Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army											Date: March 2019	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*					**R-1 Program Element (Number/Name)** PE 0603710A *I Night Vision Advanced Technology*							
COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	45.617	61.313	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	106.930
K70: *Night Vision Adv Tech*	-	20.867	32.717	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	53.584
K86: *Night Vision, Abn Sys*	-	24.750	28.596	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	53.346

Note

In Fiscal Year (FY) 2020 this Program Element is being eliminated, with continuity of effort realigned to the following PEs:
 * PE 0603118A Soldier Lethality Advanced Technology
 * PE 0603462A Next Generation Combat Vehicle Advanced Technology
 * PE 0603463A Network C3I Advanced Technology
 * PE 0603465A Future Vertical Lift Advanced Technology

A. Mission Description and Budget Item Justification

This PE matures and demonstrates sensor technologies that increase Warfighter situational understanding, survivability, and lethality by providing sensor capabilities to acquire and engage targets at longer ranges in complex environments and operational conditions (e.g. day/night, obscured, smoke, adverse weather, and other degraded visual environments). Project K70 pursues technologies that provide our Warfighters with a Common Operating Picture (COP) to enable increased situational understanding and combat overmatch. Specific areas of maturation and demonstration include technologies that integrate disparate sensor architectures, perform multispectral aided target detection (AiTD), enable passive long range target identification (ID), improve day/night visualization systems, allow rapid wire area search, and facilitate augmented reality. Project K86 matures and validates airborne platform sensors and algorithms designed to detect targets (vehicles and personnel) in camouflage, concealment, and deception. This Project provides pilotage and situational understanding imagery to multiple pilots/crew members independently to enhanced operations in day/night/adverse weather conditions.

Work in this PE is fully coordinated with efforts in PE 0602120A (Sensors and Electronic Survivability), PE 0602270A (Electronic Warfare Technology), PE 0602709A (Night Vision and Electro-Optics Technology), PE 0602712A (Countermine Systems), PE 0603001A (Warfighter Advanced Technology), PE 0602211A (Aviation Technology), PE 0603003A (Aviation Advanced Technology), PE 0603005A (Combat Vehicle and Automotive Advanced Technology), PE 0603606A (Landmine Warfare and Barrier Advanced Technology), PE 0603774A (Night Vision Systems Advanced Development) and PE 0604710A (Night Vision Systems Engineering Development).

All FY 2020 adjustments align program financial structure to Army Modernization Priorities in support of the National Defense Strategy.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the U.S. Army Futures Command (AFC).

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army		**Date:** March 2019
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603710A *I Night Vision Advanced Technology*	

B. Program Change Summary ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**
Previous President's Budget	47.135	61.376	62.280	-	62.280
Current President's Budget	45.617	61.313	0.000	-	0.000
Total Adjustments	-1.518	-0.063	-62.280	-	-62.280
• Congressional General Reductions	-0.030	-0.063			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.488	-			
• Adjustments to Budget Years	-	-	-62.280	-	-62.280

Change Summary Explanation

FY20 reduction - PE eliminated due to financial restructure, with continuity of effort realigned to other PEs in Science and Technology portfolio.

| Exhibit R-2A, RDT&E Project Justification: PB 2020 Army | | | | | | | | | | Date: March 2019 | |

Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603710A / Night Vision Advanced Technology	Project (Number/Name) K70 / Night Vision Adv Tech

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
K70: Night Vision Adv Tech	-	20.867	32.717	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	53.584

Note

In Fiscal Year (FY) 2020 this Project is being realigned to:
Program Element (PE) 0603463A Network C3I Advanced Technology, Project:
* AQ5 Sensor CE-Integrated Sensor Architecture Adv Tech
PE 0603118A Soldier Lethality Advanced Technology, Projects
* AY7 Small Arms Fire Control Advanced Technology
* BC9 Adv Soldier Sensors/Displays AdvTech for Dismounts
PE 0603462A Next Generation Combat Vehicle Advanced Technology, Projects:
* BG1 Sensors for Auto Oper and Survivability Adv Tech
* BI3 Sensor Protection Advanced Technology

A. Mission Description and Budget Item Justification

This Project matures and demonstrates high-performance sensor technologies and architectures that enhance situational understanding, increase target detection and identification ranges, reduce target acquisition (TA) timelines, enable threat detection and mitigation, and support operations in degraded environments against threats that are partially obscured by terrain, weather, or other features. This Project provides improved capabilities and Common Operating Picture (COP) for mounted and dismounted Soldiers and tactical vehicles.

