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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0101126F I B-1B Squadrons							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	4.562	62.471	76.030	0.000	76.030	6.586	18.276	7.962	8.107	Continuing	Continuing
675344: B-1B Modernization	-	4.562	62.471	76.030	0.000	76.030	6.586	18.276	7.962	8.107	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The B-1B Lancer is a swing-wing, supersonic, long-range conventional bomber. It carries the largest payload of both guided and unguided weapons in the AF inventory. The multi-mission B-1B is the backbone of America's long-range conventional bomber force and can rapidly deliver massive quantities of precision (and non-precision) weapons against any adversary, anywhere in the world, at any time. The current structural service life extends beyond 2040.

The B-1B modernization projects alleviate aircraft obsolescence issues due to Diminishing Manufacturing Sources (DMS) while at the same time providing improved capabilities to the B-1B weapon system that require significant hardware and software development and testing.

FULLY INTEGRATED TARGETING POD (FITP)

The Fully Integrated Targeting Pod (FITP) modification permanently integrates the Advanced Targeting Pod (ATP) capability into the B-1B's avionics flight software architecture and replaces the B-1B's Temporary T-1 Beyond Line of Sight (BLOS) / Laptop Controlled Targeting Pod (LCTP) system with a digital, high-definition video-streaming targeting pod. This will provide increased B-1B aircrew situational awareness, weapons de-confliction, and Intelligence, Surveillance and Reconnaissance (ISR) within the Combat Air Forces (CAF). FITP will provide robust combat targeting processing power, computing speed and throughput for aircrew mission planning, and a permanent sustainment support structure. It will provide all four crew members access to targeting pod information displayed on digital-quality video using the Integrated Battle Station (IBS), Multi-Function Displays (MFDs), and the cursor controller. FITP will address the aircrew ergonomic issues caused by the current system configuration, allowing more rapid prosecution of targets through improved integration with Avionics Flight Software (AFS) capabilities. In addition, FITP will provide growth capability for implementation and interaction with follow-on systems to augment targeting pod use. Furthermore, the FITP removes the need for an Interim Contractor Support (ICS) sustainment support structure, which will resolve DMS issues.

MODE 5/S AUTOMATIC SURVEILLANCE BROADCAST (ADS-B) OUT

B-1B Identification Friend or Foe (IFF) Mode 5/S is the replacement for the B-1B Mark XII IFF Mode 4. Mode 5 will provide secure target identification and will be a response system for combat identification. Mode Select (Mode S) and ADS-B Out provides timely aircraft position and flight path prediction to receiver units for aircraft, Air Traffic Control, and the Air Defense System. The IFF Mode 5 upgrade uses an automated system that responds to interrogations to avoid the loss of B-1B aircraft through fratricide. Upgrades to ADS-B Out and Mode S are Federal Aviation Administration (FAA) mandates to field by January 2020 and the upgrade to Mode 5 is a Joint Requirements Oversight Council (JROC) mandate to field by September 2020. Failure to meet these mandates will require FAA and ICAO waivers or will result in delayed/denied service of controlled airspace within the US and Europe. The Air Force is currently seeking waiver with FAA. Funds are included to accommodate the FAA mandate for ADS-B and Mode S and the JROC mandate for Mode 5 as outlined in previous AF and DoD budget exhibits.

