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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)					R-1 Program Element (Number/Name) PE 0603313A / Missile and Rocket 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	-	133.433	94.561	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	227.994
206: Missile Simulation	-	2.384	2.487	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	4.871
263: Future Msl Tech Integr(FMTI)	-	33.387	37.665	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	71.052
704: Advanced Missile Demo	-	24.662	19.409	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	44.071
NA6: Missile and Rocket Initiatives (CA)	-	73.000	35.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	108.000
Note In Fiscal Year (FY) 2020 this Program Element (PE) is being eliminated, with continuity of effort realigned to the following PEs: ? 0603462A Next Generation Combat Vehicle Advanced Technology ? 0603464A Long Range Precision Fires Advanced Technology ? 0603465A Future Vertical Lift Advanced Technology ? 0603466A Air and Missile Defense Advanced Technology												
A. Mission Description and Budget Item Justification This PE matures, fabricates, and demonstrates advanced rocket, missile, interceptor, and guided munition technologies to enhance weapon system lethality, survivability, agility, deployability, and affordability. Project 206 develops high fidelity simulations for advanced tactical missiles and interceptors. Project 263 demonstrates missile and interceptor systems with capabilities to provide protection against rockets, artillery, and mortars; provide precision weapons for small units in close combat; provide precision long-range fires; and provide minimum smoke propulsion for aviation missiles. Project 704 demonstrates the capability to detect and track rocket, artillery, mortar, and unmanned air vehicles threats. Project NA6 is a congressional increase Project. In FY 2018/FY 2019, work in this PE is complimentary to PE 0602303A (Missile Technology) and is fully coordinated with PE 0602618A (Ballistics Technology), PE 0602624A (Weapons and Munitions Technology), PE 0603003A (Aviation Advanced Technology), PE 0603004A (Weapons and Munitions Advanced Technology), PE 0603005A (Combat Vehicle and Automotive Advanced Technology), PE 0603125A (Combating Terrorism Technology Development), PE 0603270A (Electronic Warfare Technology), PE 0603734A (Combat Engineering Systems), and PE 0708045A (Manufacturing Technology). In FY 2020 this PE is being eliminated, with continuity of effort realigned to other PEs as part of a strategic financial restructuring of the Science and Technology (S&T) portfolio. All FY 2020 adjustments align program requirements with 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.												

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Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 3: Advanced Technology Development (ATD)		R-1 Program Element (Number/Name) PE 0603313A I Missile and Rocket Advanced Technology				
The work in this PE is performed by the U.S. Army Futures Command.						
B. Program Change Summary (\$ in Millions)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget		62.850	61.132	56.578	-	56.578
Current President's Budget		133.433	94.561	0.000	-	0.000
Total Adjustments		70.583	33.429	-56.578	-	-56.578
• Congressional General Reductions		-0.049	-0.071			
• Congressional Directed Reductions		-	-1.500			
• Congressional Rescissions		-	-			
• Congressional Adds		73.000	35.000			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-2.368	-			
• Adjustments to Budget Years		-	-	-56.578	-	-56.578
Congressional Add Details (\$ in Millions, and Includes General Reductions)					FY 2018	FY 2019
Project: NA6: Missile and Rocket Initiatives (CA)						
Congressional Add: Cybersecurity & Supply Chain Risk Management Research					10.000	-
Congressional Add: Program Increase - House					2.000	-
Congressional Add: Program Increase - Senate					45.000	-
Congressional Add: Program Increase - Conference					6.000	-
Congressional Add: Land-based Anti-Ship Missile Development & Integration					10.000	-
Congressional Add: Program increase - cybersecurity and supply chain risk management					-	10.000
Congressional Add: Program increase - cyber security					-	15.000
Congressional Add: Program increase - tactically mobile, shoot-on-the-move SHORAD demonstration					-	10.000
Congressional Add Subtotals for Project: NA6					73.000	35.000
Congressional Add Totals for all Projects					73.000	35.000
Change Summary Explanation						
FY18 congressional adds for Cybersecurity and supply chain risk management research (\$10.000 million), Program increase (\$53.000 million), and Land-based anti-ship missile development & integration (\$10.000 million).						

