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**Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	41.831	92.951	48.720	-	48.720	104.429	92.382	92.709	93.742	Continuing	Continuing
BQ6: <i>Visual Augmentation System Eng Dev</i>	-	6.254	68.043	7.973	-	7.973	70.982	72.490	73.262	74.079	Continuing	Continuing
L67: <i>Soldier Night Vision Devices</i>	-	11.482	4.435	6.061	-	6.061	5.826	5.716	5.776	5.840	Continuing	Continuing
L70: <i>Night Vision Dev Ed</i>	-	19.166	9.039	10.521	-	10.521	7.648	7.690	7.771	7.858	Continuing	Continuing
L79: <i>Joint Effects Targeting Systems (JETS)</i>	-	4.929	11.434	24.165	-	24.165	19.973	6.486	5.900	5.965	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

A portion of this funding line is directly aligned to the Army Soldier Lethality Modernization Priority in support of situational awareness for the Close Combat Soldier. This program element provides night vision/reconnaissance, surveillance and target acquisition technologies required for United States defense forces to engage enemy forces twenty-four hours a day under conditions of degraded visibility due to darkness, adverse weather, battlefield obscurants, foliage and man-made structures. These developments and improvements to high performance night vision electro-optics, radar, laser, and thermal systems and integration of related multi-sensor suites will enable near to long range target acquisition, identification and engagement to include significant fratricide reduction, which will improve battlefield command and control in "around-the-clock" combat operations.

Project BQ6 This project focuses on transitioning demonstrated technologies that bring improvements to the dismounted Soldier's augmented vision and situational awareness system and provide Soldiers with the ability to fight, rehearse, train and win during multi-domain operations. Funded efforts will accelerate the implementation of components, terrain shared coordinate data and processing, algorithms including machine learning/artificial intelligence and demonstrations in support of the next generation augmented vision and situational awareness. Efforts will provide rapid decision making and targeting capabilities with the integration of external video and data sources such as weapon sights, unmanned air and ground vehicles and other data sources enabled by tactical cloud package and advanced network services. This project will provide data driven analytics to optimize unit performance and enhance lethality and to enable Synthetic Training Environment (STE) squad capability to perform live mixed reality training and rehearsing. This project includes costs for efforts associated with movement of information and high level processing, integration, and interface of products with the Soldiers' head, body, weapon, and transportation. Funding for this project aligns with the Army's priorities in support of the National Defense Strategy. This project supports the Soldier Lethality Cross Functional Team. Congressional Interest Item funding provided for continued 1.2 development.

The total cost of the Integrated Visual Augmentation System Rapid Prototyping Middle Tier of Acquisition effort is \$871 million RDT&E from FY18 to FY21. The total cost of the IVAS 1.2 Middle Tier of Acquisition effort is \$221 million RDT&E from FY23 to FY24.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Army	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>
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Project L67 project develops, improves and miniaturizes high performance electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. It focuses on adapting demonstrated technologies that bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability. This project includes cost associated with efforts for the development, integration and interface of products on Soldiers head, body and weapons. Funding in this project supports the Army's Soldier Lethality Cross Functional Teams (SL CFT) initiatives. Funding in this project aligns with the Army's priorities in support of the National Defense Strategy.

Project L70 focuses on night vision, reconnaissance, surveillance and target acquisition (RSTA) sensor and suites of sensors to provide well-defined surveillance and targeting capabilities for a variety of Current, Modular, and Future Force platforms. This project includes: 3rd Generation Forward Looking Infra-Red (3GEN FLIR) B-Kit development activities, the 3GEN Long Range Advanced Scout Surveillance System (LRAS3) Modification Work Order (MWO) to integrate 3GEN FLIR B-Kit, and the Assistant Secretary of the Army for Acquisition, Logistics, and Technology ASA(ALT) Common Operating Environment (COE) effort to meet sensor interoperability requirements and improve the soldier-machine interface of the Program of Record (POR).

Project L79 is an Army program with joint information (Air Force and Marine Corps). JETS addresses the one-man, hand-held precision targeting gap identified by the Fires Center of Excellence (FCoE). JETS is a light-weight, handheld system that will provide the single dismounted observer with a common, enhanced day and night thermal capability to rapidly acquire, accurately locate, positively identify, and precisely designate targets. JETS Target Location and Designation System (TLDS) will be able to interface with existing and future Forward Entry Systems (FESs) and operate in environments where global positioning system (GPS) capabilities are degraded or denied including the integration of military GPS user equipment (M-Code) GPS receivers. This project will address continued development and integration of improved precision targeting components to reduce size, weight, power, and cost of systems for dismounted precisions Fires mission. Funding in this project aligns with the Army's priorities in support of the National Defense Strategy.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	43.417	62.679	38.594	-	38.594
Current President's Budget	41.831	92.951	48.720	-	48.720
Total Adjustments	-1.586	30.272	10.126	-	10.126
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-3.228			
• Congressional Rescissions	-	-			
• Congressional Adds	-	33.500			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.586	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	10.126	-	10.126

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2024 Army **Date:** March 2023

**Appropriation/Budget Activity**  
 2040: *Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)*

**R-1 Program Element (Number/Name)**  
 PE 0604710A / *Night Vision Systems - Eng Dev*

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** BQ6: *Visual Augmentation System Eng Dev*  
 Congressional Add: *HUD Congressional Add*

	FY 2022	FY 2023
	-	33.500
Congressional Add Subtotals for Project: BQ6	-	33.500
Congressional Add Totals for all Projects	-	33.500

**Change Summary Explanation**

Increase in FY 2024 funding request from Previous President's Budget to Current President's Budget due to Army investment in Joint Effects Targeting Systems (JETS).

