Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army Date: February 2018

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

2040: Research, Development, Test & Evaluation, Army I BA 4: Advanced

PE 1206308A I Army Missile Defense Systems Integration

Component Development & Prototypes (ACD&P)

	• •	,											
COST (\$ in Millions)	Prior			FY 2019	FY 2019	FY 2019					Cost To	Total	
COST (\$ III WIIIIONS)	Years	FY 2017	FY 2018	Base	oco	Total	FY 2020	FY 2021	FY 2022	FY 2023	Complete	Cost	
Total Program Element	-	0.000	20.432	38.319	-	38.319	22.277	30.653	25.932	24.194	0.000	161.807	
FE5: Space And Missile Defense Integration	-	0.000	15.966	17.225	-	17.225	17.031	20.081	20.569	19.502	0.000	110.374	
FE6: Army Space System Enhancement/Integration	-	0.000	4.466	21.094	-	21.094	5.246	10.572	5.363	4.692	0.000	51.433	

### A. Mission Description and Budget Item Justification

- PE 0603308A project 990 transition to PE 1206308A project FE5 beginning in FY 2018.
- PE 0603308A project EB7 transition to PE 1206308A project FE6 and PE 1205117A project FG3 beginning in FY 2018.

This program element funds space systems integration efforts performed by the US Army Space and Missile Defense Command/ Army Forces Strategic Command (USASMDC/ARSTRAT) and the Program Executive Office for Intelligence, Electronic Warfare (PEO IEW&S).

Project FE5 funds USASMDC/ARSTRAT to integrate warfighting concepts and technologies, validate concepts, and identify capabilities needed to implement the validated concepts, and develop DOTMLPF solutions to realize those space and high altitude related capabilities. Provide engineering support to the Joint Friendly Force Tracking (J-FFT) Mission Management Center (MMC) through an associated test-bed for both operational and developmental injection and integration of real-time J-FFT information into the Common Operating Picture (COP) for Combatant Commanders (COCOMs), Joint Task Forces (JTFs), and Coalition Partners. The MMC injects real-time J-FFT information into the COP for COCOMs, JTFs and Coalition partners. USSTRATCOM, in accordance with CJCSI 3910.01 (reference V.4.) is designated one of three coordinating agencies for J-FFT within DoD. CJCSI 3910.01 directs eight Force Modernization tasks to USSTRATCOM. USSTRATCOM SI 534-5 (reference V.6.) and annually published USSTRATCOM operations orders have designated USASMDC/ARSTRAT as the lead USSTRATCOM component command for Friendly Force Tracking (FFT).

Project FE6: Details of this program are reported in accordance with Title 10, United States Code, Section 119 (a)(1).

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

2040: Research, Development, Test & Evaluation, Army I BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 1206308A I Army Missile Defense Systems Integration

**Date:** February 2018

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	20.432	24.127	-	24.127
Current President's Budget	0.000	20.432	38.319	-	38.319
Total Adjustments	0.000	0.000	14.192	-	14.192
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
Reprogrammings	-	-			
<ul> <li>SBIR/STTR Transfer</li> </ul>	-	-			
<ul> <li>Adjustments to Budget Years</li> </ul>	-	-	14.192	-	14.192

### **Change Summary Explanation**

PE 0603308A project 990 transition to PE 1206308A project FE5 beginning in FY 2018.

PE 0603308A project EB7 transition to PE 1206308A project FE6 and PE 1205117A project FG3 beginning in FY 2018.

FY 2019 funding realignment to match acquisition schedule and equipment purchases required by the approved acquisition strategy consistent with the FY 2017 development contract award.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army  Date: February 2018												
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 1206308A I Army Missile Defense Systems Integration Project (Number/Name) FE5 I Space And Missile Defense Integration						,	
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
FE5: Space And Missile Defense Integration	-	0.000	15.966	17.225	-	17.225	17.031	20.081	20.569	19.502	0.000	110.374
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

### **Note**

Army

PE 0603308A project 990 transition to PE 1206308A project FE5 beginning in FY 2018.

