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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 3: Advanced Technology Development (ATD)					R-1 ITEM NOMENCLATURE PE 0603601F: Conventional Weapons Technology							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	44.057	36.352	33.996	-	33.996	43.589	46.601	47.585	48.459	Continuing	Continuing
63670A: Conventional Weapons Development	-	44.057	36.352	33.996	-	33.996	43.589	46.601	47.585	48.459	Continuing	Continuing
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This program develops, demonstrates, and integrates advanced ordnance and guidance technologies for air-launched conventional weapons. The program focuses on conventional ordnance component technologies such as warheads, fuzes, and explosives, as well as munition guidance component technologies such as navigation and control systems and seekers. Technologies to be developed, demonstrated, and integrated address blast, fragmentation, penetration, low-collateral damage, variable depth/location fuzing, precise guidance, and high performance and insensitive explosives. Efforts in this program have been coordinated through the Department of Defense (DoD) Science and Technology (S&T) Executive Committee process to harmonize efforts and eliminate duplication. This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.												
B. Program Change Summary (\$ in Millions)				FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total				
Previous President's Budget				45.542	36.352	33.996	-	33.996				
Current President's Budget				44.057	36.352	33.996	-	33.996				
Total Adjustments				-1.485	0.000	0.000	-	0.000				
• Congressional General Reductions				-	0.000							
• Congressional Directed Reductions				-	0.000							
• Congressional Rescissions				0.000	0.000							
• Congressional Adds				-	0.000							
• Congressional Directed Transfers				-	0.000							
• Reprogrammings				-0.574	0.000							
• SBIR/STTR Transfer				-0.911	0.000							
• Other Adjustments				0.000	0.000	0.000	-	0.000				
C. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014	
Title: Ordnance Technologies									28.307	18.000	6.500	

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Description: Develop and demonstrate ordnance technologies to improve conventional, air-delivered munitions. Specific technical areas of focus include fuzes, energetic materials, and warheads. FY 2012 Accomplishments: Demonstrated survivability of components for a conventional ordnance package capable of penetrating high performance concrete with high-speed sled tests. Performed system trades to assess approaches for incorporating velocity boosting for a penetrating warhead. Developed an ordnance package that enables the warfighter to tailor the weapon effects for the target and its surrounding environment. FY 2013 Plans: Continue developing technologies for a conventional ordnance package capable of penetrating high performance concrete at velocities up to 2,500 feet per second. Continue developing and demonstrating technologies and approaches that incorporate velocity augmentation capability for penetrating weapons. Continue developing an ordnance package that enables the warfighter to tailor the weapon effects for the target and its surrounding environment. Investigate alternate fuze concepts to increase the reliability of penetrating weapons. FY 2014 Plans: Complete demonstrations of a conventional ordnance package capable of penetrating high performance concrete at velocities up to 2,500 feet per second. Complete demonstration of technologies that incorporate velocity augmentation capability for penetrating weapons. Continue developing an ordnance package that enables the warfighter to tailor the weapon effects for the target and its surrounding environment. Develop alternate fuze technologies to increase the reliability of penetrating weapons.				
Title: Guidance Technologies Description: Develop and demonstrate guidance technologies to improve the precision, controlled lethality, and flexibility of conventional, air-delivered munitions. Specific technical areas include precision navigation and terminal seekers. FY 2012 Accomplishments: Completed demonstration of dynamic path planning and target engagement technologies for close controlled strike munitions concepts. Developed algorithms for precision weapon navigation in Global Positioning System (GPS)-degraded environments for strict control of angle of attack. FY 2013 Plans: Continue developing technology for precision weapon navigation in GPS-degraded environments. Develop technologies capable of guiding a high-speed strike weapon characterized by very high terminal speed and high end-game maneuverability. FY 2014 Plans:		9.688	7.800	11.700

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Demonstrate simulations of weapon navigation and control necessary for penetration into hard targets at high velocities. Demonstrate technologies for precision weapon navigation in GPS-degraded environments. Continue to develop technologies capable of guiding a high-speed strike weapon characterized by very high terminal speed and high end-game maneuverability.				
Title: Advanced Munition Concept Technologies		6.062	10.552	15.796
Description: Demonstrate advanced conventional munition concepts. These innovative concepts integrate ordnance, guidance, and carriage and release technologies to demonstrate warfighter capability.				
FY 2012 Accomplishments: Began demonstrating technologies that enable a munition to provide effects tailorable to the target and surrounding environment. Refined employment concepts and system technologies for high-speed penetrating weapons with velocity augmentation. Continued developing missile technologies, primarily focused on increasing kinematic performance, to defeat a broad range of small and highly agile air targets, as well as high value ground targets, such as enemy air defenses. Performed an integrated demonstration of the guidance, navigation and control functions to attack multiple moving vehicles with several small, powered, precision guided submunitions.				
FY 2013 Plans: Complete development of missile technologies to defeat a broad range of small and highly agile air targets, as well as high value ground targets, such as enemy air defenses. Continue to refine employment concepts and system technologies for high-speed penetrating weapons with velocity augmentation. Continue development of a munition concept to incorporate technologies for carriage and terminal impact at high-speed. Increase emphasis on munition concepts that increase the capacity and capability of fifth-generation aircraft.				
FY 2014 Plans: Complete demonstration of technologies for high-speed penetrating weapons with velocity augmentation. Investigate concepts for cooperative control of small weapons to produce scalable effects to increase the capacity and capability of fifth-generation aircraft. Develop and demonstrate ordnance and guidance technologies for tactically relevant long range strike weapons and reduce risk for a potential follow-on acquisition program.				
Accomplishments/Planned Programs Subtotals		44.057	36.352	33.996
D. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				

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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.		