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				<b>Project (Number/Name)</b> BQ6 / <i>Visual Augmentation System Eng Dev</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
BQ6: <i>Visual Augmentation System Eng Dev</i>	-	6.254	68.043	7.973	-	7.973	70.982	72.490	73.262	74.079	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project focuses on transitioning demonstrated technologies that bring improvements to the dismounted Soldier's augmented vision and situational awareness system and provide Soldiers with the ability to fight, rehearse, train and win during multi-domain operations. Funded efforts will accelerate the implementation of components, terrain shared coordinate data and processing, algorithms including machine learning/artificial intelligence and demonstrations in support of the next generation augmented vision and situational awareness. Efforts will provide rapid decision making and targeting capabilities with the integration of external video and data sources such as weapon sights, unmanned air and ground vehicles and other data sources enabled by tactical cloud package and advanced network services. This project will provide data driven analytics to optimize unit performance and enhance lethality and to enable Synthetic Training Environment (STE) squad capability to perform live mixed reality training and rehearsing. This project includes costs for efforts associated with movement of information and high-level processing, integration, and interface of products with the Soldiers' head, body, weapon, and transportation. Funding for this project aligns with the Army's priorities in support of the National Defense Strategy. This project supports the Soldier Lethality Cross Functional Team.

Congressional Interest Item funding provided for continued 1.2 development.

The total cost of the Integrated Visual Augmentation System Rapid Prototyping Middle Tier of Acquisition effort is \$871 million RDT&E from FY18 to FY21. The total cost of the IVAS 1.2 Middle Tier of Acquisition effort is \$221 million RDT&E from FY23 to FY24.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> Heads Up Display (HUD)	6.254	33.282	7.973
<b>Description:</b> Integrated Visual Augmentation System (IVAS) HUD provides a digital platform for Soldier to fight, rehearse, and train in day and night that provides increased lethality, mobility, and situational awareness necessary to achieve overmatch against our current and future adversaries.			
<b>FY 2023 Plans:</b> Optimize IVAS 1.2 prototype performance and address IVAS 1.2 manufacturability and producibility. Begin test and evaluation of IVAS 1.2.			
<b>FY 2024 Plans:</b> Improve IVAS 1.2 producibility and reliability. Continue test and evaluation of IVAS 1.2			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> BQ6 / <i>Visual Augmentation System Eng Dev</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Change in funding for FY 2024 reflects costs for IVAS 1.2 developmental efforts.			
<b>Title:</b> SBIR/STTR Transfer	-	1.261	-
<b>Description:</b> Funding transferred in accordance with Title 15 USC 638			
<b>FY 2023 Plans:</b> Funding transferred in accordance with Title 15 USC 638			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding transferred in accordance with Title 15 USC 638			
<b>Accomplishments/Planned Programs Subtotals</b>	6.254	34.543	7.973

	<b>FY 2022</b>	<b>FY 2023</b>
<b>Congressional Add:</b> HUD Congressional Add	-	33.500
<b>FY 2023 Plans:</b> Congressional Interest Item funding provided for continued 1.2 development.		
<b>Congressional Adds Subtotals</b>	-	33.500

<b>C. Other Program Funding Summary (\$ in Millions)</b>												
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>	
• K36402: <i>IVAS/Heads Up Display</i>	405.140	-	89.451	-	89.451	-	-	-	-	-	Continuing	Continuing
• BQ5: <i>Visual Augmentation System Advanced Development</i>	56.463	86.594	67.935	-	67.935	29.084	29.703	30.021	30.356	-	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**  
Based on the IVAS Operational Test results, the Army is adjusting the IVAS program plan to field a limited number of IVAS 1.0 and IVAS 1.1 systems while accelerating the development, production, and fielding of IVAS 1.2. IVAS 1.2 will be accomplished as a technology insertion to the base production agreement was awarded in Dec 2022. Initial Low Rate 1.2 variant representative deliveries are slated for 1QFY2024, a second lot of Improved Low Rate 1.2 units are expected to begin in 4QFY2024. IVAS 1.2 OT in 4QFY2024 will validate the system improvements and inform a production and fielding decision in 1QFY2025. IVAS will transition to a Major Capability Acquisition pathway no later than October 2025.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> BQ6 / <i>Visual Augmentation System Eng Dev</i>
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<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Program Management	MIPR	Various : Various	17.876	0.023	Sep 2022	-		-		-		-	Continuing	Continuing	-
SBIR/STTR Transfer	TBD	To Be Determined : To Be Determined	-	-		1.261	Mar 2023	-		-		-	0.000	1.261	-
<b>Subtotal</b>			17.876	0.023		1.261		-		-		-	Continuing	Continuing	N/A