### A. Mission Description and Budget Item Justification

USASMDC/ARSTRAT: Headquarters, Department of the Army General Order 37, dated 16 October 2006, designated USASMDC/ARSTRAT as the Army proponent for space and ground-based midcourse defense (GBMD), the Army integrator for global missile defense (GMD), and the Army Service Component Command (ASCC) of the U.S. Strategic Command (USSTRATCOM). Army Regulation (AR) 10-87, Army Commands, Army Service Component Commands, and Direct Reporting Units, dated 4 September 2007, and AR 5-22, The Army Force Modernization Proponent System, dated 19 August 2009, designate USASMDC/ARSTRAT as the Army specified proponent for Global Missile Defense and Space/High Altitude capabilities. As the Army proponent for space, high altitude and GBMD, USASMDC/ARSTRAT is responsible for developing warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organizations, Training, Material, Leadership & Education, Personnel, Facilities and Policy (DOTMLPF-P) solutions to realize the GMD capabilities. As the Army integrator for global missile defense, USASMDC/ARSTRAT is responsible for reviewing programs managed by the Army, other Services, Defense agencies and National agencies to ensure that they are correctly synchronized and will ultimately provide the capabilities required by USSTRATCOM to execute its global missile defense responsibilities.

Project FE5 funds United States Army Space and Missile Command/Army Strategic Command (USASMDC/ARSTRAT) efforts to develop, analyze and mature warfighting concepts, and conduct warfighting experiments for space and high altitude capabilities. USASMDC/ARSTRAT is the proponent for space / high altitude capabilities and is responsible for determining and integrating Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF-P) for the Army. The program also funds development and integration of new data sources and data services into the Joint Friendly Force Tracking Mission Management Center. The Mission Management Center (MMC) injects real-time Joint Friendly Force Tracking (J-FFT) information into the Common Operating Picture for Combatant Commands (COCOMs), Joint Task Forces (JTFs) and Coalition partners. USSTRATCOM, in accordance with CJCSI 3910.01 (reference V.4.) is designated one of three coordinating agencies for J-FFT within DOD. CJCSI 3910.01 directs eight Force Modernization tasks to USSTRATCOM. USSTRATCOM SI 534-5 (reference V.6.) and annually published USSTRATCOM operations orders have designated USASMDC/ARSTRAT as the lead USSTRATCOM component command for J-FFT.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Title: : Architecture Development, Wargames and Demonstrations	-	13.016	10.440
Description: Funding is provided for the following efforts			
FY 2018 Plans:			

PE 1206308A: Army Missile Defense Systems Integration

UNCLASSIFIED
Page 3 of 12

R-1 Line #83

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: F	ebruary 2018	3
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 1206308A I Army Missile Defense Systems Integration	Project (Number/Name) FE5 I Space And Missile Defense Integration			se
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2017	FY 2018	FY 2019
Plan, develop, and execute architectures and combat development capabilities, missile defense and high altitude systems. Represent and high altitude domains in Joint/DoD and inter-Service activities; Plan and execute wargames to evaluate emerging concepts within and provide support to Army and Joint wargames and experiments can be integrated and evaluated in the most realistic operating env capability gaps are identified and capabilities are correctly represer and where possible, exploited. Develop space modernization strat warfighting concepts. USASMDC/ARSTRAT will continue efforts to based assets and JCIDS capability development activities for space and tactical launch systems. Products scheduled to be delivered in Analysis of Alternatives and Cost -Benefit Analysis updates: Overh Hostile use of Space Force Enhancement; and Position Navigation and commence TAA 22-26 Capability Demand Analysis Phase. The required Army force structure within end strength and accounts for necessary to comply with DOD guidance. Participate in the Army's development, capabilities determination, requirements approval, and new Rules of Allocation (ROA) will be developed to ensure SRC40.	Army positions and defend Army equities relative to space e.g., Executive Agent for Space Program Assessments, the space and high altitude domains as well as participal where space and high altitude capabilities and technologizationment possible. Ensure that space, high altitude and ented so that the Army's use of these capabilities is explore egies and sponsor exploration of future space and high a contained enter resiliency and effectiveness of critical space enhance the resiliency and effectiveness of critical space and Persistence Infrared (OPIR) Analysis; Space Superinead Persistence Infrared (OPIR) Analysis; Assessment of Timing (PNT) analysis. Support TAA 21-25 Resourcing AA is a phased force structure analysis process that definite military and DA Civilian requirements and authorizating FDU process 19-2 and 20-1. FDUs Include capabilities and implementation decisions. Additionally during the TAA	ce etc. ee gies cyber ed ltitude ee- ellites fority f Phase es the ons			
Plan, develop, and execute architectures and combat development capabilities, and high altitude systems. As the Army Executive Age and defend Army equities relative to space and high altitude domai wargames to evaluate emerging concepts within the space and high to Army and Joint wargames and experiments where space and high evaluated in the most realistic operating environment possible. Encidentified and capabilities are correctly represented so that the Arm exploited. Develop space modernization strategies and sponsor ex USASMDC/ARSTRAT Future Warfare Center (FWC) will continue space-based assets and JCIDS capability development activities for satellites and tactical launch systems. Will develop Space and Hig Documents (ICD) or Capability Development Documents (CDD), and Operational Requirements Documents (ORD). Develop a space su	ent for Space Program Assessments, represent Army positins in Joint/DoD and inter-Service forums. Plan and exectly altitude domains as well as participate and provide supurable and technologies can be integrated sure that space, high altitude and cyber capability gaps any's use of these capabilities is explored and where possity ploration of future space and high altitude warfighting corresponds to enhance the resiliency and effectiveness of critical programs are superiority, high altitude persistent platforms, nat haltitude JCIDS documents including Initial Capabilities and Capability Production Documents (CPD) to update systems.	sitions cute port d and re ble, ncepts. cal no-			

