Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	578.093	95.097	137.369	205.615	-	205.615	196.665	257.393	281.736	229.585	Continuing	Continuing
2329: *JPALS*	542.699	70.397	78.364	41.992	-	41.992	19.178	23.848	18.677	18.347	Continuing	Continuing
3228: *JPALS 1B*	35.394	24.700	59.005	117.424	-	117.424	129.436	199.575	232.578	189.556	Continuing	Continuing
3354: *JPALS Inc 2*	0.000	0.000	0.000	46.199	-	46.199	48.051	33.970	30.481	21.682	Continuing	Continuing
MDAP/MAIS Code(s): 238												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Joint Precision Approach and Landing System (JPALS) is an Acquisition Category ID program with joint partners for requirements and acquisition including the USAF, USN/USMC, USA, USCG, and the Federal Aviation Administration (FAA). JPALS development includes an incremental approach employing a family of systems (FoS) to ensure joint, allied, coalition and FAA / International Civil Aviation Organization interoperability. JPALS is the next generation global positioning system (GPS)-based precision approach and landing system for the DoD. It will replace several aging and obsolete aircraft landing systems with a FoS that provide a rapidly deployable, adverse weather, adverse terrain, day/night precision approach and landing capability for fixed and rotary wing manned and unmanned aircraft. Operating environments include fixed or permanent ground facilities, expeditionary facilities, and shipboard.

The JPALS program was established in response to the Joint Mission Needs Statement (MNS) for Precision Approach and Landing Capability (PALC), which was approved by the Chief of Naval Operations on 28 July 1994 and the Chief of Staff of the Air Force on 8 August 1994. The PALC MNS was validated by the Joint Requirements Oversight Council (JROC) on 29 August 1995. Army Joint Service participation was included in the 28 May 1996 Principal Deputy Under Secretary of Defense (Acquisition and Technology) Milestone 0 Acquisition Decision Memorandum, which also designated the Air Force as the Lead Service. In March 2004, the JPALS Overarching Integrated Program Team determined that the MNS should be converted to an Initial Capabilities Document (ICD). The JPALS ICD was approved by the JROC on 19 September 2005. On 16 March 2007, the JROCM approved the JPALS Capability Development Document and designated the Navy as the Lead Service. The Analysis of Alternatives was finalized in 3Q FY2007. Milestone B was met 14 July 2008. At Milestone B, the Milestone Decision Authority separated Increment (Inc) 1 into Inc 1A and Inc 1B. On 19 January 2010, the JROC approved Inc 2 for the Land-Based System and designated the Air Force as the lead component for the Land-Based System.

In December, 2012, the Department transferred responsibility for development and funding for JPALS Increment 2 from the Air Force to the Navy. JPALS Increment 2 will reach milestone B in 1Q FY 2015.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	118.255	137.369	154.833	-	154.833
Current President's Budget	95.097	137.369	205.615	-	205.615
Total Adjustments	-23.158	0.000	50.782	-	50.782
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-20.524	0.000			
• SBIR/STTR Transfer	-2.634	0.000			
• Program Adjustments	0.000	0.000	51.971	-	51.971
• Rate/Misc Adjustments	0.000	0.000	-1.189	-	-1.189

Change Summary Explanation

Technical: Not applicable.

Schedule:

2329: JPALS Inc 1A project schedule updated to clarify Engineering Development Model (EDM) deliveries and adjust IOC and RDT&E LRIP delivery schedule by one quarter. JPALS MS C, LRIP contract award, and LRIP deliveries were moved by several quarters to accommodate a delay in the CVN 77 availability and a re-phasing of the program by the Department.

3228: JPALS Inc 1B schedule has been updated to reflect recent program changes within the Department.

Financial:

2329: Added FY14 funding for JPALS Prime contractor EAC growth.

3228: FY12 funding was reprogrammed for higher Service priorities.

3354: Added FY 14 funding to reflect the transfer of funding and the development of JPALS Increment 2 from the Air Force to the Navy.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 2329: *JPALS*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2329: *JPALS*	542.699	70.397	78.364	41.992	-	41.992	19.178	23.848	18.677	18.347	Continuing	Continuing
Quantity of RDT&E Articles	2	6	2	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Joint Precision Approach and Landing System (JPALS) Increment 1A provides for development, integration, installation, and test of Sea-Based JPALS on all air capable ships and air stations ashore, in accordance with the JPALS Capability Development Document (CDD). This effort includes the build and test of Ship Global Positioning System/Inertial Navigation System based precision approach and landing systems to replace obsolete AN/SPN-46, AN/SPN-42, and AN/SPN-35 Systems. This requirement supports the JPALS Integration on CVN/LHA/LHD-class ships and establishes requirements for air integration, and provides critical enabling technology for Joint Strike Fighter (JSF)F-35 A/B/C, Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS) and FIRESCOUT Unmanned Air System (UAS). Includes risk reduction efforts and trade studies for DDG-1000 and all other Air Capable Ships (ACS).