<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Heads Up Display (HUD)	Various	Various : Various	27.919	-		0.220	Feb 2023	0.226	Nov 2023	-		0.226	Continuing	Continuing	-
Vehicle Integration	Various	Various : Various	-	0.026	Aug 2022	-		-		-		-	Continuing	Continuing	-
Heads Up Display (HUD)	C/FFP	Microsoft : Redmond, WA	-	2.689	Dec 2022	63.340	Dec 2023	4.677	Mar 2024	-		4.677	Continuing	Continuing	-
<b>Subtotal</b>			27.919	2.715		63.560		4.903		-		4.903	Continuing	Continuing	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
IVAS HUD Testing	MIPR	Various : Various	10.476	3.516	Feb 2023	3.222	Sep 2023	3.070	Mar 2024	-		3.070	Continuing	Continuing	-
<b>Subtotal</b>			10.476	3.516		3.222		3.070		-		3.070	Continuing	Continuing	N/A

			Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			56.271	6.254	68.043	7.973	-	7.973	Continuing	Continuing	N/A

**Remarks**  
Some cost categories include multiple efforts, so award date is the last date where funds were awarded. FY 2024 BQ6 funds are dedicated to IVAS 1.2 producibility and testing.



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> BQ6 / <i>Visual Augmentation System Eng Dev</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Heads Up Display (HUD)	4	2018	4	2020
Improved Technology Production Transition	4	2021	2	2025
Operational Test	3	2022	4	2022
Follow-on Testing (Production Improvements)	1	2023	4	2024
HUD and System Improvements	1	2025	4	2028
1.2 Tech Insertion	1	2023	1	2025
1.2 Test	1	2023	4	2025
Extensibility and Platform Integration	2	2023	4	2028
1.3 / 2.0 Development Cycle	2	2026	2	2028

