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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>
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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	-	84.171	53.208	24.007	-	24.007	20.187	3.901	7.251	4.025	Continuing	Continuing
675039: <i>B-52 Modernization</i>	-	84.171	0.065	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675048: <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>	-	0.000	16.490	11.373	-	11.373	8.264	3.901	0.000	0.000	Continuing	Continuing
675049: <i>MODE S/5 IFF</i>	-	0.000	1.202	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675050: <i>CONNECT</i>	-	0.000	34.700	12.634	-	12.634	11.923	0.000	7.251	4.025	Continuing	Continuing
675051: <i>ANTI-SKID</i>	-	0.000	0.751	0.000	-	0.000	0.000	0.000	0.000	0.000	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

Note

FOR FY05-FY12 THE B-52 SQUADRONS PROGRAM ELEMENT CONTAINED A SINGLE BPAC, 675039, B-52 MODERNIZATION. BEGINNING IN FY 13 AND OUT, SEPARATE BPACs HAVE BEEN ESTABLISHED AS FOLLOWS:

- 675039 B-52 MODERNIZATION
- 675048 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)
- 675049 MODE S/5 IFF
- 675050 CONNECT
- 675051 B-52 ANTI-SKID

Prior to FY13, budget included funding for the EHF and SR2 programs. These programs were terminated in the FY13 PB.

A. Mission Description and Budget Item Justification

B-52 MODERNIZATION PROGRAMS

Prior to FY13, all B-52 modernization programs were funded in a single BPAC, 675039 B-52 Modernization. B-52 modernization is a comprehensive program to ensure B-52 viability to perform current and future wartime missions to include datalinks, navigation, sensors, weapons, and electronic warfare (EW) and training capabilities. B-52 modernization (initiated in FY 2005) integrates and adds both tactical and global datalink communications for real time command and control, targeting, and intelligence. It upgrades antiquated air traffic management (ATM) systems with those supported by three key functions using satellite technology: Communications, Navigation and Surveillance (CNS). Modernization upgrades training devices to support aircrew and maintenance training with the latest B-52 capability. In addition, modernization improves conventional warfare capability with additional MIL-STD-1760 smart weapons and improved weapons carriage and fully integrates advanced targeting pods with the offensive avionics system. B-52 modernization upgrades or replaces legacy defensive EW systems to include the radar warning receiver,

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<p>jammers, chaff and flare dispensers and situational awareness displays as well as integration of offensive EW such as the Miniature Air-Launched Decoy (MALD) and MALD-Jammer (MALD-J).</p> <p>CONNECT The B-52 Combat Network Communications Technology (CONNECT) acquisition program supports nuclear and conventional operations by upgrading the B-52 fleet with tactical datalink and voice communications capabilities along with improved threat and situational awareness to support participation in network centric operations. The CONNECT upgrade includes new multi-functional color displays (MFCDs) and a digital interphone system, which will survive and function through the nuclear environment to enhance crew interaction and situational awareness. To enable net centric operations, the CONNECT upgrade integrates the following systems: on-board client/server architecture supporting distributed processing with independent control functions, UHF Beyond Line-Of-Sight (BLOS) Joint Range Extension (JRE) capability via ARC-210 Warrior radio to exchange J-Series messaging within theater, Intelligence Broadcast Receiver (IBR), limited Internet Protocol (IP)-based UHF BLOS link supporting e-mail and file transfers, and Improved Data Modem (IDM)-based digital Variable Message Format (VMF) datalink to significantly enhance close air support (CAS) missions. This integrated suite will provide the B-52 fleet with a machine-to-machine data transfer capability supporting aircraft re-tasking and re-targeting of Conventional Air Launched Cruise Missile (CALCM), Joint Air-to-Surface Standoff Missile/JASSM-Extended Range (JASSM/JASSM-ER), and other J-series weapons across the range of B-52 military operations and missions.</p> <p>In the FY13PB, the CONNECT program was restructured to only replace the current Multi-Function Displays (MFDs) located at each of the crew stations, make the temporary Evolutionary Data Link (EDL) modification permanent, and demod of the CONNECT test aircraft as required. However, the original CONNECT development effort, as laid out in FY12, will be completed as planned and the technical design/baseline is being maintained in support of the FY14 POM decision to reinstate the program.</p> <p>For FY14, the FY13 decision to restructure the CONNECT program was reversed. The Air Force FY14 PB submission funds the completion of the full CONNECT capability development, updates due to Diminishing Manufacturing Sources and Materiel Sources (DMSMS) issues, changes to incorporate updates to GFP, recurring changes to B-52 Software baseline, CONNECT capability inclusion into the required B-52 training systems, and production/installation/initial support for a total 30 CONNECT capable (2 kits were funded in EMD) aircraft. The test aircraft will not be de-modified from its CONNECT configuration.</p> <p>TRAINERS AND UPGRADES FOR CONNECT In order to maintain currency with the latest aircraft configuration, the CONNECT program will update existing trainers or use computer-based training to add CONNECT functionality to meet user-training requirements and establish a system integration laboratory (SIL) for updates of the Weapon System Trainers (WST).</p> <p>MIL-STD 1760 IWBU The MIL-STD 1760 Internal Weapons Bay Upgrade (IWBU) program modifies hardware and software for seventy-six (76) B-52H aircraft. It also modifies hardware for the Common Strategic Rotary Launchers (CSRL). The 1760 IWBU program is segmented into two increments. Increment 1 consists of two sub-increments: 1.1 and 1.2.</p>		

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<p>Increment 1.1 provides capability for internal carriage of eight Joint Direct Attack Munitions (JDAM) smart weapons on a rotary launcher. Excess Nuclear CSRLs will be converted to Conventional Rotary Launchers (CRL).</p> <p>CRL Hardware modification: Consists of Group A equipment racks and electrical wiring, Group B consists of one Integrated Weapons Interface Unit (IWIU) per CRL, this Line Replaceable Unit (LRU) was previously developed under the Advanced Weapons Integration (AWI) program and work previous accomplished for a 2005 demonstration or developed using 2006 and 2007 Congressional Add funding. CRLs will lose their nuclear capability until integration of the Mil-STD 1760 System II nuclear munitions and development and integration of a nuclear hardened IWIU. No new Nuclear CSRLs are required.</p> <p>Aircraft Software modification: Consists of modifying existing aircraft, JDAM Software and ground based Joint Mission Planning System (JMPS).</p> <p>Increment 1.2 provides capability for internal carriage of eight Joint Air to Surface Standoff Missiles-Extended Range (JASSM-ER) or eight Miniature Air Launched Decoys (MALD). Internal capabilities include authorized munition variants, for example, JDAM, GBU-31 (v)1, (v)3, GBU-38, JASSM, and MALD-Jammer (MALD-J).</p> <p>Common Rotary Launcher(CRL) Hardware modification: Consists of modifying the Increment 1.1 configuration by adding four Group B LRUs, (three power supplies, one junction box) and Group A associated interface wiring.</p> <p>Seventy-six (76) Aircraft Hardware modification: Consists of Group A wiring and circuit breakers to supply additional power to the CRL. Aircraft Software modification: Includes modifying existing JASSM-ER, MALD software.</p> <p>Support Equipment: Thirty-eight (38) Multi-Use System Tester Armament Next Generation (MUSTANG) testers will be modified to support both increments.</p> <p>Increment 2 will provide carriage expansion of the CRL through a software and hardware modification and will increase the number of weapon stations from 8 to 16 to support 500 lb class munitions. This will occur after increment one completes.</p> <p>Mode S/5 IFF Mode S/5 Identification Friend or Foe (IFF) is part of the Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) effort and will develop and integrate modern technolog into the B-52 to enable it to operate in the evolving air traffic environment. This effort is driven by International Civil Aviation Organization (ICAO) and Federal Aviation Administration (FAA) mandates to comply with performance standards to allow the B-52 to operate safely in controlled airspace. This program will also yield significant savings by allowing the use of more efficient flight routes and altitudes.</p> <p>CNS/ATM Capabilities identified under CNS/ATM activities will include Frequency Management (FM) immunity, digital communications (voice and data), improved navigation accuracy such as Required Navigation Performance (RNP) or Global Positioning System (GPS) enhancements, Reduced Vertical Separation Minimum (RVSM),</p>		