**UNCLASSIFIED** Page 4 of 12

	UNCLASSIFIED						
Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: F	ebruary 2018	1			
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 1206308A I Army Missile Defense Systems Integration		<b>Project (Number/Name)</b> FE5 <i>I Space And Missile Defense</i> <i>Integration</i>				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019			
to develop the JCIDS documentation required to Integrate space and (MDTF).	d high altitude capabilities into Multi-Domain Task Force						
FY 2018 to FY 2019 Increase/Decrease Statement: Decrease was due to establishing a dedicated requirement for Force	Development activities.						
Title: Joint Friendly Force Tracking (J-FFT) Testbed		-	2.950	2.72			
Description: Funding is provided for the following efforts							
Support the full integration of Joint Friendly Force Tracking (J-FFT) in requirements. Continue to develop the J-FFT Testbed for its use in it to the field. Leverage network enabled command and control system Friendly Force Tracking (FFT) capabilities for deployed and coalition Management System (FTAMS) to FFT-Mission Management Center USSTRATCOM-directed FFT tasks in order to assure continuous 24 the Combatant Commands, the Services, agencies, allies, and coalit (SA), enhance command and control (C2) to reduce fratricide in com	integrating hardware and software prior to its deployment on enhancements and continue to support development of forces. Continue to transition Force Tracking Advanced (MMC). The J-FFT Division coordinates and executes // FFT data services support to authorized users to inclusion partners in order to improve their situational awarence.	of d ude ess					
FY 2019 Plans: Support the full integration of Joint Friendly Force Tracking (J-FFT) in requirements. Continue to develop the J-FFT Testbed for its use in it to the field. Leverage network enabled command and control system Friendly Force Tracking (FFT) capabilities for deployed and coalition Management System (FTAMS) to FFT-Mission Management Center USSTRATCOM-directed FFT tasks in order to assure continuous 24 the Combatant Commands, the Services, agencies, allies, and coalit (SA), enhance command and control (C2) to reduce fratricide in com Gain Army approval of a Joint Capabilities Integration and Developm	ntegrating hardware and software prior to its deployment of enhancements and continue to support development of forces. Continue to transition Force Tracking Advanced (MMC). The J-FFT Division coordinates and executes /7 FFT data services support to authorized users to inclution partners in order to improve their situational awareness, homeland defense, civil and contingency operations	f I ude ess					
FY 2018 to FY 2019 Increase/Decrease Statement:  Minimal decreased due to test-bed requirements.	<del>,</del>						
Title: Organizationational Development as Part of the SRC40 Propo	necy Mission		_	4.45			
	······································	1	1	1.45			

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PE 1206308A: Army Missile Defense Systems Integration Army

