

DEPARTMENT OF THE NAVY  
FISCAL YEAR (FY) 2009  
BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES  
FEBRUARY 2008

AIRCRAFT PROCUREMENT, NAVY  
Volume II:  
BUDGET ACTIVITY 5



## Department of Defense Appropriations Act, 2009

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### **Aircraft Procurement, Navy**

For construction, procurement, production, modification, and modernization of aircraft, equipment, including ordnance, spare parts, and accessories therefor; specialized equipment; expansion of public and private plants, including the land necessary therefor, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, \$14,716,774,000, to remain available for obligation until September 30, 2011.

**"In accordance with the President's Management Agenda, Budget and Performance Integration initiative, this program has been assessed using the Program Assessment Rating Tool (PART). Remarks regarding program performance and plans for performance improvement can be located at the Expectmore.gov website."**

UNCLASSIFIED  
DEPARTMENT OF DEFENSE  
FY 2009 PROCUREMENT PROGRAM  
SUMMARY  
(\$ IN MILLIONS)

22 JAN 2008

APPROPRIATION -----	FY 2007 -----	FY 2008 -----	FY 2009 -----
AIRCRAFT PROCUREMENT, NAVY	2,425.9	1,612.0	1,695.8
TOTAL Department of the Navy	2,425.9	1,612.0	1,695.8

UNCLASSIFIED

Department of the Navy

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FY 2009 PROCUREMENT PROGRAM

SUMMARY  
(\$ IN MILLIONS)

22 JAN 2008

APPROPRIATION: AIRCRAFT PROCUREMENT, NAVY

ACTIVITY -----	FY 2007 -----	FY 2008 -----	FY 2009 -----
05. MODIFICATION OF AIRCRAFT	2,425.9	1,612.0	1,695.8
TOTAL AIRCRAFT PROCUREMENT, NAVY	2,425.9	1,612.0	1,695.8

UNCLASSIFIED

## UNCLASSIFIED

Department of the Navy  
FY 2009 PROCUREMENT PROGRAM

EXHIBIT P-1

APPROPRIATION: 1506N AIRCRAFT PROCUREMENT, NAVY

DATE: 22 JAN 2008

LINE NO	ITEM NOMENCLATURE	IDENT CODE	MILLIONS OF DOLLARS						S E C
			FY 2007 QUANTITY	FY 2007 COST	FY 2008 QUANTITY	FY 2008 COST	FY 2009 QUANTITY	FY 2009 COST	
BUDGET ACTIVITY 05: MODIFICATION OF AIRCRAFT									
-----									
MODIFICATION OF AIRCRAFT									
27	EA-6 SERIES	A		227.6		30.4		33.4	U
28	AV-8 SERIES	A		67.9		36.0		51.1	U
29	ADVERSARY	A		3.7					U
30	F-18 SERIES	A		514.4		429.9		450.9	U
31	H-46 SERIES	A		135.2		23.6		34.6	U
32	AH-1W SERIES	A		46.6		1.4		6.4	U
33	H-53 SERIES	A		237.0		51.7		56.4	U
34	SH-60 SERIES	A		39.3		58.2		72.5	U
35	H-1 SERIES	A		22.2		6.4		8.9	U
36	EP-3 SERIES	A		66.8		55.5		72.4	U
37	P-3 SERIES	A		282.6		248.8		297.9	U
38	S-3 SERIES	A		.7		.5			U
39	E-2 SERIES	A		15.9		9.0		11.5	U
40	TRAINER A/C SERIES	A		17.0		20.1		26.2	U
41	C-2A	A		37.0		32.2		22.1	U
42	C-130 SERIES	A		46.7		2.2		6.5	U
43	FEWSG	A		.6		.6		.7	U
44	CARGO/TRANSPORT A/C SERIES	A		34.5		20.8		18.0	U
45	E-6 SERIES	A		54.7		84.6		88.9	U
46	EXECUTIVE HELICOPTERS SERIES	A		40.5		46.9		31.8	U

UNCLASSIFIED

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## UNCLASSIFIED

Department of the Navy  
FY 2009 PROCUREMENT PROGRAM

EXHIBIT P-1

APPROPRIATION: 1506N AIRCRAFT PROCUREMENT, NAVY

DATE: 22 JAN 2008

LINE NO	ITEM NOMENCLATURE	IDENT CODE	MILLIONS OF DOLLARS						S E C
			FY 2007		FY 2008		FY 2009		
			QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	
47	SPECIAL PROJECT AIRCRAFT	A		22.3		20.0		14.1	U
48	T-45 SERIES	A		35.7		56.8		67.7	U
49	POWER PLANT CHANGES	A		21.9		22.3		28.2	U
50	JPATS SERIES	A		1.6		9.8		8.9	U
51	AVIATION LIFE SUPPORT MODS	A		.7		8.3		7.2	U
52	COMMON ECM EQUIPMENT	A		107.6		103.8		66.4	U
53	COMMON AVIONICS CHANGES	A		178.5		147.8		148.9	U
54	COMMON DEFENSIVE WEAPON SYSTEM	A		10.9		6.4		10.8	U
55	ID SYSTEMS	A		11.1		10.2		12.0	U
56	V-22 (TILT/ROTOR ACFT) OSPREY	B		144.8		67.9		41.5	U
TOTAL MODIFICATION OF AIRCRAFT				2,425.9		1,612.0		1,695.8	
TOTAL AIRCRAFT PROCUREMENT, NAVY				2,425.9		1,612.0		1,695.8	

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							051100, EA-6 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	2719.8	A	227.6	30.4	33.4	32.1	32.7	36.8	37.5	274.5	3424.9	

**DESCRIPTION:**

This line item funds modifications to EA-6B aircraft and Airborne Electronic Attack products (e.g. ALQ-99 pods). The EA-6B Prowler is a four-seat, twin-engine, mid-wing, electronic attack, tactical aircraft. The EA-6B is employed in both Navy and Marine Corps squadrons to provide all DoD tactical electronic attack capability. The specific modifications budgeted and programmed are: procurement of low band transmitter inventory, ICAP III upgrades and installation, outer wing panels, Digital Flight Control System upgrade, J52 engine reliability improvements and EA-6B readiness support through Productive Ratio Initiatives.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
019-79 ALQ-99 PODS	821.1	59.8	21.6	33.3	32.1	32.7	36.8	37.5	30.1	1105.1
032-85 EA-6B STRUCTURAL IMPROVEMENTS	1031.8	51.1	8.8	0.1						1091.8
DERF Non-add	4.3									4.3
111-87 J-52 ENGINES	48.4	0.4								48.8
DERF Non-add	6.5									6.5
042-93 BLOCK 89A AVIONICS I	548.8	1.5								550.3
001-01 ICAP III	244.3	107.4							221.9	573.6
005-03 MIDS/LINK 16	25.4	7.5							22.4	55.3
<b>TOTAL</b>	<b>2719.8</b>	<b>227.6</b>	<b>30.4</b>	<b>33.4</b>	<b>32.1</b>	<b>32.7</b>	<b>36.8</b>	<b>37.5</b>	<b>274.5</b>	<b>3424.9</b>

1. FY2007 funding total includes \$178.5 received in GWOT supplemental.
2. FY2008 funding totals do not include \$200.7 previously requested for current FY2008 GWOT requirements.

Exhibit P-3a

MODIFICATION TITLE: ALQ-99 PODS( OSIP 019-79 )

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES TYPE MODIFICATION: Reliability/Mission Capability

**LOW BAND TRANSMITTER:**

The Low Band Transmitter (LBT) will provide the EA-6B with an expanded jamming capability against the Early Warning/Acquisition Radars and Communication Links of modern Integrated Air Defense Systems. Reliability and maintainability will also be greatly improved over that of current ALQ-99 Transmitters. Following a competitive acquisition and Milestone II approval, Engineering and Manufacturing Prototype and Low Rate Initial Production (LRIP) testing conducted at government and contractor facilities has successfully demonstrated the key performance parameters identified in OPNAV/N88 Itr Ser No. N880C3/6S663399 of 26 JUL 96 can be attained with the present design. Testing of LRIP units began in April 07 to support an FY08 Milestone III decision and Full Rate Production (FRP) throughout the FYDP. ALQ-99 Transmitters are Weapons Replaceable Assemblies that are readily removed and installed in the ALQ-99 Pod, thus no installation effort/funding is associated with this program. Aircraft Operational Flight Program changes are required to support aircraft integration of this transmitter.

LBT is a replacement for the lower AN/ALQ-99 transmitters that have found new and greatly expanded employment in the Global War On Terrorism (GWOT) operations, providing protection to Coalition air and ground forces in continuous and direct contact with enemy forces. LBT combines the functionality of the modified transmitters into a single highly reliable solid state transmitter increasing both availability and mission effectiveness. The LBT will double MTBF and will allow the EA-6B to carry additional transmitters because of its wider bandwidth to counter the ever changing threat. GWOT support has required more sustained jamming than projected and resulted in higher system failure rates. In response to the increasing force protection requirement, an Early Operational Capability (EOC) for LBT was met in August 2006. The LBT is an O-Level remove and replace item. This capability will be available for all EA-6B/EA-18G aircraft, which includes four Naval Air Reserve aircraft.

**BAND 9/10 TRANSMITTER:** The Band 9/10 Transmitter (Band 9/10) provides the EA-6B an expanded jamming capability against target tracking/fire control radars of modern Integrated Air Defense Systems. Following a competitive acquisition, Engineering and Manufacturing Development of the Band 9/10 was initiated in Jan 92. Production began in FY98 and Initial Operational Capability was accomplished in Nov 99. A total of 231 Band 9/10 Transmitters were procured between FY98 and FY03 with the last transmitter delivered in May 05. ALQ-99 Transmitters are Weapons Replaceable Assemblies that are readily removed and installed in the ALQ-99 Pod, thus no installation effort/funding is associated with this program. This capability will be available for all the EA-6B/EA-18G aircraft, which includes four Naval Air Reserve aircraft.

**SUPPORT EQUIPMENT:** Introduction of new/modified ALQ-99 pod equipment requires new/modified organizational, intermediate and depot level support equipment, such as modifications to the pod test set to support Low Band Transmitter and Band 7/8 Transmitter, modifications to High Power Device Test Set (HPDTS) to extend frequency coverage to test Band 9/10 transmitters, new Test Program Sets to test Low Band Transmitter and Band 9/10 Transmitters and modified Intermediate/depot level support equipment to test Band 7/8 Transmitters.

**ENGINEERING CHANGES:** This ALQ-99 PODS Operational and Safety Improvement Program covers ALQ-99 Pod modifications required to improve reliability/maintainability/availability, enhance mission capability, resolve obsolescence issues, and correct deficiencies found in testing or in the field.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:** LBT program is proceeding through remainder of E&MD. LRIP IA decision was awarded in 1st quarter of FY2005 and LRIP IB decision was awarded in 2nd quarter of 2006, and LRIP II was awarded in first quarter 2007.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS (A KITS)																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT (B KITS)	2,575	199.9																	2,575	199.9	
ALQ 99 BAND TWT IM		2.0			1	*													1	2.0	
BAND 9/10 GFE		0.3																		0.3	
BAND 9/10 RADOME	260	4.9															49	3.0	309	7.9	
BAND 9/10 TRANSMITTER	235	132.8																	235	132.8	
LOWBAND TRANSMITTER	17	26.3	36	50.0	10	19.5	22	31.3	22	30.8	22	31.5	26	36.1	26	36.8	14	27.1	195	289.3	
PAO TRANSMITTER MOD	1,296	5.8																	1,296	5.8	
REPAIR OF GFE(UEU)		6.2																		6.2	
UNIVERSAL EXCITER UPGRADE	480	223.3																	480	223.3	
INSTALL EQUIPMENT N/R		22.6		0.6		0.1		0.1												23.2	
ECO		1.3																		1.3	
DATA		9.9		0.2		0.1		0.1		*		*		*		*				10.4	
TRAINING EQUIP	6	1.6																	6	1.6	
SUPPORT EQUIP		102.1		0.4		0.3		0.1		*		*		*		*				102.9	
ILS		4.3																		4.3	
OTHER SUPPORT		59.0		8.6		1.8		1.9		1.3		1.2		0.7		0.7				75.2	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	1,207	18.9																		1,207	18.9
TOTAL PROCUREMENT	6,076	821.1	36	59.8	11	21.6	22	33.3	22	32.1	22	32.7	26	36.8	26.0	37.5	63	30.1	6,304	1,105.1	

Asterisk (\*) indicates amount value less than \$51K

Notes:

1. Install schedules not provided for GFE that fits into the POD without structural modification, or for equipment not requiring APN-5 funding for installation into the POD/aircraft (e.g.: LBT, UEU).
2. Total Band 9/10 Transmitters include 5 EDM's.
3. Quantity of 16 LBTs were bought in FY06 with United States Army Force Protection funds.
4. A total of \$44.946 GWOT Supplemental for EA-6B. (\$40.782 for EA-6B Low Band Transmitter ALQ-99) and (\$4.164 GWOT Supplemental for EA-6B Blue Force Tracker).

Exhibit P-3a

MODIFICATION TITLE: EA-6B STRUCTURAL IMPROVEMENTS( OSIP 032-85 )

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES TYPE MODIFICATION: Safety of Flight

DESCRIPTION / JUSTIFICATION: This Omnibus Operational and Safety Improvement Program covers EA-6B Structural modifications and EA-6B peculiar avionics modifications arising from test/deficiencies and those reliability, maintainability and safety of flight related improvements. Included are Structural Improvement modifications which includes fixes for areas found to be deficient during aircraft fatigue test; Wing Center Sections (WCS) which replace wings that have either cracked due to stress corrosion or have reached their wing fatigue life limit; Outer Wing Panels (OWP) will replace current OWPs that have reached their fatigue life limit; Structural Data Recording System (SDRS) which will provide a more accurate measurement of Fatigue Life Expenditure (FLE); Digital Flight Control System (DFCS) and USQ-113(V4) Upgrades. Productive Ratio initiatives in FY05-FY08 include Aircraft Wiring Upgrades, Hydraulic Systems Upgrades, Flight Control Surface Upgrades and the Sensors Package Upgrades.

Wing Center Section (WCS): Delivery of the WCS production units were completed and delivered by Northrop Grumman on July 2006. The last 2 aircraft receiving WCS upgrades will complete in FY08. Funds have been budgeted in FY07 to shutdown the WCS production and installation line. Efforts include tooling disposition at the Northrop Grumman facility in St Augustine, Florida.

Outer Wing Panel (OWP): The OWP replacement program includes ongoing fatigue life expenditure (FLE) analysis and an airframe change to manufacture 47 OWP's to ensure EA-6B aircraft availability through FY-2015. Funds have been budgeted in FY08 to shutdown the OWP production and installation line. Efforts include tooling disposition at the Northrop Grumman facility in St Augustine, Florida.

Structural Data Recording System (SDRS) and G-Meter Replacement: The SDRS provides a more accurate recording of the g-force hits on the aircraft. The air crew is reporting disparities between cockpit G-meter and SDRS up to 0.7g difference between the read outs. The cockpit G-meter and the g forces recorded by the SDRS. The current cockpit G-meter is an analog design meter and the replacement G-meter is a digital design. Data provided to the cockpit G-meter will be taken from the motion pick-up transducers as does the SDRS. As a secondary mode, the replacement G-meter has the capability to function independently of the motion pick-up transducer input. Installs are scheduled as part of ICAP II Block 3 installations.

Digital Flight Control System (DFCS): The DFCS program comprises the adaptation of existing Digital Flight Control Computer (DFCC) and Digital Control Panel (DCP) to replace the existing Air Navigational Computer (ANC) and control panel presently fitted to the EA-6B aircraft. This replacement DFCS will be configured to ensure only the minimum number of aircraft changes are required. The flight control system upgrade is intended to eliminate the problem of spurious inputs to Flight Control Systems.

USQ-113 V(4) Upgrade: The USQ-113(V)4 incorporates a Dual Jam Mode capability which doubles the number of targets that can be effectively jammed by the system, and removes unused and hard-to-obtain circuit card assemblies to improve the availability of this mission-essential equipment. The USQ-113(V)4 upgrade into an EA-6B involves replacing the existing USQ-113(V)3 System Controller unit, installing a new RF Switch module and associated tray, and upgrading aircraft cabling to support the mission-essential equipment; however, only the tray and cabling, known as the A-Kit, are assigned to an aircraft; the provisioned kit containing the USQ-113(V)4 System Controller and RF Switch Module is mission equipment and not permanently installed on any given BUNO. FY05 and FY06 Global War on Terror (GWOT) Supplemental provided \$14M to upgrade the USQ-113 communication jamming system which will modify existing hardware to enhance the jamming effectiveness of the system by increasing the number of modulation types from three to twelve. This upgrade would enable the USQ-113 to be effective against high priority targets that the current system cannot achieve.

Flight Control Surface Upgrades: Upgrade of current EA-6B primary flight control surfaces, includes Inboard Slats, Rudders, Outboard Flaps and Horizontal Stabilizers. Utilizing Phosphoric Acid Anodized (PAA) Honeycomb Core technology will improve operational availability of flight control surfaces by 60 percent. Bond durability between the face and core sheets and corrosion resistance is significantly improved and reduces total ownership costs by 30 percent. Additionally, some structural surfaces will be upgraded to improve operational availability per engineering analyses.

EA-6B Hydraulic System Upgrades: Hydraulic System Improvements, based on current technology, are available to improve legacy components on the EA-6B. Upgrades to the hydraulic actuators to include new technology seals to prevent leakage, new barrels and end caps to improve operational reliability and reduce FLE on components. FLE can be improved by as much as 65% with this technology.

Hydraulic Reservoir Upgrade: This upgrade includes the replacement of wiring end caps to reduce safety impact, and improve operational availability. Hydraulic pumps will be replaced with a similar design used on the F-16 and planned for the B-52, which offers six times greater reliability and improved maintainability.

Aircraft Wiring Upgrade: The wiring originally installed during OEM production of the EA-6B aircraft and Weapons Replaceable Assemblies (WRAs) has continued to degrade over time. Much of the wiring originally installed conformed to specifications that have since been superseded. Post production engineering analyses have been conducted that indicate some of the wiring originally installed has potential for severe degradation, which results in increased possibility of electrical arcing and fire hazard.

FY07 GWOT: Supplemental funding provided for USQ-113 Enhanced Jamming Capabilities Upgrade for \$32.9M. Upgrades to the USQ-113 communications jamming system modified existing hardware to enhance the jamming effectiveness of the system by increasing the number of modulation types from three to twelve. These new modulation types were being utilized by enemy communications systems which the current system can not generate. Upgrade enabled the USQ-113 to be effective against high priority targets that the current system was ineffective against. OIF/OEF Fleet Squadron's reports state a "definite need for increased communications EA jamming capability (and that they were) limited in communications EA mission capability and numerous requests for communications EA support were difficult to execute due to USQ-113 system limitations". Further classified discussions of system/threat specifics and CENTCOM/CJTF-180 reports available on request.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Major milestones include the completion of the DFCS test program, WCS production deliveries and completion of ASN-130 (2nd EGI) installations.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
2ND EGI/ ASN-130A	113	1.1																		113	1.1
AIRCRAFT WIRING UPGRADE	44	1.5	1	.1																45	1.6
AN/USQ-113 KITS	168	17.1	89	17.7																257	34.8
DFCS	73	2.9																		73	2.9
FLIGHT CONTROL	74	4.0	107	.3																181	4.3
HYDRAULIC SYSTEMS UPGRADE	88	10.6																		88	10.6
OUTER WING PANEL	1	25.0																		1	25.0
OUTER WING PANEL (SUPP)	47	130.1																		47	130.1
PRIOR YR (A Kits)	3,101	36.3																		3,101	36.3
SDRS Kit	122	1.7																		122	1.7
USQ-113 EXT A KITS (SUPP)	2	6.7																		2	6.7
WING CENTER SECTION	114	335.9																		114	335.9
INSTALLATION KITS N/R	4	50.1		5.8		1.7														4	57.6
INSTALL EQUIPMENT																					
PRIOR YR EQUIPMENT (B Kits)	1,949	89.3																		1,949	89.3
ASN-130A REPLACEMENT/2ND EGI	1	4.2																		1	4.2
DFCS	73	9.3																		73	9.3
EJECTION SEAT	1	.3																		1	.3
HYDRAULIC SYSTEM UPGRADE			1	.2																1	.2
MISSION REPROGRAMMING		11.2																			11.2
POWER PC INTEGRATION	3	3.5	1	.5																4	4.0
USQ-113 EXT B KITS (SUPP)	1	1.6																		1	1.6
USQ-113 TOG B KITS (SUPP)	2	2.3																		2	2.3
INSTALL EQUIPMENT N/R		42.7		14.5		.2															57.3
ECO		2.6																			2.6
DATA		13.2		1.3		.3															14.7
TRAINING EQUIP	15	3.4		2.3																15	5.8
SUPPORT EQUIP		15.1																			15.1
ILS		3.3		.4		.5															4.2
OTHER SUPPORT		75.4		4.3		4.4		.1													84.2
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	1,292	131.6	142	3.6	39	1.7														1,473	137.0
TOTAL PROCUREMENT	7,288	1,031.8	341	51.0	39	8.8		.1												7,668	1,091.7

1. Productive Ratio initiatives are reflected under Aircraft Wiring Upgrade, Flight Control, and Hydraulic Systems Upgrade and is comprised of a variety of different kit combinations, non-recurring engineering and installation efforts.

With the exception of the ALQ 126 shelf removal and PJ 900 wiring harness, all installations are done at the organizational depot level.

2. As a result of the 5-year rule, DFCS kits have been reduced from 118 to 73. The \$7.1M was utilized for the remainder of the DFCS test program (\$3.5) and the remainder of funds were transferred ICAP III (OSIP 01-01) to support emergent requirements (\$3.6). See OSIP 01-01 for explanation.

3. A total of \$33.204 GWOT Supplemental for EA-6B (\$1.735 for USQ-113(v) Integration, \$6.9 for USQ-113 Upgrade, \$16.699 for USQ-113(v) EnhancedJamming and \$7.87 for CNS/ATM GPS Approach.)

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EA-6B Series Modifications MODIFICATION TITLE: Wing Center Section (OSIP 32-85)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Turn-Key for FY97 Procurement. Commercial & Organic Installs FY98 and out.

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 24 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (114) kits	112	96.6	2	1.4															114	98.0
FY 2007 ( ) kits																			0	0.0
FY 2008 ( ) kits																			0	0.0
FY 2009 ( ) kits																			0	0.0
FY 2010 ( ) kits																			0	0.0
FY 2011 ( ) kits																			0	0.0
FY 2012 ( ) kits																			0	0.0
FY 2013 ( ) kits																			0	0.0
TO COMPLETE																			0	0.0
<b>Total</b>	<b>112</b>	<b>96.6</b>	<b>2</b>	<b>1.4</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>114</b>	<b>98.0</b>										

- As result of the WCS acceleration efforts production leadtime was reduced from 28 months to 24 months.
- Total of 114 aircraft includes 1 stricken aircraft.

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	112		1	1																
Out	112			1	1															

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										114
Out										114

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EA-6B Series Modifications MODIFICATION TITLE: DFCS (OSIP 32-85)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Organic Installations.

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY2007 Dec-06 FY2008 \_\_\_\_\_ FY2009 \_\_\_\_\_

DELIVERY DATE: FY2007 Dec-07 FY2008 \_\_\_\_\_ FY2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY2007		FY2008		FY2009		FY2010		FY2011		FY2012		FY2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (73) kits	2	0.2	32	1.5	39	1.7													73	3.4
FY 2007 ( ) kits																			0	0.0
FY 2008 ( ) kits																			0	0.0
FY 2009 ( ) kits																			0	0
FY 2010 ( ) kits																			0	0
FY 2011 ( ) kits																			0	0
FY 2012 ( ) kits																			0	0
FY 2013 ( ) kits																			0	0
TO COMPLETE																			0	0
<b>Total</b>	<b>2</b>	<b>0.2</b>	<b>32</b>	<b>1.5</b>	<b>39</b>	<b>1.7</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>73</b>	<b>3.4</b>								

- Prior Year Quantity accounts for 1 Test and 1 Val/Ver Aircraft (bought as install equipment N/R).
- Total to include 3 installs for Trainer Aircraft.
- Variations in DFCS installation unit costs and aircraft installation result from concurrent installations with other modifications and stand alone installations conducted at multiple facilities.

Installation Schedule

	PRIOR YEARS	FY2007				FY2008				FY2009				FY2010						
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
In	2		10	11	11	6	11	11	11											
Out	2			10	11	11	6	11	11	11										

	FY2011				FY2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														73
Out														73

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EA-6B Series Modifications MODIFICATION TITLE: Flight Control Surfaces Upgrade

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Turn-Key for FY97 Procurement. Commercial & Organic Installs FY98 and out.

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY2007 Oct 06 FY2008 \_\_\_\_\_ FY2009 N/A

DELIVERY DATE: FY2007 Dec 06 FY2008 \_\_\_\_\_ FY2009 N/A

(\$ in Millions)

Cost:	PRIOR YEARS		FY2007		FY2008		FY2009		FY2010		FY2011		FY2012		FY2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (74) kits	74	*																	74	*
FY 2007 (107) kits			107	*															107	*
FY 2008 ( ) kits																			0	0
FY 2009 ( ) kits																			0	0
FY 2010 ( ) kits																			0	0
FY 2011 ( ) kits																			0	0
FY 2012 ( ) kits																			0	0
FY 2013 ( ) kits																			0	0
TO COMPLETE																			0	0
Total	74	0.0	107	*	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	181	*

- \* indicates amount less than \$100K.
- Installation quantities reflect the ALQ-126 shelf removal airframe change.

Installation Schedule

PRIOR YEARS	FY2007				FY2008				FY2009				FY2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	74		60	47												
Out	74		40	40	27											

	FY2011				FY2012				FY2013				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															181
Out															181

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EA-6B Series Modifications MODIFICATION TITLE: Aircraft Wiring Upgrade

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Organic Installations.

ADMINISTRATIVE LEADTIME: \_\_\_\_\_ Months PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY2007 Oct 06 FY2008 Oct-07 FY2009 N/A

DELIVERY DATE: FY2007 Oct 06 FY2008 Oct 07 FY2009 N/A

(\$ in Millions)

Cost:	PRIOR YEARS		FY2007		FY2008		FY2009		FY2010		FY2011		FY2012		FY2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (44) kits	44	*																	44	*
FY 2007 (1) kits			1	*															1	*
FY 2008 ( ) kits																			0	0
FY 2009 ( ) kits																			0	0
FY 2010 ( ) kits																			0	0
FY 2011 ( ) kits																			0	0
FY 2012 ( ) kits																			0	0
FY 2013 ( ) kits																			0	0
TO COMPLETE																			0	0
Total	44	0.0	1	*	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	45	0.0

- \* indicates amount less than \$100K.
- Installation quantity reflects the PJ 900 wiring harness airframe change.

Installation Schedule

PRIOR YEARS	FY2007				FY2008				FY2009				FY2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	44		1													
Out	44			1												

	FY2011				FY2012				FY2013				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															45
Out															45

Exhibit P-3a

MODIFICATION TITLE: J-52 ENGINES( OSIP 111-87 )

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES TYPE MODIFICATION: Reliability Upgrade

DESCRIPTION / JUSTIFICATION: J52 Engine Improvements: The J52 engine is a legacy gas turbine engine, which powers the EA-6B and has been in service since the 1960's. This initiative will capitalize on R&D efforts funded through the Engine Component Improvement Program (CIP) and OMN funded analysis of engine failure modes. Specific reliability discrepancy trends have been identified and appropriate Engineering Change Proposals (ECP) and Power Plant Changes (PPC) have been developed to address the risk of uncontained turbine blade failures and improve engine reliability and time on wing. The results include an improved Turbine Exhaust Case (TEC) that provides low pressure turbine (LPT) containment and other durability and reliability improvements designed to increase engine time on wing. 20 TEC kits were purchased in June 2004 and have all delivered. Funding will also be used for the Power Trim Indicator system and engineering and logistics labor required to complete development of maintenance planning products across all 10 ILS elements. Efforts include the analysis of J52 data, maintenance plan, Level of repair analysis, reliability centered maintenance to establish preventive maintenance schedules, development of technical manuals, provisioning technical documentation, and logistics support tail for associated support equipment. Also includes the development of source data, and limits to revise engine build standards in order to meet J52 reliability goal of 760 hours time on wing.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Development of the Improved Turbine Exhaust Case (TEC) began in FY95 using engine CIP and contractor funds. Testing and ECP approval was completed in the first quarter of FY98 (OCT 97), followed by a production contract award. All ECPs are approved and Technical Directives (TD) are completed or in process. Incorporation of initial PPC 306 TEC kits is in process. Initial PPC 304 kits are on order and NAVICP is currently procuring attrition parts.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS		250		25.6																250	25.6
INSTALLATION KITS N/R				0.3																	0.3
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R				1.1																	1.1
ECO																					
DATA				0.2																	0.2
TRAINING EQUIP																					
SUPPORT EQUIP				5.7																	5.7
ILS				1.3																	1.3
OTHER SUPPORT				14.3		0.4															14.7
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT		250		48.4		0.4															250 48.8

Notes:

1. Funding provided within the FYDP reflects an approved Reduction in Total Ownership Cost (RTOC) initiative.
2. Installations will be performed concurrently with Standard Depot Level Maintenance (SDLM), Engine Overhauls and other O&M,N funded efforts.

Exhibit P-3a

MODIFICATION TITLE: BLOCK 89A AVIONICS I( OSIP 042-93 )

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES TYPE MODIFICATION: Safety of Flight/Reliability

DESCRIPTION / JUSTIFICATION: This omnibus Operational and Safety Improvement Program covers EA-6B ICAP II Block 89A Avionics systems modifications to install required communications, navigation, and miniaturized technology improvements. The avionics common systems upgrade includes incorporation of: (1) AN/ARC-210 VHF/UHF radios having SINGARS and HAVEQUICK modes for inter-operability with Air Force, ground, and NATO forces. (2) The Embedded GPS Inertial Navigation System (EGI) provides a closely coupled GPS-INS solution and replaces the ASN-60 AHRS which has very poor reliability. (3) Full integration of the Electronic Flight Instrumentation System (EFIS), Control Display Navigation Unit (CDNU), and Digital Signal Data Converter (DSDC), which were installed as part of AFC778-779. This OSIP provides for upgrade of the DSDC for use in Block 89A. The DSDC functions as an interface unit for the EFIS and is connected to the 1553 Navigation data bus to provide additional navigation data to the aircrew. (4) The AYK-14 computer will be upgraded with Very High Speed Integrated Circuit Technology (VHSIC) improving processing, memory, and throughput. The upgraded computer (CP-2357) will retain the outer form factor of the current computer and incorporate a new backplane that supports the new VHSIC processor Module and provides VME-bus expansion slots. Discrete and Serial Modules (DSM) replace the Serial Interface Module-A (SIM-A) cards. (5) Mission Planning System: The AN/TSQ-142 Mission Planner provides operational flight program loading, maps, EW libraries, jammer techniques, HARM data, and performs data reduction. Modifications to the AN/TSQ-142 are required to support the Block-89A upgrade, and to support transition of EA-6B MPS. (6) Misc. Avionics: Additional Engineering Change Proposals (ECP) and procurement of avionics, such as ARC-199 Radios, CIU/E, HARM, Dual EGI, and Night Vision capability in all aircraft. FY06 Supplemental GWOT funds provided for the Exterior NVD Lighting System. Inherent system design failure caused a rewrite of the technical directive and forced design changes to the Exterior Lighting control box, which will have to be retrofitted to all EA-6B aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The ARC-210 UHF/VHF radio is a common avionics system to be installed in all Navy aircraft, and has undergone OPEVAL on the F-18, UH-1, and other platforms. The EA-6B has been approved for installation. The EFIS system completed successful OPEVAL and was approved for full rate production and will require minimal upgrade FOT&E for the required interface and incorporation of EGI data. The EGI is common avionics with the F-18 EGI and has been extensively flight tested in that platform. The AYK-14 (XN-series) computer utilizes modules that are common avionics to Navy inventory, and a chassis similar to the current XN-4. The similarity and commonality of the upgraded AYK-14 required little additional qualification testing. DT began on the Block -89A system in FY-98, with an intensive integrated Test and Evaluation period. Testing of software, upgraded avionics, including some regression testing of existing functionality, and testing of the mission planning system are currently being conducted.

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
BLOCK 82 TO 89A CABLES OWP	44	43.6																	44	43.6	
BLOCK 82 TO 89A KIT	20	59.5																	20	59.5	
BLOCK 89 TO 89A KIT	46	15.4																	46	15.4	
INSTALLATION KITS N/R	8	61.4																	8	61.4	
INSTALL EQUIPMENT																					
AN/AYK-14	45	8.4																	45	8.4	
ARC210 EQUIP	50	5.6																	50	5.6	
ARC210, USQ-113	60	3.0																	60	3.0	
BLOCK 82 TO 89A EQUIP	26	16.4																	26	16.4	
BLOCK 89 TO 89A	30	2.0																	30	2.0	
CIU/ENCODER/CDNU	66	18.6																	66	18.6	
EGI	21	1.2																	21	1.2	
NVD EQUIP	122	12.6																	122	12.6	
INSTALL EQUIPMENT N/R	2	8.8																	2	8.8	
ECO		0.5																			.5
DATA		12.4																			12.4
TRAINING EQUIP		13.4																			13.4
SUPPORT EQUIP		44.2																			44.2
ILS		9.5		0.5																	10.0
OTHER SUPPORT		98.7		0.7																	99.4
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	237	113.6	4	0.4																241	114.0
TOTAL PROCUREMENT	777	548.8	4	1.5															781	550.3	

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EA-6B Series Modifications MODIFICATION TITLE: BLOCK 89A AVIONICS I( OSIP 042-93 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Commercial and Organic Installations

ADMINISTRATIVE LEADTIME: 0 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007 N/A FY 2008 N/A FY 2009 N/A

DELIVERY DATE: FY 2007 N/A FY 2008 N/A FY 2009 N/A

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (117) kits	113	93.0	4	0.4															117	93.4
FY 2007 ( ) kits																			0	0.0
FY 2008 ( ) kits																			0	0.0
FY 2009 ( ) kits																			0	0.0
FY 2010 ( ) kits																			0	0.0
FY 2011 ( ) kits																			0	0.0
FY 2012 ( ) kits																			0	0.0
FY 2013 ( ) kits																			0	0.0
TO COMPLETE																			0	0.0
Total	113	93.0	4	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	117	93.4

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	113			2	2																	
Out	113				2	2																

  

	FY 2012				FY 2013				TO COMPLETE				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															117
Out															117

1. Three (3) Kits Procured by Navy Reserve in FY03. Aircraft Transferred to Active Navy.

Exhibit P-3a

MODIFICATION TITLE: ICAP III( OSIP 001-01 )

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES TYPE MODIFICATION: Safety of Flight/Reliability

DESCRIPTION / JUSTIFICATION: This Operational and Safety Improvement Program covers the EA-6B Improved Capabilities III (ICAP III) systems modifications to install required radar and communications receiver, displays, and connectivity improvements. Additionally, this modification removes over 70 aging and unreliable Weapons Replaceable Assemblies (WRAs). Specifically, the modification program replaces the ALQ-99 Receiver System with the ALQ-218 receiver system, replaces the TDY-43 display system with a new COTS based display system for the Pilot and three Electronic Countermeasures Officers (ECMOs), replaces the Recorder Reproducer Set (RRS) with a new Digital Recorder, incorporates the Multi-Mission Advanced Tactical Terminal (MATT) which provides reception of datalinks such as TIBS, incorporates the USQ-113 Communication Receiver/Jammer with the ALQ-128, updates mission planning for ICAP III to JMPMS, and incorporates Link-16 to include basic electronic warfare battle management capabilities. The course of maturing ICAP III to full potential will consist of Block upgrades to deliver approximately 15 months apart. FY07 and FY08 Supplemental funding is expected to procure ICAP III kits to support future USMC requirements.

FY07 GWOT supplemental funding of \$93.5M provides for the purchase of 7 additional ICAP III ALQ-218 systems to upgrade 7 EA-6B ICAP II 89A aircraft and 7 ALQ-218 systems, the corresponding MIDS Link 16 systems and installation costs. The ICAP III ALQ-218 system with MIDS provides improved information and battle management capability using new integrated displays and controls for improved human machine interface. The MIDS Link-16 system allowed the Prowler to participate in the Link-16 tactical data link network and provides real-time or near real-time situation awareness.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Following a Full and Open Competition, Milestone II approval was received, and an EMD RDT&E development contract was awarded to the Northrop Grumman Corporation in March 1998. Following a DT/OT test period, completion of an OA and an LRIP decision, an LRIP contract was awarded in FY03. Following completion of OPEVAL and a Milestone III decision, a full rate production contract was awarded in the 2nd quarter FY06.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT:																					
INSTALLATION KITS:																					
ICAP III	14	116.0	7	81.4													14	203.4	35	400.8	
INSTALLATION KITS N/R		2.3		3.6																	5.9
INSTALLATION EQUIPMENT		4.7																			4.7
INSTALL EQUIPMENT N/R		1.7																			1.7
ECO																					
DATA		1.4		*																	1.4
TRAINING EQUIP	2	72.4		1.9																2	74.3
SUPPORT EQUIP		17.0		1.1																	18.1
ILS		3.3		1.0																	4.3
OTHER SUPPORT		14.7		1.3																	16.0
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	10	10.8	4	17.0					7								14	18.5	35	46.3	
TOTAL PROCUREMENT	26	244.3	11	107.4													28	221.9	72	573.6	

Notes:

1. Installation costs include Repair Incident to Modification (RIM) efforts in FY06 and out.
2. Total quantity of 35 ICAP III kits does not include 2 kits procured/installed via the E&MD program.
3. In FY07, \$3.6M was realigned from OSIP 32-85, Structural Improvements, to support a non-recurring engineering effort on the ALQ-218 system (\$2.6M) and to support ILS efforts (\$1M) for Deployed aircraft.
4. \$99.4M GWOT Supplemental for Seven (7) Additional ICAP III Systems. (Includes \$93.52M for ICAP III and \$5.88M for MIDS in OSIP 005-03). ICAP III Breakout: \$81.42M Install Kits, \$1.0M Install Kits N/R, \$1.9M Training Equipment, \$.380 Other Support, \$8.82 Install.
5. FY-07 installation quantities include Four (4) installations to support FY-06 procurement and Seven (7) installations to support FY-07 GWOT procurement.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EA-6B Series Modifications MODIFICATION TITLE: ICAP III( OSIP 001-01 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Commercial

ADMINISTRATIVE LEADTIME: \_\_\_\_\_ Months PRODUCTION LEADTIME: \_\_\_\_\_ Months

CONTRACT DATES: FY 2007 Feb 08 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Jan 10 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS (14) kits	10	10.8	4	6.2																14	17.0	
FY 2007 (7) kits				10.8					7											7	10.8	
FY 2008 ( ) kits																				0	0.0	
FY 2009 ( ) kits																				0	0.0	
FY 2010 ( ) kits																				0	0.0	
FY 2011 ( ) kits																				0	0.0	
FY 2012 ( ) kits																				0	0.0	
FY 2013 ( ) kits																				0	0.0	
TO COMPLETE																			14	18.5	14	18.5
Total	10	10.8	4	17.0	0	0.0	0	0.0	7	0.0	0	0.0	0	0.0	0	0.0	0	0.0	14	18.5	35	46.3

1. Aircraft are inducted concurrent with other Depot work to maximize Primary Aircraft Inventory (PAI) levels and is not impacted despite delay in initial ICAP III kit deliveries.
2. ICAP III Kit is delivered in three parts. Part 1 of the kit delivery is delivered 16 months after ARO.
3. ICAP III and MIDS are interconnected programs, but have their own OSIPs. However, procurement kit quantities and kit install quantities will match because the goal is to have both MIDS and ICAP III work as part of a system. As a result, the installs will be done at the same time to ensure that the two are placed on a common aircraft.

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	10		2	2										3	3	1					
Out	10						1	3										3	3		1

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									14	35
Out									14	35

- 1.Two (2) aircraft kits were developed and installed in EA-6B EMD RDT&E program. Total Inventory of 37 (35 of which is in production).

Exhibit P-3a

MODIFICATION TITLE: MIDS/LINK 16( OSIP 005-03 )

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES TYPE MODIFICATION: Safety of Flight/Reliability

DESCRIPTION / JUSTIFICATION: This Operational and Safety Improvement Program covers integration of required flight systems and Link-16 into the EA-6B. These programs cover procurement and installation of (a) Government Off the Shelf (GOTS) Inter-cockpit Communications System (ICS), CXP (IFF), TACAN Modification, and modification of the Pre-Planned Product Improvement (P3I) Ethernet processor into the already installed AN/AYK-14 XN-11 and (b) previously developed and approved for production MIDS Low Volume Terminal. These modifications will allow the EA-6B aircraft to fly with new FAA mandated requirements and to participate in the Link-16 network. Items within (a) above are required prerequisites for (b) installs. Training Systems, Publications, and Support Equipment will be procured.

FY07 GWOT supplemental funding of \$93.5M provides for the purchase of 7 additional ICAP III ALQ-218 systems to upgrade 7 EA-6B ICAP II 89A aircraft and 7 ALQ-218 systems, the corresponding MIDS Link 16 systems and installation costs. The ICAP III ALQ-218 system with MIDS provides improved information and battle management capability using new integrated displays and controls for improved human machine interface. The MIDS Link-16 system allows the Prowler to participate in the Link-16 tactical data link network and provides real-time or near real-time situation awareness.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The MIDS LVT is a common DoD system. The Navy will procure an existing ICS system based on requirements and via a competitive contract. The AYK-14 XN-11 Ethernet modification and development has been completed.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
MIDS A Kits	14	.5	7	.2													14	1.0	35	1.7	
MIDS B Kits	14	5.8	7	4.2													14	11.6	35	21.6	
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
AYK-14 COM MISSION COMP	1	2.4																		1	2.4
B KITS AYK-14 XN-11 Mod	1	*															7	3.0	8	3.0	
B KITS CXP (APX-118)	2	.8															7	3.0	9	3.8	
Inter Comm System (ICS)	14	1.3															7	3.0	21	4.2	
B KITS MATT BLOCK III		.1		.9																	1.0
MIDS Provision A Kits	11	.8																		11	.8
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		.2																			.2
TRAINING EQUIP		1.9		.4																	2.3
SUPPORT EQUIP		.1		*																	.1
ILS		.3																			.3
OTHER SUPPORT		9.4		.1																	9.4
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	10	1.7	4	1.7					7								14	1.0	35	4.4	
TOTAL PROCUREMENT	67	25.4	18	7.5													63	22.5	155	55.3	

Asterisk (\*) indicates amount value less than \$5K

Note 1. A total of \$99.4M GWOT Supplemental for Seven (7) Additional EA-6B ICAP III Systems (Includes \$93.52M for ICAP III in OSIP 001-01 and \$5.88M for MIDS).