JPALS Engineering Development Model (EDM) test articles will be delivered to support system development and demonstration, as follows:

FY12 - 6 EDMs for Shipboard Testing (CVN+LHD/LHA)
FY13 - 2 RDT&E LRIPs for Shipboard Testing (CVN/LHD)

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: JPALS Engineering and Manufacturing Development (EMD) Increment 1A - Shipboard	70.397	78.364	41.992
Articles:	6	2	0
Description: JPALS Increment 1A provides for development, integration, installation, and test of Sea-Based JPALS.			
FY 2012 Accomplishments: Continued IT 1-3 and Operational Assessment test events. Six Engineering and Development Models (EDMS) delivered.			
FY 2013 Plans: Conduct shipboard integrated testing and perform Operational Assessment. Establish ashore training capability in support of F-35 Development Test (DT). Includes funding for 2 RDT&E LRIPS which will be obligated in second quarter FY14.			
FY 2014 Plans: Attain Milestone C and award LRIP contract. Continue shore based testing and support of F-35 DT. Award RDT&E LRIP contract.			
Accomplishments/Planned Programs Subtotals	70.397	78.364	41.992

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 2329: *JPALS*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN: *JPALS*	0.000	0.000	0.000		0.000	22.134	48.473	47.473	46.117	60.334	224.531

Remarks

D. Acquisition Strategy

Technology Development phase was conducted jointly by NAVAIRSYSCOM (PMA213), USAF Electronic Systems Command (Global Air) and multiple industry partners. This effort provided the concept of operations, performance specifications and technology readiness levels necessary to provide the foundation from which to launch the Increment 1 System Development and Demonstration (SDD) phase development. In March 2007, overall joint program leadership transferred from the USAF to the USN. The JPALS 1A phase reached MS B on 14 July 2008 and the SDD phase development contract was awarded on 17 July 2008. Tasking consists of seabased JPALS, related ship and airborne reference systems, end-to-end software algorithms, necessary ship installation hardware, test equipment, system simulation software, and other RDT&E deliverable products to the joint team. The SDD contract was decided after full and open competition. An updated JPALS Acquisition Strategy separated Increment 1 into two Increments (Inc 1A and Inc 1B). JPALS Increment 1A will be developed by the Navy with an open system architecture in order to facilitate the compatible integration of many different aircraft and avionics architectures. The Navy is lead service for the Joint Program and lead component for Increment 1. JPALS Increment 1A provides for development, integration, installation, and test of Sea-Based JPALS to meet IOC of all air capable ships, in accordance with the JPALS Capability Development Document. Additionally, this requirement supports the JPALS Integration on CVN/LHA/LHD-class ships, air stations ashore, and provides critical enabling technology for Joint Strike Fighter (JSF)F-35 A/B/C and ship-based Unmanned Air Systems (UAS).

E. Performance Metrics

MS B conducted 17 July 2008 and approval granted for program progression to Engineering and Manufacturing Development (EMD) phase. Preliminary Design Review conducted first quarter FY 2010. Critical Design Review conducted first quarter FY2011. EDM 2 Delivery completed fourth quarter FY2011. EDM 3 - 8 deliveries completed third quarter FY2012. MS C scheduled for 1st quarter FY2014.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 2329: *JPALS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Ship Integration	WR	NAWCAD:Pax River, MD	20.841	2.500	Dec 2011	1.141	Dec 2012	1.777	Dec 2013	-		1.777	0.000	26.259	
Primary Hardware Development	C/CPAF	Raytheon:Fullerton, CA	224.530	38.474	Jan 2012	26.617	Jan 2013	14.226	Jan 2014	-		14.226	0.000	303.847	308.699
Ship Integration - LRIP	WR	NAWCAD:Pax River, MD	0.000	0.000		2.740	Dec 2012	2.679	Dec 2013	-		2.679	0.000	5.419	
LRIP 1 Contract	TBD	Raytheon:Fullerton, CA	0.000	0.000		13.538	Mar 2014	0.112	Dec 2013	-		0.112	0.000	13.650	13.650
Award Fee	C/CPAF	Various:Various	8.068	2.000	Jan 2012	0.000		0.000		-		0.000	0.000	10.068	10.068
Prior Year Prod Dev costs no longer funded in FYDP	Various	Various:Various	130.650	0.000		0.000		0.000		-		0.000	0.000	130.650	
		Subtotal	384.089	42.974		44.036		18.794		0.000		18.794	0.000	489.893	

Remarks

The Primary Hardware Development contract with Raytheon is a combined CPAF and CPIF contract.
Period 4A (21 November 2011 - 20 November 2012) Paid out in December 2012 for 89.3% of potential award.

FY2014 LRIP contract award in 2nd Qtr of FY14 will be funded with FY13 RDT&E.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering Support-EMD	WR	NAWCAD:Pax River, MD	31.453	8.080	Dec 2011	13.367	Dec 2012	3.058	Dec 2013	-		3.058	0.000	55.958	
Integrated Logistics Support	WR	NAWCAD:Pax River, MD	11.091	3.302	Dec 2011	3.980	Dec 2012	2.299	Dec 2013	-		2.299	0.000	20.672	
Prior Year Support costs no longer funded in FYDP	Various	Various:Various	21.514	0.000		0.000		0.000		-		0.000	0.000	21.514	
		Subtotal	64.058	11.382		17.347		5.357		0.000		5.357	0.000	98.144	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 2329: *JPALS*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWCAD:Pax River, MD	29.154	5.020	Dec 2011	7.180	Dec 2012	1.852	Dec 2013	-		1.852	0.000	43.206	
Operational Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	1.709	0.390	Dec 2011	0.510	Dec 2012	3.666	Dec 2013	-		3.666	0.000	6.275	
LRIP Certification	WR	NAWCAD:Pax River, MD	0.000	0.000		0.000		2.083	Dec 2013	-		2.083	0.000	2.083	
		Subtotal	30.863	5.410		7.690		7.601		0.000		7.601	0.000	51.564	

