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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	351.549	260.466	340.819	-	340.819	432.155	422.958	361.634	271.430	Continuing	Continuing
675345: <i>B-2 Modernization</i>	351.549	260.466	5.135	-	5.135	2.007	1.945	1.962	1.988	Continuing	Continuing
676021: <i>BASELINE SUPPORT</i>	-	-	9.523	-	9.523	7.860	14.336	15.916	13.810	Continuing	Continuing
676022: <i>EHF SATCOM and Computer</i>	-	-	285.034	-	285.034	244.410	225.389	244.846	205.843	Continuing	Continuing
676023: <i>Defensive Management System</i>	-	-	41.127	-	41.127	177.878	181.288	98.910	49.789	Continuing	Continuing

Note

In FY10, Project Number 653843, B-2 Advanced Technology Bomber efforts transferred from PE 0604240F, B-2 Advanced Technology Bomber, to PE 0101127F, B-2 Squadrons, transferring funds/efforts from major force program (MFP) 6 to MFP 1.

Funding prior to FY10-FY12, and the estimate to complete after FY12 for the two B-2 ACAT 1 programs as follows:

(1) The ACAT 1C B-2 Extremely High Frequency Satellite Communication (EHF SATCOM) and Computers Increment 1: Prior years funding: \$288.5M; estimate to complete: \$6.4M

(2) The ACAT 1C B-2 Radar Modernization Program (RMP): Prior years funding: \$646.6M; estimate to complete: Not applicable. EMD is complete, effort is in full-rate production, no remaining RDT&E efforts after FY10.

In FY12, three new project numbers were established:

676021 Baseline Support

676022 EHF SATCOM and Computer

676023 Defensive Management System

Funding for the three new project numbers was transferred from the existing 675345 project number. Project number 675345 will continue to be used for B-2 Modernization efforts that are not allocated to the three new project numbers.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.515M in FY12.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0101127F: *B-2 SQUADRONS*

The program funding includes reductions for acquisition excellence efficiencies for project 676023 in FY15 and FY16 that are not intended to impact program content. Reductions for efficiencies may be spread to other Air Force programs at a later date. Amounts of the reductions are: \$3.7M/FY15 and \$54.2M/FY16.

A. Mission Description and Budget Item Justification

The B-2A Spirit is the world's most advanced long-range strike asset. The unique combination of range, precision, payload, and ability to operate in anti-access environments allow the B-2 to identify, locate, target, and destroy the highest value enemy targets. The B-2 can, with necessary upgrades, accomplish its mission regardless of location, return to base safely, and permit freedom of movement for follow-on forces, including other long range strike platforms.

The array of planned RDT&E projects are necessary to both preserve this strategic advantage as well as increase the flexibility, lethality, and survivability of this national asset tasked across a broad spectrum, from tactical to national objectives. Upgrades include, but are not limited to, armament systems, structures, engine improvements, low observable modifications, trainers, support equipment, Radar Modernization Program (RMP), Link-16 Center Instrument Display (CID)/In-Flight Replanner (IFR), Ultra High Frequency (UHF) Satellite Communication (SATCOM), Mode 5/S Identification Friend or Foe (IFF)-Automatic Dependence Surveillance-Broadcast, Adaptable Communications Suite (ACS), Extremely High Frequency (EHF) SATCOM and Computers, Defensive Management System (DMS), Electro-magnetic pulse (EMP) Hardening Testing, and advanced, low detection data links upgrades.

Specific efforts will be managed under one of four projects:

676021 Baseline Support
676022 EHF SATCOM and Computer
676023 Defensive Management System
675345 B-2 Modernization

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. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	407.189	260.466	295.333	-	295.333
Current President's Budget	351.549	260.466	340.819	-	340.819
Total Adjustments	-55.640	-	45.486	-	45.486
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-2.039	-			
• SBIR/STTR Transfer	-51.902	-			
• Other Adjustments	-1.699	-	45.486	-	45.486