Note 2. \$.945M GWOT Supplemental for EA-6B MATT Block 2 to Block 3 Upgrade.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EA-6B Series Modifications MODIFICATION TITLE: MIDS/LINK 16( OSIP 005-03 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field and Depot Install

ADMINISTRATIVE LEADTIME: \_\_\_\_\_ Months PRODUCTION LEADTIME: \_\_\_\_\_ Months

CONTRACT DATES: FY 2007 Feb 08 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Jan 10 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS (14) kits	10	1.7	4	0.7																14	2.4	
FY 2007 (7) kits				1.0					7											7	1.0	
FY 2008 ( ) kits																				0	0.0	
FY 2009 ( ) kits																				0	0.0	
FY 2010 ( ) kits																				0	0.0	
FY 2011 ( ) kits																				0	0.0	
FY 2012 ( ) kits																				0	0.0	
FY 2013 ( ) kits																				0	0.0	
TO COMPLETE																			14	1.0	14	1.0
Total	10	1.7	4	1.7	0	0.0	0	0.0	7	0.0	0	0.0	0	0.0	0	0.0	0	0.0	14	1.0	35	4.4

- Aircraft are inducted one month before kit deliver MIDS and ICAP III work as part of a system.  
As a result, the installs will be done at the same time to ensure that the two are placed on a common aircraft.
- MIDS Installation Equipment (i.e. companion equip: CXP, AVK, ICS) is required for ICAP II 89A Block III Aircraft whether it is upgraded to ICAP III or not.
- MIDS A & B Kits are installed at the same time. Above quantity reflects a combined installation of A & B kits.

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	10			2	2										3	3	1				
Out	10						1	3										3	3	1	

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									14	35
Out									14	35

- Total of 39 Kits include 4 which are used for labs and test aircraft.

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							051400, AV-8 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	558.2	A	67.9	36.0	51.1	36.4	28.4	22.2	21.9	117.5	939.5	

DESCRIPTION: This line item funds modifications to AV-8B aircraft. The AV-8B is a single engine, single crewmember aircraft capable of vertical/short take-off and landing (V/STOL) operations. Training aircraft have a two seat configuration. The AV-8B meets the Marine Corps requirements for a light attack aircraft to provide responsive offensive air power that can operate at austere forward bases in direct support of ground forces. The overall goal of the modifications budgeted in FY 2009 is to continue incorporation of Operational and Safety Improvements to the aircraft; continued update of TAV-8B trainer aircraft to better align with operational aircraft; continued incorporation of OSCAR; incorporation of Readiness Management Plan structural changes; and incorporation of AV-8B F402-RR-408 Engine safety and operational changes.

The AV-8B active inventory (03 May 2007) consists of 151 aircraft in 4 major configurations:

- 17 two-seat TAV-8B aircraft,
- 5 DAY Attack aircraft,
- 38 NIGHT Attack Aircraft, and
- 91 Night Attack/RADAR aircraft.

Retrofit quantities of each ECP depend on the aircraft configuration type if and when the change was introduced into production.

The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
001-91 OMNIBUS O&S IMPROVEMENTS	94.1	1.0	0.1	0.2						95.4
003-96 KAPTON WIRE REPLACEMENT	36.4	3.6	*	*						40.0
025-99 TAV-8B PERFORMANCE UPGRADE	107.9	2.6	0.3	0.3						111.0
023-00 AV-8B LITENING POD	194.3	17.0	5.2	7.1	4.7	2.4	2.1	2.3	9.4	244.4
012-02 OPEN SYSTEMS CORE AVIONICS REQUIREMENT	89.8	8.4	6.8	7.1	2.7					114.7
002-04 ENGINE LIFE MANAGEMENT PROGRAM	13.3	4.3	2.6	5.6	7.2	6.3	7.3	6.8	16.7	70.0
006-06 OBSOLESCENCE REPLACEMENT	9.2	9.7	6.7	13.3	8.9	12.3	12.6	12.9	91.3	176.8
015-07 AV-8 ATTRITION RECOVERY DAY TO NIGHT		21.4	14.4	17.5	12.9	7.5	0.2			73.8
Inactive OSIPs	13.2									
<b>TOTAL</b>	<b>558.2</b>	<b>67.9</b>	<b>36.0</b>	<b>51.1</b>	<b>36.4</b>	<b>28.4</b>	<b>22.2</b>	<b>21.9</b>	<b>117.5</b>	<b>926.3</b>

1. FY2007 funding total includes \$43.7M received in GWOT supplemental.
2. FY2008 funding totals do not include \$22.6M previously requested for current FY2008 GWOT requirements.

Asterisk (\*) indicates amount value less than \$51K

MODIFICATION TITLE: AV-8B LITENING POD( OSIP 023-00 )

MODELS OF SYSTEMS AFFECTED: AV-8B Night Attack & Radar/Night Attack TYPE MODIFICATION: Upgrade

DESCRIPTION / JUSTIFICATION:

The system will integrate and procure an external targeting pod that includes an infrared (IR) and low-light TV targeting device capable of detecting, classifying, auto-tracking, and designating air-to-surface targets. The system will support first-pass autonomous delivery of conventional, precision guided, and accurate munitions to include Laser Maverick, GBU-12 and GBU-16 and JDAM (Joint Direct Attack Munition). The system will provide targeting capabilities for the AV-8B fleet of Night Attack and Radar/Night Attack aircraft through the end of its service life. The addition of the LITENING II Targeting Pod gives the AV-8B (Night and Radar) the capability to perform precision targeting. Congressional adds of FY01 \$80M, FY02 \$24.7M, FY03 \$28.0M and FY04 \$37.0M received to procure additional pods. Congressional add of FY07 \$3.25M to upgrade litening targeting pods. FY07 supplemental funds were provided for AV-8B Litening capability on Station 4/Centerline to support the movement of the litening targeting pod to the AV-8B centerline station allowing carriage of both left and right hand configured pods, which increased the AV-8Bs ordnance capacity by 200%. Reduced sensor masking and elimination of asymmetry problems associated with targeting pod carriage on a wing station will yield better aircraft handling, increased bring-back capability, and significantly increased combat effectiveness in support of OIF and the Global War on Terrorism (GWOT).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The Targeting Pod is a non developmental item and has been in full production for several years. It was a winner of a targeting FLIR competition for the Air Force Reserve and Air National Guard and put in service on their F-16s 2nd Qtr FY00. The design, integration, and testing of the Targeting Pod for the AV-8B was done on the Radar and/or Night Attack during 3rd Qtr FY00. The integration utilized existing aircraft software, a weapons station adapter, and Targeting Pod interface software. PEO(A) had approved the acquisition strategy to acquire the pods through an existing USAF contract and provided a targeting pod capability to the Fleet in 1st Qtr FY02. Additional full Litening integration to utilize targeting information from the Litening Pod in OC1.2 to create aircraft targeting solutions was developed and tested under this OSIP and introduced under the H2O OFP program. Video datalink with the ability to transmit Litening POD video (to Rover III grand stations utilized by forward air controllers) was introduced as Rover upgrades. Station 4 efforts to determine feasibility of carrying the Pod on centerline station to allow for more weapons carriage on other wing stations. The ability to carry the Litening Pod on wing stations 2,5,6 and multi-target cueing is included in the H4.0/H5.0 Program. Future upgrades will include retrofit current Rover Pods with new transmitters and upgrading existing Pods to Rover configuration. Congressionally directed funding in the amount of \$1.7M in FY06 and \$4.2M in FY07 was allocated for Litening on Station 4 (Centerline) in support of Global War on Terrorism (GWOT). Congressionally directed funding in the amount of \$3.25M in FY07 for Litening Pod Upgrade. FY07 Supplemental directed funding, in the amount of \$9.5M, enabled IP communications (chat, status of forces, imagery, and pre-formatted messages) via radio relay among dispersed tactical elements and provide enhanced collaboration capability between EA-6B, F-18 and AV-8B pilots and corresponding Joint Forward Air Controllers (JFACs) and Tactical Air Control Party/Post (TACP) personnel, allowing more accurate targeting and faster assessments.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Litening PD/ROVER	2	4.9																		2	4.9
Night	44	.1																		44	.1
POD RETROFIT KITS	47	3.9																		47	3.9
Radar	47	.1																		47	.1
Reman	47	.1																		47	.1
Station 4 Pods			23	1.4			18	1.2	17	1.1							71	5.0		129	8.7
INSTALLATION KITS N/R		7.9		4.0		2.7		3.5		1.5		1.7		2.1		2.1					25.6
INSTALL EQUIPMENT																					
CFE PODS	96	124.6																		96	124.6
MULTI STATION	127	1.9																		127	1.9
INSTALL EQUIPMENT N/R				8.5																	8.5
ECO		1.1																			1.1
DATA		.8		.3		.3		.1													1.5
TRAINING EQUIP		5.3		.4		.5		.5		.17											6.9
SUPPORT EQUIP		1.6		.1																	1.6
ILS		.6																			.6
OTHER SUPPORT		41.4		2.2		1.6		1.2		.5		.4		*		.1				1.0	48.6
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST					2	*	18	0.7	35	1.4	3	0.2					71	3.4		129	5.7
TOTAL PROCUREMENT	410	194.3	23	17.0		5.2	18	7.1	17	4.7		2.4		2.1		2.3	71	9.4		469	244.4

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B Night Attack & Radar/Night Attack MODIFICATION TITLE: AV-8B LITENING POD( OSIP 023-00 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Depot Installation

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2007 Sep 07 FY 2008 \_\_\_\_\_ FY 2009 Oct 08

DELIVERY DATE: FY 2007 Sep 08 FY 2008 \_\_\_\_\_ FY 2009 Oct 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS ( ) kits																						
FY 2007 (23) kits					2	*	18	0.7	3	0.1										23	0.9	
FY 2008 ( ) kits																						
FY 2009 (18) kits									18	0.7										18	0.7	
FY 2010 (17) kits									14	0.5	3	0.2								17	0.8	
FY 2011 ( ) kits																						
FY 2012 ( ) kits																						
FY 2013 ( ) kits																						
TO COMPLETE (71) kits																			71	3.4	71	3.4
Total					2	*	18	0.7	35	1.4	3	0.2						71	3.4	129	5.7	

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								2	4	4	5	5	9	9	8	9	1	1	1	
Out								2	4	4	4	5	9	9	8	9	1	1	1	

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									71	129
Out									71	129

MODIFICATION TITLE: OPEN SYSTEMS CORE AVIONICS REQUIREMENT & PRECISION STRIKE( OSIP 012-02 )

MODELS OF SYSTEMS AFFECTED: AV-8B Night, AV-8B Night/Radar TYPE MODIFICATION: Upgrade

**DESCRIPTION / JUSTIFICATION:**

The current AV-8B avionics do not have sufficient processor throughput and memory to support planned system upgrade. The OSCAR program will update the existing obsolete avionics using Commercial Off the Shelf (COTS) open system architecture hardware that has object-oriented design (OOD) and higher order language (HOL) software. This OSIP supports the procurement and retrofit installation of the Mission System Computer (MSC), and Warfare Management Computer (AMC) and Warfare Management Computer (WMC) being developed under the OSCAR program. This OSIP also supports the procurement and retrofit installation of MIL-STD-1760 wiring. The installation of the MIL-STD-1760 wiring to support JDAM and other new weapons will require the addition of wiring to the wing, pylons, fuselage, additional circuit breakers, and a new relay panel. ECP-289 ECCM Mod Kits are being installed concurrent with OSCAR to provide the full integration of the Havequick/SINCGARS capability.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

This system upgrade (ECP-270R2, ECP-285) is the production incorporation of the MSC, WMC and software developed under the OSCAR program. The OSCAR program developed, integrated and operationally tested the new MSC, WMC, and Operational Flight Program software that will use the MK-83 Joint Direct Attack Munitions on the AV-8B as well as full integration of Havequick/SINCGARS. LRIP I decision was approved Feb 02. DT completed 4th quarter FY02. LRIP II decision was approved Apr 03. OPEVAL completed Mar 04 and the final report was received Jul 04. Initial operational capability attained Jun 05. OSCAR was approved MSIII / Full Rate Production 16 Aug 04.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
RDT&E																						
PROCUREMENT																						
INSTALLATION KITS																						
ECP-270R1 NIGHT	21	3.1	9	1.4	5	1.0														35	5.4	
ECP-270R1 RADAR	24	5.4																		24	5.4	
ECP-270R1 REMAN	35	7.8	1	*																36	7.8	
INSTALLATION KITS N/R		.2																			.2	
INSTALL EQUIPMENT																						
AMC&D/GDAIS	1	*																			1	*
ECP-270R2 AMC	142	17.5																			142	17.5
ECP-270R2 WMC	135	26.7																			135	26.7
INSTALL EQUIPMENT N/R		3.1																				3.1
ECO																						
DATA		1.4																				1.4
TRAINING EQUIP		7.3																				7.3
SUPPORT EQUIP		2.4																				2.4
ILS		.2			.2		.2		.2													.8
OTHER SUPPORT		7.5		2.3		1.9		1.7		1.2												14.6
INTERIM CONTRACTOR SUPPORT																						
INSTALLATION COST	88	7.2	47	4.7	41	3.7	42	5.2	7	1.3											225	22.0
TOTAL PROCUREMENT	358	89.8	10	8.4	5	6.8		7.1		2.7											373	114.7

Asterisk (\*) indicates amount value less than \$51K

Notes: ECP-289 ECCM Mod kits will be installed concurrent with OSCAR and installation costs will be incurred under OSIP 12-02 Open Systems Core Avionics Requirement and Precision Strike.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B Night, AV-8B Night/Radar MODIFICATION TITLE: OPEN SYSTEMS CORE AVIONICS REQUIREMENT & PRECISION STRIKE( OSIP 012-02 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: AFC Installation will be accomplished by Naval Aviation Depot or Commercial DIM or FMT.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007 Jun 07 FY 2008 Jun-08 FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Jun 08 FY 2008 Jun 09 FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (211) kits	88	7.2	47	4.7	41	3.7	32	2.6	3	0.1									211	18.2
FY 2007 (9) kits							9	2.5											9	2.5
FY 2008 (5) kits							1	0.1	4	1.2									5	1.3
FY 2009 ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
TO COMPLETE ( ) kits																				
Total	88	7.2	47	4.7	41	3.7	42	5.2	7	1.3									225	22.0

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	88	11	12	12	12	11	10	10	10	11	11	10	10	2	2	2	1				
Out	88	11	12	12	12	11	10	10	10	11	11	10	10	2	2	2	1				

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										225
Out										225

Exhibit P-3a

MODIFICATION TITLE: ENGINE LIFE MANAGEMENT PROGRAM( OSIP 002-04 )MODELS OF SYSTEMS AFFECTED: TAV-8B, AV-8B Day, AV-8B Night, AV-8B Night/Radar TYPE MODIFICATION: Safety

## DESCRIPTION / JUSTIFICATION:

The AV-8B is a single engine aircraft with unique capabilities. The VSTOL environment is very unforgiving and allows no tolerance for engine problems. In the past, the Pegasus F402 has suffered from a less than optimal safety and reliability record demonstrating a 12.11 mishap (Class A) per 100,000 flight hours compared to a historical average rate of less than 2.0 over the rest of the Navy and Marine Corps in recent years. The Engine Life Management Program is a comprehensive program to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine. Funding provided is to incorporate Engineering Change Proposals to increase safety of flight and operational readiness of the F-402-RR-408 Engine.

## DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The Engine Life Management Program was developed in October 2000. OSIP 02-04 supports the Harrier AV-8B Engine Life Management Program (ELMP) through APN funding. Power Plant changes are required throughout the aircraft service life as the aircraft ages and operationally revealed deficiencies are discovered, researched and solutions engineered. The Component Improvement Program (CIP), which is RDT&E funded, provides for the developing and demonstrating of the engineered solutions to these deficiencies and through the Engineering Change Proposal (ECP) process the Power Plant changes are initiated. The power plant program procures the necessary kits, installation, non-recurring engineering, and technical data. The kits provided are for engine and propulsion related hardware to support the AV-8B F402 engine such as nozzle guide vanes (NGV), Pilot Lever Angle Units (PLAU), Fuel Control Units, Generator Turbine Starters (GTS) and accessory components, rotors and vanes for compressor sections, power turbines, combustion sections, exhaust ducts, engine monitor systems, and blade and vane coatings and foils to improve Foreign Object Damage (FOD) tolerance. The purpose of the program is to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine. The ELMP is comprised of several Engineering Project Description investigations and a series of tri-annual Accelerated Simulated Mission Endurance Tests (ASMET). The Engineering Project Description (EPD) investigations and ASMET tests provide data points for existing Fleet problems and predict future engineering issues with the F402-RR-408. The EPD investigations are conducted annually and an ASMET test began 4Q/04. Engineering Change Proposals resulting from Engineering Investigations and ASMET teardown results will be researched and their development formalized under the development program and incorporated into the F402-RR-408 via OSIP 02-04.

ECP-589 GTS Chip Detector - New chip detector for early detection of potential  
 ECP-951 GTS Exhaust Duct  
 ECP-3532 Bulkhead Cracking  
 ECP-3584 PPC 180  
 ECP-3641C1/PPC 196  
 ECP-3647 Improved Alignment of Bulkhead Sealing Rings  
 ECP-3654R1 PPC218  
 ECP-3690 Improved clipping of GTS leads - Revised to alleviate design deficiency  
 ECP-3705R1 Two Piece Bottom Heat Shield ECP- 3754 HPB Pipe Clamps  
 ECP-3720 PPC 209  
 ECP-3733 PPC 213  
 ECP-3739 PPC 214  
 ECP-3743 PPC 215  
 ECP-3745 Combustion Chamber Improvement  
 ECP-3748 R1 PPC 216  
 ECP-3763 AYC 1249  
 ECP-3784 R2 PPC 204  
 ECP-3800 PPC 223, QEC 3  
 ECP-3800 PPC 216  
 ECP-3813 Oil Piping #3 Vane  
 ECP-3837R1 CuNiIn  
 ECP-3837 AYC 1284  
 ECP-3843 Sand Tolerant NGV - Revised NGV's to improve durability and increase  
 ECP-3848 HPC Casing Manifold Bridge Pipe  
 ECP-3852 LPC Stage 2 Vanes Hard Coating  
 ECP-3854 LPC3 Vane Sealing Strip  
 ECP-3855 LPC1 Dampning Foil  
 ECP-3868 Improved GB Lubrication  
 ECP-3877 EVICS HMU Introduction of Restrictor - Introduces a repair for dithering (fluctuation) enhancing the reliability.  
 ECP-3881 FMU Shut Off Valve  
 ECP-3883 Introduction of IBI  
 ECP-3886 PDR Assembly component life damaging particles within the GTS  
 ECP-3887 IGV Position Transmitter with Rev. Drive Shaft  
 ECP-3889 Encapsulated Revision  
 ECP-3892 LPC Rotor 2 Blade with Revised Stagger Angle  
 ECP-3893 LPS 1, 2, & 3 Van Serialization  
 IPPC 227 FDS

The following TBD ECP's are revisions to improve durability and increase component life and or introduce new parts due to obsolescence

ECP-TBD GTS PWR Turbine/Compressor RGV/Compressor Turbine - Revision due to obsolescence, introduces a new part number.  
 ECP-TBD CCQC Thermocouples  
 ECP-TBD HPC Vane Modification  
 ECP-TBD LPT1 Liner  
 ECP-TBD Introduction of new HPT2 Blade  
 ECP-TBD Fine Oil Filter  
 ECP-TBD Control System Obsolescence  
 ECP-TBD EVICS IDEC POR Correction  
 ECP-TBD EVICS IDEC Diagnostic Improvements  
 ECP-TBD EVICS Obsolescence  
 ECP-TBD EVICS HMU Pilot Valve Improvements  
 ECP-TBD DECU Obsolescence  
 ECP-TBD Final Drive End-Similar to RAF design  
 ECP-TBD Hot nozzle redesign - cracking problem  
 ECP-TBD Exhaust Diffuser Redesign  
 ECP-TBD Thrust Push Improvements  
 ECP-TBD GTS Improvements

- ECP-TBD DECU/FMU WOW/ Improvements
- ECP-TBD LPC 1 Blade FOD Tolerance (LPB)
- ECP-TBD LPC 1 Blade Dovetail Coatings (LPB)
- ECP-TBD #2 Bearing Redesign
- ECP-TBD PLAU Shut Off Valve
- ECP-TBD Obsolescence, starter contactor
- ECP-TBD Obsolescence, protection unit
- ECP-TBD Obsolescence, starter motor
- ECP-TBD New break-in box with expanded capability
- ECP-TBD Power turbine rotor blade failure fix
- ECP-TBD Nozzle and spigot ring assy material change for improved reliability
- ECP-TBD New Starter Contactor - improved reliability
- ECP-TBD FMU Obsolescence ECP
- ECP-TBD 2 Transducer modification
- ECP-TBD DCU Redesign
- ECP-TBD EMS
- ECP-TBD HPT Blade Coating (Aluminide)
- ECP-TBD SET 2006-F402-01 (LPB Vanes)
- ECP-TBD LPCI Redesign
- ECP-TBD DECU Phase Software
- ECP-TBD Disk Slot Treatment (LPB)
- ECP-TBD GTS Break Seal

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
ECP-3843 SAND TOLERANCE	53	4.3	18	1.6	8	.8	15	1.6	16	2.0	10	1.4	12	1.9	8	1.4	23	4.2	163	19.1	
ECP-589 MAGNETIC CHIP DETECTOR	309	1.4																	309	1.4	
INSTALLATION KITS N/R		.1																			.1
INSTALL EQUIPMENT																					
ECP TBD ENGINE MONITORING SYSTEM							16	1.6	34	3.5	31	3.3	33	3.6	34	3.8	3	.4	151	16.2	
INSTALL EQUIPMENT N/R								.2													.2
ECO																					
DATA		.9		.4		.2		.4		.2		.2		.2		.2		.5			3.2
TRAINING EQUIP																					
SUPPORT EQUIP		2.5		.6		.2		.3		.3											3.8
ILS		3.0		1.3		1.2		1.4		1.2		1.2		1.3		1.2		10.8			22.5
OTHER SUPPORT		1.0		.4		.3		.1		.1		.2		.4		.1		.9			3.5
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST																					
TOTAL PROCUREMENT	362	13.3	18	4.3	8	2.6	31	5.6	50	7.2	41	6.3	45	7.3	42	6.8	26	16.7	623	70.0	

EMS Kits are "O" Level Installations. EMS kit quantity is based on the number of aircraft.

Exhibit P-3a

MODIFICATION TITLE: OBSOLESCENCE REPLACEMENT ( OSIP 006-06 )  
 MODELS OF SYSTEMS AFFECTED: TAV-8B, AV-8B Day, AV-8B Night, AV-8B Night/Radar TYPE MODIFICATION: Safety

DESCRIPTION / JUSTIFICATION:

This OSIP provides for maintaining the readiness of the AV-8B weapons system until its projected end of service, which is now expected to extend to 2025 or until replaced by STOVL JSF. This requires the airframe and integrated systems to exceed planned service life and will require both structural and obsolescence solutions. Funds will be utilized to manage and prepare, process and incorporate ECPs and implement changes to sustain and improve AV-8B weapons system readiness including safety, mission availability, structural integrity, and component (avionics/systems) reliability, maintainability, and obsolescence conditions as they arise. Due to fleet aircraft PAA inventory shortfalls, all depot level modification installations must be planned and programmed concurrent with Integrated Maintenance Plan (IMP) scheduled depot overhaul events to minimize aircraft out-of-service periods. The program intends to pursue resolution of ECP-282-Fuel Coupling-- will install new clamshell couplings with safety straps and modify the wing to fuselage fuel interconnect with threaded couplings; ECP-283-- Water Tank Pre-Filter--incorporates a filter to prevent contamination and engine water flow stoppage at the poppet drain valve; ECP-305-- Throttle and Stick Grip, Night Attack and TAV-8B-- replaces obsolete throttle and stick grips with current fleet configuration; ECP-309-- Fuel Bellows Conduit Leak--incorporates a safer double bellows design with increased gage material; ECP-CHPT-042 Center Tank Improvement--Replaces failing fuel tank structural frames 19, 20, 21 with a safer strengthened design; ECP-PMA-001 Pylon Hooks -- correct in-service deficiency to restore safe separation and jetison of weapons. ECP-TBD Alt Structural Modification Improvement-- will install structural sensors/recorders in all aircraft-- to allow early detection and enable design resolution of Frame 43 bulkhead cracking in the area of the vertical tail and horizontal stabilizer to prevent catastrophic failure; ECP-TBD Electronic Altitude Airspeed Sensor (EAAS)--modifies EAAS unit to correct crew ejection safety deficiencies; ECP-TBD Bullet Fairing-- modify to prevent corrosion deterioration of fairing internal structure; ECP-TBD-- Main Landing Gear (MLG) Hand Operating Strut-- redesign to forestall premature strut wear resulting in premature failure of MLG door mechanism; ECP-TBD Frame 16 Nozzle Ring-- provide solution of fatigue cracking in the engine nozzle ring raceway and bulkhead buttresses; ECP-TBD Main Landing Gear Upper Torque Link Pin--incorporates redesign with reduced diameter and incorporate new material to reduce cracking and thread chip-out conditions which ompromise main landing gear integrity; ECP-TBD Nose Landing Gear Steering Dowel Pin--incorporates redesign with strengthened material to resist stress failures; ECP-TBD Emergency Landing Gear Blow Down Bottle--incorporates redesign to prevent helium loss resulting in failure to fully extend and lock all four landing gear. ECP-CP-043 Frame 30, 31 and 32 Heatshield-- implement solution for heatshield fatigue cracking; ECP-TBD Wheel bearing seal/grease-- will modify the existing wheel bearing seal to better prevent water intrusion and increase grease retention. Will also replace the existing grease ith a higher lubricity, water resistant grease; ECP-TBD Blast Shields--implement solution for acoustic fatigue failures; ECP-TBD-- Forward ECS Air Ducts-- modify failing staying ties/fasteners which are causing FOD failures in the ECS system; ECP-TBD Display Computers-- modify or replace to address processor obsolescence; power panel, terminal, and circuit breaker reliability improvements; ECP-CP-045 DC Contactor reliability improvements; GAU-12 25MM Gun system reliability improvements; TAV-8B 30KVA Generators-- replace obsolete 20KVA generators and generator control units with current fleet standard 30KVA systems. FY07 Title IX funding provided to procure additional 30KVA generators, due to the fact that the current 20KVA generators will be unsupportable by late 2008 due to obsolescence. Without replacement of the obsolete 20KVA generator units, there will be fewer aircraft ready and available to operate in OIF and the Global War on Terrorism (GWOT). Aircraft will be grounded and current 30KVA spares inventory depleted, resulting in prolonged degraded fleet readiness unless 20KVA generators are replaced with 30KVAs. Failure to replace the obsolete 20KVA units will result in critical obsolescence operational impacts to Fleet Pilot Training Rates (PTR); ECP-320 Ventral Fin (VFIN) Antenna--replace current deficient, unreliable antennas with an improved design; ECP-307 SAMSU Bleed Air Filtering reliability improvements; ECP-TBD Internozzle Fairing--redesign to prevent premature fatigue and acoustic cracking; FLE Tracking will incorporate Software Trouble Report (STR) corrections to allow the recording of Fatigue Life Expended on the AV-8B concurrent with the release of the H5.0 Operational Flight Program (OFF). This action will allow the accurate tracking of FLE to facilitate the transition from flight hour tracking with a 6,000 hour limit, to 100% FLE. This effort will increase the flight hours available to a minimum of 12,000 hours, and will reduce the impact of combat operations in support of the Global War on Terrorism (GWOT) that drive flying of the aircraft beyond Weapons Systems Planning Document estimates. ECP-CP-044 Power Management Indicator/ Engine Monitoring Unit (PM/EMU)--redesign to eliminate obsolescence issues, and priority emergent safety and obsolescence issues as they arise. Congressionally directed funding in the amount of \$2.3M for V-Fin Antenna and \$.837M for 25MM Gunbolt Conversion was allocated in FY06 in support of Global War on Terrorism (GWOT).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Non-recurring engineering and ILS work on new ECPs began in FY07 for future ECP procurements and installations. O-Level kits and first initial D-level val/ver kits will be procured in FY07, with first depot level installations to occur in FY08. Kit procurements and installations will continue in FY08, FY09, and throughout the FYDP. Support equipment procurements have begun to support future installations to manage aircraft obsolescence.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
ECP-282 Fuel Coupling P1			151	1.1																151	1.1
ECP-282 Fuel Coupling P2			1	*	33	1.1	31	1.0	36	1.2	36	1.2	4	.1	2	.1			143	4.8	
ECP-283 Water Tank Pre-Filter			151	.7																151	.7
ECP-305 Throttle Stick and Grip							2	*	11	.2	13	.3	10	.2	8	.2	16	.3		60	1.2
ECP-307 SAMSU						2	*	72	.6	35	.3	34	.3							143	1.2
ECP-320 V-Fin Antenna		151	2.3																	151	2.3
ECP-CP-042 Ctr Tank Mod			2	.1	10	.4	3	.1	6	.3	14	.6	22	1.0	22	1.1	64	3.2	143	6.9	
ECP-CP-043 Heatshields			1	.3	1	.3	11	1.7	7	1.1	11	1.7	9	1.4	7	1.1	13	2.1	60	9.6	
ECP-CP-044 PMI/EMU			151	.1																151	.1
ECP-CP-045 DC Contactor			2	*	76	.1	65	.1												143	.2
ECP-PMA-001 Pylon Hooks			1,057	*																1,057	*
ECP-TBD MLG UTLP					1	*	60	.1	60	.1	22	*								143	.2
ECP-TBD NLG Steering Dowel Pin					1	*	60	*	60	*	22	*								143	.1
ECP-TBD Blow-Down Bottle					151	.1														151	.1
ECP-TBD Forward ECS							143	.6												143	.6
ECP-TBD Internozzle Fairing									1	*	11	*	33	*	33	*	65	.1	143	.2	
ECP-TBD MLG Hand Op Strut									1	*			60	1.0	60	1.0	22	.4	143	2.3	
INSTALLATION KITS N/R				1.1		.5		.8		.4		.2									2.9
INSTALL EQUIPMENT																					
30KVA Generators	9	1.9	9	1.9																18	3.8
ECP-TBD Display Computer Kits											3	.9	3	.9	2	.8	135	47.3	143	49.9	
ECP-TBD EAAS							160	.6												160	.6
FLE TRACKING				.4																	.4
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		.9		.1		.4		1.0		*		.1		*							2.5
TRAINING EQUIP				.1		*					.2										.2
SUPPORT EQUIP		2.6		1.2		.6		1.0		.5		.5		.1							6.4
ILS		.4		.5		.3		.5		.4		.5		.4		.4			2.2		5.6
OTHER SUPPORT		1.1		2.2		2.1		2.4		2.2		3.4		3.3		3.3			17.4		37.3
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST					2	.7	50	2.7	167	2.2	182	2.5	129	4.1	78	5.1	230	18.4	838	35.7	
TOTAL PROCUREMENT	160	9.2	1,525	9.7	275	6.7	607	13.3	217	8.9	166	12.3	141	12.6	134	12.9	315	91.3	3,540	176.8	

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: TAV-8B, AV-8B Day, AV-8B Night, AV-8B Night/Radar      MODIFICATION TITLE: OBSOLESCENCE REPLACEMENT( OSIP 006-06 )

INSTALLATION INFORMATION: Quantities will not match kit procurement line due to "O" Level installs.

METHOD OF IMPLEMENTATION: Installation will be accomplished by Naval Aviation Depot or Contractor Drive In Mod or FMT.

ADMINISTRATIVE LEADTIME: Various Months      PRODUCTION LEADTIME: Various Months

CONTRACT DATES:      FY 2007 Multiple      FY 2008 Multiple      FY 2009 Multiple

DELIVERY DATE:      FY 2007 Multiple      FY 2008 Multiple      FY 2009 Multiple

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS ( ) kits																					
FY 2007 (4) kits					2	0.7	2	0.4												4	1.2
FY 2008 (48) kits							48	2.3												48	2.3
FY 2009 (167) kits									167	2.2										167	2.2
FY 2010 (182) kits											182	2.5								182	2.5
FY 2011 (129) kits													129	4.1						129	4.1
FY 2012 (78) kits															78	5.1				78	5.1
FY 2013 (72) kits																	72	4.9		72	4.9
TO COMPLETE (158) kits																	158	13.5		158	13.5
<b>Total</b>					2	0.7	50	2.7	167	2.2	182	2.5	129	4.1	78	5.1	230	18.4	838	35.7	

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In									1	1	12	12	13	13	41	42	42	42	45	45	46	46
Out									1	1	12	12	13	13	41	42	42	42	45	45	46	46

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	33	32	32	32	20	20	19	19	230	838
Out	33	32	32	32	20	20	19	19	230	838

Exhibit P-3a

MODIFICATION TITLE: AV-8 ATTRITION RECOVERY DAY TO NIGHT( OSIP 015-07 )

MODELS OF SYSTEMS AFFECTED: AV-8B Day Attack TYPE MODIFICATION: Upgrade

**DESCRIPTION / JUSTIFICATION:**

Currently obsolete configured AV-8B Harrier aircraft will be restored to fleet representative baseline configuration, and modified by the contractor as follows: eliminate Kapton wiring, incorporate current configuration -408 engine provisions, EVICS, 30KVA generators, incorporate enhanced nose wheel steering, incorporate -1760 and Litening pod wiring, power wire separation, RWR flex lines, common throttle and stick, night vision lighting/goggle provisions, dual AMPCD instrument panel, Wide Field of View Head-up display (WFOV HUD) and camera, DVMS/DSU and TAMMAC provisions, ARC-210 radios, current fleet released software (with compatible hardware), Frame-12 structural improvements, and compatibility changes necessary for systems integration to achieve a comparable Night Attack fleet baseline configuration. Rolls-Royce Pegasus -408B engines will be provided from current fleet inventory. All modification engineering integration and incorporation of components and systems mentioned above are to be performed by the contractor. All modification kit materials will be delivered fully installed in the completed flight accepted aircraft. FY07 Title IX funding provided to upgrade one Day Attack configured aircraft into a Night capable deployable asset to compensate for attrition and the resultant Primary Aircraft Authorized (PAA) shortfall. Failure to address inventory shortfalls will progressively aggravate the effect of PAA deficiencies on mission availability and combat relevance to support OIF and the Global War on Terrorism (GWOT), as well as operational safety. Current AV-8B inventory is insufficient to maintain PAA, provide for an effective Integrated Maintenance Plan (IMP), allow for crash damage repair and attrition, and accomplish timely reliability and capability upgrades through transition to JSF.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Non-recurring engineering, engineering change order work, kit buys, and installs funded with FY07 supplemental to provide one upgraded aircraft in FY09, with subsequent aircraft mods beginning in FY08.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Installation Kits (A Kits)			1	2.9	1	2.7	2	4.7	1	2.5									5	12.7	
Installation Kits (A Kits)--GFE			1	4.1	1	3.1	2	5.5	1	3.0									5	15.7	
INSTALLATION KITS N/R				7.7																	7.7
INSTALL EQUIPMENT																					
Install Equip (B Kits)			1	1.7	1	1.6	2	2.8	1	1.6									5	7.8	
Install Equip (B Kits)--GFE			1	3.7	1	1.6	2	2.8	1	1.6									5	9.8	
INSTALL EQUIPMENT N/R																					
ECO				.4																	.4
DATA						3.0			1.7		3.1										7.9
TRAINING EQUIP																					
SUPPORT EQUIP				.2																	.2
ILS				.2		.2		.2		.6		.7									1.9
OTHER SUPPORT				.4		.4		.4		.4		.4		.2							2.2
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST					1	1.8	1	1.1	1	1.4	2	3.2							5	7.5	
TOTAL PROCUREMENT			4	21.4	4	14.4	8	17.5	4	12.9		7.5		.2					25	73.8	

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B Day Attack MODIFICATION TITLE: AV-8 ATTRITION RECOVERY DAY TO NIGHT( OSIP 015-07

INSTALLATION INFORMATION: All modification kit materials will be delivered fully installed in the flight accepted aircraft.

METHOD OF IMPLEMENTATION: Installation will be accomplished by Contractor Drive-In Mod.

ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2007 Various FY 2008 Various FY 2009 Various

DELIVERY DATE: FY 2007 Various FY 2008 Various FY 2009 Various

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS ( ) kits																					
FY 2007 (1) kits																					
FY 2008 (1) kits					1	1.8														1	1.8
FY 2009 (2) kits							1	1.1	1	1.4										2	2.5
FY 2010 (1) kits											2	3.2								2	3.2
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
TO COMPLETE ( ) kits																					
Total						1	1.8	1	1.1	1	1.4	2	3.2							5	7.5

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							1				1				1				2	
Out													1		1				1	

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										5
Out			1				1			5

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							052200, ADVERSARY					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	42.3	A	3.7								46.1	

**DESCRIPTION:**

F-5 Aircraft. This line item funds modifications to convert a total of 32 F-5E Aircraft, procured from the Government of Switzerland, into a U.S. Navy approved configuration. It allows the U.S. Navy to maintain as close a standardized configuration with the U.S. Air Force as possible based on need. It also allows the U.S. Navy to initiate unique structural or avionics modifications. The overall goal of the modifications budgeted in FY2009 is to incorporate airframe modifications and selected U.S. Air Force approved Time-Compliance Technical Orders (TCTO's) to improve safety and reliability. These specific modifications budgeted and programmed are for the F-5 Structural Repair Program.

F-16 Aircraft. This line item funds the 10 F-16 Aircraft assigned to Naval Strike and Air Warfare Center (NSAWC), NAS Fallon, Nevada to support the Adversary role of Air Combat Missions training. These Aircraft, in their Adversary mission, improve the air combat maneuvering training received by the aircrews. These aircraft will serve as the U.S. Navy's only dis-similar CAT IV threat replication training asset in service for the foreseeable future.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
029-81 STRUCTURAL FATIGUE/U	42.3	3.7								46.1
<b>TOTAL</b>	<b>42.3</b>	<b>3.7</b>								<b>46.1</b>

Exhibit P-3a

MODIFICATION TITLE: STRUCTURAL FATIGUE/U (OSIP 029-81)

MODELS OF SYSTEMS AFFECTED: F-5 ADVERSARY SERIES

TYPE MODIFICATION: SAFETY/RELIABILITY  
VERTICAL STABILIZER  
COCKPIT LONGERON  
SWISS US CONVERSION

DESCRIPTION / JUSTIFICATION: The U. S. Navy F-5E/F Adversary aircraft inventory and all applicable funds are for 32 aircrafts. U. S. Air Force updated durability, damage, and tolerance analysis, structural inspection, full scale fatigue testing and counting accelerometer data has identified structural fatigue in wings and fuselage areas. The U. S. Navy plans to utilize these aircrafts in the Adversary mission through FY2015 and beyond. However, aircraft will be grounded prior to FY2015, when maximum fatigue life is reached on major structural components, unless further analysis and replacements are procured and installed. The U. S. Navy plans to replace the current high time fuselage with low time Swiss F-5E Fuselages. Wings as well as Horizontal stabilizers, Vertical Stabilizers, Upper/ Lower Cockpit Longerons, and Dorsal Longerons require replacement as they reach their fatigue life limit. Also, repair of other critical safety-of-flight systems such as Flight Controls and Canopy Latching mechanisms will be accomplished under this program.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: All components and systems required for this program are already qualified, and/or approved for U. S. Navy use. No operational testing is envisioned under this program.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
CANOPY LATCH MOD/REFURB KITS	36	0.2																	36	.2	
DORSAL LONGERONS	21	1.6																	21	1.6	
HORIZONTAL STABILIZERS	13	1.5																	13	1.5	
SDR KITS	10	0.9																	10	.9	
SWISS/US CONVERSION KIT	27	2.5	5	0.2															32	2.8	
UPPER COCKPIT LONGERON	36	2.0	5	0.4															41	2.3	
VARIOUS KITS	291	1.2																	291	1.2	
VERTICAL STABILIZER	21	3.6																	21	3.6	
VERTICAL STABILIZER INSTALL KIT	10	0.2																	10	.2	
WINGS	4	3.9																	4	3.9	
INSTALLATION KITS N/R		6.2																			6.2
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		1.2																			1.2
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS		2.8		0.1																	2.9
OTHER SUPPORT		2.5		1.2																	3.7
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	403	12.1	14	1.9																417	14.0
TOTAL PROCUREMENT	872	42.3	24	3.7																896	46.1

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F-5 ADVERSARY SERIES MODIFICATION TITLE: SAFETY/RELIABILITY  
VERTICAL STABILIZER  
COCKPIT LONGERON  
SWISS US CONVERSION

INSTALLATION INFORMATION: DEPOT LEVEL

METHOD OF IMPLEMENTATION: CONCURRENT WITH PHASED DEPOT MAINTENANCE

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2007 Nov 07 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Jul 08 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (82) kits	78	12.1	4	0.4															82	12.5
FY 2007 (10) kits			10	1.5															10	1.5
FY 2008 ( ) kits																				
FY 2009 ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
TO COMPLETE ( ) kits																				
<b>Total</b>	<b>78</b>	<b>12.1</b>	<b>14</b>	<b>1.9</b>															<b>92</b>	<b>14.0</b>

Note: 325 kits from prior year procurement has been installed and are not shown on this schedule.

