EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7**					R-1 ITEM NOMENCLATURE 0305204N Tactical Unmanned Aerial Vehicles			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost		**76.943**	**115.173**	**115.950**	**40.510**	**11.647**	**11.862**	**12.471**
2478 Tactical Control System		**13.286**	**10.762**	**9.156**	**9.453**	**8.932**	**9.094**	**9.326**
2768 VTUAV		**59.096**	**74.215**	**105.124**	**29.347**	**0.971**	**0.989**	**1.328**
2910 Joint Technology Center/ Sys Integ Lab		**1.590**	**1.634**	**1.670**	**1.710**	**1.744**	**1.779**	**1.817**
3135 USMC VUAV			**3.862**					
9650 Advanced Airship Flying Laboratory		**2.971**						
9999 Congressional Adds			**24.700**					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: These programs provide for the development of Tactical Unmanned Aerial Vehicle (TUAV) systems that provide warfighters with dedicated day/night aerial Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR&TA) capabilities; and communications/data dissemination; electronic warfare; weather data collection to support combat operations; minefield detection; and nuclear/biological/chemical reconnaissance in limited adverse weather.

Tactical Control System (TCS): TCS provides interoperability for command and control of the present and future Tactical and Medium Altitude Endurance (MAE) UAVs and their payloads utilized for ISR&TA and combat assessment. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the ground control station (GCS), implementation of NATO (North Atlantic Treaty Organization) Standardization Agreement (STANAG) 4586, and through the use of the Tactical Common Data Link (TCDL). TCS provides connectivity to designated Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems for the Navy Vertical Takeoff and Landing (VTOL) Tactical UAV (VTUAV). TCS and VTUAV will implement NATO STANAG 4586 compliance, and weaponization and plug-and-play functionality. TCS will also be evaluated for future Naval UAVs.

Vertical Takeoff and Landing Tactical UAV (VTUAV): VTUAV (also referred to as the Fire Scout VTUAV) provides real-time and non-real-time intelligence, surveillance and reconnaissance data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline VTUAV can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle management (including communications relay). The VTUAV launches and recovers vertically, and can operate from air capable ships, as well as confined area land bases. Other characteristics include autonomous air vehicle launch and recovery, and autonomous waypoint navigation with command override capability. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the ground control station, and through the use of the Tactical Common Data Link (TCDL). The data from the VTUAV will be provided through standard DoD C4ISR system architectures and protocols.

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7**	R-1 ITEM NOMENCLATURE 0305204N Tactical Unmanned Aerial Vehicles

JTC/SIL: The Joint Technology Center/System Integration Laboratory provides experimentation for UAV technology assessment, insertion, demonstration, transfer, as well as simulation and exercise support.

USMC Vertical Unmanned Aerial Vehicle (VUAV): The USMC VUAV will provide the Marine Corps a Tier III UAV supporting Marine Expeditionary Force (MEF) and Joint Task Force (JTF) level commanders with the required speed and survivability to support USMC Expeditionary Maneuver Warfare (EMW) operations. The system will build on Navy VTUAV and Coast Guard Eagle Eye technology. Pre-Milestone A activities will be conducted.

Advance Airship Flying Laboratory: FY 2005 Congressional Add - Initial capability studies for development of a modernized naval airship featuring contemporary composited, digital flight controls, vectored thrust and remote piloted capabilities that can provide immediate utility for missions requiring heavy lift (logistics and/or sensor suites), long endurance (measured in days vs. hours), and persistent broad-area Intelligence, Surveillance, and Reconnaissance (ISR).

Congressional Adds.

Joint Operational Test Bed System (JOTBS)
JOTBS is an experimental, ground-based control system that is designed to fly, operate and receive data from all the services and individual UAVs from a single interface.

Fire Scout RQ-8B (MQ-8B)
The Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle (VTUAV) was designed to provide real-time intelligence, surveillance and reconnaissance data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The VTUAV can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation, and battle management (including communications relay). The VTUAV launches and recovers vertically and can operate from all air capable ships as well as confined area land bases. Other characteristics include autonomous air vehicle launch and recovery, autonomous waypoint navigation with command override capability, and the ability to incorporate Electro-Optical/Infrared/Laser Designator-Laser Range Finder modular mission payload. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the ground control station, through implementation of NATO Standardization Agreement (STANAG) 4586 and through the use of the Tactical Common Data Link (TCDL). The data from the VTUAV will be provided through standard DoD Command, Control, Communications, Computers and Intelligence Surveillance, and Reconnaissance (C4ISR) system architectures and protocols.

Center for Coastline Security Technology
Office of Naval Research (ONR) is working with the Institute for Ocean and Systems Engineering to develop surface and airborne autonomous and remotely operated platform surveillance systems for deployment along United States Coastlines.

Advanced Airship Flying Laboratory Phase II
Capability studies for development of a modernized naval airship featuring contemporary composited, digital flight controls, vectored thrust and remote piloted capabilities that can provide immediate utility for missions requiring heavy lift (logistics and/or sensor suites), long endurance (measured in days vs. hours), and persistent broad-area Intelligence, Surveillance, and Reconnaissance (ISR).