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<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				<b>Project (Number/Name)</b> L67 / <i>Soldier Night Vision Devices</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
L67: <i>Soldier Night Vision Devices</i>	-	11.482	4.435	6.061	-	6.061	5.826	5.716	5.776	5.840	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project develops, improves and miniaturizes high performance electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. It focuses on adapting demonstrated technologies that bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability and supports the Night Vision Goggles Modernization Strategy. This project includes cost associated with efforts for the development, integration and interface of products on Soldiers head, body and weapons. Funding in this project supports the Army's Soldier Lethality Cross Functional Teams (SL CFT) initiatives. Funding in this project aligns with the Army's priorities in support of the National Defense Strategy.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> Family of Weapon Sights (FWS)	3.509	0.946	2.027
<p><b>Description:</b> There are three variants in the Family of Weapon Sights: FWS-Individual (FWS-I), FWS-Crew Served (FWS-CS) and FWS-Sniper (FWS-S). These sights enable combat forces to acquire and engage targets with small arms and conduct surveillance and fire control under day/night obscuration, no-light, and adverse weather conditions. The FWS utilizes advancements in thermal and low light level sensors to produce sights operable in-line with a day optic or in stand-alone mode. This RDT&amp;E project integrates smaller pixel thermal detectors/imagers in high definition formats with improved sensitivity, clarity, and range, while simultaneously reducing the size, weight and power consumption for all FWS variants and provides a minimum of a 20% overmatch for each of the weapon platforms they are intended.</p> <p>The FWS-I variant is a weapon-mounted thermal sensor that enables Soldiers to fire quickly and accurately from any carry position and with significantly reduced exposure to enemy fire by providing a wireless, zeroed weapon aimpoint in the Soldier's Enhanced Night Vision Goggle - Binocular (ENVG-B) or Integrated Visual Augmentation System (IVAS). FWS-I requires RDT&amp;E in FY2022 and FY2023 to design and qualify a second vendor in production, because additional capacity is required to meet the increase AAO of 112K.</p> <p>The FWS-CS variant leverages the success of the FWS-I development effort, and will be the primary sight for the MK19, M240B and M2. The FWS-CS system integrates High Definition (HD) Thermal and Day Color imagers, an Integrated Laser Range Finder (ILRF) and ballistic calculator to provide Soldiers with an accurate aimpoint that adjusts automatically for range, ammunition</p>			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p>characteristics, vertical angle, and weapon cant. The FWS-CS includes a wireless HD Helmet Mounted Display (HMD) that receives weapon sight imagery allowing the Soldier to utilize the weapon sight without requiring them to look through the weapon sights eyepiece. This wireless HMD provides the opportunity for the Soldier to stay in a protected, unexposed posture while still accurately detecting and engaging targets. Additionally, the FWS-CS will integrate into Adaptive Squad Architecture and wirelessly share video and data with the Night Vision Systems (NVS) and the Nett Warrior End User Device (EUD). All wireless communication will be through the Intra Soldier Wireless (ISW) Network.</p> <p>The FWS-S variant utilizes a HD thermal sensor and mounts in-line with the Sniper's direct view optic providing a thermal capability without the need to remove or re-boresight the current direct view optic. The FWS-S provides Snipers a large format display with increased pixel density that enables accurate long range engagements in all battlefield conditions while utilizing the direct view optic's aiming features, extending lethality and providing exceptional observation.</p> <p><b>FY 2023 Plans:</b> FWS Crew Served will conduct reliability growth testing, production qualification testing, and operational testing to support Low Rate Initial Production. FWS Individual will also conduct testing to support qualification of a second vendor for production and collection of weapons firing data on various weapon systems.</p> <p><b>FY 2024 Plans:</b> Both FWS Individual and FWS Crew Served will continue to conduct operational and airborne testing, to include an Airborne Limited User Test for FWS-CS. In addition, integration efforts between FWS Individual and the fused awareness system.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The increase in funding from FY23 to FY24 is due to the integration efforts between FWS Individual and the fused awareness system.</p>				
<p><b>Title:</b> Enhanced Night Vision Goggle - Binocular (ENVG-B)</p> <p><b>Description:</b> The ENVG-B system is a modular helmet-mounted, passive electro-optical fused sensor imaging device in a binocular configuration. The system integrates dual Image Intensification (I2) sensors with the thermal sensor imagery into a single viewing display. The thermal sensor provides the Soldier with the capability to rapidly detect and recognize human-sized targets in adverse weather, obscurants and in varying light conditions. The dual I2 sensors provide the Soldier with depth perception for ease of low-light level maneuvers and the ability to detect rifle-mounted aiming lights to engage targets. The ENVG-B can also be operated in a monocular configuration by moving one of the two individually rotating monoculars. The ENVG-B has a near infrared (NIR) emitting light source that provides illumination for close-up viewing. The ENVG-B mounts on current Soldier equipment, including the Advanced Combat Helmet (ACH), the Enhanced Combat Helmet (ECH) and Integrated Head Protection System (IHPS). The ENVG-B has a multi-point wireless interface to the FWS-I and Nett Warrior in order to support augmented</p>		5.039	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L67 / <i>Soldier Night Vision Devices</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p>reality requirements. The ENVG-B wirelessly operates with the FWS-I to provide Rapid Target Acquisition (RTA) capability. RTA is the capability to view the boresighted/zeroed weapon sight reticle in the ENVG- B display, enabling the Soldier to accurately engage targets without having to bring the weapon to eye level and without the use of active lasers, all while remaining in defilade.</p> <p><b>Title:</b> Night Vision Device - Next (NVD-N) (formerly Night Vision Goggle-Next (NVG-N))</p> <p><b>Description:</b> NVD-N provides the capability to engage threat personnel at night or in low light conditions with greater clarity, depth perception, and increased recognition range for engagements. NVD-N systems will replace Soldiers' legacy monocular AN/PVS-14s and bi-ocular AN/PVS-7s increasing the Soldiers' situational awareness, mobility, speed, and effectiveness to support an increased operational tempo.</p> <p><b>FY 2023 Plans:</b> Initiate the development and testing of the NVD-N product in support of the Situational Awareness Modernization Strategy.</p> <p><b>FY 2024 Plans:</b> Continue development and testing of the NVD-N product in support of the Situational Awareness Modernization Strategy.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The FY2023 to FY2024 funding increase continues NVD-N risk reduction efforts through revision and update of unit cost trade studies.</p>		-	1.935	2.900
<p><b>Title:</b> Small Tactical Optical Rifle Mounted (STORM)</p> <p><b>Description:</b> The STORM Micro-Laser Range Finder (MLRF) is a weapon-mounted multi-function laser system. It provides an eye safe laser range finder, digital compass, Infrared (IR) and visible aiming lights, and an IR illuminator for far target location with continuous range, accuracy, weight and power performance enhanced capabilities. Funding supports qualifying smaller, lighter, and a less expensive STORM variant for Soldiers. Funding also supports integrating ballistics calculator and in-line display capabilities into the STORM as well as a power/data rail interface to support the sharing of laser range finder (LRF) data to other enablers on the weapon.</p>		1.029	-	-
<p><b>Title:</b> Laser Target Locator Module (LTLM)</p> <p><b>Description:</b> LTLM is a Lightweight, Handheld Laser Target Locator with a direct view optic, un-cooled thermal camera, eye-safe laser range finder, digital magnetic compass, and an internal Selective Availability Anti-Spoofing Module (SAASM) GPS receiver, which provides the dismounted observer or Scout a fully digital, handheld system to accurately determine target location and the ability to call for fire during all weather and light conditions.</p> <p><b>FY 2023 Plans:</b></p>		1.905	1.392	1.134

