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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV							
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	46.472	0.000	13.470	-	13.470	0.000	0.000	0.000	0.000	Continuing	Continuing
MQ1: MQ-1 Gray Eagle - Army UAV (MIP)	-	46.472	0.000	13.470	-	13.470	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The MQ-1C Gray Eagle provides Reconnaissance, Surveillance, Target Acquisition (RSTA), Command and Control, Communications Relay, Signals Intelligence (SIGINT), Battle Damage Assessment, and Manned-Unmanned Teaming Capability. MQ-1C Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all Army Divisions, Intelligence and Security Command and Army Special Operations Command in support of the commander's warfighting priorities.

The Fiscal Year (FY) 2017 MQ-1 Gray Eagle funding of \$13.470 million will support Test and Evaluation efforts associated with the Improved Gray Eagle (IGE) Engineering Change Proposal (ECP). The test effort will evaluate the changes materiel. The types of effort required include Environmental Testing, Electromagnetic Environmental Effects (E3) testing, and Follow-On Operational Test and Evaluation II (FOTE II).

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	46.472	0.000	0.000	-	0.000
Current President's Budget	46.472	0.000	13.470	-	13.470
Total Adjustments	0.000	0.000	13.470	-	13.470
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	13.470	-	13.470

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV	Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
MQ1: MQ-1 Gray Eagle - Army UAV (MIP)	-	46.472	0.000	13.470	-	13.470	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The MQ-1C Gray Eagle provides Reconnaissance, Surveillance, Target Acquisition (RSTA), Command and Control, Communications Relay, Signals Intelligence (SIGINT), Battle Damage Assessment, and Manned-Unmanned Teaming Capability. MQ-1C Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all Army Divisions, Intelligence and Security Command and Army Special Operations Command in support of the commander's warfighting priorities.

The Fiscal Year (FY) 2017 MQ-1 Gray Eagle funding of \$13.470 million will support Test and Evaluation efforts associated with the Improved Gray Eagle (IGE) Engineering Change Proposal (ECP). The test effort will evaluate the changes to materiel(Improved Gray Eagle). The types of effort required include Environmental Testing, Electromagnetic Environmental Effects (E3) testing, and Follow-On Operational Test and Evaluation (FOTE II).

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

	FY 2015	FY 2016	FY 2017
<p>Title: Gray Eagle Software / Hardware Development</p> <p>Description: Gray Eagle Software / Hardware Development</p> <p>FY 2015 Accomplishments: Complete development of 4.3.X software.</p>	18.965	-	-
<p>Title: Government Test Support</p> <p>Description: Government test support including support of developmental test, E3 testing on the Universal Ground Control Station (UGCS), Joint Interoperability Test Center efforts, Link 16 testing, and FOT&E II test planning, site preparation, and complete FOT&E II.</p> <p>FY 2015 Accomplishments: Complete developmental test to include Captive Carry, Transport/Mobility. Conduct and complete FOT&E.</p>	21.858	-	-
<p>Title: Ground Base Sense and Avoid (GBSAA)</p> <p>Description: Ground Base Sense and Avoid (GBSAA)</p> <p>FY 2015 Accomplishments:</p>	5.649	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army **Date:** February 2016

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
Development of the GBSAA software, integration, and perform testing.			
Title: MQ-1C Improved Gray Eagle (IGE) Testing	-	-	13.470
Description: MQ-1C IGE Testing			
FY 2017 Plans: IGE Environmental Testing, E3 testing, and FOTE II.			
Accomplishments/Planned Programs Subtotals	46.472	-	13.470

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• MQ-1 UAV / APA - Base: A00005	238.081	286.973	55.388	-	55.388	10.806	-	-	-	-	Continuing
• Gray Eagle Mods: A00002	-	-	-	-	-	92.694	11.806	58.724	27.662	Continuing	Continuing

Remarks

D. Acquisition Strategy
 An Extended Range Multi-Purpose (ERMP) Operational Requirement Document (ORD) was approved by the Joint Requirement Oversight Council (JROC) 6 Apr 2005. Milestone B occurred on 20 Apr 2005, and the System Development and Demonstration contract was awarded 8 Aug 2005, as a result of a competitive solicitation which included a vendor system capabilities demonstration. A Capabilities Production Document (CPD), version 8.7 was approved on 17 Jul 15. MQ-1C Gray Eagle completed FOTE 12 Jun 2015. On 14 Jul 2015, the trigger Configuration Steering Board (CSB) concurred with the Course of Action (COA) to validate the revised requirement for the Echelons Above Division (EAD) Gray Eagle and grant authorities through a new Acquisition Decision memorandum (ADM) to pursue the extended range capable Gray Eagle (Improved Gray Eagle) configuration. IGE is an enhanced derivative of the MQ-1C Gray Eagle UAS and closes the capability gap by delivering extended surveillance coverage which supports Army RSTA missions in excess of 27 hours. IGE's extended range provides the capacity for multi-intelligence payloads, precision strike capability, special reconnaissance in support of Special Operations Forces (SOF), Mission command from Aerial Intelligence Brigade (AIB) and U.S. Army Special Operations Command (USASOC). The Gray Eagle Research, Development, Test, and Evaluation (RDTE) acquisition strategy emphasis will be to complete Developmental test events (Environmental, E3, Transportability, & Performance Tests) to define and address system risks, followed by a FOTE II for the IGE.

E. Performance Metrics
 N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army **Date:** February 2016

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Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	PM UAS : Redstone Arsenal, AL	9.066	-		-		-		-		-	0	9.066	0
Subtotal			9.066	-		-		-		-		-	0.000	9.066	0.000

Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Development Engineering	C/CPIF	General Atomics / ASI : San Diego, CA	165.070	-		-		-		-		-	0	165.070	0
Prototype Manufacturing	Various	General Atomics / ASI : San Diego, CA	213.776	-		-		-		-		-	0	213.776	0
Ground Support Equipment	C/CPIF	Various : Various	9.075	-		-		-		-		-	0	9.075	0
Ground Base Sense & Avoid (GBSAA)	SS/CPFF	Various : Various	10.796	5.649	Jan 2016	-		-		-		-	0	16.445	0
Software / Hardware Development	SS/CPIF	General Atomics : San Diego, CA	76.214	18.965	Feb 2015	-		-		-		-	0	95.179	0
Subtotal			474.931	24.614		-		-		-		-	0.000	499.545	0.000

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Contractor Engineering Support	MIPR	Ft. Huachuca : Ft. Huachuca	24.501	-		-		-		-		-	0	24.501	0
Training and Training Equipment	MIPR	Ft. Huachuca : Ft. Huachuca	43.892	-		-		-		-		-	0	43.892	0
Government Engineering Support	C/FFP	Various : Various	18.859	-		-		-		-		-	0	18.859	0
Subtotal			87.252	-		-		-		-		-	0.000	87.252	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

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Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
(1) Operational Test Readiness Review I									▲ OTRR1																			
(2) Operational Test Readiness Review II									▲ OTRR2																			
(3) Operational Test Readiness Review III									▲ OTRR3																			
(4) Follow-on Operational Test and Evaluation II									▲ FOT&E II																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army **Date:** February 2016

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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Operational Test Readiness Review I	2	2017	2	2017
Operational Test Readiness Review II	4	2017	4	2017
Operational Test Readiness Review III	1	2018	1	2018
Follow-on Operational Test and Evaluation II	1	2018	1	2018

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