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 2478 Tactical Control System			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
2478 Tactical Control System		**13.286**	**10.762**	**9.156**	**9.453**	**8.932**	**9.094**	**9.326**
RDT&E Articles Qty - Not Applicable								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Tactical Control System (TCS) is developing a standards based system that provides interoperability and commonality for Command and Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) interfaces, and command and control of Navy Unmanned Aerial Vehicles (UAVs), including the Navy Vertical Takeoff and Landing (VTOL) Tactical UAV (VTUAV). Interoperability is achieved through the use of the Tactical Control System (TCS) software in the ground control station, NATO STANAG-4586 compliance and through the use of the Tactical Common Data Link (TCDL). TCS and VTUAV will implement NATO STANAG 4586 and plug-and-play functionality. TCS will also be evaluated for future Naval UAVs.

TCS provides a full range of scaleable Unmanned Air System (UAS) capabilities from passive receipt of air vehicle and payload data to full air vehicle and payload command and control. TCS offers the war fighter a common core operating environment to simultaneously receive, process, and disseminate UAV data from different UAS types for reconnaissance, surveillance, and combat assessment.

TCS provides UAS command, control and processing from land and sea based ground control stations. TCS development continues to meet the updated VTUAV Operational Requirements Document (ORD) and add key technologies that will be used by UAS.

TCS maximizes the use of contractor and government off-the shelf hardware and software whenever possible. TCS software is interoperable, and is compliant with the OSD Command and Control, Communications, Intelligence (C3I) Joint Technical Architecture (JTA), and Distributed Common Ground System (DCGS) standards.

Includes FY 2005 Congressional add of $4.5M for the Joint Operational Test Bed System (JOTBS), less $.121M Congressional undistributed reductions. The FY 2006 Congressional add of $3.0M for JOTBS is shown in project 9999.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2478 Tactical Control System

B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		5.840	7.390	5.968
RDT&E Articles Quantity				

Continue TCS integration with VTUAV development. Continue new TCS capabilities to support requirements for Littoral Combat Ship (LCS) integration. Continue TCS NATO STANAG 4586 compliance. Continue TCS Command and Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) interface testing for VTUAV required C4ISR systems. Complete multi-vehicle UAS control through FY2008.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		4.379		
RDT&E Articles Quantity				

JOTBS enhancements and support of UAV experimentation.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		3.067	3.372	3.188
RDT&E Articles Quantity				

Continue government engineering support, contractor support, program support, and travel for the TCS program.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		**February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2478 Tactical Control System

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 05	FY 06	FY 07
Previous President's Budget:	13.293	10.902	9.110
Current BES/President's Budget:	13.286	10.762	9.156
Total Adjustments	-0.007	-0.140	0.046
Summary of Adjustments			
Congressional Reductions			
Congressional Recissions			
Congressional Undistributed Reductions	-0.010	-0.097	
Congressional Increases	0.003		
Economic Assumptions		-0.043	0.046
Miscellaneous			
Subtotal	-0.007	-0.140	0.046

Schedule:

Schedule changes support an integration between VTUAV and Littoral Combat Ship.

Technical:

Not applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2478 Tactical Control System

D. OTHER PROGRAM FUNDING SUMMARY:

Not Applicable

E. ACQUISITION STRATEGY:

These acquisitions have been made by modifying the competitively awarded TCS contract (awarded to Raytheon in 2000), as well as through the TCS Basic Order Agreement with Raytheon, both of which are cost-plus contracts. TCS development and testing will be accomplished via a Government/Industry team.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2006**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**		PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 2478 Tactical Control System						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPAF	Raytheon, Falls Church, VA	75.321	4.970	11/04	6.934	12/05	5.193	11/06	13.401	105.819	105.819
Award Fees	C/CPAF	Raytheon, Falls Church, VA	7.005	0.840	06/05	0.426	06/06	0.745	06/07	1.608	10.624	10.624
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			82.326	5.810		7.360		5.938		15.009	116.443	
Remarks:												
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2006**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**		PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 2478 Tactical Control System						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	Various	1.140	0.030	11/04	0.030	02/06	0.030	11/06	Continuing	Continuing	
Test Assets	WX	USJFCOM, Norfolk, VA	6.078	4.379	01/05						10.457	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			7.218	4.409		0.030		0.030		Continuing	Continuing	
Remarks:												
Contractor Engineering Support	Various	Various	0.100	0.610	12/04	0.625	12/05	0.641	12/06	Continuing	Continuing	
Government Engineering Support	WX	NAWCAD, Pax River, MD	4.083	1.368	12/04	1.322	10/05	1.190	11/06	Continuing	Continuing	
Government Engineering Support	WX	SPAWAR, San Diego, CA	0.050	0.050	11/04	0.096	01/06	0.097	11/06	Continuing	Continuing	
Program Management Support	Various	Various	2.631	1.006	11/04	1.314	02/06	1.244	11/06	Continuing	Continuing	
Travel	TO	NAVAIR-HQ, Pax River, MD	1.489	0.033	11/04	0.015	10/05	0.016	11/06	Continuing	Continuing	
											0.000	
Subtotal Management			8.353	3.067		3.372		3.188		Continuing	Continuing	
Remarks:												
Total Cost			97.897	13.286		10.762		9.156		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - 202

CLASSIFICATION:

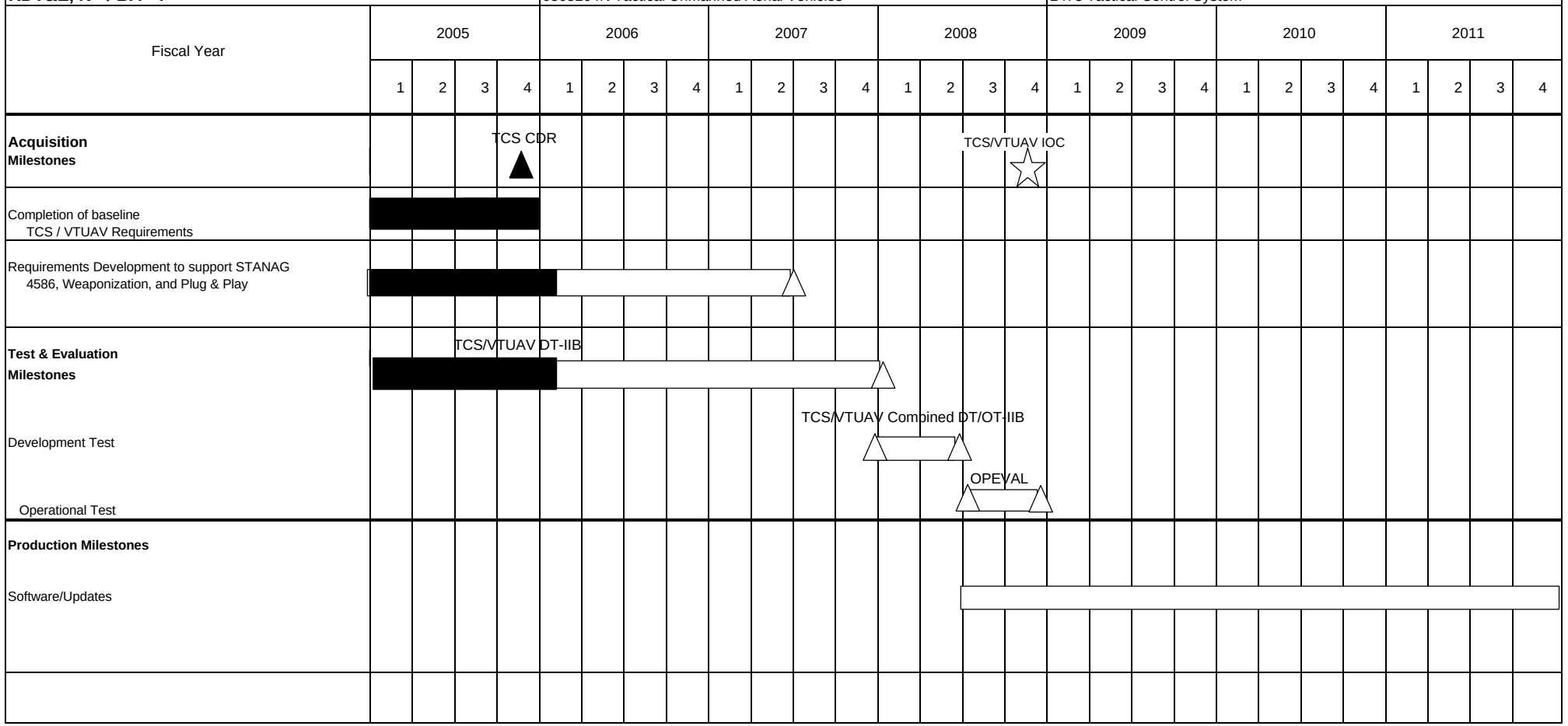
EXHIBIT R4, Schedule Profile

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA - 7**

PROGRAM ELEMENT NUMBER AND NAME: 0305204N Tactical Unmanned Aerial Vehicles

PROJECT NUMBER AND NAME: 2478 Tactical Control System



R-1 SHOPPING LIST - 202

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 2478 Tactical Control System		
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
TCS Critical Design Review (CDR)	4Q						
TCS/VTUAV Initial Operating Capability (IOC)				4Q			
Completion of baseline TCS / VTUAV Requirements	1Q-4Q						
Requirements Development to support STANAG							
4586, Weaponization, and Plug & Play	1Q-4Q	1Q-4Q	1Q-2Q				
TCS/VTUAV DT-IIB	1Q-4Q	1Q-4Q	1Q-4Q				
TCS/VTUAV Combined DT/OT-IIB				1Q-2Q			
TCS/VTUAV OT-IIB OPEVAL				3Q-4Q			
Software/Updates				3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

R-1 SHOPPING LIST - 202

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 2768 VTUAV			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
2768 VTUAV		**59.096**	**74.215**	**105.124**	**29.347**	**0.971**	**0.989**	**1.328**
RDT&E Articles Qty		**2**	**5 ***					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle (VTUAV) (also referred to as the Fire Scout VTUAV) was designed to provide real-time intelligence, surveillance and reconnaissance data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The VTUAV can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation, and battle management (including communications relay). The VTUAV launches and recovers vertically and can operate from all air capable ships as well as confined area land bases. Other characteristics include autonomous air vehicle launch and recovery, autonomous waypoint navigation with command override capability, and the ability to incorporate Electro-Optical/Infrared/Laser Designator-Laser Range Finder modular mission payload. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the ground control station, through implementation of NATO Standardization Agreement (STANAG) 4586 and through the use of the Tactical Common Data Link (TCDL). The data from the VTUAV will be provided through standard DoD Command, Control, Communications, Computers and Intelligence Surveillance, and Reconnaissance (C4ISR) system architectures and protocols. The program complies with FY06 Defense legislation and resultant DoD policy concerning Tactical Common Data Links.