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L67 / <i>Soldier Night Vision Devices</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p>FY 2023 funding will support the qualification and Government testing for the upgraded LTLM variant beginning in the 2Q FY 2023.</p> <p><b>FY 2024 Plans:</b> Funding for FY 2024 will support the completion of testing and qualification of the LTLM upgraded variant.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The decrease in funding from FY 2023 to FY 2024 is due to the completion of the LTLM upgraded variant's testing and qualification.</p> <p><b>Title:</b> SBIR/STTR Transfer</p> <p><b>Description:</b> Funding transferred in accordance with Title 15 USC 638</p> <p><b>FY 2023 Plans:</b> Funding transferred in accordance with Title 15 USC 638</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding transferred in accordance with Title 15 USC 638.</p>	-	0.162	-
<b>Accomplishments/Planned Programs Subtotals</b>	11.482	4.435	6.061

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• VT7: <i>Soldier Maneuver Sensors - Adv Dev</i>	3.639	8.839	3.729	-	3.729	3.589	3.707	3.746	3.787	Continuing	Continuing
• K22002: <i>FWS-INDIVIDUAL</i>	151.956	143.833	129.807	-	129.807	147.556	95.922	94.803	94.234	0.000	858.111
• K35110: <i>Small Tactical Optical Rifle Mounted MLRF</i>	21.103	11.357	15.484	-	15.484	11.119	2.217	1.599	11.338	Continuing	Continuing
• B53800: <i>Laser Target Locator Systems</i>	27.771	34.229	21.539	-	21.539	22.055	2.820	2.846	21.942	Continuing	Continuing
• K22003: <i>FWS-CREW SERVED</i>	25.673	33.850	42.649	-	42.649	51.220	-	-	46.863	Continuing	Continuing
• K22004: <i>FWS-SNIPER</i>	11.101	11.000	13.178	-	13.178	13.491	13.213	13.483	13.711	Continuing	Continuing
• BQ5: <i>Visual Augmentation System Advanced Development</i>	56.463	86.594	67.935	-	67.935	29.084	29.703	30.021	30.356	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L67 / <i>Soldier Night Vision Devices</i>

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>			<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• BQ6: <i>Visual Augmentation System Eng Dev</i>	6.254	68.043	7.973	-	7.973	70.982	72.490	73.262	74.079	Continuing	Continuing
• K36400: <i>Helmet Mounted Enhanced Vision Devices</i>	234.906	300.000	30.153	-	30.153	-	-	-	-	0.000	565.059

**Remarks**

**D. Acquisition Strategy**

The various developmental programs in this project continue to exercise competitively awarded contracts using best value source selection procedures.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army												Date: March 2023				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 5				PE 0604710A / Night Vision Systems - Eng Dev				L67 / Soldier Night Vision Devices								
<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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	
PROGRAM MGMT	MIPR	Various : Various	24.009	0.804	Nov 2021	0.867	Nov 2022	0.850	Nov 2023	-		0.850	Continuing	Continuing	-	
SBIR/STTR Transfer	TBD	Various : Various	-	-		0.167	Mar 2023	-		-		-	0.000	0.167	-	
<b>Subtotal</b>			24.009	0.804		1.034		0.850		-		0.850	Continuing	Continuing	N/A	
<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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	
Family of Weapon Sights-Individual (FWS-I)	C/FFP	Various : Various	-	3.046	Apr 2022	-		1.687	Feb 2024	-		1.687	0.000	4.733	-	
Enhanced Night Vision Goggle - Binocular (ENVG-B)	C/FFP	L3Harris Corporation : Londonderry, NH	16.129	1.549	May 2022	-		-		-		-	0.000	17.678	-	
Enhanced Night Vision Goggle - Binocular (ENVG-B)	C/FFP	Elbit Systems of America : Roanoke, VA	12.579	1.549	May 2022	-		-		-		-	0.000	14.128	-	
Night Vision Device - Next	C/TBD	TBD : TBD	-	-		0.796	Aug 2023	0.812	Feb 2024	-		0.812	Continuing	Continuing	-	
STORM II	C/CPFF	L3H : Londonderry, NH	2.010	0.280	Jan 2022	-		-		-		-	0.000	2.290	-	
Laser Target Location Module (Optics 1)	C/CPFF	Optics 1 : Bedford, NH	4.351	1.080	Apr 2022	-		-		-		-	0.000	5.431	-	
<b>Subtotal</b>			35.069	7.504		0.796		2.499		-		2.499	Continuing	Continuing	N/A	
<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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	
Matrix Support	MIPR	RTI : Ft Belvoir, VA	30.301	0.387	Dec 2021	0.519	Dec 2022	0.540	Dec 2023	-		0.540	Continuing	Continuing	-	
<b>Subtotal</b>			30.301	0.387		0.519		0.540		-		0.540	Continuing	Continuing	N/A	



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>		<b>Date: March 2023</b>
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L67 / <i>Soldier Night Vision Devices</i>