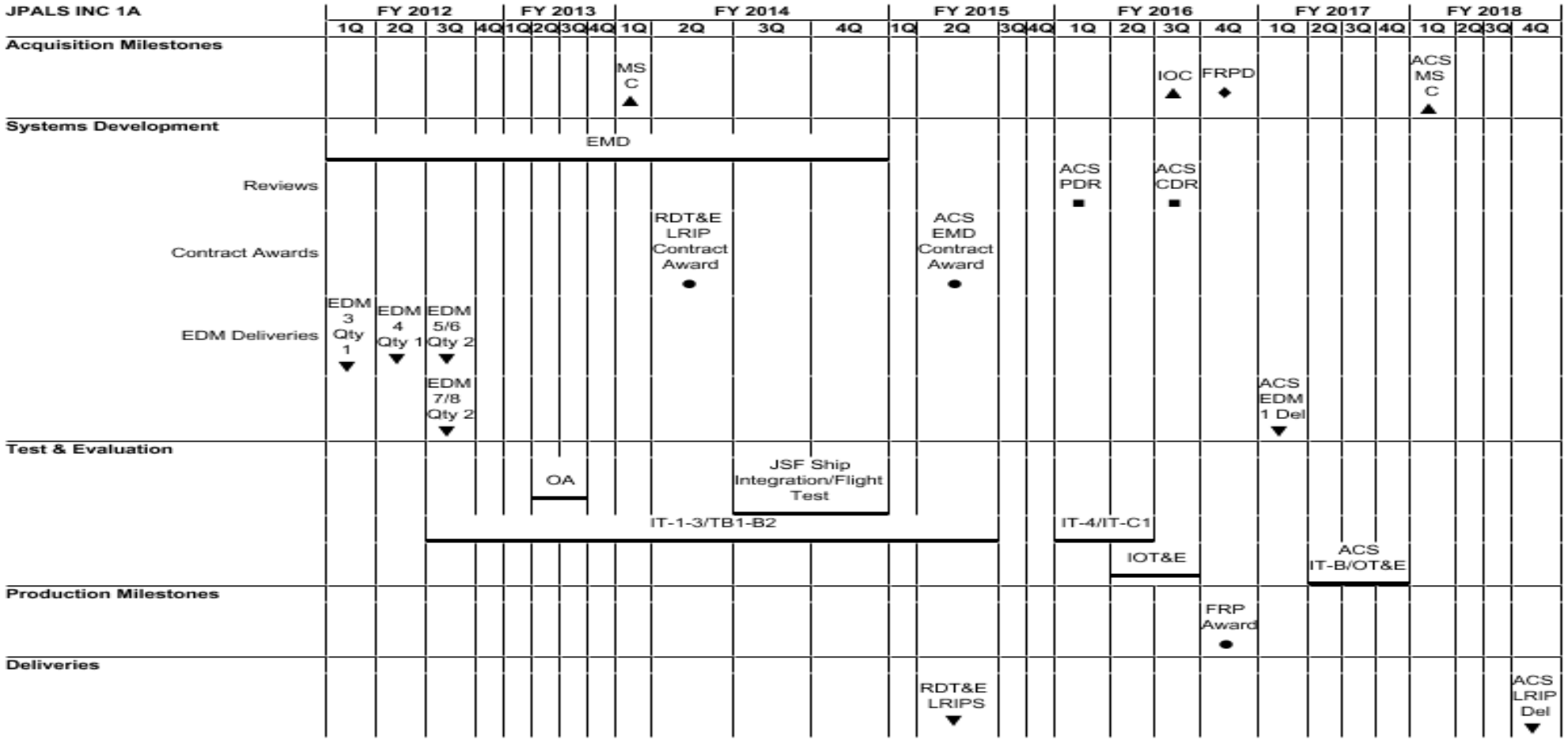
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWCAD:Pax River, MD	44.814	7.400	Dec 2011	5.654	Dec 2012	3.908	Dec 2013	-		3.908	Continuing	Continuing	Continuing
Program Management Support	WR	NAWCAD:Pax River, MD	9.107	1.102	Dec 2011	2.301	Dec 2012	3.982	Dec 2013	-		3.982	0.000	16.492	
PM Support-MSS	C/CPFF	Amelex:California, MD	7.425	1.764	Dec 2011	1.126	Dec 2012	1.955	Dec 2013	-		1.955	0.000	12.270	12.270
Travel	WR	NAVAIR:Pax River, MD	2.343	0.365	Dec 2011	0.210	Dec 2012	0.395	Dec 2013	-		0.395	0.000	3.313	
		Subtotal	63.689	10.631		9.291		10.240		0.000		10.240			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	542.699	70.397		78.364		41.992		0.000		41.992			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 2329: *JPALS*