A VTUAV system is comprised of three air vehicles, three electro-optical/infrared/laser designator-rangefinder payloads, two Ground Control Stations (with TCS and TCDL integrated for interoperability), one UAV Common Automatic Recovery System (UCARS) for automatic take-off and landings, and associated spares and support equipment.

A program to continue development of the VTUAV to meet the Littoral Combat Ship (LCS) mission requirements was initiated in FY04. Engineering and Manufacturing Development (EMD) is continuing in FY07 and will include design activities for system upgrades, and TCS integration. Procurement of two EMD MQ-8B Air Vehicles was initiated in FY04, two additional EMD MQ-8B Air Vehicles initiated in FY05, and five EMD MQ-8B Air Vehicles will be initiatied in FY06.

The Air Vehicle was redesignated from RQ-8B to MQ-8B on 24 June 2005 per letter from HQ USAF/XPPE.

The VTUAV system is scheduled for a 1st quarter FY07 Milestone C LRIP decision.

The U.S. Army has selected the MQ-8B as their Class IV UAV for the Future Combat System (FCS). Coordination with the U.S. Army FCS Program is on-going to investigate the potential cost savings for both programs where system commonalities and common logistics support can be identified.

* Two of the five articles initiated in FY06 are funded by a Congressional plus-up, and identified in Project 9999 of this exhibit.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2768 VTUAV

B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		46.233	56.715	89.994
RDT&E Articles Quantity		2	5 *	

Continue incremental procurement and integration of EMD MQ-8B Air Vehicles to support the Engineering and Manufacturing Development (EMD) program. Continue to completion EMD of the VTUAV system. Continue combined developmental and operational testing.
* Two of the five articles initiated in FY06 are funded by a Congressional plus-up, and identified in Project 9999 of this exhibit.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		2.900	4.600	7.670
RDT&E Articles Quantity				

Continue ILS, technical data, and training system development. Procurement of trainers and spares to support OPEVAL.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		1.196	2.500	3.093
RDT&E Articles Quantity				

Complete developmental testing of the VTUAV system. Continue combined developmental and operational testing TECHEVAL and planning for OPEVAL.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2768 VTUAV

B. Accomplishments/Planned Program (Cont.)

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		8.767	10.400	4.367
RDT&E Articles Quantity				

Continue engineering management, program technical management, and management support for the VTUAV system. These include transportation of system assets, fleet introduction team and program office personnel travel, and contract support services. Continue to support system development, system integration and test, and TECHEVAL.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2768 VTUAV

C. PROGRAM CHANGE SUMMARY:

Funding:	FY05	FY 06	FY 07
Previous President's Budget:	59.129	77.601	53.172
Current BES/President's Budget:	59.096	74.215	105.124
Total Adjustments	-0.033	-3.386	51.952
Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-0.045	-0.805	
Congressional Increases			
Economic Assumptions		-0.351	0.539
Other Adjustments			52.600
Miscellaneous Adjustments	0.012	-2.230	-1.187
Subtotal	-0.033	-3.386	51.952

Schedule:

Schedule change due to revision of optimum phasing of milestones and reviews. Procurement of two VTUAV EMD MQ-8B air vehicles in 3Q, FY05. Procurement of three VTUAV EMD MQ-8B air vehicles planned for 2Q, FY06. Two additional EMD MQ-8B articles are being initiated in FY06, funded by a Congressional plus-up, and identified in Project 9999 of this exhibit. Milestone C is planned for 1Q, FY 07. Combined DT/OT planned for 4Q,FY07-2Q,FY08. OPEVAL planned for 2Q-4Q, FY08. IOC planned for 4Q, FY08. Full Rate Production (FRP) planned for 1Q, FY09.

Technical:

Not applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2768 VTUAV

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
APN: 044300 VTUAV			37.570	64.501	104.866	100.383	94.133	972.244	1,373.697
APN Initial Spares: 060510 VTUAV			7.426	7.821	26.308	8.425	3.421	144.058	197.459

E. ACQUISITION STRATEGY:

Continue with the VTUAV EMD program. Design and development of an improved system initiated in FY04 to support the Littoral Combat Ship Program. Nine EMD MQ-8B Air Vehicles will be procured. A Milestone C LRIP decision is scheduled for 1Q, FY07. A FRP and IOC will follow completion of OPEVAL.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2006**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**		PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 2768 VTUAV							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPFF	NGC, San Diego, CA	181.501	46.233	06/05	56.715	02/06	89.994	11/06	92.463	466.906	466.906
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			181.501	46.233		56.715		89.994		92.463	466.906	
Remarks:												
Integrated Logistics Support	WX	Various	8.723	2.900	11/04	4.600	12/05	7.670	11/06	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			8.723	2.900		4.600		7.670		Continuing	Continuing	
Remarks:												