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<p>enhanced situational awareness such as Mode S/5 IFF, Communications Management Unit, HF Data Link, Auto Dependent Surveillance-Broadcast (ADS-B), and any follow-activities to associated components/systems resulting from modifications to CNS/ATM systems.</p> <p>Anti-Skid Replacement Anti-Skid system is used to maintain control of aircraft during landings and taxi operations. The B-52 Anti-Skid system prevents aircraft skidding by sensing the exact amount of brake pressure needed for safe braking under all runway conditions without tire damage. Previous B-52 Anti-Skid supportability analysis, completed in 2006 by General Atomics, indicated a supportability end date of 2011, based on parts obsolescence, a lack of test equipment and a lack of repair personnel. Parts obsolescence continues to be a major supportability factor. However, since the previous analysis, test equipment and new depot maintenance procedures to refurbish previously failed Anti-Skid Detectors have been put in place in order to provide spares until 2015 when the replacement will be available. The Anti-Skid Replacement program develops and installs a new system. This effort includes an upgrade of the maintenance trainers.</p> <p>B-52 EHF The B-52 Extremely High Frequency (EHF) program integrates and installs the B-52 fleet with the equipment needed to provide secure, survivable two-way EHF SATCOM link for Emergency Action Messages (EAMs) and report-backs to meet Joint Chiefs of Staff (JCS) nuclear protected Information Exchange Requirements (IERs). The B-52 EHF will install/integrate the Family of Advanced Beyond-Line-of-Sight (BLOS) Terminal (FAB-T) Airborne Wideband Terminal system developed and procured by Space and Missile Center (SMC) through PE 0303601F or other equivalent terminals/solutions, as necessary to meet user requirements. The B-52 EHF will also integrate a high data rate BLOS communication link supporting IP-based Global Information Grid (GIG) interoperability into the B-52 architecture. The B-52 EHF program is planned to be accomplished in two increments. Increment 1 preserves the existing B-52 capability to receive EAMs and report-backs via SATCOM to include an Environmental Control System (ECS) modification required to support the additional communication equipment. Increment 2 provides GIG and net-ready capability as well as full integration with other-B-52 systems.</p> <p>The B-52 EHF program was terminated in the FY13 PB.</p> <p>SR2 The B-52 Strategic Radar Replacement (SR2) program replaces the current AN/APQ-166 Strategic Radar fielded in the 1960s and then upgraded in the 1970s and 1980s. Although modified several times, it has never been totally replaced and several parts of the system remain from the original design, such as the antenna reflector, feed, and casting. Although sustainable through the current service life of the B-52, the legacy radar system MTBF continues to degrade and sustainment costs are expected to significantly increase after 2017. The SR2 program is a radar replacement program that may take advantage of the advanced capabilities of modern non-developmental radars, maximizing commonality with other platforms. The B-52 SR2 Program will integrate, test, and field a modern radar system, which supports all weather targeting and navigation to support the requirements of keeping the B-52 combat capable for its extended service life. Additionally, the remaining two legacy MFDs will be upgraded to take advantage of the replacement radar's full capability.</p> <p>The B-52 SR2 program was terminated in the FY13 PB.</p>		

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APPROPRIATION/BUDGET ACTIVITY
3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE
PE 0101113F: *B-52 SQUADRONS*

Reconstitution of B-52 Nuclear Capability Study/Electromagnetic Pulse Test (EMP)
Renewed emphasis of the Air Force Nuclear Mission and the pivotal role the B-52 capabilities play into that role require a study be completed to ensure the platform maintains an enhanced level of readiness. The study will evaluate the nuclear hardening of the platform and ensure the survivability of existing Global Strike Weapons. Tasks include development of a plan required for full-scale EMP test of the B-52's nuclear mission essential systems.

ENGINEERING STUDIES & ANALYSIS AND TEST & EVALUATION
B-52 modernization funds test activities at the Air Force Flight Test Center (AFFTC), engineering and planning studies for potential future weapon system enhancements (weapons, sensors, avionics and EW) and emerging requirement on current programs, upgrades to the B-52 SIL, AISF and WSTs, and weapon system operational/safety, supportability, reliability, and Total Ownership Cost (TOC) improvements.

ARMS CONTROL ACTIVITIES (Funding is in the ARMS Control PE, 35145F)
Arms Control Activities under the New START Treaty drives the need to modify a number of B-52s to a conventional only role by removing the Code Enable Switch and associated equipment. This effort requires a complete design to remove the equipment from the aircraft and install metal plates prohibiting reinstallation of removed equipment to comply with treaty protocols.

ADDITIONAL EFFORTS
B-52 modernization funds additional efforts that stem from the operation and maintenance of a 50-plus-year-old aircraft, such as parts obsolescence, DMS, and emerging requirements to add to or maintain the existing capabilities. Examples include, but are not limited to upgrades to outdated avionics computers, mission planning interfaces to JMPS, Air Force Mission Support System (AFMSS), and other mission planning systems (JMPS), upgrades to the EW suite, and studies and analysis. All B-52 development programs support planned requirements for unique identification in their production phases.

This program 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 funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	93.808	53.208	41.173	-	41.173
Current President's Budget	84.171	53.208	24.007	-	24.007
Total Adjustments	-9.637	0.000	-17.166	-	-17.166
• 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	-6.809	0.000			
• SBIR/STTR Transfer	-2.828	0.000			
• Other Adjustments	0.000	0.000	-17.166	-	-17.166

Change Summary Explanation

FY12 adjustments: -6.809M in two BTR's (\$5.0M ICBM Alternative Guidance Technologies (AGT); \$1.809M Nuclear Surety), and \$2.828M Small Business Innovative Research (SBIR).

FY14 adjustments: -17.166M due to the termination of the CONECT Restructure effort, which required additional development for the replacement monitors, and reinstatement of the Original CONECT effort which completed EMD in May 2012.

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force **DATE:** April 2013

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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
675039: <i>B-52 Modernization</i>	-	84.171	0.065	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] 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

Note

The EHF and SR2 programs were terminated in FY13 PB.

A. Mission Description and Budget Item Justification

Prior to FY13, all B-52 modernization programs were funded in a single BPAC, 675039 B-52 Modernization.

