Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*							
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	525.552	548.267	657.483	-	657.483	233.485	162.143	209.848	117.061	120.075	2,573.914
4020: *BAMS UAS*	525.552	548.267	657.483	-	657.483	233.485	162.143	209.848	117.061	120.075	2,573.914

Note

*Total cost on R2 is not accurate as it does not include the FY10 control amount of $438.199M. Total cost is $3,012.113M as shown on the R3.

A. Mission Description and Budget Item Justification

RQ-4 Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS)
The BAMS RQ-4 is a High Altitude-Long Endurance UAS designed to provide Fleet and Combatant Commanders with persistent maritime Intelligence, Surveillance and Reconnaissance (ISR) of nearly all the world's high-density sea-lanes, littorals, and areas of national interest. Envisioned as an unmanned adjunct to the P-8A Multi-Mission Maritime Aircraft and crucial to the recapitalization of Navy's airborne maritime ISR capability, the system will seek to leverage Maritime Patrol and Reconnaissance Force manpower, training and maintenance efficiencies.

The RQ-4 air vehicle is based on Northrop Grumman's Block 20 Global Hawk and features sensors designed to provide near worldwide coverage through a network of five orbits inside and outside continental United States, with sufficient air vehicles to remain airborne for 24 hours a day, 7 days a week, out to ranges of 2000 nautical miles. Onboard sensors will provide detection, classification, tracking and identification of maritime targets and include maritime radar, electro-optical/infra-red and Electronic Support Measures systems. Additionally, the RQ-4 will have a communications relay capability designed to link dispersed forces in the theater of operations and serve as a node in the Navy's FORCEnet strategy. Tactical-level data analysis will occur in real-time at shore-based Mission Control sites connected to the air vehicle via satellite communications. Further intelligence exploitation can be conducted at Fleet shore-based sites or aboard Aircraft Carriers and other ships.

RQ-4 will play a significant role in the Sea Shield and FORCEnet pillars of Sea Power 21. In its Sea Shield role, the system will rely on its key attribute of persistence to provide the supported Combatant Command or Fleet Commander with unparalleled situational awareness of the maritime battle space as it develops and sustains the Common Operational Tactical Picture. The system will also serve as a Fleet Response Plan enabler, while acting as a trip wire for Intelligence Preparation of the Environment. Additionally, BAMS UAS will be a FORCEnet enabler and relay platform, directly connected to both the Global Information Grid and the Distributed Common Ground System-Navy Information Backbone.

This PE includes funding in FY15-17 for future incremental development in support of BAMS Increment 3 signals intelligence (SIGINT) capability.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*		R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	529.250	548.482	681.775	-	681.775
Current President's Budget	525.552	548.267	657.483	-	657.483
Total Adjustments	-3.698	-0.215	-24.292	-	-24.292
• Congressional General Reductions	-	-0.215			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.886	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	-24.418	-	-24.418
• Rate/Misc Adjustments	-	-	0.126	-	0.126
• Congressional General Reductions Adjustments	-2.812	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS) was directed in an Acquisition Decision Memorandum (ADM) signed on 1 November 2011 to rename the 1st lot of Low Rate Initial Production (LRIP) as System Demonstration Test Articles (SDTA) to finish system development test and to support Operational Evaluation (OPEVAL). SDTA is an incrementally funded, priced option on the BAMS UAS Northrop Grumman System Development & Demonstration (SDD) prime contract. LRIP 2, LRIP 3, and Full Rate Production (FRP) Lot Contract Awards and deliveries were renamed and scheduled accordingly. The schedule has also been updated to reflect a move in Milestone C from 3Q FY13 to 4Q FY13, Flight Readiness Review (FRR) from 2Q FY12 to 4Q FY12 and SDD delivery from 3Q FY12 through 4Q FY12 to 4Q FY12 through 1Q FY13.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*	PROJECT 4020: *BAMS UAS*	

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
4020: *BAMS UAS*	525.552	548.267	657.483	-	657.483	233.485	162.143	209.848	117.061	120.075	2,573.914
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

RQ-4 Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS).
RQ-4 is a High Altitude-Long Endurance UAS designed to provide Fleet and Combatant Commanders with persistent maritime Intelligence, Surveillance and Reconnaissance (ISR) of nearly all the world's high-density sea-lanes, littorals, and areas of national interest. Envisioned as an unmanned adjunct to the P-8A Multi-Mission Maritime Aircraft, and crucial to the recapitalization of Navy's airborne maritime ISR capability, the system will seek to leverage Maritime Patrol and Reconnaissance Force manpower, training and maintenance efficiencies.