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	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
FWS-I Contract 2nd Source / Design Qualification																												
FWS-I and the fused awareness system																												
FWS-CS Qualification Testing																												
FWS-S (GOTS Systems) Limited User Testing (LUT)																												
FWS-S Directed Requirement (DR)																												
ENVG-B LRIP Qualification																												
STORM II Qualification Testing																												
STORM II Wireless Technology Integration																												
STORM II - Power Data Rail Integration																												
LTLM M-Code GPS Integration																												
Advanced Sensor Development/Enhancements																												
Night Vision Device-Next Qualification & Government Testing																												
Night Vision Device-Next MS C																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L67 / <i>Soldier Night Vision Devices</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FWS-I Contract 2nd Source / Design Qualification	3	2022	2	2023
FWS-I and the fused awareness system	1	2024	2	2026
FWS-CS Qualification Testing	2	2021	4	2023
FWS-S (GOTS Systems) Limited User Testing (LUT)	3	2021	1	2022
FWS-S Directed Requirement (DR)	1	2022	1	2022
ENVG-B LRIP Qualification	4	2020	2	2022
STORM II Qualification Testing	2	2019	2	2022
STORM II Wireless Technology Integration	2	2019	4	2022
STORM II - Power Data Rail Integration	1	2024	2	2026
LTLM M-Code GPS Integration	2	2021	3	2023
Advanced Sensor Development/Enhancements	3	2026	4	2028
Night Vision Device-Next Qualification & Government Testing	4	2023	2	2026
Night Vision Device-Next MS C	3	2026	3	2026

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				<b>Project (Number/Name)</b> L70 / <i>Night Vision Dev Ed</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
L70: <i>Night Vision Dev Ed</i>	-	19.166	9.039	10.521	-	10.521	7.648	7.690	7.771	7.858	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The project supports the 3rd Generation Forward Looking Infrared (3GEN FLIR) B-Kit program, which incorporates the next generation of forward looking infrared technologies. The 3GEN FLIR program provides a common 3GEN FLIR B-Kit for integration into US Army FLIR sensor systems in accordance with the approved Improved Forward Looking Infrared (I-FLIR) Capability Development Document (CDD). The common 3GEN FLIR B-Kit will initially integrate with the Abrams platform, and is planned for integration into future platforms such as the Next Generation Combat Vehicle / Optionally Manned Fighting Vehicle (NGCV/OMFV) platform with the potential for 3GEN FLIR components to be utilized in future reconnaissance and airborne applications. The 3GEN FLIR B-Kit provides Mid Wave Infrared and Long Wave Infrared digital video and the electronic interfaces required to integrate the 3GEN FLIR technology with the host platform sensor. When integrated in platform sensor packages, 3GEN FLIR technology enhances the warfighters' survivability and lethality through increased identification range performance, while enabling the detection of difficult or obscured targets and faster threat detection through automated processes. Executing Army guidance to implement product improvements that will incorporate advancements in digital processing and artificial intelligence to ensure the sensor overmatch provided by 3GEN FLIR is maintained. The 3GEN FLIR B-Kit program is also a key element in maintaining the Army's FLIR industrial base.

FY 2024 Base funding in the amount of \$10.521 million supports the 3GEN FLIR B-Kit program activities.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> 3GEN FLIR B-Kit EMD <b>Description:</b> 3GEN FLIR EMD requirements and contract awards.	19.166	-	-
<b>Title:</b> SBIR/STTR Transfer <b>Description:</b> Funding transferred in accordance with Title 15 USC 638  <b>FY 2023 Plans:</b> Funding transferred in accordance with Title 15 USC 638 <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding transferred in accordance with Title 15 USC 638	-	0.330	-
<b>Title:</b> 3GEN FLIR B-Kit Product Improvements & Competition Development <b>Description:</b> 3GEN FLIR B-Kit Product Improvements, Technical Insertions, and promotion of competition	-	8.709	10.521

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L70 / <i>Night Vision Dev Ed</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b><i>FY 2023 Plans:</i></b> FY 2023 Base Funding supports continued integration of sensor automation and artificial intelligence/machine learning to support Aided Target Detection and Recognition and promote competition for full rate production.</p> <p><b><i>FY 2024 Plans:</i></b> FY 2024 Base Funding supports demonstration of the continued integration of sensor automation and artificial intelligence/machine learning to support Aided Target Detection and Recognition and promote competition for full rate production.</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase due to program transition from EMD phase to 3GEN FLIR B-Kit Product Improvements &amp; Competition Development activities. Overall funding increase attributable to the sensor automation demonstration planned activities.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	19.166	9.039	10.521