B-52 MODERNIZATION PROGRAMS

B-52 modernization is a comprehensive program to ensure B-52 viability to perform current and future wartime missions to include datalinks, navigation, sensors, weapons, and electronic warfare (EW) and training capabilities. B-52 modernization (initiated in FY 2005) integrates and adds both tactical and global datalink communications for real time command and control, targeting, and intelligence. It upgrades antiquated Air Traffic Management (ATM) systems with those supported by three key functions using satellite technology: Communications, Navigation and Surveillance (CNS). Modernization upgrades training devices to support aircrew and maintenance training with the latest B-52 capability. In addition, modernization improves conventional warfare capability with additional MIL-STD-1760 smart weapons and improved weapons carriage and fully integrates advanced targeting pods with the offensive avionics system. B-52 modernization upgrades or replaces legacy defensive EW systems to include the radar warning receiver, jammers, chaff and flare dispensers and situational awareness displays as well as integration of offensive EW such as the Miniature Air-Launched Decoy (MALD) and MALD-Jammer (MALD-J). Lastly, B-52 Modernization replaces the current aging strategic radar capability with a state-of-the-art, non-developmental radar.

BA7- This program 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 funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2012	FY 2013	FY 2014
Title: Arms Control Activities	0.000	0.065	0.000
Description: Arms Control Activation under the New START Treaty drives the need to modify approximately 28 B-52s to a conventional only role by removing the Code Enable Switch and associated equipment. This effort requires a complete design to remove the equipment from the aircraft and install metal plates prohibiting reinstallation of removed equipment to comply with treaty protocols.			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: N/A				
FY 2013 Plans: Studies/analysis to begin efforts to modify 28 aircraft to a conventional role. Design removal of equipment from aircraft and install equipment.				
Title: CONECT Description: Integrates rapid re-tasking capability of J-series weapons and conventional cruise missiles, dedicated BLOS UHF comm/datalink; computer network infrastructure, digital interphone. Multi-Function Color Displays (MFCD); and an Intelligence Broadcast Receiver (IBR). FY 2012 Accomplishments: Milestone C flight testing completed Nov 11. Milestone C and permission to into Low Rate Initial Production (LRIP) approved May 2012. Complete flight testing of the additional J-Series messages and IBR (Drop D). Analyze/fix ground/flight test issues as they are identified. Begin DMS redesign development and test effort. Begin IOT&E testing. Purchase hardware required for integration into the B-52 training systems and begin engineering design of CONECT capability into the training systems. FY 2013 Plans: Effort moved to BPAC 675050		60.884	0.000	0.000
Title: CONECT Management Services Description: Program Management Administration (PMA). Government travel, Centralized IT, SF and Support, A&AS Support FY 2012 Accomplishments: Government travel, Centralized IT, SF and Support, A&AS Support FY 2013 Plans: Effort moved to BPAC 675050		4.494	0.000	0.000
Title: EHF Description: Integrates the FAB-T Airborne Wideband Terminal (AWT) or other equivalent terminals, as required, to preserve existing B-52 capability to receive EAMs and transmit report-backs; supports USSTRATCOM requirement for secure, survivable communications. Modifies B-52 ECS to support EHF and accommodate for B-52 aircraft system modifications. Future increment provides integration into GIG to provide wideband BLOS datalink.		1.208	0.000	0.000

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
<i>FY 2012 Accomplishments:</i> Completion of efforts related to SRR of the EHF and ECS designs. Complete efforts associated with FAB-T analysis of B-52 unique requirements.			
<i>FY 2013 Plans:</i> Program terminated in FY13 PB.			
<i>Title:</i> Anti-skid <i>Description:</i> Replaces legacy B-52 Anti-skid system with modernized system improving safety and cockpit display. Anti-Skid Detector has been identified a critical obsolescence item, which begins to be unsupportable in FY15.	3.599	0.000	0.000
<i>FY 2012 Accomplishments:</i> Continue with HITL Simulations; Flight Test Activities, TO source data, Airworthiness Certification documents.			
<i>FY 2013 Plans:</i> Effort moved to BPAC 675051.			
<i>Title:</i> Anti-Skid Management Services <i>Description:</i> Program Management Administration (PMA) costs in support of the Anti-Skid program.	0.013	0.000	0.000
<i>FY 2012 Accomplishments:</i> Travel in support of the Anti-Skid program.			
<i>FY 2013 Plans:</i> Program terminated in FY13 for higher Air Force priorities			
<i>Title:</i> SR2 <i>Description:</i> Integrates modern non-developmental airborne radar replacing current, mission critical APQ-166 Strategic Radar, last upgraded in early-1980s. Legacy Strategic Radar is experiencing systemic sustainment and obsolescence issues.	0.007	0.000	0.000
<i>FY 2012 Accomplishments:</i> Complete SR2 studies and initiate program activities required for termination of effort in FY 13.			
<i>FY 2013 Plans:</i> Program terminated in FY13 PB.			
<i>Title:</i> Mode S/5 IFF	1.128	0.000	0.000

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
<p>Description: Integrates modern IFF technology onto the B-52 by replacing the current system with APX-119; required by DoD, FAA and ICAO.</p> <p>FY 2012 Accomplishments: Upgrade System Integration Lab (SIL), Developmental and Operational Test Procedures, EMI/EMC (safety of flight) Test procedures as required, identify long-lead components, complete all fabrication drawings, develop Installation Drawing package, conduct SIL testing, support ground/flight testing and Air Traffic Control Radar System IFF Mark 12/Mark 12A, AIMS, ESC Systems platform certification, and report certification results. Update technical orders and weapon system trainer configuration to include Mode S/5 IFF.</p> <p>FY 2013 Plans: Effort moved to BPAC 675049</p>				
<p>Title: Mode S/5 IFF Management Services</p> <p>Description: Program Management Administration (PMA) costs in support of Mode S/5 IFF.</p> <p>FY 2012 Accomplishments: Travel in support of the Mode S/5 IFF program.</p> <p>FY 2013 Plans: Effort moved to BPAC 675049</p>		0.038	0.000	0.000
<p>Title: 1760 IWBU</p> <p>Description: 1760 Internal Weapons Bay Upgrade - provides internal J-series weapons capability through modification of CSRLs with IWIU and upgraded weapon management software.</p> <p>FY 2012 Accomplishments: Continue Increment 1.1: Continue Seek Eagle safe separation analysis; conduct ground and flight testing of CRL prototype and JDAM SMO; finalize drawings for aircraft, CRL, and test support equipment modification kits; and complete development of technical orders. Continue Increment 1.2: Modify JASSM and MALD SMOs (including respective -ER and -J variant capabilities); perform engineering and test support for SIL, ground and flight testing. Develop technical orders. Continue B-52 JMPS development, testing, and certification with JASSM and MALD, including respective variants.</p> <p>FY 2013 Plans: Effort moved to BPAC 675048</p>		12.740	0.000	0.000
<p>Title: 1760 IWBU Management Services</p>		0.060	0.000	0.000

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
Description: Program Management Administration (PMA) costs in support of the 1760 IWBU program.			
FY 2012 Accomplishments: Travel in support of the 1760 IWBU program.			
FY 2013 Plans: Not Applicable			
Accomplishments/Planned Programs Subtotals	84.171	0.065	0.000

