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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2022 Air Force **Date:** May 2021

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605931F / <i>B-2 Defensive Management System</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	0.000	224.358	0.000	0.000	0.000	0.000	-	-	-	-	-	-
653844: <i>B-2 DMS</i>	0.000	224.358	0.000	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

**Program MDAP/MAIS Code:** 431

**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, payload and stealth (anti-access and global strike missions) characteristics allow the B-2 to target and destroy the highest value enemy targets, regardless of location, and return home safely. RDT&E projects are necessary to both preserve this strategic advantage as well as increase the flexibility and lethality of this national asset tasked across a broad spectrum, from tactical to national objectives.

This RDT&E program reflects the restructure of the current DMS-M EMD effort and transition to the modernization of the B-2 cockpit display sub-system. The legacy multi-function display units (MDUs) are not supportable due to obsolescence and repair issues. Without this program, display availability will severely impact aircraft availability.

In FY 2020 and prior, the B-2 DMS-M effort was documented in PE 0605931F B-2 DMS, Project 653844 B-2 DMS; the de-scoped effort was re-named to B-2 Displays Modernization (BDM) and is now documented in PE 0101127F B-2 Squadrons, Project 675345 B-2 Modernization.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver B-2 DMS-M 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 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	250.100	0.000	0.000	0.000	0.000
Current President's Budget	224.358	0.000	0.000	0.000	0.000
Total Adjustments	-25.742	0.000	0.000	0.000	0.000
• 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	-17.229	0.000			
• SBIR/STTR Transfer	-8.513	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

**Change Summary Explanation**

FY 2020 changes are -17.229M on FY20 OMNIBUS and -8.513M for Small Business Innovative Research.

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> B-2 Defensive Management System Modernization (DMS-M) EMD	224.358	0.000	0.000
<b>Description:</b> DMS Modernization program develops improved aircrew situational awareness through replacement of passive antennas, receiver/processors, and display processors. DMS-M also addresses critical system shortfalls, and improves legacy DMS component repair issues.			
<b>FY 2021 Plans:</b> N/A - Transitioned to PE 0101127F			
<b>FY 2022 Plans:</b> N/A - Transitioned to PE 0101127F			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> N/A - No increase/decrease from FY 2021 to FY 2022			
<b>Accomplishments/Planned Programs Subtotals</b>	224.358	0.000	0.000

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<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> / BA 5: <i>System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605931F / <i>B-2 Defensive Management System</i>
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**D. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTE 07 0101127F: <i>B-2 Squadrons</i>	93.076	187.399	133.661	0.000	133.661	-	-	-	-	-	-

**Remarks**

Transitioned to PE 0101127F in FY 2021

**E. Acquisition Strategy**

See acquisition strategy in PE 0101127F for the B-2 DMS-M Displays program.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force** **Date:** May 2021

<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605931F / B-2 Defensive Management System	<b>Project (Number/Name)</b> 653844 / B-2 DMS
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<b>Product Development (\$ in Millions)</b>				<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022 Base</b>		<b>FY 2022 OCO</b>		<b>FY 2022 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Product Development	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	-	-	-
Air Vehicle - Technology Development	SS/CPFF	Various : Various, NV	0.000	-		-		-		-		-	-	-	-
Air Vehicle - Engineering and Manufacturing Development (EMD)	SS/ Various	Various : Various, NV	0.000	148.524	Oct 2019	-		-		-		-	-	-	-
<b>Subtotal</b>			0.000	148.524		-		-		-		-	-	-	N/A

**Remarks**  
Northrop-Grumman, Palmdale, CA is the prime contractor and integrator.

<b>Support (\$ in Millions)</b>				<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022 Base</b>		<b>FY 2022 OCO</b>		<b>FY 2022 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Support	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	-	-	-
Trainers	C/CPIF	WPAFB : Dayton, OH	0.000	17.966	Nov 2019	-		-		-		-	-	-	-
Mission Planning	C/CPIF	Hanscom : Boston, MA	0.000	22.271	Feb 2020	-		-		-		-	-	-	-
<b>Subtotal</b>			0.000	40.237		-		-		-		-	-	-	N/A

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022 Base</b>		<b>FY 2022 OCO</b>		<b>FY 2022 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Test and Evaluation	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	-	-	-
Government Test	MIPR	AFFTC : Various, NV	0.000	10.400	Oct 2019	-		-		-		-	-	-	-
<b>Subtotal</b>			0.000	10.400		-		-		-		-	-	-	N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force** **Date:** May 2021

<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605931F / B-2 Defensive Management System	<b>Project (Number/Name)</b> 653844 / B-2 DMS
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<b>Management Services (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Management Services	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	-	-	-
PMA	Various	Various : Various, NV	0.000	25.197	Nov 2019	-		-		-		-	-	-	-
<b>Subtotal</b>			0.000	25.197		-		-		-		-	-	-	N/A

**Remarks**  
Funding supports the A&AS, government travel, Weapon System Support Center (WSSC) lab support, and enterprise support contract with Northrop Grumman. Activities on the Northrop Grumman contract include but are not limited to, configuration management, security, test support, and risk management.

	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	0.000	224.358	0.000	-	-	-	-	-	N/A

**Remarks**  
Northrop-Grumman, the prime contractor for the B-2 weapon system, is the integrator and prime contractor for B-2 DMS activities.

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2022 Air Force		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605931F / <i>B-2 Defensive Management System</i>	<b>Project (Number/Name)</b> 653844 / <i>B-2 DMS</i>

	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026							
	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>B-2 DMS</b>																																
Multi-Functional Display Unit Replacement (MDU-R) RFP Release																																
MDU-R Contract Award																																
MDU-R EMD (FY21 and beyond in PE 0101127F)																																

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 Air Force		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605931F / <i>B-2 Defensive Management System</i>	<b>Project (Number/Name)</b> 653844 / <i>B-2 DMS</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>B-2 DMS</i></b>				
Multi-Functional Display Unit Replacement (MDU-R) RFP Release	2	2020	2	2020
MDU-R Contract Award	3	2020	3	2020
MDU-R EMD (FY21 and beyond in PE 0101127F)	3	2020	4	2020

**Note**

FY 2021 DMS-M effort is documented in PE 0101127F B-2 Squadrons, Project 675345 B-2 Modernization.