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	78		3	6	5																	
Out	78	2	3	2	1	2	4															

  

	FY 2012				FY 2013				TO COMPLETE				Total	
	1	2	3	4	1	2	3	4	1	2	3	4		
In														92
Out														92

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: February 2008				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 52500 F-18 Series Modification				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total
QUANTITY											
COST (In Millions)	2,492.3		514.4	429.9	450.9	471.9	499.7	514.3	523.3	338.7	6,235.3
<p>This line item funds modifications to F/A-18 aircraft. The F/A-18 Naval Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft. The F/A-18 is employed in both Navy and Marine Corps squadrons. Commencing with the FY 1988 procurement, both the single seat and two-seat F/A-18's include a night attack capability. F/A-18 can be missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality provides the Operational Commander more flexibility in employing his tactical aircraft in a dynamic scenario. The primary design mission for the F/A-18 is a strike fighter which includes the traditional fighter applications, such as fighter escort and fleet air defense, combined with the attack applications, such as interdiction and close air support. Since the same fighter and self defense capability is retained, the overall goal of the modifications budgeted in FY 2009 is to implement commonality/capability and structural safety and reliability improvements. The specific modifications budgeted and programmed are:</p>											
(TOA, \$ in Millions)											
OSIP No.	Description	Prior Years	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total
011-84	Correction of Discrep.	545.0	43.2	49.9	60.4	58.5	59.8	63.3	63.5	37.1	980.8
036-94	GPS	82.8	0.3							2.9	86.0
012-96	PIDS	59.1	4.8	3.7	3.7						71.3
010-99	DCS	20.2	2.3	1.7	1.4	1.4	1.4				28.4
011-99	SLMP	305.6	98.9	101.5	114.1	121.9	122.3	128.9	182.3	258.3	1,433.9
012-99	MIDS <sup>1</sup>	307.9	38.3	13.3	19.2	21.0	*				399.8
021-00	USMC F/A-18 UPGRADE (ECP583)	262.6	10.1	22.2	22.4	17.8	24.6				359.7
024-00	JHMCS	94.5	33.1	31.5	38.2	39.0	39.3	58.3	59.4	22.3	415.8
012-01	ATFLIR	469.7	174.4	80.8	61.7	25.3	21.0				832.8
019-01	E/F 2000 hr Correction of Discrep.	33.7	3.7	0.6	0.2						38.2
005-02	Digital Wing Tip for AIM 9X	1.8	0.8	1.0							3.6
006-02	C/D Training System	67.8	9.4	6.8	6.7	6.8	12.8	13.2			123.4
012-03	E/F 4000 hr Correction of Discrep.	9.4	0.6	0.5							10.5
013-03	E/F 6000 hr Correction of Discrep.	3.8	0.5	*	*						4.4
014-03	E/F Correction of Operational Discrep.	90.5	14.4	25.5	27.2	26.4	25.1	28.8	20.7	15.6	274.3
023-04	Core Avionics Upgrade	37.8	11.6	3.4	2.8	6.0	6.2	6.3			80.4
024-04	Litening	80.4	47.6								128.0
008-05	Reserve Squadron ECP560	15.8	0.6	0.3	0.3						17.0
009-06	Link 4A Replacement	3.8	4.7	3.7	4.1						16.3
002-07	AESA		12.9	83.4	88.4	116.4	122.2	50.0	49.4	2.5	525.0
013-07	SHARP		2.1								2.1
002-10	Network Centric Ops					31.4	46.7	137.6	99.8		315.5
003-11	IRST						14.1	23.4	37.2		74.7
006-11	EA-18G IBS Receiver						4.1	4.5	4.6		13.2
<b>TOTAL</b>		<b>2,492.3</b>	<b>514.4</b>	<b>429.9</b>	<b>450.9</b>	<b>471.9</b>	<b>499.7</b>	<b>514.3</b>	<b>523.3</b>	<b>338.7</b>	<b>6,235.3</b>
<p>Note 1: Defense Emergency Response Funding (DERF) added \$11.5M to OSIP (12-99)                  Note 2: Beginning in FY 2004, OSIP 15-03 has been moved to P-1 Line Item 51 (P-1 Nomenclature: ID Systems)                  Note 3: Asterisk indicates amount less than \$50K                  Note 4: FY2007 funding total includes \$90.014 received in GWOT supplemental.                  Note 5: FY2008 funding totals do not include \$60.264 previously requested for current FY2008 GWOT requirements.</p>											
	RESERVE INCLUDED IN TOTAL		11.7	11.8	7.9	7.9	0.4	0.4	0.3		

Exhibit P-3a	INDIVIDUAL MODIFICATION
MODIFICATION TITLE:	CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-84)
MODELS OF SYSTEM AFFECTED:	F/A-18 A/B/C/D TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT
DESCRIPTION/JUSTIFICATION:	
<p>* Corrections to discrepancies found during testing and evaluation can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Additionally, deficiencies discovered during fleet operations must be corrected. The unacceptable alternative to retrofiting would be multiple configurations in the fleet, which will create maintenance and supply problems, and in many cases the mission capability of the aircraft would be adversely affected as well as reduced service life. Corrections to the following items/conditions are required:</p> <p>External Stores EMI Protection (ECP 087S1)  Auto AC Bus Isolation (ECP 121R1)  Battery Control Relay Unit (ECP 165R1)  FY86 Block Upgrade (ECP 178R1C1)  Center Fuselage Structural Mods (ECP 241R1)  Dorsal Longeron (ECP 251)  Dorsal Longeron (ECP 251R1)  A/B Blue Angel Aircraft (ECP-254)  470.5 Bulkhead (ECP 262)*  Righthand AMAD Bay (ECP 267R1)*  Y508 Former (ECP 276)  Strengthening Of Aft Area Of VT Above The Root Rib (ECP-301)  Strengthening Of Fwd Area Of VT Including Root Rib Area (ECP-302)  Improv. To VT Suppt Struct @ Y598 Otbd Former In Aft Fuse (ECP-303)  77.5% Spar, Crack At Upper Tool Hole (ECP-307)  Strengthening Upper Areas Of The VT (FT96 Cracks) (ECP-308)  AFT Engine Mount (ECP 305R1)*  Y657.35 Engine Bay Door Former (ECP 306)  Main Landing Gear (MLG) Planning Link (ECP 311)*  MLG Trunnion Upgrade (ECP 319)*  Y488 Bulkhead (ECP 320)  Wing Fatigue Repair (ECP 353)  MLG Shoulder Bolt (ECP 355)  ASPJ System Improvement (ECP 364)  Y470 Bulkhead Improvement (ECP 365)  #1 Fuel Cell Floor (ECP 367)  MLG Retract Actuator (ECP 375)  Fretting on Formers &amp; Spindles (ECP 391)  Fuselage Skin, Y518 to Y534 (ECP 402)*  Fuselage Skin, Y518 to Y534 (ECP 402R1)*  Inlet Duct Skin at Y453 (ECP 417)  Y470.5 Bulkhead MLG Trunnion (ECP 428)  Speed Brake Trough (ECP 440)  SUU-63 Wing Pylon Door Panel (ECP 488)  Y470.5 Bulkhead Fatigue Change (ECP 492)  Fuselage Skin at Y453 (ECP 498)  Nacelle Skin Fatigue Improvements (ECP 501)  LAU-115 Sparrow Mod (ECP 506)*  ST-16 Failures (ECP 536)*  Improvement of Inner Wing SPAR (ECP 544)  Fuel Barrier Web (ECP 548)  Wing Drag Longeron (ECP 550)*  Y326.5 Plate Nut (ECP 561)  Lower Center Keel Fire Hazard (ECP 562)  Aileron/Trailing Edge Flap (ECP 574)  Serocylinder Test Station (ECP-598)  Flight Control Computer (ECP 595)  Hydraulic Temp Gauges (ECP NI 879)  Environment Control System Wiring (NI 742)  Wing Fuel Dams (NI 796)  MLG Trunnion Assembly (NI 824)  Heat Exchanger (NI 827)  Night Vision Display System (NVDS) (NI 830)  Trailing Edge Flap (NI 839)  Birdstrike Res Windshield (NI 843)  Aileron Hinge Mod (NI 844)  ANTI G VALVE (ECP XXX)  Fuel Cell Floor Crack (ECP 973)  AFT Fuselage Skin Crack (ECP592)  Wing SPAR Crack (ECP XXX5)  Forward Lower Keel Modification (ECP NI 931)  Main Landing Gear (MLG) Axle (ECP 952)  MLG Y488 Bulkhead (ECP XXX8)  OBOGS Solid-State Oxygen Monitor (SSOM), CRU-99/A (ECP 590)  Crease Longeron (ECP 608)  Heat Deterrant (ECP NI-1013-05)  Nose Landing Gear/MLG/Control Valve Restriction (ECP XX12)  Bay 3 Shelf Redesign (ECP XXX13)  Bay 4 Shelf Redesign (ECP XXX14)  Cockpit Pressurization Warning System (ECP 6217)  Vertical Tail (ECP XXX-16)  Canopy/Windscreen (ECP XXX-17)  NLG/MLG Fatigue Improvements (ECP-XXX18)  F/A-18 A-D INNER WING CONVERSION (ECP 609)  NFDS Mods, C&amp;D Conversion (ECP-JAX-F18-001)</p>	<p>Provide for the application of external stores EMI Protection. This ECP includes Installation Costs ONLY.  Modifies the 50A Battery Charging Converter installation to automatically isolate the busses and reset the generators following a dual power outage.  Safety modification to the utility/emergency battery control circuits and adds a battery relay control unit. Prevents inadvertent battery discharge.  Increases the power handling capabilities of the four port antenna and the RF switch able filter in order to accommodate the RF power output requirements of the ASPJ System.  Improves fatigue for the Dorsal Deck, Duct Skin rivets at Y442, ECS Inlet Casting, and Y419 Nacelle Former at Ramp Truss Attachment.  Life extension modification to the Dorsal Longeron.  Life extension modification to the Dorsal Longeron.  Modifications for the Naval Flight Demonstration Squadron (NFDS), Part I Smoke Display System, Part II VOR/ILS, Part III Aircrew Member Restraint System  Improves the fatigue life of the Y470.5 Bulkhead Outer Cap.  Reliability and maintainability improvement to the interference between the motive flow tube and the hot fuel recirculation tube.  Structural improvement of the Y508 Former by increasing the flange thickness and reinforcing the former with integral ribs.  This change corrects deficiencies in the aft area of the vertical tail above the root rib.  This change corrects deficiencies in the forward area of the vertical tail including the root rib.  This change corrects deficiencies in the vertical tail support structure at Y598 outboard former in the aft fuselage.  Provides for strengthening the Vertical Tail 77.5% spar to prevent cracks in the area of the upper tooling hole.  This change corrects deficiencies in the upper areas of the vertical tail.  Safety modification improves the aft engine mount support to prevent cracking in the aft engine mount support fitting.  Modifies the existing door former to prevent cracking.  Safety modification to the existing planning link assembly. Belleville washers spring is replaced with nested external compression springs to provide additional over center locking force and stroke capability.  Safety modification reconfigures and strengthens the MLG trunnion assembly to prevent catastrophic failure upon landing or takeoff.  Modifies the Y488 bulkhead to reduce structural stress and improve fatigue life.  Modifies the fastener holes in the Wing Panel Forward Spar and the #4 Intermediate Wing Spar to increase fatigue life.  Safety modification provides new shoulder bolts to correct a deficiency concerning elongation of the AFT bolt hole in the MLG Door Actuator Support Fitting.  Improves reliability and maintainability by improving the cooling system and correcting transmit switchable filter qual test problems.  Modifies the Y470 bulkhead to reduce structural stress and improve fatigue life.  Safety modification to improve the fuel cell floor strength to prevent cracking during catapult.  Redesigns the MLG Retract Actuator Support Fitting and the Flange of Y470.5 Bulkhead where the fitting attaches and revises hydraulic timing to lengthen the Fatigue Life of the structures.  Safety modification to correct fretting observed on outboard formers of horizontal stabilizer.  Modifies exterior fittings and adds and internal bathtub to strengthen the area, reduce structural stress, and improve fatigue life.  Modifies exterior fittings and adds and internal bathtub to strengthen the area, reduce structural stress, and improve fatigue life.  Addresses the retrofit design which will provide 12,000 SFH of life without cracks for the Inlet Duct Skin.  Corrects the deficiency in the MLG Trunnion support at Y470.5 bulkhead.  Modifies the existing speed brake trough area to strengthen it and improve fatigue life.  Safety modification to the existing door panel to preclude loss of the door during flight  Modifies the thickness of the existing bulkhead web to increase strength and improve fatigue life.  Safety modification to strengthen existing fasteners attaching the P/N 74A324350 former to Y453 bulkhead.  Retrofits the Inlet Nacelle Skin to correct acoustic vibration related fatigue failures.  Modifies the lower rail of the LAU-115 to strengthen the area of the AIM-7 Sparrow missile forward hanger interface and improve fatigue life.  Modifies aircraft between Lot VI and Lot XVI or realize Full Life Airframe (6000 Fatigue Hours)  Strengthens the existing inner wing spar to improve fatigue life.  Safety improvement to the existing fuel barrier web to prevent fuel leaks.  Structural improvement to the Wing Drag Longeron due to tabs attached to the closeout webs were cracking during installation.  Modifies the existing fasteners at the Y326.5 Bulkhead to improve fatigue life.  Safety improvement to the secondary pressure regulator bay to eliminate fire hazards.  Provides a full-life improvement for aircraft degradation caused by cracked trailing edge flap and aileron hinges.  Provides for the upgrade of aging Peculiar Support Equipment. Improvements in reliability and maintainability of Peculiar Support Equipment and modification to existing Support Equipment.  Improves safety-of-flight for the recovery from, and resistance to, out-of-control flight (OOCF) while also eliminating anomalies cited in FCC OPF 91C*004. <b>(NON-RECURRING COSTS ONLY)</b>  Improves the reliability of the hydraulic temperature gauges.  Modifies wiring to the number 3 Relay Panel Assembly to connect the Left MainGear (LMG) Weight on Wheels (WOW) Relay ABD the Dump/RAM Dump Relay.  Safety improvement modifies the inner wing inboard closure rib to prevent fuel leaks.  Safety improvement to the MLG trunnion assembly to improve fatigue life and prevent failed landing gear mishaps.  Provides for the removal of the nickel core and replaces with a more reliable stainless steel and nickel core.  Adds capability to the lighting system to make the NVDS compatible.  Safety modification to the trailing edge flap to correct flap departures while in flight.  Safety modification to the windshield to protect against birdstrikes during flight.  Provide a full-life improvement for aircraft degradation caused by cracked trailing edge flap and aileron hinges.  Improves pilot G-Load tolerance as part of the Navy Combat Edge (NCE) Anti-G Protection System.  Safety modification to correct cracks at Y431, Y442, and Y453 in the fuel cavity floor deck centerline under tank two and three.  Safety improvement to the fatigue life of the forward skin section of the chem.-milled panels.  Strengthens the existing front inner wing SPAR to improve fatigue life.  Improves fatigue life of the Nose Landing Gear (NLG) Drag Brace.  Incorporation of Full Life redesigned Main Landing Gear Axle Polygon, extending Axle's service life from current 8300 total landings to 13000.  Restores Full Life to Y488 Bulkhead due to cracks around MLG Uplock hardware holes  Safety improvement to the OBOGS oxygen system, providing an additional monitoring capabilities against Hypoxia resulting in safer flight operation.  Restores the load path lost when the Crease Longeron cracks at FS 453.  Modifies the aircraft to correct structural fatigue problems caused by degraded ECS Peri-Seals.  Improve hydraulic fluid rate and reduce hydraulic line failures.  Modify avionic shelves to withstand catapult fatigue loads.  Modify avionic shelves to withstand catapult fatigue loads.  Notify pilot when pressurization is lost in cockpit.  Modify vertical tail former and spars to prevent fatigue cracking.  Modify canopy/windscreen frames and address delamination.  Fatigue Improvements to include arresting gear planning link redesign  Convert Lots 5 through 9 Inner Wings to be used on Lot 10 and above F/A-18C/D aircraft, &amp; convert Lot 10 and 11 InnerWings to be used on Lot 12 and above F/A-18C/D aircraft.  Removing the weapon systems from the aircraft, install Smoke Generation System and install Auxiliary Fuel Pumps for extended inverted flight.</p>

Interwing Conversion ECP XXX-21 (Bundled in ECP-609)  
Repeatable Release Holdback Bar (ECP 0147)  
Redesign of Backrest Operation Plunger (ECP-9384MB)  
F/A-18 Panel, Blank-Center Instrument (ECP-984NI)  
Inner Wing Structure Fatigue Improvement (ECP-1022NI)  
Inboard LEF Crack Modification (ECP-1027NI)  
Inboard TEF Hinge (Wingside)(ECP-1031NI)  
TEF-Aileron Attach Lug Bushing (ECP-1034NI)  
LEF Torque Tubes Drive System Failures (ECP-XXX22)  
AFT Fuselage Structure Failures (ECP-XXX23)

Converting Lot 10/11 Wings to Lot 12 and above configuration.  
Modifies the RRHB to correct problems caused by degraded primary locking segments.  
Safety ECP incorporation a redesigned knurled and rounded top plunger backrest part# MBEU148542.  
Modification Of Center Instrument Panel, ALR-67 Control Indicator Support Bracket.  
Improving inner wing fatigue life Front SPAR.  
Modification will release stress on ILEF attach point to prevent cracks.  
Modification will release stress on TEF to prevent cracks.  
To prevent electronic magnetic interference (EMI) tabs from gouging TEF/AIL hinges causing life limited restrictions.  
Modification to correct failures in the LEF Torque Tubes Drive System Failures  
Modification to correct failed AFT fuselage areas

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Each change has been or will be tested prior to installation in the F/A-18.

ECP 536 moved from OSIP 11-99 to OSIP 11-84 in FY02.

Unit cost variances due to: - Many ECP Kits were/are provided to the Navy at no additional costs (warranty kits).\*

- Some ECPs have numerous Technical Directives with different unit costs.
- Some ECPs require no kits, installs only

Exhibit P-3a

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-8)

MODELS OF SYSTEM AFFECTED: F/A-18 A/B/C/D TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

FINANCIAL PLAN (TOA, \$ in Millions)

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
ECP 087S1/External Stores EMI Protection																					
ECP 121R1/Auto AC Bus Isolation	356	0.7																	356	0.7	
ECP 165R1/Battery Control Relay Unit	251	0.5																	251	0.5	
ECP 178/FY86 Block Upgrade	82	4.7																	82	4.7	
ECP 241R1/Center Fuselage Structural Mods	1,719	0.6																	1,719	0.6	
ECP 251/Dorsal Longeron	1,926	0.8																	1,926	0.8	
ECP 251R1/Dorsal Longeron	443	8.6																	443	8.6	
ECP 262/470.5 Bulkhead	494	*																	494	*	
ECP 267R1/Righthand AMAD Bay	287	*																	287	*	
ECP 276/Y508 Former	836	1.0																	836	1.0	
ECP 305/AFT Engine Mount	619	*																	619	*	
ECP 306/Y657.35 Engine Bay Door Former	688	0.9																	688	0.9	
ECP 311/Main Landing Gear (MLG) Planing Link	10	*																	10	*	
ECP 319/MLG Trunnion Upgrade	1,405	*																	1,405	*	
ECP 320/Y488 Bulkhead	473	1.2																	473	1.2	
ECP 353/Wing Fatigue Repair	98	0.7																	98	0.7	
ECP 355/MLG Shoulder Belt	350	0.2																	350	0.2	
ECP 364/ASPJ System Improvement	225	*																	225	*	
ECP 365/Y470 Bulkhead Improvement	982	1.0																	982	1.0	
ECP 367/#1 Fuel Cell Floor	557	0.3																	557	0.3	
ECP 375/MLG Retract Actuator	1,323	5.7																	1,323	5.7	
ECP 391/Fretting on Former's & Spindles	582	0.3																	582	0.3	
ECP 402/Fuselage Skin, Y518 to Y533	638	*																	638	*	
ECP 402R1/Fuselage Skin, Y518 to Y534	720	2.1																	720	2.1	
ECP 417/Inlet Duct Skin at Y453	575	2.0																	575	2.0	
ECP 428/Y470.5 Bulkhead MLG Trunnion	2	0.1																	2	0.1	
ECP 440/Speed Brake Trough	591	1.0																	591	1.0	
ECP 488/SUU-63 Wing Pylon Door Panel	1,351	0.8																	1,351	0.8	
ECP 492/Y470.5 Bulkhead Fatigue Change	688	1.4																	688	1.4	
ECP 498/Fuselage Skin at Y453	696	0.7																	696	0.7	
ECP 501/Nacelle Skin Fatigue Improvements	663	3.7																	663	3.7	
ECP 506/LAU-115 Sparrow Mod	935	*																	935	*	
ECP 536/ST-16 Failures	45	7.2	25	4.3	25	2.7	5	0.5											100	14.7	
ECP 544/Improvement of Inner Wing SPAR	29	0.3																	29	0.3	
ECP 548/Fuel Barrier Web	750	1.4																	750	1.4	
ECP 550/Wing Drag Longeron	119	0.2																	119	0.2	
ECP 561/Y326.5 Plate Nut	532	0.2																	532	0.2	
ECP 562/Lower Center Keel Fire Hazard	798	0.4																	798	0.4	
ECP 574/Trailing Edge Flaps	1,026	26.8																	1,026	26.8	
ECP 574/Aileron	707	18.2																	707	18.2	
ECP 598 Servocylinder Test Station			9	1.5	9	1.3	8	1.2	1	0.3									27	4.3	
NI879/Hydraulic Temp Guages	150	0.2			100	0.4	100	0.4	100	0.1	130	0.2	130	0.2	70	0.1			780	1.5	
NI 742/Environment Control System Wiring	150	0.2																	150	0.2	
NI 796/Wing Fuel Dams	515	0.8																	515	0.8	
NI 824/MLG Trunnion Assembly	425	13.4																	425	13.4	
NI 827/Heat Exchanger	37	0.4																	37	0.4	
NI 830/Night Vision Display System (NVDS)	14	0.3																	14	0.3	
NI 839/Trailing Edge Flap	1,150	9.4																	1,150	9.4	
ECP XXX - ANTI G VALVE	800	1.0																	800	1.0	
ECP 973 Fuel Cell Floor Crack			40	1.1	100	2.2	100	2.3	100	2.3	100	2.3	100	2.4	40	1.0			580	13.5	
ECP 592 - Side Fuselage Crack							25	0.7	80	2.3	80	2.3	80	2.4	80	2.4			345	10.2	
ECP XXX5 - Wing SPAR Crack			40	0.4	35	1.7	35	1.7	35	1.8	35	1.8	35	1.8	35	1.9			250	11.1	
ECP NI 931 - Forward Lower Keel Modification					80	1.3	80	1.4	80	1.4	80	1.4	80	1.4	80	1.5			480	8.4	
ECP 952 - MLG Axle	688	17.1																	688	17.1	
ECP XXX8 - MLG Y488 Bulkhead					80	0.3	80	0.3	80	0.3	80	0.3	30	0.1					350	1.2	
ECP 590 - OBOGS SSOM			20	0.5	630	2.2													650	2.7	
ECP 608 - Crease Longeron																					
ECP NI-1013-05 Heat Derrent	315	4.6	315	4.6															630	9.2	
ECP XXX12 Nose Landing Gear/MLG/Control Valve Restriction																					
ECP XXX13 Bay 3 Shelf Modification					80	0.4	80	0.4	80	0.4	80	0.4	80	0.5	80	0.5			480	2.6	
ECP XXX14 Bay 4 Shelf Modification					80	0.4	80	0.4	80	0.4	80	0.4	80	0.5	80	0.5			480	2.6	
ECP 6217 Cockpit Pressurization Warning System (CPWS)	314	4.0	240	2.2	63	0.3													617	6.4	
ECP XXX16 Vertical Tail					100	2.6	100	2.7	100	2.7	100	2.8	100	2.8	120	3.4			620	17.0	

**Exhibit P-3a INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-8)

MODELS OF SYSTEM AFFECTED: F/A-18 A/B/C/D TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

FINANCIAL PLAN (TOA, \$ in Millions)

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
ECP XXX17 Canopy/Windscreen					150	0.4	150	0.4	150	0.4	100	0.3	50	0.1	30	0.1			630	1.7
ECP XXX18 NLG/MLG Fatigue Improvement					80	0.1	80	0.1	80	0.1	80	0.1	80	0.1	20	*	40	*	460	0.5
ECP 609 Inner Wing Conversions/Modification					40	1.0	40	0.5	40	0.5	40	0.5	40	0.5	40	0.5			240	3.6
ECP JAX F-18-001 NFDS MODS, C&D Conversion	2	0.1	10	2.8															12	2.9
ECP 0147 Repeatable Release Holdback Bar	285	1.5																	285	1.5
ECP XXX21 Interwing Conversion Lot 10/11 to Lot 12 & Up					40	0.2													40	0.2
ECP9384 MB Redesign of Backrest Operation Plunger (Safety)			443	0.2															443	0.2
ECP1022 Inner Wing Fatigue Improvement			36	0.1			80	0.6	80	0.6	80	0.6	80	0.6	80	0.6	52	0.4	488	3.6
ECP1034 Trailing Edge flap/Aileron Attach log Bushing							80	0.2	80	0.3	80	0.3	80	0.3	80	0.3	52	0.2	452	1.4
ECPXXX22 LEF Torque Tubes Drive System Failure							80	0.1	80	0.1	80	0.1	80	0.1	80	0.1	70	0.1	470	0.5
ECPXXX23 AFT Fuselage Structure Failure							80	0.1	80	0.1	80	0.1	80	0.1	80	0.1	70	0.1	470	0.6
Installation Kits N/R		22.7		6.2		5.4		2.6		0.1										36.8
Installation Equipment		2.3				0.6		0.6		0.7		0.3								4.6
Installation Equipment N/R		0.1																		0.1
Engineering Change Orders																				
Data		10.3		*		*		0.1												10.5
Training Equipment																				
Support Equipment		1.5																		1.5
I.L.S		140.9		15.1		16.9		17.9		19.3		19.1		19.3		19.2		17.5		285.2
Other Support																				
Interim Contractor Support																				
Installation Cost	29,416	220.8	1,178	4.3	1,692	9.7	1,283	25.3	1,326	24.4	1,305	26.5	1,205	30.1	995	31.4	284	18.8	38,684	391.2
<b>TOTAL PROCUREMENT</b>		545.0	43.2	49.9		60.4		58.5		59.8		63.3		63.5		37.1			980.8	

- Notes:
1. Totals may not add due to rounding.
  2. Asterisk indicates amount less than \$50K.
  3. ECP 08751 (External Stores EMI Protection) and ECP 608 (Crease Longerons) includes "Installation Costs" only.
  4. ECP 595 (Flight Control Computer) includes Non-Recurring Costs only.

**Exhibit P-3a** **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: F/A-18 AIRCRAFT STRUCTURAL LIFE MANAGEMENT PLAN (SLMP) (OSIP 11-99) CBR+

MODELS OF SYSTEM AFFECTED: F/A-18A/B/C/D TYPE MODIFICATION: SAFETY / LIFE EXTENSION

DESCRIPTION/JUSTIFICATION:

Incorporation of structural enhancements and changes is required to attain F/A-18 service life and maintain sufficient aircraft inventory to meet fleet operational requirements through FY 2023. Structural enhancements and changes include resolution of discrepancies identified as a result of Structural Test (ST-16) and in-service experience. These enhancements and changes include: modifications to allow the entire airframe to extend flight hours; modifications to ensure structures currently limited to 78% of design life can achieve 100% life; modifications to ensure landing gear, catapult and attachment components can extend total landings. The unacceptable alternative to retrofitting would be the failure to reach full fatigue life for these aircraft and to not correct the structural defects discovered on fatigue test articles. In many cases, the mission capability of the aircraft would be adversely affected in addition to its reduced service life. As a result, aircraft may be prematurely removed from useful service. Center Barrel Replacement Plus (CBR+) is applicable to F/A-18A/B/C/Ds. ECP 904 Part 1 is the basic center barrel kit. ECP 904 Part 2 is required to extend Wing Root FLE and is not required for all aircraft. ECP 904 Part 3 is required to extend CAT & TRAPs and does not have to be installed concurrently with Part 1 and 2. Part 4 is to extend flight hours associated with flight control surfaces, wings, vertical tails and the forward/aft fuselage.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Currently all Lot VI through XVII aircraft have 78% life limits without the SLMP modifications to bring them to 100% airframe life. MDA and NGC developed ECP536 retrofit repair to modify these aircraft so they could restore the airframe to full life. ECP 536 was approved and Validation was completed May 2001. NADEP North Island developed ECP 904NI (CBR+) which was approved on 27 April 2000, ECP 904 NI supersedes ECP 536. Validation started October 2000 and was completed in August 2001. Verification started August 2001 and was completed June 2002. ECP 536 moved from OSIP 11-99 to OSIP 11-84 in FY02.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RD&E		28.9																			
PROCUREMENT																					
Installation Kits																					
ECP 904 Part 1	172	136.1	23	27.2	15	18.0	30	33.0	40	37.6	40	38.3	40	41.1	40	44.6	21	24.6	421	400.5	
ECP 904 Part 2	68	19.0	32	29.0	28	21.9	32	4.7	32	0.6	32	0.6	32	0.7	49	1.3			305	77.7	
ECP 904 Part 3	16	1.7	2	0.4	28	4.7	28	4.8	28	5.0	30	5.5	25	4.4	68	12.4			225	38.8	
ECP 904 Part 4					40	6.6	30	5.1	58	10.0	45	7.9	40	7.2	130	32.2	135	34.7	478	103.8	
Installation Kits N/R	7	22.5																	7	22.5	
Installation Equipment	71	4.2	21	2.3	28	1.8	40	1.8	40	1.9	40	2.3	40	2.4	40	3.0	101	3.4	421	23.2	
Installation Equipment N/R		0.8		0.7							0.5										1.9
Engineering Change Orders																					
Data		4.9		0.1												0.2					5.3
Training Equipment																					
Support Equipment																					
ILS		27.3		10.5		9.5		7.0		8.3		5.4		7.4		7.9			19.5		102.7
Other Support		0.8								0.1											0.9
Interim Contractor Support																					
Installation Cost	71	88.2	21	28.7	28	39.2	40	57.7	40	58.4	40	61.8	40	65.7	40	80.7	101	176.1	421	656.5	
<b>TOTAL PROCUREMENT</b>		<b>305.6</b>		<b>98.9</b>		<b>101.5</b>		<b>114.1</b>		<b>121.9</b>		<b>122.3</b>		<b>128.9</b>		<b>182.3</b>		<b>258.3</b>		<b>1,433.9</b>	

Notes:

- Totals may not add due to rounding
  - ECP536 VALVER Kit provided under warranty.
  - Prior Year VALVER Kits: (1) provided under warranty by Boeing and (1) provided by NAVICP on hand assets.
  - Installations slipped one year due to FY01 funding reductions.
- "Installation Kit" Pricing is Quantity Sensitive. FMS procurements in some years affects unit price.
- The reduced cost for ECP 904 PT2 beginning in FY-06 is due to a change from procuring new nacelle ramps to installing AFC-271 nacelle mods on WRFL
- FY06 ECP 904 Part 2 unit cost reflects remanufactured kits vice procuring new.
- FY06 ECP 904 Part 3 is an "O" Level Install, does not have to be installed concurrently with Part 1 and 2.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18A/B/C/D MODIFICATION TITLE: F/A-18 SERVICE LIFE MANAGEMENT PROGRAM (SLMP) (OSIP 11-99) CBR+

INSTALLATION INFORMATION: CONTRACTOR PROVIDING 1 WARRANTY KIT

METHOD OF IMPLEMENTATION: ONE KIT INSTALLED BY CONTRACTOR FOR VALVER, OTHER INSTALLS BY DEPO1

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 29 Months

CONTRACT DATES: FY 2007: Jan-07 FY 2008: Jan-08 FY 2009: Jan-09

DELIVERY DATE: FY 2007: Apr-09 FY 2008: Apr-10 FY 2009: Apr-11

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY ( 172 ) kits	71	88.2	21	28.7	28	39.2	17	17.3	25	36.5	10	14.6							172	224.6
FY 2007 ( 23 ) kits							23	40.4											23	40.4
FY 2008 (15) kits									15	21.9									15	21.9
FY 2009( 30 ) kits											30	47.2							30	47.2
FY 2010 ( 40 ) kits													40	65.7					40	65.7
FY 2011 ( 40 ) kits															40	80.7			40	80.7
FY 2012 (40) kits																	40	73.4	40	73.4
FY 2013 (40 ) kits																	40	73.4	40	73.4
To Complete (21 ) kits																	21	29.2	21	29.2
<b>TOTAL</b>	<b>71</b>	<b>88.2</b>	<b>21</b>	<b>28.7</b>	<b>28</b>	<b>39.2</b>	<b>40</b>	<b>57.7</b>	<b>40</b>	<b>58.4</b>	<b>40</b>	<b>61.8</b>	<b>40</b>	<b>65.7</b>	<b>40</b>	<b>80.7</b>	<b>101</b>	<b>176.1</b>	<b>421</b>	<b>656.5</b>

- July 2006 both Depots declared they would not meet the CBR induction schedule.
- Restructured procurement profile and installation profile to relieve Depot back log.

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				
	1	2	3	4	1	2	3	4	1	2	3	4	
In	71	3	6	6	6	7	7	7	7	10	10	10	10
Out	71	3	6	6	6	7	7	7	7	10	10	10	10

	FY 2010				FY 2011				FY 2012				FY 2013				To Complete	TOTAL	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
In	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	101	421
Out	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	101	421

**Exhibit P-3a** INDIVIDUAL MODIFICATION

MODIFICATION TITLE: **MULTI-FUNCTIONAL INFORMATION DISTRIBUTION SYSTEM (MIDS) (12-99)**

MODELS OF SYSTEM AFFECTED: **F/A-18C/D/E/F and EA-18G** TYPE MODIFICATION: **CAPABILITY IMPROVEMENT**

DESCRIPTION/JUSTIFICATION:

The system is Tactical Data Link Communications to provide a secure communications and navigation system. Multifunctional Information Distribution System Low Volume Terminal (MIDS-LVT) is a Pre-planned Product Improvement (P3I) to the Joint Tactical Information System (JTIDS) and will be installed in USN/USMC F/A-18 aircraft as the primary U.S. platform, since the aircraft cannot accommodate the larger JTIDS Class 2 Terminals due to size and weight constraints. MIDS LVT is an International Cooperative Program (ICP) development with France, Germany, Italy, and Spain. A PMOU and Supplement 1 is in effect. The system will be interoperable with JTIDS Class 2 Terminals utilized by NATO allies as well as the other Services. F/A-18 will be interoperable with all Link 16 equipped platforms in U.S. and Allied Nations. This OSIP will also be used to perform efforts to address parts obsolescence and to examine potential MIDS-related capability upgrades associated with Network Centric Operations and interoperability requirements. ORD # 337-06-93. The MIDS Joint Tactical Radio System (MIDS JTRS) is an ECP upgrade to the MIDS-LVT developed under ORD#642-61-04. MIDS JTRS offers the functionality of Link 16, TACAN, and digital voice in a software-controlled architecture (SCA) JTRS-compliant format, and provides the option of future expandability to host the Airborne Networking Waveform (ANW). MIDS JTRS will be retrofit in Lots 26-31 F/A-18E/F and EA-18G aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:  
 This OSIP was originally planned for incorporation of MIDS into F/A-18C/D (Lots 12-21) and F/A-18E/F (Lots 22-31). A MIDS installation kit Critical Design Review (CDR) was held at Boeing in September 1996. MIDS Terminal initial Engineering and Manufacturing Development (E&MD) delivery for F/A-18 occurred in February 1998. Installation into the first three (3) EMD aircraft began in March 1998 and ended in September 1998. In May 1999, Boeing was awarded the ECP contracts required to provision the F/A-18E/F for the MIDS LVT while still in production. These provisions include: an Interference Blanking Unit (IBU); an Amplifier Control Intercommunication Unit (ACI); a MIDS Compatible CIT upgrade; and a MIDS Compatible Transponder upgrade. This list of equipment was also required to be retrofit into F/A-18C/D and is included as the "Avionics Upgrade" in the table below. These provisions are required by other F/A-18 programs and can be installed independently of MIDS LVT. OPEVAL was completed in June 2003, with a recommendation of operationally effective and operationally not suitable. A Verification Correction of Deficiencies (VCD) was completed on 15 August 2003. The VCD report delivered on 4 September 2003 recommended full fleet release. Full Rate Production approval was granted on 25 September 2003. Integration testing of MIDS JTRS capabilities began in FY07. FY07 is a LRIP buy per the approved acquisition strategy and will enable Initial Operational Capability in FY09.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E		29.9		1.7																	33.1
PROCUREMENT																					
Installation Kits																					
Lot 12 through 21 Kits	328	52.9	69	4.5																397	57.4
Lot 26 through 31 Kits (MIDS-JTRS)			12	0.1	12	0.1	24	0.2	36	0.4										84	0.8
Installation Kits N/R																					
Installation Equipment																					
Avionics Upgrade	328	56.6	69	2.7																397	59.3
MIDS LVT	363	106.6	52	11.0																415	117.6
MIDS JTRS			12	7.2	12	5.9	24	10.6	36	13.9										84	37.6
Installation Equipment N/R		37.2																			37.2
Engineering Change Orders		0.5		0.5		0.3		0.6		0.7											2.8
Data		2.0																			2.0
Training Equipment																					
Support Equipment		4.8		2.4																	7.2
ILS		6.5		1.6		1.0		1.3		1.1		*									11.6
Other Support		16.6		3.5		1.1		2.3		2.0											25.6
Interim Contractor Support																					
Installation Cost	232	24.3	48	4.8	48	4.8	40	4.0	29	2.9										397	40.8
<b>TOTAL PROCUREMENT</b>		<b>307.9</b>		<b>38.3</b>		<b>13.3</b>		<b>19.2</b>		<b>21.0</b>											<b>399.8</b>

- Notes:
1. Totals may not add due to rounding
  2. Asterisk indicates amount less than \$50K
  3. \*A\* Kits and Avionics Upgrade continue to be procured and MIDS installations continue on the C/D's to maintain schedule.
  4. 12 Installations kits and Avionics Upgrades, plus 23 MIDS LVT procured through DERF(\$11.5M), in FY02. Installation were accomplished through budgeted FY04 installation cost.
  5. Lots 26 through 31 Kits (MIDS-JTRS) are an "O" Level Installation.

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F and EA-18G MODIFICATION TITLE: MULTI-FUNCTIONAL INFORMATION DISTRIBUTION SYSTEM (MIDS) (12-99)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT LEVEL

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2007: Mar-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: Sep-08 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY ( 328 ) kits	232	24.3	48	4.8	48	4.8													328	33.9
FY 2007 ( 69 ) kits							40	4.0	29	2.9									69	6.9
FY 2008 ( 0 ) kits																				
FY 2009( 0 ) kits																				
FY 2010 ( 0 ) kits																				
FY 2011 ( 0 ) kits																				
FY 2012 ( 0 ) kits																				
FY 2013 ( 0 ) kits																				
FY 2014 ( 0 ) kits																				
To Complete ( 0 ) kits																				
<b>TOTAL</b>	232	24.3	48	4.8	48	4.8	40	4.0	29	2.9									397	40.8

\*Note: DERF funded "A" kit procurement.  
Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009			
		1	2	3	4	1	2	3	4	1	2	3	4
In	232	12	12	12	12	12	12	12	12	10	10	10	10
Out	232	12	12	12	12	12	12	12	12	10	10	10	10

	FY 2010				FY 2011				FY 2012				FY 2013				To Complete	TOTAL		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In	7	7	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	397
Out	7	7	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	397

**Exhibit P-3a** **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **USMC F/A-18 UPGRADE ECP-583 (OSIP 21-00)**

MODELS OF SYSTEM AFFECTED: **F/A-18A/B/C/D** TYPE MODIFICATION: **AVIONICS UPGRADE**

DESCRIPTION/JUSTIFICATION:  
 This Operational Safety Improvement Program (OSIP) upgrades United States Marine Corps (USMC) F/A-18A/B/C/Ds avionics including both hardware and software capabilities. This requirement is critical to meet the Marine Corps requirements for the Tactical Aircraft (TACAIR) Integration Plan. The Avionics Upgrade includes avionics subsystems already incorporated or being incorporated into USMC and/or Foreign Military Sales (FMS) F/A-18 aircraft. The Basic Engineering Change Proposal (ECP) 583 incorporates the following subsystems: AN/ARC-210(V) with HAVEQUICK II and SINGARS; Digital Communication Systems (DCS) Receiver/Transmitter (RT-1824(C)); Combined Interrogator/Transponder AN/APX-111 (V); Night Vision Display System (NVDS); Mission Computer CP-2360 (XN-8); Radar (AN/APG-73); Stores Management Set (SMS, AN/AYQ-9); AMRAAM Capability (radar modification, launchers, weapons pylons and control stick); Digital Display Indicator (DDI) Upgrade; Mission Data Loader (AN/ASQ-215); Targeting Forward-Looking Infrared (FLIR) provisions (AAS-38B). ECP 583R1 adds a digital wingtip modification, allowing use of the AIM-9X air-to-air missile. ECP 583R2 adds the following capabilities: Multi-functional Information Distribution System (MIDS LVT); Color Displays; Joint Helmet Mounted Cueing System (JHMCS); ALE-47; Tactical Aircraft Moving Map Capability (TAMMAC); and Auxiliary Memory Unit (AMU). ECP 583 R3 was cancelled. ECP583R4 will incorporate the Navy Aircrew Common Ejection Seat (NACES) for utilization with the JHMC system. This OSIP also provided limited integration of the LITENING Enhanced Range FLIR on 24 USMC F/A-18Ds. This allowed the Marine Corps to utilize existing LITENING pods, currently in the AV-8B inventory, on USMC F/A-18Ds to provide the Air Ground Task Force capability and flexibility in the execution of operations in the combat spectrum.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:  
 The number of aircraft to be retrofitted in the program of record has changed, the Marine Corps has deferred retrofiting some early lot F/A-18C/Ds vice only F/A-18A/Bs due to greater remaining life on those aircraft. ECP 583 was approved 25 March 1999. ECP 583R1 was approved in August 2001. ECP 583R2 was approved in 2004. ECP 583R3 was cancelled and ECP 583R4 was approved in 2006. A New Start notification was sent to Congress in FY 2003 to initiate the Litening integration and procurement of the FY 2004 Installation Kits. Due to lower than expected pricing, 24 aircraft are able to be modified with the originally identified funding.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
ECP 583	27	7.5																	27	7.5	
ECP 583R1	82	0.3																	82	0.3	
ECP 583R2	13	10.1	12	5.2	16	11.9	15	12.6											56	39.8	
ECP 583R4	13	0.8	12	0.3	19	0.3	12	0.3											56	1.5	
Litening	24	0.9																	24	0.9	
Installation Kits N/R		15.8																		15.8	
Installation Equipment	1136	177.7	8	1.3	24	5.3	40	6.4	26	11.5	30	15.8							1264	217.9	
Installation Equipment N/R																					
Engineering Change Orders																					
Data		1.2																		1.2	
Training		0.7				0.2														0.9	
Support Equipment		1.5										0.4								1.8	
ILS		19.4				0.9		0.6		0.8		1.8								23.6	
Other Support (Testing)		4.0		0.8		0.7				0.2		1.0								6.6	
Interim Contractor Support																					
Installation Cost	61	22.8	18	2.7	12	3.0	13	2.5	13	5.3	12	5.7							129	41.9	
<b>TOTAL PROCUREMENT</b>		<b>262.6</b>		<b>10.1</b>		<b>22.2</b>		<b>22.4</b>		<b>17.8</b>		<b>24.6</b>								<b>359.7</b>	

- Notes:
- Totals may not add due to rounding
  - 34 "Installation Kits" were purchased with NGRE Funds to include: 4 Val/Vers - FY98; 20 "A" Kits - FY99; and 10 "A" Kits - FY00. The cost of these kits are not displayed in this OSIP.
  - The "Installation" unit costs for FY 2002 through FY 2005 are skewed by Congressional adds. The 6 installs in FY2004 are funded with FY 2002 Congressional add funding and the 3 installs in FY 2005 are funded with FY 2003 Congressional add funding.
  - The Installation Kit procurement of ECP583R2 is for Validation/Verification.
  - The additional ECP 583R1 kits are being procured to retrofit Navy Reserve aircraft already modified to an ECP 583 configuration under an OSIP that is no longer active.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18A/B/C/D

MODIFICATION TITLE: USMC F/A-18 UPGRADE ECP-583 (OSIP 21-00)

(ECP583 and ECP 583R2)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: (ECP 583) ONE KIT INSTALLED BY CONTRACTOR FOR VAL/VER, OTHER INSTALLS FIELD TEAMS

ADMINISTRATIVE LEAD-TIME: Various

PRODUCTION LEAD-TIME: Various

CONTRACT DATES: FY 2007: Sep-07

FY 2008: Jan-08

FY 2009: Jan-09

DELIVERY DATE: FY 2007: Jun-08

FY 2008: Jun-09

FY 2009: Jul-09

Cost:	(\$ in Millions)																					
	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PY (86 ) kits <sup>1,2,3</sup>	61	22.8	18	2.7	7	1.7														86	27.2	
FY 2007 ( 12 ) kits					5	1.3	7	1.3													12	2.6
FY 2008 (16 ) kits							6	1.2	10	4.0											16	5.2
FY 2009 (15) kits									3	1.3	12	5.7									15	6.9
FY 2010 (0) kits																						
FY 2011 (0) kits																						
FY 2012 ( ) kits																						
FY 2013 ( ) kits																						
To Complete ( 0 ) kits																						
<b>TOTAL</b>	61	22.8	18	2.7	12	3.0	13	2.5	13	5.3	12	5.7									129	41.9

Notes:

1. 34 "Installation Kits" were purchased with NGRE funds, not included in this OSIP.
2. FY04 Installations are funded with FY02 Congressional add funding.
3. FY05 installations are funded with FY03 Congressional add funding.
4. FY04 installations are for Litening. FY06 installations are for ECP 583.

