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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305233N: <i>RQ-7 UAV</i>
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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
Total Program Element	3.132	7.834	0.872	-	0.872	0.871	0.874	0.876	0.891	Continuing	Continuing
9156: <i>Wide Focal Plane Array Camera (WFPAC)</i>	2.150	6.900	-	-	-	-	-	-	-	0.000	9.050
9C84: <i>MCTUAS</i>	0.982	0.934	0.872	-	0.872	0.871	0.874	0.876	0.891	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element supports additional capability development for the RQ-7 Shadow non-lethal joint tactical Unmanned Aerial Vehicle system for Department of Defense to provide the warfighter with the capability for day/night aerial Reconnaissance, Surveillance and Target Acquisition, intelligence, battle damage assessment, and force protection.

FY11 request includes \$6.9M in Overseas Contingency Operation funds for Wide Focal Plane Array Camera (WFPAC) in support of Operation Enduring Freedom - Afghanistan.

<b>B. Program Change Summary (\$ in Millions)</b>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	0.982	0.934	0.928	-	0.928
Current President's Budget	3.132	7.834	0.872	-	0.872
Total Adjustments	2.150	6.900	-0.056	-	-0.056
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	2.150	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	6.900	-0.055	-	-0.055
• Rate/Misc Adjustments	-	-	-0.001	-	-0.001

**Change Summary Explanation**

Schedule: WFPAC contract award expected in 3Q FY11. Previous budget submission inadvertently had contract award in 2Q FY11.

Technical: Not applicable.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **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
9156: <i>Wide Focal Plane Array Camera (WFPAC)</i>	2.150	6.900	-	-	-	-	-	-	-	0.000	9.050
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**Note**

Congressional approval received via above-threshold reprogramming in FY10. FY11 request includes \$6.9M in Overseas Contingency Operation funds for Wide Focal Plane Array Camera (WFPAC) in support of Operation Enduring Freedom - Afghanistan.

**A. Mission Description and Budget Item Justification**

Program completes development, testing, integration and initial procurement of a WFPAC sensor for the RQ-7 Shadow Unmanned Aircraft System (UAS) in support of Operation Enduring Freedom - Afghanistan. The Office of Naval Research is leading the development and funding the low rate initial procurement. These funds will support the test and integration efforts for the Marine Corps Shadow systems.

The WFPAC sensor enhancement will address the Marine Expeditionary Brigade's near-term organic persistent Intelligence, Surveillance and Reconnaissance requirement in Afghanistan as well as provide an enduring capability in a reduced form factor tactical UAS sensor.

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

	FY 2010	FY 2011	FY 2012
<b>Title:</b> WFPAC	2.150	6.900	-
<b>Articles:</b>	0	0	
<b>FY 2010 Accomplishments:</b> Funding supports integration and testing of the WFPAC Sensor on the RQ-7 Shadow UAS.			
<b>FY 2011 Plans:</b> Funding will continue to support integration and testing of the WFPAC Sensor on the RQ-7 Shadow UAS.			
<b>Accomplishments/Planned Programs Subtotals</b>	2.150	6.900	-

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**D. Acquisition Strategy**

The program office will leverage Army contracting by UAS Program Manager to integrate WFPAC onto the RQ-7 Unmanned Aerial Vehicle (UAV). Government engineering support will be provided by Naval Air Warfare Center, Aircraft Division, China Lake.

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**E. Performance Metrics**

WFPAC successfully integrated onto RQ-7 UAV.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305233N: <i>RQ-7 UAV</i>	<b>PROJECT</b> 9156: <i>Wide Focal Plane Array Camera (WFPAC)</i>
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<b>Support (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Systems Engineering	WR	NAWCWD:China Lake, CA	-	0.500	Mar 2011	-		-		-	0.000	0.500	
Integration and Testing	Various	TBD:TBD	1.913	6.400	Jun 2011	-		-		-	0.000	8.313	
Engineering Support	WR	Fleet Readiness:San Diego, CA	0.237	-		-		-		-	0.000	0.237	
<b>Subtotal</b>			2.150	6.900		-		-		-	0.000	9.050	

**Remarks**  
FY10 funds for Integration and Testing are not yet awarded.

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	2.150	6.900	-	-	-	0.000	9.050	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305233N: <i>RQ-7 UAV</i>	<b>PROJECT</b> 9156: <i>Wide Focal Plane Array Camera (WFPAC)</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305233N: <i>RQ-7 UAV</i>	<b>PROJECT</b> 9156: <i>Wide Focal Plane Array Camera (WFPAC)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Wide Focal Plane Array Camera (WFPAC)</b>				
Integration Testing: Integration and Testing	1	2011	2	2012

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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
9C84: <i>MCTUAS</i>	0.982	0.934	0.872	-	0.872	0.871	0.874	0.876	0.891	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

This Marine Corps Tactical Unmanned Aircraft System (MCTUAS) project supports the fielded RQ-7B Shadow Unmanned Aerial Vehicle (UAV) system by conducting research, development, test, and evaluation for improvement of the RQ-7 UAV capabilities in Reconnaissance, Surveillance and Target Acquisition, Intelligence, Battle Damage Assessment and Force Protection. The RQ-7B Shadow UAV system provides critical battlefield intelligence and targeting information in the rapid cycle time required for success at the tactical level.

RQ-7B Shadow UAV systems are acquired through the Army's Unmanned Aerial System (UAS) Program Office to fulfill Marine Corps UAS requirements. In order to optimize Marine Corps and Army's interoperability, maintenance, and capability with minimal cost, the two services plan to develop additional capability for the common system. These funds will provide the Marine Corps share of the combined development cost.

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

	FY 2010	FY 2011	FY 2012
<b>Title:</b> MCTUAS Development Support	0.982	0.934	0.872
<b>Articles:</b>	0	0	0
<b>Description:</b> Joint development efforts with US Army RQ-7 Shadow Program and associated government engineering support for block upgrades required for continued improvement and interoperability.			
<b>FY 2010 Accomplishments:</b> The RQ-7 MCTUAS program benefitted and shared in cost for the following upgrades: Common Systems Integration were required to ensure interoperability with other weapon systems, manned and unmanned. Included in this category were Universal Ground Station, trainer upgrades, and One System Remote Video Transceiver and advance payloads. The Small Sense and Avoid system was required to meet the requirements for a traffic alert and collision avoidance system and to allow for operations in the National Airspace. FY10 funded the Marine Corps share of the combined development cost. Funding was also used for government engineering support.			
<b>FY 2011 Plans:</b> Continue with Marine Corps share of the combined development cost and government engineering support. Continue development efforts and government engineering support begun in FY10.			
<b>FY 2012 Plans:</b>			

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
Funding continues development efforts and government engineering support, and will initiate development efforts for improvements to control systems, the power plant, Intelligence Surveillance Reconnaissance systems and weapons capabilities.			
<b>Accomplishments/Planned Programs Subtotals</b>	0.982	0.934	0.872

**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
• WPN/422700: <i>MCTUAS</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	207.900
• APN/044100: <i>RQ-7 UAV</i>	109.988	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	109.988
• APN/058900: <i>RQ-7 UAV</i>	0.000	26.121	11.419	0.000	11.419	11.550	11.810	0.000	0.000	0.000	60.900

**D. Acquisition Strategy**

Sole source engineering development services contract with Aircraft Armament Incorporated (AAI) through Army Program Manager Unmanned Aircraft System.

**E. Performance Metrics**

Attainment of targeted development effort upgrades improving operational capability of the RQ-7 UAV (MCTUAS).