Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0102419A: *Aerostat Joint Project Office*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	317.132	372.493	344.655	-	344.655	156.421	58.124	19.717	19.726	Continuing	Continuing
E55: *Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS*	317.132	372.493	344.655	-	344.655	156.421	58.124	19.717	19.726	Continuing	Continuing

Note

Adjustments to FY 2012: JLENS FY 2012 funds increased by $168.457 million to fund the extension of the Engineering and Manufacturing Development phase.

A. Mission Description and Budget Item Justification

This system is an integral part of the overall Air and Missile Defense (AMD) architecture and will provide for an incrementally fielded Integrated Air and Missile Defense (IAMD) Fire Control System/capability for the composite Army Air and Missile Defense Brigades.

The Joint Land Attack Cruise Missile Defense Elevated Netted Sensor Systems (JLENS) is a key component of the Army and Joint IAMD, providing a persistent surveillance and tracking capability for Unmanned Aerial Vehicle (UAV) and Cruise Missile (CM) defense to the current and projected defense forces (including air fighter forces). JLENS will provide fire control quality data to Army Surface to Air missile systems such as Patriot, Surface Launched Advanced Medium Range Air to Air Missile (SLAMRAAM) and Navy Aegis; in addition, increasing weapons' capabilities by allowing these systems to engage targets normally below, outside or beyond surface based weapons' field of view.

JLENS has secondary roles to detect and track Surface Moving Targets (SMT) and to detect, track, and provide launch point estimate (LPE) for Tactical Ballistic Missiles (TBM) and Large Caliber Rockets (LCR). JLENS supports military operations across the full spectrum of conflict.

A JLENS Orbit consists of two systems: a fire control radar system and a wide-area surveillance radar system. Each radar system employs a separate 74-meter tethered aerostat, mobile mooring station, radar and communications payload, processing station, and associated ground support equipment. JLENS uses advanced sensor and networking technologies to provide 360-degree, wide-area surveillance and precision target tracking. This JLENS information is distributed via joint service networks and contributes to the development of a single integrated air picture. JLENS also performs as a multi-role platform to enable extended range command and control linkages, communications relay, and battlefield situational awareness. JLENS can stay aloft up to 30 days providing 24-hour radar coverage of the assigned areas. JLENS is relocatable and can be transported by aircraft, railway, ship, or roadway. JLENS does not replace another system.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army					DATE: February 2011
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B. Program Change Summary ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**
Previous President's Budget	328.356	372.493	176.198	-	176.198
Current President's Budget	317.132	372.493	344.655	-	344.655
Total Adjustments	-11.224	-	168.457	-	168.457
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-11.224	-			
• Adjustments to Budget Years	-	-	168.457	-	168.457

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
E55: *Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS*	317.132	372.493	344.655	-	344.655	156.421	58.124	19.717	19.726	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Engineering and Manufacturing Development (EMD) phase contract activity	259.651	258.467	260.667
Articles:	0	0	
Description: Continue EMD phase contract activities.			
FY 2010 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Continue integration of system hardware components and begin system level integration. Continue software development, integration and test. ***FY 2011 Plans:*** Complete integration of system hardware components and system level integration. Continue software development, integration and test. Deliver Orbits 1 and 2 to test sites. Initiate Developmental Testing (DT) and conduct user training. ***FY 2012 Plans:*** Complete software development, integration and test. Continue DT and conduct Limited User Testing- Operational Testing.			
Title: Government System Test and Evaluation (STE) ***Articles:*** ***Description:*** Government System Test and Evaluation (STE) program in support of Engineering and Manufacturing Development (EMD). ***FY 2010 Accomplishments:*** Prepare for Developmental Testing (DT) activities, including test site preparation. ***FY 2011 Plans:*** Orbits 1 and 2 will be delivered to test sites. Initiate DT and conduct user training. ***FY 2012 Plans:*** Continue DT and conduct Limited User Test- Operational Testing (OT).	17.491 0	52.700 0	32.839
Title: Other contracts and Other Government Agencies (OGAs) ***Articles:*** ***Description:*** Other contracts and OGAs support of EMD phase activities. Perform technical assessments, concept studies, cost reduction, risk reduction and required documentation. ***FY 2010 Accomplishments:*** Continue support of EMD activities. Continue to support integration of system hardware components and system level integration. Continue to support software development, integration and test. Perform technical assessments, concept studies, cost reduction, risk reduction and required documentation. ***FY 2011 Plans:*** Continue support of EMD activities. Support completion of integration of system hardware components and system level integration. Continue to support software development, integration and test. Support delivery of Orbits 1 and 2 to test sites.	30.986 0	40.073 0	25.734