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009			
		1	2	3	4	1	2	3	4	1	2	3	4
In	61	6	6	6	6	4	4	4	4	4	4	4	5
Out	61	6	6	6	6	4	4	4	4	4	4	4	5

	FY 2010				FY 2011				FY 2012				FY 2013				To Complete	TOTAL	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
In			6	7			6	6										0	129
Out			6	7			6	6										0	129

**Exhibit P-3a** **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **F/A-18 JOINT HELMET-MOUNTED CUEING SYSTEM (JHMCS) (OSIP 24-00)**

MODELS OF SYSTEM AFFECTED: **F/A-18C/D/E/F** TYPE MODIFICATION: **CAPABILITY IMPROVEMENT**

DESCRIPTION/JUSTIFICATION:

The Joint Helmet-Mounted Cueing System (JHMCS) is a multi-service system that provides United States Air Force (USAF), United States Navy (USN), and United States Marine Corps (USMC) aircraft the capability to cue and verify on-board weapons and weapons sensors to a specific azimuth/elevation determined by the pilot's head position and to confirm sensor line-of-sight. The intent is to reduce tasks required of aircrews, verify seeker/sensor position, and enhance weapons employment opportunities. In the air-to-air role, the aircrew will be able to cue and verify cueing of off-boresight weapon sensors and weapons (current and future short-range air-to-air missiles) to exploit the full weapons envelopes in the dynamic Within Visual Range (WVR) arena. In the air-to-ground role, this system will enhance lethality and survivability by reducing cockpit "heads down" and target acquisition time. For the strike, strike escort, and force application missions, the JHMCS possesses potential to enhance the flexibility of cueing weapons and sensors in the stressful air-to-ground tactical environment. The JHMCS incorporates an ejection-compatible helmet-mounted display system, with capability to cue and verify cueing of high off-axis sensors and weapons, on USAF and USN single seat and two seat fighter aircraft. The JHMCS includes a flight helmet with display optics, image source, display processor/video hardware and software to drive the display, upload reticle, magnetic helmet tracker hardware and software, interfaces to the aircraft computers, weapons and sensor hardware, with software to integrate the JHMCS functions with other onboard systems. The JHMCS communicates with airborne sensors (FLIR, Radar) through the aircraft avionics MUX Bus. It communicates with weapons through the armament MUX Bus via the Stores Management System. This system will provide aircraft equipped with the Joint Helmet Mounted Cueing System (JHMCS) the ability to cue and display weapons and sensors at night through the initial fielding of a narrow field of view Night Vision Device that integrates the JHMCS cueing and display symbology. The capability will be upgraded to a wide field of view system when available. The system will be compatible with the current JHMCS helmet and will use the power and data provided by the JHMCS Universal Connector on the helmet. The System includes a high resolution image intensifier assembly, a camera to record the pilot's visual scene and display assembly that combines the JHMCS symbology and the scene viewed through the NVD. It also has an objective lens with a leaky green filter that enables the fixed wing pilot to view the head-up display while wearing the system. The system is fully adjustable by the operator and is detachable from the helmet.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

F/A-18E/F JHMCS completed Developmental Testing in August 2001. Operational Test (OPEVAL) was completed in April 2002. F/A-18E/F retrofit kit procurement began in FY 2004 and installed in FY 2005 starting with Lot 23 aircraft. JHMCS procurement for F/A-18C/D was approved at a milestone decision in January 2004. AFT Seat development completes in FY06. The first F/A-18C/D JHMCS retrofit kits were procured in FY 2005 and installed in FY 2006.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		TOTAL									
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$								
RDT&E		79.0																			79.0							
PROCUREMENT																												
Installation Kits																												
C/D	106	10.2	46	4.5	24	3.1	40	3.5	63	5.5	38	5.1	39	3.5	43	8.9					399	44.3						
E/F	29	2.2	24	1.9	21	1.7	24	2.0	24	2.0	19	2.3	24	2.8	14	2.6						179	17.5					
Canopy A Kits (AYC-1321)	139	0.4	119	1.6	59	0.9	44	0.2	41	0.1	57	0.4	51	0.2	57	0.2							567	4.0				
Ejection Seat A Kits (ACC-695)	144	0.8	56	0.3	36	0.2	52	0.3	87	0.4	66	0.3	48	0.3	71	0.4								560	2.9			
Installation Kits N/R		19.8		1.0		1.2		1.6		1.4		1.9		1.1		1.3									29.6			
Installation Equipment																												
C/D	132	31.8	158	9.0	96	5.8	144	8.8	190	12.5	158	11.6	84	7.1	129	9.6									1,091	96.2		
E/F	29	3.3	72	4.2	63	3.9	72	4.6	73	4.8	61	4.5	72	5.5	70	5.3										512	36.1	
Installation Equipment N/R		1.9																									1.9	
Engineering Change Orders														19.9		14.3											34.1	
Data		5.5		0.4		0.1						0.1		0.7		*											6.9	
Training						0.5		0.5		0.5																	1.5	
Support Equipment	81	5.6	34	2.3	27	1.3	42	4.6	25	1.8	32	1.0	8	0.4	18	0.6	4	*									271	17.7
ILS		12.2		5.3		5.3		4.5		3.9		4.3		5.7		6.0											54.6	
Spares																												
Other Support - Testing																												
Installation Cost	20	0.7	36	2.6	72	7.5	70	7.7	45	6.0	64	7.8	87	11.1	57	10.0	122	14.9									68.4	
<b>TOTAL PROCUREMENT</b>		<b>94.5</b>		<b>33.1</b>		<b>31.5</b>		<b>38.2</b>		<b>39.0</b>		<b>39.3</b>		<b>58.3</b>		<b>59.4</b>											<b>415.8</b>	

- Notes:
1. Totals may not add due to rounding
  2. Asterisk indicates amount less than \$50K
  3. "Installation Equipment" is procured one year prior to "Installation Kits" due to a year greater production leadtime.
  4. "Installation Kit" and "Installation Cost" unit costs begin to increase in FY 2006 and FY 2007 respectively due to introduction of Aft Seat JHMCS capability.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F MODIFICATION TITLE: F/A-18 JOINT HELMET-MOUNTED CUEING SYSTEM (JHMCS) (OSIP 24-00)

INSTALLATION INFORMATION: APPROX 5 KITS INSTALLED EVERY 4 WEEKS

METHOD OF IMPLEMENTATION: FIELD MOD TEAMS

ADMINISTRATIVE LEAD-TIME: 4 Months PRODUCTION LEAD-TIME: 21 Months

CONTRACT DATES: FY 2007: Feb-07 FY 2008: Feb-08 FY 2009: Feb-09

DELIVERY DATE: FY 2007: Nov-08 FY 2008: Nov-09 FY 2009: Nov-10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY2009		FY2010		FY2011		FY2012		FY2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (130) kits	20	0.7	36	2.6	72	7.5	2	0.1											130	10.9
FY 2007 (70) kits							68	7.6	2	0.3									70	7.9
FY 2008 (45) kits									43	5.8	2	0.2							45	6.0
FY 2009 (64) kits											62	7.6	2	0.2					64	7.8
FY 2010 (87) kits													85	10.9	2	0.3			87	11.3
FY 2011 (57) kits															55	9.7	2	0.1	57	9.8
FY 2012 (63) kits																	63	7.6	63	7.6
FY 2013 (57) kits																	57	6.8	57	6.8
To Complete (0) kits																				
<b>TOTAL</b>	<b>20</b>	<b>0.7</b>	<b>36</b>	<b>2.6</b>	<b>72</b>	<b>7.5</b>	<b>70</b>	<b>7.7</b>	<b>45</b>	<b>6.0</b>	<b>64</b>	<b>7.8</b>	<b>87</b>	<b>11.1</b>	<b>57</b>	<b>10.0</b>	<b>122</b>	<b>14.9</b>	<b>573</b>	<b>68.4</b>

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY2009				FY2010			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	20	9	9	9	9	18	18	18	18	18	18	18	16	12	12	12	9
Out	20	9	9	9	9	18	18	18	18	18	18	18	16	12	12	12	9

	FY2011				FY2012				FY2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4		
In	16	16	16	16	24	21	21	21	14	14	14	15	122	573
Out	16	16	16	16	24	21	21	21	14	14	14	15	122	573

Note\* 5 Val/Ver Kits not installed.

**Exhibit P-3a** **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **ADVANCED TARGETING FORWARD LOOKING INFRARED (ATFLIR) (OSIP 12-01)**

MODELS OF SYSTEM AFFECTED: **F/A-18A+/C/D/E/F** TYPE MODIFICATION: **CAPABILITY IMPROVEMENTS**

The Advanced Targeting Forward Looking Infrared (ATFLIR) (ORD# 605-78-02) will provide the F/A-18A+/C/D with a significantly enhanced capability to detect, track and attack air and ground targets. New laser guided and global positioning system (GPS) standoff weapon systems and higher altitude attack profiles require improved performance over the current AAS-38/46 Targeting Forward Looking Infra-Red (FLIR). The ATFLIR currently utilizes the 3rd generation of FLIR technology. The ATFLIR is designed to provide a quantum leap in operational effectiveness to fully support the standoff precision strike mission. Improved reliability and maintainability technology will increase operational availability while reducing life cycle costs. This OSIP is also being used to perform efforts to address parts obsolescence and to examine and incorporate potential ATFLIR-related capability upgrades associated with Network Centric Operations, interoperability requirements, and upgraded targeting.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

ATFLIR development began in FY1997. OPEVAL testing was completed in June 2003 and the OPEVAL report was issued 4 September 2003. Full Rate Production approval was given in October 2003. Navigational forward looking Infra-Red (NAVFLIR) capability was removed from the system in December 2003. FY07 CONGRESSIONAL ADD : \$7.8M - for PGSE. Received for procurement of additional ATFLIR PGSE and logistics support. ATFLIR intermediate-level maintenance is being stood up currently. This equipment is required for organic repair capability, and is lead-time away from delivery. FY07 EMERGENCY SUPPLEMENTAL : Rapid Deployment DataLink -- Streaming Video (\$6.500M): Supplemental funds received to incorporate several Engineering Changes that were deferred from the PB06 program of record to rapidly field a critical data link capability. Aircraft arriving in theatre without video downlink capability are being turned away from 80% of the Forward Air Controller missions. Video downlink capability has become a critical operational requirement for all aircraft deployed to Operation Iraqi Freedom (OIF). In support of deployed force commanders, a rapid deployment video downlink was funded and fielded by deferring ATFLIR Engineering Change Proposals (ECPs) planned as part of the PB06 submission. The deferred ECPs were planned to improve reliability and fix problems reported by fleet operators. IR Marker (\$7.920M): Supplemental funds received to incorporate an IR Marker into 45 ATFLIR pods, along with funding for the associated support requirements. The IR Marker allows Night Vision Device-equipped Forward Air Controllers to pinpoint and confirm targets for the aircrew to employ weapons in support of Close Air Support, force protection, and Imaging, Surveillance, and Reconnaissance (ISR) missions in OIF. Datalink (\$21.120M): Supplemental funds received to incorporate a data link into 88 ATFLIR pods, along with funding for the associated support requirements. Adding this capability will support the CENTCOM requirements for FLIR video datalink requirements to Rover III terminals to support Forward Air Controllers' target identification during Close Air Support (CAS), force protection, and ISR missions in OIF.

**FINANCIAL PLAN (TOA, \$ in Millions):**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
RDT&E		275.6																			275.6	
<b>PROCUREMENT</b>																						
Installation Kits																						
Installation Kits N/R																						
Installation Equipment(C/D)	143	330.0	44	96.9		8.5														187	435.3	
Installation Equipment(E/F)																						
Installation Equipment N/R		31.2																			31.2	
Engineering Change Orders																						
Software Upgrades				0.6		0.7		0.6		0.6		0.6									3.1	
Pod Data Link (Ku)		1.9	88	21.9																	88	23.7
Raytheon ECPs				5.3		31.6		15.6		1.4												54.0
I2P ECP				1.4																		1.4
IR Marker ECP		11.6	45	15.0	45	11.7	45	15.6	45	13.0	33	13.0								213	79.9	
Data		5.3		0.2		0.2		0.9		0.1		0.1										6.8
Training		3.4		0.4		*				*		*										3.9
Support Equipment		38.7		23.0		19.3		20.3		1.3		0.3										102.8
ILS		47.6		9.3		8.5		8.2		8.8		7.0										89.4
Spares																						
Other Support				0.5		0.4		0.4														1.3
Installation Cost																						
<b>TOTAL PROCUREMENT</b>		<b>469.7</b>		<b>174.4</b>		<b>80.8</b>		<b>61.7</b>		<b>25.3</b>		<b>21.0</b>										<b>832.8</b>

- Notes:
1. Totals may not add due to rounding
  2. Asterisk indicates amount less than \$50K
  3. 8 "A Kits" used for Validation/Verification will not be installed on aircraft.
  4. The "Installation Kit" is required to allow Advanced NAVFLIR functionality on cockpit displays. This ECP is required for F/A-18A+ and all F/A-18C/Ds.

**Exhibit P-3a** **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **C/D TRAINING SYSTEM (OSIP 06-02)**

MODELS OF SYSTEM AFFECTED: **F/A-18C/D** TYPE MODIFICATION: **TRAINERS UPGRADE**

DESCRIPTION/JUSTIFICATION:  
 F/A-18C/D training funds will be used to meet current Fleet Readiness Squadron (FRS) requirements by purchasing new components and software to prevent obsolescence of the various trainers as F/A-18C/D aircraft are modified for capability enhancement and service life extension. Funding will also be used to update courseware and computer based training (CBT) as new capabilities are introduced to the fleet, and will enable the fleet to institute an aggressive post-FRS training environment to bring F/A-18C/D trainers into High Level Architecture (HLA) compliance.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY2007		FY2008		FY2009		FY 2010		FY2011		FY2012		FY2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Installation Kits N/R																					
Installation Equipment																					
Installation Equipment N/R																					
Engineering Change Orders																					
Data																					
Training		67.8		9.4		6.8		6.7		6.8		12.8		13.2							123.4
Support Equipment																					
ILS																					
Spares																					
Other Support - Testing																					
Installation Cost																					
<b>TOTAL PROCUREMENT</b>		67.8		9.4		6.8		6.7		6.8		12.8		13.2							123.4

Notes:  
 1. Totals may not add due to rounding

Exhibit P-3a

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: E/F & EA-18G CORRECTION OF OPERATIONAL DISCREPANCIES (OSIP 014-03)MODELS OF SYSTEM AFFECTED: F/A-18 E/F & EA-18GTYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

DESCRIPTION/JUSTIFICATION:

Corrections to discrepancies discovered during testing and development can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Corrections to the following items/conditions are required to meet the F/A-1 E/F EA-18G transition plan and achieve planned life limits. Correct operational discrepancies discovered during testing and evaluations and during fleet operations. Modify, improve, retrofit, and restore aircraft structural safety and reliability to designed full life limits.

ECS Exhaust Overtemp Final Fix/Bard Stacks, (ECP-6106R1)Aft ECS Cooling Fan, (ECP-6114)FCC Processor Upgrade, (ECP-6002)MLG Door Bushing Migration, (ECP-6104)AFT Fuselage Outbd Former Fwd Flange @ Y645, (ECP-6088)MLG Trunnion Bearing Loose Retention Nut, (ECP-6194)Long Stick Position, (ECP-XX2)SKIN 12 Stiffener Back-up Structure, (ECP-6171)AFT Fan Shutoff Valve, (ECP-6199)Radar Altimeter Antenna Radome Delineation, (ECP-XXX8)Leading Edge Extension (LEX) Lower Surface/Structure Cracks Redesign, (ECP-6193R1)MLG Outboard Tire Door Clevis, (ECP-6145)FT50 Y436 Inlet Former, (ECP-6188)Keel Beam Lower Cap Cracks, (ECP-6203)FT50 Teardown Bulkhead Cracking, (ECP-XX12)FT50 18K Fuselage Outboard Former at Y645 Failure (ECP-6229)FT-50 Failure of Upper Wing Skin Splice Plate, (ECP-6183)DOOR 49 Replacement, (ECP-6098C1)Horizontal Actuator Cover-Door 71, (ECP-6068)MLG R/H Upper Planing Link Attach Fitting Failure, (ECP-6196C1)LEX Vent Mechanism Support Assembly Rod End Clevis Failure, (ECP-6208)Fuel Wash Filter Enhancement, (ECP-6216)ECS Ejector Cracks, (ECP-6255)MLG DOOR HINGE PINS STANDARD HARDWARE CONVERSION (ECP-6321)Cockpit Pressure Warning System (CPWS), (ECP-6217)MLG Strut Door Departures, (ECP-6235)HOL Follow-On Upgrades Lot 25 & Up, (ECP-XX21)18E Follow-On Upgrades Lot 24 & Below, (ECP-XX22)MLG Proximity Switches & Sidebrace Down lock Mechanism, (ECP-6076)Fuel System Ground Pressurization Tube Water Entrapment, (ECP-6190)Wing Modification for Transonic Flying Qualities Improvement, (ECP-6191)Radar Bay Vent Valve Fail - MSP 862, (ECP-6198)Y679 Former Boot Strap Interface Fillet Seal Missing, (ECP-6206)ECS Cooling Duct Grounding Strap, (ECP-6209)ARS Lighting, (ECP-XXX23)NVG Friendly NAV Lighting, (ECP-XXX24)Bay 4L Equipment Bay Life Limits, (ECP-6221)Y591 Bulkhead Missing Fasteners at Keel Longeron, (ECP-6262)Fatigue Testing - Teardown, (ECP-XXX27)Wing-Aft Shear Tie Bushing Migration, (ECP-6241)HS1 Reservoir Chafe, (ECP-XXX29)TEF Clip Fatigue Prevention, (ECP-6213)Boarding Ladder Sensors Improvement, (ECP-XXX30)

Modifies current exhaust ducts in order to reduce skin and structural temperatures caused by the ECS exhaust plume

Strengthens ECS cooling fan to prevent and contain fan failures

Replace existing FCC processor with upgraded higher order processors

Improved bushing retention for MLG Door hinge attach points

Repair former by adding a doubler to bring it back to original specification

Replacing bearing retention nut with an improved retention nut

Incorporation of improved retention mechanism in position sensor

Strengthen the Centerline Structure to meet 2000 catapult requirement

Modify the Aft Fan with an Improved Shut-Off Valve

Drill hole in door to allow escape of moisture accumulation in order to prevent corrosion of the antenna

Modifies LEX structure to prevent cracks induced from aerodynamic loads

Redesign clevis to eliminate cracking imparted during gear cycling

Introduces strengthened design to prevent cracking

Redesign the existing keel beam lower cap at the arresting hook uplatch mechanism. Increase the thickness of the lower flange and web in this local area to handle the inertia loads from the arresting hook while its latched in the stowed position Modifies Keel To Prevent Future Cracking

Modifies bulkhead to prevent cracking discovered during FT50 testing

This ECP describes the effort to redesign the Fuselage Outboard Former Y645 resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article

Redesigned Upper Wing Skin Splice Plate to address failures observed during fatigue testing

Replace Door 49 for holes found elongated beyond spec.

Improved fasteners to prevent deformation introduced by flight loads

Redesign existing planing link attach fittings

Redesign and strengthen door actuator

Upgrade the Fuel Wash Filter to address a design deficiency which allows bypass of FO to the LDFS. Create a simpler and lower cost design for production and retrofit. Retrofit is required for A/C in the fleet with Tube Assemblies produced before sealant was applied to prevent filter bypass

Modify ECS ejector to prevent cracks from being induced

This modification incorporates a re-designed hinge pin.

Provides a warning system to identify a possible insidious cabin pressure loss that could result in crew hypoxia and possible A/C loss

L/H MLG Strut Doors departed in flight causing damage to adjacent doors and structure Forward hinges on failed doors show evidence of fatigue failures Unanticipated loads environment due to stores carriage Centerline 480 gal fuel tank.

Mission Computer BIT performance upgrades &amp; enhancements for aircraft with Higher Order Language (HOL)

Mission Computer BIT performance upgrades &amp; enhancements for aircraft without Higher Order Language (HOL)

Modify down lock actuator assembly, jury link; replace lock plate &amp; proximity switches

Change manual drain valve to automatic drain valve to ensure that no water is trapped in the fuel system.

Modify the wing and flight control surfaces to improve the flying qualities of the aircraft when flying above the speed of sound.

To eliminate the Radar Bay Vent Valve failures (MSP 862 code). The condition was traced to an excessive voltage drop to the valve, a result of the Radar

Bay Vent Valve circuit change which incorporated Forward Avionics Fan Delay Logic.

Retrofit will consist of applying Fillet seal/brush coating to entire edge of lower leg of Support that interfaces with "Y679" Former

Add a grounding strap to prevent accidental static discharge to an aircraft maintainer

Add lighting to the ARS pod to improve the visibility of the tanking aircraft during night time refueling operations

Modify cockpit lighting to be more friendly with night vision goggles (NVG)

Retrofit Will Eddy Current Inspect and Install 1st Oversize Interface Fit Fasteners (14 Fasteners at Y326 &amp; 5 Fasteners at Y357). Final Retrofit Redesign will Install New J-Beam, New Clips, Oversize Fasteners, New Post Support and New Dagger Pins.

Cracks were found on the Y591 Bulkhead during the FT-50 Teardown. The cracks were located at the keel longeron attachment. Root cause investigation identified that 6 fasteners were missing between the horizontal leg of the longeron and the bulkhead for the FT-50 configuration. Current build aircraft are missing 4 fasteners. Test Correlation analysis indicates the bulkhead with 4 missing attach fasteners does not have a 6000 hour service life

Correct cracks in various other structural components found during teardown of various fatigue test articles

Bushings migration will reduce the contact bearing area on the spars reducing fatigue life to less than spec requirements.

Correct chafing condition between the hydraulic reservoir and structural components of the aircraft

The trailing edge flap experienced a fatigue failure during ground testing. This change incorporates improvements to the trailing edge flap to assure fatigue life requirements are met

Improve boarding ladder sensors to prevent incorrect stowage indications

Brake Piston Assy Redesign, (ECP-XXX31)  
 Inlet Ice Detector Hardware Redesign, (ECP-XXX32)  
 Wing - Fuel Probe Corrosion Protection, (ECP-6219)  
 Common Preamps (ECP-6034)  
 FT76 Forward Windshield Bolt Life Limit, (ECP-6258)  
 Hydraulics Components Improvement, (ECP-XXX33)  
 IN-FLIGHT REFUELING (IFR) PROBE LINKAGE REDESIGN, (ECP-6319)  
 LANDING GEAR CONTROL UNIT (LGCU) MIT UPGRADE, (ECP-6320)  
 Fire Bottle Bay Over-Temperature, (ECP-XXX36)  
 FT77 Wing Pylon Changes, (ECP-6282)

ECS COMPONENTS INCREASE VIBRATION LOAD ISSUES, (ECP-XXX38)  
 AFT Engine Mount Attach Fitting, (ECP-XXX39)  
 V38 OFP UPGRADES, (ECP-XXX40)  
 G81S00004 SE UPGRADE, (ECP-JAX-SE-027)  
 Hornet Feather (Vane) Wear PAD Retention System Redesign, (ECP-6075)

Repeatable Release Holdback Bar, (ECP-IRRHB-0147)  
 LEX Right Hand Walkway Mat, (ECP-6283)  
 Inlet Nacelle Bleed Plate Crack, (ECP-6227C1)  
 Throttle Electronics Module Seal Improvement, (ECP-6228)  
 Horizontal Stabilizer/Fuselage Rubbing, (ECP-6234)  
 Inadequate Clearance b/w APU Surge Control Valve and Y568 Support, (ECP-6238)

FT50 18k Fuselage Outboard Former @ Y679 Failure, (ECP-6239)  
 FT50 18K MLG Sidebrace Fitting Failure, (ECP-6240)

FT76 Jackpoint Support Fitting Life Limit, (ECP-6243)  
 INBOARD WING CLOSURE BOLT, ANTI-ROTATION RETAINER, (ECP-6245)

FT76 Y301 Sheet Metal Routing Closure Life Limit, (ECP-6246)  
 FT50 18K Y520 Former Cracks at Lower Drop Link, (ECP-6247)

Tank 1 Improvements - Vent Cap Addition, (ECP-6248)  
 Nut Plate Installation Sealing, (ECP-6249)

FT76 Bay 3-4 Avionics Door Seal Support, (ECP-6256)

HFC-125 Fire Extinguisher Mount - Final Corrective Action, (ECP-6257)

FT76 Z90 Longerons Life Limit, (ECP-6259)

FT50 18K Y491 Bulkhead Redesign, (ECP-6260)

FT76 L/H LEX Intermediate SPAR Life Limit, (ECP-6261)

RH LEX CLOSURE AT Y301 LIFE LIMIT, (ECP-6263)

FT50 Y436 BULKHEAD LIFE LIMIT, (ECP-6264)

FT76 Aft Windshield Attach Bolt Life Limit, (ECP-6269)  
 FT76 LH LEX Closure at Y265, (ECP-6270)

FT76 NLG Retract Actuator Supports & X7 Keel, (ECP-6271)

FT77 Wing Inboard Closure Rib Life Limit, (ECP-6275)

FT76 LEX Intermediate Spar at Y301 Life Limit, (ECP-6276)

FT76 Canopy Sill Longerons and Upper Nose Barrel Longerons at Y204 Life Limit, (ECP-6278)

MLG Wheel Well Drainage, (ECP-6280)  
 TEF SHROUD LINK, (ECP-6284)

FT77 Lower Wing Skin Splice Fitting Life Limit, (ECP-6285)

Redesign the brake piston assembly to improve reliability  
 Redesign the ice detector system to reduce the number of false positives  
 Add a layer of corrosion preventative between the fuel probe and its mounting to prevent galvanic corrosion between dissimilar metals  
 Procures Common Preamps not funded in Lot 24  
 Failure analysis of FT76 Test Article bolt crack has resulted in a safe life determination of less than 6000 hours  
 To improve reliability of the Hydraulic components failures  
 Incorporating a new designed IFR probe  
 Incorporating a new designed LGCU unit including software upgrade  
 Modifies the aircraft to correct structural fatigue problems caused by degraded bay over-temperature  
 Failure analysis of cracks in the Mid-board Pylon Fitting discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour specification requirement  
 Redesign/Re-qualify of ECS hardware to actual A/C Environment  
 Full life retrofit fix of the AFT engine mount pin  
 Software Upgrade  
 To support the F/A18 Interconnect Bob (IBOX), FLIR Power Supplies, and Strobe light power Supplies. (NRE & Data)  
 To redesign the Hornet Feather Wear Pad Retention System. The Hornet Feather pads have caused excessive wear of the engines afterburner ring on flight test a/c  
 Safety ECP, the RRHB (PLS) premature releases cause aircraft, flight deck, and personnel hazard condition  
 Safety ECP, this ECP adds a walkway mat to the Right Hand Lex to replace existing anti-skid surface  
 Cracks have been found on the Inlet Nacelle Bleed Plate caused by acoustic fatigue  
 The throttle module sealing improvement adds various seals to the throttle electronics module to permanently prevent water intrusion into the box  
 Fuselage and Horizontal Stabilizer are rubbing against each other under aerodynamic load  
 Redesign the 74A328283 ECS Floor Support so that adequate clearance exists between the APU Surge Control Valve and the ECS Floor Support to meet specification clearance requirements  
 To redesign the web of the aft fuselage outboard former at Y679 resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article  
 To redesign the LHS MLG Sidebrace/Retract Actuator Fitting resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article.  
 Failure analysis of an FT76 Test Article crack discovered during teardown has resulted in a safe life determination of 5200 SFH  
 During FT77 testing, at 3188 SFH inspections revealed broken lock-wires between fasteners thru the inbd closure rib. Additionally, several other fasteners had backed out of holes thru the inbd closure rib  
 Failure analysis of cracks on the Y301 Sheet Metal Routing Closure (74A305026-2005, -2006, -2009), discovered during teardown on the FT76 Test Article, has determined that the details do not meet full life requirements  
 Cracks were found on the Y520 Former during the FT-50 Teardown. The cracks were located in the LHS former flange to web fillet radius, common to the lower drop link connection to the former  
 This ECP will cover the retrofit incorporation of Vent Tube Cap into Tank #1 to prevent leaks  
 Missing, inconsistent, and potentially unclear engineering drawing callouts for wet installation of nut plates may have contributed to missing face surface sealant on subcontractor installed nut plates  
 Failure analysis of cracks on the Bay 3-4 Avionics Door Seal Support (74A305268-2002, -2003, -2004), discovered during teardown on the FT76 Test Article, has determined that the details do not meet full life requirements  
 Failure of HFC-125 Fire Bottle mounts identified during AFC-440 Fire Bottle Cartridge Retrofit on some A/C. The F/A-18E/F contract requires a 6000-hour service life. This ECP corrects this condition  
 Revise five (5) fastener hole callouts from Class 2X fit to Interference fit for Production. Interim Production/Retrofit- Install five (5) 1st Oversize Interference fit fasteners  
 Cracks were found on the Y491 Bulkhead during the FT-50 Teardown. The cracks were located at the access hole at Z100 and the keel web attachment. Test Correlation analysis indicates the Safe Life is 4550 SFH. The F/A-18E/F contract requires a 6000-hour service life  
 Failure analysis of two cracks LH LEX Intermediate Spar at the CY286 Rib attachment, discovered during teardown on the FT76 Test Article, has determined that the spar does not meet full life requirements.  
 Failure analysis of cracks on the RH LEX Closure at Y301, discovered during teardown on the FT76 Test Article, has determined that the closure does not meet full life requirements  
 During tear down of the FT-50 test article cracks were found on the Y436 Center Bulkhead (74A325203 -2005) at the attachment of the dorsal deck stiffener on both the LH and RH side. Test Correlation analysis indicates the Safe Life is 3400 SFH. The F/A-18E/F contract requires a 6000-hour service life  
 Failure analysis performed on a crack on the LH Aft Windshield Attach Bolt has determined that this bolt does not meet full life requirements  
 Failure analysis of the cracks at the LH LEX Closure at Y265 (CY260 Rib Attachment), discovered during teardown on the FT76 Test Article, has determined that the spar does not meet full life requirements  
 Retrofit is to replace (19) 3/16 in. Diameter Fasteners (Class 2X) With (9) 2nd Oversize in. Diameter Interference Fit Fasteners & (10) in. Diameter Interference Fit Fasteners  
 Failure analysis of three cracks in the Inboard Closure Rib at two hydraulic pass through holes, discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour specification requirement  
 Failure analysis of a crack in the LEX Intermediate Spar Integral Stiffener @ Y301, discovered during teardown on the FT76 Test Article, has determined that the detail does not meet full life requirements  
 Failure analysis of cracks in the Canopy Sill Longerons and the Upper Nose Barrel Longerons @ Y204 discovered during teardown on the FT76 Test Article, has determined that the details do not meet full life requirements  
 Water retention in the recesses of the trailing edge casting common to the L/RHS Strut Doors  
 Recent analysis to determine root cause of fleet failures has led to the finding that the TEF inboard link does not meet static requirement and loose jam nuts and maximum rigging length of the lower clevis exacerbate the problem  
 Failure analysis of a drain hole crack in the Wing Lower Splice Fitting discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour specification requirement

Low Speed Loss of Normal Brakes with Anti-Skid On, [\(ECP-6286\)](#)

FT76 Avionics Bay 3 & 4 Door Hinges, [\(ECP-6292\)](#)

FT50 18K Access Panel Edge Stiffener Redesign, [\(ECP-6293\)](#)

FT77 Trailing Edge Flap Actuator Rib Life Limit, [\(ECP-6294\)](#)

FT77 Wing Spar 6 Life Limit, [\(ECP-6295\)](#)

Inadequate Clearance Between APU SCV and Structure, [\(ECP-6211\)](#)

EA-18G Correction of Operational Test Discrepancies [\(ECP-XXX41\)](#)

AESA OBSOLENCES PARTS [\(ECP-XXX\)](#)

FT50 18K Y577 Former Redesign [\(ECP-6303R1\)](#)

FT50 18K Web and Wing Drag Longeron Redesign [\(ECP-6304R1\)](#)

FT50 18K Y618 Inboard Former (74A342314) Redesign [\(ECP-6306R1\)](#)

Redesign of Backrest Operation Plunger MBEU148542 - Safety [\(ECP-9384MB\)](#)

LEX Retrofit Bundle ECPs (6261/6263/6270/6276) [\(ECP-6310\)](#)

FT50 Y591 BULKHEAD AT SIDE LONGERON LIFE LIMIT [\(ECP-6287\)](#)

DOORS DRAINAGE ISSUES [\(ECP-XXX44\)](#)

FT50 STRUCTURAL RELATED ISSUES [\(ECP-XXX45\)](#)

CRU-99/A Solid-State Oxygen Monitor (SSOM) [\(ECP-590\)](#)

ARRESTING HOOK FAILURES [\(ECP-XXX46\)](#)

Y618 INBRD FORMER NEAR KEEL LONGERON ARRESTMENT LOAD [\(ECP-XXX42\)](#)

AIR VEHICLE SAFE LIFE FATIGUE MODIFICATIONS [\(ECP-XXX43\)](#)

FT78 FLIGHT CONTROL FAILURES [\(ECP-XXX47\)](#)

Tank 3 Bladder, Floor Foam and Backing Board [\(ECP-6018\)](#)

Nacelle Outboard Bleed Drainage [\(ECP-6172\)](#)

Outer Wing Rib Cracks [\(ECP-6187\)](#)

Centerline Pylon Feed-Thru Assembly Interface [\(ECP-6185\)](#)

Engine Bay Door Strut Redesign [\(ECP-6089\)](#)

Each change has been or will be tested prior to installation in the F/A-18 and EA-18G

Some ECPs are "O" Level Installs

Some ECPs do not require kits, require installs and Non-Recurring efforts.

The aircraft specification requires that the brake control system shall provide a means of controlling brake pressure on all landing surfaces on which the aircraft is designed to operate. The control speed range shall be from maximum ground speed to the lowest speed compatible with ground handling. A condition has occurred on some fielded Skid Control Systems where the combination of left hand transducer and skid control unit results in loss of brakes during extended taxi operations with anti-skid ON

The Bay 3/4 Avionics Door Hinges and Hinge Pins were cracked at several tang locations and the Hinge Pins were broken at four locations. Some of these cracks were initially discovered after 12,000 SFH of fatigue testing and remaining anomalies during teardown of the FT76 Test Article. Failure analysis of FT76 Test Article crack resulted in a safe life determination of 2350 SFH

Cracks were found on the door edge stiffener at Y524 during the FT-50 Teardown. Test Correlation analysis indicates the Safe Life is 4500 SFH Failure analysis of a fastener hole crack in the TEF Actuator Fitting discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour service life

Failure analysis of a crack in the inboard radius of the spar discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour service life

Correct chafing condition between aircraft structural material and the APU SCV to prevent damage to the aircraft structure

Redesign / Modify system and / or subsystems discrepancies discovered during OPEVAL.

PEI FOAM pt 2

This ECP describes the effort to redesign the Y577 Former resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article

This ECP describes the effort to redesign the Web and Wing Drag Longeron resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article

This ECP describes the effort to redesign the Y618 Inboard Former resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article

Safety ECP incorporation a redesigned knurled and rounded top plunger backrest part# MBEU148542

Retrofit Only ECP to combine the retrofits originally proposed in ECPs 6261, 6263, 6270, and 6276 into a single ECP

Cracks were found on the Y591 Bulkhead (74A328312) during the FT-50 Teardown. The Y591 Bulkhead is a Maintenance Critical part.

Modification to correct door failures

To Correct A/C Fatigue related discrepancies as a result of FT-50 remaining issues

Safety improvement to the OBOGS oxygen system, providing an additional monitoring capabilities against Hypoxia resulting in safer flight operation.

To correct fleet discovered arresting hook failures

Modifies Y618 Former to prevent cracking

Modification to improve safe life fatigue issues

To correct flight control failuers discovered during FT78

This ECP identifies the effort to increase usable fuel and decrease trapped/unusable fuel in Tank #3 by revising the shape of the Tank Floor Foam, Backing Board & Fuel Cell

To prevent water entrapment in the area of the Nacelle structure

To incorporate a full-life rib into LRIP 1, 2 and 3, and FRP1 aircraft

This ECP will resolve plate thickness, plate receptacle orientation and aircraft wiring clocking in Retrofit

This ECP corrects the open forward engine bay door clearance problem with the ground during lateral engine remove and replace as required by the detail specification

Exhibit P-3a INDIVIDUAL MODIFICATION

MODIFICATION TITLE: **E/F CORRECTION OF OPERATIONAL DISCREPANCIES (OSIP 14-03)**

MODELS OF SYSTEM AFFECTED: **F/A-18E/F & EA-18G** TYPE MODIFICATION: **SAFETY /RELIABILITY/IMPROVE SAFETY /RELIABILITY/IMPROVEMENT**

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RD&amp;E</b>																					
<b>PROCUREMENT</b>																					
Installation Kits																					
ECP 6106R1 / Exhaust Overtemp Final Fix/Bard Stacks	223	16.0																		223	16.0
ECP 6114 / Aft ECS Cooling Fan	12	0.1																		12	0.1
ECP 6002 / FCC Processor Upgrade	28	1.3																		28	1.3
ECP 6104 / MLG Door Bushing Migration	32	0.1																		32	0.1
ECP 6088 / Aft Fuselage Outboard Former Fwd Flange @Y645																					
ECP 6194 / MLG Trunnion Bearing Loose Retention Nut	80	0.3																		80	0.3
ECP XXX2 / Long Stick Position Tx																					
ECP 6171 / Skin 12 Stiffner Back-up Structure	54	0.1																		54	0.1
ECP-6199 / Aft Fan Shutoff Valve																					
ECP XXX8 / Radar Altimeter Antenna Radome Delimitation					26	0.6														26	0.6
ECP 6193R1 Leading Edge Ext (LEX ) Lower Surface/Structure Cracks Redesign	89	23.9																		89	23.9
ECP 6145 / MLG Outboard Tire Door Clevis																					
ECP 6188 / Y436 Inlet Former	183	1.9																		183	1.9
ECP 6203 / FT50 Keel Beam Lower Cap	38	0.1																		38	0.1
ECP XX12 / FT50 Teardown Bulkhead Cracking											36	0.4	36	0.4	36	0.4	127	1.5		235	2.8
ECP 6229 FT50 18K Fuselage Outboard Former at Y645 Failure									60	0.1	36	0.1	36	0.1	98	0.2				230	0.5
ECP 6183 / FT50 Failure of Upper Wing Skin Splice Plate					36	*	36	*	15	*										87	*
ECP 6098C1 / DOOR 49 Replacement	12	0.2																		12	0.2
ECP 6068 / Horizontal Actuator Vocer Door 71	62	1.1																		62	1.1
ECP 6196C1 / MLG R/H Upper Planing Link Attach Fitting Failure	88	0.2																		88	0.2
ECP 6208 / LEX Vent Mechanism Support Assembly Rod end Clevis Failure	92	*	44	0.1																136	0.1
ECP 6216 / LDS Fuel Wash Filter	98	0.6																		98	0.6
ECP 6255 / ECS Ejector Cracks					36	0.3														36	0.3
ECP-6321 MLG DOOR HINGE PINS STANDARD HARDWARE CONVERSION					36	0.1	36	0.1	36	0.1	36	0.1	36	0.1	50	0.1				230	0.5
ECP 6217 / Cockpit Pressure Warning System (CPWS)	218	2.0																		218	2.0
ECP 6235 / MLG Strut Door Departures	136	0.8			36	*														172	0.9
ECP XX21 / HOL Follow-on Upgrades Lot 25 & Up																					
ECP XX22 / 18E Follow-on upgrades Lot 24 & Below																					
ECP 6076 / MLG Proximity Switches & Sidebrace Downlock Mechanism	14	0.1																		14	0.1
ECP-6190 / Fuel System Ground Pressurization Tube Water Entrapment	54	0.1																		54	0.1
ECP-6191 / Wing Modification for Transonic Flying Qualities Improvement																					
ECP-6198 / Radar Bay Vent Valve Fail - MSP 862	76	*			5	*														81	*
ECP-6206 / Y679 Former Boot Strap Interface Fillet Seal Missing	36	0.1			8	*														44	0.1
ECP-6209 / ECS Cooling Duct Grounding Strap																					
ECP-XX23 / ARS Lighting					36	0.1	36	0.1	36	0.1	36	0.1	8	*						152	0.3
ECP-XX24 / NVG Friendly NAV Lighting					36	*	36	*	36	*	36	*	36	*	47	*				227	0.1
ECP-6221/ Bay \$L-Y357 Bulkhead Horizontal Flange Life Limit	162	1.6																		162	1.6
ECP-6262 / Y591 Bulkhead Missing Fasteners at Keel Longeron			36	0.4	36	0.8	36	0.4	36	0.4	35	0.4								179	2.5
ECP-XX26 / Fatigue Testing - Longeron																					
ECP-XX27 / Fatigue Testing - Teardown					36	0.3														36	0.3
ECP-6241/ Wing-Aft Shear Tie Bushing Migration	106	0.1																		106	0.1
ECP-XX29/ HS1 Reservoir Chafe																					
ECP-6213 / TEF Clip Fatigue Prevention	36	0.1			34	0.4	36	0.4	34	0.4										140	1.2
ECP-XX30 / Boarding Ladder Sensors Improvement					36	0.2														36	0.2
ECP-XXX31 / Main Wheel Brake Changes																					
ECP-XX32 / Inlet Ice Detector Hardware Redesign					36	*														36	*
ECP-6219 / Wing - Fuel Probe Corrosion Protection	143	0.1																		143	0.1
ECP-6034 / Procures Common Preamps not funded in Lot 24	36	6.0	4	1.0																40	7.0
ECP-6258/FT76 Forward Windshield Bolt Life Limit			76	*	36	*														112	0.1
ECP-XX33/ Hydraulics Components Improvement					36	*	36	*	36	*	36	*	36	*	36	*	14	*		230	0.2
ECP-6319 IN-FLIGHT REFUELING (IFR) PROBE LINKAGE REDESIGN					36	0.3	36	0.3	36	0.3	36	0.3	36	0.3	47	0.4				227	1.8
ECP-6320 LANDING GEAR CONTROL UNIT (LGCU) MIT UPGRADE					36	1.1	36	0.2	36	0.2	36	0.2	36	0.2	47	0.3				227	2.1
ECP-XX36/ Fire Bottle Bay Over-Temperature					36	0.1														36	0.1
ECP-6282 / FT77 Wing Pylon Changes					36	0.7	36	0.8	36	0.8	36	0.8	8	0.5		0.4				152	4.0
ECP-XX38 / ECS Componets Increase Vibration Load Issues					36	0.3	36	0.3	36	0.3	36	0.3	36	0.3	40	0.3				220	1.6
ECP-XX39 / AFT Engine Mount Attach Fitting									62	0.2	62	0.2	60	0.2	46	0.1				230	0.7
ECP-XX40 / V38 OFF					36	0.1	36	0.1	36	0.1	36	0.1								144	0.3
ECP-JAX-SE-027 / G81S00004 SE UPGRADE																					
ECP-6075/ Hornet Feather (Vane) Wear Pad Retention System Resign																					
ECP-IRRHB-0147/ Repeatable Release Holdback Bar	85	0.4																		85	0.4
ECP-6283/ LEX Right Hand Walkway Mat	268	0.3																		268	0.3
ECP-6227C1/ Intel Nacelle Bleed Plate Crack					36	0.5														36	0.5
ECP-6228/ Throttle Electronics Module Seal Improvement					36	0.5	36	0.5	36	0.5	22	0.3								130	1.9
ECP-6234 / Horizontal Stabalator Fuselage Rubbing	20	0.3			20	0.6														40	0.9
ECP-6238/ Inadequate Clearance Between APU Surge Control Valve & Y568 Support	36	*																		36	*
ECP-6239/ FT 50 18K Fuselage Outboard Formal @Y679 Failure					36	0.1	36	0.1	36	0.1	36	0.1	36	0.1	43	0.1				223	0.5
ECP-6240 / FT50 18K MLG Sidebrace Fitting Failure					36	*	36	*	36	*	36	*	36	*	36	*	45	*		225	0.1
ECP-6243 / FT76 Jackpoint Support Fitting Life Limit					14	*														14	*
ECP-6245 / INBOARD WING CLOSURE BOLT, ANTI-ROTATION RETAINER					36	0.1	36	0.1	13	*										85	0.2
ECP-6246 / FT76 Y301 Sheet Metal Routing Closure Life Limit					6	*														6	*
ECP-6247 / FT50 18K Y520 Former Cracks at Lower Drop Link			60	0.2			60	0.2	45	0.1										165	0.5
ECP-6248 / Tank 1 Improvements - Vent Cap Addition																					



**Exhibit P-3a** **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **CORE AVIONICS IMPROVEMENTS / UPGRADES (OSIP 023-04)**

MODELS OF SYSTEM AFFECTED: **F/A-18A-F**

TYPE MODIFICATION: **Capability and Reliability Improvements**

**DESCRIPTION/JUSTIFICATION:**

This OSIP is required to upgrade retrofits and improvements to various pieces of avionics equipment that have been or are being incorporated into production aircraft and to provide Mission Planning updates. Specifically for Mission Planning, the F/A-18 Unique Planning Component (UPC) for the Joint Mission Planning system (JMPS) must implement frequent software changes in conjunction with production aircraft modifications. The JMPS UPC changes required in conjunction with System Configuration Set (SCS) changes must include software regression tests to ensure proper operation and integration with other aircraft systems in JMPS components, and the core mission planning equipment and software procured elsewhere within the Navy budget. This OSIP currently includes a requirement to retrofit a Solid State Recorder (SSR) and Upgraded Solid State Recorder (USSR) into F/A-18E/F aircraft. SSR's do not provide 8X10 display recording which is captured with this upgrade. This retrofit leverages non-recurring integration for Lot 29 aircraft production incorporation, replacing the current Cockpit Video Recording System (CVRS) recorder. This OSIP also includes a requirement to retrofit the Deployable Flight Incident recorder System (DIFRS) to address the issue of the current COSPAT SARSAT satellite becoming obsolete. This old satellite frequency will be replaced and the DIFRS box will be modified to work with a new satellite Beacon frequency. To support updates to Operational Flight Program (OFP) for on-going aircraft modernization and modification efforts necessitate periodic software releases. The procurement of SCS is not a stand alone cost but integration for the overall improvement to the end item to allow the integration of new capabilities and or performances to be complete. The SCS builds anticipated are used to support retrofit hardware configuration changes and the accompanying software change and associated testing driven by the APN5 funded OSIP's. SCS builds will include 20X,21X,23X,H4E,H5E, and H7E. SCS build integration will comprise of Operational Flight Programs (OFP), Support Equipment Test Program Sets (TPS) Updates, functional retrofit implementation of aircrew and maintenance training systems, OFP Memory Loader Verifier Set Personal Computer Memory Card International Association (BCMCIA) cards, associated software licenses and data rights and publication updates.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

A Mission Planning system supporting F/A-18A-F is currently fielded. A Joint Mission Planning System (JMPS) was developed and fielded for F/A-18A-F in the first quarter fiscal year 2005 with 19C and H2E+. The Solid State Recorder retrofit was approved as a Congressional new start in August 2004. Validation/Verification for the SSR was completed in the second and third quarter fiscal year March 2005, with retrofit on two squadrons completed in the fourth quarter of fiscal year 2005. SCSs are scheduled for release to the fleet on an annual basis or as needed to fulfill emerging fleet requirements. FY07 EMERGENCY SUPPLEMENTAL : Solid State Recorder (SSR) (\$2.304M).