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	FY 2012	FY 2013	FY 2014 <u>Base</u>	FY 2014 <u>OCO</u>	FY 2014 <u>Total</u>	FY 2015	FY 2016	FY 2017	FY 2018	<u>Cost To Complete</u>	<u>Total Cost</u>
• RDTE: BA07: PE 0305145F: <i>Arms Control Implementation</i>	0.000	4.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	4.000
• APAF: BA05: Line Item # B05200: <i>B-52</i>	85.841	8.299	108.666		108.666	102.715	31.151	8.266	3.890	Continuing	Continuing
• APAF: BA_05: Line Item # B05200: <i>Training Support to Units</i>	7.574	1.482	1.836		1.836	2.375	2.431	2.472	2.517	Continuing	Continuing
• APAF: BA 05: Line Item # B05200: <i>Arms Control Implementation</i>	0.000	0.000	0.500		0.500	0.200	0.100	0.200	0.000	0.000	1.000
• APAF: BA06: Line Item # 000999: <i>Initial Spares</i>	0.000	0.000	3.202		3.202	5.118	0.473	0.000	0.000	0.000	8.793
• APAF: BA07: Line Item # 000071: <i>Aircraft Replacement Support Equip</i>	14.457	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	14.457
• APAF: BA07: Line Item # 000084: <i>Post Production Support</i>	0.000	0.000	7.000		7.000	5.300	7.100	8.800	0.000	0.000	28.200

Remarks

D. Acquisition Strategy
The B-52 CONECT EMD prime contract was a sole source to Boeing Defense, Space & Security (DSS), Wichita, KS. Boeing designed, developed, tested and procured the necessary equipment from their subcontractors; developed engineering drawings, logistic and technical data, and time compliance technical order (TCTO) for installation on the B-52. The EMD effort included installing and testing CONECT equipment on a B-52 aircraft. The B-52 EHF EMD prime contract was a sole

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	PE 0101113F: <i>B-52 SQUADRONS</i>	675039: <i>B-52 Modernization</i>

source to Boeing DSS, Wichita, KS. Boeing preserved the B-52 capability to receive EAMS and report-backs, upgraded current SIL and the environmental control system. The Engineering Manufacturing Development (EMD) effort includes installing and testing the EHF equipment on a B-52 aircraft.

The 1760 Internal Weapons Bay program will acquire software development and hardware design via a sole-source contract to Boeing DSS, Wichita, KS. Deliverables include an updated J-series weapon SMOs (software), a prototype modified CSRL, logistics support, ground and flight test support, and engineering drawings. The program will competitively procure the CRL modification kits for full rate production.

The B-52 Anti-Skid program is a joint effort between OC-ALC and OO-ALC. The modification will be implemented via Program Depot Maintenance (PDM) and Contract Field Team (CFT).

The B-52 Strategic Radar Replacement (SR2) Program was a sustainment upgrade to the B-52H fleet by leveraging existing technologies, designs, and radar components (e.g., line replaceable units (LRUs) already in production and fielded on other military platforms. It used existing, mature, proven technologies and focused resources on identifying and reducing the risk associated with integrating a modern radar onto the B-52H platform. The SR2 program was created to replace the AN/APQ-166 radar and several components in the Offensive Avionics System (OAS) associated with managing the video chain. Closeout activities began in FY12 due to program termination beginning in FY13.

The Mode S/5 IFF Program's EMD contract is sole source to Boeing Defense, Space and Security (DSS), Wichita, KS. This modification will be implemented via Contract Field Team (CFT).

The Tactical Data Link (TDL) will be sole source to Boeing DSS, Wichita, KS for the integration of TDL based on the CONECT baseline.

The Reconstitution of B-52 Nuclear Capability Study will be sole source to Boeing DSS.

E. 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675039: <i>B-52 Modernization</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Arms Control Activities	SS/CPAF	Boeing:Wichita, KS	-	0.000		0.065	Sep 2013	0.000		-		0.000	Continuing	Continuing	
CONNECT EMD	SS/CPIF	Boeing:Wichita, KS	-	31.958	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
B-52 EHF EMD	SS/ Various	Boeing:Wichita, KS	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
ATP Functions	Allot	WPAFB:Dayton, OH	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Mode S/5 IFF EMD	SS/CPFF	Boeing:Wichita, KS	-	0.049	Jan 2013	0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWBU EMD	SS/CPIF	WPAFB:Dayton, OH	-	1.000	May 2013	0.000		0.000		-		0.000	Continuing	Continuing	
SR2	SS/CPFF	Boeing:Wichita, KS	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Anti-Skid Group B Hardware Development	SS/FFP	ES3/OO-ALC UT:Clearfield UT, KS	-	1.211	Sep 2012	0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB Software Development	Various	Boeing:Wichita, KS	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB Production Development	Various	Boeing:Wichita, KS	-	4.040	Apr 2012	0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB Mission Planning Development	WR	557 SMXS:Tinker AFB, OK	-	3.000		0.000		0.000		-		0.000	Continuing	Continuing	
Other Air Force Priorities	Various	Air Force:,	-	10.171		0.000		0.000		-		0.000	Continuing	Continuing	
Subtotal			0.000	51.429		0.065		0.000		0.000		0.000			

Remarks
In FY12, transition to closeout actions for SR2 and EHF.

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
CONNECT Simulator/Trainer	Various	507 ACSS:OO-ALC, UT	-	11.250	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	
CONNECT CLIP Support	SS/FP	ESC/HNA:ESC, MA	-	0.858	Mar 2012	0.000		0.000		-		0.000	Continuing	Continuing	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675039: <i>B-52 Modernization</i>
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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
B-52 EHF Satellite Simulator - Lincoln Labs (FFRDC)	MIPR	ESC:Hanscom AFB, MA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
ATP Software Trainer Upgrades	MIPR	OO-ALC:Ogden, UT	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
SR2	Various	Wright-Patterson AFB:, OH	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
ATP Test Support	SS/CPFF	Boeing:Wichita, KS	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWBU PDU Support	Various	Wright-Patterson AFB:, OH	-	4.695		0.000		0.000		-		0.000	Continuing	Continuing	
Subtotal			0.000	16.803		0.000		0.000		0.000		0.000			

Remarks

In FY12, transition to closeout actions for SR2 and EHF.

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CONNECT 419 FLTS	PO	419 FLTS:Edwards AFB, CA	-	5.782	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
B-52 EHF 419 FLTS	PO	419 FLTS:Edwards AFB, CA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
CONNECT JTIC	MIPR	JTIC:Fort Huachuca, AZ	-	0.394	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	
SR2	PO	Not specified.:Edwards AFB, CA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Anti-Skid Replacement	PO	419 FLTS:Edwards, AFB, CA	-	1.788	Aug 2012	0.000		0.000		-		0.000	Continuing	Continuing	
Anti-Skid Flight Test Strut Instrumentation	SS/FFP	ES3:Clearfield, UT	-	0.600	Sep 2012	0.000		0.000		-		0.000	Continuing	Continuing	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675039: <i>B-52 Modernization</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
1760 IWB Government Test	PO	419 FLTS:Edwards AFB, CA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Mode S/5	PO	Not specified.:Edwards AFB, CA	-	1.103	Oct 2012	0.000		0.000		-		0.000	Continuing	Continuing	
Subtotal			0.000	9.667		0.000		0.000		0.000		0.000			

Remarks
In FY12, transition to closeout actions for SR2 and EHF.