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force		DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	
<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2010	FY 2011
Project: 675345: <i>B-2 Modernization</i>			
Congressional Add: <i>B-2 Advanced Tactical Data Link (ATDL)</i>		9.560	-
Congressional Add: <i>B-2 Strike Control System</i>		12.124	-
Congressional Add Subtotals for Project: 675345		21.684	-
Congressional Add Totals for all Projects		21.684	-
<u>Change Summary Explanation</u>			
FY12 changes increased funding for EHF SATCOM and Computer Increments 1 and 2, and decreased funding for Defensive Management System and Mode 5/S.			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS				PROJECT 675345: B-2 Modernization			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675345: B-2 Modernization	351.549	260.466	5.135	-	5.135	2.007	1.945	1.962	1.988	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note											
In FY10, Project Number 653843, B-2 Advanced Technology Bomber efforts transferred from PE 0604240F, B-2 Advanced Technology Bomber, to PE 0101127F, B-2 Squadrons, transferring funds/efforts from MFP 6 to MFP 1.											
In FY12:											
funding for Baseline Support transferred from project 675345 to project 676021.											
funding for Extremely High Frequency (EHF) SATCOM and Computers transferred from project 675345 to project 676022.											
funding for DMS upgrade transferred from project 675345 to project 676023.											
A. Mission Description and Budget Item Justification											
Totals include funding for PRCP Program Number (PNO) 224, B-2 EHF Increment 1; and PRCP Program Number (PNO) 376, B-2 Radar Modernization Program (RMP);											
The B-2A Spirit is the world's most advanced long-range strike asset. The unique combination of range, precision, payload, and ability to operate in anti-access environments allow the B-2 to identify, locate, target, and destroy the highest value enemy targets. The B-2 can, with necessary upgrades, accomplish its mission regardless of location, return to base safely, and permit freedom of movement for follow-on forces, including other long range strike platforms.											
The array of planned RDT&E projects are necessary to both preserve this strategic advantage as well as increase the flexibility, lethality, and survivability of this national asset tasked across a broad spectrum, from tactical to national objectives. Avionics upgrades include, but are not limited to, Radar Modernization Program (RMP), Link-16 Center Instrument Display (CID)/In-Flight Replanner (IFR), Mode 5/S Identification Friend or Foe (IFF)-Automatic Dependence Surveillance-Broadcast, Adaptable Communications Suite (ACS), Extremely High Frequency (EHF) SATCOM and Computers, Defensive Management System Modernization (DMS-M), Electro-magnetic pulse (EMP) Hardening Testing, and advanced, low detection data links upgrades.											
RMP changes the operating frequency of the radar to enable the B-2 to operate as a primary user worldwide.											
Link-16 CID/IFR upgrade allows the B-2 access to theater tactical data links, improving on-board situational awareness while greatly enhancing the ability of the theater commanders to coordinate the B-2 with other assets.											
ACS provides UHF SATCOM data for beyond line of sight situational awareness and airborne mission data transfer.											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 675345: <i>B-2 Modernization</i>
<p>Mode 5 IFF provides enhanced combat identification of friend or foe functions for military Air Traffic Management; Mode S IFF provides enhanced surveillance functions with commercial Air Traffic Management to allow operations in controlled air space; Automatic Dependence Surveillance-Broadcast provides aircraft position and navigation information to Air Traffic Control and nearby aircraft.</p> <p>EMP hardening requirements will test individual components and the entire B-2 fleet at higher EMP levels for Nuclear Command and Control Survivability.</p> <p>Integrated Strike Warfare (ISW) Airborne Network project will model and simulate combat effects and performance constraints in an environment that can demonstrate, integrate, generate and validate four generic wave form models which will be used on the B-2 platform. Additionally, this project will establish a viable end-to-end distributed modeling and simulation network.</p> <p>Advanced Tactical Data Link (ATDL) will identify B-2 CONOPS requirements and integration issues which will permit B-2 to communicate with other stealth platforms in an anti-access environment to enhance situational awareness and permit time-critical targeting and engagement.</p> <p>Armament upgrades include, but are not limited to, integration of new and/or advanced weapons on the B-2 to destroy a wider array of target sets, to include moving target sets and Hardened, Deeply Buried Targets (HDBT), as well as destroy more targets per sortie. Integration of the 30K lb class Massive Ordnance Penetrator (MOP) will provide the nation with the ability to hold additional HDBT targets at risk that are currently unachievable with 5K lb class penetrator munitions. The B-2 is the only anti-access penetrating platform capable of carrying the MOP and meets Urgent Operational Need (UON) requirements. The MOP project will design, develop, integrate, and test hardware, software, and support equipment required for carriage, jettison, and release of two MOP weapons from the B-2. The initial MOP Quick Reaction Capability effort will be expanded to include a fully developed Launch Acceptability Region, single Smart Bomb Rack Controller (SBRC) per bay, dual fuze control, and mixed carriage capability with Smart Bomb Rack Assemblies (SBRA). Further expansion will include the addition of the Global Positioning System (GPS) signal into the B-2 weapons bays to allow Monitor and Control Equipment (MACE) weapons, SBRA weapons, and RLA weapons to acquire and track GPS satellites prior to weapons release, maintaining unjammed delivery accuracy in a jamming environment.