The RQ-4 air vehicle is based on Northrop Grumman's Block 20 Global Hawk and features sensors designed to provide near worldwide coverage through a network of five orbits inside and outside the continental United States, with sufficient air vehicles to remain airborne for 24 hours a day, 7 days a week, out to ranges of 2000 nautical miles. Onboard sensors will provide detection, classification, tracking and identification of maritime targets and include maritime radar, electro-optical/infra-red and Electronic Support Measures systems. Additionally, BAMS will have a communications relay capability designed to link dispersed forces in the theater of operations and serve as a node in the Navy's FORCEnet strategy. Tactical-level data analysis will occur in real-time at shore-based Mission Control sites connected to the air vehicle via satellite communications. Further intelligence exploitation can be conducted at Fleet shore-based sites or aboard Aircraft Carriers and other ships.

RQ-4 will play a significant role in the Sea Shield and FORCEnet pillars of Sea Power 21. In its Sea Shield role, the system will rely on its key attribute of persistence to provide the supported Combatant Command or Fleet Commander with unparalleled situational awareness of the maritime battle space as it develops and sustains the Common Operational Tactical Picture. The system will also serve as a Fleet Response Plan enabler, while acting as a trip wire for Intelligence Preparation of the Environment. Additionally, RQ-4 will be a FORCEnet enabler and relay platform, directly connected to both the Global Information Grid and the Distributed Common Ground System-Navy Information Backbone.

The RQ-4 system is an evolutionary based acquisition, using an incremental development approach. Two Mission Need Statements (MNSs) support the requirement; 1) BAMS and Littoral Armed ISR MNS, and 2) Long Endurance, Reconnaissance, Surveillance and Target Acquisition Capability MNS. The BAMS UAS Capability Development Document was approved May 2007 by the Joint Requirements Oversight Council.

This Project Unit includes funding in FY15-17 for future incremental development in support of BAMS Increment 3 signals intelligence (SIGINT) capability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Product Development	495.465	507.723	607.501
Articles:	0	0	3

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*	PROJECT 4020: *BAMS UAS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: Awarded contract in FY08 to initiate the Engineering and Manufacturing Development (EMD) phase effort. The Prime Contractor is responsible for overall system development and performance, as well as associated management, engineering and logistics activities. ***FY 2011 Accomplishments:*** Continued EMD, including Government engineering support related to EMD. ***FY 2012 Plans:*** Continue EMD, including purchase of long lead materials in support of FY13 System Demonstration Test Articles (SDTA) and Government engineering support related to EMD. ***FY 2013 Plans:*** Continue EMD, including purchase of 3 SDTA vehicles to support Operational Test and Evaluation. Continue Government engineering support related to EMD.			
Title: ILS, Support, Studies & Analysis	12.625	14.105	13.022
Articles:	0	0	0
Description: Integrated Logistics Support, Studies and Analysis. ***FY 2011 Accomplishments:*** Continued integrated logistics support, technical engineering services, sensor risk reduction, logistics supportability analyses and environmental planning, modeling and simulation, development of manpower and basing assessments, and development of technical data to support fielding of the Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS) capabilities. ***FY 2012 Plans:*** Continue integrated logistics support, technical engineering services, sensor risk reduction, logistics supportability analyses and environmental planning, modeling and simulation, development of manpower and basing assessments, and development of technical data to support fielding of the BAMS UAS capabilities. ***FY 2013 Plans:*** Continue integrated logistics support, technical engineering services, sensor risk reduction, logistics supportability analyses and environmental planning, modeling and simulation, development of manpower and basing assessments, and development of technical data to support fielding of the BAMS UAS capabilities.			
Title: Program Management	6.479	6.639	6.525
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*	PROJECT 4020: *BAMS UAS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: Program Management Support and travel. ***FY 2011 Accomplishments:*** Continued the following: Program Management Support and travel, development of milestone and acquisition-related documentation, capability refinement and open systems architecture development, resource justification, affordability assessments and cost analyses, risk reduction and risk management, system integration and interoperability planning, technology maturity reviews, program protection planning, corrosion prevention planning, and Joint and International Cooperation efforts. ***FY 2012 Plans:*** Continue the following: Program Management Support and travel, development of milestone and acquisition-related documentation, capability refinement and open systems architecture development, resource justification, affordability assessments and cost analyses, risk reduction and risk management, system integration and interoperability planning, technology maturity reviews, program protection planning, corrosion prevention planning, and Joint and International Cooperation efforts. ***FY 2013 Plans:*** Continue the following: Program Management Support and travel, development of milestone and acquisition-related documentation, capability refinement and open systems architecture development, resource justification, affordability assessments and cost analyses, risk reduction and risk management, system integration and interoperability planning, technology maturity reviews, program protection planning, corrosion prevention planning, and Joint and International Cooperation efforts.			
Title: Test & Evaluation (T&E) ***Articles:*** ***Description:*** T&E efforts. ***FY 2011 Accomplishments:*** Continued test and evaluation support activities to allow test and fielding of the Broad Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS). ***FY 2012 Plans:*** Continue test and evaluation support activities to allow test and fielding of the BAMS UAS. ***FY 2013 Plans:*** Continue test and evaluation support activities to allow test and fielding of the BAMS UAS.	10.983 0	19.800 0	30.435 0
Accomplishments/Planned Programs Subtotals	525.552	548.267	657.483