2014PB - 0603860N - 2329

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603860N: *JT Precision Approach & Ldg Sys*	**PROJECT** 2329: *JPALS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JPALS INC 1A				
Acquisition Milestones: MS C	1	2014	1	2014
Acquisition Milestones: IOC	3	2016	3	2016
Acquisition Milestones: Full Rate Production Decision	4	2016	4	2016
Acquisition Milestones: ACS MS C	1	2018	1	2018
Systems Development: Engineering and Manufacturing Development	1	2012	4	2014
Systems Development: Reviews: ACS PDR	1	2016	1	2016
Systems Development: Reviews: ACS CDR	3	2016	3	2016
Systems Development: Contract Awards: RDT&E LRIP Contract Award	2	2014	2	2014
Systems Development: Contract Awards: ACS EMD Contract Award	2	2015	2	2015
Systems Development: EDM Deliveries: EDM 3 Delivery	1	2012	1	2012
Systems Development: EDM Deliveries: EDM 4 Delivery	2	2012	2	2012
Systems Development: EDM Deliveries: EDM 5 /6 Delivery	3	2012	3	2012
Systems Development: EDM Deliveries: EDM 7/8 Delivery	3	2012	3	2012
Systems Development: EDM Deliveries: ACS EDM 1 Delivery	1	2017	1	2017
Test & Evaluation: JSF Ship Integration / Flight Test F35/JSF	3	2014	4	2014
Test & Evaluation: Operational Assessment (OA)	2	2013	3	2013
Test & Evaluation: IT-1-3 /ITB1-B2	3	2012	2	2015
Test & Evaluation: IT-4/IT-C1	1	2016	2	2016
Test & Evaluation: Initial Operational Test and Evaluation (IOT&E)	2	2016	3	2016
Test & Evaluation: ACS IT-B/OT&E	2	2017	4	2017
Production Milestones: Full Rate Production (FRP) Contract Award	4	2016	4	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 2329: *JPALS*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: RDT&E LRIP Delivery Qty 2	2	2015	2	2015
Deliveries: ACS LRIP Del	4	2018	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3228: *JPALS 1B*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3228: *JPALS 1B*	35.394	24.700	59.005	117.424	-	117.424	129.436	199.575	232.578	189.556	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Joint Precision Approach and Landing System Increment 1B, beginning in FY10, provides for integration and testing into the avionics of the Carrier (CVN) & LH Air Wings, including but not limited to: C-2A, F/A-18E/F, EA-18G, MH-60R/S, and E-2D. This is the first phase of the air integration of JPALS onto all sea based USN aircraft. Additionally, trade studies and risk reduction activities will be pursued on additional sea based USN/USMC aircraft, to include MV-22, CH-53K, UH-1Y and MQ-8.

JPALS 1B underwent a significant program replan due to funding cuts and Service reprioritizations. The replan shifted a significant amount of integration work away from platform Original Equipment Manufacturers (OEMs) to government led integration activities into the avionics required for JPALS, previously planned to start in FY13. C-2A provides the best multiplatform avionics development and test opportunities and is now the designated lead platform. JPALS is required on the Carrier (CVN) Airwing to support CVN 79 events in 2022, which will not be equipped with a AN/SPN-46 Automatic Carrier Landing System (ACLS).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Lead Platform Integration	16.850	38.196	77.153
Articles:	0	0	0
Description: This effort includes development, integration, and testing of the C-2A and related JPALS capable multiplatform avionics. JPALS Inc 1B provides the Navy with aircraft that are JPALS capable in 2022 and out in the CVN/LHA/LHD Air Wings.			
FY 2012 Accomplishments: Continued direct platform risk reduction activities and the risk reduction into multiplatform avionics to ensure a common or core JPALS Air System implementation.			
FY 2013 Plans: Initial design efforts for JPALS on C-2A. Conduct government laboratory testing of C-2A representative JPALS capable multiplatform avionics prototypes.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3228: *JPALS 1B*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continue testing of JPALS capable multiplatform avionics Embedded Global Positioning System Inertial Navigation Systems (EGI) and ARC-210 GEN 5 prototypes in government labs to produce successful end-to-end system test results.			
Title: Follow-on Platform Integration	7.850	20.809	40.271
Articles:	0	0	0
Description: This effort includes development, integration, and testing of the F/A-18E/F, EA-18G, E-2D, and MH-60R/S, providing the Navy with aircraft that are JPALS capable in 2022 and out. Additionally, trade studies and risk reduction activities will be pursued on additional sea based USN/USMC manned aircraft and unmanned air systems. ***FY 2012 Accomplishments:*** Continued JPALS trade studies, risk reduction, and design activities for applicable CVN aircraft. ***FY 2013 Plans:*** Continue JPALS trade studies, risk reduction, and design activities for applicable CVN aircraft and Multi Platform Avionics. Conduct F/A-18 E/F and EA-18G SRR-2. ***FY 2014 Plans:*** Conduct F/A-18 E/F and EA-18G SFR. Continue JPALS trade studies, risk reduction, development of platform specifications, aircraft Original Equipment Manufacturers collaboration, and design activities for applicable CVN aircraft. Conduct F/A-18 E/F and EA-18G SFR.			
Accomplishments/Planned Programs Subtotals	24.700	59.005	117.424

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APN/0573: *JPALS*	0.000	0.000	0.000		0.000	0.000	0.000	24.600	44.700	2,710.200	2,779.500

Remarks

D. Acquisition Strategy

JPALS Technology Development phase was conducted jointly by NAVAIRSYSCOM (PMA213), USAF Electronic Systems Command (Global Air), and multiple industry partners. This effort provided the concept of operations, performance specifications and technology readiness levels necessary to provide the foundation from which to launch the Increment 1 System Development and Demonstration phase development. The Navy is lead service for the Joint Program and lead component for Increment 1. The JPALS capability will be incrementally acquired based on technology maturity and service needs. An updated JPALS Acquisition Strategy separates Increment 1 into two Increments (Inc 1A and Inc 1B). JPALS Increment 1A provides for development, integration, installation, and test of Sea Based JPALS. JPALS

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3228: *JPALS 1B*

Increment 1B provides for integration and testing into the avionics of the CVN/LHA/LHD Air Wings. JPALS Inc 1B will consist of the procurement of airborne systems that are modifications or upgrades to original equipment manufacturer aircraft and integration to existing avionics.