</p> <p>The Moving Target Kill (MTK) effort will leverage a high precision munition such as the Small Diameter Bomb II (SDB II) as the mobile target kill munition forming the foundation to exploit the modularity and improved precision algorithms of Universal Armament Interface (UAI) as well as a display infrastructure that can support the integration of this future weapon. Planned upgrades also include integration of upgrades to currently fielded or inventory weapons and weapons development, such as, but not limited to, B61 Life Extension Program, GBU-28 E/B Selective Availability Anti-Spoofing Module(SAASM) with impact angle control, GBU-28 D/B SAASM with impact angle control, Hard Target Void Sensing Fuse, extended range Joint Air-to-Surface Standoff Missile, and JDAM-5000.</p> <p>Basic armament improvements include, but are not limited to, stores management hardware and software modernization and improvements to enable simultaneous carriage of the Rotary Launcher Assembly (RLA) and the SBRA, integration of Universal Armament Interface, integration of System 2 Nuclear Interface, and integration of new and improved weapon capabilities thus affording maximum strike flexibility. The B-2 Weapons System Tester and its associated Test Program Sets (TPS) include, but are not limited to, the Common Organizational Level Tester (COLT), MUSTANG, and B-2 Armament Tester, will be continually upgraded for increased reliability and performance to support current and new B-2 weapon suspension and release systems.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS		PROJECT 675345: B-2 Modernization				
B. Accomplishments/Planned Programs (\$ in Millions)				FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Description: B-2 Baseline Support to include developmental flight test aircraft modification and base of operations; Mission Planning, Trainer core support, long range planning, studies, program integration activities, acquisition planning, and other government costs.</p> <p>FY 2010 Accomplishments: Continue B-2 Baseline Support to include developmental flight test aircraft modification and base of operations; Mission Planning, Trainer core support, long range planning, studies, program integration activities, acquisition planning, and other government costs.</p> <p>FY 2011 Plans: Continue B-2 Baseline Support to include developmental flight test aircraft modification and base of operations; Mission Planning, Trainer core support, long range planning, studies, program integration activities, acquisition planning, and other government costs.</p> <p>FY 2012 Base Plans: In FY12, funding for Baseline transferred from project 675345 to project 676021.</p> <p>FY 2012 OCO Plans:</p>								
<p>Title: B-2 EHF SATCOM and Computers Increment 1 System Development</p> <p>Description: Development of EHF SATCOM and Computers Increment 1 System Development and Demonstration (SDD) and design and fabrication of new and modified components for two test aircraft and two Force Development Evaluation (FDE) aircraft.</p> <p>FY 2010 Accomplishments: Continue EHF SATCOM and Computers Increment 1 SDD, ground test, and start of flight test.</p> <p>FY 2011 Plans: Continue EHF SATCOM and Computers Increment 1 SDD, continue flight test, leading to a successful milestone C decision in FY12.</p> <p>FY 2012 Base Plans: In FY12, funding for Extremely High Frequency (EHF) SATCOM and Computers transferred from project 675345 to project 676022.</p> <p>FY 2012 OCO Plans:</p>				59.777	76.926	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS	PROJECT 675345: B-2 Modernization				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: B-2 EHF SATCOM and Computers Increment 2 System Development Description: Development of EHF SATCOM and Computer Increment 2 component advanced design, risk reduction activities to meet Milestone B in FY13. FY 2010 Accomplishments: Continue EHF SATCOM and Computer Increment 2 component advanced design, risk reduction activities, and antenna system requirements review (SRR) to meet Milestone B in FY13. FY 2011 Plans: Continue EHF SATCOM and Computer Increment 2 component advanced design, risk reduction activities, and antenna system functional review (SFR) to meet Milestone B in FY13. FY 2012 Base Plans: In FY12, funding for Extremely High Frequency (EHF) SATCOM and Computers transferred from project 675345 to project 676022. FY 2012 OCO Plans:		117.727	96.637	-	-	-
Title: B-2 Defensive Management System (DMS) Moderization Description: Development of DMS Moderization Program to improve aircrew situational awareness through replacement of passive antennas, receiver/processors, and display processors, address critical system shortfalls, and improve DMS component repair issues. FY 2010 Accomplishments: Continue development of DMS core capability, complete analysis of alternatives (AoA), and complete system requirement review (SRR). FY 2011 Plans: Continue development of DMS core capability, complete system functional review (SFR), achieve a successful Milestone A decision, and begin technology development phase. FY 2012 Base Plans: In FY12, funding for DMS upgrade transferred from project 675345 to project 676023. FY 2012 OCO Plans:		93.662	52.575	-	-	-
Title: B-2 Modernization		32.091	19.194	5.135	-	5.135