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Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
2040: Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)	PE 0603313A / Missile and Rocket Advanced Technology	
FY19 congressional adds/rescission for: Multi-domain demonstration unjustified request (decrease of \$1.500 million); cybersecurity and supply chain risk management (increase \$10.000 million); cyber security (increase \$15.000 million); tactically mobile, shoot-on-the-move SHORAD demonstration (increase \$10.000 million). FY20 decrease - PE eliminated due to S&T Financial Restructuring.		

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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 0603313A / <i>Missile and Rocket Advanced Technology</i>				Project (Number/Name) 206 / <i>Missile Simulation</i>			
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
206: <i>Missile Simulation</i>	-	2.384	2.487	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	4.871

Note

In Fiscal Year (FY) 2020 this Project is being realigned to:
Program Element (PE) 0603464A Long Range Precision Fires Advanced Technology, Projects:
* AF4 Missile Simulation Advanced Technology

A. Mission Description and Budget Item Justification

This Project matures and demonstrates advanced modeling and simulation technologies for missile design and analysis. Evaluation of missile technology by means of modeling and simulation provides a cost-effective method that supports missile maturation throughout the weapon system life cycle. This effort permits a reduction in the number of flight tests required for programs of record as well as improves the confidence of flight test readiness and probability of flight test success.

This Project support efforts in the Army Science and Technology Lethality portfolio.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy. FY 2020 realignments are due to financial restructuring in support of Army Modernization Priorities.

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

	FY 2018	FY 2019	FY 2020
Title: Missile Simulation	2.384	2.412	-
Description: This effort matures and demonstrates advanced analysis and high fidelity modeling and simulation technologies for advanced missiles and interceptor design and analysis. Evaluation of missile technology through modeling and simulation provides a cost-effective method to support missile maturation throughout the weapon system life cycle. This effort shortens component design timelines, reduces integration activities, enables a reduction of flight tests required for programs of record and improves the confidence of flight test readiness and the probability of flight test success.			
FY 2019 Plans: Mature and demonstrate algorithms for forecasting air and missile tactical threat maneuvers, improve the missile threat maneuver forecaster, and will mature algorithms for engagement tailoring and predicted intercept point (pip) management and demonstrate capabilities in experiments to quantify engagement performance; will validate a System-of-Systems simulation which provides a virtual context for research, development, and evaluation of advanced fire control and missile guidance algorithms; will mature and demonstrate cross cutting technologies that enable rapid and cost effective integration of new weapon and sensor technologies into complex system architectures; will expedite the engineering of complex software intensive systems by transforming models of interactive algorithmic behaviors into prototype software; will further mature cost-estimating tools for propulsion systems, software,			

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Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603313A / <i>Missile and Rocket Advanced Technology</i>	Project (Number/Name) 206 / <i>Missile Simulation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019
modular systems, and for converting commercial off-the-shelf cost to military off-the-shelf cost; will establish behind armor debris prediction capabilities for multiple shaped charge materials and designs.			
FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 this Project has been realigned to PE 0603464/AF4 (Long Range Precision Fires Advanced Technology/Missile Simulation Advanced Technology).			
Title: FY 2019 SBIR / STTR Transfer		-	0.075
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			
Accomplishments/Planned Programs Subtotals		2.384	2.487
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics N/A			

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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 0603313A / Missile and Rocket Advanced Technology				Project (Number/Name) 263 / Future Msl Tech Integr(FMTI)			
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
263: Future Msl Tech Integr(FMTI)	-	33.387	37.665	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	71.052