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Support Initialization of Developmental Testing (DT) and user training. Prepare for Milestone C Decision. Perform technical assessments, concept studies, cost reduction, risk reduction and required documentation. ***FY 2012 Plans:*** Continue support of EMD activities. Support the completion of software development, integration and test. Continue to support DT and Limited User Testing- OT. Execute Milestone C Decision. Perform technical assessments, concept studies, cost reduction, risk reduction and required documentation.			
Title: Government Program Management (PM) ***Articles:*** ***Description:*** Provide Government PM management of EMD activities. ***FY 2010 Accomplishments:*** Continue Government PM management of EMD activities. Continue management of integration of system hardware components and system level integration. Continue management of software development, integration and testing. ***FY 2011 Plans:*** Continue Government PM management of EMD activities. Manage completion of integration of system hardware components and system level integration. Continue management of software development, integration and test. Manage the delivery of Orbits 1 and 2 to test sites. Initiate Developmental Testing (DT) and conduct user training. Prepare for Milestone (MS) C Decision. ***FY 2012 Plans:*** Continue Government Program Management (PM) of Engineering and Manufacturing Development (EMD) activities. Manage completion of software development, integration and test. Continue management of Developmental Testing (DT) and conduct Limited User Testing- Operational Testing (OT). Prepare for Milestone (MS) C Decision.	3.310 0	2.272 0	2.815
Title: Government Furnished Equipment (GFE) ***Articles:*** ***Description:*** The GFE provided to the Prime Contractor for hardware and system integration. ***FY 2010 Accomplishments:*** The GFE provided to the Prime Contractor for hardware and system integration. ***FY 2011 Plans:*** The GFE provided to the Prime Contractor for hardware and system integration. ***FY 2012 Plans:***	5.694 0	6.880 0	4.791

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
The GFE provided to the Prime Contractor for hardware and system integration.			
Title: Organizational Support Equipment (OSE) ***Articles:*** ***Description:*** The OSE required for Operational Testing (OT) of Engineering and Manufacturing Development (EMD) Orbit 1. ***FY 2011 Plans:*** Begin acquisition of the OSE required for OT of EMD Orbit 1. ***FY 2012 Plans:*** Complete the acquisition OSE required for OT of EMD Orbit 1.	-	12.101 0	17.809
Accomplishments/Planned Programs Subtotals	317.132	372.493	344.655