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS	PROJECT 675345: B-2 Modernization				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Development of Low Observable improvements, Proximity Sensor Logic Unit (PSLU), Massive Ordnance Penetrator (MOP),Integrated Windshield Solution, Trainer Upgrades, Electro Magnetic Pulse (EMP) Testing, Common Organizational Level Tester (COLT), Adaptable Communication Suite (ACS), Guided Bomb Unit (GBU) -28, Aft Deck, Mode S/5, and other airframe and avionics improvements.						
FY 2010 Accomplishments: Continue development of Low Observable improvements, Proximity Sensor Logic Unit (PSLU), Massive Ordnance Penetrator (MOP), Integrated Strike Warfare (ISW), Advanced Tactical Data Link (ATDL), Trainer Upgrades, EMP Testing, COLT, ACS, GBU-28, Mode S/5, and other airframe, avionics, and weapons improvements. Complete Integrated Windshield Solution.						
FY 2011 Plans: Continue development of on-going Low Observable improvements, ISW, ATDL, Trainer Upgrades, COLT, PSLU, GBU-28, and other airframe, avionics, and weapons improvements. Complete development efforts for ACS, and complete integration of the MOP QRC weapon on the B-2 platform and the EMP test.						
FY 2012 Base Plans: Continue development of on-going Low Observable improvements, ISW, ATDL, Trainer Upgrades, EMP Testing, GBU-28, and other airframe, avionics, and weapons improvements. Complete PSLU and COLT.						
FY 2012 OCO Plans:						
Accomplishments/Planned Programs Subtotals		329.865	260.466	5.135	-	5.135
		FY 2010	FY 2011			
Congressional Add: B-2 Advanced Tactical Data Link (ATDL)		9.560	-			
FY 2010 Accomplishments: B-2 Strike Control System upgrade establishes the foundation for all future data fusion and pilot vehicle interface (PVI) upgrades on B-2. Funds applied to the development B-2 DMS.						
FY 2011 Plans:						
Congressional Add: B-2 Strike Control System		12.124	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS				PROJECT 675345: B-2 Modernization				
								FY 2010	FY 2011			
FY 2010 Accomplishments: Completed development of Radar Modernization Program.												
FY 2011 Plans:												
Congressional Adds Subtotals								21.684	-			
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
• PE 0101127F: B-2 Squadrons, APAF, Modifications/BA05/B-2A	241.216	57.415	6.651	0.000	6.651	6.221	9.947	12.401	12.930	Continuing	Continuing	
• PE 0809731F: Training Support to Units, APAF, Modifications/BA05/B-2A	5.875	5.956	5.163	0.000	5.163	5.271	6.261	6.385	6.500	Continuing	Continuing	
• PE 0207446F: Bomber Tactical Data Link, APAF Modifications/BA05/B-2A	0.000	0.000	0.000	0.000	0.000	0.000	0.479	0.439	0.399	Continuing	Continuing	
• PE 0101127F (3): B-2 Squadrons, APAF, Post Prod Support/BA07/B-2A/ICS	24.405	20.755	39.239	0.000	39.239	39.416	39.513	39.240	31.969	Continuing	Continuing	
• PE 0101127F (4): B-2 Squadrons, APAF, Post Prod Support/BA07/B-2A	19.739	5.462	10.080	0.000	10.080	7.683	7.584	5.988	12.275	Continuing	Continuing	
• PE 0101127F (5): B-2 Squadrons, APAF, A/C Initial Spares/BA06/B-2A	0.000	15.099	11.477	0.000	11.477	0.000	0.000	0.000	0.000	Continuing	Continuing	
• PE 0101127F (6): B-2 Squadrons, APAF, Depot Activation/BA07/B-2A	18.100	166.067	11.891	0.000	11.891	10.262	9.803	10.324	10.565	Continuing	Continuing	
• PE 0207439F: B-2 Squadrons, APAF, Depot Activation/BA07/B-2A	0.000	10.230	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
	0.000	0.000	0.490	0.000	0.490	0.599	0.649	0.499	0.499	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS				PROJECT 675345: B-2 Modernization			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2012</u>	<u>FY 2012</u>	<u>FY 2012</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Complete</u>	<u>Total Cost</u>
• PE 0101127F (8): B-2 Squadrons, OPAF/BA 03/B-2A											
D. Acquisition Strategy Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman); use of cost plus award fee/ incentive fee (CPAF/IF) development contracts; and the combination of developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations.											
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 2012 Air Force											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS				PROJECT 675345: B-2 Modernization						
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Air Vehicle	Various	Various:Various,	318.768	239.462	Oct 2010	4.731	Oct 2011	-		4.731	Continuing	Continuing	0.000	
Aircrew Training	Various	Various:Various,	3.108	2.820	Jan 2011	0.239	Jan 2012	-		0.239	Continuing	Continuing	0.000	
Mission Planning	Various	Various:Various,	1.904	2.122	Jan 2011	-		-		-	Continuing	Continuing	0.000	
Subtotal			323.780	244.404		4.970		-		4.970			0.000	
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Other Government Costs	Various	Various:Various,	22.967	9.973	Oct 2010	0.165	Oct 2011	-		0.165	Continuing	Continuing	0.000	
Subtotal			22.967	9.973		0.165		-		0.165			0.000	
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Government Test	PO	AFFTC:,	4.802	6.089	Oct 2010	-		-		-	Continuing	Continuing	0.000	
Subtotal			4.802	6.089		-		-		-			0.000	
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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	
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			351.549	260.466		5.135		-		5.135			0.000	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development			R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS			PROJECT 675345: B-2 Modernization			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks									
Award dates listed are the first incremental funding opportunity associated with each cost category.									
In FY12, funding for Baseline transferred from project 675345 PE 0101127F, B-2 Squadrons to project 676021 PE 0101127F, B-2 Squadrons.									
In FY12, funding for Extremely High Frequency (EHF) SATCOM and Computers transferred from project 675345 PE 0101127F, B-2 Squadrons to project 676022 PE 0101127F, B-2 Squadrons.									
In FY12, funding for DMS-M upgrade transferred from project 675345 PE 0101127F, B-2 Squadrons to project 676023 PE 0101127F, B-2 Squadrons.									