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date	: February 2018	}			
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 1206308A I Army Missile Defense Systems Integration	I Army Missile Defense FE5 I Space And Missile Defense					
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019			
Particapte in the Force Design Update (FDU) process. FWC will partic of organizational structure changes and designs through the FDU and Operational & Organizational (O&O) Concept Papers, Organization Desheets (URS), and Manpower Requirements Criteria (MARC) determined Army's annual process to examine the projected Army force qualitative Rule of Allocation (ROA) development, Capability Demand Analysis (Oproperly accounted for in the future POM force. This is performed to a and levels of funding/authorizations, in order to build the Program Objection will review the SMDC Troops, Organization and Equipment (TOE) requase well when needed during other Force Design processes (i.e.?Basis reviews, Notification of Change (NOFC) reviews, SSN-LIN Automated etc.). Participate in BOIP Development. BOIP Development is collecting BOIPs under development, development of Feeder Data for SMDC processes (Inc.) and Solutions of a Needs Analysis (NA), Gap Analysis (GA), and Solutions based capability needs and gaps, develop a prioritized list of those gas solutions.	FDU Jr. processes. This includes the development of esign Papers, Cost Benefit Analyses, Unit Reference nation. Particapte in the Total Army Analysis (TAA), thely and quantitatively. SMDC/ARSTRAT will support TCDA) and Resourcing phases to ensure SRC40 units a analyze the projected Army Force against future demandentive Memorandum (POM) Force. SMDC/ARSTRAT uirements documents conducted as part of a cyclic prosective of Issue Plan (BOIP) Modernization Path (MODPATH Management and Integrating System (SLAMIS) review on of processes including the cyclic review of Army-wice oponent item BOIPs, and validation of BOIP MODPATH SR) which is a CBA-like structured three-phased process Analysis (SA) to identify and document organizational	ne AA re nds FWC cess ) vs, de Hs to ess					
FY 2018 to FY 2019 Increase/Decrease Statement: New requirement for FY 2019.							
<b>Title:</b> Position, Navigation, and Timing Navigation Warfare (PNT/NAVI <b>FY 2019 Plans:</b> Identify and advocate for positioning, navigation, and timing (PNT) and USSTRATCOM to the joint staff to establish and formalize joint NAVW Development System (JCIDS) process.	d Navigation Warfare (NAVWAR) requirements through		-	2.61			
FY 2018 to FY 2019 Increase/Decrease Statement: New requirement for FY 2019.							
	Accomplishments/Planned Programs Sub		- 15.966	17.22			

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PE 1206308A: Army Missile Defense Systems Integration Army Page 6 of 12 R-1 Line #83

UNCLASSIFIED								
Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018						
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 1206308A I Army Missile Defense Systems Integration	Project (Number/Name) FE5 I Space And Missile Defense Integration						
C. Other Program Funding Summary (\$ in Millions)								
Remarks N/A								
D. Acquisition Strategy N/A								
E. Performance Metrics N/A								

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army

Appropriation/Budget Activity

2040 / 4

R-1 Program Element (Number/Name)
PE 1206308A / Army Missile Defense
Systems Integration

Date: February 2018

Project (Number/Name)
FE5 / Space And Missile Defense
Integration

Management Service	es (\$ in M	illions)		FY 2	2017	FY 2	2018	FY 2 Ba	2019 ise	FY 2	2019 CO	FY 2019 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	Total Cost	Target Value of Contract
Cost Category Item Name	TBD	TBD : TBD	-	-		-		17.225		-		17.225	0.000	17.225	-
		Subtotal	-	-		-		17.225		-		17.225	0.000	17.225	N/A

#### Remarks

N/A

Product Developme	nt (\$ in Mi	llions)		FY 2	2017	FY 2	2018		2019 ise	FY 2		FY 2019 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
Space Forces Development	TBD	To be Determined : To Be Determined	-	-		15.966		-		-		-	0.000	15.966	-
		Subtotal	-	-		15.966		-		-		-	0.000	15.966	N/A

	Prior Years	FY 2	2017	FY 2	2018	FY 2 Ba		2019 CO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		15.966		17.225	-		17.225	0.000	33.191	N/A

### Remarks

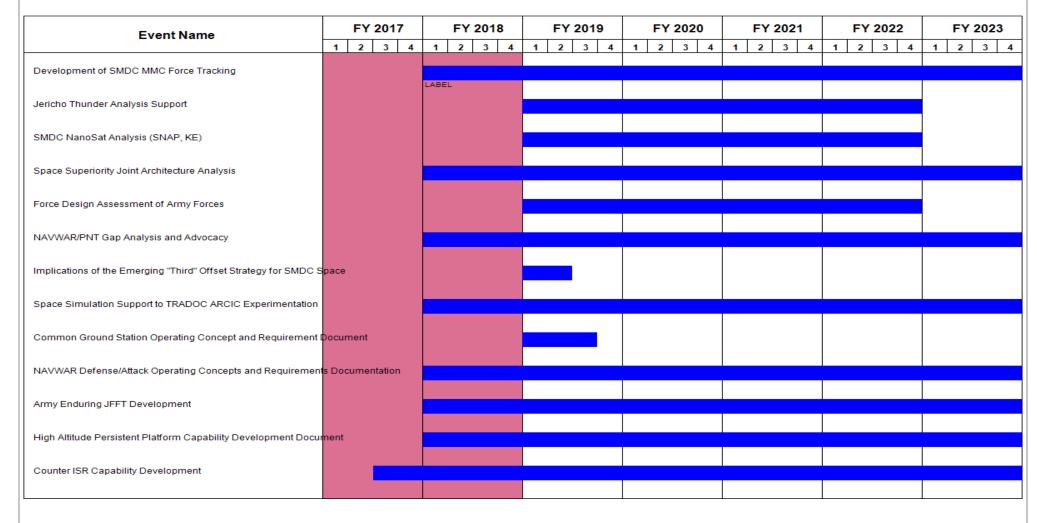
Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army

