

UNCLASSIFIED

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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605976F / <i>Facilities Restoration and Modernization - Test and Evaluation Support</i>
---	---

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	-	46.955	40.518	134.111	0.000	134.111	135.116	125.388	89.071	69.807	Continuing	Continuing
6606MC: <i>Facility Restoration and Modernization - T&E</i>	-	46.955	40.518	134.111	0.000	134.111	135.116	125.388	89.071	69.807	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Restoration includes repair and replacement work to restore damaged facilities due to accident or failure attributable to inadequate sustainment, excessive age, or other causes. Modernization includes alteration of facilities to implement a new, higher standard (including regulatory changes), to accommodate new functions, or to replace building components that typically last more than 50 years (such as foundations and structural components). Other tasks associated with facilities operations (such as custodial services, grass cutting, and the provision of central utilities) are not included. These restoration/modernization funds support the following Air Force test organizations and their associated test and evaluation facilities, including: remote locations, 96th Test Group (TG) at Holloman AFB, NM, the 96th Test Wing (TW) at Eglin AFB, FL, the Arnold Engineering and Development Complex (AEDC) at Arnold AFB, TN, the 412th TW at Edwards AFB, CA, 96 TG Landing Gear Test Facility (LGTf) at Wright-Patterson AFB, OH, Hypersonic Wind Tunnel 9 at White Oak, MD, and the National Full-Scale Aerodynamics Complex (NFAC) at Moffett Field, CA.

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.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	46.955	40.518	42.978	0.000	42.978
Current President's Budget	46.955	40.518	134.111	0.000	134.111
Total Adjustments	0.000	0.000	91.133	0.000	91.133
• 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	0.000	0.000			
• Other Adjustments	0.000	0.000	91.133	0.000	91.133

Change Summary Explanation

FY17: \$91.133M increase reflects AF focus on recapitalizing and modernizing test infrastructure to support future warfighting capability acquisition efforts.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force		Date: February 2016		
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 6: RDT&E Management Support</i>		R-1 Program Element (Number/Name) PE 0605976F / <i>Facilities Restoration and Modernization - Test and Evaluation Support</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>Title: Facility restoration and modernization at the 96 TG</p> <p>Description: Facility restoration and modernization at the 96th TG.</p> <p>FY 2015 Accomplishments: Upgraded and remodeled calibration pit at National Radar Cross Section Test Facility (NRTF). Restored and modernized 168i Dynamometer at the Landing Gear Test Facility (LGTF). Installed structures to shelter High Power Jammers at Central Inertial Guidance Test Facility (CIGTF). Upgraded trackside rainfield system to include pressure control points and monitors as needed to better maintain constant pressures at nozzles at Holloman High Speed Test Track; Began design of Radar Cross Section Advanced Measurement System Fiber Optic replacement; Replaced the hydraulic package that powers the Landing Gear Test Facility (LGTF) Baldwin Load Press; Continued effort to replace the obsolete mandrel carrier control system component of the 120 Dynamometer SC test system.</p> <p>FY 2016 Plans: Implement plan to replace Radar Cross Section Advanced Measurement System Fiber Optics. Install a new uninterruptable power system (UPS) and connect it to the existing UPS wiring infrastructure in the Advanced Inertial Test Lab portion of the Central Inertial Guidance Test Facility (CIGTF).</p> <p>FY 2017 Plans: Continue to implement plan to replace Radar Cross Section Advanced Measurement System Fiber Optics. Continue to install a new uninterruptable power system (UPS) and connect it to the existing UPS wiring infrastructure in the Advanced Inertial Test Lab portion of the Central Inertial Guidance Test Facility (CIGTF).</p>		1.766	1.563	1.661
<p>Title: Facility restoration and modernization at the 96 TW</p> <p>Description: Facility restoration and modernization at the 96th TW.</p> <p>FY 2015 Accomplishments: Conducted many small R&M projects throughout Range complex (Safety, Security, Electrical, Plumbing upgrades, Minor construction Test Building replacement, etc.).</p> <p>FY 2016 Plans: Continue Range Environmental Protection and small Restoration and Modernization (R&M) efforts across the range complex.</p> <p>FY 2017 Plans:</p>		3.532	3.125	11.267