**FINANCIAL PLAN (TOA, \$ in Millions):**

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
*A* Kits E/F Solid State Recorder & USSR	112	3.9	24	1.2			4	0.1	28	1.0	30	1.1	31	1.2	32	1.3				261	9.8
INSTALLATION KITS N/R																					
Solid State Recorder & USSR		4.9		5.0		2.1		1.1													13.1
DIFRS																					
INSTALLATION EQUIP.																					
MP/UPC		20.9		3.8		0.7		*		2.3		1.6		2.5		2.3					34.1
*B* Kits E/F Solid State Recorder & USSR	112	3.9	24	1.2			4	0.3	28	2.2	30	2.4	31	2.5	32	2.7				261	15.1
SCS																					
20X				0.2																	0.2
21X								0.8		0.2											0.9
23X										0.2		0.8									1.0
H4E						0.2															0.2
H5E								0.2													0.2
H7E												0.2									0.2
INSTALLATION EQUIP. N/R																					
ENGINEERING CHANGE ORDERS																					
DATA		0.7																			0.7
TRAINING EQUIPMENT																					
SUPPORT EQUIPMENT		0.8																			0.8
ILS		2.3		0.1		0.3		0.2		0.1		*		*		*					3.2
OTHER SUPPORT				0.3		0.2		0.1													0.5
INTERIM CONTRACT SUPPORT																					
Installation Cost	48	0.4					4	0.1	28	*	30	0.1	31	*	32	*				173	0.6
<b>TOTAL PROCUREMENT</b>		<b>37.8</b>		<b>11.6</b>		<b>3.4</b>		<b>2.8</b>		<b>6.0</b>		<b>6.2</b>		<b>6.3</b>		<b>6.3</b>					<b>80.4</b>

**Notes:**

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K
3. Funding for MP/UPC previously budgeted in OSIP 19-94, Common Configuration
4. FY07 Supplemental is an O level install.

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: F/A-18A-F MODIFICATION TITLE: CORE AVIONICS IMPROVEMENTS / UPGRADES (OSIP 23-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: PUBLIC/PRIVATE COMPETITION AND AT NAVAL AVIATION DEPOTS

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: Apr-09

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: Sep-09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (48) kits	48	0.4																	48	0.4
FY 2007 ( ) kits																				
FY 2008 ( ) kits																				
FY 2009 (4) kits							4	0.1											4	0.1
FY 2010 (28) kits									28	*									28	*
FY 2011 (30) kits											30	0.1							30	0.1
FY 2012 (31) kits													31	*					31	*
FY 2013 (32) kits															32	*			32	*
To Complete ( ) kits																				
<b>TOTAL</b>	<b>48</b>	<b>0.4</b>					<b>4</b>	<b>0.1</b>	<b>28</b>	<b>*</b>	<b>30</b>	<b>0.1</b>	<b>31</b>	<b>*</b>	<b>32</b>	<b>*</b>			<b>173</b>	<b>0.6</b>

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009			
		1	2	3	4	1	2	3	4	1	2	3	4
In	48									0	0	0	4
Out	48									0	0	0	4

	FY 2010				FY 2011				FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	7	7	7	7	7	7	8	8	8	8	8	7	8	8	8	8		173
Out	7	7	7	7	7	7	8	8	8	8	8	7	8	8	8	8		173

**Exhibit P-3a**

**INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **AESA/AN-APG-65/AN/APG-73 (OSIP 002-07)**

MODELS OF SYSTEM AFFECTED: **F/A-18 A/B/C/D/E/F** TYPE MODIFICATION: **AVIONICS UPGRADE**

DESCRIPTION/JUSTIFICATION:

The F/A-18E/F and EA-18G program has developed and integrated the AN/APG-79 Active Electronically Scanned Array (AESA) RADAR system for installation in Lot 26 and subsequent Block II, Super Hornet and Growler aircraft. The integration of the AN/APG-79 AESA RADAR system into the F/A-18E/F and EA18G greatly improves the weapon system's threat detection range, high resolution Synthetic Aperture RADAR (SAR) ground mapping and targeting capability, aircraft survivability and situational awareness. This OSIP also includes non-recurring for reliability and operational safety improvements into the AN/APG-65 and AN/APG-73 Radars. The APG-79 is a significantly more reliable radar system. ECP's identified are ECP-6038 Incorporates APG-79 into Lot 26 and subsequent aircraft, ECP-6279 AN/APG-79 (AESA) Radar Producibility Modification, ECP-6297 Radar Bias Converter (RBC) Start-Up Circuit Correction, and ECP-6298 RE102 EMI Correction.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Forward fit of the AN/APG-79 AESA RADAR system began with 8 units in Lot 27, 12 units in Lot 28 and 22 units in Lot 29. Beginning in Lot 30, all F/A-18 E/F and EA-18G aircraft will be forward fit with the AN/APG-79 AESA RADAR. This OSIP includes the retrofit of the AN/APG-79 AESA system into 135 Lot 26-29 F/A-18E/F aircraft previously outfitted with AN/APG-73. The procurement of kits will commence in FY08 with the first installation occurring in FY10. The installation of kits will be accomplished by a Fleet Support Team traveling to two locations (NAS Oceana and NAS Lemoore) and executing the retrofit or aircraft by squadron. This OSIP also includes funds to support ECP 508 that converts some AN/APG-65 radars to AN/APG-73 and non-recurring for reliability and operational safety improvements / obsolescence into the AN/APG-65 and AN/APG-73-RADAR's. FY07 Supplemental funding (\$5.720M) received for Expand 4/5 includes funding for software integration and to procure 34 Single Module Processing Elements (SMPE) for RUG II equipped aircraft.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
A KIT 1 - Radar Set (ECP-6038)					19	56.5	23	69.0	33	97.7	34	100.7	13	37.0	13	41.1			135	401.9	
A KIT 2 - Radome (ECP-6038)					19	1.9	23	2.3	33	3.3	34	3.4	13	1.3	13	1.3			135	13.5	
A KIT 3 - Modules (ECP-6279)					19	2.4	23	2.9	33	4.1	34	4.3	5	0.6					114	14.3	
Installation Kits N/R				8.6		3.8		0.9													13.3
Installation Equipment																					
B Kit -1 Elec Panel Connectors (ECP-6038)					19	1.0	23	1.2	33	1.7	34	1.7	13	0.7	13	0.7			135	6.8	
B Kit -3 (ECP-6279)																					
B Kit -4 Component/Install (ECP-6297)				17	0.1															17	0.1
B Kit -5 (ECP-6298)				20	0.6															20	0.6
B Kit - Expand 4/5 SMPE				34	2.4															34	2.4
Installation Equipment N/R																					
Engineering Change Orders				0.2		13.1		6.1		3.8		3.6		2.1		2.2					31.0
Data				*		1.9		1.1													2.9
Training																					
Support Equipment						0.5		0.3		0.4				0.3							1.4
ILS						0.4		0.1		0.1											0.6
Other Support				0.9		2.1		1.1		1.1		2.5		1.7		2.1					11.4
Interim Contractor Support																					
Installation Cost				71				76	3.5	92	4.3	132	6.1	136	6.3	44	2.1	39	2.5	590	24.8
<b>TOTAL PROCUREMENT</b>						12.9		83.4		88.4		116.4		50.0		49.4			2.5		525.0

- Notes:  
 1. Totals may not add due to rounding  
 2. FY07 no install costs for 71 kits

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: F/A-18A E/F MODIFICATION TITLE: AESA (OSIP 002-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: ONE KIT INSTALLED BY CONTRACTOR FOR VAL/VER, OTHER INSTALLS FIELD TEAM

ADMINISTRATIVE LEAD-TIME: 3 Months PRODUCTION LEAD-TIME: 12 Months

CONTRACT DATES: FY 2007: Nov-07 FY 2008: Jan-08 FY 2009: Jan-09

DELIVERY DATE: FY 2007: Dec-07 FY 2008: Jan-09 FY 2009: Jan-10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( 0) kits *																					
FY 2007 (71 ) kits			71	0.0																71	0.0
FY 2008 (76) kits							76	3.5												76	3.5
FY 2009 (92) kits									92	4.3										92	4.3
FY 2010 (132) kits											132	6.1								132	6.1
FY 2011 (136) kits													136	6.3						136	6.3
FY 2012 (44) kits															44	2.1				44	2.1
FY 2013 (39) kits																	39	2.5		39	2.5
To Complete ( ) kits																					
<b>TOTAL</b>			<b>71</b>	<b>0.0</b>			<b>76</b>	<b>3.5</b>	<b>92</b>	<b>4.3</b>	<b>132</b>	<b>6.1</b>	<b>136</b>	<b>6.3</b>	<b>44</b>	<b>2.1</b>	<b>39</b>	<b>2.5</b>	<b>590</b>	<b>24.8</b>	

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
0	17		20	34					19	19	19	19	23	23	23	23
0	17		20	34					19	19	19	19	23	23	23	23

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4		
In	33	33	33	33	34	34	34	34	11	11	11	11	39	590
Out	33	33	33	33	34	34	34	34	11	11	11	11	39	590

BUDGET ITEM JUSTIFICATION SHEET											DATE:
P-40											February 2008
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE				
Aircraft Procurement, Navy / APN5 Aircraft Modifications							052600, H-46 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
QUANTITY											
COST (In Millions)	375.3	A	135.2	23.6	34.6	36.0	36.3	41.0		2.3	684.3

DESCRIPTION: This line item funds modifications to the H-46 aircraft. The H-46 is a twin-turbine powered dual-piloted tandem-rotor helicopter. The cabin contains provisions for accommodating 25 troops and crew members. The cabin also contains an integral cargo and rescue system. The overall goal of the modification budget in FY2009 is to keep the H-46 a viable platform until a replacement aircraft can be fielded. H-46 helicopters are used by the Marine Corps for troop transport and search and rescue missions. USMC inventory: (220) CH-46E + (3) HH-46D. (24) of the (220) CH-46E's are reserve aircraft. Original design service life was 10,000 hours. It was subsequently extended to 12,500 hours on 18 Dec 1992 and to 15,000 hours on 16 Feb 1996. Aircraft will continue to be flown past 15,000 flight hours on an age exploration program.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
025-97 SAFETY IMPROVEMENT	45.7	31.5	2.1						2.3	81.6
028-99 ENGINE CONTROL SYSTEM	48.6	8.4								57.0
029-99 ELECTRICAL SYSTEMS UPGRADE	6.6	0.1								6.7
015-01 ERIP	238.5	37.6	4.0							280.1
010-03 AIRCRAFT INTEGRATED MAINTENANCE SYSTEM	26.6	5.6								32.2
011-05 LIGHTWEIGHT COCKPIT SEATS	9.2	5.8	1.7							16.7
018-07 H-46 GASSP		46.2	15.8	34.6	36.0	36.3	41.0			210.0
TOTAL	375.3	135.2	23.6	34.6	36.0	36.3	41.0		2.3	684.3

1. FY2007 funding total includes \$89.0M received in GWOT supplemental.
2. FY2008 funding totals do not include \$ 35.1M previously requested for current FY2008 GWOT requirements.

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODIFICATION TITLE: H-46 GASSP( OSIP 018-07 )

MODELS OF SYSTEMS AFFECTED: H-46 SERIES TYPE MODIFICATION: SAFETY (HONA Category A)

DESCRIPTION / JUSTIFICATION: Provides targeted initiatives to remedy the top age-related safety and reliability issues and to address the heavy wear-and-tear effects of high-tempo GWOT operations on H-46 airframes and subsystems in order to ensure safe, reliable and effective aircraft operation throughout the USMC Medium Lift transition period. In 2006, the average age of the H-46 helicopter is 39 years, and CH-46E squadrons deployed in support of GWOT have been flying in excess of 400% of planned utilization rate, creating a set of conditions that jeopardize the safety and reliability of the H-46 fleet. The H-46 Geriatric Aircraft Safety and Sustainment Program is driven by the H-46 Age Exploration Program, Systems Safety Working Group and other Fleet forums and provides redesign and modernization efforts in the following areas:

1. Redesigned and modernized wiring harnesses in airframe areas subject to high levels of heat, sand contamination and/or vibration.
2. Redesigned and modernized hydraulics subsystems using common or COTS components.
3. Redesigned and improved portions of airframe structure subject to high levels of fatigue, corrosion and other stress.
4. Improved and modernized critical avionics, aircraft survival equipment (ASE) and other aircraft systems to resolve obsolescence, reliability or safety issues using common, previously qualified or COTS solutions. This initiative replaces components that are no longer supported in the supply system or are high maintenance degraders with modern, digital components maximizing commonality with other Naval aircraft to improve reliability, increase functionality and capabilities.
5. NRE is underway for Infrared Suppression System for the Aircraft.
6. NRE is underway for Ramp Gun Mounts.
7. NRE is underway for Wire Strike Protection.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: NRE efforts are currently underway. Contracts for integration testing, prototype kits and production options will be awarded in FY2008. Prototype kit validation and verification will be performed in FY2008 and production installs will commence in FY2009.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
GASSP A-kit					3	2.0	21	13.6	20	13.436	20	13.716	20	13.944					84	56.7	
Provisioning A-Kit - IR Suppression			154	1.3															154	1.3	
Wire Strike A-kit			156	4.5															156	4.5	
Provisioning A-Kit Mission Gear Ramp Mount			188	0.2															188	0.2	
INSTALLATION KITS N/R				12.4		9.4		2.4													24.2
INSTALL EQUIPMENT																					
IR Suppression B-Kit			64	15.2															64	15.2	
Mission Gear Ramp Mount B-Kit			100	1.4															100	1.4	
INSTALL EQUIPMENT N/R				4.2																	4.2
ECO				0.3																	0.3
DATA				0.2				0.2		0.2		0.4		0.2							1.1
TRAINING EQUIP				*			2	0.9											2	0.9	
SUPPORT EQUIP				0.7				0.5		0.3		0.5		0.9							2.9
ILS				0.2				0.3		0.3		0.3		0.3							1.4
OTHER SUPPORT				4.3		0.8		1.5		1.3		1.6		1.5							11.0
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST				1.4	55	3.7	120	15.2	21	20.4	20	19.8	24	24.2						240	84.7
<b>TOTAL PROCUREMENT</b>				<b>46.2</b>		<b>15.8</b>		<b>34.6</b>		<b>36.0</b>		<b>36.3</b>		<b>41.0</b>							<b>210.0</b>

Asterisk (\*) indicates amount value less than \$51K  
 \*Two trainer kits are being purchased in FY09. Of these two kits, one is for a maintenance trainer and requires depot level installation. The other is for an aircrew procedures trainer and does not require depot level installation.  
 \* FY 2007 PROCUREMENT KITS AND INSTALLS FUNDED WITH FY 2007 SUPPLEMENTAL

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: H-46 GASSP( OSIP 018-07 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT & Concurrent with Depot Level Maintenance

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Nov-07 FY 2009 Nov-08

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Mar-08 FY 2009 Mar-09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					0
FY 2007 ( ) kits																					0
FY 2008 (3) kits					3	3.7															3
FY 2009 (21) kits							16	15.2	5	4.9											21
FY 2010 (20) kits									16	15.5	4	4.0									20
FY 2011 (20) kits											16	15.8	4	4.0							20
FY 2012 (20) kits													20	20.2							20
FY 2013 ( ) kits																					0
FY TO COMPLETE ( ) kits																					0
<b>Total</b>		0	0.0		0	0.0	3	3.7	16	15.2	21	20.4	20	19.8	24	24.2	0	0.0	0	0.0	84

\*Two trainer kits are being purchased in FY09. Of these two kits, one is for a maintenance trainer and requires depot level installation.

The other is for an aircrew procedures trainer and does not require depot level installation.

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							1	2	1	3	6	6	6	5	5	5	5	5	5	5	5
Out							1	1	1	1	3	6	6	6	5	5	6	5	5	5	5

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	6	6	6	6						84
Out	5	6	6	6	6					84

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP 018-07 WIRE STRIKE (WSPS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT & Concurrent with Depot Level Maintenance

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: Oct-07 Nov-08

DELIVERY DATE: Mar-08 Mar-09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					0
FY 2007 (156) kits			1.4		52		104														156
FY 2008 ( ) kits																					0
FY 2009 ( ) kits																					0
FY 2010 ( ) kits																					0
FY 2011 ( ) kits																					0
FY 2012 ( ) kits																					0
FY 2013 ( ) kits																					0
FY TO COMPLETE ( ) kits																					0
<b>Total</b>		0	0.0	0	1.4	52	0.0	104	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	156

\*FY 2007 PROCUREMENT KITS AND INSTALLS FUNDED WITH FY 2007 SUPPLEMENTAL

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In								26	26	26	26	26									
Out								26	26	26	26	26	26								

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										156
Out										156

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY						P-1 ITEM NOMENCLATURE						
<b>Aircraft Procurement, Navy / APN5 Aircraft Modifications</b>						<b>052700, AH-1W SERIES</b>						
Program Element for Code B Items:						Other Related Program Elements						
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	437.6	A	46.6	1.4	6.4	2.0	2.0	2.1	2.1	172.3	672.4	

DESCRIPTION: This line item funds modifications to the AH-1W aircraft. Modifications prior to FY 1997 were funded in the H-1 Series P-1 line item. In FY09 there are 166 AH-1W's. The AH-1W is a tandem set, two place (pilot and gunner/co-pilot) attack helicopter designed and built to provide the high speed and maneuverability required by the attack mission. The armament of the AH-1W includes the SIDEWINDER, TOW, and HELLFIRE missile systems, a chin-mounted 20mm turret gun, and wide variety of forward firing and gravity released external stores. The overall goal of the modifications budgeted in FY 2009 is to continue to fulfill the operational requirements to detect, identify and destroy tactical sized armored targets with precision guided munitions during the day, at night, and during adverse weather, as well as providing enhanced conventional weapons delivery by utilizing the systems laser ranging and designating system. Additionally, modifications to eliminate safety hazards and remedy obsolescence issues and improve reliability are part of this program. The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
016-98 AH-1W APR-39 A(V)2	62.3	14.5	1.2	0.4						78.4
013-00 AH-1W A/C & T700 ENG	24.6	30.3	0.2						139.0	194.1
002-03 AH-1W 20MM LINKLESS FEED	9.8	1.8		6.0	2.0	2.0	2.1	2.1	33.3	59.1
Inactive OSIPs	340.9									340.9
<b>TOTAL</b>	<b>437.6</b>	<b>46.6</b>	<b>1.4</b>	<b>6.4</b>	<b>2.0</b>	<b>2.0</b>	<b>2.1</b>	<b>2.1</b>	<b>172.3</b>	<b>672.4</b>

1. FY2007 funding total includes \$21.1M received in GWOT supplemental.
2. FY2008 funding totals do not include \$67.0 previously requested for current FY2008 GWOT requirements.

MODIFICATION TITLE: AH-1W 20MM LINKLESS FEED( OSIP 002-03 )

MODELS OF SYSTEMS AFFECTED: AH-1W/AH-1Z TYPE MODIFICATION: SURVIVABILITY

DESCRIPTION / JUSTIFICATION: The U.S Marine Corps (USMC) has an operational requirement for conventional weapons delivery. This initiative will replace the current feeder assembly with one that utilizes linkless, bulk 20MM ammunition common to all other DoN 20MM weapons system improvements (F/A-18, F-14, CWIS). The ammo can/feeder assembly is the highest reliability degrader in the gun system. In addition this OSIP provides for additional modifications, enhance lubrication system/methodology, laser pointers, improved turret test console and improved barrel supports that will significantly increase the accuracy and reliability of this critical weapons system and enhance the survivability of the flight crew. The implementation of this modification will enhance the warfighter's capability to place more rounds on target by eliminating gun jamming significantly increasing reliability. Additionally, improvements to increase reliability and accuracy of AH-1W/AH-1Z mission and rocket weapons systems will be incorporated into this OSIP. This modification will be carried forward and must be forward compatible to the AH-1Z.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This initiative will be implemented by issuance of a new contract based on open competition between several manufacturers of 20MM Weapons System Improvements technology. Contract Awarded 1st quarter of FY07. Production installations, which are O-level installs, are forecasted to commence in the 4th quarter of FY08.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RDT&E																				
PROCUREMENT																				
INSTALLATION KITS																				
INSTALLATION KITS N/R																				
INSTALL EQUIPMENT																				
Linkless Feed Assembly and Loader	3	3.6	1	0.5			14	3.2	1	0.4	1	0.5	1	0.5	1	0.5	161	28.4	183	37.6
INSTALL EQUIPMENT N/R		0.6																		.6
ECO																				
Engineering Change Orders		0.1																		.1
DATA		0.1					0.3		0.1		0.1		0.1		0.1				0.1	.9
TRAINING EQUIP		0.1					0.5		0.1										0.7	1.4
SUPPORT EQUIP	3	1.7					5	0.5	*	0.5	*		*		*		48	1.1	56	3.3
ILS		1.4		0.2			0.5		0.6		0.6		0.7		0.7				1.5	6.2
OTHER SUPPORT		2.0		1.1			0.9		0.8		0.8		0.8		0.9				1.5	8.9
INTERIM CONTRACTOR SUPPORT																				
INSTALLATION COST	5	0.2																		5
TOTAL PROCUREMENT	11	9.8	1	1.8			19	6.0	1	2.0	1	2.0	1	2.1	1	2.1	209	33.3	244	59.1

Asterisk (\*) indicates amount value less than \$51K

NOTE: The 183 represented in the quantity total for Linkless Feed Assembly consists of 140 AH-1W's, 3 AH-1W prototypes, and 40 AH-1Z.

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							052800, H-53 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	521.8	A	237.0	51.7	56.4	36.3	45.4	46.5	46.6	217.6	1259.3	

DESCRIPTION: This line item funds modifications to the CH-53D/CH-53E/MH-53E aircraft. The aircraft inventories to be modified vary by OSIP, dependant on kit modification production lead-time. The CH-53E is a seven blade main rotor and a four-blade canted tail rotor helicopter powered by three T64-GE-416A turbo shaft engines on the CH-53E while the CH-53D has six main rotor blades and two T64-GE-413 engines. The CH-53D/E aircraft are capable of both land and ship based transport of heavy equipment, supplies, and personnel. The MH-53E is similar to the CH-53E with additional capabilities for Airborne Mine Countermeasures (AMCM), Vertical On-Board Delivery (VOD), and Special Missions which require longer range and more precise navigation than that of the CH-53E. The overall goal of the modifications budgeted in FY09 was improved communication and navigation, integrated mechanical diagnostics, degraded visual environment mitigation, survivability and sustainment initiatives, night vision capability, and fleet operation and safety performance in the H-53 community.

The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
012-92 HNVS	178.7	0.6	0.6	0.7	0.8	1.0	1.0	1.0	30.1	214.4
020-97 ATTEN. TRP SEATS FOR	51.0									51.0
007-98 INTEGRATED MECH DIAG	71.5	15.7	8.5	2.9	1.3	3.4	1.8	3.4	27.7	136.4
009-01 NACELES	15.0	0.4	0.5	2.9	2.6	2.4	2.5			26.3
010-05 H-53 ERIP	56.0	23.8	9.3	14.1	12.1	11.6	11.8	11.9	79.4	230.1
012-05 H-53 AMARC	7.0	5.6	3.4							16.0
015-05 H-53 MEDIVAC	17.2	13.0	3.0	3.2						36.4
008-06 H-53 A/C SUSTAINMENT	12.6	21.9	19.6	19.7	13.4	14.1	16.4	17.4	54.9	190.0
016-07 H-53 CNS/ATM		2.0								2.0
020-07 H-53 VDE		5.3								5.3
010-08 DIRCM		148.6	6.7	13.0	6.0	13.0	12.9	12.9	25.5	238.6
Inactive OSIPs	112.9									112.9
<b>TOTAL</b>	<b>408.9</b>	<b>237.0</b>	<b>51.7</b>	<b>56.4</b>	<b>36.3</b>	<b>45.4</b>	<b>46.5</b>	<b>46.6</b>	<b>217.6</b>	<b>1259.3</b>
RESERVE FUNDING INCLUDED IN TOTAL		7.1	7.3	7.4	7.5	7.7	7.8	8.0		

1. FY2007 funding total includes \$22.9M received in GWOT supplemental.
2. FY2008 funding total includes \$2.6M received in the 2008 Consolidated Appropriation Act, Division L.
3. FY2008 funding totals do not include \$91.5M previously requested for current FY2008 GWOT requirements.

MODIFICATION TITLE: INTEGRATED MECH DIAG( OSIP 007-98 )

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total TYPE MODIFICATION: SAFETY, READINESS AND MAINTAINABILITY

DESCRIPTION / JUSTIFICATION: IMD is a helicopter monitoring and diagnostics system that provides continuous on board monitoring and diagnostics of engine health, gearbox and drive train vibrations, oil debris, rotor track and balance. The crash protected Cockpit Voice and Flight Data recorder (CVFDR), an integral part of the IMD system, will perform the required function of a Flight Incident Recorder (FIR). Full incorporation of IMDS capabilities will allow rapid transition from the current costly philophies of the 70s to today's costwise initiatives and concepts. Lessons learned from this effort were incorporated into the solicitation for the fleet wide IMD effort with CH/MH-53E aircraft designated as the lead platforms. IMDS produces the aircraft interface required to implement military flight operations quality assurance (MFOQA), a capability designed to provide hazard monitoring and mitigation.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The CH-53E IMDS successfully completed operational evaluation (OPEVAL) in October 2005. The Milestone Decision Authority approved full-rate production for CH-53E IMDS in December 2004. MH-53E NRE & installs began FY07 with VAL/VER completion scheduled for 3rd Qtr FY08. Advanced diagnostics enhancements & airframe structural life extension database interfaces are being incorporated to provide comprehensive platform operational & maintenance status awareness to the Squadron Commanders & key decision makers.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AVC-5102 Panel Lens (LEAD)	1	.1																		1	0.1
Accelerometers	2	.2																		2	0.2
CH-53E A-Kits	81	24.1	29	8.8	6	1.8	5	1.5	1	.3	6	1.8	4	1.2	4	1.2				136	40.9
MH-53E Kits (A-kits)			2	0.7											1	.3	23	7.4		26	8.3
INSTALLATION KITS N/R		3.1		0.9																	4.0
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		.8		0.1																	0.8
TRAINING EQUIP		.3				.1															0.4
SUPPORT EQUIP		.7		0.3		.4					.1					.2				.2	1.9
ILS		2.5		0.1																	2.6
OTHER SUPPORT		34.1		2.4		5.5		1.0		1.0		1.0		.3		1.2			18.0	64.5	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	28	5.6	35	2.4	40	.7	22	.4	1	.1	6	.5	4	.3	5	.5	23	2.2		164	12.6
TOTAL PROCUREMENT	112	71.5	66	15.7	46	8.5	27	2.9	2	1.3	12	3.4	8	1.8	10	3.4	46	27.7		329	136.4

Note :

1. FY07 installation cost quantity includes one install for MH-53E NRE prototype.
2. Kits procured in FY05 and FY06 with supplemental funding are installed in FY07 and FY08.
3. Kits procured in FY07 with supplemental funding are installed in FY08 and FY09.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total MODIFICATION TITLE: INTEGRATED MECH DIAG( OSIP 007-98 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR INSTALLED

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2007 Mar 07 FY 2008 Mar-08 FY 2009 Mar-09

DELIVERY DATE: FY 2007 Sep 07 FY 2008 Sep 08 FY 2009 Sep 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS (83) kits	28	5.6	35		20														83	6	
FY 2007 (31) kits				2.4	14		17												31	2	
FY 2008 (6) kits					6	0.7													6	1	
FY 2009 (5) kits							5	0.4											5	0	
FY 2010 (1) kits									1	0.1									1	0	
FY 2011 (6) kits											6	0.5							6	0	
FY 2012 (4) kits													4	0.3					4	0	
FY 2013 (5) kits															5	0.5			5	1	
TO COMPLETE (23) kits																	23	2.2	23	2	
<b>Total</b>	<b>28</b>	<b>5.6</b>	<b>35</b>	<b>2.4</b>	<b>40</b>	<b>0.7</b>	<b>22</b>	<b>0.4</b>	<b>1</b>	<b>0.1</b>	<b>6</b>	<b>0.5</b>	<b>4</b>	<b>0.3</b>	<b>5</b>	<b>0.5</b>		<b>23</b>	<b>2.2</b>	<b>164</b>	<b>12.6</b>

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	28	6	7	11	11	8	10	11	11	8	9		5				1				6
Out	28	6	7	11	11	8	10	11	11	8	9		5				1				6

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In				4				5	23	164
Out				4				5	23	164

Note:

1. Kits procured in FY05 and FY06 with supplemental funding are installed in FY07 and FY08.
2. Kits procured in FY07 with supplemental funding are installed in FY08 and FY09.

Exhibit P-3a

MODIFICATION TITLE: NACELLES( OSIP 009-01 )

MODELS OF SYSTEMS AFFECTED: CH-53D(19), CH-53E(136), MH-53E(26), 181 Total TYPE MODIFICATION: MISSION/MISSION ENHANCEMENT

DESCRIPTION / JUSTIFICATION: This modification provides improvements to the engine nacelles which are intended to decrease the maintenance man-hours expended on nacelles repair and replacement. This modification will incorporate the forward and aft engine nacelles for the H-53.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Material quality defects were discovered in the first production lot. Technical data package was studied by the OEM. Contract awarded Feb 07 for Non-Recuring Engineering, Tooling and Val/Ver kits. Production to begin in FY09.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
CH/MH-53E KITS (Radian)	46	3.2																		46	3.2
CH/MH-53E KITS (TBD)							53	2.8	47	2.5	41	2.2	40	2.2						181	9.7
CH/MH-53E Kits - Val/Ver	2	0.1																		2	.1
INSTALLATION KITS N/R		5.8																			5.8
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		0.1																			.1
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT		5.7		0.4		0.5		0.1		0.2		0.2		0.3							7.4
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT	48	15.0		.4		.5	53	2.9	47	2.6	41	2.4	40	2.5						229	26.3

1. All installations are O-Level.

MODIFICATION TITLE: H-53 ERIP( OSIP 010-05 )

MODELS OF SYSTEMS AFFECTED: H-53 T64 Turbo-shaft engines TYPE MODIFICATION: SAFETY, READINESS AND MAINTAINABILITY

DESCRIPTION / JUSTIFICATION: The T64 Engine reliability Improvement Program upgrades top age related engine degraders, fatigue limiters, and performance degradation on the T64 engine. A concentrated effort is to upgrade the T64-416 engines to the T64-416A configuration by replacing components of the engine with improved hardware designs to increase reliability and reduce logistical requirements by conforming to one configuration. T64 engines will be modified to incorporate titanium nitride-coated compressor airfoils. Titanium nitride coating provides significantly improved durability and reliability for operation in austere environments. Degraded and obsolete components such as torque measuring gauges and other peculiar equipment will also be improved. The T64 Engine Air Particle Separator (EAPS) 360 Degree Seal effort will modify CH-53E, MH-53E and CH-53D aircraft to incorporate improved seals between the engine and the EAPS system to reduce the amount of particulate matter that bypasses the EAPS and enters the engine airstream. The current EAPS seal does not provide adequate protection in all operating environments. The improved EAPS seal is expected to eliminate the current sealing issues.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: 41 of 462 engines have been upgraded from the T64-416 to T64-416A configuration. T64-416A upgrade kits procured with FY04 Title IX Supplemental funding began installs in FY05. T64-416 and -416A engines began incorporating titanium nitride in FY04. T64-419 engines began incorporating titanium nitride in FY06. T64-413 engines began incorporating titanium nitride in FY07. The full rate production decision for the CH-53E EAPS seal occurred in FY07. The improved CH-53E EAPS seal design will be compatible with the MH-53E and CH-53D. Non-Recurring Engineering to modify CH-53D EAPS barrel sealing features is needed to incorporate the improved CH-53E EAPS seal.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RDT&E																				
PROCUREMENT																				
INSTALLATION KITS																				
INSTALLATION KITS N/R																				
INSTALL EQUIPMENT																				
416A CONVERSION KITS	21	2.7																	21	2.7
416A UPGRADE (GE)	84	12.4																	84	12.4
AIR STARTER KITS	8	0.2																	8	.2
COMPRESSOR ROTOR SET KITS	960	0.7																	960	.7
IMPROVED EAPS SEAL (SAC)			342	1.7	270	1.0													612	2.8
REL IMPROVEMENT KITS (GE)	38	3.2																	38	3.2
T2 HOUSING KICKSTAND (GE)	933	0.2																	933	.2
T64 COMP CASES FOR SUPPORT TIN	5	0.3																	5	.3
T64 ERIP Kits	42	6.4	104	16.6	43	6.1	67	10.7	42	9.1	40	8.8	40	9.0	41	9.6	477	26.3	896	102.6
TIN SETS (GE)	83	20.4					4	0.9	4	0.9	4	0.9	4	1.0	4	1.0	171	43.3	274	68.4
VG ACTUATOR KITS	1,100	*																	1,100	*
INSTALL EQUIPMENT N/R		3.2		0.5																3.7
ECO																				
DATA		1.0																		1.0
TRAINING EQUIP				*																*
SUPPORT EQUIP		2.2		2.1		0.2		0.3		0.2		0.2								5.2
ILS																				
OTHER SUPPORT		2.7		2.2		1.7		1.7		1.7		1.7		1.8		1.2		9.8		24.5
INTERIM CONTRACTOR SUPPORT																				
INSTALLATION COST	30	0.5	120	0.7	140	0.3	282	0.6	70	0.2									642	2.3
TOTAL PROCUREMENT	3,304	56.0	566	23.8	453	9.3	353	14.1	116	12.1	44	11.6	44	11.8	45	11.9	648	79.4	5,573	230.1

Asterisk (\*) indicates amount value less than \$51K

Note:  
1. Quantity of ERIP kits reflects 101 kits for CH-53D, 638 kits for CH-53E, 132 kits for MH-53E. Quantities reflect total engine inventory.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-53 T64 Turbo-shaft engines MODIFICATION TITLE: H-53 ERIP( OSIP 010-05 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS (30) kits	30	0.5																		30	1	
FY 2007 () kits																				0	0	
FY 2008 () kits																				0	0	
FY 2009 () kits																				0	0	
FY 2010 () kits																				0	0	
FY 2011 () kits																				0	0	
FY 2012 () kits																				0	0	
FY 2013 () kits																				0	0	
TO COMPLETE () kits																				0	0	
Total	30	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	30	0.5

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	30																					
Out	30																					

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										30
Out										30

Note:  
 1. 30 kits reflect 1 validation kit procured with FY04 Title IX funding and 29 kits in FY06. Kit procurements are reflected in "416A UPGRADE (GE)" budget line.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-53 T64 Turbo-shaft engines MODIFICATION TITLE: EAPS Improved Seal

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007 Feb 07 FY 2008 Feb-08 FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 May 07 FY 2008 May 08 FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
PRIOR YEARS () kits																					0	0	
FY 2007 (342) kits			120	0.7	140	0.3	82														342	1	
FY 2008 (270) kits							200	0.6	70	0.2											270	1	
FY 2009 () kits																						0	0
FY 2010 () kits																						0	0
FY 2011 () kits																						0	0
FY 2012 () kits																						0	0
FY 2013 () kits																						0	0
TO COMPLETE () kits																						0	0
Total		0	0.0	120	0.7	140	0.3	282	0.6	70	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	612	1.7

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In			60	60	0	0	70	70	70	71	71	70	70								
Out			60	60	0	0	70	70	70	71	71	70	70								

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										612
Out										612

MODIFICATION TITLE: H-53 A/C SUSTAINMENT ( OSIP 008-06 )

MODELS OF SYSTEMS AFFECTED: CH-53D, CH-53E, MH-53E TYPE MODIFICATION: MISSION/PERFORMANCE SUSTAINMENT

DESCRIPTION / JUSTIFICATION: The H-53 Aircraft are included in the Headquarters Marine Corps Aviation Plan through CY 2025. The H-53 Aircraft Sustainment Strategy targets initiatives to remedy the top age-related maintenance degraders, fatigue life limiters, and safety issues that impede the aircraft's ability to operate into the future. This program implements a concentrated effort to utilize improvements to the H-53 component obsolescence (e.g. Engine Air Particle Separator (EAPS) redesign), structural limitations (e.g. transition bulkhead and station 820 structural improvement), aircrew safety systems and program sustainment support. This effort will sustain the H-53 legacy fleet in an affordable manner until the H-53 follow-on aircraft becomes available.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The H-53 Sustainment Program Acquisition Strategy was approved by PEO(A) in March 2006, to be executed as four Abbreviated Acquisition Programs (AAPs) for (1) Fatigue, (2) Obsolescence, (3) Readiness, and (4) Safety. Each AAP consists of several independent projects, each of which has an independent platform effectivity, acquisition strategy, production lead time, production rate and quantity, and installation approach. Thus, they are not amenable to a "block upgrade" type approach. Each year of the program will involve non-recurring engineering (NRE) on some projects, leading to production and installation in out-years. Other projects require little or no NRE and can be acquired and installed quickly during maintenance.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
#2 ENGINE BACKFLOW (CH/MH-E)					2	0.1	60	1.8	60	1.9	20	0.7	20	0.8						162	5.2
ARC FAULT CIRCUIT BREAK (H-53)			74	0.5	30	0.3	30	0.3	30	0.3	30	0.4	36	0.5	15	0.3				245	2.7
COMMON GCU SHIP-SETS (H-53)			32	0.6	30	0.2	30	0.2	30	0.2	32	0.2	30	0.2	29	0.2				213	1.8
EAPS IMPROVEMENT KITS (CH/MH-E)					18	0.6	18	0.7	15	0.6	40	1.6	53	2.2	18	0.8				162	6.5
EMERGENCY EGRESS LIGHT (H-53)			50	0.9	22	0.5	40	1.0	12	0.3	11	0.3								135	3.1
HEELS (H-53) Congress Add					46	1.1														46	1.1
GYRO REPLACEMENT (CH-D)			40	1.4																40	1.4
GYRO REPLACEMENT (CH-D) Supp			32	1.2																32	1.2
KAPTON WIRING KITS (H-53)									1	0.2	2	0.4	5	0.9	12	2.1	96	26.5	116	30.0	
NGB IMPROVED SEAL KITS (H-53)	386	2.7	70	0.5																456	3.2
NLG DOOR BRACKET (H-53)	220	0.3																		220	0.3
OBSOLESCE COMPONENTS (H-53)			1	*	20	1.5	49	3.3	15	0.9	15	1.0	28	2.0	25	1.9	28	2.2	181	12.8	
RAMP CONVERSION KITS			35	*																35	*
ROTOR BLADE COATING (H-53)							32	1.1	39	1.3	39	1.3	45	1.6	39	1.5				194	6.8
TRANSITION BULKHEAD (CH/MH-E)	4	0.3	6	0.5	12	1.1	13	1.2	8	0.7	18	1.7	18	1.8	32	3.2	22	2.5	133	13.1	
TRDS FITTING KIT (CH/MH-E)			37	0.2	30	0.1	30	0.1	30	0.1	20	0.1	15	0.1						162	0.7
WIRING DIAGNOSTICS KITS (H-53)			22	2.8	30	0.6	30	0.7	25	0.6	20	0.5	20	0.5	20	0.6	22	0.7	189	6.8	
INSTALLATION KITS N/R		1.9		1.6		0.6		1.6													5.7
INSTALL EQUIPMENT																					
CH-53D HEELS B KITS	1	*																		1	*
CH-53E HEELS B KITS	1	*																		1	*
Electric Cargo Winch			10	1.3	8	1.1														18	2.4
MH-53E HEELS B KITS	1	*																		1	*
INSTALL EQUIPMENT N/R		0.3		0.1		3.4		2.4													6.2
ECO																					
DATA		*		0.2		0.6		0.6		0.3		0.5		0.6		0.6					3.5
TRAINING EQUIP																					
SUPPORT EQUIP		0.7																			0.7
ILS		0.1		0.2		0.8		0.7		0.5		0.6		0.5		0.4			2.4		6.3
OTHER SUPPORT		5.5		7.4		5.0		2.7		1.4		2.1		2.0		1.4			6.9		34.4
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	49	0.6	72	2.4	116	2.0	148	1.5	213	4.2	146	2.8	116	2.6	139	4.5	251	13.8	1,250	34.3	
TOTAL PROCUREMENT	662	12.64	481	21.9	364	19.6	480	19.7	478	13.4	393	14.1	386	16.4	329	17.4	419	54.9	3,992	190.0	

