Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force											Date: February 2015	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305182F / *Spacelift Range System (SPACE)*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	11.909	13.318	6.902	-	6.902	12.521	10.620	10.819	11.011	Continuing	Continuing
674137: *Launch and Test Range System (LTRS) Modernization*	-	11.909	13.318	6.902	-	6.902	12.521	10.620	10.819	11.011	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Eastern Range at Patrick AFB/Cape Canaveral AFS, FL and the Western Range at Vandenberg AFB, CA make up the Spacelift Range System (SLRS), also known as the Launch and Test Range System (LTRS). The SLRS provides the capability to track and destroy an errant rocket in flight to protect the public, which enables national security, civil, and commercial spacelift operations to be conducted safely. SLRS is also a test range, supporting intercontinental and sea-launched ballistic missile test launches, national missile defense tests, and aeronautical tests.

SLRS is comprised of twelve subsystems (2000 assets) 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. These subsystems rely on the Telemetry, Radar, and Optics subsystems to provide tracking data to the Mission Flight Control Officer (MFCO), who is certified to determine if a rocket in flight is on course. The Weather and Surveillance subsystems provide the MFCO information about the surroundings 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 the MFCO. Finally, the Planning and Scheduling subsystem ensures all assets are available when needed for a launch or test operation. Because aging range systems are exhibiting 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 fudning in the current or subsequent fiscal year.

The FY2016 funding request was reduced by $2.164 million to account for the availability of prior execution balances.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305182F / *Spacelift Range System (SPACE)*

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	12.312	13.462	9.066	-	9.066
Current President's Budget	11.909	13.318	6.902	-	6.902
Total Adjustments	-0.403	-0.144	-2.164	-	-2.164
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.403	-			
• Other Adjustments	-	-0.144	-2.164	-	-2.164

Change Summary Explanation

FY16: The FY2016 funding request was reduced by $2.164 million to account for the availability of prior execution balances.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Range Modernization (SLRSC)	4.550	-	-
Description: SLRSC managed the fielded baseline (all 2000+ assets) via systems engineering to include configuration management, requirements, analysis, and special studies. In FY 15 this activity will transition to the LISC contract with associated cost savings. Provides program management support, to include System Program Office operations, Systems Engineering and Technical Assistance (SETA), and Federally Funded Research and Development Centers (FFRDC).			
FY 2014 Accomplishments: SLRSC managed the fielded baseline (2000+ assets) via systems engineering to include configuration management, requirements, analysis, and special studies. In FY 15 this activity will transition to the LISC contract.			
Title: Systems Engineering Support to Operational Baseline	-	7.461	2.058
Description: LTRS Integrated Support Contract (LISC) manages the fielded baseline (all twelve subsystems) to include configuration management of all range assets, requirements analyses, and special studies. Provides program management support, to include System Program Office operations, Systems Engineering and Technical Assistance (SETA),and Federally Funded Research and Development Centers (FFRDC).			
FY 2014 Accomplishments:			

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305182F / *Spacelift Range System (SPACE)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
N/A ***FY 2015 Plans:*** Manage the baseline (all twelve subsystems) to include configuration management of all range assets, requirements, analysis, and special studies. ***FY 2016 Plans:*** Manage the baseline (all twelve subsystems) to include configuration management of all range assets, requirements, analysis, and special studies.			
Title: Systems Engineering and Integration to Support Government-Controlled Baseline ***Description:*** 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 intergrator" engineering support to ensure multiple separate modernizations and the sustainment baseline are synchronized. SE&I will develop and recommend investment strategies to keep the Eastern and Western Ranges operating well beyond the FYDP. ***FY 2014 Accomplishments:*** Continued independent SE&I efforts to integrate modernization and sustainment efforts into future ranges. Provide systems and subsystem level definition, baseline, architecture, integration planning and support for future systems. ***FY 2015 Plans:*** 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. ***FY 2016 Plans:*** 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.	3.034	1.383	4.844
Title: Standard Space Trainer ***Description:*** Develops the Standard Space Trainer (SST) and other trainer applications for the spacelift ranges. SST is the AFSPC/CC directed training system for all Combat Mission Ready (CMR) space systems. It provides a common platform for all space operational training systems for both AFSPC and AETC. The Spacelift Range SST will be developed to support CMR training for the Ranges Aerospace Control Officer, Range Control Officer (RCO)/ Range Operations Commander (ROC), Mission Flight Control Officer (MFCO) and Launch Weather Officer (LWO) positions. ***FY 2014 Accomplishments:***	4.325	4.474	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Awarded contract and began development of the SST. Concluded requirements analysis and applied lessons learned from previous developments. ***FY 2015 Plans:*** Conclude development and procurement of the Standard Space Trainer. ***FY 2016 Plans:*** N/A			
Accomplishments/Planned Programs Subtotals	11.909	13.318	6.902