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 330: <i>Abrams Tank Improve Prog</i>	118.471	61.205	96.240	-	96.240	83.621	83.688	84.581	85.524	Continuing	Continuing
• CF6: <i>Optionally Manned Fighting Vehicle (OMFV)</i>	194.936	554.925	996.653	-	996.653	542.476	369.090	373.020	377.183	0.000	3,408.283
• KA4511: <i>Improved Forward Looking Infrared (IFLIR) B-Kit</i>	11.929	37.914	20.438	-	20.438	70.115	68.561	125.223	125.331	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**  
3GEN FLIR: Materiel Development Decision (MDD) was received from the Army Acquisition Executive (AAE) and the Acquisition Decision Memorandum (ADM) was signed on 22-Dec-2014. Per the ADM, 3GEN FLIR entered the acquisition lifecycle at Milestone B (MS B) in 2Q FY 2016. After a successful MS B decision, competitive EMD contracts were awarded to design, develop, integrate and test the 3GEN FLIR B-Kit prior to production and mitigate the industrial base risk. The host platforms are responsible for integration of the 3GEN FLIR B-Kit. 3GEN FLIR product improvement efforts will continue to focus on the integration and refinement of the artificial intelligence/machine learning capabilities per Army guidance.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604710A / Night Vision Systems - Eng Dev				L70 / Night Vision Dev Ed							
Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Project Management	MIPR	PM TS : Ft. Belvoir, VA	16.867	0.550	Jan 2022	0.512	Jan 2023	0.522	Jan 2024	-		0.522	Continuing	Continuing	-
SBIR/STTR Transfer	TBD	Various : Various	-	-		0.330		-		-		-	0.000	0.330	-
<b>Subtotal</b>			16.867	0.550		0.842		0.522		-		0.522	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
3GEN FLIR B-Kit EMD	C/CPIF	Various : Various	213.495	15.291	Feb 2022	-		-		-		-	0.000	228.786	-
3GEN FLIR Product Improvements	TBD	Various : Various	-	-		7.830	Mar 2023	9.625	Jan 2024	-		9.625	Continuing	Continuing	-
<b>Subtotal</b>			213.495	15.291		7.830		9.625		-		9.625	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
3GEN FLIR B-Kit Support	C/TBD	Various : Various	42.713	0.951	Feb 2022	0.367	Feb 2022	0.374	Feb 2024	-		0.374	Continuing	Continuing	-
<b>Subtotal</b>			42.713	0.951		0.367		0.374		-		0.374	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Other Test Support	MIPR	Various : Various	15.850	2.374	Jan 2022	-		-		-		-	0.000	18.224	15.850
<b>Subtotal</b>			15.850	2.374		-		-		-		-	0.000	18.224	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>			<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L70 / <i>Night Vision Dev Ed</i>

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	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
3GEN FLIR B-Kit Development, Test, and Integration																												
3GEN FLIR Incremental Product Improvements																												
3GEN FLIR B-Kit MS C									▲ 1																			

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L70 / <i>Night Vision Dev Ed</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
3GEN FLIR Materiel Development Decision (MDD)	1	2015	1	2015
3GEN FLIR Development Request For Proposal Release Review (DRFP RR)	3	2015	3	2015
3GEN FLIR B-Kit MS B	2	2016	2	2016
3GEN FLIR B-Kit Development, Test, and Integration	2	2016	3	2023
3GEN FLIR Incremental Product Improvements	4	2022	4	2030
3GEN FLIR B-Kit MS C	3	2023	3	2023
3GEN LRAS3 ECP to Integrate 3GEN FLIR B-Kit: Spec Development & Documentation	1	2018	4	2019
Common Operating Environment, Development	2	2012	4	2018

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604710A / Night Vision Systems - Eng Dev				<b>Project (Number/Name)</b> L79 / Joint Effects Targeting Systems (JETS)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
L79: Joint Effects Targeting Systems (JETS)	-	4.929	11.434	24.165	-	24.165	19.973	6.486	5.900	5.965	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Joint Effects Targeting System (JETS) is an Army Joint Information Program. JETS addresses the one-man, hand-held precision targeting gap identified by the Fires Center of Excellence (FCoE). JETS is a light-weight, handheld system that will provide the single dismounted observer with a common, enhanced day and night thermal capability to rapidly acquire, accurately locate, positively identify, and precisely designate targets. JETS Target Location and Designation System (TLDS) is able to interface with existing and future Forward Entry Systems (FESs) and will be able to operate in environments where global positioning system (GPS) capabilities are degraded or denied, and integrating military GPS user equipment (M-Code) GPS receivers. This project will develop and integrate improved precision targeting components to reduce size, weight, power, and cost of systems for dismounted precision Fires mission. Funding in this project aligns with the Army's priorities in support of the National Defense Strategy.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> Precision Targeting and Target Acquisition Development	4.929	-	-
<b>Description:</b> This project develops prototype precision targeting systems incorporating improved target acquisition sensors and optics, improved targeting sensors, and updated targeting algorithms while reducing size, weight, and power requirements. Incorporates JETS into the Adaptive Squad Architecture (ASA) and integrates the Intra Soldier Wireless (ISW) capability.			
<b>Title:</b> JETS II Development	-	11.017	24.165
<b>Description:</b> This project performs engineering and manufacturing development of the next generation JETS, transitioning technologies developed in the Precision Targeting and Target Acquisition Development project. The JETS II will be an advanced, lighter weight precision targeting systems incorporating improved target acquisition sensors and optics, improved targeting sensors, targeting algorithms, and a M-Code GPS receiver while reducing size, weight, and power requirements. It will integrate JETS into the Adaptive Squad Architecture (ASA) using the Intra Soldier Wireless (ISW) capability.			
<b>FY 2023 Plans:</b> The FY23 resources will initiate the engineering and manufacturing development of JETS II.			
<b>FY 2024 Plans:</b> The FY24 resources will continue to support the competitive engineering and manufacturing development of JETS II.			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L79 / <i>Joint Effects Targeting Systems (JETS)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
The FY 2024 increased funding reflects the ramp up of the engineering and manufacturing development phase for JETS II.			
<b>Title:</b> SBIR/STTR Transfer	-	0.417	-
<b>Description:</b> Funding transferred in accordance with Title 15 USC 638			
<b>FY 2023 Plans:</b> Funding transferred in accordance with Title 15 USC 638			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding transferred in accordance with Title 15 USC 638			
<b>Accomplishments/Planned Programs Subtotals</b>	4.929	11.434	24.165