Asterisk (\*) indicates amount value less than \$51K

- Note:
- Quantities for "Models of Systems affected" vary by ECP, dependent on Type/Model/Series (T/M/S) affected and production leadtimes.
  - Gyro replacement quantity reflects 2 kits per aircraft for 36 CH-53Ds.
  - Kapton wiring kits provided for aircraft (all T/M/S) with faulty wiring only.
  - Transition Bulkhead kits are for CH/MH-53Es on an as-needed basis.
  - Station 820 kits were procured with prior year funding. Installation costs are funded in this OSIP.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total      MODIFICATION TITLE: #2 Engine Backflow Kits

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: FMT

ADMINISTRATIVE LEADTIME: 4 Months      PRODUCTION LEADTIME: 10 Months

CONTRACT DATES:      FY 2007 \_\_\_\_\_      FY 2008 Jan-08      FY 2009 Jan-09

DELIVERY DATE:      FY 2007 \_\_\_\_\_      FY 2008 Nov 08      FY 2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
PRIOR YEARS () kits																					0	0	
FY 2007 () kits																						0	0
FY 2008 (2) kits								2	0.0												2	0	
FY 2009 (60) kits										60	0.3											60	0
FY 2010 (60) kits												60	0.4									60	0
FY 2011 (20) kits														20	0.2							20	0
FY 2012 (20) kits																20	0.2					20	0
FY 2013 () kits																						0	0
TO COMPLETE () kits																						0	0
<b>Total</b>		0	0.0	0	0.0	0	0.0	2	0.0	60	0.3	60	0.4	20	0.2	20	0.2	0	0.0	162	1.1		

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										2			15	15	15	15	15	15	15	15
Out										2			15	15	15	15	15	15	15	15

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	5	5	5	5	5	5	5	5		162
Out	5	5	5	5	5	5	5	5		162

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (36)

MODIFICATION TITLE: CH-53D Ramp Conversion Kits

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: D-level modification

ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2007 Jun 07 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Aug 07 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS () kits																					0	0
FY 2007 (16) kits			16	1.2																	16	1
FY 2008 () kits																					0	0
FY 2009 () kits																					0	0
FY 2010 () kits																					0	0
FY 2011 () kits																					0	0
FY 2012 () kits																					0	0
FY 2013 () kits																					0	0
TO COMPLETE () kits																					0	0
Total	0	0.0	16	1.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	16	1.2

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In				16																		
Out				16																		

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										16
Out										16

Note:

1. Of the 35 kits procured in FY07, 16 installs are funded. The remaining installs were installed by other means.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total MODIFICATION TITLE: EAPS Improvement Kits

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: FMT

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Jan-08 FY 2009 Jan-09

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Nov 08 FY 2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
PRIOR YEARS () kits																					0	0	
FY 2007 () kits																						0	0
FY 2008 (18) kits								18	0.3													18	0
FY 2009 (18) kits										18	0.3											18	0
FY 2010 (15) kits												15	0.3									15	0
FY 2011 (40) kits														40	0.7							40	1
FY 2012 (53) kits																53	1.1					53	1
FY 2013 (18) kits																		18	0.3			18	0
TO COMPLETE () kits																						0	0
Total	0	0.0	0	0.0	0	0.0	18	0.3	18	0.3	15	0.3	40	0.7	53	1.1	18	0.3	162	3.0			

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									6	6	6		6	6	6		5	5	5	
Out									6	6	6		6	6	6		5	5	5	

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	13	13	14		17	18	18		18	162
Out	13	13	14		17	18	18		18	162

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (19), CH-53E (136), MH-53E (26), 181 Total      MODIFICATION TITLE: Emergency Egress Lighting

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: FMT

ADMINISTRATIVE LEADTIME: 4 Months      PRODUCTION LEADTIME: 10 Months

CONTRACT DATES:      FY 2007 Jan 07      FY 2008 Jan-08      FY 2009 Jan-09

DELIVERY DATE:      FY 2007 Nov 07      FY 2008 Nov 08      FY 2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS () kits																					0	0
FY 2007 (50) kits					50	1.0															50	1
FY 2008 (68) kits							68	0.3													68	0
FY 2009 (40) kits									40	0.6											40	1
FY 2010 (12) kits											12	0.2									12	0
FY 2011 (11) kits													11	0.2							11	0
FY 2012 () kits																					0	0
FY 2013 () kits																					0	0
TO COMPLETE () kits																					0	0
<b>Total</b>		0	0.0	0	0.0	50	1.0	68	0.3	40	0.6	12	0.2	11	0.2	0	0.0	0	0.0	181	2.2	

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					16	17	17		22	23	23		13	13	14		4	4	4	4
Out					16	17	17		22	23	23		13	13	14		4	4	4	4

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	3	4	4							181
Out	3	4	4							181

Note:

1. 46 kits installed in FY09 are funded with FY08 Congressional Add funding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (19), CH-53E (136), MH-53E (26), 181 Total      MODIFICATION TITLE: Kapton Wiring

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: FMT, IMC

ADMINISTRATIVE LEADTIME: 4 Months      PRODUCTION LEADTIME: 10 Months

CONTRACT DATES:      FY 2007 \_\_\_\_\_      FY 2008 \_\_\_\_\_      FY 2009 \_\_\_\_\_

DELIVERY DATE:      FY 2007 \_\_\_\_\_      FY 2008 \_\_\_\_\_      FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
PRIOR YEARS () kits																					0	0	
FY 2007 () kits																						0	0
FY 2008 () kits																						0	0
FY 2009 () kits																						0	0
FY 2010 (1) kits												1	0.0									1	0
FY 2011 (2) kits														2	0.1							2	0
FY 2012 (5) kits																5	0.1					5	0
FY 2013 (12) kits																		12	0.4			12	0
TO COMPLETE (96) kits																		96	2.9			96	3
<b>Total</b>		0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	5	0.1	108	3.2	116	3.5		

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In																					1			
Out																					1			

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		2				2	3		108	116
Out		2				2	3		108	116

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (19), CH-53E (136), MH-53E (26), 181 Total      MODIFICATION TITLE: Obsolescent Components

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Numerous types of kits will be procured. Each has it own unique installation method.

ADMINISTRATIVE LEADTIME: 4 Months      PRODUCTION LEADTIME: 10 Months

CONTRACT DATES:      FY 2007 Jan 07      FY 2008 Jan-08      FY 2009 Jan-09

DELIVERY DATE:      FY 2007 Jun 07      FY 2008 Nov 08      FY 2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS () kits																					0	0
FY 2007 (1) kits			1	0.1																	1	0
FY 2008 (20) kits							20	0.6													20	1
FY 2009 (49) kits									49	1.6											49	2
FY 2010 (15) kits											15	0.5									15	1
FY 2011 (15) kits													15	0.5							15	1
FY 2012 (28) kits																28	1.0				28	1
FY 2013 (25) kits																		25	0.5		25	1
TO COMPLETE (28) kits																		28	1.0		28	1
Total		0	0.0	1	0.1	0	0.0	20	0.6	49	1.6	15	0.5	15	0.5	28	1.0	53	1.9		181	6.3

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In				1					5	5	5	5	12	12	12	13	4	4	4	4	3
Out				1					5	5	5	5	12	12	12	13	4	4	4	4	3

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	4	4	4	3	7	7	7	7	53	181
Out	4	4	4	3	7	7	7	7	53	181

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (137), MH-53E (26), 163 Total MODIFICATION TITLE: Station 820 Bulkhead

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: IMC, FMT

ADMINISTRATIVE LEADTIME: N/A Months PRODUCTION LEADTIME: N/A Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS () kits	49	0.6	49	0.8	25	0.4	10	0.1	4	0.0										137	2	
FY 2007 () kits																					0	0
FY 2008 () kits																					0	0
FY 2009 () kits																					0	0
FY 2010 () kits																					0	0
FY 2011 () kits																					0	0
FY 2012 () kits																					0	0
FY 2013 () kits																					0	0
TO COMPLETE () kits																					0	0
Total	49	0.6	49	0.8	25	0.4	10	0.1	4	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	137	1.9

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	49			24	25			15	10			10				4						
Out	49			24	25			15	10			10				4						

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										137
Out										137

Note:

- Station 820 kits were procured with prior year funding. Installation costs are funded in this OSIP.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (130), MH-53E (26), 156 Total

MODIFICATION TITLE: Transition Bulkhead

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: IMC

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 19 Months

CONTRACT DATES: FY 2007 Mar 07 FY 2008 Mar-08 FY 2009 Mar-09

DELIVERY DATE: FY 2007 Apr 07 FY 2008 Oct 09 FY 2009 Oct 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS (4) kits			4	0.2																4	0
FY 2007 (6) kits			2	0.1	4	0.4														6	1
FY 2008 (12) kits									12	1.3										12	1
FY 2009 (13) kits											13	1.4								13	1
FY 2010 (8) kits													8	0.9						8	1
FY 2011 (18) kits															18	2.1				18	2
FY 2012 (18) kits																	18	2.1		18	2
FY 2013 (32) kits																	32	3.7		32	4
TO COMPLETE (22) kits																	22	2.5		22	3
Total	0	0.0	6	0.3	4	0.4	0	0.0	12	1.3	13	1.4	8	0.9	18	2.1	72	8.3	133	14.7	

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In			3	3	4								3	3	3	3	3	3	3	3	4
Out			3	3	4								3	3	3	3	3	3	3	3	4

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	2	2	2	2	4	4	5	5	72	133
Out	2	2	2	2	4	4	5	5	72	133

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total MODIFICATION TITLE: Tail Rotor Drive Shaft (TRDS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: IMC

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2007 Jan 07 FY 2008 Jan-08 FY 2009 Jan-09

DELIVERY DATE: FY 2007 Nov 07 FY 2008 Nov 08 FY 2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS () kits																					0	0
FY 2007 (37) kits					37	0.1															37	0
FY 2008 (30) kits							30	0.1													30	0
FY 2009 (30) kits									30	0.1											30	0
FY 2010 (30) kits											30	0.1									30	0
FY 2011 (20) kits													20	0.1							20	0
FY 2012 (15) kits																15	0.1				15	0
FY 2013 () kits																					0	0
TO COMPLETE () kits																					0	0
Total		0	0.0	0	0.0	37	0.1	30	0.1	30	0.1	30	0.1	20	0.1	15	0.1	0	0.0	162	0.6	

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						12	12	13		10	10	10		10	10	10		10	10	10
Out						12	12	13		10	10	10		10	10	10		10	10	10

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		6	7	7		5	5	5		162
Out		6	7	7		5	5	5		162

Exhibit P-3a

MODIFICATION TITLE: DIRCM( OSIP 010-08 )

MODELS OF SYSTEMS AFFECTED: CH-53E (152) TYPE MODIFICATION: MISSION/PERFORMANCE SUSTAINMENT

DESCRIPTION / JUSTIFICATION: Currently, the H-53E has only IR detection equipment and rudimentary flares for use as CM. This funding is for ECP development, A-kit procurement and installation of a DIRCM system for CH-53Es. This system will help protect the CH-53E which is highly susceptible to IR seeking manpads, the weapon of choice in all current theaters. This system has been found effective against fourth generation IR manpads, and is extremely effective earlier generation manpads.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: ECP development, kit procurement and installation begin in FY08.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
DIRCM A Kits			16	11.5	1	0.5	18	5.7	9	2.9	21	7.1	20	6.9	19	6.8	36	13.2	140	54.7	
INSTALLATION KITS N/R				15.8		4.4		0.8												20.9	
INSTALL EQUIPMENT																					
DIRCM B Kits			16	104.6																16	104.6
INSTALL EQUIPMENT N/R																					
ECO																					
DATA				0.2		0.4		0.2													.8
TRAINING EQUIP				1.0				1.1													2.1
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT				2.8		0.9		1.6		1.2		1.4		1.5		1.8		3.0		14.1	
INTERIM CONTRACTOR SUPPORT				6.0																	6.0
INSTALLATION COST				6.7	33	0.4	18	3.7	9	1.9	21	4.6	20	4.5	19	4.4	36	9.2	156	35.4	
TOTAL PROCUREMENT			32	148.6	34	6.7	36	13.0	18	6.0	42	13.0	40	12.9	38	12.9	72	25.5	312	238.6	

Notes:

1. Kkits procured in FY07 with supplemental funding are installed in FY08.
2. Total quantity of 156 kkits procured includes 16 B-kits funded with FY07 supplemental funding. Total quantity of aircraft modified is 140.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (152) MODIFICATION TITLE: DIRCM( OSIP 010-08 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007 Aug 07 FY 2008 Nov-07 FY 2009 Nov-08

DELIVERY DATE: FY 2007 Nov 07 FY 2008 Feb 08 FY 2009 Feb 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
PRIOR YEARS ( ) kits																					0	0	
FY 2007 (32) kits				6.7	32																	32	7
FY 2008 (1) kits					1	0.4																1	0
FY 2009 (18) kits							18	3.7														18	4
FY 2010 (9) kits									9	1.9												9	2
FY 2011 (21) kits											21	4.6										21	5
FY 2012 (20) kits													20	4.5								20	5
FY 2013 (19) kits															19	4.4						19	4
TO COMPLETE (36) kits																		36	9.2			36	9
Total	0	0.0	0	6.7	33	0.4	18	3.7	9	1.9	21	4.6	20	4.5	19	4.4		36	9.2		156	35.4	

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						16	17			6	6	6		3	3	3		7	7	7
Out						16	17			6	6	6		3	3	3		7	7	7

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	6	7	7		6	6	7		36	156
Out	6	7	7		6	6	7		36	156

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							053000, SH-60 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	226.6	A	39.3	58.2	72.5	84.0	89.6	81.0	75.3	356.9	1083.5	

DESCRIPTION: This line item funds modifications to H-60 series aircraft. The H-60 series program of record for modification is comprised of: 38 HH-60H, 145 SH-60B, 71 SH-60F, 149 MH-60S, 54 MH-60R. The HH-60H is a Combat Search and Rescue (CSAR) and Special Warfare Support (SWS) helicopter assigned to carrier airwings aboard CVs and also in two reserve squadrons. The primary missions of the SH-60B are Anti-Submarine (ASW) and Surface Warfare (SUW). The SH-60F is an ASW, dipping sonar helicopter assigned to carrier airwings based aboard aircraft carriers (CV). The SH-60F primary mission is protection of the CV inner zone. The MH-60S is the Fleet Combat Support (HC) Helicopter. The primary missions of the MH-60S are Vertical Replenishment (VERTREP), Search and Rescue (SAR), Organic AMCM (OAMCM), Surface Warfare (SUW), Extended Maritime Interdiction Operations (EMIO), and Navy Organic Combat Search and Rescue (CSAR). The MH-60R is the Multi-Mission Helicopter. The primary missions of the MH-60R are Under Sea Warfare (USW) and Surface Warfare (SUW). The overall goal of the modifications budgeted is for the Integrated Mechanical Diagnostic System (IMDS), Safety Related Systems Upgrade, AMCM/Armed Helo (Correction of Deficiencies) for the MH-60S, Air Ambulance, SH-60F High Strength Sonar Cable, Armed Block I Upgrade for the MH-60R, H-60 Helicopter Visit, Board, Search, and Seizure (HVBSS), MH-60S Warfighting Capability, SH-60B Datalink (KuBand), MH-60R/S Crew Workload - Operator System Interface (OSI), and Automatic Radar Periscope Detection Discrimination (ARPDD). The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
017-00 HELO INTG MECH DIAGN	26.5	0.2	0.5	0.4						27.5
009-03 SAFETY RELATED SYSTEM UPGRADE	26.2	7.4	3.7	3.7	5.4	5.6	5.6	5.7	12.3	75.7
016-04 MH-60S AMCM/ARMED HELO	15.9	3.9	8.1	6.5	3.4	2.0	0.4		1.0	41.3
026-04 AIR AMBULANCE	18.5	8.4								26.9
017-05 HIGH STRENGTH SONAR CABLE SH-60F	3.0	0.4								3.3
001-06 MH-60R ARMED BLOCK I UPGRADE	4.1	4.7	24.4	23.3	31.7	29.3	24.5	22.5	25.5	190.0
008-07 H-60 HVBSS		8.1	1.2	1.2					15.7	26.1
009-07 MH-60S WARFIGHTING CAPABILITY		6.2	20.2	27.1	29.8	29.0	25.0	19.6	40.4	197.3
008-09 SH-60B DATALINK (KUBAND)				4.9	5.9	3.6				14.5
009-09 MH-60R/S CREW WORKLOAD - OPERATOR SYSTEM INTERFACE				5.6	7.8	7.0	7.0	2.4		29.8
004-11 AUTOMATIC RADAR PERISCOPE DETECTION DISCRIMINATION						13.0	18.4	25.1	262.0	318.5
Inactive OSIPs	132.5									132.5
TOTAL	226.6	39.3	58.2	72.5	84.0	89.6	81.0	75.3	356.9	1083.5

1. FY2007 funding total includes \$16.0M received in GWOT supplemental.
2. FY2008 funding totals do not include \$6.7M previously requested for current FY2008 GWOT requirements.

Exhibit P-3a

MODIFICATION TITLE: MH-60S AMCM/ARMED HELO ( OSIP 016-04 )

MODELS OF SYSTEMS AFFECTED: MH-60S TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION / JUSTIFICATION: Based on Developmental and Operational testing, Fleet aircraft require modifications to correct identified deficiencies incorporated in production aircraft. These modifications include corrections to Common Cockpit Avionics, Auxiliary Fuel System, High Maintenance Battery, Search and Rescue Equipment, Rotor System and Airframe, Night Vision Device Exterior Lighting and AMCM Mission Equipment. Current retrofit plan is as follows: The Aux Tank A kit will be retrofit on 50 aircraft. Aux Tank B kits (two tanks per kit) and AMCM Mission Equipment are not procured on a one for one basis with the A kit modifications. No install required. The Bifilar B Kit and Ultra Low Maintenance Battery will be retrofit as an "O" Level install on 50 aircraft. Night Vision Device Capable Aircraft Lighting will be retrofit on 137 Aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The MH-60S aircraft completed OPEVAL in Mar 2002; MS III was completed 12 Aug 2002. The validation of the Aux Tank capability was completed in the second quarter of FY 2005.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Bifilar	50	2.6																		50	2.6
ECP 4000 Retrofit	24	6.2	7	1.9	11	3.0	8	2.3												50	13.3
NVD KITS	2	0.1	6	0.3	24	1.1	34	1.6	33	1.6	24	1.2					14	0.7	137	6.7	
ULMB	26	0.6																		26	.6
INSTALLATION KITS N/R		3.5																			3.5
INSTALL EQUIPMENT																					
AMCM MISSION EQUIP MODS			5	1.7	4	2.4	1	0.6	1	0.6										11	5.2
AUX TANKS	20	2.8																		20	2.8
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT		0.1			0.1		0.1				0.1			*							.5
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST			2	0.1	27	1.5	47	1.9	42	1.2	36	0.7	17	0.3			14	0.3	185	6.1	
TOTAL PROCUREMENT	122	15.9	20	3.9	66	8.1	90	6.5	76	3.4	60	2.0	17	0.4			28	1.0	479	41.3	

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: ECP 4000 kits (OSIP 016-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2007 Mar 07 FY 2008 Dec-07 FY 2009 Dec-08

DELIVERY DATE: FY 2007 Feb 08 FY 2008 Nov 08 FY 2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PRIOR YEARS (22) kits			2	0.1	19	1.4	1	0.1												22	1.6
FY 2007 (7) kits							7	0.5												7	0.5
FY 2008 (11) kits							11	0.8												11	0.8
FY 2009 (8) kits									8	0.6										8	0.6
FY 2010 ( ) kits																				0	0
FY 2011 ( ) kits																				0	0
FY 2012 ( ) kits																				0	0
FY 2013 ( ) kits																				0	0
TO COMPLETE ( ) kits																				0	0
<b>Total</b>	0	0.0	2	0.1	19	1.4	19	1.4	8	0.6	0	0.0	0	0.0	0	0.0	0	0.0	48	3.6	

Note: (2) ECP 4000 kits installed as VAL/VER NRE

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					2	2	4	6	7	3	5	5	6	2	2	1	3				
Out					3	4	6	4	6	5	5	5	3	2	2	2	2	1			

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										48
Out										48

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: NVD Lighting (OSIP 016-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2007 Mar 07 FY 2008 Dec-07 FY 2009 Dec-08

DELIVERY DATE: FY 2007 Nov 07 FY 2008 Aug 08 FY 2009 Aug 09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PRIOR YEARS (2) kits					2	0.0														2	0.0
FY 2007 (6) kits					6	0.1														6	0.1
FY 2008 (24) kits							24	0.4												24	0.4
FY 2009 (34) kits							4	0.1	30	0.6										34	0.6
FY 2010 (33) kits									4	0.1	29	0.5								33	0.6
FY 2011 (24) kits											7	0.1	17	0.3						24	0.5
FY 2012 () kits																				0	0.0
FY 2013 () kits																				0	0.0
TO COMPLETE (14) kits																	14	0.3	14	0.3	0.0
<b>Total</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>8</b>	<b>0.1</b>	<b>28</b>	<b>0.5</b>	<b>34</b>	<b>0.6</b>	<b>36</b>	<b>0.7</b>	<b>17</b>	<b>0.3</b>	<b>0</b>	<b>0.0</b>	<b>14</b>	<b>0.3</b>	<b>137</b>	<b>2.6</b>	

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					2	2	2	2	7	7	7	7	8	9	9	8	9	9	9	9	9
Out					2	2	2	2	7	7	7	7	8	9	9	8	9	9	9	9	9

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	4	5	4	4					14	137
Out	4	5	4	4					14	137

MODIFICATION TITLE: MH-60R ARMED BLOCK I UPGRADE( OSIP 001-06 )

MODELS OF SYSTEMS AFFECTED: MH-60R TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION / JUSTIFICATION: This line item funds modifications to the MH-60R series aircraft. The modifications are part of the P3I effort that includes GPS SAASM, KUBAND, IMDS, AVC, ACOUSTIC PROCESSOR, and LINK-16 for LRIP I Aircraft and subsequent. Global Positioning System (GPS) upgrade includes Selective Availability Anti-Spoofing Module (SAASM) and GAS-1 antenna upgrade. SAASM is a set of functional security requirements used to design and build a secure GPS receiver. Use of GPS SAASM security architecture significantly enhances the pilot's ability to use the GPS Precise Positioning, velocity, time, and other GPS sensor information in all environments. GAS-1 antenna upgrade to the GPS system improves susceptibility performance. Link 16 supports the exchange of C4I data that is required to operate in a Joint and NATO Battlespace. Link 16 is designed to support the exchange of formatted data messages rather than the "raw" data exchange that the existing C-Band Hawklink and Tactical Common Data Link (TCDL), now KUBAND, will support. KUBAND is an update to the current C-Band Hawklink that allows for an increase in bandwidth with the ability to transfer additional data. MH-60R is required to be backward-compatible with both legacy Surface Fleet Combat Systems and forward-compatible with new and under-development Surface Fleet Combat Systems at relatively long-range of not only voice and video information, but large amounts of sensor and tactical data. It is compliant with the Assistant Secretary of Defense C3I Letter dated 18 October 2004 directing commonality and interoperability between all DOD airborne sensor platforms and meets the mandate for a common standard for transmission of unprocessed sensor information. The Integrated Mechanical Diagnostic System (IMDS) will improve aircraft performance and vibration parameters in flight. GPS SAASM, Link 16, KUBAND and IMDS are a part of the MH-60R Block Upgrades as specified in the evolutionary acquisition strategy for the program. The Acoustic Subsystem is a key component to meeting H60R ASW mission requirements. This OSIP includes updates to obsolete components of the Acoustic Subsystem. Sonar Transducer Receiver (ST/R) will be modified to solve obsolescence issues.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: SAASM Joint Common System (JCS) Instruction CDCSI 6140.01, issued 15 November 1998, mandates that all Precise Position Systems (i.e. Global Positioning System (GPS) used on the MH-60R) users field SAASM-based user equipment and use black keys after 01 October 2002.

METHOD OF IMPLEMENTATION: KuBand and ST/R are "O" Level Installs. GPS SAASM is an "O" Level Install which started in FY 2007.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
ACOUSTICS PROCESSOR TI					7	5.3	7	2.8	11	4.6	15	6.5	14	6.2						54	25.4
AVC KITS					4	2.4											3	1.4	7	3.8	
GPS SAASM KITS	4	0.2	4	0.2	12	1.1											7	0.4	27	1.8	
IMDS KITS			2	0.4	2	0.3	10	2.3	7	1.6							22	5.0	43	9.7	
KUBAND KITS							6	6.6	18	14.9	18	13.9	9	7.2	18	14.0				69	56.6
LINK-16 KITS	4	3.3	10	1.8													8	4.0	22	9.0	
SONAR TRANSDUCER RECEIVER (ST/R)							20	2.4	21	2.4							19	2.5	60	7.3	
INSTALLATION KITS N/R						7.6		1.7													9.3
INSTALL EQUIPMENT																					
GPS SAASM KITS	1	0.1																		1	.1
INSTALL EQUIPMENT N/R																					
ECO																					
DATA								0.5		1.7											2.2
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS				0.4		0.4		1.4		1.5		0.7		0.8							5.2
OTHER SUPPORT				1.4		1.3		1.9		2.5		1.3		1.4							9.7
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	3	0.5	5	0.5	14	3.6	9	3.7	19	4.9	18	6.9	15	8.9	14	8.5	33	12.2	130	49.7	
TOTAL PROCUREMENT	12	4.1	21	4.7	59	24.4	53	23.3	55	31.7	51	29.3	38	24.5	32	22.5	92	25.5	413	190.0	

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60R MODIFICATION TITLE: GPS SAASM/AVC KITS (OSIP 01-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Nov-07 FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Feb 08 FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PRIOR YEARS (4) kits	3	0.5	1	0.2																
FY 2007 () kits																				
FY 2008 (4) kits					4	0.7														
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
TO COMPLETE (3) kits																		3	0.5	
Total	3	0.5	1	0.2	4	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.5

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011		
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
In	3				1			2	2											
Out	3				1			2	2											

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									3	11
Out									3	11

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60R MODIFICATION TITLE: ACOUSTIC PROCESSOR KITS (OSIP 01-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Feb-08 FY 2009 Feb-09

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Dec 08 FY 2009 Dec 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PRIOR YEARS () kits																			
FY 2007 () kits																			
FY 2008 (7) kits							7	3.5											
FY 2009 (7) kits									7	4.0									
FY 2010 (11) kits											11	6.4							
FY 2011 (15) kits													15	8.9					
FY 2012 (14) kits															14	8.5			
FY 2013 () kits																			
TO COMPLETE () kits																			
Total	0	0.0	0	0.0	0	0.0	7	3.5	7	4.0	11	6.4	15	8.9	14	8.5	0	0.0	

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011		
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
In										2	2	3		2	2	3			2	4
Out										2	2	3		2	2	3			2	4

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	5	5	5		4	5	5		54	
Out	5	5	5		4	5	5		54	

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60R MODIFICATION TITLE: LINK-16 KITS (OSIP 01-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2007 Dec 06 FY 2008 Dec-07 FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Sep 07 FY 2008 Sep 08 FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PRIOR YEARS (4) kits			4	0.3																
FY 2007 (10) kits					10	1.0														
FY 2008 () kits																				
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
TO COMPLETE (8) kits																		8	1.3	
Total	0	0.0	4	0.3	10	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	1.3

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011		
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
In					4			5	5											
Out						4			5	5										

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									8	22
Out									8	22

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60R MODIFICATION TITLE: IMDS KITS (OSIP 01-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2007 Jul 07 FY 2008 Apr-08 FY 2009 Dec-08

DELIVERY DATE: FY 2007 Jan 09 FY 2008 Oct 09 FY 2009 Jun 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PRIOR YEARS ( ) kits																			
FY 2007 (2) kits							2	0.2											
FY 2008 (2) kits									2	0.2									
FY 2009 (10) kits									10	0.8									
FY 2010 (7) kits											7	0.5							
FY 2011 ( ) kits																			
FY 2012 ( ) kits																			
FY 2013 ( ) kits																			
TO COMPLETE (22) kits																		22	10.4
Total	0	0.0	0	0.0	0	0.0	2	0.2	12	0.9	7	0.5	0	0.0	0	0.0	22	10.4	

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011		
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
In											1		1	1	1	5	5			3
Out										1		1	1	1	1	4	4	4	1	3

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									22	43
Out									22	43

MODIFICATION TITLE: MH-60S WARFIGHTING CAPABILITY ( OSIP 009-07 )

MODELS OF SYSTEMS AFFECTED: MH-60S TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION / JUSTIFICATION: Provides for the retrofit of AMCM Block 2B (AMNS & OASIS Only) & 3B P3I effort includes: Link-16, DALs, SASSM and GAS-1 airframe provisions into 69 Block 2A aircraft; Armed Helo Block 3A weapons airframe provision into 31 Block 2A aircraft and fixed forward weapons/rockets provisions into 121 Block 2A aircraft. Block 3B capabilities will be incorporated into 69 aircraft. OSIP also provides retrofit of Active Vibration Control (AVC) in 137 MH-60S aircraft and Integrated Mechanical Diagnostics (IMDS) in 119 MH-60S aircraft to achieve a common configuration for vibration and IMD. IMD flight data recorder capability as well as the building block for Military Flight Operations Quality Assurance (MFOQA) capability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The MH-60S Aircraft completed MS III in August 2002.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AVC					17	3.7	18	4.0	18	3.9	18	4.0	18	4.0	17	3.9	31	7.6	137	31.1	
Block 2B			1	0.2	8	1.4	9	1.6	8	1.4	13	2.4	11	2.0	7	1.3	12	2.3	69	12.6	
Block 3A			1	0.5	8	4.3	9	5.0	8	4.5	1	0.6					4	2.4	31	17.4	
Block 3A Rockets									32	0.6	33	0.6	33	0.6	23	0.4			121	2.3	
Block 3B			1	0.3	8	2.1	9	2.4	8	2.2	13	3.6	11	3.1	7	1.9	12	3.6	69	19.1	
IMDS					17	3.8	18	4.1	18	4.0	18	4.1	18	4.2	6	1.4	14	3.6	109	25.0	
INSTALLATION KITS N/R				5.3																5.3	
INSTALL EQUIPMENT																					
Install Equip (B kits) 3A Rockets									32	0.8	33	0.8	33	0.8	23	0.6			121	3.1	
INSTALL EQUIPMENT N/R																					
ECO																					
DATA						1.1		0.1												1.2	
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS						0.2		0.1		0.1		0.1		0.1		0.1		0.2		.7	
OTHER SUPPORT						1.7		0.2		0.6		0.7		0.1		0.1		0.2		3.6	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST					6	2.1	50	9.8	71	11.7	87	12.1	81	10.0	80	9.8	98	20.5	473	76.0	
TOTAL PROCUREMENT			3	6.2	64	20.2	113	27.1	195	29.8	216	29.0	205	25.0	163	19.6	171	40.4	1,130	197.3	

Note: The FY08 install kits are available from missed production installs.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: Block 3A A kit (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2007 Feb 08 FY 2008 Feb-08 FY 2009 Dec-08

DELIVERY DATE: FY 2007 Jan 09 FY 2008 Jan 09 FY 2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PRIOR YEARS () kits *					6	2.1														6	2.1	
FY 2007 (1) kits							1	0.3												1	0.3	
FY 2008 (8) kits							7	2.4	1	0.4										8	2.8	
FY 2009 (9) kits									8	2.8	1	0.4								9	3.2	
FY 2010 (8) kits											8	2.9								8	2.9	
FY 2011 (1) kits											1	0.4								1	0.4	
FY 2012 () kits																				0	0.0	
FY 2013 () kits																				0	0.0	
TO COMPLETE (4) kits																	4	1.5	4	1.5		
Total	0	0.0	0	0.0	6	2.1	8	2.8	9	3.2	10	3.6	0	0.0	0	0.0	4	1.5	4	1.5	37	13.2

\*Note: Kits available for 08 installs from missed Production installs - not procured with APN-5  
Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							3	3		2	3	3	2	2	2	3	2	2	3	3	
Out							3	3	3	1	2	3	3	2	2	2	3	2	2	2	3

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									4	37
Out	2								4	37

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: BLOCK 2B and 3B A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY2007 Feb-08 FY2008 Feb-08 FY2009 Jan-09

DELIVERY DATE: FY2007 Jan 09 FY2008 Jan 09 FY2009 Dec 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY2007		FY2008		FY2009		FY2010		FY2011		FY2012		FY2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PRIOR YEARS () kits																					0	0.0
FY 2007 (1) kits							1	0.4													1	0.4
FY 2008 (8) kits							7	2.9	1	0.4											8	3.3
FY 2009 (9) kits									9	3.8											9	3.8
FY 2010 (8) kits											8	3.5									8	3.5
FY 2011 (13) kits											1	0.4	12	5.3							13	5.7
FY 2012 (11) kits															11	5.0					11	5.0
FY 2013 (7) kits																	7	3.3			7	3.3
TO COMPLETE (12) kits																	12	5.6			12	5.6
Total	0	0.0	0	0.0	0	0.0	8	3.3	10	4.2	9	3.9	12	5.3	11	5.0	19	8.9			69	30.6

Installation Schedule

	FY 2006 & PRIOR	FY2007				FY2008				FY2009				FY2010				FY2011					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In													3	3	2	2	2	3	3	2	2	2	3
Out													2	3	2	2	2	3	2	3	2	2	2

  

	FY2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	3	3	3	3	3	3	3	2	19	69
Out	3	3	3	3	3	3	3	3	20	69

Note: Installation kits deliver late June 2008, however, installations will begin in July 2008.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: IMDS A kits (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY2007 Feb-08 FY2008 Feb-08 FY2009 Jan-09

DELIVERY DATE: FY2007 Jan 09 FY2008 Jan 09 FY2009 Dec 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY2007		FY2008		FY2009		FY2010		FY2011		FY2012		FY2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
FY 2006 & PRIOR YEARS () kits																					0	0	
FY 2007 () kits																						0	0.0
FY 2008 (17) kits								17	1.0													17	1.0
FY 2009 (18) kits										18	1.1											18	1.1
FY 2010 (18) kits												18	1.1									18	1.1
FY 2011 (18) kits														18	1.1							18	1.1
FY 2012 (18) kits																18	1.1					18	1.1
FY 2013 (6) kits																		6	0.4			6	0.4
TO COMPLETE (14) kits																		14	0.9			14	0.9
Total	0	0.0	0	0.0	0	0.0	17	1.0	18	1.1	18	1.1	18	1.1	18	1.1	20	1.293	109	6.6			

Installation Schedule

	FY 2006 & PRIOR	FY2007				FY2008				FY2009				FY2010				FY2011					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In													6	6	5	4	5	4	5	4	5	4	5
Out													6	6	5	4	5	4	5	4	5	4	5

  

	FY2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	4	5	4	5	4	5	4	5	20	109
Out	4	5	4	5	4	5	4	5	20	109

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: AVC A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY2007 Feb 08 FY2008 Feb-08 FY2009 Dec-08

DELIVERY DATE: FY2007 Jan 09 FY2008 Jan 09 FY2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY2007		FY2008		FY2009		FY2010		FY2011		FY2012		FY2013		TO COMPLETE		TOTAL						
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$					
FY 2006 & PRIOR YEARS ( ) kits																					0	0.0			
FY 2007 ( ) kits																						0	0.0		
FY 2008 (17) kits							17	2.7														17	2.7		
FY 2009 (18) kits									18	2.9													18	2.9	
FY 2010 (18) kits											18	3.0											18	3.0	
FY 2011 (18) kits													18	3.0										18	3.0
FY 2012 (18) kits															18	3.1								18	3.1
FY 2013 (17) kits																	17	3.0						17	3.0
TO COMPLETE (31) kits																	31	5.7						31	5.7
Total	0	0.0	0	0.0	0	0.0	17	2.7	18	2.9	18	3.0	18	3.0	18	3.1	48	8.694						137	23.5

Installation Schedule

	FY 2006 & PRIOR	FY2007				FY2008				FY2009				FY2010				FY2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In										5	6	6	4	5	4	5	4	4	5	4	5	4
Out										4	5	5	5	4	5	4	5	4	5	4	5	4

  

	FY2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	4	5	4	5	4	5	4	5	48	137
Out	5	4	5	4	5	4	5	4	51	137

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: 3A UNGUIDED ROCKETS A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY2007 \_\_\_\_\_ FY2008 \_\_\_\_\_ FY2009 \_\_\_\_\_

DELIVERY DATE: FY2007 \_\_\_\_\_ FY2008 \_\_\_\_\_ FY2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY2007		FY2008		FY2009		FY2010		FY2011		FY2012		FY2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
FY 2006 & PRIOR YEARS () kits																					0	0	
FY 2007 () kits																						0	0
FY 2008 () kits																						0	0
FY 2009 () kits																						0	0
FY 2010 (32) kits									16	0.3	16	0.3										32	0.6
FY 2011 (33) kits											16	0.3	17	0.3								33	0.6
FY 2012 (33) kits													16	0.3	17	0.3						33	0.6
FY 2013 (23) kits															16	0.3	7	0.1				23	0.4
TO COMPLETE () kits																	7	0.1				0	0
Total	0	0.0	0	0.0	0	0.0	0	0.0	16	0.3	32	0.6	33	0.6	33	0.6	7	0.1			121	2.2	

Installation Schedule

FY 2006 & PRIOR	FY2007				FY2008				FY2009				FY2010				FY2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In															6	10	6	10	6	10
Out															6	10	6	10	6	10

  

	FY2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	7	10	6	10	7	10	6	10	7	121
Out	7	10	6	10	7	10	6	10	7	121

Exhibit P-3a

MODIFICATION TITLE: SH-60B DATALINK (KUBAND) ( OSIP 008-09 )

MODELS OF SYSTEMS AFFECTED: SH-60B TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION / JUSTIFICATION: The SH-60B currently has a C-Band data link (Hawklink) to transmit data between aircraft and ship. The Littoral Combat Ship (LCS) will be built with a new data link system, Ku Band, which is not compatible with the C-Band. The installation of the TCDL kits on SH-60B aircraft are required to support the LCS during a limited time-frame - from FY09 to FY13 - after which, it is expected that the MH-60R aircraft will be available to support the LCS. The SH-60B TCDL will support the relatively short-range transmission of voice and video information with a limited amount of tactical data. The funding in this OSIP will provide the procurement of 30 SH-60B Ku Band A-kit modifications and 15 B-kits to be compatible and interoperable with LCS. The new Ku Band data link will transfer data from the SH-60B to the LCS to meet LCS Anti-Submarine Warfare (ASW) and Surface Warfare (SUW) mission requirements.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Research and Development (R&D) for SH-60B Ku Band will begin in FY08. Ku Band will begin leveraging off similar systems, which will significantly reduce the amount of R&D required.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Common Data Link (CDL)								10	2.8	14	3.9	6	1.7							30	8.3
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
Fast Tactical Imaging (FTI)								5	0.2	5	0.2	5	0.2							15	.6
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP								0.2		0.1		0.1									.4
SUPPORT EQUIP																					
ILS								0.9		0.6		1.1									2.6
OTHER SUPPORT								0.1		0.2		0.2									.5
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST								10	0.7	14	1.0	6	0.4							30	2.1
TOTAL PROCUREMENT								25	4.9	33	5.9	17	3.6							75	14.5

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: SH-60B MODIFICATION TITLE: SH-60B DATALINK (KUBAND) ( OSIP 008-09 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 Nov-08

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 May 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PRIOR YEARS () kits																				0	0
FY 2007 () kits																				0	0
FY 2008 () kits																				0	0
FY 2009 (10) kits							10	0.7												10	0.7
FY 2010 (14) kits									14	1.0										14	1.0
FY 2011 (6) kits											6	0.4								6	0.4
FY 2012 () kits																				0	0
FY 2013 () kits																				0	0
TO COMPLETE () kits																				0	0
Total	0	0.0	0	0.0	0	0.0	10	0.7	14	1.0	6	0.4	0	0.0	0	0.0	0	0.0	30	2.1	

Installation Schedule

FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											4	6		8		6		6		
Out										4	6		8		6		6			

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										30
Out										30

Exhibit P-3a

MODIFICATION TITLE: MH-60R/S CREW WORKLOAD - OPERATOR SYSTEM INTERFACE( OSIP 009-09 )

MODELS OF SYSTEMS AFFECTED: MH-60R AND MH-60S TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION / JUSTIFICATION: This effort reduces crew Operator System Interface (OSI) workload issues for MH-60R and MH-60S aircraft by replacing operator keysets with Control Display Units (CDU's) and hand controllers in addition to upgrading OSI software to a Windows-like system. The OSI kit includes a CDU, Force Stick Cursor Control Unit (CCU), and Interface Cabling Kit. This effort corrects deficiencies identified during OPEVAL of the MH-60R. MH-60R requires 3 OSI kits per aircraft and MH-60S requires 2 OSI kits per aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: MH-60S aircraft completed OPEVAL in Mar 2002 and MS III in Aug 2002. MH-60R completed OPEVAL in Sep 2005 and MS III in Mar 06. NRE for Production incorporation of the OSI is funded in FY07, with production cut-in LOT 12 for MH-60S and LOT 5 for MH-60R.  
 METHOD OF IMPLEMENTATION: OSI is an "O" Level Install.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
OPERATOR SYSTEM INTERFACE (OSI) ROMEO							42	2.0	54	2.7	48	2.4	42	2.1	45	2.3			231	11.5	
OPERATOR SYSTEM INTERFACE (OSI) SIERRA							60	2.8	92	4.5	92	4.5	96	4.8					340	16.7	
INSTALL EQUIPMENT N/R								0.6													.6
ECO																					
DATA																					
TRAINING EQUIP									0.4												.4
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT							0.2		0.2		0.1		0.1		0.1						.7
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST																					
TOTAL PROCUREMENT							102	5.6	146	7.8	140	7.0	138	7.0	45	2.4			571	29.8	

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							053200, H-1 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	159.6	A	22.2	6.4	8.9	8.5	8.5	8.7	8.8	54.5	286.2	

DESCRIPTION: There are 76 H-1N's in the UH configuration and 3 H-1N's in the HH configuration for a total of 79. The UH-1N provides command and control and combat assault support under day/night and adverse weather conditions. Additional UH-1N missions include special operations support, controls/coordination/guidance of supporting fire and aeromedical evacuation. The overall goal of the modifications budgeted in FY2009 is to eliminate safety hazards, remedy obsolescence and maintain significant mission capability until the planned retirement date. The HH configured aircraft provide local civilian and military search and rescue support, as well as augmenting Department of Homeland Security resources. Additionally, the UH-1Y will upgrade the current Navigational Thermal Imaging System (NTIS) starting in FY09. The Critical System Improvement Program (OSIP 019-09) will incorporate cost effective changes into the UH-1Y and AH-1Z helicopters, specifically targeting improvements to safety of flight, maintenance, obsolescence, and readiness degrading items.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
031-92 UH-1 NTIS	121.7	22.0	6.2	7.9	8.1	8.2	8.4	8.5	54.5	245.5
018-98 H-1N SAFETY UPGRADES	30.8	0.2	0.2	0.2	0.3	0.3	0.3	0.3		32.6
019-09 CRITICAL SYSTEM IMPROVEMENT PROGRAM				0.8	0.2					1.0
Inactive OSIPs	7.1									7.1
<b>TOTAL</b>	<b>159.6</b>	<b>22.2</b>	<b>6.4</b>	<b>8.9</b>	<b>8.5</b>	<b>8.5</b>	<b>8.7</b>	<b>8.8</b>	<b>54.5</b>	<b>286.2</b>

1. FY2007 funding total includes \$18.0M received in GWOT supplemental.
2. FY2008 funding totals do not include \$42.1M previously requested for current FY2008 GWOT requirements.