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF: BA03: Line item # 836770: *Spacelift Range System Space*	90.806	65.674	113.275	-	113.275	116.108	105.446	107.320	109.222	Continuing	Continuing
• OPAF: BA05: Line Item # 86190A: *Spares and Repair Parts*	2.617	3.136	-	-	-	-	-	-	-	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.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305182F / *Spacelift Range System (SPACE)*	**Project (Number/Name)** 674137 / *Launch and Test Range System (LTRS) Modernization*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Spacelift Range System Contract (SLRSC)	C/CPAF	ITT Exelis : Cape Canaveral, FL	-	4.156	Nov 2013	1.019	Nov 2014	-		-		-	Continuing	Continuing	TBD
Standard Space Trainer	SS/CPFF	Sonalysts, Inc : Waterford, CT	-	4.325	Dec 2013	4.474	Jan 2015	-		-		-	Continuing	Continuing	TBD
Systems Engineering and Integration Contract	C/CPIF	Booz Allen Hamilton : McLean, VA	-	3.034	Dec 2013	1.383	Aug 2015	4.844	Aug 2016	-		4.844	Continuing	Continuing	TBD
LISC Systems Engineering and Tech Support	C/Various	Range Generation Next, LLC : Waltham, MA	-	-		6.036	May 2015	1.640	May 2016	-		1.640	Continuing	Continuing	-
		Subtotal	-	11.515		12.912		6.484		-		6.484	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support (FFRDC)	RO	Aerospace : El Segundo, CA	-	0.394	Jan 2014	0.406	Nov 2014	0.418	Nov 2015	-		0.418	Continuing	Continuing	TBD
		Subtotal	-	0.394		0.406		0.418		-		0.418	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305182F / *Spacelift Range System (SPACE)*	**Project (Number/Name)** 674137 / *Launch and Test Range System (LTRS) Modernization*	

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	11.909		13.318		6.902		-		6.902	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305182F / *Spacelift Range System (SPACE)*	**Project (Number/Name)** 674137 / *Launch and Test Range System (LTRS) Modernization*

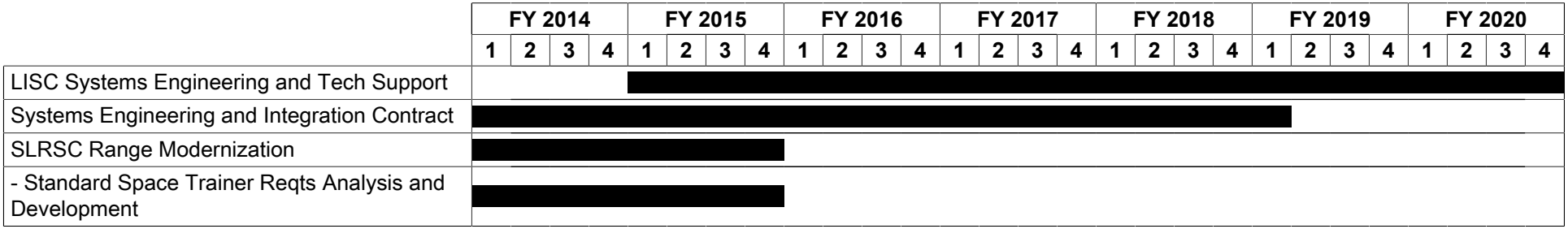

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305182F / *Spacelift Range System (SPACE)*	**Project (Number/Name)** 674137 / *Launch and Test Range System (LTRS) Modernization*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
LISC Systems Engineering and Tech Support	1	2015	4	2020
Systems Engineering and Integration Contract	1	2014	1	2019
SLRSC Range Modernization	1	2014	4	2015
- Standard Space Trainer Reqts Analysis and Development	1	2014	4	2015