Note

In Fiscal Year (FY) 2020 this Project is being realigned to:
Program Element (PE) 0603464A Long Range Precision Fires Advanced Technology, Projects:
* AE8 Land-Based Anti-Ship Missile Advanced Technology
* AE9 Low-Cots Tactical Extended Range Missile Advanced Technology
* AH1 Multiple Simultaneous Engagement Technologies Advanced Technology
* AH3 Single Multi-Mission Attack Missile Advanced Technology
PE 0603462A Next Generation Combat Vehicle Advanced Technology, Projects:
* BG7 Ground System Active Defense Advanced Technology

A. Mission Description and Budget Item Justification

This Project matures, fabricates, and demonstrates advanced missile and interceptor technologies, such as seekers, guidance and controls, propulsion, and airframes. The project goal is to reduce the life-cycle costs and cost per kill of precision guided missiles and interceptors.

This Project support efforts in the Army Science and Technology Lethality and Ground Maneuver portfolios.

In FY18/FY19, this Project matures technologies from Program Element (PE) 0602303A and directly supports systems managed by the Program Executive Officer for Missiles and Space. Work in this Project is in collaboration with PE 0602618A (Ballistics Technology), PE 0602624A (Weapons and Munitions Technologies), PE 0603004A (Weapons and Munitions Advanced Technology), PE 0603005A (Combat Vehicle and Automotive Advanced Technology) and PE 0708045A (Manufacturing Technology).

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

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

	FY 2018	FY 2019	FY 2020
Title: Low Cost Tactical Extended Range Missile	8.038	9.470	-
Description: This effort focuses on maturation, fabrication, and demonstration of technologies for low-cost precision fires missile capable of deep strike engagements. The aim is to provide extended range and expanded target set capability through advanced propulsion, new payload technology, and maintain effectiveness in Global Positioning System (GPS) challenged environments			

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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 0603313A / <i>Missile and Rocket Advanced Technology</i>	Project (Number/Name) 263 / <i>Future Msl Tech Integr(FMTI)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019
through new and novel navigation technologies. This effort supports the Army need for developing capability enablers in the area of Extended Range Precision Fires.			
FY 2019 Plans: Mature and evaluate the long range fires missile components in the areas of navigation, propulsion, and payload technologies; will conduct system simulation to assess improved missile performance provided by these technologies and guide their continued development; will continue to develop and test navigation integration architectures and algorithms and refine navigations system design concepts based on updated program requirements and technology developments and begin testing of enhanced navigation system designs at the sub-system level; will conduct fabrication and testing of high strength fiber and high temperature matrix materials for the solid rocket motorcase and missile airframe to meet objective requirements. Will conduct analysis of results from Single Warhead for Area and Point Targets (SWAP) warhead testing to facilitate technology transition for multi-effects lethality for Fire Support applications.			
FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 this effort has been realigned to PE 0603464A/AE9 (Long Range Precision Fires Advanced Technology).			
Title: Active Protection System Interceptor Demonstration Description: This effort matures, integrates and demonstrates modular hard-kill Active Protection System (APS) technologies with the Hit Avoidance Architecture and APS Common Controller and matures modeling and simulation for system integration and demonstration. Specifically the hard-kill APS portion and modeling and simulation efforts will be addressed by the United States (U.S.) Army Aviation and Missile Research, Development and Engineering Center (AMRDEC). This effort supports the Army's APS program to mature and demonstrate APS technologies to reduce vehicle weight while reducing reliance on armor through the use of other means such as sensing, warning, hostile fire detection, and active countermeasures to achieve increased protection against current and emerging threats. This effort supports the development of an APS Common Architecture enabling adaptable APS solutions that can be integrated across Army vehicle platforms as required. This effort compliments work being accomplished under PE 0602601A/Project C05, PE 0602618A/Project H80, PE 0603004A/Project 232, PE 0603005A/Project 221, and PE 0603270A/Project K16.		6.250	3.516
FY 2019 Plans: Continue maturation and adaptation of a hard-kill countermeasure and fire control sensor to improve performance of survivability equipment; will improve modeling and simulation of APS countermeasure and fire control sensor alternatives.			
FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 this effort has been realigned to PE 063462A/ Project BG7 (Next Generation Combat Vehicle Advanced Technology).			
Title: Affordable Extended Range Precision Missile Demonstration		12.549	7.700