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force		Date: February 2016		
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 6: RDT&E Management Support</i>		R-1 Program Element (Number/Name) PE 0605976F / <i>Facilities Restoration and Modernization - Test and Evaluation Support</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
Continue Range Environmental Protection and small Restoration and Modernization (R&M) efforts across the range complex. Begin effort to restore and modernize McKinnley Climatic Lab facility components. Replace solar array, replace HVAC air makeup unit heat exchanger, modernize facility monitoring and control system.				
<p>Title: Facility restoration and modernization at AEDC</p> <p>Description: Facility restoration and modernization at AEDC.</p> <p>FY 2015 Accomplishments: Continued FY14 efforts not completed or that were multiyear. Continued upgrading control systems from analog to digital in the Exhaust Test Facility. Continued planning to improve the exhaust plant cooling systems. Continued work to improve the 16T wind tunnel Foreign Object Damage (FOD) fix effort. Improved balances and calibration systems. Began planning for AB Exhaust plant system life extension program - ensured A/B exhaust system was operational until strategic direction is executed relative to replacement; Refurbished C Plant mechanical and electrical systems; Continued effort to replace H2 diffuser; Rewound and upgraded Propulsion Wind Tunnel 83,000 HP Motors M4 and M1.</p> <p>FY 2016 Plans: Continue FY15 efforts not completed or that were multiyear, including major service life extension efforts on wind tunnels and exhaust plants.</p> <p>FY 2017 Plans: Begin effort to restore and modernize the Medium Turbine Engine A&B Plant and the Large Turbine Engine C-Plant mechanical systems, control valves, electrical systems, temperature controls and automate the control systems. Begin service life extension program effort for the High Speed Wind Tunnels (4T, 16T, 16S, Tunnel 9 and associated infrastructure).</p>		35.995	30.820	113.162
<p>Title: Facility restoration and modernization at 412 TW</p> <p>Description: Facility restoration and modernization at the 412 TW.</p> <p>FY 2015 Accomplishments: Upgraded BAF electrical hydraulics and cooling to support the B-2 program; Repaired asphalt between Hangars 1207 and 1210 (Main Base Airfield); Rebuilt Pad 20 (Main Base airfield); Removed 100 identified obstructions in Main Base airfield infield areas; Installed lights on Ramp 9, shelter included conduit, boring if required, all wiring and hardware to make a complete and useable system.</p> <p>FY 2016 Plans:</p>		5.662	5.010	8.021

UNCLASSIFIED

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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605976F / <i>Facilities Restoration and Modernization - Test and Evaluation Support</i>
---	---

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
412 TW will continue projects for Electronic Warfare, Range, and other test and evaluation facilities including, but not limited to, roofing, heating and air conditioning, windows, doors, and floors, work area rezoning, transformers and power systems, fire suppression systems, seismic upgrades, and RAM replacement.			
FY 2017 Plans: Begin effort to restore and modernize Benefield Anechoic Facility components. Replace facility auxiliary cooling system, and replace the electrical substation.			
Accomplishments/Planned Programs Subtotals	46.955	40.518	134.111

D. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• RDTE: BA06: PE 0604256F: <i>Threat Simulator Development</i>	24.318	23.844	21.630	0.000	21.630	22.038	22.426	22.839	23.245	Continuing	Continuing
• RDTE: BA06: PE 0604759F: <i>Major T&E Investment</i>	45.985	73.302	66.385	0.000	66.385	65.706	66.001	67.265	68.464	Continuing	Continuing
• RDTE: BA06: PE 0605807F: <i>Test and Evaluation Support</i>	691.977	683.308	661.417	0.000	661.417	672.180	680.576	693.772	706.945	Continuing	Continuing
• RDTE: BA06: PE 0605978F: <i>Facility Sustainment - T&E Support</i>	32.965	27.895	28.091	0.000	28.091	28.637	29.093	29.633	30.158	Continuing	Continuing

Remarks

E. Acquisition Strategy
N/A

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.