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODIFICATION TITLE: UH-1 NTIS ( OSIP 031-92 )

MODELS OF SYSTEMS AFFECTED: UH-1N/UH-1Y, ASSOCIATED TRAINERS AND LABS TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: Solution Planning Directive (serial number C14, dated 26 June 2007) and Capabilities Production Document (CPD) (approved 11 June 2007, JROCM 138-07) states that the UH-1N requires a Navigational Thermal Imaging System (NTIS) to provide the U.S. Marine Corps with a night/day warfighting capability in the NOE/smoke/dust/haze environment. This capability reduces the safety risk by allowing the aircrew to see and avoid flight obstructions and locate targets that might not be visible with the naked eye or night vision goggles. The AN/AAQ-22 is a low cost, stabilized system which provides the required capability in the form of high quality real time imagery displayed into the UH-1N aircraft cockpit. The NTIS System is comprised of 5 components: Turret FLIR Unit (TFU), Central Electronics Units (CEU), Hand Control Unit (HCU), Thermal Image Recorder (TIR), and the Video Display Unit (VDU). The NTIS is installed only in the UH-1N aircraft by AFC-278. The system also includes a Laser Range Finder (LRF) to determine the range to landmarks, targets, and tactical points of interest. Beginning FY97, the NTIS was upgraded from 1st generation to 3rd generation Forward Looking Infrared (FLIR) technology. The COTS Star SAFIRE modification consisted of a 3-5 micron focal plane array detector, an eye safe LRF and new optics. Additionally, the NTIS will be upgraded with a new Thermal Imaging Recorder (TIR) with mount and a Flat Panel Display replacement for the VDU due to a fire hazard. Additional modifications to the NTIS are being incorporated in order to add a COTS Laser Designator/Laser Pointer capability (BRITE Star I/II). Laser designator capability is a threshold ORD requirement. BRITE Star I/II "P" Kits are "O" level installed mission kits. Additional reliability and maintenance upgrades, including replacement of existing TIR with a Digital Thermal Imaging Recorder, to the NTIS components and VDU will also be incorporated. BRITE Star Block II integration in to the UH-1Y will start in FY08.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The NTIS is a commercial off-the-shelf (COTS) item. MIL-STD-810C testing is complete. DT-III testing was completed in the fourth quarter FY94 and FOT&E was completed in the second quarter of FY96. Additional testing occurred during fourth quarter FY98 for NTIS upgrade. The completion of COTS post Milestone II testing of Laser Designator (BRITE Star) completed in FY03. Initial fielding of BRITE Star I completed in FY06. BRITE Star II development and test complete in FY07/08.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RDT&E																				
PROCUREMENT																				
INSTALLATION KITS																				
	105	2.6																	105	2.6
	105	0.1																	105	.1
AFC-364 (Brite Star)	99	0.4																	99	.4
AFC-XXX (UH-1Y)	16	0.3					9	0.1	11	0.2	16	0.2	16	0.3	16	0.3	18	0.3	102	1.6
INSTALLATION KITS N/R		3.4		2.2		0.2		0.2		0.1								1.6		7.7
INSTALL EQUIPMENT																				
BRITE STAR I	38	24.1																	38	24.1
BRITE STAR II	10	13.9	18	18.6	4	4.4	5	5.3	4	4.3	5	5.6	5	5.8	5	5.9	46	42.2	102	106.1
FLAT PANEL DISPLAY	91	0.9																	91	.9
NTIS SYSTEM (GPE)	84	29.7																	84	29.7
NTIS UPGRADE	90	29.3																	90	29.3
TIR (GPE)	107	1.0																	107	1.0
INSTALL EQUIPMENT N/R		0.6																2.9		3.5
DATA		0.5						0.2										0.2		.8
TRAINING EQUIP	7	1.7							1	1.1							4	5.1	12	7.9
SUPPORT EQUIP	3	1.1			1	0.2													4	1.3
ILS		0.4								0.2			0.3		0.3		0.3			1.8
OTHER SUPPORT		8.3		1.1		1.2		2.0		1.9		1.9		1.8		1.8		1.8		21.9
INTERIM CONTRACTOR SUPPORT																				
INSTALLATION COST	191	3.5			16	0.2	9	0.1	11	0.2	16	0.2	16	0.2	16	0.2	18	0.2	293	4.9
TOTAL PROCUREMENT	946	121.7	18	22.0	21	6.2	23	7.9	27	8.1	37	8.2	37	8.4	37	8.5	86	54.5	1,232	245.5

NOTE: AFC-XXX UH-1Y will be configured to fly with any of the three existing sensors: STAR Safire, BRITE Star Block I or BRITE Star Block II. FY07 contains \$18.007M Title IX Supplemental (GWOT) for BRITE STAR II.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: UH-1N/UH-1Y, ASSOCIATED TRAINERS AND LABS MODIFICATION TITLE: BRITE STAR II/UH-1Y ( OSIP 031-92 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 0 Months PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY 2007 N/A FY 2008 N/A FY 2009 Oct-08

DELIVERY DATE: FY 2007 N/A FY 2008 N/A FY 2009 Oct 08

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS (16) kits					16	0.2														16	0.2	
FY 2007 ( ) kits																				0	0	
FY 2008 ( ) kits																				0	0.0	
FY 2009 (9) kits							9	0.1												9	0.1	
FY 2010 (11) kits									11	0.2										11	0.2	
FY 2011 (16) kits											16	0.2								16	0.2	
FY 2012 (16) kits													16	0.2						16	0.2	
FY 2013 (16) kits															16	0.2				16	0.2	
TO COMPLETE (18) kits																	18	0.2		18	0.2	
Total	0	0.0	0	0.0	16	0.2	9	0.1	11	0.2	16	0.2	16	0.2	16	0.2	18	0.2	18	0.2	102	1.4

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						5	5	6	2	2	2	3	2	3	3	3	4	4	4	4
Out						5	5	5	6	2	2	2	3	3	4	4	4	4	4	4

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	4	4	4	4	4	4	4	4	18	102
Out	4	4	4	4	4	4	4	4	18	102

MODIFICATION TITLE: H-1 CRITICAL SYSTEMS IMPROVEMENT PROGRAM ( OSIP 019-09 )

MODELS OF SYSTEMS AFFECTED: UH-1Y/AH-1Z TYPE MODIFICATION: READINESS IMPROVEMENT/SAFETY OF FLIGHT/COMBAT EFFECTIVENESS

DESCRIPTION / JUSTIFICATION: The purpose of this program is to incorporate a number of cost effective changes to the UH-1Y and AH-1Z helicopters, specifically targeting improvements to safety of flight, maintenance, obsolescence, and readiness degrader items. These improvements are a vital element of the H-1 Upgrades program, significantly enhancing the strategy of a more ready, more capable H-1 force to accomplish the successful fielding of this new capability to the Warfighter in support of the Global War on Terrorism. The increased readiness and capabilities that will be realized support the tenets of Sea Power 21, specifically operational availability, enhanced capabilities, and interoperability. Planned improvements under this OSIP cover airframe, propulsion, helmet, weapons systems, survivability, reliability & maintainability, weight & balance, and avionics related subsystems. The OSIP intends to utilize upgrades to existing technology to the maximum extent practicable to minimize development and procurement costs, and to reduce the time to field the improved systems. The system identified for improvement in the OSIP is the UH-1Y SATCOM Antenna Placement. Additionally, systems being evaluated for replacement include Helmet Mounted Sight Display (HMSD), support equipment, avionics subsystems, sensors, Data Link, armor, communication systems, Missile Warning and Radar Detection Systems, a Directed Infrared Counter Measures survivability system, Gen II Mission Computer, and increased aircraft electrical power availability system.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This SATCOM antenna modification makes maximum use of existing technologies that have been installed on the AH-1W and HH/UH-1N platforms, or other fielded USN or USMC platforms.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS							12	0.1											12	.1	
INSTALL EQUIPMENT																					
SATCOM ANTENNA AV2091							12	0.1											12	.1	
REDESIGNED SLIPPING AND STANDPIPE							12	0.4											12	.4	
MOUNTING ASSEMBLY																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT								0.3		0.1											.4
INSTALLATION COST									12	0.1										12	.1
TOTAL PROCUREMENT								36	.8		.2									48	1.0

This OSIP is a new start that will commence with FY 2007 funds transferred from the Engineering Change Order portion of APN 0178 following notification of Congress.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: UH-1Y MODIFICATION TITLE: H-1 SYSTEM IMPROVEMENT PROGRAM (OSIP 019-09) SATCOM ANTENNA RELOCATION

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007 N/A FY 2008 N/A FY 2009 Dec-08

DELIVERY DATE: FY 2007 N/A FY 2008 N/A FY 2009 Dec-09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
PRIOR YEARS () kits																					0	0	
FY 2007 () kits																						0	0
FY 2008 () kits																						0	0.0
FY 2009 (12) kits										12	0.1											12	0.1
FY 2010 () kits																						0	0.0
FY 2011 () kits																						0	0.0
FY 2012 () kits																						0	0.0
FY 2013 () kits																						0	0.0
TO COMPLETE () kits																						0	0.0
Total		0	0.0	0	0.0	0	0.0	0	0.0	12	0.1	0	0.0	0	0.0	0	0.0	41	0.0	12	0.1		

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In														2	3	3	4						
Out														2	3	3	4						

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										12
Out										12

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							053700, EP-3 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	629.6	A	66.8	55.5	72.4	195.0	103.1	105.3	77.9	134.5	1440.2	

**DESCRIPTION:**

This line item funds modifications to the EP-3E aircraft. The EP-3E is a land based, long range aircraft, with electronic intercept devices for detection and tracking of enemy RADARs and communications.

In OSIP 11-01, the Spiral 1 kit improves operational capability and aircrew productivity by expanding the Electronic Support Measures (ESM) frequency coverage, applying state-of-the-art signal exploitation/processing/display techniques, expanding Direction Finding (DF) frequency coverage, off-board classified communication, and expanding special signal processing capability. Spiral 2 kit provides for improved information fusion/decision-making capabilities. Spiral 3 procurement begins in FY10 with Low Band Communication System Upgrades, Environmental Control System (ECS) Upgrades and the replacement of aging and obsolescence aircraft antenna arrays. FY07-FY08 includes ECO funding to replace subsystem obsolescence to ensure EP-3E viability until aircraft recapitalization. In OSIP 007-09 Recapitalization Capabilities Migration(RCM) FY09-FY11 procures capabilities to ensure EP-3E relevance beyond FY20 and procures follow-on capabilities to be migrated to the recap platform. OSIP 014-05 responds to the current, immediate demand for electronic attack capabilities on the EP-3E in the Global War on Terrorism (GWOT) and has been funded via the Emergency Supplemental Appropriation for Defense (ESAD).

Research and Development is funded with National Security Agency (NSA) Military Intelligence Program (MIP) funds. This OSIP provides the procurement tail for RDT&E funds from the Navy's Advanced Signal Recognition line (PE 0305206N). The NSA RDT&E line for the Navy Airborne Sensor System Improvements funds sensor improvements with application for the EP-3E. MIP RDT&E funds are responsible for the development and acquisition of EP-3E sensors, data links, data relays and ground stations to achieve and maintain interoperability with Defense-wide airborne reconnaissance assets. Active Primary Aircraft Authorization (PAA) inventory is 12 with a Backup Aircraft Authorization (BAA) inventory of 4 for a total of 16 aircraft with the completion of OSIP 29-00. Funds budgeted in FY2009-FY2013 are to continue EP-3E Joint Airborne Signal Intelligence (SIGINT) Architecture (JASA) Modification (JMOM) Common Configuration (JCC) Program. The EP-3E has an average service life of 34.8 years. The EP-3E service life will be managed through Special Structural Inspection - Kits (SSI-Ks) in the P3 Series Modification program (OSIP 005-05).

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
011-01 JSAF MODIFICATION (JMOM)	229.4	56.5	46.5	39.5	71.3	60.1	64.2	66.1	134.5	768.2	
007-09 EP-3E RECAPITALIZATION CAPABILITIES MIGRATION				32.9	123.7	43.1	41.1	11.8		252.5	
014-05 EP-3E INFO OPERATIONS	14.8	10.2	9.0							34.1	
INACTIVE OSIPS	385.4									385.4	
<b>TOTAL</b>	<b>629.6</b>	<b>0.0</b>	<b>66.8</b>	<b>55.5</b>	<b>72.4</b>	<b>195.0</b>	<b>103.1</b>	<b>105.3</b>	<b>77.9</b>	<b>134.5</b>	<b>1440.2</b>

1. FY2008 funding total includes \$9.0 received in the 2008 Consolidated Appropriation Act, Division L.

Exhibit P-3a

MODIFICATION TITLE: JSAF MODIFICATION (JMCD) ( OSIP 011-01 )

MODELS OF SYSTEMS AFFECTED: EP-3E TYPE MODIFICATION: Operational Improvement/Modernization

**DESCRIPTION / JUSTIFICATION**

The EP-3E JASA Modification (JMCD) Program began as an upgrade to the capabilities of the Sensor System Improvement Program (SSIP) configuration of the EP-3E. This OSIP responds to Operational Requirement Document (ORD) #571-78-01 and the CAPSTONE ORD (CAF-002-88). JMCD was designed as an evolutionary acquisition program consisting of three block mods. MCD 1 updated the EP-3E infrastructure, improved auto-ESM with the Story Finder system, incorporated Joint Signal Processor (JSP), incorporated SSIP corrections, and incorporated Quick Response Capabilities (QRC) (including the Single Channel Ground and Airborne Radio Systems (SINCGARS) upgrade and InfraRad (IR) Stobes modifications) into JMCD. MCD 2 was planned to incorporate a low band capability which improves special collection capability and add the Common Data Link (CDL) allowing the EP-3E to serve as a network-centric airborne SIGINT collection element capable of sharing data with ground, air, and ship-based operators. MCD 3 would have incorporated precision targeting. The Baseline Update to MCD 1 was required to ensure the JMCD Trial Kit Installation (TKI) aircraft had the same baseline configuration and capabilities as SSIP and QRC fleet assets. The twelve EP-3E aircraft (PAA) will be managed through Special Structural Inspections (SSIs) beyond JMCD Baseline Full Operational Capability (FOC).

In OSIP 11-01, the Spiral 1 kit improves operational capability and aircrew productivity by expanding the ESM frequency coverage, applying state-of-the-art signal exploitation/processing/display techniques, expanding Direction Finding (DF) frequency coverage, off-board classified communication, and expanding special signal processing capability. Spiral 2 kit provides for improved information fusion/decision-making capabilities. Spiral 3 procurement begins in FY10 with Low Band Communication System Upgrades, Environmental Control System (ECS) Upgrades and the replacement of aging and obsolescence aircraft antenna arrays. FY2007-FY2008 includes ECO funding to replace subsystem obsolescence to ensure EP-3E viability until aircraft recapitalization.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Increment 1 (the JMCD baseline configuration) Milestone III decision occurred 4th Qtr FY04 based on completion of Operational Test (OT), demonstration of Key Performance Parameters (KPP's) and a Developmental Test (DT) Assist on the Story Finder subsystem. The ForceNet Spiral 1 LRIP decision was approved as planned on 06 June 2005 based on successful completion of its Design Readiness Reviews (DRR) and applicable contractor aircraft flight tests. Spiral 1 completed OT 2nd Qtr of FY06 with the associated Full Rate Production decision and contract awarded 4th Qtr of FY06. Spiral 2 Engineering Development efforts are underway with its associated LRIP decision planned for 2nd Qtr in FY08 and associated contract award planned for the 2nd Qtr in FY08. Spiral 2 OT is planned for 4th Qtr of FY08 with its associated Full Rate Production decision in the 1st Qtr of FY09 and associated contract award planned for the 1st Qtr of FY09. Spiral 3 efforts will begin with LRIP procurement in 4th Qtr FY2009.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
BLOCK MOD 1	3	4.0																	3	4.0	
COMINT/ELINT UPGRADES		1.9																			1.9
IR STROBES MOD	10	0.2																		10	.2
JMCD Common	9	9.0																		9	9.0
JMCD Common SP1	6	4.8																		6	4.8
JMCD Common SP2					4	0.2	4	0.3	4	0.3	4	0.3								16	1.1
JMCD Common SP3									3	7.1	3	7.1	3	7.2	3	7.3	4	10.0		16	38.5
RFD Upgrades	4	0.4																		4	.4
SINCGARS UPGRADE	16	0.4																		16	.4
VME TUNER	2	1.1																		2	1.1
INSTALLATION KITS N/R		5.8		2.1		4.5		13.2		3.4		1.3		0.9		1.0		3.1			35.3
INSTALL EQUIPMENT																					
BLOCK MOD 1	3	11.1																		3	11.1
COMINT/ELINT UPGRADES		7.2																			7.2
DERF SIGINT		14.2																			14.2
IR STROBES MOD	10	0.1																		10	.1
JMCD 1 Upgrades	5	10.8																		5	10.8
JMCD Common	9	15.5																		9	15.5
JMCD Common SP1	6	25.0																		6	25.0
JMCD Common SP2					4	0.3	4	0.3	4	0.3	4	0.3								16	1.1
JMCD Common SP3									3	17.6	3	17.7	3	18.3	3	18.5	4	25.0		16	97.1
RFD Upgrades	9	4.4																		9	4.4
SINCGARS UPGRADE	16	0.6																		16	.6
Tactical Comms System Upgra	16	3.4																		16	3.4
VME TUNER	6	10.0																		6	10.0
INSTALL EQUIPMENT N/R		26.9		3.1		7.6		10.2		5.6		2.0		2.3		2.1		5.2			65.0
ECO																					
JCC Obsolescence				14.8		12.0															26.8
DATA		4.0		1.4		1.4		1.4		1.5		1.5		1.5		1.5		4.5			18.7
TRAINING EQUIP		4.8		1.4		3.0		1.5		5.7		1.5		1.6		1.6		3.2			24.3
SUPPORT EQUIP		1.8		0.2		0.2		0.7		4.4		0.2		0.2		0.2		0.5			8.4
ILS		12.0		2.1		4.2		2.3		6.9		2.8		2.9		2.1		4.1			39.5
OTHER SUPPORT		40.9		5.7		7.9		8.1		7.6		6.9		5.3		4.9		9.0			96.2
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	9	9.1	6	25.8	4	5.2	4	1.5	5	10.9	6	18.6	3	24.0	3	27.0	7	70.0	47	192.1	
TOTAL PROCUREMENT	139	229.4		56.5	4	46.5	4	39.5	7	71.3	7	60.1	3	64.2	3	66.1	4	134.5	194	768.2	

1. FY07/FY08 Installation cost include various ECO that are not part of JCC Spiral install costs.
2. FY09 NRE increase for significant SP3 tooling/setup of install kits and equipment manufacturing.
3. FY10 increase to support logistic, training, and support equipment for SP3 procurement.
4. Costs of JCC Kits and Installs experience large increases because there are no longer cost sharing benefits due to retiring P-3 efforts.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Joint Airborne SIGINT Architecture (JASA) Modification Program (JMOD) (OSIP 11-01)

INSTALLATION INFORMATION: JMOD Installations/JMOD Common Spiral 1

METHOD OF IMPLEMENTATION: Commercial Contractor Installation

ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY2006 & FY (19) kits/**	10	7.2	6	19.7																16	26.9
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
TOTAL	10	7.2	6	19.7																16	26.9

\* 1 JMOD 1 kit was funded as a R&D TKI.

\*\* Three (3) JMOD kits installed into Conversion aircraft (OSIP 29-00). Installation efforts for FY04 Congressional Plus Ups will be concurrent with the JMOD Baseline installations or Special Structural Inspections (SSIs).

Installation Schedule

	FY 2006	FY 2007				FY 2008				FY 2009				FY 2010				
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	10		2	2	2													
Out	8		2		2	2	2											

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4		
In														16
Out														16

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Joint Airborne SIGINT Architecture (JASA) Modification Program (JM0D) (OSIP 11-01)

JM0D Installations/JM0D Common Spiral 2

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Commercial Contractor Installation

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: 12/07 FY 2009: 12/08

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: 03/08 FY 2009: 03/09

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 (4) kits					4	1.5														4	1.5
FY 2009 (4) kits							4	1.5												4	1.5
FY 2010 (4) kits									4	1.6										4	1.6
FY 2011 (4) kits											4	1.6								4	1.6
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
TOTAL					4	1.5	4	1.5	4	1.6	4	1.6								16	6.2

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In							2	2				2	2				2	2
Out							2	2				2	2				2	2

  

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL	
	1	2	3	4	1	2	3	4	1	2	3	4			
In			2	2											16
Out			2	2											16



Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Joint Airborne SIGINT Architecture (JASA) Modification Program (JMOD) (OSIP 11-01)

Obsolescence ECPs

INSTALLATION INFORMATION:  
METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007: 12/06 FY 2008: 12/07 FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: 02/07 FY 2008: 02/08 FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					
FY 2007 ( ) kits				6.2																	6.2
FY 2008 ( ) kits						3.8															3.8
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
TOTAL				6.2		3.8															10.0

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010								
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
In																					
Out																					

In	FY 2011				FY 2012				FY 2013				To Complete	TOTAL	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Note: FY07/FY08 Obsolescence quantities vary due to emergent threat requirements.

Exhibit P-3a

MODIFICATION TITLE: EP-3E RECAPITALIZATION CAPABILITIES MIGRATION( OSIP 007-09 )

MODELS OF SYSTEMS AFFECTED: EP-3E TYPE MODIFICATION: Operational Improvement/Modernization

**DESCRIPTION / JUSTIFICATION:**

Funding was added in FY09-FY10 to procure OSD directed EP-3E capabilities to ensure mission relevance beyond FY20 that may be migrated to the recapitization platform. RCM funding broken down via a RADAR Migration Kit that addresses RADAR, Identification Friend or Foe (IFF), Radio Frequency (RF) path procurements and a Signals Migration Kit that addresses special SIGINT signal procurements. Moved JCC obsolescence for FY09-FY13 and QRCs for FY10-FY13 from OSIP 11-01 to OSIP 007-09. The QRC funds address mission avionics system obsolescence and emerging requirements from national and theater commanders in response to rapidly evolving Global War On Terrorism (GWOT) threats.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The EP-3E sustainment ECO procurement will commence in FY10 to ensure mission system viability beyond FY20.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
RADAR MIGRATION A KIT									3	13.5	1	4.5							4	18.0	
SIGNALS MIGRATION A KIT							1	0.6	2	1.1	1	0.6							4	2.2	
INSTALLATION KITS N/R								3.0		7.0										10.0	
INSTALL EQUIPMENT																					
RADAR MIGRATION B KIT									3	21.0	1	7.0							4	28.0	
SIGNAL MIGRATION B KIT							1	1.3	2	2.6	1	1.3							4	5.2	
INSTALL EQUIPMENT N/R								1.8		2.6										4.4	
ECO																					
OBsolescence								8.2		6.9		6.1		22.4		4.4				48.0	
QRC										5.6		4.9		6.5		2.8				19.8	
DATA								0.5		0.6		0.3		0.3		0.2				1.9	
TRAINING EQUIP								3.0		15.0										18.0	
SUPPORT EQUIP								2.4		27.9										30.3	
ILS								7.9		12.9		1.5		1.7		1.1				25.1	
OTHER SUPPORT								3.0		3.0		2.0		2.1		1.2				11.3	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST								1.2	1	4.0	4	14.9	2	8.1		2.1			7	30.3	
TOTAL PROCUREMENT								1	32.9	5	123.7	2	43.1		41.1		11.8		7	252.5	

1. FY10 through FY13 QRC quantities vary due to emergent threat requirements.
2. FY10 one RADAR Kit is a system integration lab asset.
3. FY2012 ECO Obsolescence increase because there are no longer cost sharing benefits due to retiring P-3 efforts.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Recapitalization Capabilities Migration (RCM) (OSIP 007-09)

Quick Response Capabilities (QRC)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_

FY 2008: \_\_\_\_\_

FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: \_\_\_\_\_

FY 2008: \_\_\_\_\_

FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2005 & FY ( ) kits																					
FY 2006 ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits									1.4												1.4
FY 2011 ( ) kits										1.1											1.1
FY 2012 ( ) kits											1.0										1.0
FY 2013 ( ) kits																1.0					1.0
To Complete ( ) kits																					
TOTAL									1.4		1.1		1.0		1.0						4.5

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In																					
Out																					

  

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Note: FY10 through FY13 QRC quantities vary due to emergent threat requirements.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Recapitalization Capabilities Migration (RCM) (OSIP 007-09)

Obsolescence ECPs

INSTALLATION INFORMATION: \_\_\_\_\_

METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2007: 12/06 FY 2008: 12/07 FY 2009: 12/08

DELIVERY DATE: FY 2007: 02/07 FY 2008: 02/08 FY 2009: 02/09

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits								1.2													1.2
FY 2010 ( ) kits									2.1												2.1
FY 2011 ( ) kits											1.8										1.8
FY 2012 ( ) kits													1.1								1.1
FY 2013 ( ) kits																1.1					1.1
To Complete ( ) kits																					
TOTAL								1.2	2.1	1.8	1.1	1.1	1.1								7.3

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In																					
Out																					

  

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Note: FY07 through FY13 Obsolescence quantities vary due to emergent threat requirements.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Recapitalization Capabilities Migration (RCM) (OSIP 007-09)

INSTALLATION INFORMATION: BADAR Migration Kits  
 METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 (2) kits											2	11.0								2	11.0
FY 2011 (1) kits													1	5.5						1	5.5
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
TOTAL											2	11.0	1	5.5						3	16.5

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010								
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
In																					
Out																					

  

FY 2011	FY 2012				FY 2013				To Complete	TOTAL											
	1	2	3	4	1	2	3	4			1	2	3	4							
In	1		1		1																3
Out				1		1															3

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Recapitalization Capabilities Migration (RCM) (OSIP 007-09)  
 INSTALLATION INFORMATION: SIGNAL Migration Kits

METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 (1) kits									1	0.5										1	0.5
FY 2010 (2) kits											2	1.0								2	1.0
FY 2011 (1) kits													1	0.5						1	0.5
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
TOTAL									1	0.5	2	1.0	1	0.5						4	2.0

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010								
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
In														1								
Out																					1	

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4		
In	1		1		1									4
Out			1		1	1								4

Exhibit P-3a

MODIFICATION TITLE: EP-3E INFO OPERATIONS

MODELS OF SYSTEMS AFFECTED: EP-3E TYPE MODIFICATION: Operational Improvement/Modernization

**DESCRIPTION / JUSTIFICATION:**

This program responds to the current, immediate demand for electronic attack capabilities on the EP-3E in the Global War on Terrorism (GWOT) and has been funded via the Emergency Supplemental Appropriation for Defense (ESAD).

This EP-3E Information Operations program will procure the necessary modifications for EP-3E aircraft to selectively conduct offensive intelligence operations. This requirement was originally identified by COMFIFTHFLT (NS/117153320CT02) for Operation Enduring Freedom (OEF). The requirement was further identified by CMNF - Iraq (0211012NOV04) and endorsed by USCENCOM (CC-B-P/091619ZNOV04), USNAVCENT (111332ZNOV04) and CFFC (122012ZNOV04).

The AN/USQ-146 procurement follows a prototype installation of this capability that was installed to meet an urgent requirement for an airborne Intelligence Operations capability during Operation Iraqi Freedom (OIF). Due to its great success in the operational theater, the Joint Chiefs of Staff (JCS) requested the capability to be installed on all EP-3E aircraft in the USCENCOM theater. This program procures ten units for aircraft installation.

The AN/USQ-146 will be used to fill the emergent requirement for electronic attack to expedite the capability.

The FLIR effort represents the procurement and installation of emergent classified Surge requirements as directed by the Secretary of Defense in support of the Global War on Terrorism (GWOT). Effort was initiated using FY05 funding with additional FY06 and FY07 funds added by the NAVAIR War Council to fund procurement of six systems and five installations.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Contract award is scheduled for 4th quarter FY05. Delivery will occur ten months after contract award and installation two weeks thereafter. DT III testing will occur on the first delivered unit in 3rd quarter FY06. Each unit will require TEMPEST testing after installation.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AN/USQ-146	10	0.5																		10	.5
FLIR	2	0.4	3	0.4																5	.8
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
AN/USQ-146	10	8.1																		10	8.1
FLIR	3	3.9	3	3.5																6	7.4
INSTALL EQUIPMENT N/R				3.1																	3.1
ECO																					
OBSOLESCENCE																					
QRC																					
DATA		0.1																			.1
TRAINING EQUIP		0.1																			.1
SUPPORT EQUIP																					
ILS		0.2																			.2
OTHER SUPPORT		0.7		1.8		9.0															11.6
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	6	0.8	9	1.4																15	2.2
TOTAL PROCUREMENT	25	14.8	6	10.2		9.0														31	34.1

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E MODIFICATION TITLE: EP-3E Information Operations (OSIP 014-05)

AN/USQ-146 Installation

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2007: Sep-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: Sep-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2005 & PY (10 ) kits	4	0.5	6	0.7																10	1.2
FY 2006 ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
TOTAL																				10	1.2

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In	4		2	2	2																
Out	4		2	2	2																

  

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4		
In														10
Out														10

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E MODIFICATION TITLE: EP-3E Information Operations (OSIP 014-05)

FLIR Installation

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2007: Sep-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: Sep-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2005 & FY (2) kits	2	0.3																		2	0.3
FY 2006 ( ) kits																					
FY 2007 (3) kits			3	0.8																3	0.8
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
TOTAL	2	0.3	3	1																5	1.1

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In	2		1	1	1																
Out	2		1	1	1																

  

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4		
In														5
Out														5

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							053800, P-3 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	2775.2	A	282.6	248.8	297.9	240.4	144.0	133.3	117.2	234.8	4474.1	

**DESCRIPTION:**

This line item funds modifications to P-3 aircraft. The P-3 Orion is a 4 engine, long-range maritime surveillance aircraft which performs Under Sea Warfare (USW), Surface Warfare (SUW) and Intelligence, Surveillance and Reconnaissance (ISR) in support of battle group and littoral operations in direct support of Sea Shield and Forcenet pillars of Seapower 21.

As a direct result of the 7 June 2003 Maritime Patrol and Reconnaissance (MPRA) offsite, the P-3 Sustainment Bridge was approved by the CNO. This resulted in P-3C inventory levels being reduced from 227 to 148. The foundational element of this bridge was optimizing the P-3 fleet by investing manpower, AVDLR and Flying Hour Program (FHP) savings into the resulting smaller P-3 force to produce a better productive ratio of aircraft. This investment allows the P-3 force to be smaller, more ready and more capable. A key investment area is P-3 Mod Programs. Funding for these programs support a multitude of obsolescence, structural, sustainment, training/logistics and warfighting capability upgrades that are key in keeping the P-3 platform relevant through Multi-mission Maritime Aircraft (MMA) Initial Operational Capability (IOC) of 2013 and until the projected MMA Full Operational Capability (FOC) of 2019. P-3 aircraft mods funded under the APN line have heavily supported recent and current Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF) and Global War on Terrorism (GWOT) operations. Without key technology upgrades and aggressive obsolescence management, P-3 aircraft will be unable to meet Fleet Response Plan (FRP) requirements, leaving key Seapower 21 capabilities in support of the Combatant Commanders at risk. This P-3 Sustainment Bridge provides a roadmap through MMA FOC, ensuring sufficient P-3 assets for Fleet and Combatant Commanders to fulfill operational and training/readiness requirements.

The overall goal of the modifications budgeted in FY2009 is to continue mission system sustainment, including: USQ-78 improvements (part of Update III), comm/nav/surveillance weapon system improvements, upgrades/modifications to airframe components/systems, safety improvements and key system obsolescence upgrades. The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
080-84 UPDT III BLK UPGRDE	1143.3	47.8	29.6	18.6	19.2	3.2	18.5	19.7	8.0	1307.8
053-85 CRITICAL SYSTEMS IMPROVEMENTS	37.5	0.9	0.4	0.4	0.4	0.4	0.4	0.4		40.8
029-94 ASUW IMPROV. PROG.	1245.7	55.2	19.2	39.3	40.8	41.9	40.0	26.6	7.0	1515.7
013-01 CNS-ATM	80.5	20.6	15.4	16.9	17.2	11.4	11.7	4.6	0.5	179.0
004-04 P-3 READINESS IMPROVEMENT	67.1	42.3	41.8	51.6	46.0	31.3	30.9	47.1	104.8	462.9
005-05 SSI-K	75.8	113.1	134.6	152.7	94.8	35.4	10.9		25.7	642.9
005-07 PROJECT K-0416		2.7	2.3	2.4	2.1	2.1	2.1	2.2		15.9
006-08 P-3 MISSION SYSTEMS			5.5	16.1	19.9	18.3	18.8	16.5	88.7	183.8
INACTIVE OSIPs	125.3									125.3
<b>TOTAL</b>	<b>2775.2</b>	<b>282.6</b>	<b>248.8</b>	<b>297.9</b>	<b>240.4</b>	<b>144.0</b>	<b>133.3</b>	<b>117.2</b>	<b>234.8</b>	<b>4474.1</b>

1. FY2007 funding total includes \$81.3 received in GWOT supplemental.
2. FY2008 funding totals do not include \$3.1 previously requested for current FY2008 GWOT requirements.

Exhibit P-3a

MODIFICATION TITLE: UPDT III BLK UPRDE( OSIP 080-84 )

MODELS OF SYSTEMS AFFECTED: P-3C TYPE MODIFICATION: Operational Improvement

**DESCRIPTION / JUSTIFICATION:**

The Update III Block Upgrade program provides an improved P-3 anti-submarine warfare (ASW) capability required to neutralize current and emerging littoral and open ocean submarine threats in support of Sea Shield/Sea Power 21.

The program initially establishes a common configuration of AN/USQ-78(V) acoustic processors, acoustic data recorders, sonobuoy receivers, and other acoustic subsystem components for all P-3C Mission Aircraft. Follow-on program efforts continuously modernize this common acoustic subsystem baseline to address COTS component obsolescence, accomplish periodic COTS technology insertions, and provide functional improvements via an Air Acoustic Rapid COTS Insertion (Air ARCI) process. These common configuration efforts and follow-on technology insertion efforts are accomplished with AN/USQ-78(V) Air ARCI upgrade funding.

FY09 thru FY13 objectives of the Update III Block Upgrade Program are to provide improved ASW capability through a series of Air ARCI Technology Insertions/Refreshes to the Acoustic Receiver, Acoustic Processor, and the Acoustic System. These Tech Insertions/Refreshes will: (1) increase digital sonobuoy monitoring capacity and improve acoustic subsystem maintainability by replacing the analog ARR-78 sonobuoy receiver with a digital Software Defined Sonobuoy Receiver (SDSR); (2) increase system openness by eliminating the analog signal conditioning and MIL-unique interface cards; (3) increase processing growth to meet emerging under-sea threats and Fleet ASW requirements for multi-static acoustic sensor processing (e.g., Extended Echo Ranging [EER] family), active acoustic sensor processing (e.g., DICASS) and passive acoustic sensor processing (e.g., ADR, DIFAR) by incrementally upgrading system memory and processing capacity with the latest commercial variants of COTS single board computers and digital signal processors; (4) provide additional on going non-recurring engineering (NRE) solutions to support continuous technology insertions/Refreshes and COTS obsolescence mitigation on a regular cycle via an ARCI Tech Refresh process to the USQ78(B) system.

The Update III Common Configuration program is based on Decision Coordinating Paper W-080-AS and the Program Management Plan #0526 serial 902D/6U324405. Up to 97 aircraft and 10 trainers to be modified to a common baseline configuration, then continuously upgraded via an ARCI process.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:** The original Update III variant received approval for limited production in December 1983 and December 1984. Approval for full production was received in January 1986. The basis of the currently planned common configuration is an AN/USQ-78(V) variant that received approval for full production in February 2002.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
PRIOR YEAR KITS	658	98.8																		658	98.8
INSTALLATION KITS N/R		64.5																			64.5
INSTALL EQUIPMENT																					
DASD/DASD DOCKS	284	2.5	26	0.1																310	2.6
PRIOR YEAR EQUIPMENT	1,895	567.6																		1,895	567.6
USQ-78A/CHRDS	86	116.0	11	13.2																97	129.2
USQ78 APTR RETROFIT CARD SETS									75	10.1										75	10.1
USQ78 APTR UPGRADE KITS							16	8.4									8	5.4		24	13.8
USQ78 ASTR RETROFIT CARD SETS													46	13.8	51	16.7				97	30.5
USQ78 SONO RECEIVER UPGRADE			19	9.5	41	18.8														60	28.3
INSTALL EQUIPMENT N/R		89.5		8.3		4.9		1.2		1.9		1.3		2.1							109.2
ECO																					
ECO						0.1		0.1		0.1		0.1		0.1		0.1		0.1			.7
USQ-78B SYSTEM CONTROLLER ECP		1.6																			1.6
USQ7-78 SONO RECEIVER ECP				6.8																	6.8
DATA		17.0		0.4		0.5		0.1		0.2		0.2		0.2		0.3		0.2			19.0
TRAINING EQUIP	43	17.6	4	3.8			10	1.1					2	0.6	8	0.7				67	23.7
SUPPORT EQUIP		1.6																			1.6
ILS		3.6																			3.6
OTHER SUPPORT		128.3		4.7		3.6		1.9		2.0		1.6		1.7		2.0		1.2			147.1
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	552	34.7	12	1.0	15	1.8	55	5.8	40	4.8							8	1.1		682	49.3
TOTAL PROCUREMENT	3,518	1,143.3	72	47.8	56	29.6	81	18.6	115	19.2		3.2	48	18.5	59	19.7	16	8.0		3,965	1,307.8

Note: The cost of "A" and "B" kits for USQ-78 are not separately priced.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C

MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) USQ-78V

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished on the SMIP contract OR on the SMIP contract and NADEP Jax

ADMINISTRATIVE LEADTIME: 11 Months

PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2007: 08/07 FY 2008: \_\_\_\_\_

FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: 1/09 FY 2008: \_\_\_\_\_

FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (86) kits	51	3.1	12	1.0	15	1.8	8	1.0											86	6.9
FY 2007 (11) kits							7	.8	4	.5									11	1.3
FY 2008 ( ) kits																				
FY 2009 ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
To Complete ( ) kits																				
<b>TOTAL</b>	<b>51</b>	<b>3.1</b>	<b>12</b>	<b>1.0</b>	<b>15</b>	<b>1.8</b>	<b>15</b>	<b>1.8</b>	<b>4</b>	<b>.5</b>								<b>97</b>	<b>8.2</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	51	2	3	3	4	6	3	3	3	6	3	3	3	4				
Out	51	2	3	3	4	6	3	3	3	6	3	3	3	4				

	FY 2011				FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4		
In														97
Out														97

Completions same as inductions; one week effort.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C

MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) SONO RECEIVER

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished on the MIP contract and on-site by contractor field team

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2007: 8/07 FY 2008: 3/08 FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: 11/08 FY 2008: 06/09 FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 (19) kits							19	1.9												19	1.9
FY 2008 (41) kits							21	2.1	20	2.4									41	4.5	
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
To Complete () kits																					
<b>TOTAL</b>							40	4.0	20	2.4									60	6.4	

NOTE: FY06 was procured with the FY-07 LOT

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In										4	9	12	15	10	10							
Out										4	9	12	15	10	10							

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										60
Out										60

Completions same as inductions; two week effort.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C

MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) ACOUSTIC PROCESSOR TECH REFRESH

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished on-site by contractor field team

ADMINISTRATIVE LEADTIME: 4 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: 2/09

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: 2/10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 (16) kits									16	1.9										16	1.9
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
To Complete (8) kits																		8	1.1	8	1.1
<b>TOTAL</b>									16	1.9							8	1.1	24	3.0	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In															6	10					
Out															6	10					

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In									8	24
Out									8	24

Completions same as inductions; one week effort.

