

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0101126F / <i>B-1B Squadrons</i>
--	---

COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	58.175	1.000	15.766	0.000	15.766	29.954	12.482	0.000	0.000	0.000	117.377
675344: <i>B-1B Modernization</i>	-	58.175	1.000	15.766	0.000	15.766	29.954	12.482	0.000	0.000	0.000	117.377
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 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.

The Fiscal Year 2021 President's Budget retires 17 B-1 aircraft, bringing the total aircraft inventory to 45.

FULLY INTEGRATED TARGETING POD (FITP)- (Air Force terminated program 2QFY20)

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

B-1B Identification Friend or Foe (IFF) Mode 5/S is the replacement for the B-1B Mark XII IFF Mode 4. Mode 5, which will replace Mode 4, will provide secure target identification and will be a response system for combat identification. Mode Select (Mode S), replacing Mode C, 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. Mode S provides accuracy required in International Civil Aviation Organization (ICAO) airspace. Mode 5 is a Joint Requirements Oversight Council (JROC) 2020 mandate. Funds are included to accommodate the DoD mandate as outlined in previous AF and DoD budget exhibits.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force Date: February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0101126F / <i>B-1B Squadrons</i>
--	---

RADIO CRYPTO COMPLIANCE

The B-1B Radio Crypto Compliance requirements originated to meet DoD mandates by a classified need date. 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 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 SYSTEMS (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/NTIA 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 re-targeting 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 mitigate 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 program element 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 program element 0605831F.

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.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
--	----------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons
--	--

B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	60.295	1.000	27.315	0.000	27.315
Current President's Budget	58.175	1.000	15.766	0.000	15.766
Total Adjustments	-2.120	0.000	-11.549	0.000	-11.549
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-2.119	0.000			
• Other Adjustments	-0.001	0.000	-11.549	0.000	-11.549

Change Summary Explanation

FY19: Decrease \$2.120M for Small Business Innovation Research (SBIR).

FY21: Decrease \$11.549M for higher Air Force priorities

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Fully Integrated Targeting Pod	6.177	0.000	0.000	0.000	0.000
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. Last year of funding was FY19.					

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force				Date: February 2020	
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons			
C. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
FY 2020 Plans: N/A					
FY 2021 Base Plans: N/A					
FY 2021 OCO Plans: N/A					
FY 2020 to FY 2021 Increase/Decrease Statement: N/A					
Title: Mode 5/S					
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, which will replace Mode 4, will provide secure target identification and will be a response system for combat identification. Mode Select (Mode S), which will replace Mode C, 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. Mode 5 is a Joint Requirements Oversight Council (JROC) 2020 mandate. Mode S is required in International Civil Aviation Organization (ICAO) airspace. Failure to meet these mandates will result in delayed/denied service of controlled airspace within the US and Europe. Program was de-scoped to remove ADS-B requirement based on several factors including Operations and Emission security (OPSEC/EMSEC) concerns.					
FY 2020 Plans: N/A					
FY 2021 Base Plans: N/A					
FY 2021 OCO Plans: N/A					
FY 2020 to FY 2021 Increase/Decrease Statement: N/A					
Title: Radio Crypto Compliance					
	17.057	0.000	0.000	0.000	0.000
	7.400	0.000	3.370	0.000	3.370

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
--	----------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons
--	--

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
---	----------------	----------------	---------------------	--------------------	----------------------

<p>Description: The B-1B Radio Crypto Compliance requirements originated to meet DoD mandates by a classified need date. 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 short-term 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.</p> <p>FY 2020 Plans: N/A</p> <p>FY 2021 Base Plans: Continue Engineering and Manufacturing Development (EMD) efforts.</p> <p>Major Milestone: PDR</p> <p>FY 2021 OCO Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: N/A</p>					
---	--	--	--	--	--

<p>Title: Multifunctional Information Distribution System-Joint Tactical Radio System</p> <p>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/NTIA 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.</p> <p>FY 2020 Plans: N/A</p> <p>FY 2021 Base Plans:</p>	6.344	0.000	3.370	0.000	3.370
--	-------	-------	-------	-------	-------