UNCLASSIFIED

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Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons	
RADIO CRYPTO COMPLIANCE The B-1B Radio Crypto Compliance requirements originated to meet DoD mandates by 1 January 2020. If the requirements are not met, the B-1B is at risk of losing secure Line of Sight (LOS) and BLOS communication with ground and air forces. The Air Force is in the process of negotiating a waiver to the mandate. Without the radio crypto compliance the B-1B will not be able to participate in CONUS/OCONUS military operations. The program replaces the existing radios with crypto-compliant radios providing BLOS communications. Funds are included to accommodate the DoD mandate as outlined in previous AF and DoD budget exhibits.		
Multifunctional Information Distribution System (MIDS) - Joint Tactical Radio System (JTRS) The B-1B Multifunctional Information Distribution System (MIDS) - Joint Tactical Radio System (JTRS) replaces the existing MIDS Low Volume Terminal (LVT) 1 Link 16 terminal to meet National Security Agency (NSA) Crypto Modernization (CM) Device Cease Key and FAA Frequency Remap mandates: Current systems become non-compliant in 2025. MIDS-JTRS resolves all LVT 1 deficiencies and adds substantial combat capability enhancements to Link 16 Enhanced Throughput (LET) and Concurrent Multi-Netting (CMN-4) with Concurrent Retention Receive (CRR). MIDS-JTRS also provides multi-datalink capability, improving situational awareness and allowing rapid in-flight retargeting in a cooperative combat environment. Funds are included to accommodate DoT/DoD-approved Frequency Remap and Crypto Modernization Device Cease mandates as outlined in previous AF and DoD budget exhibits.		
Bomb Rack Unit 56 (BRU-56) The Bomb Rack Unit 56 (BRU-56) upgrade will solve a safety risk present within the legacy BRU-56 ejector rack. The upgrade will alleviate the deficiency within the current ejector rack as well as add increased carriage capability. Prolonged use has resulted in a deficiency of the rivets within the linkage of the rack. This deficiency led to multiple failures, to include one Class A mishap in 2003, one Class C mishap in 2010, and multiple ground mishaps. The BRU-56 modification guards against future bomb rack mishaps and the possibility of a catastrophic aircraft loss as well as the loss of life.		
GAP AND INTEGRATION ANALYSIS Program funds cover engineering/planning studies, related engineering efforts, and the auxiliary equipment needed for development projects that have not yet been fielded. Funds may be used to resolve emerging safety of flight and DMS issues, accommodate technology insertion, and fulfill FAA (or other) mandates necessary to ensure continued aircrew safety and mission effectiveness. Costs includes Program Management Administrative (PMA) costs, total ownership cost, as well as initiatives for anticipated weapon system enhancements, to include efforts for improving weapon system operational capabilities, safety, supportability, maintainability, and reliability. All B-1B development projects support planned requirements for unique identification in their production phases. Funding is also required to ensure test asset availability for testing of aircraft RDT&E efforts.		
This PE may include necessary civilian pay expenses required to manage, execute, and deliver B-1B weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in PEs 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, and 0605898F.		
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 current or subsequent fiscal year.		

UNCLASSIFIED

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Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0101126F I B-1B Squadrons				
B. Program Change Summary (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget		5.830	62.471	67.101	0.000	67.101
Current President's Budget		4.562	62.471	76.030	0.000	76.030
Total Adjustments		-1.268	0.000	8.929	0.000	8.929
• Congressional General Reductions		-1.900	0.000			
• Congressional Directed Reductions		0.000	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		0.000	0.000			
• Congressional Directed Transfers		0.000	0.000			
• Reprogrammings		0.000	0.000			
• SBIR/STTR Transfer		-0.128	0.000			
• Other Adjustments		0.760	0.000	8.929	0.000	8.929
Change Summary Explanation						
FY17: Decrease of \$1.268 was due to \$1.9M due to Congressional General Reductions, \$0.128M reduction for SBIR, and \$0.760 BTR for B-1 Tech insertion.						
FY19: Increase of \$8.929M includes \$4.0M BRU-56 EMD efforts, \$5.5M Fully Integrated Targeting Pod (FITP) and decrease of \$0.571M for Inflation Adjustment						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2017	FY 2018	FY 2019
Title: Fully Integrated Targeting Pod				-	23.283	20.388
Description: The Fully Integrated Targeting Pod (FITP) Modification permanently integrates the Advanced Targeting Pod (ATP) capability into the B-1B's avionics flight software architecture and replaces the B-1B's Temporary T-1 Beyond Line of Sight (BLOS) / Laptop Controlled Targeting Pod (LCTP) system with a digital, high-definition video-streaming targeting pod. This will provide increased B-1B aircrew situational awareness, weapons de-confliction, and Intelligence, Surveillance and Reconnaissance (ISR) within the Combat Air Forces (CAF). FITP will provide robust combat targeting processing power, computing speed and throughput for aircrew mission planning, and a permanent sustainment support structure. It will provide all four crew members access to targeting pod information displayed on digital-quality video using the Integrated Battle Station (IBS), Multi-Function Displays (MFDs), and the cursor controller. FITP will address the aircrew ergonomic issues caused by the current system configuration, allowing more rapid prosecution of targets through improved integration with Avionics Flight Software (AFS) capabilities. In addition, FITP will provide growth capability for implementation and interaction with follow-on systems to augment targeting pod use. Furthermore, the FITP removes the need for an ICS sustainment support structure, which will resolve the DMS issue.						
FY 2018 Plans:						