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 675345: <i>B-2 Modernization</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 675345: <i>B-2 Modernization</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Radar Modernization Program SDD complete	2	2010	2	2010
Radar Modernization Program LRIP Installs complete	4	2010	2	2011
Radar Modernization Program FRP Installs complete	4	2011	2	2012
MOP QRC Flight Test	3	2010	2	2011
MOP QRC RAA	3	2011	3	2011
EMP Testing Contract Award	1	2011	1	2011
EMP Field Test	2	2011	3	2011
AHFM Last Install	1	2013	1	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS				PROJECT 676021: BASELINE SUPPORT			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676021: BASELINE SUPPORT	-	-	9.523	-	9.523	7.860	14.336	15.916	13.810	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note											
In FY10, Project Number 653843, B-2 Advanced Technology Bomber efforts transferred from PE 0604240F, B-2 Advanced Technology Bomber, to PE 0101127F, B-2 Squadrons, transferring funds/efforts from MFP 6 to MFP 1.											
In FY12, funding for Baseline Support transferred from project 675345 to the new project 676021.											
A. Mission Description and Budget Item Justification											
Baseline Support maintains the B-2 unique flight test aircraft and as well as obtains, modifies, and operates a flying test bed and developmental hardware/software and test equipment to support developmental systems integration and flight test, reducing the need for additional operational aircraft and accelerates deployment of advanced operational capabilities to the warfighter.											
Baseline Support also ensures the Mission Planning system keeps pace with aircraft modifications and mission planning core system updates. Baseline Support also provides for other B-2 unique government costs, and includes acquisition planning activities for future capabilities such as, but not limited to, Stores Management Processor/Infrastructure upgrades, Global Positioning Satellite signal to B-2 Weapons Bays, Massive Ordnance Penetrator Enhancements, F118 Service Live Extension and F118 Extended Mission Oil Tank Upgrades, Advanced Tactical Data Link capabilities, mixed weapon load-outs, B61 Life Extension Program, Universal Armament Interface, System 2 Nuclear Interface, Global Positioning System/Selective Availability and Anti-Spoofing Module (SAASM)/M-Code receivers upgrades, Joint Precision Approach and Landing System upgrades, Radar Processor Modernization, and Automatic Dependent Surveillance – Broadcast, and integration of currently fielded or new weapons including, but not limited to, GBU E/B SAASM with impact angle control, GBU D/B SAASM with impact angle control, Hard Target Void Sending Fuze, extended range Joint Air-to-Surface Standoff Missile, and Joint Direct Attack Munition-5000.											
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 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Baseline Support Acquisition Planning							-	-	0.901	-	0.901
Description: Baseline support provides for other B-2 unique government costs, and includes acquisition planning activities for future capabilities, Trainer cores support, long range planning, studies, and program integration activities.											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS	PROJECT 676021: BASELINE SUPPORT				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY 2010 Accomplishments: FY10 effort covered under Project Number 675345. FY 2011 Plans: FY11 effort covered under project 675345. FY 2012 Base Plans: Continue Baseline support activities including acquisition planning for future capabilities, Trainer cores support, long range planning, studies, and program integration activities. FY 2012 OCO Plans:						
Title: Baseline Support Flight Test Description: Baseline support Flight Test maintains the B-2 unique flight test aircraft and as well as obtains, modifies, and operates a flying test bed and developmental hardware/software and test equipment to support developmental systems integration and flight test, reducing the need for additional operational aircraft and accelerates deployment of advanced operational capabilities to the warfighter. FY 2010 Accomplishments: FY10 effort covered under project 675345. FY 2011 Plans: FY11 effort covered under project 675345. FY 2012 Base Plans: Continue B-2 Flight Test activities, maintaining the B-2 unique flight test aircraft and as well as obtaining, modifying, and operatating a flying test bed and developmental hardware/software and test equipment to support developmental systems integration and flight test. FY 2012 OCO Plans:		-	-	6.714	-	6.714
Title: Baseline Support Mission Planning Description: Baseline support mission planning ensures the mission planning system keeps pace with aircraft modifications and mission planning core system updates		-	-	1.908	-	1.908