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CONNECT ASC/WWV	Various	ASC/WWV:Wright-Patterson AFB, OH	-	0.894	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
B-52 EHF	Various	ASC/WWV:Wright-Patterson AFB, OH	-	1.208	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	
SR2 ASC/WWV	Various	ASC/WWV:Wright-Patterson AFB, OH	-	0.007	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
CONNECT OCALC/GKDF	Various	OCALC/GKDF:Tinker AFB, OK	-	0.080	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
SR2 OCALC/GKDF	Various	Not specified.:Tinker AFB, OK	-	0.020	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB Program Management Support	C/Various	TAASC:Tinker AFB, OK	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB PMA/TDY	Various	AFLCMC/WWV:Tinker AFB, OK	-	0.065		0.000		0.000		-		0.000	Continuing	Continuing	
Mode S/5 IFF PMA/TDY	Various	AFLCMC/WWV:Tinker AFB, OK	-	0.014		0.000		0.000		-		0.000	Continuing	Continuing	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675039: <i>B-52 Modernization</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Anti-Skid PMA/TDY	Various	AFLCMC/ WWV:Tinker AFB, OK	-	0.013		0.000		0.000		-		0.000	Continuing	Continuing	
CONNECT Program Support, Studies and Analysis, and Misc Expenses	Various	Various;	-	3.971	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
B-52 EHF Program Support, Studies and Analysis	Various	Various;	-	0.000	Mar 2012	0.000		0.000		-		0.000	Continuing	Continuing	
SR2 Program Support, Studies and Analysis	Various	Various;	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Subtotal			0.000	6.272		0.000		0.000		0.000		0.000			

Remarks
In FY12, transition to closeout actions for SR2 and EHF.

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	84.171	0.065	0.000	0.000	0.000			

Remarks
In FY12, transition to closeout actions for SR2 and EHF.

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675039: <i>B-52 Modernization</i>

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B-52 Modernization Schedule



Activity	FY12				FY13				FY14				FY15				FY16				FY17				FY18				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1760 IWBU 1.1	Milestones																												
	Reqmts																												
	EMD	Development																											
	LRIP	Budget Activities Transferred to BPAC 675048																											
	FRP	Budget Activities Transferred to BPAC 675048																											
Anti-skid	Milestones																												
	EMD	Grp A CDR																											
	Anti-Skid Kit Proc	EMD																											
CONECT	Milestones																												
	EMD	MS C																											
	LRIP	Budget Activities Transferred to BPAC 675050																											
Mode S/5 IFF	Milestones																												
	EMD	MS B																											
	APX-119 Proc	EMD																											
	Mode S/5 Kit Proc	Budget Activities Transferred to BPAC 675049																											

Concept activities
 Production / fielding
 Design / development
 Operations / sustainment
 Integration / test
 Key events

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Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675039: <i>B-52 Modernization</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CONNECT Ground/Flight Test Drop D	1	2012	4	2012
CONNECT LRIP Milestone C	3	2012	3	2012
Anti-Skid EMD	1	2012	4	2013
Mode S/5 IFF EMD	2	2012	3	2014
1760 IWB EMD	3	2013	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675048: <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>
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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
675048: <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>	-	0.000	16.490	11.373	-	11.373	8.264	3.901	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] 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

Note

PRIOR YEAR COSTS FOR 1760 IWBU FY10-FY12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675048 STARTING IN FY13.

A. Mission Description and Budget Item Justification

MIL-STD 1760 Internal Weapons Bay Upgrade (IWBU) requires the integration of the 1760 weapons capability into the bomb bay on seventy-six (76) B-52H aircraft utilizing Common Strategic Rotary Launcher (CSRLs) converted into Conventional Rotary Launchers (CRLs). The 1760 IWBU program is segmented into two Increments; Increment 1 consists of two sub-increments 1.1 and 1.2.

Increment 1.1 consists of internal carriage of eight Joint Direct Attack Munitions (JDAM) and variants, to include Laser JDAM (L-JDAM), on a rotary launcher. Additionally, L-JDAM will be integrated on external hard points during this effort. The CRL Hardware modification consists of Group A equipment racks and electrical wiring and Group B consists of one Integrated Weapons Interface Unit (IWIU) per CRL. This Line Replaceable Unit (LRU) was previously developed under the Advanced Weapons Integration (AWI) program and work was previously accomplished for a 2005 demonstration or developed using 2006 and 2007 Congressional Add funding. CSRLs will lose their nuclear capability when modified into a CRL. No new Nuclear CSRLs will be required. The aircraft software modification consists of modifying existing aircraft, JDAM Stores Management Overlays (SMO), and ground based Joint Mission Planning System (JMPS).

CRL Hardware modification: Consists of Group A equipment racks and electrical wiring, Group B consists of one Integrated Weapons Interface Unit (IWIU) per CRL, this Line Replaceable Unit (LRU) was previously developed under the Advanced Weapons Integration (AWI) program and work previous accomplished for a 2005 demonstration or developed using 2006 and 2007 Congressional Add funding. CRLs will lose their nuclear capability until integration of the MIL-STD 1760 System II nuclear munitions and development and integration of a nuclear hardened IWIU. No new Nuclear CSRLs will be required.

Aircraft Software modification: Consists of modifying existing aircraft, JDAM Software and ground based Joint Mission Planning System (JMPS).

Increment 1.2 provides capability for internal carriage of eight Joint Air to Surface Standoff Missiles-Extended Range (JASSM-ER) or eight Miniature Air Launched Decoys (MALD). Internal capabilities include authorized munition variants, for example, JDAM, GBU-31 (v)1, (v)3, GBU-38, JASSM, and MALD-Jammer (MALD-J).

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675048: <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>
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CRL Hardware modification: Consists of modifying the Increment 1.1 configuration by adding four Group B LRUs, (up to three power supplies and one junction box) and Group A associated interface wiring.

Aircraft Hardware modification: Consists of Group A wiring and circuit breakers to supply additional power to the CRL. Aircraft Software modification: Includes modifying existing JASSM-ER, MALD software.

Support Equipment: Thirty-eight (38) Multi-Use System Tester Armament Next Generation (MUSTANG) testers will be modified to support both increments.

A future Increment (Increment 2) will provide carriage expansion of the CRL through a software and hardware modification and will increase the number of weapon stations from 8 to 16 and provide mixed load capability. This will occur after Increment 1 completes.

B-52 Advanced Weapons Integration (AWI) initiatives previously managed under MN-4260 are now managed under two separate modifications for clarity in effort, funding and schedule. The initiatives are now described in MN-4260 Advanced Weapons Integration (AWI) and MN-6884 MIL-STD-1760

Budget Item Justification: FY14 continues Increment 1.1 development, continues SEEK EAGLE safe separation analysis, and conducts ground and flight testing of CRL prototype and JDAM SMO. Continue B-52 Joint Mission Planning System (JMPS) and Trainer/GMCP software. Finalize drawings for CRL, and test support equipment modification kits to support Milestone C activity. Begin development of technical orders in preparation for kit-proof. Modify three prototype CRLs.

