Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force											Date: May 2017	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 1206116F / *Space Test and Training Range Development*							
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	-	18.465	22.228	25.773	0.000	25.773	0.000	23.429	20.092	20.441	Continuing	Continuing
666156: *Space Test and Training Range Development*	-	18.465	22.228	25.773	0.000	25.773	0.000	23.429	20.092	20.441	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY2018, PE 0606116F, Space Test and Training Range Development efforts were transferred to PE 1206116F, Space Test and Training Range Development due to the creation of a new Major Force Program for Space. FY2016 and FY2017 funding is now documented in the exhibits for PE 1206116F.

A. Mission Description and Budget Item Justification

Supports the development of Space Test and Training Range (STTR) capabilities critical for developmental and operational test, training, exercises and tactics development for Space Control systems and Joint National Space Architecture. Includes development, demonstration and delivery of test assets, special test equipment, capabilities and systems required to test, validate, and verify performance of integrated space control systems. Provides a safe, secure, controllable and repeatable environment for the testing and training of Space Control mission systems and operators that is both realistic and relevant. Additionally, this program develops test range assets for both the fixed node Space Range Operation Center (SROC) at Schriever AFB and a deployable capability to support complex Joint and AF exercises. The virtual range as part of the Family of Systems (FoS), called Big Top, is being developed to accomplish the STTR mission. Big Top integrates to a Distributed Mission Architecture, tying into both the Information Operations (IO) and Air ranges for increased realism and complexity required to prepare space operators for real-world threats. This technology will allow for the first-ever use of a realistic signal environment to increase the realism and efficiency of space control squadron training.

This program is in Budget Activity 6, RDT&E Management Support because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

.

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force		Date: May 2017
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 1206116F / *Space Test and Training Range Development*	

B. Program Change Summary ($ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	18.940	18.528	19.317	0.000	19.317
Current President's Budget	18.465	22.228	25.773	0.000	25.773
Total Adjustments	-0.475	3.700	6.456	0.000	6.456
• 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	0.000	0.000			
• SBIR/STTR Transfer	-0.475	0.000			
• Other Adjustments	0.000	3.700	6.456	0.000	6.456

Change Summary Explanation

FY2017: $3.7M FY2017 RAA increase to support development and delivery of mission specific emulation capabilities to the Counter Communications System (CCS) and Offensive and Defensive Space Control (OCS, DCS) operational units.

FY2018: $6.4M increase to fund Multi-Range Integration, integrate STTR into other Air Force Range capabilities.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Title: Range Control	17.547	21.283	25.108

Description: Development and acquisition of mobile, transportable, and fixed range monitoring and communications capabilities for the space range.

FY 2016 Accomplishments:

Finalized test activities for Spiral 1 capability Developmental Testing (DT) and Operational Testing (OT). Continued development and deliveries of advanced live, virtual and constructive environment, closed loop training and advanced software simulation tools.

FY 2017 Plans:

Development and acquisition of mobile, transportable, signal monitoring and communications capabilities. Continue advanced live virtual and constructive environment and closed loop training and advanced software for the Space Test and Training Range.

FY 2018 Plans:

Continue development and acquisition of mobile, transportable, and fixed range monitoring and communications capabilities for the space range. Integrate STTR into other Air Force Range capabilities. Address Risk Management Framework (RMF) compliance, general obsolescence, outdated servers, database overhaul, Windows 10 migration, further hardening of hard drives,

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force	Date: May 2017
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 1206116F / *Space Test and Training Range Development*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
upgraded encryption, and software upgrades. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.			
Title: Bandwidth Support ***Description:*** Provides for leased SATCOM bandwidth for STTR operations. ***FY 2016 Accomplishments:*** Provided required space range satellite communications bandwidth for exercise, testing and training of both offensive and defensive space control systems on the space range. Small amounts of Ka bandwidth were utilized at the end of FY 2015 for testing. More extensive testing was accomplished in FY 2016. ***FY 2017 Plans:*** Provide required space range satellite communications bandwidth for exercise, testing and training of both offensive and defensive space control systems on the space range. ***FY 2018 Plans:*** Provide required space range satellite communications bandwidth for exercises, tests, and training of both offensive and defensive space control systems on the space range.	0.918	0.945	0.665
Accomplishments/Planned Programs Subtotals	18.465	22.228	25.773

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

All contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible.

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.