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Conduct acquisition planning, risk assessments, and other pre-EMD activities. Begin Engineering and Manufacturing Development (EMD) Phase I efforts thru Preliminary Design Review (PDR) completion. FY 2019 Plans: Continue EMD Phase 2 efforts. Conduct software development and software integration and developmental/operational testing efforts for qualification onto the aircraft via Configuration Control Board approval. FY 2018 to FY 2019 Increase/Decrease Statement: Decrease in funding due to ramp down in FY2019 as EMD activities conclude.				
Title: Mode 5/S Automatic Dependent Surveillance Broadcast (ADS-B) Out Description: B-1B Identification Friend or Foe (IFF) Mode 5/S is the replacement for the B-1B Mark XII IFF Mode 4. Mode 5 will provide secure target identification and will be a response system for combat identification. Mode Select (Mode S) and ADS-B Out provides timely aircraft position and flight path prediction to receiver units for aircraft, Air Traffic Control, and the Air Defense System. The IFF Mode 5 upgrade uses an automated system that responds to interrogations to avoid the loss of B-1B aircraft through fratricide. Upgrades to ADS-B Out and Mode S are required FAA mandates to field by January 2020 and the upgrade to Mode 5 is a JROC mandate to field by September 2020. Failure to meet these mandates will result in delayed/denied service of controlled airspace within the US and Europe. FY 2018 Plans: Conduct acquisition planning, risk assessments, and other pre-EMD activities. Begin Engineering and Manufacturing Development efforts. FY 2019 Plans: Continue Engineering and Manufacturing efforts. Perform Preliminary and Critical design reviews, Frequency and First Article testing, and Developmental testing. FY 2018 to FY 2019 Increase/Decrease Statement: Increase in funding is due to major EMD activities being performed in the 2nd year of EMD.		0.000	13.546	17.065
Title: Radio Crypto Compliance Description: The B-1B Radio Crypto Compliance requirements originated to meet DoD mandates by 1 January 2020. If the requirements are not met, the B-1B is at risk of losing secure LOS and BLOS communication with ground and air forces. Without the radio crypto compliance the B-1B will not be able to participate in CONUS/OCONUS military operations. The program replaces the existing radios with crypto-compliant radios providing BLOS communications. FY 2018 Plans:		0.000	5.117	8.491