BA7- This program 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 funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
<p>Title: 1760 IWBU</p> <p>Description: 1760 Internal Weapons Bay Upgrade - provides internal J-series weapons capability through modification of CSRLs with IWIUs and upgraded weapon management software.</p> <p>FY 2012 Accomplishments: Effort accomplished in BPAC 675039</p> <p>FY 2013 Plans: Continue Increment 1.1: Continue SEEK EAGLE safe separation analysis, conduct preliminary design review, critical design review, technical readiness review, continue formal qualification testing of JDAM software stores management overlay and enter engineering, manufacturing and development phase. Continue B-52 Joint Mission</p>	0.000	15.648	10.429

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675048: <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
Planning System (JMPS) development, testing, and certification. Begin design, coding, and testing ground maintenance computer program software. FY 2014 Plans: Continue Increment 1.1 development: Continue SEEK EAGLE safe separation analysis. Conduct ground and flight testing of CRL prototype and JDAM SMO. Continue B-52 Joint Mission Planning System (JMPS)) and Trainer/GMCP software. Finalize drawings for CRL, and test support equipment modification kits to support Milestone C activity. Begin development of technical orders in preparation for kit-proof. Modify three prototype CRLs.			
Title: 1760 IWBU Management Services Description: Program Management Administration (PMA) costs in support of the 1760 IWBU program. FY 2012 Accomplishments: Effort accomplished in BPAC 675039. FY 2013 Plans: A&AS and Travel in support of the 1760 IWBU program. FY 2014 Plans: A&AS and Travel in support of the 1760 IWBU program.	0.000	0.842	0.944
Accomplishments/Planned Programs Subtotals	0.000	16.490	11.373

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF: BA05: Line Item #	0.000	3.238	5.120		5.120	0.380	0.000	0.000	0.000	Continuing	Continuing
B05200: <i>B-52</i>											
• RDTE: BA07: PE 0101113F: <i>B-52 Squadrons</i>	12.800	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy
 The 1760 Internal Weapons Bay Upgrade program will acquire software development and hardware design via a sole-source contract to Boeing DSS, Wichita, KS. Deliverables include an updated J-series weapon SMOs (software), three prototype modified CSRLs, logistics support, ground and flight test support, and engineering drawings. The program will competitively procure the CRL modification kits for full rate production.

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675048: <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>

E. 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					PROJECT					
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					PE 0101113F: B-52 SQUADRONS					675048: 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
1760 IWBU Production Development	Various	Boeing:Wichita, KS	-	0.000		13.459	May 2013	6.041	Jan 2014	-		6.041	Continuing	Continuing	
1760 IWBU Mission Planning Development	WR	557 SMXS:Tinker AFB, OK	-	0.000		0.000		0.834	Jan 2014	-		0.834	Continuing	Continuing	
Subtotal			0.000	0.000		13.459		6.875		0.000		6.875			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
1760 IWBU Government Test	PO	419 FLTS:Edwards AFB, CA	-	0.000		1.004	Jul 2013	2.968	Jan 2014	-		2.968	Continuing	Continuing	
1760 IWBU Trainer Software	Allot	AFLCMC:Wright Patterson AFB, OH	-	0.000		1.177	Jun 2013	0.090	Jan 2014	-		0.090	Continuing	Continuing	
1760 IWBU Ground Maintenance Computer Program	WR	Not specified.:	-	0.000		0.008	Jun 2013	0.496	Jan 2014	-		0.496	Continuing	Continuing	
Subtotal			0.000	0.000		2.189		3.554		0.000		3.554			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
1760 IWBU Program Management	Various	Not specified.:Tinker AFB, OK	-	0.000		0.842	Apr 2013	0.944	Nov 2013	-		0.944	Continuing	Continuing	

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675048: <i>1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
1760 IWBU Milestone B	3	2013	3	2013
1760 IWBU EMD	3	2013	4	2014
1760 IWBU Milestone C	4	2014	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675049: <i>MODE S/5 IFF</i>
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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
675049: <i>MODE S/5 IFF</i>	-	0.000	1.202	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] 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

Note

PRIOR YEAR COSTS FOR MODE S/5 IFF FY11-FY12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675049 STARTING IN FY13.

A. Mission Description and Budget Item Justification

Beginning in FY13 Project Number 675049, Mode S/5 IFF, transferred from Project Number 675039, B-52 Modernization.

Mode S/5 IFF

Mode S/5 Identification Friend or Foe (IFF) is part of the Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) effort and will develop and integrate modern technology into the B-52 to enable it to operate in the evolving air traffic environment. This effort is driven by International Civil Aviation Organization (ICAO) and Federal Aviation Administration (FAA) mandates to comply with performance standards to allow the B-52 to operate safely in controlled airspaces. This program will also yield significant savings through more efficient flight routes and altitudes.

CNS/ATM

Capabilities identified under CNS/ATM activities will include Frequency Management (FM) immunity, digital communications (voice and data), improved navigation accuracy such as Required Navigation Performance (RNP) or Global Positioning System (GPS) enhancements, Reduced Vertical Separation Minimum (RVSM), enhanced situational awareness such as Mode S/Mode 5 IFF, Communications Management Unit, HF Data Link, Auto Dependent Surveillance- Broadcast (ADS-B), and any follow-on activities to associated components/systems resulting from modifications to CNS/ATM systems.

BA7- This program 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 funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2012	FY 2013	FY 2014
Title: Mode S/5 IFF	0.000	1.152	0.000
Description: Integrates modern IFF technology onto the B-52 by replacing the current system with APX-119 required by DoD, FAA and the International Civil Aviation Organization (ICAO).			

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675049: <i>MODE S/5 IFF</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
<p><i>FY 2012 Accomplishments:</i> Effort accomplished in BPAC 675039.</p> <p><i>FY 2013 Plans:</i> Upgrade Systems Integration Lab (SIL), Developmental and Operational Test Procedures, EMI/EMC (saftey of flight) Test procedures as required, identify long-lead components, complete all fabrication drawings, develop Installation Drawing Package, conduct SIL testing, support ground/flight testing and Air Traffic Control Radar System IFF Mark 12/Mark 12A, AIMS, ESC Systems platform certification, and report certification results. Update technical orders and weapon system trainer configuration to include Mode S/5 IFF. Maintain interoperability with multiple configurations in fleet.</p>			
<p><i>Title:</i> Mode S/5 IFF Management Services</p> <p><i>Description:</i> Program Management Administration (PMA) costs in support of Mode S/5 IFF</p>	0.000	0.050	0.000
<p><i>FY 2012 Accomplishments:</i> Effort accomplished in BPAC 675039.</p> <p><i>FY 2013 Plans:</i> Travel in support of the Mode S/5 IFF program.</p>			
Accomplishments/Planned Programs Subtotals	0.000	1.202	0.000

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF: BA05: Line Item # B05200: <i>B-52</i>	0.000	0.000	9.590		9.590	12.203	2.509	0.000	0.000	Continuing	Continuing
• APAF: BA06: Line Item # 000999: <i>Initial Spares/Repair Parts</i>	0.000	0.000	0.592		0.592	0.905	0.075	0.000	0.000	Continuing	Continuing
• RDTE: BA07: PE 0101113F: <i>B-52 Squadrons</i>	1.166	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy
The Mode S/5 IFF Program's EMD contract is sole source to Boeing Defense, Space and Security (DSS), Wichita, KS. This modification will be implemented via Contract Field Team (CFT).