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>		PROJECT 676021: <i>BASELINE SUPPORT</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<i>FY 2010 Accomplishments:</i> FY10 effort covered under project 675345. <i>FY 2011 Plans:</i> FY11 effort covered under project 675345. <i>FY 2012 Base Plans:</i> Continue B-2 Mission Planning activities keeping pace with aircraft modifications and mission planning core system updates <i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	-	-	9.523	-	9.523

C. Other Program Funding Summary (\$ in Millions)												
	<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman); use of cost plus award fee/ incentive fee (CPAF/IF) development contracts; and the combination of developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations.

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 2012 Air Force										DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS				PROJECT 676021: BASELINE SUPPORT					
Product Development (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Mission Planning	Various	Various:Various,	-	-		1.596	Jan 2012	-		1.596	Continuing	Continuing	TBD	
Subtotal			-	-		1.596		-		1.596				
Support (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Other Government Costs	Various	Various:Various,	-	-		6.253	Oct 2011	-		6.253	Continuing	Continuing	TBD	
Subtotal			-	-		6.253		-		6.253				
Test and Evaluation (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Government Test	PO	AFFTC:,	-	-		1.674	Oct 2011	-		1.674	Continuing	Continuing	TBD	
Subtotal			-	-		1.674		-		1.674				
Management Services (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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	
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			-	-		9.523		-		9.523				
Remarks Award dates listed are the first incremental funding opportunity associated with each cost category.														

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 676021: <i>BASELINE SUPPORT</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 676021: <i>BASELINE SUPPORT</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Mission Planning Release 4.3	3	2010	3	2010
Mission Planning Release 4.3.0.1	1	2011	1	2011
Mission Planning Release 4.3.1	2	2011	2	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS				PROJECT 676022: EHF SATCOM and Computer			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676022: EHF SATCOM and Computer	-	-	285.034	-	285.034	244.410	225.389	244.846	205.843	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10, Project Number 653843, B-2 Advanced Technology Bomber efforts transferred from PE 0604240F, B-2 Advanced Technology Bomber, to PE 0101127F, B-2 Squadrons, transferring funds/efforts from MFP 6 to MFP 1.

In FY12, funding for Extremely High Frequency (EHF) SATCOM and Computers transferred from project 675345 to project 676022.

A. Mission Description and Budget Item Justification

The aging Ultra High Frequency (UHF) Military Satellite Communications system is being phased out and replaced by the Advanced Extremely High Frequency (AEHF) Satellite Communications (SATCOM) system. The B-2 Extremely High Frequency (EHF) SATCOM program supports the replacement of the present B-2 UHF Terminal Set with an EHF SATCOM system that will be compatible with the legacy MILSTAR I/II satellite constellation and the future AEHF satellite constellation. The B-2 EHF SATCOM system is one element of a system of systems that includes the AEHF satellites, multiple platforms, and the Family of Advanced Beyond-Line-of-Site Terminals (FAB-T) or other equivalent terminals, as required. The B-2 EHF SATCOM upgrade is a three increment program.