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Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603313A / Missile and Rocket Advanced Technology	Project (Number/Name) 263 / Future Msl Tech Integr(FMTI)		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
<p>Description: This effort focuses on the maturation, fabrication, integration, hardware-in-the-loop (HWIL) test, and flight demonstration of technology for an affordable discriminate extended range precision missile to include critical component technologies such as advanced propulsion, seekers, fire control, datalink, guidance and controls, and maneuverable airframes. Critical subsystem technology development transitions to 0603313A/263 Low Cost Extended Range Missile and 0603313A/704 Low Cost Extended Range Air Defense and to future fire support efforts for further maturation.</p> <p>FY 2019 Plans: Develop radio frequency (RF) sensor technology, perform integration and will demonstration for multiple platforms to improve performance of missiles in an Anti-Access/Anti-Denial environment; critical attributes will include target detection, target acquisition, target classification, target tracking and target aim point selection.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 this effort has been realigned to PE 0603464A/Project AE8 (Long Range Precision Fires Advanced Technology).</p>				
<p>Title: Close Combat Weapons Technology</p> <p>Description: This effort addresses close combat weapon systems trade studies, and technology maturation and demonstration for a next generation close combat precision missile system for dismounted and mounted maneuver.</p> <p>FY 2019 Plans: Optimize missile design with multi-effects lethal mechanism and integrate with expeditionary launcher for short to medium range precision strike with man-in-the-loop and loitering capability with lethal effects against hard and soft targets; will begin validation of the optimized design through lab and field demonstration.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 this effort has been realigned to PE 0603464A/AH3 (Long Range Precision Fires Advanced Technology).</p>		6.550	5.572	-
<p>Title: Multi-Domain Lethality Demonstration</p> <p>Description: This effort focuses on the maturation, fabrication, integration, Hardware-in-the-Loop (HWIL) development and test, and flight demonstration of critical missile technology that supports Multi-Domain Battle Concept/Cross-Domain Fires and Manned-Unmanned Teaming (MUM-T) System of Systems. The objective is to develop capability for missile systems to destroy enemy air defenses in the land and the maritime domains. This effort will develop and demonstrate appropriate sensor and payload component technologies for engaging and destroying maritime- and land-based air defense systems; integrate these component technologies into prototype missile hardware; and demonstrate hardware in a relevant flight environment.</p> <p>FY 2019 Plans:</p>		-	10.011	-

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Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603313A / <i>Missile and Rocket Advanced Technology</i>	Project (Number/Name) 263 / <i>Future Msl Tech Integr(FMTI)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019
Will mature component development of 1) multi-mode seeker (anti-radiation homing and imaging infrared) for target classification/discrimination and aim-point selection on critical target features and 2) warhead and fuze that maximizes lethal effects against multi-domain target sets; will conduct critical design review of component technologies; will perform test and evaluation of key enabling component technologies; will refine concepts for system integration; will mature modeling and simulation HWIL capabilities for testing and validation of integrated components.			
FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 this effort has been realigned to PE 0603464/AE8 (Long Range Precision Fires Advanced Technology).			
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		-	1.396
Accomplishments/Planned Programs Subtotals		33.387	37.665
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics N/A			

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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 0603313A / Missile and Rocket Advanced Technology				Project (Number/Name) 704 / Advanced Missile Demo			
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
704: Advanced Missile Demo	-	24.662	19.409	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	44.071

Note

In Fiscal Year (FY) 2020 this Project is being realigned to:
Program Element (PE) 0603466A Air and Missile Defense Advanced Technology, Projects:
* AC8 Low Cost Extended Range Air Defense Advanced Technology
* AD4 Maneuver Air Defense Advanced Technology
PE 0603465A Future Vertical Lift Advanced Technology, Projects:
* AK5 Multi-Role Small Guided Missile Advanced Technology

A. Mission Description and Budget Item Justification

This Project matures advanced missile system concepts and related hardware to enhance weapon system lethality, survivability, agility, versatility, deployability, and affordability for defense against future air and ground, armored and non-armored threats.