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675049: <i>MODE S/5 IFF</i>

E. 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT								
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				PE 0101113F: B-52 SQUADRONS				675049: MODE S/5 IFF								
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Mode S/5 IFF Fleet Interoperability EMD	SS/CPFF	Boeing:Wichita, OK	-	0.000		0.757	Apr 2013	0.000		-		0.000	Continuing	Continuing		
Subtotal			0.000	0.000		0.757		0.000		0.000		0.000				
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Mode S/5 IFF Simulator/ Trainers	MIPR	WPAFB:Dayton, OH	-	0.000		0.349	Jun 2013	0.000		-		0.000	Continuing	Continuing		
Subtotal			0.000	0.000		0.349		0.000		0.000		0.000				
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Interpreter Test Support	MIPR	Patuxent River:, MD	-	0.000		0.046	Feb 2013	0.000		-		0.000	Continuing	Continuing		
Subtotal			0.000	0.000		0.046		0.000		0.000		0.000				
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
PMA	Various	Tinker AFB:, OK	-	0.000		0.050		0.000		-		0.000	Continuing	Continuing		
Subtotal			0.000	0.000		0.050		0.000		0.000		0.000				
Project Cost Totals			0.000	0.000		1.202		0.000		0.000		0.000				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675049: <i>MODE S/5 IFF</i>
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	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
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Remarks									
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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675049: <i>MODE S/5 IFF</i>



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B-52 Squadrons
Mode S/5 Schedule

Activity	FY12				FY13				FY14				FY15				FY16				FY17				FY18				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Mode S/5 IFF	Milestones	☆ MS B				◇ Grp A CDR				☆ MS C																			
	EMD	EMD								Grnd/Fit Test																			
	APX-119 Proc					CA ◇ Grp B				CA ◇ Grp A				△ (35) (39) △															
	Mode S/5 Kit Proc													△ (35) (39) △															

- Concept activities
- Production / fielding
- Design / development
- Operations / sustainment
- Integration / test
- Key events

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675049: <i>MODE S/5 IFF</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Mode S/5 IFF Milestone B	2	2012	2	2012
Mode S/5 IFF EMD	2	2012	3	2014
Mode S/5 IFF Milestone C	3	2014	3	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675050: <i>CONNECT</i>
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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
675050: <i>CONNECT</i>	-	0.000	34.700	12.634	-	12.634	11.923	0.000	7.251	4.025	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

[#] 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

Note

PRIOR YEAR COSTS FOR CONNECT FY 05 - FY 12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675050 STARTING IN FY 13.

A. Mission Description and Budget Item Justification

CONNECT
The B-52 Combat Network Communications Technology (CONNECT) acquisition program supports nuclear and conventional operations by upgrading the B-52 fleet with tactical datalink and voice communications capabilities along with improved threat and situational awareness to support participation in network centric operations. The CONNECT upgrade includes new multi-functional color displays (MFCDs) and a digital interphone system, which will survive and function through the nuclear environment to enhance crew interaction and situational awareness. To enable net centric operations, the CONNECT upgrade integrates: on-board client/server architecture supporting distributed processing with independent control functions; UHF Beyond Line-Of-Sight (BLOS) Joint Range Extension (JRE) capability via ARC-210 Warrior radio to exchange J-Series messaging within theater; Intelligence Broadcast Receiver (IBR); limited Internet Protocol (IP)-based UHF BLOS link supporting e-mail and file transfers; and Improved Data Modem (IDM)-based digital Variable Message Format (VMF) datalink to significantly enhance close air support (CAS) missions. This integrated suite will provide the B-52 fleet with a machine-to-machine data transfer capability supporting aircraft re-tasking and re-targeting of Conventional Air Launched Cruise Missile (CALCM), Joint Air-to-Surface Standoff Missile/JASSM-Extended Range (JASSM/JASSM-ER), and other J-series weapons across the range of B-52 military operations and missions.

For FY14, the FY13 decision to restructure the CONNECT program was reversed. The Air Force FY14 PB submission funds the completion of the full CONNECT capability development, updates due to Diminishing Manufacturing Sources and Material Sources (DMSMS) issues, changes to incorporate updates to GFP, recurring changes to B-52 Software baseline, CONNECT capability inclusion into the required B-52 training systems, and production/installation/initial support for a total 30 CONNECT capable (2 kits were funded in EMD) aircraft. The test aircraft will not be de-modified from its original CONNECT configuration.

TRAINERS AND UPGRADES FOR CONNECT

In order to maintain currency with the latest aircraft configuration, the CONNECT program will update existing trainers or use computer-based training to add CONNECT functionality to meet user-training requirements and establish a system integration laboratory (SIL) for updates of the Weapon System Trainers (WST).

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675050: <i>CONNECT</i>
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This program 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 funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2012	FY 2013	FY 2014
<p>Title: CONNECT</p> <p>Description: Covered under BPAC 675039 in FY12. New BPAC (675050) was established with FY13 President's Budget. Continue DMS redesign development and test effort. Continuation of engineering design of CONNECT capability into the B-52 training systems. Begin incorporating changes required due to updates in GFE and crypto modernization requirements. Incorporate/integrate CONNECT with recurring updates of the B-52 software baseline.</p> <p>FY 2012 Accomplishments: Effort accomplished in BPAC 675039.</p> <p>FY 2013 Plans: Initiate restructure of the B-52 CONNECT program, to include replacement the current MFDs on non-CONNECT aircraft, due to long standing obsolescence issues. FY14 PB reverses this program path.</p> <p>FY 2014 Plans: Continue DMS redesign development and test effort. Continuation of engineering design of CONNECT capability into the B-52 training systems. Incorporate changes required due to updates in GFE and crypto modernization requirements. Incorporate/integrate CONNECT with recurring updates of the B-52 software baseline.</p>	0.000	32.822	11.579
<p>Title: CONNECT PMA</p> <p>Description: Government travel, Centralized IT, SF and support, A&AS support</p> <p>Covered under BPAC 675039 in FY12</p> <p>FY 2012 Accomplishments: Covered under BPAC 675039 for FY12</p> <p>FY 2013 Plans: Government travel, Centralized IT, SF and support, A&AS support</p> <p>FY 2014 Plans: Government travel, Centralized IT, SF and support, A&AS support</p>	0.000	1.878	1.055
Accomplishments/Planned Programs Subtotals	0.000	34.700	12.634

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675050: <i>CONNECT</i>

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2014</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• APAF: BA05: Line Item # B05200: <i>B-52</i>	84.406	0.000	87.200		87.200	83.600	27.300	6.900	2.500	Continuing	Continuing
• APAF: BA06: Line Item # 000999: <i>Initial Spares\Repair Parts</i>	0.000	0.000	3.100		3.100	3.100	0.000	0.000	0.000	0.000	6.200
• APAF: BA07: Line Item # 000084: <i>Post Production Support</i>	0.000	0.000	7.000		7.000	5.300	7.100	8.800	0.000	Continuing	Continuing
• RDT&E: BA07: PE 0101113F: <i>B-52 Squadrons</i>	74.056	34.700	12.634		12.634	11.923	0.000	7.251	4.025	Continuing	Continuing

Remarks

D. Acquisition Strategy

The B-52 CONNECT EMD prime contract was a sole source to Boeing Defense, Space & Security (DSS), Wichita, KS. Boeing designs, develops, tests and procures necessary equipment from their subcontractors; developed engineering drawings, logistic and technical data, and time compliance technical order (TCTO) for installation on the B-52.

E. 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675050: <i>CONNECT</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Baseline CONECT EMD - Wright Patt	SS/ Various	Boeing:Wichita, KS	-	0.000		0.000		6.702	Oct 2014	-		6.702	Continuing	Continuing	
CONECT Restructure - Tinker	Various	Not specified.:	-	0.000		34.700	Oct 2013	0.000		-		0.000	Continuing	Continuing	
Subtotal			0.000	0.000		34.700		6.702		0.000		6.702			

Remarks
FY13 President's Budget restructured the Baseline CONECT Program in lieu of making Evolutionary Data Link, a temporary mod, permanent. Also included updating the displays due to Diminishing Manufacturing Sources issues. The FY14 PB restored funding for the Baseline CONECT Program at a reduced fleet size of 30 aircraft.