Increment 1 will provide upgraded flight management computer processors, increased data storage, re-hosted flight management operational flight program, and a high bandwidth data bus in order to prevent degradation of existing capabilities resulting from EHF SATCOM installation. Additionally, the Increment 1 Integrated Processing Unit and Disk Drive Unit architectures establish a high speed fiber optic structure network as well as maintain connectivity to legacy interfaces. Increment 1 provides a processing growth path to future B-2 upgrades.

Increment 2 will integrate the FAB-T Government Furnished Equipment, or other equivalent terminals (if required), into the B-2 as well as develop and install a low-observable antenna system consisting of arrays, antenna line replaceable units, and structural modifications for both power and cooling. This upgrade is critical to ensure the B-2 is compatible with the next generation communications satellite architecture and is absolutely essential in providing uninterrupted, highly survivable communications required for the command and control of the nation's strategic nuclear forces. Connectivity is mandatory to enable network centric enabled attack in an anti-access environment.

Increment 3 will enable the B-2 to interface with the Global Information Grid and provide net ready capability.

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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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS	PROJECT 676022: EHF SATCOM and Computer				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: B-2 EHF SATCOM and Computers Increment 1 System Development</p> <p>Description: Development of EHF SATCOM and Computers Increment 1 System Development and Demonstration (SDD) and design and fabrication of new and modified components for two test aircraft and two Force Development Evaluation (FDE) aircraft.</p> <p>FY 2010 Accomplishments: FY10 effort covered under Project Number 675345.</p> <p>FY 2011 Plans: FY11 effort covered under Project Number 675345.</p> <p>FY 2012 Base Plans: Complete EHF SATCOM and Computers Increment 1 SDD, complete IOT&E, and begin LRIP.</p> <p>FY 2012 OCO Plans:</p>		-	-	57.069	-	57.069
<p>Title: B-2 EHF SATCOM and Computers Increment 2 System Development</p> <p>Description: Development of EHF SATCOM and Computer Increment 2 component advanced design, risk reduction activities to meet Milestone B in FY13.</p> <p>FY 2010 Accomplishments: FY10 effort covered under Project Number 675345.</p> <p>FY 2011 Plans: FY11 effort covered under Project Number 675345.</p> <p>FY 2012 Base Plans: Continue EHF SATCOM and Computer Increment 2 component advanced design, risk reduction activities to achieve a successful System preliminary design review (PDR).</p> <p>FY 2012 OCO Plans:</p>		-	-	227.965	-	227.965
Accomplishments/Planned Programs Subtotals		-	-	285.034	-	285.034

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 676022: <i>EHF SATCOM and Computer</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0101127F: <i>B-2 Squadrons, APAF, Modifications/BA05/B-2A</i>	0.000	0.000	29.501	0.000	29.501	36.635	28.687	10.039	6.252	Continuing	Continuing
• PE 0101127F (1): <i>B-2 Squadrons, APAF, Post Prod Support/BA07/B-2A/ICS</i>	0.000	0.000	0.101	0.000	0.101	0.481	0.489	0.830	0.738	Continuing	Continuing
• PE 0101127F (2): <i>B-2 Squadrons, APAF, A/C Initial Spares/BA06/B-2A</i>	0.000	0.000	0.803	0.000	0.803	6.673	5.098	0.512	0.522	Continuing	Continuing
• PE 0101127F (3): <i>B-2 Squadrons, APAF, Depot Activation/BA07/B-2A</i>	0.000	0.000	3.925	0.000	3.925	2.703	0.192	0.196	0.000	Continuing	Continuing

D. Acquisition Strategy

Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman); use of cost plus award fee/ incentive fee (CPAF/IF) development contracts; and the combination of developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations

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 2012 Air Force											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS					PROJECT 676022: EHF SATCOM and Computer				
Product Development (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Air Vehicle	Various	Various:Various,	-	-		280.430	Oct 2011	-		280.430	Continuing	Continuing	TBD	
Subtotal			-	-		280.430		-		280.430				
Support (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Other Government Costs	Various	Various:Various,	-	-		1.642	Oct 2011	-		1.642	Continuing	Continuing	TBD	
Subtotal			-	-		1.642		-		1.642				
Test and Evaluation (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Government Test	PO	AFFTC:,	-	-		2.962	Oct 2011	-		2.962	Continuing	Continuing	TBD	
Subtotal			-	-		2.962		-		2.962				
Management Services (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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	
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			-	-		285.034		-		285.034				
Remarks Award dates listed are the first incremental funding opportunity associated with each cost category.														