E. Performance Metrics

Milestone B scheduled for 4Q15/1QFY16. C-2A PDR scheduled for 2QFY15.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3228: *JPALS 1B*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Aircraft Integration-Non Specific	Various	Various:Various	4.781	0.166	Jan 2012	0.610	Mar 2013	0.601	Mar 2014	-		0.601	0.628	6.786	6.786
Aircraft Integration-multi-Platform Avionics	Various	Various:Various	0.150	9.088	Jul 2012	10.151	Jun 2013	22.323	Jun 2014	-		22.323	75.419	117.131	117.131
Aircraft Integration-JPALS Capable Avionics Integration	Various	Various:Various	0.000	0.000		13.632	Mar 2013	20.056	Mar 2014	-		20.056	14.210	47.898	47.898
Aircraft Integration-F/A-18E/F & EA-18G	SS/CPIF	Boeing:St. Louis, MO	7.543	0.272	Jan 2012	12.130	Jan 2013	22.940	Jan 2014	-		22.940	180.997	223.882	224.934
Aircraft Integration-MH-60R/S	SS/CPIF	Lockheed Martin:Owego, NY	8.595	0.000		0.500	Mar 2013	7.352	Mar 2014	-		7.352	119.381	135.828	136.278
Aircraft Integration-F/A-18 E/F & EA-18G	WR	NAWCAD:China Lake, CA	0.020	0.066	Dec 2011	0.085	Dec 2012	1.480	Dec 2013	-		1.480	61.150	62.801	
Aircraft Integration-MH-60R/S	SS/CPIF	Sikorsky:Stratford, CT	0.644	0.000		0.000		2.262	Apr 2014	-		2.262	62.385	65.291	65.291
Aircraft Integration-E-2D	SS/CPFF	Northrop Grumman:Bethpage, NY	0.000	0.000	Jan 2012	0.408	Apr 2013	2.252	Apr 2014	-		2.252	148.798	151.458	151.458
Aircraft Integration-C-2A	SS/FFP	Rockwell Collins:Cedar Rapids, IA	0.298	0.000		0.204	Jan 2013	5.870	Jan 2014	-		5.870	65.794	72.166	72.166
Aircraft Integration-C-2A	SS/FFP	Honeywell:Clearwater, FL	0.653	0.000		0.167	Jan 2013	2.218	Jan 2014	-		2.218	5.922	8.960	8.960
Aircraft Integration-C-2A	WR	SSC PAC:San Diego, CA	0.115	0.091	Dec 2011	0.082	Jan 2013	0.886	Jan 2014	-		0.886	3.296	4.470	
Aircraft Integration-C-2A	WR	FRC SW:San Diego, CA	0.083	0.093	Dec 2011	0.082	Jan 2013	0.886	Jan 2014	-		0.886	3.296	4.440	
		Subtotal	22.882	9.776		38.051		89.126		0.000		89.126	741.276	901.111	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3228: *JPALS 1B*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NAWCAD:Pax River, MD	0.881	0.242	Nov 2011	2.280	Dec 2012	3.076	Dec 2013	-		3.076	17.549	24.028	
Engineering Support	WR	NAWCAD:Pax River, MD	6.936	8.931	Nov 2011	13.570	Dec 2012	16.520	Dec 2013	-		16.520	92.246	138.203	
		Subtotal	7.817	9.173		15.850		19.596		0.000		19.596	109.795	162.231	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWCAD:Pax River, MD	0.456	0.224	Nov 2011	0.534	Dec 2012	3.459	Dec 2013	-		3.459	115.219	119.892	
Operational Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	0.000	0.000		0.000		0.000		-		0.000	21.203	21.203	
		Subtotal	0.456	0.224		0.534		3.459		0.000		3.459	136.422	141.095	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWCAD:Pax River, MD	0.554	1.603	Nov 2011	0.534	Dec 2012	0.732	Dec 2013	-		0.732	Continuing	Continuing	Continuing
PM Support	WR	NAWCAD:Pax River, MD	3.035	3.394	Nov 2011	3.049	Dec 2012	3.479	Dec 2013	-		3.479	18.304	31.261	
PM Support-MSS	C/CPFF	Amelex:California, MD	0.650	0.530	Jan 2012	0.987	Jan 2013	1.032	Jan 2014	-		1.032	7.103	10.302	10.302
		Subtotal	4.239	5.527		4.570		5.243		0.000		5.243			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	35.394	24.700		59.005		117.424		0.000		117.424			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3228: *JPALS 1B*	

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603860N: *JT Precision Approach & Ldg Sys*	**PROJECT** 3228: *JPALS 1B*