This Project support efforts in the Army Science and Technology Lethality portfolio.

Work in this Project is in collaboration with PE 0602624A (Weapons and Munitions Technologies).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy. FY 2020 realignments are due to financial restructuring in support of Army Modernization Priorities.

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

	FY 2018	FY 2019	FY 2020
Title: Counter Rockets, Artillery, Mortars (RAM), Unmanned Aerial Systems (UAS), and Cruise Missile Tracking and Fire Control	7.197	2.273	-
Description: This effort matures and demonstrates system technology to provide 360 degree, near hemispherical coverage for tracking and intercept of UAS and/or Cruise Missile threats. This effort matures fire control methodology for engagement of threat UAS and/or Cruise Missile to generate firing solutions and determine interceptors available for an air defense mission. These efforts will be evaluated through Hardware-in-the-Loop (HWIL) experiments and multiple interceptor flights. Effort will also mature tactical launcher configurations and designs for alternative mission profiles. The technologies demonstrated will be applicable to the Indirect Fire Protection Capability (IFPC) and other Air and Missile Defense programs.			
FY 2019 Plans: mature and integrate digital data link ground station, inertial network alignment technology, and ground station components with a surrogate demonstration launcher for demonstration; will mature fire control methodology and software for air defense			

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Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603313A / Missile and Rocket Advanced Technology	Project (Number/Name) 704 / Advanced Missile Demo		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
engagement planning and flight test demonstration planning. Will exploit data gathered from multi-mission radar and other sensors in order to mature algorithm to autonomously detect, track, identify, rank and defeat counter-Unmanned Aerial System threat. FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 PE 0603313A/704 has been realigned to PE 0603466A/AC8.				
Title: Low-cost Extended Range Air Defense Description: This effort matures key technologies of a lower-cost interceptor system with a low- to medium-altitude, medium- to long-range capability. This effort will enable lower cost interceptor integration into a net-enabled Air and Missile Defense Task Force for the protection of high value assets. Technologies will address the defeat of air defense threats such as Unmanned Aerial System (UAS) and Cruise Missile threats with secondary capabilities against Large Caliber Rockets (LCR), Short Range Ballistic Missiles (SRBM), and Tactical Air-to-Surface Missiles (TASMS). FY 2019 Plans: Integrate the guidance electronics unit (GEU) and control system into HWIL for demonstration of the entire guidance, navigation, and control system. Will begin HWIL flight simulation, demonstrating GEU and control system performance with a false target generator and flight motion simulator using an emulated target with the correct radar signature and kinematics, and the emulated body motion and loading of simulated flight environments. FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 PE 0603313A/704 has been realigned to PE 0603466A/AC8.		8.582	7.991	-
Title: Seeker and Guidance Technology for Air Defense Description: This effort focuses on the maturation, integration, and fabrication of seeker and guidance technologies supporting air defense missile systems. Technologies addressed enable the defeat of multiple air defense threats such as Rockets, Artillery, and Mortars, Unmanned Aerial System (UAS), and Cruise Missile threats with secondary capabilities against Large Caliber Rockets (LCR), Short Range Ballistic Missiles (SRBM), and Tactical Air-to-Surface Missiles (TASMS). FY 2019 Plans: Continue maturation of the active RF seeker in the HWIL simulation facility; will refine seeker calibration, optimizing acquisition and track algorithms, optimizing seeker control algorithms, and debugging software; will continue maturation of guidance algorithms in hardware-in-the-loop (HWIL) for accurate mid-course and terminal homing guidance at extended ranges; will provide flight control scripts for testing the speed, accuracy, and stability of the flight control system for use in future flight testing. FY 2019 to FY 2020 Increase/Decrease Statement:		6.880	6.537	-

