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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Army	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				PE 0305219A: <i>MQ-1 Gray Eagle - Army UAV (MIP)</i>							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	119.195	121.846	74.618	-	74.618	14.705	2.513	19.760	20.092	Continuing	Continuing
MQ1: <i>MQ-1 GRAY EAGLE - ARMY UAV (MIP)</i>	119.195	121.846	74.618	-	74.618	14.705	2.513	19.760	20.092	Continuing	Continuing

Note

Prior to FY2011, ERMP RDT&E funding was in PE 0305204A, Project D09.

A. Mission Description and Budget Item Justification

The production MQ-1C Gray Eagle Unmanned Aircraft System (UAS) has changed based on new Army Guidance from a company sized unit equipped with twelve (12) Unmanned Aircraft (UA) and associated support equipment to balanced Platoons, each capable of operating independently with four (4) Aircraft. Each will be equipped with a Standard Equipment Package (SEP), Ground Equipment and the following Payloads: Electro-Optical/Infrared, Laser Range Finder/Laser Designator (EO/IR/LRF/LD), communications relay, and up to four (4) HELLFIRE Missiles. The SEP includes: two (2) Universal Ground Control Stations (UGCS), two (2) Ground Data Terminal?s (GDT?s), one (1) Satellite Communication (SATCOM) Ground Data Terminal (SGDT), one (1) Portable Ground Control Station (PGCS), one (1) Portable Ground Data Terminal (PGDT), one (1) Automatic Take-off and Landing System (ATLS) set which includes (2) Tactical Automatic Landing Systems (TALS), and ground support equipment.

Ground Based Sense and Avoid (GBSAA) provides a solution to the ?See and Avoid? issues associated with gaining access to the National Airspace System (NAS) for UAS. GBSAA is a ground-based means of detecting airborne traffic and providing the necessary intelligence to the UAS, allowing it to Sense and Avoid (SAA) as an alternate means of compliance with CFR Part 91.

Justification: FY 2013 funding of \$74,618 million will provide for software/hardware fixes identified from the Initial Test and Evaluation (IOTE) in FY2012. It will provide funding to conduct the Follow-On Test and Evaluation (FOTE) for the Universal Ground Control Station (UGCS) and the Universal Ground Data Terminal, GBSAA development, testing and integration of the Phase I Plus systems.

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
2040: Research, Development, Test & Evaluation, Army		PE 0305219A: MQ-1 Gray Eagle - Army UAV (MIP)			
BA 7: Operational Systems Development					
B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	123.156	137.038	66.124	-	66.124
Current President's Budget	119.195	121.846	74.618	-	74.618
Total Adjustments	-3.961	-15.192	8.494	-	8.494
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-3.961	-15.192	8.494	-	8.494

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Army									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305219A: MQ-1 Gray Eagle - Army UAV (MIP)				PROJECT MQ1: MQ-1 GRAY EAGLE - ARMY UAV (MIP)			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MQ1: MQ-1 GRAY EAGLE - ARMY UAV (MIP)	119.195	121.846	74.618	-	74.618	14.705	2.513	19.760	20.092	Continuing	Continuing
Quantity of RDT&E Articles											

Note

Prior to FY2011, Gray Eagle RDT&E funding was in PE 0305204A, Project D09.

A. Mission Description and Budget Item Justification

The production MQ-1C Gray Eagle Unmanned Aircraft System (UAS) has changed based on new Army Guidance from a company sized unit equipped with twelve (12) Unmanned Aircraft (UA) and associated support equipment to balanced Platoons, each capable of operating independently with four (4) Aircraft. Each will be equipped with a Standard Equipment Package (SEP), Ground Equipment and the following Payloads: Electro-Optical/Infrared, Laser Range Finder/Laser Designator (EO/IR/LRF/LD), communications relay, and up to four (4) HELLFIRE Missiles. The SEP includes: two (2) Universal Ground Control Stations (UGCS), two (2) Ground Data Terminal?s (GDT?s), one (1) Satellite Communication (SATCOM) Ground Data Terminal (SGDT), one (1) Portable Ground Control Station (PGCS), one (1) Portable Ground Data Terminal (PGDT), one (1) Automatic Take-off and Landing System (ATLS) set which includes (2) Tactical Automatic Landing Systems (TALS), and ground support equipment.

