

# UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
3600: Research, Development, Test & Evaluation, Air Force I BA 6: RDT&E Management Support					PE 0605976F I Facilities Restoration and Modernization - Test and Evaluation Support							
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	-	40.518	134.111	135.507	0.000	135.507	125.437	89.111	69.814	71.243	Continuing	Continuing
6606MC: Facility Restoration and Modernization - T&E	-	40.518	134.111	135.507	0.000	135.507	125.437	89.111	69.814	71.243	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, 704th Test Group (TG) at Holloman AFB, NM, the 96th Test Wing (TW) at Eglin AFB, FL, Arnold Engineering and Development Complex (AEDC)] at Arnold AFB, TN, the 412th TW at Edwards AFB, CA, 704 TG Landing Gear Test Facility (LGTf) at Wright-Patterson AFB, OH, AEDC's Hypersonic Wind Tunnel 9 at White Oak, MD, and AEDC's 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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	40.518	134.111	135.116	0.000	135.116
Current President's Budget	40.518	134.111	135.507	0.000	135.507
Total Adjustments	0.000	0.000	0.391	0.000	0.391
• 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	0.391	0.000	0.391

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
<b>Title:</b> Facility restoration and modernization at the 704 TG  <b>Description:</b> Facility restoration and modernization at the 704th TG.  <b>FY 2016 Accomplishments:</b> Implemented plan to replace Radar Cross Section Advanced Measurement System Fiber Optics. Installed a new uninterruptable power system (UPS) and connected it to the existing UPS wiring infrastructure in the Advanced Inertial Test Lab portion of the Central Inertial Guidance Test Facility (CIGTF).  <b>FY 2017 Plans:</b> 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).  <b>FY 2018 Plans:</b> Continue to implement plan to replace Radar Cross Section Advanced Measurement System Fiber Optics. Complete work 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). Begin work to refurbish the high speed test track girder and rail hardware, refurbish and upgrade high speed test track utilities.		1.563	1.661	1.644
<b>Title:</b> Facility restoration and modernization at the 96 TW  <b>Description:</b> Facility restoration and modernization at the 96th TW.  <b>FY 2016 Accomplishments:</b> Continued Range Environmental Protection and small Restoration and Modernization (R&M) efforts across the range complex.  <b>FY 2017 Plans:</b> 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.  <b>FY 2018 Plans:</b> Continue Range Environmental Protection and small Restoration and Modernization (R&M) efforts across the range complex. Continue 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.		3.125	11.267	9.516
<b>Title:</b> Facility restoration and modernization at AEDC		30.820	113.162	111.558

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
<b>Description:</b> Facility restoration and modernization at AEDC.  <b>FY 2016 Accomplishments:</b> Completed the multiyear efforts, including major service life extension efforts on wind tunnels and exhaust plants.  <b>FY 2017 Plans:</b> 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).  <b>FY 2018 Plans:</b> Continue 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. Continue service life extension program effort for the High Speed Wind Tunnels (4T, 16T, 16S, Tunnel 9 and associated infrastructure).				
<b>Title:</b> Facility restoration and modernization at 412 TW  <b>Description:</b> Facility restoration and modernization at the 412 TW.  <b>FY 2016 Accomplishments:</b> 412 TW completed 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.  <b>FY 2017 Plans:</b> Begin effort to restore and modernize Benefield Anechoic Facility components. Replace facility auxiliary cooling system, and replace the electrical substation.  <b>FY 2018 Plans:</b> Continue effort to restore and modernize Benefield Anechoic Facility components. Replace facility auxiliary cooling system, and replace the electrical substation.		5.010	8.021	12.789
<b>Accomplishments/Planned Programs Subtotals</b>		40.518	134.111	135.507

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<b>D. Other Program Funding Summary (\$ in Millions)</b>											
			<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Complete</u>	<u>Total Cost</u>
• RDTE: BA06: PE 0604256F: <i>Threat Simulator Development</i>	23.558	21.630	35.405	0.000	35.405	28.513	28.540	29.049	29.655	Continuing	Continuing
• RDTE: BA06: PE 0604759F: <i>Major T&amp;E Investment</i>	70.894	71.385	82.874	0.000	82.874	79.536	76.629	78.240	81.118	Continuing	Continuing
• RDTE: BA06: PE 0605807F: <i>Test and Evaluation Support</i>	683.307	680.217	678.289	0.000	678.289	686.379	700.630	713.790	729.060	Continuing	Continuing
• RDTE: BA06: PE 0605978F: <i>Facility Sustainment - T&amp;E Support</i>	27.895	28.091	28.720	0.000	28.720	29.105	29.646	30.160	30.777	Continuing	Continuing
<b>Remarks</b>											
<b>E. Acquisition Strategy</b>											
N/A											
<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.											