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*	PROJECT 4020: *BAMS UAS*

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
• RDTE/0305205N: *BAMS UAS*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	588.909
• APN-4/044200: *RQ-4 UAV (BAMS UAV)*	0.000	0.000	51.124	0.000	51.124	495.984	585.786	615.136	703.993	7,459.013	9,911.036
• APN-6/060510: *BAMS UAV*	0.000	0.000	0.000	0.000	0.000	43.140	42.421	42.390	7.302	1,081.325	1,216.578
• MILCON/0816376N: *Broad Area Maritime Surveillance T&E Facility*	33.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	33.034
• MILCON/0815976N: *Facilities New Footprint*	0.000	4.482	14.843	0.000	14.843	68.139	96.712	31.517	35.823	0.000	251.516
• MILCON/0203176N: *BAMS MOB MCS*	0.000	0.000	21.980	0.000	21.980	0.000	0.000	0.000	0.000	0.000	21.980
• MILCON/0212176N: *BAMS Tension Fabric Hangers*	0.000	0.000	34.048	0.000	34.048	0.000	0.000	0.000	0.000	0.000	34.048

D. Acquisition Strategy

The Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS) is an evolutionary-based acquisition, using an incremental development approach. During the pre-Milestone B phase, the program performed technical risk reduction through studies and demonstrations, Engineering and Manufacturing Development (EMD) contract preparation, and Milestone B documentation development activities. Milestone B occurred on 8 April 2008 and EMD award occurred on 22 April 2008. The EMD contract was based on a competitive selection process for a Prime Contractor.

The BAMS UAS program office is pursuing joint efficiency with the Air Force on the Global Hawk UAS. However, the integration of the BAMS UAS into the Maritime Patrol Reconnaissance Force and the unique maritime sensors employed dictate a Navy-led acquisition program focused on joint efficiencies, where possible.

E. Performance Metrics

Successfully achieve Flight Readiness Review, Milestone C, Integrated Test, and Operational Evaluation.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*	PROJECT 4020: *BAMS UAS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPAF	Northrop Grumman:Bethpage, NY	834.705	461.025	Nov 2011	562.886	Nov 2012	-		562.886	315.912	2,174.528	2,174.528
Systems Engineering	Various	Various:Various	3.369	1.278	Nov 2011	1.000	Nov 2012	-		1.000	3.103	8.750	
Award Fees	C/CPAF	Northrop Grumman:Bethpage, NY	17.116	12.533	Dec 2012	12.600	Dec 2013	-		12.600	25.852	68.101	68.101
Systems Engineering	WR	NAWC-AD:Patuxent River, MD	53.853	31.548	Nov 2011	29.660	Nov 2012	-		29.660	34.532	149.593	
Systems Engineering	WR	NAWC-WD:China Lake, CA	2.602	1.339	Nov 2011	1.355	Nov 2012	-		1.355	3.073	8.369	
Increment 3 Development	TBD	TBD:TBD	-	-		-		-		-	379.552	379.552	
		Subtotal	911.645	507.723		607.501		-		607.501	762.024	2,788.893	