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 0604869A: *Patriot/MEADS Combined Aggregate Program (CAP)*	570.831	467.139	406.605		406.605					Continuing	Continuing
• 0605456A: *PAC-3/MSE Missile*		62.500	88.993		88.993		68.938	63.468	64.215	Continuing	Continuing
• C53101: *MSE Missile*			74.953		74.953		532.540	487.049	560.099	Continuing	Continuing
• C53201: *Patriot/MEADS GSE*											
• BZ0525: *JLENS Production*							501.459	454.966	416.888	Continuing	Continuing
• 0604802A: *SLAMRAAM*	56.441									Continuing	Continuing
• 0605455A: *SLAMRAAM*		23.700	19.931		19.931					Continuing	Continuing
• C81002: *SLAMRAAM Launcher*		116.732								Continuing	Continuing
• C81004: *SLAMRAAM Missile*											
• 0603305A: *Indirect Fire Protection Capability II- Intercept*		4.296	21.126		21.126		89.021	92.999	142.738	Continuing	Continuing
• WK5053: *FAAD GBS*		91.467	7.958		7.958					Continuing	Continuing
• 0603327A: *AMD System of System Engineering and Integration*	164.719									Continuing	Continuing
		251.124	270.607		270.607		346.341	298.869	275.651	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 0605457A: *Army Integrated Air and Missile Defense (AIAMD)*											
• BZ5075: *Army IAMD Battle Command System (IBCS)*							23.587	100.560	256.855	Continuing	Continuing
• 0208053: *JOINT TACT GRD STATION-P3I (MIP)*	13.189	12.403	27.630		27.630		14.109	7.912	8.039	Continuing	Continuing
• BZ8401: *Joint Tactical Ground Station (JTAGS)*	6.682	9.279	1.199		1.199		9.740	4.432	4.496	Continuing	Continuing
• 0604820A: *Sentinel*			2.890		2.890		1.983	1.968	2.937	Continuing	Continuing
• WK5057: *Sentinel Mods*	25.783		41.657		41.657		48.418	46.613	46.463	Continuing	Continuing

D. Acquisition Strategy

The JLENS Operational Requirements Document (ORD) calls for initial fielding to Block I requirements (tethered aerostat platforms for Fire Control and Surveillance radars), followed by fielding of Block II (untethered platforms for Fire Control and Surveillance radars), and Block III (both radars on a single untethered platform). There is currently no funding beyond Block I.

On 28 Jun 05, the Defense Acquisition Board (DAB) approved the JLENS program for entry into Engineering and Manufacturing Development (EMD) as recommended by the Army Acquisition Executive. The DAB elected to maintain oversight of JLENS as an ACAT 1D program as stated in the Acquisition Decision Memorandum signed on August 5, 2005.

The Defense Acquisition Executive, on August 5, 2005, approved the JLENS Acquisition Strategy to field an EMD system in order to get the capabilities provided by JLENS to the warfighter expeditiously. In fielding an EMD system (Orbit 1), DoDI 5000.02 requires the JLENS program to conduct full Operational Testing using Research, Development, Test and Evaluation (RDT&E) funding as well as the traditional Demonstration Testing conducted during EMD. RDT&E funds for Fiscal Year (FY) 2012, FY 2013 and FY 2014 are necessary to execute the testing of the EMD system. A Milestone C decision for JLENS to enter Low Rate Initial Production will occur fourth quarter FY 2012, in parallel to testing of the EMD system. All of the EMD phase exit criteria will be met with Orbits 1 and 2 serving as production representative articles. The LRIP contract will be awarded first quarter FY 2013 with the first initial production fielding (LRIP Orbit 1) scheduled for FY 2016.

E. Performance Metrics

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EMD Government Program Management	Various	PEO Missiles and Space:Various	13.361	2.272		2.815		-		2.815	Continuing	Continuing	Continuing
		Subtotal	13.361	2.272		2.815		-		2.815			