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2006**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**		PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 2768 VTUAV						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	Various	1.691	1.196	11/04	2.500	12/05	3.093	11/06	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			1.691	1.196		2.500		3.093		Continuing	Continuing	
Remarks:												
Government Engineering Support	WX	Various	12.220	4.150	11/04	5.550	12/05	2.134	11/06	Continuing	Continuing	
Program Management Support	Various	Various	8.272	4.567	11/04	4.800	12/05	2.183	11/06	Continuing	Continuing	
Travel		NAVAIR, Pax River, MD	0.517	0.050	11/04	0.050	10/05	0.050	11/06	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
Subtotal Management			21.009	8.767		10.400		4.367		Continuing	Continuing	
Remarks:												
Total Cost			212.924	59.096		74.215		105.124		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - 202

EXHIBIT R4, Schedule Profile | DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA -7**

PROGRAM ELEMENT NUMBER AND NAME: 0305204N Tactical Unmanned Aerial Vehicles

PROJECT NUMBER AND NAME: 2768 VTUAV

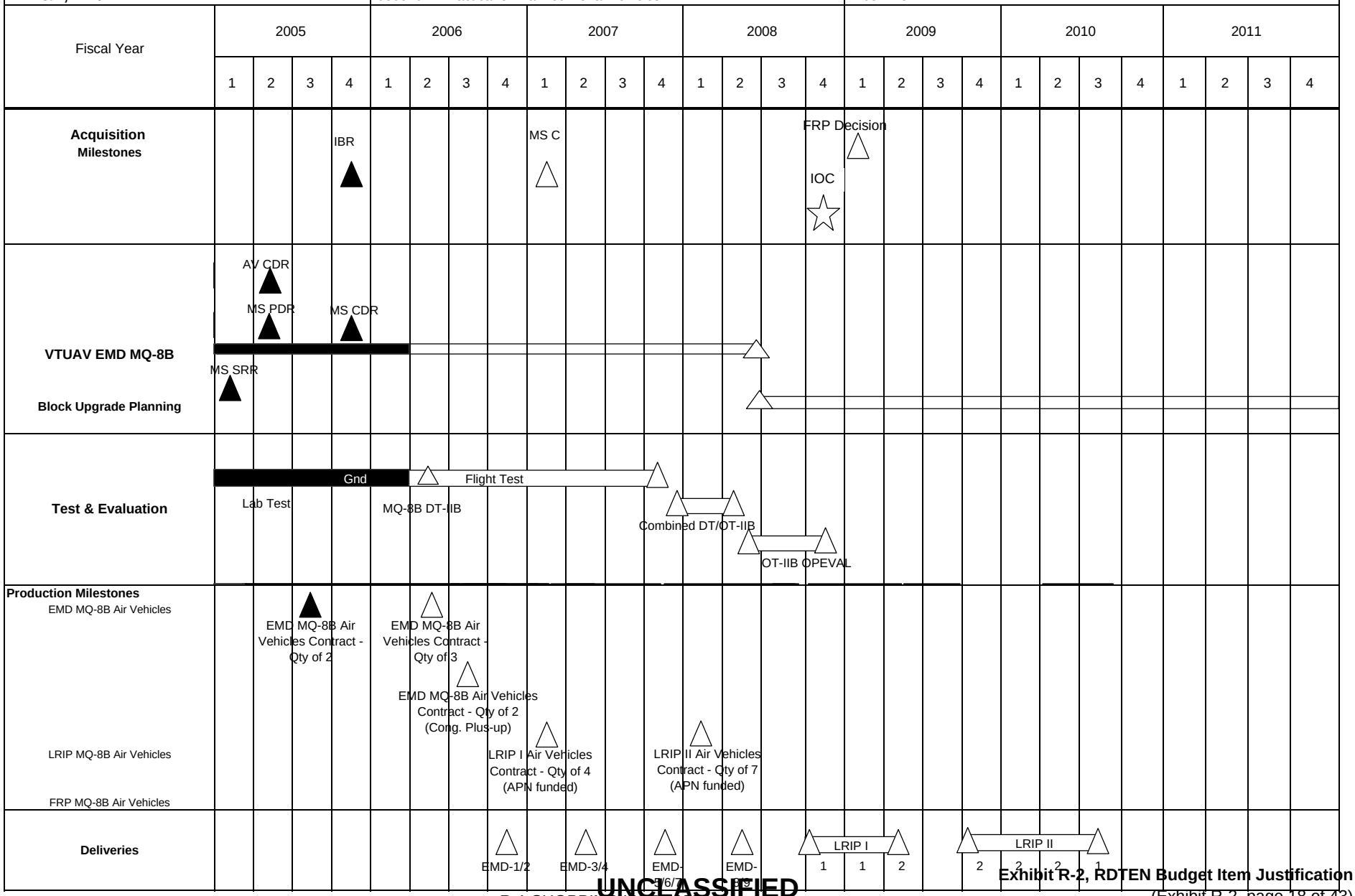


Exhibit R-4a, Schedule Detail					DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 2768 VTUAV			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Acquisition Milestones							
VTUAV EMD (MQ-8B)	1Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q			
Mission System System Requirements Review (MS SRR)	1Q						
Air Vehicle Critical Design Review (AV CDR)	2Q						
Mission System Preliminary Design Review (MS PDR)	2Q						
Mission System Critical Design Review (MS CDR)	4Q						
Integrated Baseline Review (IBR)	4Q						
Milestone C			1Q				
Initial Operating Capability (IOC)				4Q			
Block Upgrade Planning				2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Full Rate Production (FRP)					1Q		
Test & Evaluation Milestones							
DT IIB	1Q-4Q	1Q-4Q	1Q-4Q				
Combined DT/OT IIB			4Q	1Q-2Q			
OPEVAL				2Q-4Q			
Production Milestones							
2 EMD MQ-8B Air Vehicles	3Q						
3 EMD MQ-8B Air Vehicles		2Q					
2 EMD MQ-8B Air Vehicles (Congressional Plus-Up)		3Q					
3 LRIP I MQ-8B Air Vehicles (APN funded)			1Q				
5 LRIP II MQ-8B Air Vehicles (APN funded)				1Q			
Delivery							
Air Vehicles -- EMD		4Q	2Q,4Q				
Air Vehicles -- EMD (Congressional Plus-Up)				2Q			
Air Vehicles -- LRIP (APN funded)				4Q	1Q-2Q, 4Q	1Q-3Q	