Ground Based Sense and Avoid (GBSAA) provides a solution to the ?See and Avoid? issues associated with gaining access to the National Airspace System (NAS) for UAS. GBSAA is a ground-based means of detecting airborne traffic and providing the necessary intelligence to the UAS, allowing it to Sense and Avoid (SAA) as an alternate means of compliance with CFR Part 91.

Justification: FY 2013 funding of \$74,618 million will provide for software/hardware fixes identified from the Initial Test and Evaluation (IOTE) in FY2012. It will provide funding to conduct the Follow-On Test and Evaluation (FOTE) for the Universal Ground Control Station (UGCS) and the Universal Ground Data Terminal, GBSAA development, testing and integration of the Phase I Plus systems.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: ERMP EMD System including Electro-Optical / Infrared, synthetic Aperture Radar, and communications Relay Payloads	57.695	79.039	-
Articles:	0	0	
Description: ERMP EMD System including Electro-Optical / Infrared, synthetic Aperture Radar, and communications Relay Payloads			
FY 2011 Accomplishments:			

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219A: <i>MQ-1 Gray Eagle - Army UAV (MIP)</i>	PROJECT MQ1: <i>MQ-1 GRAY EAGLE - ARMY UAV (MIP)</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
ERMP EMD System including Electro-Optical / Infrared, synthetic Aperture Radar, and communications Relay Payloads				
FY 2012 Plans: ERMP EMD System including Electro-Optical / Infrared, synthetic Aperture Radar, and Communications Relay Payloads				
Title: Gray Eagle Software / Hardware Development Description: Gray Eagle Software / Hardware Development		-	-	18.919
FY 2013 Plans: Gray Eagle Software / Hardware Development				
Title: Government Test support including IOT&E, LUT, Logistics Demonstration Operational Tempo (OPTEMPO) Description: Government Test support including IOT&E, LUT, Logistics Demonstration Operational Tempo (OPTEMPO) FY 2011 Accomplishments: Government Test support including IOT&E, LUT, Logistics Demonstration Operational Tempo (OPTEMPO) FY 2012 Plans: Government Test support including IOT&E, LUT, Logistics Demonstration Operational Tempo (OPTEMPO) FY 2013 Plans: Government Test support including FOT&E		20.500 Articles: 0	18.165 0	28.031
Title: Gray Eagle System Training and Training Equipment Development Description: Gray Eagle System Training and Training Equipment Development FY 2011 Accomplishments: Gray Eagle System Training and Training Equipment Development FY 2012 Plans: Gray Eagle System Training and Training Equipment Development FY 2013 Plans: Gray Eagle System Training and Training Equipment Development		18.900 Articles: 0	20.764 0	11.525
Title: Gray Eagle Support including Engineering and Program Management Articles:		22.100 0	3.878 0	8.450

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2011	FY 2012	FY 2013
Description: Gray Eagle Support including Engineering and Program Management											
FY 2011 Accomplishments: Gray Eagle Support including Engineering and Program Management											
FY 2012 Plans: Gray Eagle Support including Engineering and Program Management											
FY 2013 Plans: Gray Eagle Support including Engineering and Program Management											
Title: Ground Base Sense and Avoid (GBSAA)									-	-	7.693
Description: Ground Base Sense and Avoid (GBSAA)											
FY 2013 Plans: Ground Base Sense and Avoid (GBSAA)											
Accomplishments/Planned Programs Subtotals									119.195	121.846	74.618
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• MQ-1 UAV / APA (A00005):	459.310	550.798	518.088		518.088		232.321			0.000	2,278.977
MQ-1 UAV / APA (A00005) - Base											
• MQ-1 UAV / APA (A00025):	14.644									0.000	14.644
MQ-1 UAV / APA (A00025) - Weaponization UAS											
D. Acquisition Strategy											
Extended Range Multi-Purpose (ERMP) Operational Requirement Document (ORD) was approved by the Joint Requirement Oversight Council (JROC) 6 Apr 2005, Milestone B occurred 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. Capabilities Production Document was approved 14 Mar 09. To meet the required capability, evolutionary acquisition has been employed to implement the incremental approach outlined in the CPD. The Gray Eagle UAS is being matured during the System Development and Demonstration (SDD) phase, which includes the development and integration of key components such as the Tactical Common Data Link (TCDL), Link-16, and integration of Government Furnished Equipment (GFE), payloads, appropriate Common Aviation Ground Support Equipment and the One System GCS. PM JAMS is developing the P+ model of the HELLFIRE missile and participating in the integration and test activities for the entire Gray Eagle system. PM JAMS is budgeting for the											