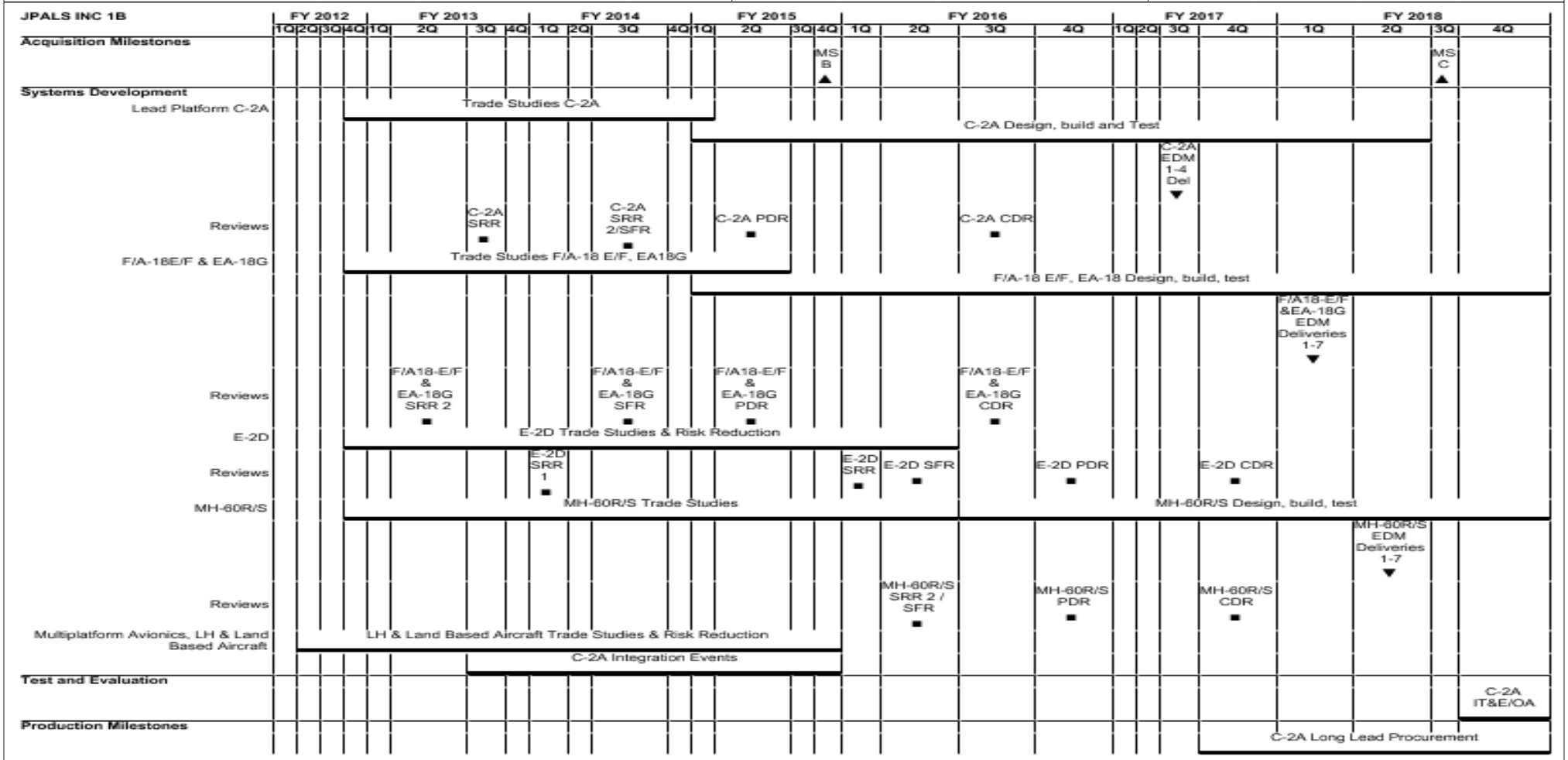


Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3228: *JPALS 1B*

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603860N: *JT Precision Approach & Ldg Sys*	**PROJECT** 3228: *JPALS 1B*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JPALS INC 1B				
Acquisition Milestones: Milestone B	4	2015	4	2015
Acquisition Milestones: Milestone C	3	2018	3	2018
Systems Development: Lead Platform C-2A: C-2A Trade Studies and Risk Reduction	4	2012	1	2015
Systems Development: Lead Platform C-2A: C-2A Design, build, test	1	2015	2	2018
Systems Development: Lead Platform C-2A: C-2A Engineering Development Model (EDM) Deliveries 1-4	3	2017	3	2017
Systems Development: Reviews: C-2A SRR 2 / SFR (System Functional Review)	3	2014	3	2014
Systems Development: Reviews: C-2A SRR 1	3	2013	3	2013
Systems Development: Reviews: C-2A Preliminary Design Review (PDR)	2	2015	2	2015
Systems Development: Reviews: C-2A Critical Design Review (CDR)	3	2016	3	2016
Systems Development: F/A-18E/F & EA-18G: Trade Studies F/A-18E/F, EA-18G	4	2012	2	2015
Systems Development: F/A-18E/F & EA-18G: F/A-18 E/F, EA-18 Design, build, test	1	2015	4	2018
Systems Development: F/A-18E/F & EA-18G: F/A18-E/F &EA-18G EDM Deliveries 1-7	1	2018	1	2018
Systems Development: Reviews: F/A18-E/F & EA-18G SRR 2	2	2013	2	2013
Systems Development: Reviews: F/A18-E/F & EA-18G PDR	2	2015	2	2015
Systems Development: Reviews: F/A18-E/F & EA-18G CDR	3	2016	3	2016
Systems Development: Reviews: F/A-18-E/F & EA-18G SFR	3	2014	3	2014
Systems Development: E-2D: E-2D Trade Studies & Risk Reduction	4	2012	2	2016
Systems Development: Reviews: E-2D SRR 1	1	2014	1	2014
Systems Development: Reviews: E-2D SRR	1	2016	1	2016
Systems Development: Reviews: E-2D SFR	2	2016	2	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3228: *JPALS 1B*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Reviews: E-2D Preliminary Design Review (PDR)	4	2016	4	2016
Systems Development: Reviews: E-2D Critical Design Review (CDR)	4	2017	4	2017
Systems Development: MH-60R/S: MH-60R/S Trade Studies	4	2012	2	2016
Systems Development: MH-60R/S: MH-60R/S Design, build, test	3	2016	4	2018
Systems Development: MH-60R/S: MH-60R/S EDM Deliveries 1-4	2	2018	2	2018
Systems Development: Reviews: MH-60R/S SRR 2 / SFR	2	2016	2	2016
Systems Development: Reviews: MH-60R/S PDR	4	2016	4	2016
Systems Development: Reviews: MH-60R/S CDR	4	2017	4	2017
Systems Development: Multiplatform Avionics, LH & Land Based Aircraft: Multilplatform Avionics (MPA), LH & Land Based Aircraft Trade Studies & Risk Reduction	2	2012	4	2015
Systems Development: Multiplatform Avionics, LH & Land Based Aircraft: C-2A Integration Events MPA	3	2013	4	2015
Test and Evaluation: C-2A Initial Test and Evaluation (IT&E)/Operational Assessment (OA)	4	2018	4	2018
Production Milestones: C-2A Long Lead Procurement	4	2017	4	2018
Production Milestones: C-2A Low Rate Initial Production (LRIP) APN Procurement	4	2018	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3354: *JPALS Inc 2*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3354: *JPALS Inc 2*	0.000	0.000	0.000	46.199	-	46.199	48.051	33.970	30.481	21.682	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program element provides for the development, integration, and testing of the Joint Precision Approach and Landing System (JPALS), Increment (Inc) 2. Inc 2 Land Based (LB) JPALS will mitigate the capability gaps identified in the Precision Approach and Landing Capability (PALC) Initial Capabilities Document (ICD). To be readily available to the Joint Force Commander, aviation assets need to operate in and out of airfields and landing areas across the range of military operations and in adverse weather conditions. Inc 2 LB JPALS will provide a joint, interoperable PALC for all aviation assets in conventional fixed-base and expeditionary operations. Inc 2 LB JPALS will provide guidance based on the aircraft's position in relation to the final approach course (azimuth), the glide path (elevation), and the distance (range) from the touchdown point on the runway or landing surface to enable a Category I precision approach and landing. The JPALS Capability Development Document (CDD) was approved 16 March 2007 and Annex A (Inc 2) was approved on 19 January 2010.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Navy Programmatic Expertise in support of the US Air Force JPALS Inc 2 Development	0.000	0.000	46.199
Articles:			0
Description: This effort includes programmatic support to the US Air Force for the development of the JPALS Inc 2 capability to provide joint, interoperable Precision Approach and Landing Capability for all aviation assets in conventional fixed-base and tactical operations.			
FY 2014 Plans: Begin primary hardware and software modification/engineering analysis and development. Initiation of Increment 1A Ashore Interim Training System development contract. Approval of Material Development Decision. Begin JPALS Increment 2 engineering studies and analysis. SRD finalization and RFP development.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	46.199