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 2910 Joint Technology Center/Systems Integration Lab			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
2910 Joint Technology Center/Sys Integ Lab		**1.590**	**1.634**	**1.670**	**1.710**	**1.744**	**1.779**	**1.817**
RDT&E Articles Qty - Not Applicable								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Joint Technology Center/Systems Integration Laboratory (JTC/SIL) is a center of technical excellence to support all Unmanned Air Vehicle (UAV) programs within the services. The mission includes Service-specific and Joint Command, Control, Communications, Computers and Intelligence, Surveillance, and Reconnaissance (C4ISR) programs throughout DoD. The JTC/SIL provides a Government test bed for rapid prototyping, technology insertion and transition, systems engineering, modeling/simulation, training and Command and Control, Communications, Computers, Intelligence, Surveillance, and Reconnaisance (C4ISR) optimization. The cornerstone of its diverse tool set is the Mulitiple Unified Simulation Environment (MUSE), which is the Department's simulation/training system of choice for ISR systems, sensors, and platforms.

The Services and Warfighting Commanders have a requirement for the capability to train with a system that provides a real-time simulation environment containing multiple intelligence systems that can be integrated with larger force-on-force simulations. The MUSE creates a realistic operational environment which supports the ability to assess military utility, architecture and CONOPS development, Tactics, Techniques, and Procedures (TTP) development and refinement, conduct emerging concepts experimentation, and C4ISR optimization within warfighting exercises and experiments.
It is the only simulation system used by the Combat Commanders and Joint Services to support command and battle staff C4ISR training; there is no alternative available to satisfy those requirements.

The MUSE also creates a realistic operational environment that supports an embedded training capability for multiple Program Managers; tools to minimize acquisition and life cycle cost and schedule impacts; the ability to conduct emerging concepts experimentation, future systems exploration, systems integration, and technology insertion; applications for Joint and Service-specific warfighting exercises; and C4ISR optimization.

MUSE is currently in use within all services and unified commands simulating Predator, Global Hawk, Hunter, Shadow 200, and Pioneer UAVs, national and commercial satellite collectors, P-3, and the U-2. During warfighting exercises, the JTC/SIL integrates imagery simulations with associated C4ISR systems to support execution of critical imagery processes. For those assets normally not available for training, the JTC/SIL provides surrogate systems and interfaces. Distributed training environments, virtually linking participants from various locations worldwide, are routinely supported within the MUSE architecture. The MUSE is also used as a mission rehearsal tool for current on going military combat operations.

Additionally, the JTC/SIL supports a range of materiel developers, integrating prototypes and trainers into the C4ISR and training environments of supported units. The Tactical UAV (TUAV) ground station developed by the JTC/SIL includes an embedded MUSE trainer, and is planned to be incorporated into the VTUAV Ground Control Station (GCS). Interim training capabilities for the Tactical Exploitation System (TES) are currently employed in the joint exercises.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2910 Joint Technology Center/Systems Integration Lab

B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.270	0.339	0.340
RDT&E Articles Quantity				

Laboratory Sustainment includes government management, contracts administration, cost accounting, configuration management, administrative support of the lab, MUSE architecture development, property management/accountability, and procurement of equipment.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.820	0.795	0.830
RDT&E Articles Quantity				

MUSE Development - Initial development of VTUAV model, continued Common Trainer for current platforms, continue to provide C4ISR simulation support to major exercises and demonstrations, complete integration of Tactical Exploitation of National Capabilities (TENCAP) simulation into PC-based MUSE, complete development of virtual Signals Intelligence (SIGINT) platform, continue development of Laser Designator capability, continue upgrade for National Space Assets Enhancements, continue C4I Enhancements, continue initial Fixed Target Damage simulation.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.500	0.500	0.500
RDT&E Articles Quantity				

Maintenance, Licenses and Equipment Purchases includes the day-to-day maintenance of lab equipment, license maintenance and license renewals from vendors for individual pieces of equipment, purchases of equipment to support the MUSE, and purchases to upgrade the MUSE capability.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2910 Joint Technology Center/Systems Integration Lab

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 05	FY 06	FY 07
Previous President's Budget:	1.591	1.659	1.662
Current BES/President's Budget:	1.590	1.634	1.670
Total Adjustments	-0.001	-0.025	0.008
Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-0.001	-0.017	
Congressional Increases			
Economic Assumptions		-0.008	0.008
Miscellaneous Adjustments			
Subtotal	-0.001	-0.025	0.008

Schedule:

Not Applicable

Technical:

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	2910 Joint Technology Center/Systems Integration Lab