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 676022: <i>EHF SATCOM and Computer</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 676022: <i>EHF SATCOM and Computer</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EHF SATCOM and Computers Inc 1 First Flight Test	4	2010	4	2010
EHF SATCOM and Computers Inc 1 Milestone C production decision	1	2012	1	2012
EHF SATCOM and Computers Inc 2 System Preliminary Design Review	4	2012	4	2012
EHF SATCOM and Computers Inc 2 Milestone B	1	2013	1	2013
EHF SATCOM and Computers Inc 2 start engineering and manufacturing development	2	2013	2	2013
EHF SATCOM and Computers Inc 2 Critical Design Review	1	2014	1	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101127F: B-2 SQUADRONS				PROJECT 676023: Defensive Management System			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676023: Defensive Management System	-	-	41.127	-	41.127	177.878	181.288	98.910	49.789	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10, Project Number 653843, B-2 Advanced Technology Bomber efforts transferred from PE 0604240F, B-2 Advanced Technology Bomber, to PE 0101127F, B-2 Squadrons, transferring funds/efforts from MFP 6 to MFP 1.

In FY12, funding for DMS upgrade transferred from project 675345 to project 676023.

The program funding includes reductions for acquisition excellence efficiencies in FY15 and FY16 that are not intended to impact program content. Reductions for efficiencies may be spread to other Air Force programs at a later date. Amounts of the reductions are: \$3.7MM/FY15 and \$54.2/FY16

A. Mission Description and Budget Item Justification

The B-2 Defensive Management System modernization (DMS) program maintains the existing direct attack stealth capability against 21st century threats. DMS will upgrade the Electronic Support Measures, antennas, and display processing units. Modernization of this system will resolve the #1 obsolescence issue in the B-2 fleet.

The B-2 DMS will provide the Joint Force Commander and the B-2 fleet: advanced situational awareness, improved supportability, enhanced lethality, increased platform survivability, and networked battlespace awareness. The B-2 DMS upgrade will provide the following core capabilities for the B-2 and joint warfighting force:
1) The ability to provide indication, type, and position of airborne- and ground-based radio frequency (RF) threats with the situational awareness needed to avoid, engage, or negate threats, 2) Improved RF threat information that can be reported to control agencies or inter-flight for improved situation/battlespace awareness, 3) The ability to adequately control, process, and display incoming threat information to the pilot and provide updated battle-space awareness, and 4) Improved supportability and reduced operations and maintenance costs.

As DMS requires increased functionality and capability of the display processor, it includes FY10 and future year budgets transitioned from the B-2 Integrated Display System modification (MN-110041).

FY10 Congressional Plus-up for B-2 Strike Control System establishes the foundation for all future data fusion and pilot-vehicle interface upgrades. Funds were applied to the DMS development program.

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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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force							DATE: February 2011					
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>			PROJECT 676023: <i>Defensive Management System</i>						
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	
Title: B-2 Defensive Management System (DMS) Modernization Description: Development of DMS Modernization Program to improve aircrew situational awareness through replacement of passive antennas, receiver/processors, and display processors, address critical system shortfalls, and improve DMS component repair issues. FY 2010 Accomplishments: FY10 effort covered under Project Number 675345. FY 2011 Plans: FY11 effort covered under Project Number 675345. FY 2012 Base Plans: Continue DMS Modernization technology development leading to Preliminary Design Review and a successful Milestone B decision in FY13. FY 2012 OCO Plans:							-	-	41.127	-	41.127	
Accomplishments/Planned Programs Subtotals							-	-	41.127	-	41.127	
C. Other Program Funding Summary (\$ in Millions)												
	<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
•	N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy												
Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman); use of cost plus award fee/ incentive fee (CPAF/IF) development contracts; and the combination of developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations.												
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 2012 Air Force											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>				PROJECT 676023: <i>Defensive Management System</i>					

Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vehicle	Various	Various:Various,	-	-		41.127	Oct 2011	-		41.127	Continuing	Continuing	TBD
Subtotal			-	-		41.127		-		41.127			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		-	-		41.127		-	41.127			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 676023: <i>Defensive Management System</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101127F: <i>B-2 SQUADRONS</i>	PROJECT 676023: <i>Defensive Management System</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DMS Milestone A	2	2011	2	2011
DMS Technology Development Contract Award	3	2011	3	2011
DMS Technology Development	3	2011	2	2014
DMS Preliminary Design Review	3	2013	3	2013
DMS Milestone B	4	2013	4	2013
DMS Critical Design Review	4	2014	4	2014

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