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3354: *JPALS Inc 2*

D. Acquisition Strategy

The JPALS capability is being delivered using an incremental acquisition approach employing Family of Systems architecture to ensure joint, allied, coalition and FAA/ICAO interoperability. The program is divided into incremental components based on technical limitations and service needs. JROCM dated 16 Mar 2007 designated the US Navy as the lead DoD component for JPALS implementation; however, JROCM dated 19 Jan 2010 designated the USAF as the Lead Component for Increment 2 - the Land Based initiative. Lead service and funding were transferred from the Air Force to the Navy in December 2012. The Inc 2 acquisition strategy focuses primarily on modifications to the Increment 1A ship system to minimize development costs and schedule, and maximize interoperability. The Inc 1A ship system will be minimally modified to provide a rapid, interim shore based Inc 1A capability, followed by modifications to provide full Inc 2 LB JPALS capability. All interim shore based systems will be upgraded to full Inc 2 LB JPALS capability. Inc 2 LB JPALS civil capability will follow the military capability in full cooperation and coordination with the Federal Aviation Administration.

E. Performance Metrics

Development initiation for the Inc 1A interim shore capability is scheduled for 1Q FY14. Material Development Decision for full Inc 2 LB capability development is scheduled for 1Q FY14.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3354: *JPALS Inc 2*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW Dev	SS/CPIF	TBD:TBD	0.000	0.000		0.000		9.860	Oct 2013	-		9.860	22.841	32.701	32.701
Primary HW Dev - SW	SS/CPIF	TBD:TBD	0.000	0.000		0.000		13.997	Oct 2013	-		13.997	41.152	55.149	55.149
Systems Engineering	WR	NAWCAD:PAX River, MD	0.000	0.000		0.000		4.652	Dec 2013	-		4.652	12.530	17.182	
Training Development	WR	NAWCAD:PAX River, MD	0.000	0.000		0.000		0.300	Dec 2013	-		0.300	0.901	1.201	
LRIP Contract	SS/CPIF	TBD:TBD	0.000	0.000		0.000		0.000		-		0.000	9.633	9.633	9.633
		Subtotal	0.000	0.000		0.000		28.809		0.000		28.809	87.057	115.866	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NAWCAD:Pax River, MD	0.000	0.000		0.000		1.315	Dec 2013	-		1.315	3.764	5.079	
Government Engineering Support	WR	NAWCAD:PAX River, MD	0.000	0.000		0.000		1.174	Dec 2013	-		1.174	3.521	4.695	
Tech Data	WR	NAWCAD:PAX River, MD	0.000	0.000		0.000		0.850	Dec 2013	-		0.850	2.518	3.368	
Studies and Analyses	Various	Various:Various	0.000	0.000		0.000		0.974	Oct 2013	-		0.974	0.000	0.974	
		Subtotal	0.000	0.000		0.000		4.313		0.000		4.313	9.803	14.116	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development T&E	WR	NAWCAD:Pax River, MD	0.000	0.000		0.000		0.497	Dec 2013	-		0.497	21.500	21.997	
Operational T&E	WR	COMOPTEVFOR:Norfolk, VA	0.000	0.000		0.000		0.000	Dec 2013	-		0.000	4.100	4.100	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603860N: *JT Precision Approach & Ldg Sys*	PROJECT 3354: *JPALS Inc 2*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Assets	WR	NAWCAD:Pax River, MD	0.000	0.000		0.000		6.940	Dec 2013	-		6.940	5.296	12.236	
LRIP Certification	WR	NAWCAD:Pax River, MD	0.000	0.000		0.000		0.000		-		0.000	1.100	1.100	
		Subtotal	0.000	0.000		0.000		7.437		0.000		7.437	31.996	39.433	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	Not Specified:Not Specified	0.000	0.000		0.000		4.290	Dec 2013	-		4.290	Continuing	Continuing	Continuing
PM Support MSS	C/CPFF	CTSi:Lexington Park, MD	0.000	0.000		0.000		1.350	Dec 2013	-		1.350	8.986	10.336	10.336
		Subtotal	0.000	0.000		0.000		5.640		0.000		5.640			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		46.199		0.000		46.199			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603860N: *JT Precision Approach & Ldg Sys*	**PROJECT** 3354: *JPALS Inc 2*