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• VT8: <i>SOLDIER PRECISION TARGETING DEVICES - ADV DEV</i>	2.432	2.045	2.011	-	2.011	2.010	2.012	2.033	2.056	Continuing	Continuing
• K32101: <i>JOINT EFFECTS TARGETING SYSTEM (JETS)</i>	62.082	2.576	8.932	-	8.932	9.347	69.020	69.683	69.753	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

The Joint Effects Targeting System (JETS) Target Location Designation System (TLDS) entered the acquisition framework on 25 February 2013 at Milestone (MS) B and the Engineering Manufacturing & Development phase. On 26 May 2016, MS C was approved for entry into the Production and Deployment Phase, Low Rate Initial Production. On 6 March 2022, the Milestone Decision Authority provided an Acquisition Decision Memorandum directing the Product Manager to develop a comprehensive plan to acquire an updated version of JETS, implementing M-Code to be compliant with Public Law 111-383, and insertion of other capability improvements commensurate with user Requirements.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604710A / Night Vision Systems - Eng Dev				L79 / Joint Effects Targeting Systems (JETS)							
Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Program Management Support	MIPR	PM-IVAS : Ft Belvoir, VA 22060	5.285	0.368	Feb 2022	0.379	Feb 2023	0.400	Dec 2023	-		0.400	Continuing	Continuing	Continuing
SBIR/STTR Transfer	TBD	Various : Various	-	-		0.417	Mar 2023	-		-		-	0.000	0.417	-
<b>Subtotal</b>			5.285	0.368		0.796		0.400		-		0.400	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Precision Targeting & Target Acquisition Development	C/FFP	Elbit : Merrimack, NH	9.359	3.241	Feb 2022	-		-		-		-	0.000	12.600	-
JETS II	C/FFP	TBD : TBD	-	-		9.415	Aug 2023	22.606	Nov 2023	-		22.606	Continuing	Continuing	Continuing
<b>Subtotal</b>			9.359	3.241		9.415		22.606		-		22.606	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Matrix Support	MIPR	C5ISR (RTI) : Ft. Belvoir, VA	13.456	0.411	Jan 2022	0.423	Feb 2023	0.250	Dec 2023	-		0.250	Continuing	Continuing	-
Science and Engineering Support	SS/CPFF	Johns Hopkins University : Laurel, MD	8.488	0.909	Jan 2022	0.800	Feb 2023	0.659	Jan 2024	-		0.659	Continuing	Continuing	-
<b>Subtotal</b>			21.944	1.320		1.223		0.909		-		0.909	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Testing	MIPR	Various : Various	6.061	-		-		0.250	Jan 2024	-		0.250	Continuing	Continuing	-



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L79 / <i>Joint Effects Targeting Systems (JETS)</i>

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028								
	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					
Full Materiel Release (FMR)	▲ 1 FMR																																
Precision Targeting and Target Acquisition Development	■ SENSOR DEVELOPMENT																																
JETS II Development Decision				▲ 2 JETS II Development Decision																													
JETS II Development									■ JETS II Development																								
JETS II Limited User Test													■ JETS II LUT																				
JETS II Production Decision															▲ 3 JETS II Production Decision																		
JETS II Production																	■ JETS II Production																
JETS II Initial Operational Test & Evaluation																					■ JETS II IOT&E												
JETS II SWAP-C																									■ JETS II SWAP-C								

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2024 Army</b>		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L79 / <i>Joint Effects Targeting Systems (JETS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Full Materiel Release (FMR)	2	2022	2	2022
Precision Targeting and Target Acquisition Development	2	2019	4	2022
JETS II Development Decision	4	2022	4	2022
JETS II Development	4	2023	2	2026
JETS II Limited User Test	3	2025	4	2025
JETS II Production Decision	1	2026	1	2026
JETS II Production	3	2026	2	2032
JETS II Initial Operational Test & Evaluation	3	2027	3	2027
JETS II SWAP-C	2	2027	4	2030