D. OTHER PROGRAM FUNDING SUMMARY:

Not Applicable

E. ACQUISITION STRATEGY:

Not Applicable

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2006**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**			PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 2910 Joint Technology Center/Systems Integration Lab						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	MIPR	Redstone Arsenal, AL	2.678	0.820	11/04	0.795	03/06	0.830	11/06	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			2.678	0.820		0.795		0.830		Continuing	Continuing	
Remarks:												
Development Support	MIPR	Redstone Arsenal, AL	1.900	0.500	11/04	0.500	03/06	0.500	11/06	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			1.900	0.500		0.500		0.500		Continuing	Continuing	
Remarks:												

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2006**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**			PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 2910 Joint Technology Center/Systems Integration Lab						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000			0.000	
Remarks:												
Government Engineering Support	MIPR	Redstone Arsenal, AL	0.990	0.270	11/04	0.339	03/06	0.340	11/06	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			0.990	0.270		0.339		0.340		Continuing	Continuing	
Remarks:												
Total Cost			5.568	1.590		1.634		1.670		Continuing	Continuing	
Remarks:												

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																												
																					DATE: **February 2006**							
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA - 7**					PROGRAM ELEMENT NUMBER AND NAME 0305204N Tactical Unmanned Aerial Vehicles												PROJECT NUMBER AND NAME 2910 Joint Technology Center/Systems Integration Lab											
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones																												
Test & Evaluation Milestones																												
Provide MUSE support to UAV developers																												

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 2910 Joint Technology Center/Systems Integration Lab			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
MUSE support to UAV developers	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 3135 USMC VUAV			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
3135 USMC VUAV			**3.862**					
RDT&E Articles Qty - Not Applicable								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The USMC Vertical Unmanned Aerial Vehicle (VUAV) will provide the Marine Corps a Tier III UAV supporting Marine Expeditionary Force (MEF) and Joint Task Force (JTF) level commanders with the required speed and survivability to support USMC Expeditionary Maneuver Warfare (EMW) operations. The system will build on Navy Vertical Takeoff and Landing Tactical UAV (VTUAV) and Coast Guard Eagle Eye technology. FY06 funds will support an Analysis of Alternatives (AoA) for a subsequent acquisition program.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	3135 USMC VUAV

B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost			3.862	
RDT&E Articles Quantity				

Conduct studies and analysis, government engineering support, program management support, and travel for the USMC VUAV program.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	3135 USMC VUAV

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 05	FY 06	FY 07
Previous President's Budget:	0.000	9.187	7.994
Current BES/President's Budget:	0.000	3.862	0.000
Total Adjustments	0.000	-5.325	-7.994
Summary of Adjustments			
Congressional Reductions		-5.187	
Congressional Rescissions			
Congressional Undistributed Reductions		-0.096	
Congressional Increases			
Economic Assumptions		-0.042	
Miscellaneous Adjustments			-7.994
Subtotal	0	-5.325	-7.994

Schedule:

Current schedule reflects new Analysis of Alternatives (AoA). Due to program restructuring, other activities identified in PB06 submit were eliminated.

Technical:

Not Applicable

R-1 SHOPPING LIST - 202

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	3135 USMC VUAV

D. OTHER PROGRAM FUNDING SUMMARY:

Not Applicable

E. ACQUISITION STRATEGY:

Conduct a follow-on Analysis of Alternatives (AoA) for the current Marine Corps Pioneer UAV.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2006**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**			PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 3135 USMC VUAV						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Studies & Analyses	TBD	TBD				3.600	04/06				3.600	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			0.000	0.000		3.600		0.000			3.600	
Remarks:												

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2006**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**			PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 3135 USMC VUAV						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000			0.000	
Remarks:												
Government Engineering Support	WX	NAWCAD, Pax River, MD				0.130	02/06				0.130	
Program Management Support	TBD	TBD				0.132	02/06				0.132	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			0.000	0.000		0.262		0.000		0.000	0.262	
Remarks:												
Total Cost			0.000	0.000		3.862		0.000		0.000	3.862	
Remarks:												

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																												
																					DATE: **February 2006**							
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA - 7**					PROGRAM ELEMENT NUMBER AND NAME 0305204N Tactical Unmanned Aerial Vehicles												PROJECT NUMBER AND NAME 3135 USMC VUAV											
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones							AoA																					
Test & Evaluation Milestones																												

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT 0305204N Tactical Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 3135 USMC VUAV			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Analysis of Alternatives		2Q-4Q	1Q				

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 9650 Advanced Airship Flying Laboratory			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
9650 Advanced Airship Flying Lab		**2.971**						
RDT&E Articles Qty - Not Applicable								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Congressional Add of $3.0M, less $.029M Congressional undistributed reductions. The Navy needs efficient airborne platforms for the development and test of transformational airborne sensors and platforms. Airships boast very low cost-per-hour operation and can economically support those portions of flight-testing that concentrate on sensor performance (vice platform integration).

Develop an airship-based platform for affordable testing of transformational airborne sensors in a stable, vibration-free, laboratory-like environment. Conduct initial capability studies for development of a modernized naval airship featuring contemporary composites, digital flight controls, vectored thrust and remote piloted capabilities that can provide immediate utility for missions requiring heavy lift (logistics and/or sensor suites), long endurance (measured in days vs. hours), and persistent broad-area Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems.