Appropriation/Budget Activity

2040 / 4

R-1 Program Element (Number/Name)
PE 1206308A / Army Missile Defense
Systems Integration

Project (Number/Name)
FE5 / Space And Missile Defense
Integration



Date: February 2018 Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) 2040 / 4 PE 1206308A I Army Missile Defense FE5 I Space And Missile Defense Integration Systems Integration

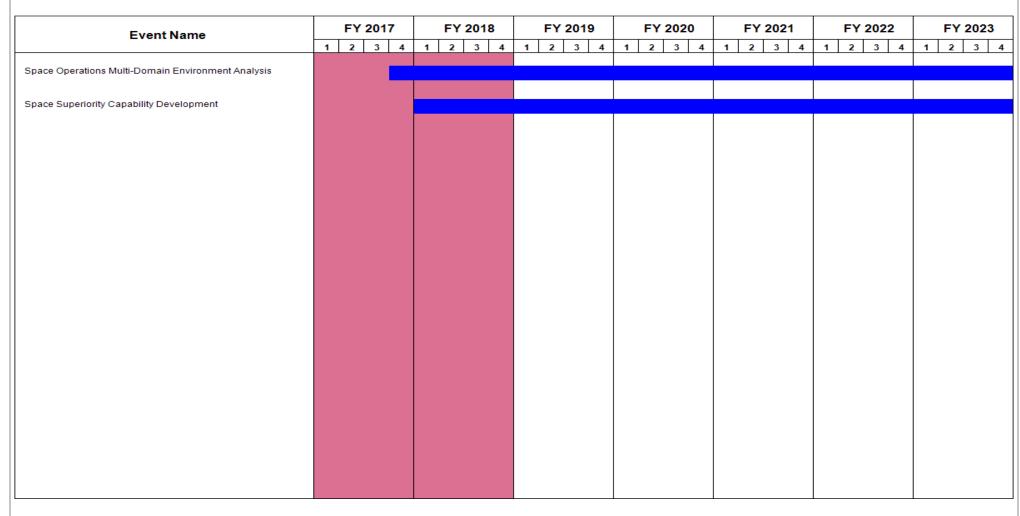


Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army	Date: February 2018		
Appropriation/Budget Activity	,	- 3 (	umber/Name)
2040 / 4	PE 1206308A I Army Missile Defense	FE5 / Spac	ce And Missile Defense
	Systems Integration	Integration	

# Schedule Details

	Sta	art	End		
Events	Quarter	Year	Quarter	Year	
Development of SMDC MMC Force Tracking	1	2018	4	2023	
Jericho Thunder Analysis Support	1	2019	4	2022	
SMDC NanoSat Analysis (SNAP, KE)	1	2019	4	2022	
Space Superiority Joint Architecture Analysis	1	2018	4	2023	
Force Design Assessment of Army Forces	1	2019	4	2022	
NAVWAR/PNT Gap Analysis and Advocacy	1	2018	4	2023	
Implications of the Emerging "Third" Offset Strategy for SMDC Space	1	2019	2	2019	
Space Simulation Support to TRADOC ARCIC Experimentation	1	2018	4	2023	
Common Ground Station Operating Concept and Requirement Document	1	2019	3	2019	
NAVWAR Defense/Attack Operating Concepts and Requirements Documentation	1	2018	4	2023	
Army Enduring JFFT Development	1	2018	4	2023	
High Altitude Persistent Platform Capability Development Document	1	2018	4	2023	
Counter ISR Capability Development	3	2017	4	2023	
Space Operations Multi-Domain Environment Analysis	4	2017	4	2023	
Space Superiority Capability Development	1	2018	4	2023	

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army							Date: February 2018					
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 1206308A I Army Missile Defense Systems Integration				Project (Number/Name) FE6 I Army Space System Enhancement/ Integration			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
FE6: Army Space System Enhancement/Integration	-	0.000	4.466	21.094	-	21.094	5.246	10.572	5.363	4.692	0.000	51.433
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

# A. Mission Description and Budget Item Justification

The details of this program are reported in accordance with Title 10, United States Code, Section 119(a)(1).

Funding line is shared between USA Space and Missile Defense Command (SMDC) and Program Executive Office Intelligence, Electronic Warfare and Sensors (PEO IEW&S) starting in FY2018. Funding transferred from PE 0603308A project EB7 transition to PE 1206308A project FE6 and PE 1205117A project FG3 beginning in FY 2018.