Remarks

The percentage of funding actually awarded for the FY10 Award Fee period was 80.6%. In FY11, 75.1% of the Award Fee was earned.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various	Various:Various	6.680	3.933	Nov 2011	2.074	Nov 2012	-		2.074	9.217	21.904	
Integrated Logistics Support	Various	Various:Various	1.235	1.799	Nov 2011	1.100	Nov 2012	-		1.100	1.361	5.495	
Development Support	WR	NAVSEA:Dahlgren, VA	6.070	2.362	Dec 2011	2.178	Dec 2012	-		2.178	6.014	16.624	
Integrated Logistics Support	WR	NAWC-AD:Patuxent River, MD	7.746	4.955	Nov 2011	6.603	Nov 2012	-		6.603	5.285	24.589	
Integrated Logistics Support	WR	NAWC-TSD:Orlando, FL	2.054	1.056	Nov 2011	1.067	Nov 2012	-		1.067	3.267	7.444	
Prior Years Support	Various	Various:Various	0.768	-		-		-		-	0.000	0.768	
		Subtotal	24.553	14.105		13.022		-		13.022	25.144	76.824	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*	PROJECT 4020: *BAMS UAS*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various:Various	4.921	6.859	Nov 2011	9.549	Nov 2012	-		9.549	18.272	39.601	
Developmental Test & Evaluation	WR	NAWC-AD:Patuxent River, MD	10.719	12.941	Nov 2011	18.686	Nov 2012	-		18.686	9.646	51.992	
Operational Test & Evaluation	Various	Various:Various	-	-		2.200	Nov 2012	-		2.200	20.749	22.949	
		Subtotal	15.640	19.800		30.435		-		30.435	48.667	114.542	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	Mitre:McLean, VA	1.993	1.485	Nov 2011	1.606	Nov 2012	-		1.606	1.415	6.499	6.499
Program Management Support	Various	Various:Various	1.489	0.722	Nov 2011	0.438	Nov 2012	-		0.438	1.170	3.819	
Travel	WR	Various:Various	0.622	0.350	Nov 2011	0.309	Nov 2012	-		0.309	0.402	1.683	
Program Management Support	C/CPFF	Ausley:Lexington Park, MD	4.971	2.569	Dec 2011	2.626	Dec 2012	-		2.626	2.384	12.550	12.550
Program Management Support	C/CPFF	Bowhead:Alexandria, VA	2.838	1.513	Dec 2011	1.546	Dec 2012	-		1.546	1.406	7.303	7.303
		Subtotal	11.913	6.639		6.525		-		6.525	6.777	31.854	

Remarks

Travel funding vehicle type is TO.

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	963.751	548.267		657.483		-		657.483	842.612	3,012.113	

Remarks

Prior to FY10, BAMS was budgeted for in PE 0305205N: Endurance Unmanned Aer Veh.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*	PROJECT 4020: *BAMS UAS*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305220N: *RQ-4 UAV*	PROJECT 4020: *BAMS UAS*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 4020				
Acquisition Milestones: Milestone C	4	2013	4	2013
Acquisition Milestones: Full Rate Production	1	2016	1	2016
Acquisition Milestones: Initial Operational Capability	1	2016	1	2016
System Development: Systems Demonstration and Development	1	2011	3	2016
System Development: Increment 3 Development	1	2015	4	2017
System Development: Reviews: Critical Design Review	2	2011	2	2011
System Development: Reviews: Flight Readiness Review	4	2012	4	2012
Test & Evaluation Activities: Integrated Test (Combined/Developmental/Operational)	3	2012	4	2014
Test & Evaluation Activities: Operational Test Readiness Review	1	2015	1	2015
Test & Evaluation Activities: OPEVAL	2	2015	3	2015
Production Milestones: Contracts: System Demonstration Test Articles Contract Award	1	2013	1	2013
Production Milestones: Contracts: Low Rate Initial Production 1 Contract Award	1	2014	1	2014
Production Milestones: Contracts: Low Rate Initial Production 2 Contract Award	1	2015	1	2015
Production Milestones: Contracts: Lot 3 Contract Award	1	2016	1	2016
Production Milestones: Contracts: Lot 4 Contract Award	1	2017	1	2017
Production Milestones: Deliveries: System Development and Demonstration Deliveries	4	2012	1	2013
Production Milestones: Deliveries: System Demonstration Test Articles Delivery	4	2014	2	2015
Production Milestones: Deliveries: Low Rate Initial Production 1 Delivery	4	2015	3	2016
Production Milestones: Deliveries: Low Rate Initial Production 2 Delivery	4	2016	3	2017