The FY 2006 Congressional add for Advanced Airship Flying Laboratory Phase II is reflected in project 9999.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	9650 Advanced Airship Flying Laboratory

B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		2.650		
RDT&E Articles Quantity				

Develop new technologies to advance modern airships, such as digital automated flight controls, bow thrusters, and heavy fuel engines.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.321		
RDT&E Articles Quantity				

Government Engineering Support, contractor support services, and travel.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	9650 Advanced Airship Flying Laboratory

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 05	FY 06	FY 07
Previous President's Budget:	2.972	0.000	0.000
Current BES/President's Budget:	2.971		
Total Adjustments	-0.001	0.000	0.000
Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-0.002		
Congressional Increases			
Economic Assumptions			
Miscellaneous Adjustments	0.001		
Subtotal	-0.001	0.000	0.000

Schedule:

Not applicable

Technical:

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	9650 Advanced Airship Flying Laboratory

D. OTHER PROGRAM FUNDING SUMMARY:

Not Applicable

E. ACQUISITION STRATEGY:

Not Applicable

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305204N Tactical Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 9999, Congressional Adds			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
9999 Congressional Adds			**24.700**					
RDT&E Articles Qty			**2 ***					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Congressional Adds.

Joint Operational Test Bed System (JOTBS) ($3.0M)
The Joint Operational Test Bed System is an experimental, ground-based control system that is designed to fly, operate and receive data from all the services; individual UAVs from a single interface.

Fire Scout RQ-8B (MQ-8B) ($17.0M)
The Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle (VTUAV) was designed to provide real-time intelligence, surveillance and reconnaissance data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The VTUAV can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation, and battle management (including communications relay). The VTUAV launches and recovers vertically and can operate from all air capable ships as well as confined area land bases. Other characteristics include autonomous air vehicle launch and recovery, autonomous waypoint navigation with command override capability, and the ability to incorporate Electro-Optical/Infrared/Laser Designator-Laser Range Finder modular mission payload. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the ground control station, through implementation of NATO Standardization Agreement (STANAG) 4586 and through the use of the Tactical Common Data Link (TCDL). The data from the VTUAV will be provided through standard DoD Command, Control, Communications, Computers and Intelligence Surveillance, and Reconnaissance (C4ISR) system architectures and protocols.

A program to continue development of the VTUAV to meet the Littoral Combat Ship (LCS) mission requirements was initiated in FY04. Engineering and Manufacturing Development (EMD) is continuing in FY07 and will include design activities for system upgrades, and TCS integration. Fabrication of the RQ-8A LRIP 1 system was completed in FY03. Procurement of two EMD MQ-8B Air Vehicles was initiated in FY04, two additional EMD MQ-8B Air Vehicles initiated in FY05, and five EMD MQ-8B Air Vehicles will be initiatied in FY06. Two of the five articles initiated in FY06 are funded by this Congressional plus-up, and identified in this exhibit.
* These quantities are also reflected in project 2768 for display purposes. The total quantity in FY06 is 5 air vehicles.

Center for Coastline Security Technology ($2.2M)
Congressional Add in RDTE,N for the Coastline Security Technology Initiative that is only for continuation of work with the Institute for Ocean and Systems Engineering to develop surface and airborne autonomous and remotely operated platform surveillance systems for deployment along US Coastlines.

Advanced Airship Flying Laboratory Phase II ($2.5M)
Capability studies for development of a modernized naval airship featuring contemporary composited, digital flight controls, vectored thrust and remote piloted capabilities that can provide immediate utility for missions requiring heavy lift (logistics and/or sensor suites), long endurance (measured in days vs. hours), and persistent broad-area Intelligence, Surveillance, and Reconnaissance (ISR).

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	9999 Congressional Adds

B. Accomplishments/Planned Program

2478		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost			3.000	
RDT&E Articles Quantity				

Joint Operational test bed systems. Continue JOTBS enhancements and support of UAV experimentation.

2768		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost			17.000	
RDT&E Articles Quantity			2	

Fire Scout RQ-8B (MQ-8B): Continue incremental procurement, development, and integration of VTUAV EMD MQ-8B Air Vehicles to support the Engineering and Manufacturing Development (EMD) program.

9432		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost			2.200	
RDT&E Articles Quantity				

Office of Naval Research (ONR) is working with the Institute for Ocean and Systems Engineering to develop surface and airborne autonomous and remotely operated platform surveillance systems for deployment along US Coastlines.

9650		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost			2.500	
RDT&E Articles Quantity				

Advanced airship flying laboratory Phase II. Continue the development of new technologies to advance modern airships, such as digital automated flight controls, bow thrusters, and heavy fuel engines. Government Engineering Support, contractor support services, and travel.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	9999 Congressional Adds

C. PROGRAM CHANGE SUMMARY:

Funding:	FY05	FY 06	FY 07
Previous President's Budget:		0.000	
Current BES/President's Budget:		24.700	
Total Adjustments	0.000	24.700	0.000
Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions			
Congressional Increases		24.700	
Economic Assumptions			
Miscellaneous Adjustments			
Subtotal	0.000	24.700	0.000

Schedule:

Not applicable

Technical:

Not applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305204N Tactical Unmanned Aerial Vehicles	9999 Congressional Adds

D. OTHER PROGRAM FUNDING SUMMARY:

Not Applicable

E. ACQUISITION STRATEGY:

Not Applicable