Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Army											Date: February 2020	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603006A *I Space Application Advanced Technology*							
COST ($ in Millions)	**Prior Years**	**FY 2019**	**FY 2020**	**FY 2021 Base**	**FY 2021 OCO**	**FY 2021 Total**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**Cost To Complete**	**Total Cost**
Total Program Element	-	48.542	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	48.542
257: *DIGITAL BATTLEFLD COMM (CA)*	-	36.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	36.000
592: *Space Application Tech*	-	12.542	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	12.542

Note

In Fiscal Year (FY) 2020 this Program Element (PE) is realigned to the following PE:
* 0603463A Network C3I Advanced Technology

A. Mission Description and Budget Item Justification

This PE matures and demonstrates advanced space technologies that support the Army's ability to control and exploit space assets that contribute to current and future military operations as defined in the national, Department of Defense (DoD), and Army space policies. This PE provides applications for enhanced intelligence, reconnaissance, surveillance, target acquisition, position/navigation/timing, missile warning, ground-to-space surveillance, and command and control capabilities. Project 592 matures and demonstrates networked and integrated surveillance, communications, and command and control capabilities for high altitude and tactically responsive space payloads to enable information superiority, enhanced situational awareness, and support global assured access enabling distributed tactical operations.

Work in this PE complements the work in PE 0602120A (Sensors and Electronic Survivability), and PE 0603794A (C3 Advanced Technology).

All FY20 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 PE is performed by the United States Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT) Technical Center in Huntsville, AL.

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Army	Date: February 2020
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603006A *I Space Application Advanced Technology*

B. Program Change Summary ($ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	48.985	0.000	0.000	-	0.000
Current President's Budget	48.542	0.000	0.000	-	0.000
Total Adjustments	-0.443	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.443	-			

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2019	FY 2020
Project: 257: *DIGITAL BATTLEFLD COMM (CA)*		
Congressional Add: *Tactical Small Launch*	20.000	-
Congressional Add: *Global Communications Research*	10.000	-
Congressional Add: *Assured Positioning, Navigation and Timing for Space and Missile Defense Assets*	6.000	-
Congressional Add Subtotals for Project: 257	36.000	-
Congressional Add Totals for all Projects	36.000	-

Exhibit R-2A, RDT&E Project Justification: PB 2021 Army			Date: February 2020
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603006A / *Space Application Advanced Technology*	Project (Number/Name) 257 / *DIGITAL BATTLEFLD COMM (CA)*	

COST ($ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
257: *DIGITAL BATTLEFLD COMM (CA)*	-	36.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	36.000

A. Mission Description and Budget Item Justification

Congressional Interest Item funding for Space Application Advanced Technology as specified in Appropriations Act Conference Reports.

Congressional adds fund efforts to: adapt and mature Conventional Prompt Strike technologies in both the payload delivery vehicle and the payload to meet the Army's emerging long range fires requirements; mature design of glide body, optimize flight-proven navigation, guidance, and control system, and exploit internal layout and design of current vehicle to meet required range, payload, and lethality capabilities; mature and demonstrate Space and High Altitude based global communications technologies and multi-payload/platform communication and prioritization protocols in order to demonstrate commanders guaranteed access to critical communications and position and timing to ensure mission command.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020
Congressional Add: Tactical Small Launch	20.000	-
FY 2019 Accomplishments: Tactical Small Launch		
Congressional Add: Global Communications Research	10.000	-
FY 2019 Accomplishments: Global Communications Research		
Congressional Add: Assured Positioning, Navigation and Timing for Space and Missile Defense Assets	6.000	-
FY 2019 Accomplishments: Assured Positioning, Navigation and Timing for Space and Missile Defense Assets		
Congressional Adds Subtotals	36.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2021 Army			Date: February 2020
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603006A / *Space Application Advanced Technology*	Project (Number/Name) 592 / *Space Application Tech*	

COST ($ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
592: *Space Application Tech*	-	12.542	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	12.542

Note

In Fiscal Year (FY) 2020 this Project is being realigned to:
Program Element (PE) 0603463A Network C3I Advanced Technology
* Project A06 Tag Track and Locate Small Satellites Adv Tech
* Project AV2 LEO Advanced Technology

A. Mission Description and Budget Item Justification

This Project matures and demonstrates payloads, sensors, and data down link systems for tactically responsive space and high altitude platforms supporting Army ground forces. This Project matures, demonstrates, and integrates lightweight materials, hardware components with reduced power consumption, and advanced data collection, processing, and dissemination capabilities. This Project also develops algorithms that process space and near space sensor data in real and near real time for integration into battlefield operating systems. These efforts support the Army's ability to control and exploit space assets that contribute to current and future military operations as defined in the National, Department of Defense (DoD), and Army space policies.

All FY20 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, Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Title: Payload Technology Development	12.542	-	-
Description: This effort matures technologies for smaller, Warfighter-responsive sensor and communication small satellite constellations. Work related to standard Army networks is done in coordination with the Communications-Electronics Research Development and Engineering Center (CERDEC) and the Army Cyber Center of Excellence.			
Accomplishments/Planned Programs Subtotals	12.542	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2021 Army		Date: February 2020
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603006A / *Space Application Advanced Technology*	**Project (Number/Name)** 592 / *Space Application Tech*

D. Acquisition Strategy

N/A