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Conduct acquisition planning, risk assessments, and other pre-EMD activities. Begin Engineering and Manufacturing Development efforts. FY 2019 Plans: Continue Engineering and Manufacturing Development (EMD) efforts. Perform Preliminary and Critical design reviews, Frequency and First Article testing, and Developmental testing. FY 2018 to FY 2019 Increase/Decrease Statement: Increase in funding is due to a ramp up of EMD activities in FY19.				
Title: Multifunctional Information Distribution System-Joint Tactical Radio System Description: The B-1B Multifunctional Information Distribution System (MIDS) - Joint Tactical Radio System (JTRS) replaces the existing MIDS Low Volume Terminal (LVT) 1 Link 16 terminal to meet National Security Agency (NSA) Crypto Modernization (CM) Device Cease Key and FAA Frequency Remap mandates; systems become non-compliant in 2025. MIDS-JTRS resolves all LVT 1 deficiencies and adds substantial combat capability enhancements to Link 16 Enhanced Throughput (LET) and Concurrent Multi-Netting (CMN-4) with Concurrent Retention Receive (CRR). MIDS-JTRS also provides multi-datalink capability, improving situational awareness and allowing rapid in-flight retargeting in a cooperative combat environment. FY 2018 Plans: Conduct acquisition planning, risk assessments, and other pre-EMD activities. Begin Engineering and Manufacturing Development efforts. FY 2019 Plans: Continue Engineering and Manufacturing Development efforts. Perform Preliminary and Critical design reviews, Frequency and First Article testing, and Developmental testing. FY 2018 to FY 2019 Increase/Decrease Statement: Increase in FY2019 funding from FY2018 is due to a increase in contract cost and flight test.		0.000	8.241	9.715
Title: Bomb Rack Unit - 56 Description: The Bomb Rack Unit 56 (BRU-56) upgrade will solve a safety risk present within the legacy BRU-56 ejector rack. The upgrade will alleviate the deficiency within the current ejector rack as well as add increased carriage capability. Prolonged use has resulted in a deficiency of the rivets within the linkage of the rack. This deficiency led to multiple failures, to include one Class A mishap in 2003, one Class C mishap in 2010, and multiple ground mishaps. The BRU-56 modification avoids future bomb rack mishaps and the possibility of a catastrophic aircraft loss as well as the loss of life. FY 2018 Plans:		0.000	5.898	20.114

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Conduct acquisition planning, risk assessments, and other pre-Engineering and Manufacturing Development (EMD) activities. Begin software development. FY 2019 Plans: Award EMD contract and continue software development. Begin Preliminary Design Review activities. FY 2018 to FY 2019 Increase/Decrease Statement: Increase in funds due to beginning of EMD efforts.				
Title: Gap and Integration Analysis Description: Funds will be used for studies to facilitate new capabilities and enhancements to improve operational aircraft safety, supportability, maintainability, reliability and total ownership cost. Conduct engineering studies that will involve a gap and integration analysis to include but not limited for Small Diameter Bomb (SDB) II Integration with Universal Armament Interface (UAI), Guided Bomb Unit (GBU)-56 Integration, Miniature Air Launch Decoy (MALD) Integration (All variants) and Helmet Mounted Cueing System. FY 2018 Plans: Engineering studies will be conducted to include a gap and integration analysis to include but not limited to Small Diameter Bomb (SDB) II Integration with Universal Armament Interface (UAI), Guided Bomb Unit (GBU)-56 Integration, Miniature Air Launch Decoy (MALD) Integration (all variants) and Helmut Mounted Cueing System. FY 2019 Plans: Engineering studies will be conducted to include a gap and integration analysis to include but not limited to Small Diameter Bomb (SDB) II Integration with Universal Armament Interface (UAI), Guided Bomb Unit (GBU)-56 Integration, Miniature Air Launch Decoy (MALD) Integration (all variants) and Helmut Mounted Cueing System. FY 2018 to FY 2019 Increase/Decrease Statement: GPS-M-Code was a New Start in FY17. Funding was not used due to a two year delay in the development of the Military GPS User Equipment (MGUE) box to FY19. As a result of the delay in development FY2018 and FY2019 funds were removed. FY17 funds were realigned to Gap and Integration Analysis.		4.562	6.386	0.257
Accomplishments/Planned Programs Subtotals		4.562	62.471	76.030