FY 2020 realignments are due to financial restructuring in support of Army Modernization Priorities.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the U.S. Army Futures Command (AFC).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Title: Sensor Interoperability	2.342	2.904	-
Description: This effort matures and demonstrates an interoperability sensor architecture that allows a system to dynamically discover and leverage other systems on a network without any specific or prior knowledge. The goal of this effort is to develop standards, models, and protocols that provide a common language for sensor systems to connect, publish their capabilities and needs, and interact with other systems, even on disadvantaged networks. The benefits of this effort are increased sensor collaboration, reduced decision timelines, reduced soldier load, and reduced integration costs.			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019	

Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603710A / *Night Vision Advanced Technology*	Project (Number/Name) K70 / *Night Vision Adv Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
FY 2019 Plans: Improve methods for distributed interoperability management to support autonomous sensor data requesting, processing, and distribution decisions; improve methods for interoperability to optimize operation on limited-bandwidth communication networks and survive and recover from communication network denial; exploit internal interoperability management metadata to provide indicators of abnormal network behavior consistent with intrusion; mature and demonstrate methods allowing two-way interoperability across security domains; demonstrate interoperability integration and operation strategies across tactical and intelligence assets, to include joint and multinational assets. *FY 2019 to FY 2020 Increase/Decrease Statement:* For FY 2020, this effort is realigned to PE 0603463A / Project AQ5.			
Title: Soldier System Architecture *Description:* This effort matures and optimizes interfaces for Soldier sensors, optics, displays, and electronic systems that will be incorporated into the larger Soldier system architecture to improve the individual Soldier's effectiveness and efficiency while reducing burden and total operational costs. This effort is coordinated with Program Element (PE) 0603001A/Project J50, PE 0602716A/Project H70, PE 0602786A/Project H98, PE 060315A/Project S28, and PE 0603004A/Project 232. This effort ends in FY 2018 and deliverables transition to Program Executive Office (PEO) Soldier and Research, Development, and Engineering Command (RDECOM).	1.001	-	-
Title: Ground Based Sensors and Integration for Degraded Visual Environments (DVE) *Description:* This effort provides uncooled infrared (UCIR) sensor technologies to improve survivability through increased Situational Awareness (SA) in all conditions and environments, to include Degraded Visual Environments (DVE), for manned and unmanned ground vehicle systems. Current uncooled IR requires improvement in sensitivity and development of signal processing techniques to penetrate obscurants. Integration of improved sensors, signal processing algorithms, and data fusion will maintain mission capabilities in DVE (e.g. smoke, dust, fog). Demonstration of scalable, multi-functional (360 degree SA, Hostile Fire Detection (HFD), Aided Driving), low cost SA systems with in-vehicle displays that can be tailored to the ground platform and mission requirements will bring timely and useful information to the vehicle crew and squad. This is a Joint effort with the Tank Automotive Research, Development and Engineering Center (TARDEC) under PE 0602601/Project C05 and PE 0603005/Project 221. This effort is fully coordinated with PE 0602709/Project H95. *FY 2019 Plans:* Conduct system validation of real time driving and maneuver capabilities in DVEs (dust, fog) on vehicle platforms with imaging sensors, an overlay of driving aids on sensor displays, and image enhancement algorithms; continue performance improvements	5.112	7.599	-