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Trainer Update	Various	AFLCMC/ WNS:WPAFB, OH	-	0.000		0.000		3.976	Oct 2014	-		3.976	Continuing	Continuing	
Subtotal			0.000	0.000		0.000		3.976		0.000		3.976			

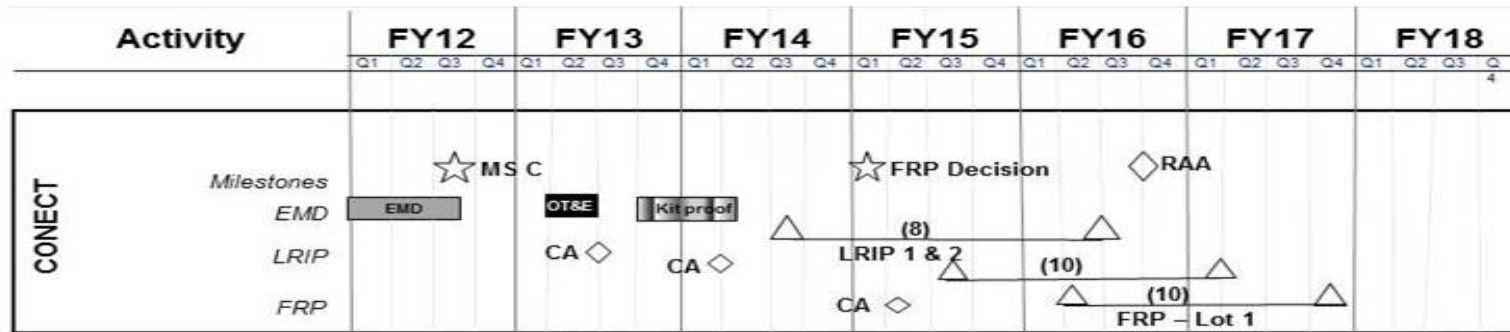
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Flight Test	PO	Edwards AFB:, CA	-	0.000		0.000		1.856	Oct 2014	-		1.856	Continuing	Continuing	
JITC	MIPR	Not specified.:	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Subtotal			0.000	0.000		0.000		1.856		0.000		1.856			

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675050: <i>CONECT</i>



B-52 CONECT Schedule



- Concept activities
- Production / fielding
- Design / development
- Operations / sustainment
- Integration / test
- Key events

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675050: <i>CONNECT</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CONNECT Milestone C	3	2012	3	2012
CONNECT LRIP 1 Award	2	2013	2	2013
CONNECT LRIP 2 Award	2	2014	2	2014
CONNECT Full Rate Award	2	2015	2	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675051: <i>ANTI-SKID</i>
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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
675051: <i>ANTI-SKID</i>	-	0.000	0.751	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] 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

Note

PRIOR YEAR COSTS FOR ANTI-SKID FY10-FY12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675051 STARTING IN FY13

A. Mission Description and Budget Item Justification

Beginning in FY13 Project Number 675051, B-52 Anti Skid Replacement, transferred from Project Number 675039, B-52 Modernization.

The B-52 Anti-skid system is used to maintain control of aircraft during landings and taxi operations. The B-52 Anti-skid system prevents aircraft skidding by sensing the exact amount of brake pressure needed for safe braking under all runway conditions without tire damage. Previous B-52 Anti-skid supportability analysis, completed in 2006 by General Atomics, indicated a supportability end date of 2011, based on parts obsolescence, a lack of test equipment and a lack of repair personnel. Parts obsolescence continues to be a major supportability factor. However, since the previous analysis, test equipment and new depot maintenance procedures to refurbish previously failed Anti-skid detectors have been put in place in order to provide spares until 2014/2015 when the replacement will be available. The Anti-skid Replacement program develops and installs a new system. This effort includes an upgrade of the maintenance trainers.

BA7- This program 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 funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2012	FY 2013	FY 2014
Title: Anti-skid	0.000	0.731	0.000
Description: Replaces legacy B-52 Anti-skid system with modernized system improving safety and cockpit display. Anti-skid detector has been identified a critical obsolescence item, which begins to be unsupported in FY15.			
FY 2012 Accomplishments: Effort accomplished in BPAC 675039.			
FY 2013 Plans:			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
Continue/complete Flight Test Activities, Flight Test Reports, update Technical Order (TO) data.			
Title: Anti-Skid Management Services	0.000	0.020	0.000
Description: Program Management Administration (PMA) costs in support of the Anti-Skid program.			
FY 2012 Accomplishments: Effort accomplished in BPAC 675039.			
FY 2013 Plans: Travel in support of the Anti-Skid program.			
Accomplishments/Planned Programs Subtotals	0.000	0.751	0.000

C. Other Program Funding Summary (\$ in Millions)

Line Item	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
• APAF: BA05: Line Item # B05200: <i>B-52</i>	0.000	0.000	6.737		6.737	5.936	0.898	0.914	0.930	Continuing	Continuing
• APAF: BA06: Line Item # 000999: <i>Initial Spares/Repair Parts</i>	0.000	0.000	0.384		0.384	0.589	0.048	0.000	0.000	Continuing	Continuing
• RDTE: BA07: PE 0101113F: <i>B-52 Squadrons</i>	3.617	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy
The B-52 Anti-skid program is a combined effort between OC-ALC and OO-ALC (both organizations now under the AF Life-Cycle Management Center). The modification will be implemented via Program Depot Maintenance (PDM) and Contract Field Team (CFT).

E. 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT								
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				PE 0101113F: B-52 SQUADRONS				675051: ANTI-SKID								
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000	
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
Anti-skid Replacement	Various	Edwards, AFB:Palmdale, CA	-	0.000		0.731	Nov 2012	0.000		-		0.000	0.000	0.731	0.751	
Subtotal			0.000	0.000		0.731		0.000		0.000		0.000	0.000	0.731	0.751	
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
PMA	Various	Tinker AFB:, OK	-	0.000		0.020		0.000		-		0.000	Continuing	Continuing		
Subtotal			0.000	0.000		0.020		0.000		0.000		0.000				
Project Cost Totals			0.000	0.000		0.751		0.000		0.000		0.000				
Remarks																

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101113F: <i>B-52 SQUADRONS</i>	PROJECT 675051: <i>ANTI-SKID</i>



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B-52 Squadrons *Anti-Skid Schedule*

Activity	FY12				FY13				FY14				FY15				FY16				FY17				FY18			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<i>Milestones</i>	◇ Grp A CDR								★ MS C																			
<i>EMD</i>	EMD				Ground/Flight Test																							
<i>Anti-Skid Kit Proc</i>									◇ CA (27)				(23)								△							

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Concept activities	Design / development	Integration / test
Production / fielding	Operations / sustainment	△◇ Key events

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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Anti-skid EMD & Test & Evaluation	1	2012	4	2013
Anti-skid MS C	1	2014	1	2014
Anti-skid FRP	1	2014	1	2016
Kit Proof	1	2015	1	2015
RAA	4	2015	4	2015