UNCLASSIFIED

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D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• APAF 05 Line Item B01B00: Training Support to Units, Mods PE 0809731F	0.438	0.448	0.450	-	0.450	0.458	0.467	0.476	0.485	Continuing	Continuing
• APAF 05 Line Item B01B00 (1)...: Bomber Tactical Data Link Mods PE 0207446F	1.380	0.100	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.480
• APAF 05 Line Item B01B00 (2)...: B-1B Squadrons, Mods	148.501	155.086	50.840	-	50.840	85.885	121.815	85.172	73.594	Continuing	Continuing
• APAF 05 Line Item B01B00 Spares: B-1B Squadrons, Spares	7.429	7.806	0.000	-	0.000	2.513	0.718	0.856	0.872	Continuing	Continuing
Remarks											
(U) Program Element 0809731F, Training Support to Units, Mods											
(U) Program Element 0207446F, Bomber Tactical Data Link, Mods											
E. Acquisition Strategy											
FITP acquisition strategy will be a Cost Plus Fixed Fee (CPFF) Sole Source contract with a three-year EMD effort and a Firm Fixed Fee (FFP)sole source contract with a three-year Production and Installation effort.											
Mode 5/S ADS-B Out, Radio Crypto Compliance, and MIDS-JTRS acquisition strategies will be a CPFF sole source contract with a two-year EMD effort and a Firm Fixed Price (FFP)competitively-selected contract with a three-year Production and Installation effort.											
The acquisition strategy for the Bomb Rack Unit 56 (BRU-56) will be competitively-selected contract for hardware development and a sole source to Boeing (OEM) for software development. EMD will be a four year effort and a three-year Production and Installation effort. Contract type is TBD.											
F. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons				Project (Number/Name) 675344 / B-1B Modernization					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fully Integrated Targeting Pod (FITP)	SS/CPFF	Boeing : OKC, OK	-	-		22.786	Jun 2018	19.922	Jun 2019	-		19.922	Continuing	Continuing	-
Mode 5/S Automatic Dependent Surveillance Broadcast (ADS-B) Out	SS/CPFF	Boeing : OKC, OK	-	-		11.937	Jun 2018	10.112	Jun 2019	-		10.112	Continuing	Continuing	-
Radio Crypto Compliance	SS/CPFF	Boeing : OKC, OK	-	-		5.092	Jun 2018	7.534	Jun 2019	-		7.534	Continuing	Continuing	-
Multifunction Information Distribution System (MIDS) Joint Tactical Radio System (JTRS)	SS/CPFF	Boeing : OKC, OK	-	-		5.743	Jun 2018	6.075	Jun 2019	-		6.075	Continuing	Continuing	-
Bomb Rack Unit - (BRU) 56	C/TBD	TBD : NV	-	-		5.898	Mar 2018	19.054	Mar 2019	-		19.054	Continuing	Continuing	-
Subtotal			-	-		51.456		62.697		-		62.697	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Gap And Integration Analysis	Various	Various : TBD, OK	-	2.569	Sep 2017	6.361	Apr 2018	0.257	Apr 2019	-		0.257	Continuing	Continuing	-
A&AS	C/TBD	TBD : TBD, VA	-	-		0.939	Mar 2018	1.073	Mar 2019	-		1.073	Continuing	Continuing	-
Trainers	TBD	Various : TBD, OH	-	-		1.889	Jun 2018	1.722	Jun 2019	-		1.722	Continuing	Continuing	-
Subtotal			-	2.569		9.189		3.052		-		3.052	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AFFTC	PO	Edward AFB : CA	-	1.968	Dec 2017	0.363	Dec 2018	8.524	Jun 2019	-		8.524	Continuing	Continuing	-
Subtotal			-	1.968		0.363		8.524		-		8.524	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons				Project (Number/Name) 675344 / B-1B Modernization					

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	Various : Various, OK	-	0.025	Mar 2017	1.463	Jan 2018	1.757	Oct 2018	-		1.757	Continuing	Continuing	-
Subtotal			-	0.025		1.463		1.757		-		1.757	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	4.562	62.471	76.030	-	76.030	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force

Date: February 2018

Appropriation/Budget Activity

3600 / 7

R-1 Program Element (Number/Name)

PE 0101126F / B-1B Squadrons

Project (Number/Name)