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering and Manufacturing Development (EMD) Hardware/Software	SS/CPIF	Raytheon Systems Co.:Andover, MA	962.145	223.011		209.398		-		209.398	Continuing	Continuing	Continuing
Technology Development (TD) Phase Contracts and Government	SS/CPIF	Raytheon Systems Co.:MA/CA/FL/TX	301.083	-		-		-		-	Continuing	Continuing	0.000
EMD Other Government Agency System Engineering	Various	Multiple:Various	17.746	5.242		7.244		-		7.244	Continuing	Continuing	Continuing
Lightweight X-Band Radar Antenna	Various	Various:Various	7.811	-		-		-		-	Continuing	Continuing	0.000
EMD System Engineering Contracts	Various	Multiple:Various	62.409	33.261		16.606		-		16.606	Continuing	Continuing	Continuing
EMD Government Furnished Equipment (GFE) Various	Various	Multiple:Various	18.754	1.690		2.191		-		2.191	Continuing	Continuing	Continuing
EMD GFE - Cooperative Engagement Transmission Processing Set (CETPS)	Various	Multiple:Various	24.541	5.190		2.600		-		2.600	Continuing	Continuing	Continuing
EMD Government Integrated Logistics Support	Various	Multiple:Various	3.915	1.570		1.884		-		1.884	Continuing	Continuing	Continuing
EMD Organizational Support Equipment	Various	Multiple:Various	-	12.101		17.809		-		17.809	Continuing	Continuing	Continuing
		Subtotal	1,398.404	282.065		257.732		-		257.732			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TD Phase Misc Support	Various	Multiple:Various	2.084	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	2.084	-		-		-		-			0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TD Phase Maintain Test Bed	SS/CPFF	CAS, Inc.:NM	3.056	-		-		-		-	Continuing	Continuing	0.000
EMD Contractor System Test and Evaluation	SS/CPIF	Raytheon Systems Co.:MA/CA/FL/TX	10.267	35.456		51.269		-		51.269	Continuing	Continuing	Continuing
EMD Government System Test and Evaluation	Various	Multiple:Various	32.235	52.700		32.839		-		32.839	Continuing	Continuing	Continuing
		Subtotal	45.558	88.156		84.108		-		84.108			

	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,459.407	372.493		344.655		-		344.655			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army		DATE: February 2011
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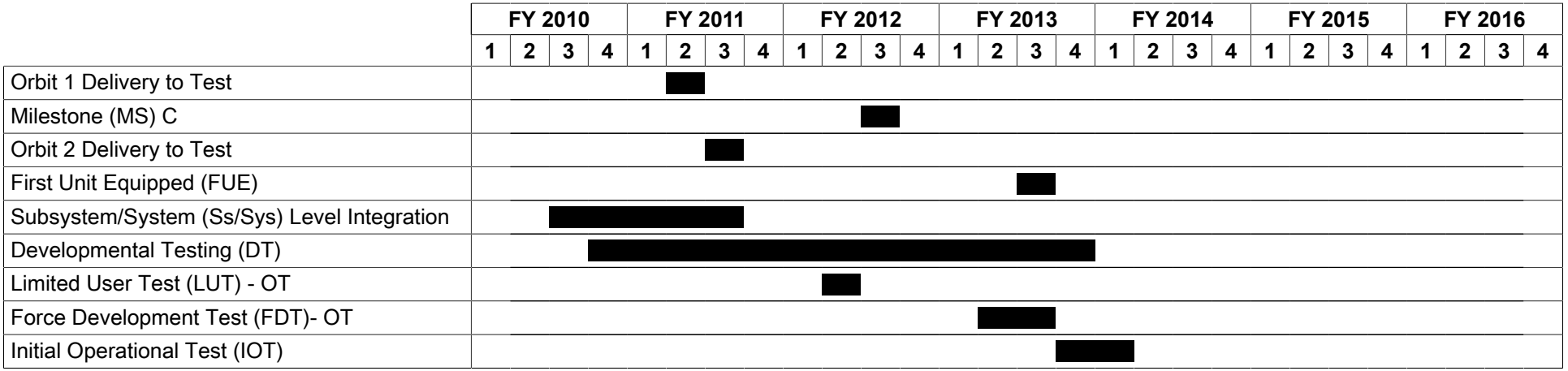

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army		DATE: February 2011
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Orbit 1 Delivery to Test	2	2011	2	2011
Milestone (MS) C	3	2012	3	2012
Orbit 2 Delivery to Test	3	2011	3	2011
First Unit Equipped (FUE)	3	2013	3	2013
Subsystem/System (Ss/Sys) Level Integration	3	2010	3	2011
Developmental Testing (DT)	4	2010	4	2013
Limited User Test (LUT) - OT	2	2012	2	2012
Force Development Test (FDT)- OT	2	2013	3	2013
Initial Operational Test (IOT)	4	2013	1	2014