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603710A / *Night Vision Advanced Technology*	Project (Number/Name) K70 / *Night Vision Adv Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
from fusing COTS active sensors including MMW/Radar and scene based terrain knowledge to supplement UCIR imagery and optimize low latency cues suitable for driving; incorporate advanced UCIR sensors and image processing into unmanned systems to enhance target detection performance of convoy operations under degraded environments; demonstrate stationary hostile fire detection/cueing capabilities in real time through use of dual band UCIR with high performance detection against subsonic vehicular threats; optimize HFD algorithms for both short/long range scenarios to demonstrate low false alarm rates and validate the potential for OTM applications. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Effort ends in FY 2019.			
Title: Soldier Maneuver and Lethality Sensors ***Description:*** This effort matures and demonstrates dismounted Soldier capabilities that improve Soldier mobility, maneuver, situational understanding, threat detection, targeting, and lethality. Innovative technologies for Soldier weapon or head mounted sensors, head mounted displays, and tactical lasers will be provided to users to gain feedback about performance and utility. The technologies provided through this effort address human factors/human dimension and provide lower weight, reduced cost, and improved performance for Soldier based sensor systems. In FY 2019, work in this effort are realigned to support the Army science and technology (S&T) priorities as identified at the December 2016 S&T Army Requirements Oversight Council by the Chief of Staff of the Army. ***FY 2019 Plans:*** Provide design approaches for a multi-band leader weapon sight with multifunction sensors and lasers for target handoff, threat detection, and facial identification; improve sensor resolution for threat discrimination; exploit existing biometrics databases to provide standoff tactical capabilities; mature existing target detection algorithms to recognize complex obstacles using data collected with prototype high resolution airborne detection sensor system to improve situational awareness for dismounted units. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** For FY 2020, this effort is realigned to PE 0603118A / Project AY7 and PE 0603462A / Project BG1.	2.892	3.808	-
Title: Augmented Reality for Tactical Operations ***Description:*** This effort will mature and demonstrate an integrated mounted and dismounted tactical Augmented Reality (AR) capability that provides a Common Operating Picture (COP) for mounted and dismounted elements, increased maneuverability and survivability, and enhanced situational understanding by integrating sensor imagery, geo-location information, accurate real time Situational Understanding (SU) and command and control information for all warfighter operational environments. Leverages work performed in PE 0602709A/Project H95, PE 0602784A/Project 855, and PE 0602784A/Project T42. ***FY 2019 Plans:***	2.002	2.904	-

Exhibit R-2A, **RDT&E Project Justification:** PB 2020 Army		**Date:** March 2019
Appropriation/Budget Activity 2040 **/** 3	**R-1 Program Element (Number/Name)** PE 0603710A **/** *Night Vision Advanced Technology*	**Project (Number/Name)** K70 **/** *Night Vision Adv Tech*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020**
Provide vision based orientation sensors to support geo-registration of information; provide initial demonstration of Blue Force Tracking (BFT), threat icons, and Situational Awareness (SA) information display on existing vehicle displays; demonstrate video from vehicle imagers displayed on Soldier Helmet Mounted Display (HMD) via wireless connection. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** For FY 2020, this effort is realigned to PE 0603118A / Project BC9.			
Title: New Long Range Advanced Scout Surveillance System (LRAS3) ***Description:*** This effort matures and demonstrates sensor technologies that provide reconnaissance crews the ability to rapidly detect, identify, and respond to hybrid threats beyond their current tactical capability to include integration of third-generation forward looking infrared (FLIR) with low cost optics, multi-function laser module enabling range finding, marking and pointing, rapid detection of threat optical systems, precision target location, and advanced image processing and aided target recognition algorithms. ***FY 2019 Plans:*** Integrate 3rd Generation FLIR and mature high power multi-spectral laser technologies for advanced threat detection at tactical ranges; improve laser detector technology to increase range performance and range resolution; optimize optical assemblies to yield high throughput multi-wavelength designs, lowering overall system Size, Weight, and Power (SWAP); validate target handoff subsystem performance; demonstrate initial digital read-out integrated circuit (DROIC) and cooled long wave infrared (LWIR) camera under required environmental conditions. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** For FY 2020, this effort is realigned to PE 0603462A / Project BG1.	5.412	4.727	-
Title: Down Range Electro-Optical Wind Sensing ***Description:*** This effort will integrate crosswind sensing and range measurement with real time compensation of the aim-point offset for a shooter to rapidly and accurately engage targets from effective weapon ranges. The effort will mature and demonstrate sensing and imaging technologies to measure crosswinds and target range to provide an aim-point compensation of the bullet trajectory and increase the first round probability of hit. ***FY 2019 Plans:*** Mature and demonstrate a system brass board concept for a crew served electro-optical (EO) wind sensing system with weapon sight and reticle aim point adjustment; improve rifle display assembly to provide more direct optical flow of disturbed reticle. ***FY 2019 to FY 2020 Increase/Decrease Statement:***	2.106	2.815	-

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019	
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603710A / *Night Vision Advanced Technology*	**Project (Number/Name)** K70 / *Night Vision Adv Tech*	