675344 / B-1B Modernization

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
B-1B Modernization																												
Gap and Integration Analysis Contract Award (Sep 17)																												
Gap & Integration Analysis Contract Award (Apr 18)																												
Gap & Integration Analysis Contract Award (Apr 19)																												
Fully Integrated Targeting Pod - EMD Activities																												
Fully Integrated Targeting Pod - Contract Award (Jun 18)																												
Fully Integrated Targeting Pod - MS C																												
Fully Integrated Targeting Pod - Production																												
Mode 5/S ADS-B Out - EMD Activities																												
Mode 5/S ADS-B Out - Contract Award (Jun 18)																												
Mode 5/S ADSB Out - PDR																												
Mode 5/S ADSB Out - CDR																												
Mode 5/S ADSB Out - MS C																												
Mode 5/S ADSB Out - Production																												
Radio Crypto Compliance - EMD Activities																												
Radio Crypto Compliance - Contract Award (Jun 18)																												
Radio Crypto Compliance - PDR																												
Radio Crypto Compliance - CDR																												
Radio Crypto Compliance - MS C																												
Radio Crypto Compliance - Production																												

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force																			Date: February 2018																	
Appropriation/Budget Activity 3600 / 7									R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons								Project (Number/Name) 675344 / B-1B Modernization																			
									FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
									1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
MIDS JTRS - EMD Activities																																				
MIDS JTRS - Milestone B Decision and Contract Award (Jun 18)																																				
MIDS JTRS - PDR																																				
MIDS JTRS - CDR																																				
MIDS JTRS - MS C																																				
MIDS JTRS - Production																																				
BRU-56 EMD Activities																																				
BRU-56 - Contract Award for Software Development (Mar 18)																																				
BRU-56 - Contract Award for Hardware Development (Mar 19)																																				
BRU-56 - MS C																																				
BRU-56 - Production																																				

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0101126F / <i>B-1B Squadrons</i>	Project (Number/Name) 675344 / <i>B-1B Modernization</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>B-1B Modernization</i>				
Gap and Integration Analysis Contract Award (Sep 17)	4	2017	4	2017
Gap & Integration Analysis Contract Award (Apr 18)	3	2018	3	2018
Gap & Integration Analysis Contract Award (Apr 19)	3	2019	3	2019
Fully Integrated Targeting Pod - EMD Activities	3	2018	2	2020
Fully Integrated Targeting Pod - Contract Award (Jun 18)	3	2018	3	2018
Fully Integrated Targeting Pod - MS C	2	2020	2	2020
Fully Integrated Targeting Pod - Production	2	2020	4	2023
Mode 5/S ADS-B Out - EMD Activities	3	2018	4	2019
Mode 5/S ADS-B Out - Contract Award (Jun 18)	3	2018	3	2018
Mode 5/S ADSB Out - PDR	2	2019	2	2019
Mode 5/S ADSB Out - CDR	3	2019	3	2019
Mode 5/S ADSB Out - MS C	1	2020	1	2020
Mode 5/S ADSB Out - Production	1	2020	4	2023
Radio Crypto Compliance - EMD Activities	3	2018	4	2019
Radio Crypto Compliance - Contract Award (Jun 18)	3	2018	3	2018
Radio Crypto Compliance - PDR	2	2019	2	2019
Radio Crypto Compliance - CDR	3	2019	3	2019
Radio Crypto Compliance - MS C	1	2020	1	2020
Radio Crypto Compliance - Production	1	2020	4	2023
MIDS JTRS - EMD Activities	3	2018	3	2019
MIDS JTRS - Milestone B Decision and Contract Award (Jun 18)	3	2018	3	2018
MIDS JTRS - PDR	2	2019	2	2019

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force	Date: February 2018
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0101126F / <i>B-1B Squadrons</i>	Project (Number/Name) 675344 / <i>B-1B Modernization</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
MIDS JTRS - CDR	3	2019	3	2019
MIDS JTRS - MS C	4	2019	4	2019
MIDS JTRS - Production	4	2019	4	2022
BRU-56 EMD Activities	3	2018	3	2021
BRU-56 - Contract Award for Software Development (Mar 18)	3	2018	3	2018
BRU-56 - Contract Award for Hardware Development (Mar 19)	3	2019	3	2019
BRU-56 - MS C	4	2021	4	2021
BRU-56 - Production	4	2021	4	2023