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procurement of missiles for the fielded systems. PM Night Vision/Reconnaissance, Surveillance, and Target Acquisition (RSTA) under PEO Intelligence and Electronic Warfare Systems (IEWs) develops, manages, and competes in the POM and is responsible for meeting all ERMP costs associated for payloads, payload integration, and payload sustainment. Field Tests at the Electronic Proving Grounds in Ft Huachuca, AZ, and integration tests at the Central Technical Support Facility in Ft Hood, TX, are examples of the tests planned to reduce risk in the SDD phase. FY2013 and beyond funding allows for the development and integration of Pre-Planned Product Improvements, such as interoperability compliance initiatives and a Universal Armament Interface, and Block upgrades. These improvements will be implemented through a CPFF engineering services contract and/or engineering change proposals with the Gray Eagle prime contractor. The LRIP will: - Establish an effective and efficient production base for the system required to provide a solid foundation on which to build FRP systems. - Permit an orderly increase in production rate to mitigate risk. - Procure production representative equipment to support test & evaluation. - Support Doctrine, Training, Leadership Development, Organization, Materiel, Personnel and Facilities (DTLOMPF) and Tactics, Techniques and Procedures (TTP) development. - Provide an opportunity to incorporate lessons learned from the comprehensive test and evaluation program into the production baseline. <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Army										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	MIPR	PM UAS:Redstone Arsenal, AL	36.112	3.602		3.380		-		3.380	Continuing	Continuing	Continuing
Subtotal			36.112	3.602		3.380		-		3.380			
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Engineering	C/CPIF	General Atomics / ASI:San Diego, CA	116.521	35.862		13.674		-		13.674	Continuing	Continuing	Continuing
Prototype Manufacturing	Various	General Atomics / ASI:San Diego, CA	213.776	-		-		-		-	Continuing	Continuing	0.000
Ground Support Equipment	C/CPIF	Various:Various	9.075	-		-		-		-	Continuing	Continuing	0.000
Ground Base Sense & Avoid (GBSAA)	SS/CPFF	General Atomics / ASI:San Diego, CA	-	-		7.693		-		7.693	Continuing	Continuing	0.000
Software / Hardware Development	SS/CPIF	General Atomics:San Diego, CA	-	19.844		7.568		-		7.568	Continuing	Continuing	0.000
Subtotal			339.372	55.706		28.935		-		28.935			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	MIPR	Ft. Huachuca:Ft. Huachuca	83.046	11.954		4.558		-		4.558	Continuing	Continuing	Continuing
Training and Training Equipment	MIPR	Ft. Huachuca:Ft. Huachuca	36.943	20.730		11.525		-		11.525	Continuing	Continuing	Continuing
Government Engineering Support	C/FFP	Various:Various	87.086	5.404		5.070		-		5.070	Continuing	Continuing	0.000
Subtotal			207.075	38.088		21.153		-		21.153			

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPR	Various Government Agencies:Various Government Agencies	105.580	24.450		21.150		-		21.150	Continuing	Continuing	Continuing
Subtotal			105.580	24.450		21.150		-		21.150			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	688.139	121.846		74.618		-		74.618			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Army			DATE: February 2012		
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
System Deployment																												
First Unit Equipped																												
Initial Operational Test and Evaluation (IOT&E)																												
Engineering Software / Hardware Development																												
Full Rate Produciton Contract Award																												
Initial Operating Capability																												
Follow-on Operational Test and Evaluation																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Army			DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Deployment	2	2012	2	2012
First Unit Equipped	3	2012	3	2012
Initial Operational Test and Evaluation (IOT&E)	4	2012	4	2012
Engineering Software / Hardware Development	1	2013	1	2014
Full Rate Produciton Contract Award	3	2013	3	2013
Initial Operating Capability	1	2014	1	2014
Follow-on Operational Test and Evaluation	4	2013	4	2013