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Effort ends in FY 2019.			
Title: One Sensor for Fire Support/Scout Operations	-	2.012	-
Description: This effort will optimize and demonstrate a modular and tailorable single sensor solution for both Scouts and Forward Observers integrating advanced sensor technologies with increased identification (ID) range and improved target location accuracy. The effort will enable a synchronized Situational Awareness (SA) picture to enhance overall lethality and survivability. A single sensor approach will increase human performance with common training, common materiel repair parts, and economy of scales to support expeditionary operations. *FY 2019 Plans:* Provide trade studies to optimize single sensor design approach for both Scouts and Forward Observers; improve design for increased range performance and reduced target location error; validate design approach via sensor range performance predictive modeling. *FY 2019 to FY 2020 Increase/Decrease Statement:* For FY 2020, this effort is realigned to PE 0603118A / Project AY7.			
Title: Asymmetric Vision / Decide Faster	-	4.937	-
Description: This effort will mature and demonstrate sensing, image processing, display and mission decision aid capabilities to provide disaggregated mounted and dismounted teams with the ability to act autonomously, outmaneuver, and outthink the enemy in close combat with limited and intermittent access to higher echelon command and control systems. In FY 2019, this effort is developed from realigned funds in support of the Army science and technology (S&T) priorities as identified at the December 2016 S&T Army Requirements Oversight Council by the Chief of Staff of the Army. *FY 2019 Plans:* Demonstrate tactical augmented reality, 3-Dimensional enriched terrain and mission planning tools; validate initial system of systems level concepts in tactically relevant environments; optimize concept data management and interoperability approaches. *FY 2019 to FY 2020 Increase/Decrease Statement:* For FY 2020, this effort is realigned to PE 0603118A / Project BC9.			
Title: FY 2019 SBIR / STTR Transfer	-	1.011	-
Description: FY 2019 SBIR / STTR Transfer *FY 2019 Plans:*			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019	
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603710A / Night Vision Advanced Technology	Project (Number/Name) K70 / Night Vision Adv Tech	

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
FY 2019 SBIR / STTR Transfer			
FY 2019 to FY 2020 Increase/Decrease Statement: FY 2019 SBIR / STTR Transfer			
Accomplishments/Planned Programs Subtotals	20.867	32.717	-

C. Other Program Funding Summary ($ in Millions)
 N/A
Remarks

D. Acquisition Strategy
 N/A

E. Performance Metrics
 N/A

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019	
Appropriation/Budget Activity 2040 / 3				**R-1 Program Element (Number/Name)** PE 0603710A / *Night Vision Advanced Technology*					**Project (Number/Name)** K86 / *Night Vision, Abn Sys*		

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
K86: *Night Vision, Abn Sys*	-	24.750	28.596	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	53.346

Note

In Fiscal Year (FY) 2020 this Project is being realigned to:
Program Element (PE) 0603465A Future Vertical Lift Advanced Technology, Projects:
* AK3 Aviation Survivability Advanced Technology
* AL6 Degraded Vis Environ Mitigation (DVE-M) Adv Tech
* AL7 Full Spectrum Targeting Advanced Technology

A. Mission Description and Budget Item Justification

This Project matures and demonstrates intelligence, surveillance, reconnaissance, targeting, and pilotage technologies in support of the Army's aviation and networked systems. This effort focuses on improved reconnaissance, surveillance, and target acquisition, pilotage sensors, high-resolution heads-up displays, sensor fusion, and aided target recognition (AiTR) capabilities for Army vertical lift aircraft, utility helicopters, and unmanned aerial systems (UAS) in day/night, obscured, smoke, adverse weather, and other Degraded Visual Environments (DVE). UAS payload efforts mature and demonstrate small, lightweight, and modular payloads (e.g. electro-optical/ infrared, laser radar, designator) to support target detection, identification, location, tracking, and targeting of tactical targets for the Brigade Combat Team.

Work in this Project is fully coordinated with Program Element (PE) 0602211A (Aviation Technology) and PE 0603003A (Aviation Advanced Technology).