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons
--	--

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
---	---------	---------	--------------	-------------	---------------

Begin Engineering and Manufacturing Development (EMD) Phase Major Milestone: PDR Note: Radio Crypto and MIDS-JTRS modification efforts are concurrent efforts (i.e., same contract and modification schedule). The rationale for "bundling" these efforts is because neither program had adequate 3600 funds; therefore, cost saving initiatives had to be implemented (i.e., paying for one set of test flights as opposed to two, paying for one set of documents to be written/updated, etc.). FY 2021 OCO Plans: Begin Engineering and Manufacturing Development (EMD) Phase Major Milestone: CDR Note: Radio Crypto and MIDS-JTRS modification efforts are concurrent efforts (i.e., same contract and modification schedule). The rationale for "bundling" these efforts is because neither program had adequate 3600 funds; therefore, cost saving initiatives had to be implemented (i.e., paying for one set of test flights as opposed to two, paying for one set of documents to be written/updated, etc.). Also, aircraft will only be down one time vs. two times which will help with aircraft availability. FY 2020 to FY 2021 Increase/Decrease Statement: N/A					
--	--	--	--	--	--

Title: Bomb Rack Unit - 56 Description: The Bomb Rack Unit 56 (BRU-56) upgrade will mitigate 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 2020 Plans:	20.837	1.000	9.026	0.000	9.026
---	--------	-------	-------	-------	-------

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force				Date: February 2020	
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons			
C. Accomplishments/Planned Programs (\$ in Millions)					
Complete a Preliminary Design Review (PDR) in September, Critical Design Review (CDR) in February and Test Readiness Review (TRR) in August.					
FY 2021 Base Plans: Complete a Production Readiness Review (PRR) in October, a System Verification Review (SVR) in November, Flight Test Readiness Review (FTRR) in January.					
FY 2021 OCO Plans: N/A					
FY 2020 to FY 2021 Increase/Decrease Statement: Increase in BRU-56 reviews					
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), Conventional Mission Upgrade Program (CMUP) and Helmet Mounted Cueing System. Funding is also required to ensure test asset availability for testing of aircraft RDT&E efforts. Costs include Program Management Administrative (PMA) costs and Acquisition Support costs.					
FY 2020 Plans: N/A					
FY 2021 Base Plans: N/A					
FY 2021 OCO Plans: N/A					
FY 2020 to FY 2021 Increase/Decrease Statement: N/A					
Accomplishments/Planned Programs Subtotals					
	0.360	0.000	0.000	0.000	0.000
	58.175	1.000	15.766	0.000	15.766

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons
--	--

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF 05 Line Item	0.450	0.458	0.041	-	0.041	0.072	0.101	0.494	0.503	0.000	2.119
<i>B01B00: Training Support to Units, Mods PE 0809731F</i>											
• APAF 05 B01B00: B-1B	-	-	3.853	-	3.853	5.086	4.495	-	-	0.000	13.434
• APAF 05 B00100: B-1	39.240	18.453	21.767	-	21.767	33.162	28.974	0.000	0.000	0.000	141.596
• APAF 05 Line Item B01B00	0.000	0.000	0.717	-	0.717	0.855	0.871	0.000	-	0.000	2.443
<i>Spares: B-1B Squadrons, Spares</i>											

Remarks

E. Acquisition Strategy

Mode 5/S acquisition strategy is an Undefined Contracting Action (UCA) definitized on 7 Jan 20 as a Cost Plus Fixed Fee (CPFF) with a 2 year Period of Performance for the initial 18 aircraft. Production will begin in Jan 20 with the procurement of kits for the 10 production aircraft using the contract awarded on 7 Jan 20. There is a one-year lead time for kits. Installation will begin as soon as kits are delivered (one year after order). Projected to have 18 aircraft modified with Mode 5 by March 2021. The remainder of the fleet will be modified using a Firm Fixed Price (FFP) competitively-selected contract.

Radio Crypto and MIDS-JTRS acquisition strategies will be a CPFF sole source contract with a five+ years EMD effort and a Firm Fixed Price (FFP) competitively-selected contract with a two-year Production and Installation effort for increment one (meets mandates).