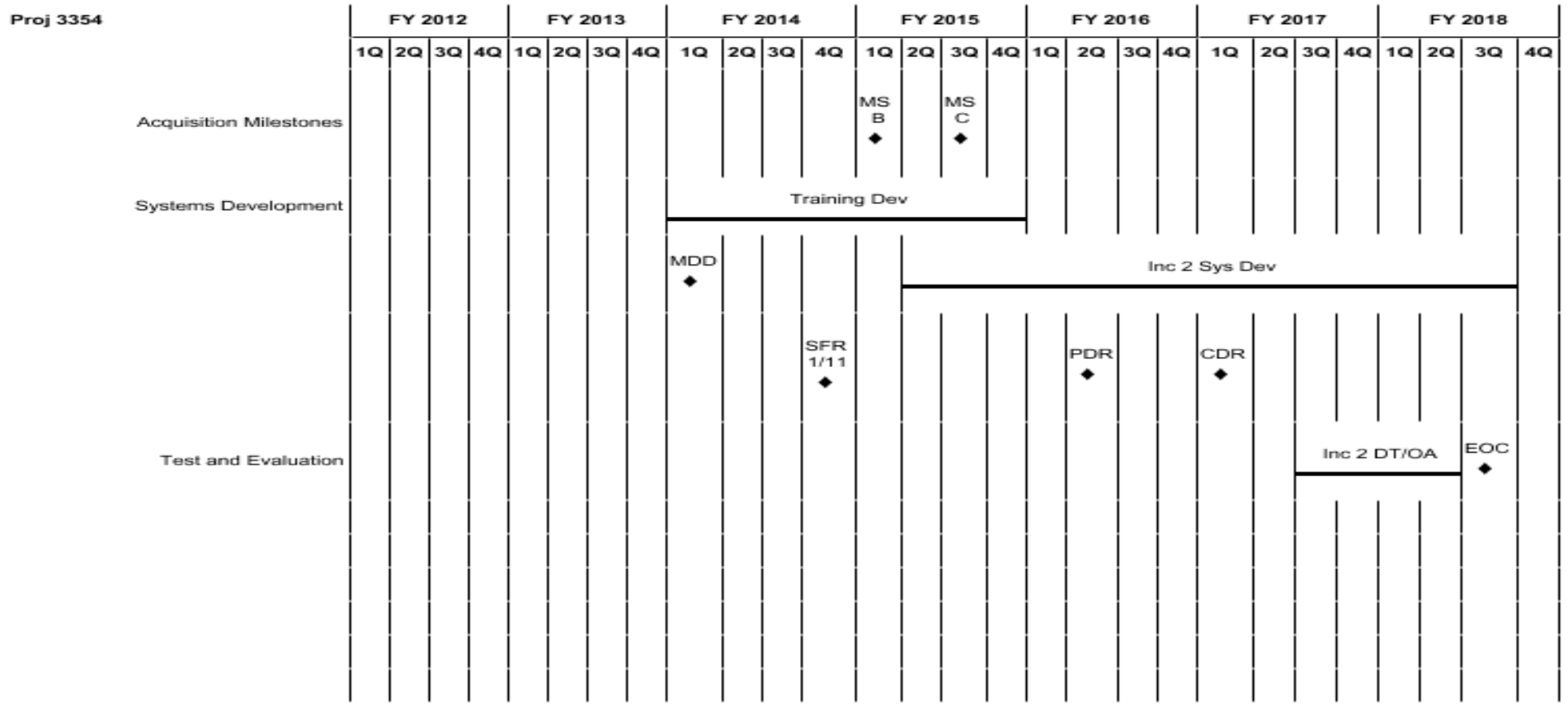


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603860N: *JT Precision Approach & Ldg Sys*	**PROJECT** 3354: *JPALS Inc 2*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3354				
Acquisition Milestones: Milestone B	1	2015	1	2015
Acquisition Milestones: Milestone C	3	2015	3	2015
Systems Development: Increment 1A Ashore Interim Training System Development	1	2014	4	2015
Systems Development: Increment 2 Material Development Decision	1	2014	1	2014
Systems Development: Inc 2 System Development	2	2015	3	2018
Systems Development: PDR	2	2016	2	2016
Systems Development: CDR	1	2017	1	2017
Systems Development: Inc 1 Ashore SFR 1/11	4	2014	4	2014
Test and Evaluation: Increment 2 Developmental Test/Operational Assemssment	3	2017	2	2018
Acquisition Milestones: Early Operational Capability	3	2018	3	2018