the "government as the integrator" between LISC and separately competed modernization projects. FFRDC provides mission assurance oversight to ensure capabilities meet operational need.

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**Appropriation/Budget Activity**

3600: *Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development*

**R-1 Program Element (Number/Name)**

PE 0305182F / *Spacelift Range System (SPACE)*

**F. Performance Metrics**

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 2017 Air Force** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305182F / Spacelift Range System (SPACE)	<b>Project (Number/Name)</b> 674137 / Launch and Test Range System (LTRS) Modernization
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<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Spacelift Range System Contract (SLRSC)	C/CPAF	ITT Exelis : Cape Canaveral, FL	-	1.512	Nov 2014	0.000		0.000		0.000		0.000	Continuing	Continuing	TBD
SLRS Enterprise Systems Engineering and Integration	C/CPIF	Booz Allen Hamilton : McLean, VA	-	4.562	Aug 2015	1.962	Dec 2015	0.000		0.000		0.000	Continuing	Continuing	TBD
RN Enterprise Systems Engineering and Integration	C/TBD	TBD : TBD	-	0.000		3.510	Apr 2016	3.563	Apr 2017	0.000		3.563	Continuing	Continuing	TBD
LTRS Integrated Support Contract	C/Various	Range Generation Next, LLC : Dulles, VA	-	0.000		0.442	May 2016	7.635		0.000		7.635	Continuing	Continuing	TBD
<b>Subtotal</b>			-	6.074		5.914		11.198		0.000		11.198	-	-	-

**Remarks**

Product Development: The AF is recompeting the Systems Engineering and Integration Contract in FY 2016.

<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
TEST AND EVALUATION (WS)	Various	MIT, 17th Test Squad, NAVAIR : Various	-	1.762		0.000		0.000		0.000		0.000	Continuing	Continuing	-
<b>Subtotal</b>			-	1.762		0.000		0.000		0.000		0.000	-	-	-



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2017 Air Force</b>		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305182F / <i>Spacelift Range System (SPACE)</i>	<b>Project (Number/Name)</b> 674137 / <i>Launch and Test Range System (LTRS) Modernization</i>

FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
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

LTRS Integrated Support Contract	[REDACTED]																											
Systems Engineering and Integration Contract	[REDACTED]																											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Air Force		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305182F / <i>Spacelift Range System (SPACE)</i>	<b>Project (Number/Name)</b> 674137 / <i>Launch and Test Range System (LTRS) Modernization</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LTRS Integrated Support Contract	1	2015	4	2021
Systems Engineering and Integration Contract	1	2015	1	2021