BRU-56 acquisition strategy is a single award C-type contract that was competed under FAR Part 15 utilizing source selection procedures for the hardware portion of this effort. The software portion of this effort is sole source to Boeing (OEM). EMD will be a two year effort and Production will be a two and a half year effort.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

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 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Fully Integrated Targeting Pod (FITP) (Sub-Contract)	SS/CPFF	Northrop Grumman : Rolling Meadow, IL	-	4.305	Jun 2019	-		-		-		-	0.000	4.305	-
Mode 5 - Accelerated IFF Contract	SS/CPFF	Boeing : OKC, OK	-	5.836	Jan 2020	-		-		-		-	0.000	5.836	-
Mode S Software EA 19-AVSX-11441	SS/CPFF	Boeing : OKC, OK	-	2.000	Dec 2019	-		-		-		-	0.000	2.000	-
Radio Crypto Compliance - ARC - 210 Hardware Buy	SS/FFP	Rockwell Collins : OKC, OK	-	1.947	May 2019	-		-		-		-	0.000	1.947	-
Radio Crypto Compliance	SS/CPFF	Boeing : OKC, OK	-	3.804	Feb 2020	-		3.087	Jan 2021	-		3.087	0.000	6.891	-
Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS)	SS/CPFF	Boeing : OKC, OK	-	5.119	Feb 2020	-		3.088	Jan 2021	-		3.088	0.000	8.207	-
Bomb Rack Unit (BRU) 56 - Hardware	C/CPFF	EDO, LLC : Amityville, NY	-	5.375	Apr 2019	0.775	Mar 2020	1.593	May 2021	-		1.593	0.000	7.743	-
Bomb Rack Unit - (BRU) 56 - Software	SS/CPAF	Boeing : OKC, OK	-	1.445	Sep 2019	-		1.865	Nov 2020	-		1.865	0.000	3.310	-
Subtotal			-	29.831		0.775		9.633		-		9.633	0.000	40.239	N/A

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Documentation - Technical Support	MIPR	Booz Allen Hamilton : OKC, OK	-	2.138	Sep 2019	-		0.517	Nov 2020	-		0.517	0.000	2.655	-
Acquisition Support	Allot	Not specified. : OKC, OR	-	3.928	Dec 2019	-		-		-		-	0.000	3.928	-
Acquisition Support Additional (BRU-56, FITP, ADS-B, Comm Crypto)	Allot	Not specified. : OKC, OK	-	15.000	Apr 2020	-		-		-		-	0.000	15.000	-
Subtotal			-	21.066		-		0.517		-		0.517	0.000	21.583	N/A

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0101126F / B-1B Squadrons	Project (Number/Name) 675344 / B-1B Modernization
--	--	---

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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																												
Fully Integrated Targeting Pod - TMRR Activities																												
Fully Integrated Targeting Pod PDR																												
Accelerated IFF Mode 5 - UCA Award																												
Accelerated IFF Mode 5 - PDR/CDR																												
Accelerated IFF Mode 5 - EMD																												
Radio Crypto Compliance - EMD Activities																												
MIDS JTRS - EMD Activities																												
BRU-56 EMD																												
BRU-56 Critical Design Review (CDR)																												
BRU-56 DT / OT																												
BRU-56 MS C																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force **Date:** February 2020

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>				
Fully Integrated Targeting Pod - TMRR Activities	1	2019	2	2020
Fully Integrated Targeting Pod PDR	1	2020	1	2020
Accelerated IFF Mode 5 - UCA Award	2	2020	2	2020
Accelerated IFF Mode 5 - PDR/CDR	4	2019	4	2019
Accelerated IFF Mode 5 - EMD	4	2019	2	2020
Radio Crypto Compliance - EMD Activities	2	2020	4	2024
MIDS JTRS - EMD Activities	2	2020	4	2024
BRU-56 EMD	3	2019	1	2022
BRU-56 Critical Design Review (CDR)	2	2020	2	2020
BRU-56 DT / OT	4	2021	1	2022
BRU-56 MS C	2	2022	2	2022