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Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603313A / <i>Missile and Rocket Advanced Technology</i>	Project (Number/Name) 704 / <i>Advanced Missile Demo</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019
In FY 2020 PE 0603313A/704 has been realigned to PE 0603466A/AC8.			FY 2020
Title: Multi-Role Missile Demonstration Description: This effort focuses on the maturation, fabrication, integration, hardware-in-the-loop (HWIL) development and test, and flight demonstration of critical technology that supports an open systems architecture to enable modular designs of guided and unguided missiles for smaller and lighter missile options with multi-role engagement capabilities reducing the life cycle cost for missiles. Critical component technologies include advanced propulsion, payload (lethal and non-lethal), seekers, fire control, datalink, guidance and controls, and maneuverable airframes. This effort matures and demonstrates technology from PE 0602303A, Multi-Role Missile Technology. FY 2019 Plans: Continue demonstration in a ground-launched flight test the guidance and control performance of the guided forward firing configuration and will continue maturation of the component technology of the drop/glide configuration from PE 602303A (Multi-Role Missile Technology) which includes seeker, payload, guidance electronics unit, control actuation subsystem, propulsion subsystem, and subsystem interface bus; will perform laboratory testing and simulation evaluations; will integrate modular missile technology subsystems; and will perform air dropped, unguided/ballistic flight tests to verify mechanical and electrical integrity of the drop/glide variant. FY 2019 to FY 2020 Increase/Decrease Statement: In FY 2020 PE 0603313A/704 has been realigned to PE 0603465A/AK5.		2.003	1.922
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		-	0.686
Accomplishments/Planned Programs Subtotals		24.662	19.409
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			

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Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603313A / Missile and Rocket Advanced Technology	Project (Number/Name) 704 / Advanced Missile Demo
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Appropriation/Budget Activity 2040 / 3					R-1 Program Element (Number/Name) PE 0603313A / Missile and Rocket Advanced Technology				Project (Number/Name) NA6 / Missile and Rocket Initiatives (CA)			
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
NA6: Missile and Rocket Initiatives (CA)	-	73.000	35.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	108.000
A. Mission Description and Budget Item Justification Congressional Interest Item funding for Missile and Rocket advanced technology development.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2018	FY 2019			
Congressional Add: Cybersecurity & Supply Chain Risk Management Research								10.000	-			
FY 2018 Accomplishments: Cybersecurity & Supply Chain Risk Management Research												
Congressional Add: Program Increase - House								2.000	-			
FY 2018 Accomplishments: Program Increase - House												
Congressional Add: Program Increase - Senate								45.000	-			
FY 2018 Accomplishments: Program Increase - Senate												
Congressional Add: Program Increase - Conference								6.000	-			
FY 2018 Accomplishments: Program Increase - Conference												
Congressional Add: Land-based Anti-Ship Missile Development & Integration								10.000	-			
FY 2018 Accomplishments: Land-based Anti-Ship Missile Development & Integration												
Congressional Add: Program increase - cybersecurity and supply chain risk management								-	10.000			
FY 2019 Plans: Program increase - cybersecurity and supply chain risk management												
Congressional Add: Program increase - cyber security								-	15.000			
FY 2019 Plans: Program increase - cyber security												
Congressional Add: Program increase - tactically mobile, shoot-on-the-move SHORAD demonstration								-	10.000			
FY 2019 Plans: Program increase - tactically mobile, shoot-on-the-move SHORAD demonstration												
Congressional Adds Subtotals								73.000	35.000			
C. Other Program Funding Summary (\$ in Millions) N/A												

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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 0603313A / <i>Missile and Rocket Advanced Technology</i>	Project (Number/Name) NA6 / <i>Missile and Rocket Initiatives (CA)</i>
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		