FY 2020 realignments are due to financial restructuring in support of Army Modernization Priorities.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the U.S. Army Futures Command (AFC).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Title: Local Area Intelligence, Surveillance, and Reconnaissance (ISR) for Tactical Small Units	5.089	5.148	-
Description: This effort develops and demonstrates sensors enabling simultaneous display of wide and narrow field-of-view (FOV) infrared imagery for enhanced Situational Awareness (SA)/targeting. This effort optimizes multi-band image fusion and the ability to image battlefield laser spot locations for improved targeting accuracy and reduced fratricide caused by laser misalignment. *FY 2019 Plans:*			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		**Date:** March 2019
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603710A / *Night Vision Advanced Technology*	**Project (Number/Name)** K86 / *Night Vision, Abn Sys*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Demonstrate and validate CSP turret system performance/capability improvements from a surrogate manned airborne platform to include simultaneous wide/narrow field-of-view, imaging of battlefield lasers, and extended range performance under adverse weather conditions. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Effort ends in FY 2019.			
Title: Sensors and Sensor Fusion for Rotorcraft Degraded Visual Environment (DVE) Mitigation *Description:* This effort leverages work previously accomplished under the ?Multifunction Imagers for Rotary Wing? and ? Pilotage Sensor Fusion? efforts. This effort matures sensing and processing approaches to improve pilotage in DVEs. This effort optimizes Long Wave Infrared (LWIR) imaging sensors capable of providing actionable imagery over a wide range of DVEs. This effort also demonstrates a distributed aperture sensing (DAS) approach in which sensing modules are placed around the airframe to enable 360 degree coverage and provide information on potential threats and obstacles for increased Situational Awareness (SA). The effort provides DVE-specific multimodal fusion techniques to leverage the strengths and mitigate the weaknesses of multiple sensor modalities. Work in this effort is coordinated with DVE efforts in PE 060211A, Aviation Technology, Project 47A, and PE0603003A, Aviation Advanced Technology, Project 313. ***FY 2019 Plans:*** Mature real-time computing hardware and implement previously identified software approaches for sensor fusion, DAS and synthetic scene rendering, coherent 3D world model generation, and advanced navigation/location; integrate flight-worthy real-time computing hardware/software along with baseline sensor suite (high-sensitivity cooled LWIR, RADAR, active IR and wide field of view uncooled IR) onto airborne rotary wing testbed platform; conduct a series of airborne data collections to demonstrate the achieved system performance of the baseline and several alternate sensor/processing configurations; validate demonstrated performance of DVE sensor/processing configurations and identify modifications to improve performance; demonstrate operability of data interfaces to allow 3D world model queries from the flight control, guidance, and cueing systems. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** For FY 2020, this effort is realigned to PE 0603465A / Project AL6.	9.257	10.692	-
Title: Digital Dual Use Sensors (DDUS) *Description:* This effort will mature and demonstrate the core camera technology for a multi-spectral, multi-mode distributed aperture pilotage system while supporting aircraft survivability. This synergistic single sensor technology will support aircraft survivability by providing hostile fire and missile warning cues while simultaneously providing pilotage and situational understanding in Degraded Visual Environments (DVEs). This effort leverages technology from the Dual Band Infrared Focal	10.404	11.848	-

Exhibit R-2A, **RDT&E Project Justification:** PB 2020 Army		**Date:** March 2019
Appropriation/Budget Activity 2040 *I* 3	**R-1 Program Element (Number/Name)** PE 0603710A *I Night Vision Advanced Technology*	**Project (Number/Name)** K86 *I Night Vision, Abn Sys*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020**
Plane Arrays (IRFPA) ManTech as well as from the 3D Digital Read-Out Integrated Circuit (DROIC) Science and Technology Objective (STO) to fabricate the digital multi-function readout circuit to enable the multi-function capability. *FY 2019 Plans:* Mature multiple dual band DROIC designs; optimize DROICs based on the two most promising designs; electrically probe DROIC parts will be validated for functionality and performance in preparation to bond DROICs to the dual band Midwave/Longwave Infrared (MWIR/LWIR) detector material; mature the integrated dewar and cooler assemblies (IDCAs) required for DDUS FPAs; mature optical lenses to demonstrate and validate performance of DDUS sensor technology. *FY 2019 to FY 2020 Increase/Decrease Statement:* For FY 2020, this effort is realigned to PE 0603465A / Project AK3.			
Title: FY 2019 SBIR / STTR Transfer *Description:* FY 2019 SBIR / STTR Transfer *FY 2019 Plans:* FY 2019 SBIR / STTR Transfer *FY 2019 to FY 2020 Increase/Decrease Statement:* FY 2019 SBIR / STTR Transfer	-	0.908	-
Accomplishments/Planned Programs Subtotals	24.750	28.596	-

C. Other Program Funding Summary ($ in Millions)
 N/A
Remarks

D. Acquisition Strategy
 N/A

E. Performance Metrics
 N/A