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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
2040: <i>Research, Development, Test & Evaluation, Army / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>					PE 0604021A / <i>Electronic Warfare Technology Maturation (MIP)</i>							
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	15.034	-	-	-	-	0.000	0.000	0.000	0.000	0.000	15.034
AW7: <i>Electronic Warfare Technology Maturation</i>	-	15.034	-	-	-	-	-	-	-	-	0.000	15.034

Note

PE 0604021A has no FY2023 Funding Request.

A. Mission Description and Budget Item Justification

Terrestrial Layer System Brigade Combat Team (TLS BCT) provides Army maneuver forces integrated full spectrum Signals Intelligence (SIGINT), Electronic Warfare (EW), and Cyber-enabling non-kinetic offensive operation options to Brigade Combat Team (BCT) and Expeditionary-Military Intelligence Brigade (EMIB) commanders. TLS BCT's information superiority provides Indications and Warnings, Force Protection and Situational Awareness to influence the commander's decision cycle, improve targeting timeliness and accuracy, and provide the maneuver commander with electronic attack and offensive cyber warfare options to deny, degrade, disrupt, or otherwise manipulate the targeted force. TLS BCT employs technologically advanced systems with a modular open-system approach for multiple operation configurations that can be efficiently sustained and effectively upgraded to provide capabilities against changing near peer and emerging threats to address multi-domain capability gaps.

B. Program Change Summary (\$ in Millions)

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	15.034	0.000	0.000	-	0.000
Current President's Budget	15.034	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604021A / <i>Electronic Warfare Technology Maturation (MIP)</i>	Project (Number/Name) AW7 / <i>Electronic Warfare Technology Maturation</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
<i>AW7: Electronic Warfare Technology Maturation</i>	-	15.034	-	-	-	-	-	-	-	-	0.000	15.034
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Terrestrial Layer System Brigade Combat Team (TLS BCT) provides Army maneuver forces integrated full spectrum Signals Intelligence (SIGINT), Electronic Warfare (EW), and Cyber-enabling non-kinetic offensive operation options to Brigade Combat Team (BCT) and Expeditionary-Military Intelligence Brigade (EMIB) commanders. TLS BCT's information superiority provides Indications and Warnings, Force Protection and Situational Awareness to influence the commander's decision cycle, improve targeting timeliness and accuracy, and provide the maneuver commander with electronic attack and offensive cyber warfare options to deny, degrade, disrupt, or otherwise manipulate the targeted force. TLS BCT employs technologically advanced systems with a modular open-system approach for multiple operation configurations that can be efficiently sustained and effectively upgraded to provide capabilities against changing near peer and emerging threats to address multi-domain capability gaps.

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

	FY 2021	FY 2022	FY 2023
Title: Technical / Program Management	0.719	-	-
Description: Funds will provide for technical engineering and program management.			
Title: Systems Engineering and Component Prototyping	14.315	-	-
Description: Funds will provide for, but are not limited to development, engineering and evaluation of component level technologies to include antennas, radios, software architecture and other Signals Intelligence (SIGINT), Electronic Warfare Support (ES), Electronic Attack (EA) and Cyber enabling components to mature technical feasibility and reduce Critical Technology Element (CTE) risks. Funds will support, but are not limited to the development capabilities to enhance and integrate Signals of Interest, develop system level designs, reduce Size, Weight and Power (SWaP), to mature components into an emerging Program of Record (PoR) level technology maturation level, and to support the evaluation environment to conduct required developmental events.			
Accomplishments/Planned Programs Subtotals	15.034	-	-

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

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• FJ5: <i>Terrestrial Layer System</i>	38.105	50.624	21.468	-	21.468	12.419	-	-	-	0.000	122.616

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

Line Item	FY 2021	FY 2022	FY 2023	FY 2023	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Cost To	Total Cost
			Base	OCO	Total					Complete	
• B97610: <i>TERRESTRIAL LAYER SYSTEM BCT</i>	8.081	39.240	88.915	-	88.915	168.612	188.341	188.870	188.767	0.000	870.826

Remarks

D. Acquisition Strategy

A competitive acquisition approach for component development and prototyping is planned for TLS BCT using a tailored acquisition strategy to rapidly deliver an initial integrated signals intelligence, electronic warfare and cyber capability to the Army. These efforts will be used, but are not limited to identify, develop, prototype, evaluate, analyze, and demonstrate potential capabilities and alternative solutions. These efforts will quantify the respective maturity and effectiveness to mitigate capability gaps against changing near peer representative enemy target sets and operational scenarios. Enhanced capability and other technologies to provide overmatch capabilities will be evaluated for merit and will provide increased performance for production of TLS BCT systems in FY 2022.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army **Date:** April 2022

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Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Systems Engineering and Prototyping	C/Various	TBD : TBD	15.761	14.315	Feb 2021	-		-		-		-	0.000	30.076	-
Counter drone RF-signal based targeting	C/Various	TBD : TBD	5.000	-		-		-		-		-	0.000	5.000	-
Subtotal			20.761	14.315		-		-		-		-	0.000	35.076	N/A

Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Technical / Program Management	C/CPFF	AASKI Technology : Tinton Falls, NJ	1.141	0.500	Nov 2020	-		-		-		-	0.000	1.641	-
Technical / Program Management	MIPR	Various Matrix Support Organizations : Aberdeen Proving Grounds, MD	1.141	0.219	Nov 2020	-		-		-		-	0.000	1.360	-
Subtotal			2.282	0.719		-		-		-		-	0.000	3.001	N/A

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	23.043	15.034	-	-	-	-	0.000	38.077	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604021A / <i>Electronic Warfare Technology Maturation (MIP)</i>	Project (Number/Name) AW7 / <i>Electronic Warfare Technology Maturation</i>	

Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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
Component Engineering and Prototyping	████████				████████																							
Integration on Stryker					████████																							
Field Test 1																												
Field Test 2																												
Long Lead Component Procurement					████████																							
Rapid Fielding or MS C Decision Point																												
Production on Stryker Variant					████████				████████				████████															
First Unit Equipped with TLS on Stryker																												
IOT&E / Log Demo																												
Integration & Evaluation on AMPV					████████				████████																			
TLS BCT Production on AMPV																												
Integration & Evaluation on IBCT Platform																												
TLS BCT Production on IBCT Platform																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army			Date: April 2022		
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Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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
Iterative Prototyping																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone A	2	2020	2	2020
Component Engineering and Prototyping	3	2020	2	2021
Mid Tier Acquisition Approval	3	2020	3	2020
Integration on Stryker	2	2021	1	2022
Field Test 1	4	2021	4	2021
Field Test 2	4	2021	1	2022
Long Lead Component Procurement	2	2021	1	2022
Rapid Fielding or MS C Decision Point	1	2023	1	2023
Production on Stryker Variant	2	2022	4	2024
First Unit Equipped with TLS on Strkyer	4	2022	4	2022
IOT&E / Log Demo	1	2023	1	2023
Integration & Evaluation on AMPV	2	2022	4	2023
TLS BCT Production on AMPV	4	2023	1	2025
Integration & Evaluation on IBCT Platform	2	2023	4	2024
TLS BCT Production on IBCT Platform	1	2025	4	2026
Iterative Prototyping	1	2022	1	2027