Exhibit P-3a

MODIFICATION TITLE: ASUW IMPROV. PROG.( OSIP 029-94 )

MODELS OF SYSTEMS AFFECTED: P-3C TYPE MODIFICATION: Operational Improvement

DESCRIPTION / JUSTIFICATION:

The Navy's Maritime Patrol and Reconnaissance Force (primarily P-3C Orion aircraft) provides three deliverables to Navy and joint commanders worldwide: Undersea warfare; Intelligence Surveillance, and Reconnaissance; and Maritime Surveillance Targeting. The ASUW Improvement Program meets the Navy's requirement to rapidly provide a significant increase in the current P-3's ability to perform Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASUW), Over-the-Horizon Targeting (OTH-T), and Command, Control, Communications, Computers, and Intelligence (C4I). The target aircraft for this modification are P-3C Update II/II.5 and Update III. This modification focuses on improving the weapon system's capability for standoff targeting and classification. Significant sensor improvements and capabilities are provided by the APS-137D (V) 5 imaging radar, the Advanced Imaging Multi-Spectral Sensor (AIMS) electro optical/infrared system, and ESM upgrades that include Specific Emitter Identification (SEI), SEI Utility Improvement, ALR-95, improved pulse processing, and DF accuracy. C4I is improved with a DAMA Satcom radio suite and Multi-mission Advanced Tactical Terminal (MATT) that can receive the Officer in Tactical Command Information Exchange System (OTCIXS), and other fleet broadcasts. Additional planned Phased Capability Upgrade (PCU) improvements include the Maritime Surveillance Targeting (MST) capability as well as Tactical Common Data Link (TCDL). Survivability enhancements include the ALE-47/AAR-47 missile warning countermeasures, explosive suppressant foam, and small circular area of probability weapon system (Maverick, SLAM, SLAM-ER, and provisions to carry and launch all Mil Std 1760 Digital weapons. Additional funding in FY1995 and FY1996 was utilized to meet an urgent fleet requirement to upgrade 17 Pre-AIP aircraft with Maverick armament control kits. FY2005 Emergency Supplemental Appropriation for Defense (ESAD) funds were provided to procure and install additional TCDL systems. The P3 AIP operational requirement document (ORD) is Ser # 355-88-94. Future Engineering Change Proposals (ECPs) are anticipated for the existing systems including APS 137 radar; AIMS EO/IR; MATT; Link 16; Global Communication & Control System - Maritime (GCCS-M); Precision Targeting Workstation (PTW); OASIS; Video Distribution Controller (VDC); Tactical Mission Computer; ALR-95 ESM; DAMA Satcom; MST; TCDL; Recorders including the High Resolution Digital Recorder; ALE47/AAR47; Digital Stores Management System (DSMS); all weapon systems including missiles, torpedoes, mines, as well as acoustic system upgrades. The ASW Maritime Improvement Program (AMIP) will provide for Mission System Sustainment, ASW improvements and improved C4I systems including INMARSAT /Integrated Tactical Picture (ITP).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This modification makes maximum use of previously developed subsystems.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$			
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
PRIOR YEAR KITS	88	384.3																		88	384.3		
TCDL A-KIT			25	0.8														3	0.1	28	.9		
INSTALLATION KITS N/R		42.1		1.2																	43.2		
INSTALL EQUIPMENT																							
BMUP ASE FOAM KITS			5	0.2																	5	.2	
C4 FOR ASW LINK16					2	1.6	11	3.2	15	4.5	16	4.8	16	4.8	12	3.6					72	22.6	
C4 FOR ASW (INMARSAT/ITP)		1.9			2	0.6	11	8.9	15	12.3	16	13.1	16	13.1	12	9.8					72	59.8	
Digital Stores Management							7	2.0	19	5.5	19	5.5	19	5.5	8	2.3					72	20.9	
GFE SENSORS AND AVIONICS		286.3		0.6																		287.0	
HIGH RESOLUTION DIGITAL RECORDER		0.8		1.1																		1.9	
PHASED CAPABILITY UPGRADE (MST)	30	29.0	33	12.1	7	3.2	1	0.4										3	1.5	74	46.2		
PRIOR YEAR EQUIPMENT		9.5																				9.5	
TCDL B-KIT			26	10.8																3	1.2	29	12.0
INSTALL EQUIPMENT N/R		82.4		6.6		4.3		1.0														94.3	
ECO																							
ALR-95 UPGRADES		0.3																				.3	
DIGITAL STORES MANAGEMENT SYSTEM		6.8		3.6				0.5	0.5		0.5		0.5		0.3							12.7	
SLAM-ER		23.8																				23.8	
DATA		16.7		0.1		0.9		1.1		1.0		1.0		0.8		0.3						21.8	
TRAINING EQUIP		59.2		7.1		5.0		11.8		5.0		2.5		1.0		0.3						91.9	
SUPPORT EQUIP		13.1		0.3				1.1		0.5		0.1		0.1		*						15.2	
ILS		16.2		0.5				0.5		0.5		0.5		0.5		0.2						18.9	
OTHER SUPPORT		144.0		3.5		3.2		7.4		4.9		3.9		3.8		1.3						172.0	
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST	71	129.4		6.6	51	0.4	65	1.3	25	6.1	35	9.9	35	10.0	28	8.5	20	4.3	330			176.4	
TOTAL PROCUREMENT	189	1,245.7	89	55.2	62	19.2	95	39.3	74	40.8	86	41.9	86	40.0	60	26.6	29	7.0	770			1,515.7	

Asterisk (\*) indicates amount value less than \$51k

- The cost of "A" and "B" kits for all kits (except TC DL) not separately priced.
- AIP prior year TC DL kits funded with Congressional Add and ESAD funds.
- Phased Capability Upgrade (MST) prior year kits include two (2) lab assets.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED:

P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) TCDL Installations

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

Contractor Field Mod Team

ADMINISTRATIVE LEADTIME:

10 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES:

FY 2007: 08/07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE:

FY 2007: 06/08 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (46) kits	46	4.1																	46	4.1	
FY 2006 () kits																					
FY 2007 (25) kits **					12	*	13	*											25	*	
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
To Complete (3) kits																		3	.1	3	.1
<b>TOTAL</b>	<b>46</b>	<b>4.1</b>			<b>12</b>	<b>*</b>	<b>13</b>	<b>*</b>										<b>3</b>	<b>.1</b>	<b>74</b>	<b>4.3</b>

\* Install provided at no cost to Gov't

\*\* Two of the FY07 funded kits are for trainers; one is for PHIC lab which does not require installation.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	46							6	6	6	6	1										
Out	46							6	6	6	6	1										

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In									3	74
Out									3	74

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) AIS Installations / PCU (MST)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2007: 8/07 FY 2008: 01/08 FY 2009: 11/08

DELIVERY DATE: FY 2007: 05/08 FY 2008: 10/08 FY 2009: 08/09

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (28) kits			***	1.0	24	***	4	***												28	1.0
FY 2007 (33) kits			**/**	1.1			33	**/**												33	1.1
FY 2008 (7) kits							7	.3												7	.3
FY 2009 (1) kits							1	*												1	***
FY 2010 ()kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
To Complete (3) kits																	3	.1	3	.1	
<b>TOTAL</b>			*	2.1	24	*	45	.3									3	.1	72	2.5	

\*Asterisk (\*) indicates amount value less than \$51K

\*\* FY07 Title IX funds installs 26 kits in FY09

\*\*\*FY07 Congressional Add funds 24 installs in FY08 and 11 installs in FY09 (11 FY09 installs = 4 prior year kits & 7 FY07 kits)

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							12	12	12	12	12	9									
Out							12	12	12	12	12	9									

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In									3	72
Out									3	72

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED:

P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) C4 for ASW (INMARSAT/ITPLink-16) Installations

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

Contractor Field Mod Team

ADMINISTRATIVE LEADTIME:

2 Months

PRODUCTION LEADTIME: 8 Months

CONTRACT DATES:

FY 2007: \_\_\_\_\_ FY 2008: 11/08 FY 2009: 11/08

DELIVERY DATE:

FY 2007: \_\_\_\_\_ FY 2008: 07/09 FY 2009: 07/09

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 () kits																					
FY 2008 (2) kits					*	.4	2	*											2	.4	
FY 2009 (11) kits							5	1.0	6	1.2										11	2.2
FY 2010 (15) kits									12	2.4	3	.6								15	3.0
FY 2011 (16) kits											13	2.6	3	.6						16	3.3
FY 2012 (16) kits													13	2.7	3	.6				16	3.3
FY 2013 (12) kits															6	1.2	6	1.2	12	2.5	
To Complete () kits																					
<b>TOTAL</b>						.4	7	1.0	18	3.6	16	3.3	16	3.3	9	1.8	6	1.2	72	14.7	

\* FY08 C4 for ASW Congressional Adds funds 2 installs in FY09.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In												7	6	4	4	4	3	5	4	4	
Out													7	6	4	4	4	3	5	4	

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In	3	5	4	4	3	2	2	2	6	72
Out	4	3	5	4	4	3	2	2	8	72

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED:

P-3C                      MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) Digital Stores Management

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

Contractor Field Mod Team

ADMINISTRATIVE LEADTIME:

3 Months                      PRODUCTION LEADTIME: 9 Months

CONTRACT DATES:

DELIVERY DATE:            FY 2007: \_\_\_\_\_            FY 2008: \_\_\_\_\_            FY 2009: 1/09

   FY 2007: \_\_\_\_\_            FY 2008: \_\_\_\_\_            FY 2009: 10/09

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 (7) kits									7	2.5										7	2.5
FY 2010 (19) kits											19	6.7								19	6.7
FY 2011 (19) kits													19	6.7						19	6.7
FY 2012 (19) kits															19	6.7				19	6.7
FY 2013 (8) kits																	8	2.8		8	2.8
To Complete () kits																					
<b>TOTAL</b>									7	2.5	19	6.7	19	6.7	19	6.7	8	2.8	72	25.2	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In													1	2	2	2	4	5	5	5	
Out														1	2	2	2	4	5	5	

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In	5	5	5	4	5	5	5	4	8	72
Out	5	5	5	5	4	5	5	5	12	72

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: BMUP SURVIVABILITY

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 10 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2007: 08/07 FY 2008:        FY 2009:       

DELIVERY DATE: FY 2007: 7/08 FY 2008:        FY 2009:       

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 (15) kits			*	4.5	3	**	12	**												15	4.5
FY 2008 () kits																					
FY 2009 (7) kits																					
FY 2010 (19) kits																					
FY 2011 (19) kits																					
FY 2012 (19) kits																					
FY 2013 (8) kits																					
To Complete () kits																					
<b>TOTAL</b>			*	4.5	3	**	12	**												15	4.5

\*FY07 B-Kits funded with JIEDDO (other customer funds), APN is funding installations only under ESAD.

\*\*ESAD funds 3 installs in FY08 and 12 installs in FY09

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									3	3	3	3	3								
Out										3	3	3	3	3							

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										15
Out										15

Exhibit P-3a

MODIFICATION TITLE: CNS-ATM( OSIP 013-01 )

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3 TYPE MODIFICATION: Operational Improvement/Safety

**DESCRIPTION / JUSTIFICATION:**

P-3C aircraft have a requirement for a Communications, Navigation and Surveillance/ Air Traffic Management (CNS/ATM) upgrades to meet expanding CNS/ATM requirements and ensure global access to commercial airspace. The CNS/ATM requirements consist of various avionics systems upgrades/replacements which currently include: VHF radio with 8.33 kHz channel spacing, IFF (Mode S and Mode 5), protected ILS/VOR with FM Immunity, and an upgraded GPS to provide increased navigation accuracy (RNP5, BRNAV, RVSM) with the capability to meet Automatic Dependent Surveillance Broadcast (ADS-B), Next Generation Communications (NEXCOM), Joint Precision Approach and Landing System (JPALS), Precision Area Navigation (PRNAV), Navigation Warfare (NAVWAR) and Joint Tactical Radio System (JTRS) requirements. Successful integration of any or all of these capabilities, and any future Federal Aviation Administration (FAA) or International Civil Aviation Organization (ICAO) mandates, requires an Flight Management System (FMS) which provides for growth and interface flexibility. This OSIP provides non-recurring engineering for the development of the CNS/ATM architecture for the P-3 aircraft which includes a FMS/CDU, digital air data computer (DADC) and an Electronic Flight Display Systems (EFDS). This modification program provides CNS/ATM upgrades for 148 P-3C aircraft and 16 EP-3 aircraft. RNAV/MODE S Kit (JAX ECP P3-828) includes FMS/CDU 7000, Digital Air Data Computer, APX-118 (IFF/MODE S) and RINU-G. EFDS (JAX ECP P3-491), MMR (JAX ECP P3-826 & ARC-210 (8.33KHz) (Jax ECP P3-827) are Stand-Alone ECPs that will be installed separately or in conjunction with RNAV/Mode S ECP. Joint Mission Planning System (JMPS) Unique Planning Component (UPC) is required to replace the flight and mission planning elements ( Flight Planning, ASW Mission Planning, SLAM-ER planning) that presently reside in TAMPs, which will be replaced by JMPS. The JMPS UPC will reside on laptop computers to be procured for 97 aircraft (72 AIP/25 BMUP). There is no kit or install associated with this effort.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:** Acquisition Strategy approved 21 Nov 03/ACAT IV M. Preliminary Design Review for RNAV Mode S completed 16 Jun 04. Began transition of ARC-210 (8.33kHz) Radio and MLR-2020 (P-ILS) from Roll-On/Roll-Off to permanent installation in FY-05 (PMA-209 funded). Milestone C/ Full Rate Production approved on 23 August 2006.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
5VAC RED LIGHTING BUS	2	*	50	0.1	50	0.1	36	*	10	*										148	.2
8.33kHz VHF RADIO	28	0.1		***		***		***		***		***		***		***				28	.1
ARC-197/210 KIT	28	0.5																		28	.5
EFDS	125	6.4	16	2.0	5	0.5	2	0.2	6	0.7	3	0.4	6	0.7	1	0.1				164	11.1
MLR-2020 (P-ILS)	75	0.3		***		***		***		***		***		***		***				75	.3
MLR-2020 (PERMANENT)	20	0.1																		20	.1
RNAV/MODE S	39	2.7	14	0.8	23	1.8	28	1.9	26	1.8	12	0.9	21	1.5	1	0.1				164	11.4
INSTALLATION KITS N/R		10.4		0.5																	10.8
INSTALL EQUIPMENT																					
8.33kHz (ARC-210)	54	1.8		***		***		***		***		***		***		***				54	1.8
APX-118 (IFF/MODE S)	5	0.1		***		***		***		***		***		***		***				5	.1
DIGITAL ADC	94	2.3	34	0.8	54	1.4	58	1.5	46	1.2	24	0.6	42	1.2	2	0.1				354	9.0
EFDS	138	9.9	15	2.2	4	0.6	2	0.3	6	1.0	3	0.5	6	1.0	1	0.2				175	15.6
FMS/CDU 7000 (3 per A/C)	152	6.5	51	2.2	75	3.6	64	3.0	78	3.7	36	1.7	63	3.2	3	0.2				522	24.2
JMPS UPC									6	*	91	0.5								97	.5
MLR-2020 (P-ILS) (2 PER A/C)	148	6.1		***		***		***		***		***		***		***				148	6.1
MLR-2020A-1 UPGRADES	40	0.2		***		***		***		***		***		***		***				40	.2
RINU-G (RNP 4/S) (2 PER A/C)	8	0.1		***		***		***		***		***		***		***				8	.1
INSTALL EQUIPMENT N/R		13.3						2.1	2.7		1.2										19.2
ECO																					
ADDU UPGRADE				0.1																	.1
CDU 7000 SERVICE BULLETINS		0.1							0.1	0.1											.3
JUMPS SOFTWARE												0.6		0.8							1.3
DATA		1.2																			1.2
TRAINING EQUIP	5	0.6	6	0.3	5	0.7	4	0.3	2	0.2										22	1.9
SUPPORT EQUIP																					
ILS		1.7		0.5		0.4		0.4		0.4		0.2		0.2		0.2			0.1		4.1
OTHER SUPPORT		12.0		2.4		1.3		1.7		2.1		1.7		1.6		0.9			0.2		23.9
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	165	4.3	69	8.8	79	5.0	89	5.5	57	3.4	42	3.2	15	1.6	27	2.9	2	0.3		545	35.0
TOTAL PROCUREMENT	1,126	80.5	255	20.6	295	15.4	283	16.9	237	17.2	211	11.4	153	11.7	35	4.6	2	.5		2,597	179.0

Asterisk (\*) indicates amount value less than \$51K

\*\* 60 EFDS funded under GSP OSIP 28-92.

\*\*\* Beginning in FY-04, PMA-209 will fund NRE, equipment and installs for ARC-210 VHF radio, APX-118, MLR-2020 and RINU-G.

NOTE: APX-118 and RINU-G funding in FY04 is for TKIs.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) RNAV MODE S

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2007: 01/07 FY 2008: 01/08 FY 2009: 01/09

DELIVERY DATE: FY 2007: 10/07 FY 2008: 10/08 FY 2009: 10/09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (39) kits *	2	.5	23	5.5	14	1.3													39	7.2
FY 2007 (14) kits					9	1.2	5	.5											14	1.7
FY 2008 (23) kits							23	3.0											23	3.0
FY 2009 (28) kits									28	3.2									28	3.2
FY 2010 (26) kits											26	2.4							26	2.4
FY 2011 (12) kits													12	1.2					12	1.2
FY 2012 (21) kits															21	2.2			21	2.2
FY 2013 (1) kits																	1	.1	1	.1
To Complete () kits																	1	.1		
<b>TOTAL</b>	<b>2</b>	<b>.5</b>	<b>23</b>	<b>5.5</b>	<b>23</b>	<b>2.5</b>	<b>28</b>	<b>3.6</b>	<b>28</b>	<b>3.2</b>	<b>26</b>	<b>2.4</b>	<b>12</b>	<b>1.2</b>	<b>21</b>	<b>2.2</b>	<b>1</b>	<b>.1</b>	<b>164</b>	<b>21.1</b>

P-3C Prototype NRE, prototype kit and prototype installation funded in FY02 with Congressional Plus-Up.

RNAV MODE S installs begin in FY05 and consist of FMS/CDU 7000, Digital Air Data Computer (DADC/ADDU), CXP and RINU-G. CXP & RINU-G Funded by PMA-209.

Installs include trainers.

\* 9 of the FY-06 funded RNAV Mode S kits procured in FY-07, Installs Extend into FY-08

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2		7	8	8	5	6	6	6	7	7	7	7	7	7	7	7	7	7	6	6
Out	2			7	8	8	5	6	6	6	7	7	7	7	7	7	7	7	7	7	6

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In	3	3	3	3	5	5	5	6	1	164
Out	6	3	3	3	3	5	5	5	7	164

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) Electronic Flight Display Systems (EFDS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2007: 01/07 FY 2008: 01/08 FY 2009: 01/09

DELIVERY DATE: FY 2007: 9/07 FY 2008: 9/08 FY 2009: 9/09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (125) kits **	92 *	3.6	26	3.3	7	1.0													125	7.8
FY 2007 (16) kits					9	1.4	7	.8											16	2.2
FY 2008 (5) kits							5	1.1											5	1.1
FY 2009 (2) kits									2	.2									2	.2
FY 2010 (6) kits											6	.7							6	.7
FY 2011 (3) kits													3	.4					3	.4
FY 2012 (6) kits															6	.7			6	.7
FY 2013 (1) kits																	1	.2	1	.2
To Complete () kits																				
<b>TOTAL</b>	92	3.6	26	3.3	16	2.4	12	1.8	2	.2	6	.7	3	.4	6	.7	1	.2	164	13.3

Note: Will conduct stand-alone EFDS installations in FY01-07 to meet immediate requirements. EFDS will be installed stand-alone or concurrent with CNS/ATM Architecture installs beginning in FY08.

Installs include trainers.

\* 60 Prior year EFDS funded kits under GPS OSIP 29-92

\*\* Six (6) of the FY-06 funded EFDS kits procured in FY-07 and will be installed in FY-08.

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	92	6	7	7	6	7	3	3	3	3	3	3	3	1		1		2	2	1	1
Out	87	5	6	7	7	6	7	3	3	3	3	3	3	3	1		1		2	2	1

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In	1	1	1		1	2	2	1	1	164
Out	1	1	1	1	1	2	2		2	164

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) 5V LIGHTING CB

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007: 05/07 FY 2008: 03/08 FY 2009: 03/09

DELIVERY DATE: FY 2007: 8/07 FY 2008: 06/08 FY 2009: 06/09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (2) kits	2	*																	2	*
FY 2007 (50) kits			20	*	30	.1													50	.1
FY 2008 (50) kits					10	*	40	.1											50	.1
FY 2009 (36) kits							9	*	27	.1									36	.1
FY 2010 (10) kits											10	*							10	*
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
To Complete () kits																				
<b>TOTAL</b>	2	*	20	*	40	.1	49	.1	27	.1	10	*							148	.4

Asterisk (\*) indicates amount value less than \$51K.

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2				20	10	10	10	10	10	15	15	9	9	9	9		5	5		
Out	2				20	10	10	10	10	10	15	15	9	9	9	9		5	5		

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										148
Out										148

Exhibit P-3a

MODIFICATION TITLE: P-3 READINESS IMPROVEMENT( OSIP 004-04 )

MODELS OF SYSTEMS AFFECTED: P-3/EP-3 TYPE MODIFICATION: Readiness Improvement

**DESCRIPTION / JUSTIFICATION:**

The purpose of this program is to incorporate a number of cost effective changes to the P-3/EP-3 weapon system, specifically targeting improvements to high cost and maintenance and obsolete readiness degrader items. These improvements are a vital element of the P-3/EP-3 sustainment bridge, significantly enhancing the strategy of a smaller, more ready, more capable P-3/EP-3 force during the bridge to Multi-Mission Maritime Aircraft (MMA). The increased readiness and capabilities that will be realized, support the foundational sustainment bridge elements, specifically operational availability and common configuration. Planned improvements under this OSIP cover airframe, propulsion and avionics related subsystems, utilizing Commercial Off-The-Shelf Systems (COTS) technology to the maximum extent practicable to minimize development and procurement costs, and to reduce the time to field the improved systems. The systems identified for replacement include HF Radio, HF-IP (Internet Protocol), Data Link, InfraRed Detection System, Autopilot, Inter Communication System, Magnetic Anomaly Detector (MAD), and Radar. Additionally, systems being evaluated for replacement include IFF Interrogator Set, and Magnetic Tape Recorder/Reproducer.

FY06 Congressional Plus-Up of \$1.0M for Electro-Optics and Communications Upgrade.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

The COP NPDM authorizing MS-C / LRIP was approved 26 March 2004. The COP ADM authorizing FRP was approved 15 March 2006.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AUTO-PILOT KIT	25	1.4	25	1.6	26	1.6	32	2.0	32	2.1	3	0.2	3	0.2						146	9.0
DIGITAL MAD SYSTEM KIT					3	0.2	6	0.4	11	0.7	23	1.5	34	2.4	20	1.4				97	6.6
HF RADIO/DATA LINK KIT	12	1.5	30	1.5	26	1.4	32	1.7	32	1.8	8	0.5	3	0.2	3	0.2				146	8.7
HF-IP KIT					9	0.4	26	1.2	26	1.2	36	1.6								97	4.4
INFRARED DETECTION KIT (EO/IR)	28	0.5	18	0.3	10	0.2														56	1.0
INTER COMMUNICATIONS KIT	12	0.7	9	0.1	9	0.1	9	0.1												39	.9
RADAR/INTEROGATOR															8	0.6	31	2.6	39	3.2	
INSTALLATION KITS N/R		0.5		0.7				0.5		0.5											2.1
INSTALL EQUIPMENT																					
AUTO-PILOT SYSTEM	25	8.0	25	6.3	26	6.5	32	8.3	32	8.5	3	0.8	3	0.9						146	39.3
DIGITAL MAD SYSTEM					3	0.8	6	1.6	11	2.9	23	6.1	34	10.2	20	6.2				97	27.7
HF RADIO/DATA LINK SYSTEM	12	5.5	30	9.4	26	8.5	32	10.5	32	10.7	8	2.7	3	1.0	3	1.0				146	49.4
HF-IP SYSTEM					9	1.8	26	5.2	26	5.2	36	7.2								97	19.4
INFRARED DETECTION SYSTEM (EO/IR)	28	10.4	18	6.5	10	3.7														56	20.5
INTER COMMUNICATIONS SYSTEM	12	3.9	9	3.7	9	3.7	9	3.9												39	15.1
RADAR/INTEROGATOR															8	24.8	31	96.1	39	120.9	
INSTALL EQUIPMENT N/R		15.9		1.7		0.8		0.7		0.4				1.4		1.5					22.3
ECO								0.1		0.1		0.1		0.1		0.1					.5
DATA		1.7		2.5		1.0		1.0		1.0		0.9		1.2		1.2					10.4
TRAINING EQUIP		5.8		1.8		1.0		2.0		0.1				1.3		1.6		1.0			14.6
SUPPORT EQUIP		0.7		0.1		*		0.6						2.5							3.9
ILS		1.5		1.7		1.5		1.6		0.8		0.6		1.1		1.1					10.0
OTHER SUPPORT		6.4		2.7		3.1		3.6		2.8		3.3		5.0		5.0					31.9
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	18	2.7	50	2.0	82	5.6	92	6.8	105	7.3	101	5.8	70	3.6	40	2.4	62	5.1	620	41.1	
TOTAL PROCUREMENT	172	67.1	214	42.3	248	41.8	302	51.6	307	46.0	241	31.3	150	30.9	102	47.1	124	104.8	1,860	462.9	

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3/EP-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) HF Radio / Data Link

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: 05/07 FY 2008: 01/08 FY 2009: 01/09

DELIVERY DATE: FY 2007: 05/08 FY 2008: 01/09 FY 2009: 01/10

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (12) kits	3	.2	9	.5																12	.6
FY 2007 (30) kits					30	1.6														30	1.6
FY 2008 (26) kits							26	1.4												26	1.4
FY 2009 (32) kits									32	1.7										32	1.7
FY 2010 (32) kits											32	1.8								32	1.8
FY 2011 (8) kits													8	.4						8	.4
FY 2012 (3) kits															3	.2				3	.2
FY 2013 (3) kits																	3	.2		3	.2
To Complete ( ) kits																			3	.2	
<b>TOTAL</b>	<b>3</b>	<b>.2</b>	<b>9</b>	<b>.5</b>	<b>30</b>	<b>1.6</b>	<b>26</b>	<b>1.4</b>	<b>32</b>	<b>1.7</b>	<b>32</b>	<b>1.8</b>	<b>8</b>	<b>.4</b>	<b>3</b>	<b>.2</b>	<b>3</b>	<b>.2</b>	<b>146</b>	<b>8.0</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011								
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
In	3		3	3	3				15	15			9	9	8			11	11	10			11	11	10	
Out	3			3	3	3			15	15			9	9	8			11	11	11			10		11	11

  

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In		3	3	2		1	1	1	3	146
Out	10		3	3	2		1	1	4	146

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Infrared Detection (EO/IR)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: 01/07 FY 2008: 01/08 FY 2009:         

DELIVERY DATE: FY 2007: 01/08 FY 2008: 01/09 FY 2009:         

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (28) kits	9	.3	19	.5																28	.8
FY 2007 (18) kits					18	.5														18	.5
FY 2008 (10) kits							10	.3												10	.3
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
To Complete () kits																					
<b>TOTAL</b>	9	.3	19	.5	18	.5	10	.3												56	1.5

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	9		7	6	6		6	6	6		5	5										
Out	8	1		7	6	6		6	6	6												

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										56
Out										56

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3/EP-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Auto-Pilot

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: 01/07 FY 2008: 01/08 FY 2009: 01/09

DELIVERY DATE: FY 2007: 01/08 FY 2008: 01/09 FY 2009: 01/10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (25) kits *	3	.5	22	1.0															25	1.5
FY 2007 (25) kits					25	1.6													25	1.6
FY 2008 (26) kits							26	1.7											26	1.7
FY 2009 (32) kits									32	2.1									32	2.1
FY 2010 (32) kits											32	2.2							32	2.2
FY 2011 (3) kits													3	.2					3	.2
FY 2012 (3) kits															3	.2			3	.2
FY 2013 () kits																				
To Complete () kits																				
<b>TOTAL</b>	<b>3</b>	<b>.5</b>	<b>22</b>	<b>1.0</b>	<b>25</b>	<b>1.6</b>	<b>26</b>	<b>1.7</b>	<b>32</b>	<b>2.1</b>	<b>32</b>	<b>2.2</b>	<b>3</b>	<b>.2</b>	<b>3</b>	<b>.2</b>			<b>146</b>	<b>9.6</b>

\*Six (6) of the 22 installs in FY07 are funded with FY05 Congressional Adds.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In	3		8	8	6			10	10	5			9	9	8			11	11	10			11	11	10
Out	3			8	8	6			10	10	5			9	9	8			11	11	10			11	11

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In		1	1	1		1	1	1		146
Out	10		1	1	1		1	1	1	146

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Inter Communications System

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: 12/07 FY 2008: 12/07 FY 2009: 01/09

DELIVERY DATE: FY 2007: 12/08 FY 2008: 12/08 FY 2009: 01/10

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (12) kits	3	1.8			9	1.8														12	3.6
FY 2007 (9) kits							9	1.4												9	1.4
FY 2008 (9) kits							9	1.4												9	1.4
FY 2009 (9) kits									9	2.0										9	2.0
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
To Complete () kits																					
<b>TOTAL</b>	<b>3</b>	<b>1.8</b>			<b>9</b>	<b>1.8</b>	<b>18</b>	<b>2.8</b>	<b>9</b>	<b>2.0</b>									<b>39</b>	<b>8.4</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1				1	1	3	3	3		5	7	6		3	3	3				
Out		1				1	1	3	3	3		5	7	6		3	3	3			

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										39
Out										39

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Radar/Interrogator System

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: TBD Months PRODUCTION LEADTIME: TBD Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 (8) kits																	8	2.0	8	2.0	
To Complete (31) kits																	31	1.7	31	1.7	
<b>TOTAL</b>																	<b>39</b>	<b>3.7</b>	<b>39</b>	<b>3.7</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In									39	39
Out									39	39

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) HF -IP

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: 01/08 FY 2009: 01/09

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: 01/09 FY 2009: 01/10

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 () kits																					
FY 2008 (9) kits							9	.4												9	.4
FY 2009 (26) kits									26	1.1										26	1.1
FY 2010 (26) kits											26	1.1								26	1.1
FY 2011 (36) kits													36	1.5						36	1.5
FY 2012 () kits																					
FY 2013 () kits																					
To Complete () kits																					
<b>TOTAL</b>							9	.4	26	1.1	26	1.1	36	1.5					97	4.0	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											3	3	3		9	9	8		9	9	8
Out												3	3	3		9	9	8		9	9

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In		12	12	12						97
Out	8		12	12	12					97

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Digital MAD System

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: 01/08 FY 2009: 01/09

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: 01/09 FY 2009: 01/10

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 () kits																					
FY 2008 (3) kits							3	.2												3	.2
FY 2009 (6) kits									6	.4										6	.4
FY 2010 (11) kits											11	.7								11	.7
FY 2011 (23) kits													23	1.4						23	1.4
FY 2012 (34) kits															34	2.0				34	2.0
FY 2013 (20) kits																	20	1.2		20	1.2
To Complete () kits																					
<b>TOTAL</b>							3	.2	6	.4	11	.7	23	1.4	34	2.0	20	1.2	97	5.8	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										1	1	1		2	2	2		4	4	3	
Out											1	1	1	1	2	2	2	2	4	4	4

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In		8	8	7		12	11	11	20	97
Out	3		8	8	7		12	11	31	97

Exhibit P-3a

MODIFICATION TITLE: SSI-K( OSIP 005-05 )

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S TYPE MODIFICATION: Sustainment

**DESCRIPTION / JUSTIFICATION:**

The Special Structural Inspection - Kits Program is an Operational Safety Improvement Program (OSIP) that will capture the P-3/EP-3 aircraft's test demonstrated fatigue life by replacing airframe structural components in fatigue life limiting critical regions of the P-3/EP-3 aircraft to enable the airframe to fully reach its designed service life but will not extend the fatigue life of those aircraft. Unchecked, these problem areas collectively will result in significant loss of aircraft from the operational inventory due to operational and support funding limitations. SSI-K will manufacture and install a structural mod / replacement kit for P-3 outer wing, center box and other components. Aircraft that have received an Enhanced Special Structural Inspection (ESSI) require only the Center Box subset of an SSI-K. These Center Box subset install kits are shown separately.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Program is in full rate production.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
CENTER BOX KIT	24	7.2					6	2.0	3	1.0										33	10.2
EP ROTABLE POOL OUTER WING KIT					3	11.4	2	7.8												5	19.2
EP SSI-K KIT (A-KIT)			2	2.6	3	4.0	1	1.4									1	1.7		7	9.8
Rotable Pool Outer Wing Kit	3	3.2																		3	3.2
SSI-K KIT (A-Kits)	26	15.6	18	10.6	18	13.3	16	13.0			2	1.9					2	2.2		82	56.6
TITLE IX ROTABLE POOL OUTER WING KIT			10	22.7																10	22.7
INSTALLATION KITS N/R		7.7																			7.7
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
CENTER WING FABRICATION						0.1		0.1		0.1											.2
SSI-K KIT ECP						0.4				0.3											.7
DATA		1.4				1.0		0.2		0.2		0.1									2.9
TRAINING EQUIP																					
SUPPORT EQUIP		1.0				0.4		0.5		0.2		0.1									2.2
ILS		0.6		0.5		1.0		0.5		0.8		0.1									3.5
OTHER SUPPORT		9.0		8.1		9.8		9.3		4.3		2.2		2.0						2.2	46.9
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	6	30.1	23	68.5	27	93.2	30	118.1	28	88.0	8	31.0	2	8.9			3	19.6		127	457.3
TOTAL PROCUREMENT	59	75.8	53	113.1	51	134.6	55	152.7	31	94.8	10	35.4	2	10.9			6	25.7		267	642.9

1. FY-06 Includes \$18.4M Title IX Supplemental Funds
2. FY-07 Includes \$50.5M Title IX Supplemental Funds
3. EP SSI-K's include 7 SSI-K's and 5 Rotable Pool Outer Wing Kits for total of 12
4. No Install Costs associated with FY-05 / FY-06 Rotable Pool Outer Wing Kits
5. No Install Costs associated with FY-07 Title IX Rotable Pool Outer Wing Kits

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S

MODIFICATION TITLE: P-3 Special Structural Inspection - Kits (SSI-K) (OSIP 05-05)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 5 Months

PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2007: 1/07

FY 2008: 12/07

FY 2009: 2/09

DELIVERY DATE: FY 2007: 11/07

FY 2008: 9/08

FY 2009: 11/09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (26) kits	6	23.5	17	68.5	3	12.3													26	104.3
FY 2007 (18) kits					16	65.9	2	8.5											18	74.4
FY 2008 (18) kits							18	76.0											18	76.0
FY 2009 (16) kits									13	58.4	3	13.9							16	72.3
FY 2010 () kits																				
FY 2011 (2) kits													2	8.9					2	8.9
FY 2012 () kits																				
FY 2013 () kits																				
To Complete (2) kits																	2	11.5	2	11.5
<b>TOTAL</b>	<b>6</b>	<b>23.5</b>	<b>17</b>	<b>68.5</b>	<b>19</b>	<b>78.2</b>	<b>20</b>	<b>84.5</b>	<b>13</b>	<b>58.4</b>	<b>3</b>	<b>13.9</b>	<b>2</b>	<b>8.9</b>			<b>2</b>	<b>11.5</b>	<b>82</b>	<b>347.4</b>

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	6	2	5	5	5	4	5	5	5	5	5	5	5		4	4	5	3			
Out	2	2	2	2	5	5	5	4	5	5	5	5	5	5	5		4	4	5	3	

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In	2								2	82
Out			2						2	82

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S MODIFICATION TITLE: P-3/EP-3 Special Structural Inspection - Kits (SSI-K) (OSIP 05-05) Center Box

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: 2/09

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: 2/10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (24) kits	*	6.6	6	*	6	*	6	3.3	6	3.4									24	13.2
FY 2007 () kits																				
FY 2008 () kits																				
FY 2009 (6) kits									6	3.4									6	3.4
FY 2010 (3) kits											3	1.7							3	1.7
FY 2011 () kits																				
FY 2012() kits																				
FY 2013 () kits																				
To Complete () kits																				
<b>TOTAL</b>	*	6.6	6	*	6	*	6	3.3	12	6.7	3	1.7							33	18.3

\* Installs for Center wings procured with FY06 Title IX Supplemental funding occur in FY07 and FY08 and remaining installs will occur in FY09 and FY10 with program funds.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In		1	1	4	1	2	1	2	1	1	2	2	3	3	3	3			1	1	1
Out					1	1	4	1	2	1	2	1	1	2	2	3	3	3	3	3	3

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										33
Out	1	1	1							33

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S MODIFICATION TITLE: EP-3 Special Structural Inspection - Kits (SSI-K) and Rotable Pool Outer Wing (OSIP 05-05)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2007: 05/07 FY 2008: 12/07 FY 2009: 2/09

DELIVERY DATE: FY 2007: 03/08 FY 2008: 9/08 FY 2009: 11/09

(\$ in Millions)

Cost:	Prior years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PY () kits																						
FY 2007 (2) kits					2	15.0														2	15.0	
FY 2008 (6) kits							4	30.3	2	15.2										6	45.5	
FY 2009 (3) kits									1	7.7	2	15.5								3	23.2	
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
To Complete (1) kits																			1	8.0	1	8.0
<b>TOTAL</b>					2	15.0	4	30.3	3	22.9	2	15.5							1	8.0	12	91.7

\*Notes

1. FY-08 Kits include 3 SSI-K installs and 3 Rotable Pool Outer Wing Installs
2. FY-09 Kits include 1 SSI-K Install and 2 Rotable Pool Outer Wing Installs

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Out									1	1	1	1	1	1	1	1	1	1	1	1	1	2

  

	FY 2012				FY 2013				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In									1	12
Out									1	12



BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							054100, S-3 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	412.0	A	0.7	0.5							413.2	

DESCRIPTION: This line item funds modifications to S-3 aircraft. The S-3B is a carrier based, all weather, high wing, high subsonic, twin engine, multi-mission aircraft capable of Anti-Surface Warfare (ASUW) operations and tanking. The S-3B will reach end of service in 2009. The final modifications budgeted and programmed were:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
004-06 FLIGHT CRITICAL SYSTEM SUSTAINMENT	0.7	0.7	0.5							1.9
INACTIVE OSIPs	411.3									411.3
TOTAL	412.0	0.7	0.5							413.2

MODIFICATION TITLE: FLIGHT CRITICAL SYSTEM SUSTAINMENT ( OSIP 004-06 )

MODELS OF SYSTEMS AFFECTED: S-3B TYPE MODIFICATION: Safety

**DESCRIPTION / JUSTIFICATION:**

The purpose of this program was to provide funding to implement airframe and avionic modifications to flight critical S-3B systems that were essential to the continued safe operational employment and support of the S-3B aircraft. These included but were not limited to: airframe changes to inner and outer wing spars discovered during the Full Scale Fatigue test required to safely operate the aircraft until FY2009, and replacement of Kapton wiring harnesses of Critical Avionics equipment.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

The modifications identified were minor and did not require approval for full production.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
CRITICAL AVIONICS WIRING	15	0.1																		15	.1
INSTALLATION KITS N/R		0.1																			.1
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		*																			*
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS		0.2		0.1		0.1															.4
OTHER SUPPORT		0.3		0.6		0.4															1.3
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT	15	.7		.7		.5														15	1.9

Asterisk (\*) indicates amount value less than \$51K

NOTE: Installation for kits is "0" level.

BUDGET ITEM JUSTIFICATION SHEET										DATE:	
P-40										February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE				
<b>Aircraft Procurement, Navy / APN5 Aircraft Modifications</b>							<b>054400, E-2 SERIES</b>				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
QUANTITY											
COST (In Millions)	1194.6	A	15.9	9.0	11.5	19.2	17.6	21.1	31.6	115.4	1435.8

**DESCRIPTION:**

This line item funds modifications to the E-2 aircraft. The E-2 is an all weather, carrier based, airborne early warning and command and control aircraft that extends task force defense perimeters by providing early warning of approaching enemy units and by vectoring interceptors into attack position. Additionally, the HAWKEYE provides strike control, radar surveillance, search and rescue assistance, communications relay and automatic tactical data exchange.

The E-2 aircraft design service life is 10,000 flight hours with an average service life remaining through FY2020. The E-2 is a critical element of the Navy's Cooperative Engagement Capability (CEC). The Structural Enhancements OSIP (121-87) provides for procurement and installation of the new eight (8) bladed propeller. The Block II Upgrade (74-88) funds commercial technology, E-2 Warning Detection System, Radar Obsolescence, Vapor Cycle and Engine Turbine Blade reliability improvements and emerging safety of flight items such as parachute survival ensemble (PSE), cockpit lighting, and flight instruments.

As the result of technological advancements, the Commercial-Off-The-Shelf (COTS) hardware/software of the Mission Computer (MCU) will change or become obsolete in the very near future. The Technology Insertion OSIP (5-01) supports assembly, validation and configuration management of COTS hardware and software of the MCU. The Outer Wing Panel (OWP) OSIP (87-88), funds OWP enhancements. The E-2 Core Open Architecture (OA) OSIP (5-09), provides core hardware and software architecture upgrades to reduce cost of future requirements integration. High Frequency Internet-Protocol (HFIP) OSIP (2-10) provides Internet-Protocol Networking capability to 31 E-2C (Hawkeye 2000/MCU) aircraft, utilizing existing High Frequency radio set and new airborne Advanced Digital Networking System (ADNS) Internet Protocol router/gateway. The E-2 In-Flight Refueling (IFR) OSIP (3-10), provides extended range and longer endurance for Battlespace Surveillance, Management, and Targeting for 24/7 operations. The Automatic Identification System (AIS) OSIP (2-11), will integrate this system into the E-2 mission computer and provide for a means to transfer AIS data from the aircraft to the warships inflight. The Dual Transmit Satellite Communications OSIP (1-13), provides the E-2 with an additional SATCOM radio satisfying a capability gap that is identified in Operation Enduring Freedom. The Satellite Communication (SATCOM) Connectivity Enhancement OSIP (14-07) will replace the current turnstile SATCOM Antenna with Conic Spiral SATCOM Antenna to provide better SATCOM connectivity, range and communication reliability for 32 non-Hawkeye 2000 aircraft.

The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
121-87 STRUCTURAL ENHANCEMENTS	567.3	2.5	0.3							570.1
074-88 BLOCK UPGRADE II	423.1	0.6	0.1							423.8
087-88 OUTER WING PANELS	119.5	0.2	0.3	0.3	0.3					120.6
005-01 TECHNOLOGY INSERTION	51.5	5.7	8.2	9.6	9.8	10.3	10.5	10.6	36.8	153.0
014-07 SATCOM CONNECTIVITY ENHANCEMENT			7.0							7.0
005-09 E-2 CORE OA/IP INFRASTRUCTURE & EXPERIMENTATION				1.5	8.8	6.1	0.2			16.7
002-10 HIGH FREQUENCY INTERNET PROTOCOL					0.3	0.4	0.4	0.4	0.7	2.1
003-10 IFR							9.9	17.4	72.1	99.4
002-11 AUTOMATIC IDENTIFICATION SYSTEM						0.8	0.1	0.1	*	1.0
001-13 DUAL TRANSMIT SATCOM								3.1	5.8	8.9
INACTIVE OSIPs	33.2									33.2
<b>TOTAL</b>	<b>1194.6</b>	<b>15.9</b>	<b>9.0</b>	<b>11.5</b>	<b>19.2</b>	<b>17.6</b>	<b>21.1</b>	<b>31.6</b>	<b>115.4</b>	<b>1435.8</b>

1. FY2007 funding total includes \$7.0 received in GWOT supplemental.

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODIFICATION TITLE: STRUCTURAL ENHANCEMENTS ( OSIP 121-87 )

MODELS OF SYSTEMS AFFECTED: E-2C TYPE MODIFICATION: Safety

**DESCRIPTION/ JUSTIFICATION**

The Navy Inventory Control Point (NAVICP) projected an E-2 propeller shortage in FY 2000. As a result, NAVICP approved a Logistics Engineering Change Proposal (LECP) to procure a new eight-blade propeller for the E-2 program office. The LECP funds the non-recurring and the procurement of 187 propellers only. The E-2 program office is responsible for funding the ground/flight test and overall system integration between Northrop Grumman (airframe), Allison (engine) and Hamilton-Sunstrand (propellers). The ground/flight test and prototype propeller kits were funded with AFN-1 funds starting in FY99. Starting in FY00 retrofit propeller kits and installs were funded with AFN-5 funds.

Repeatedly, E-2 Hawkeye and C-2A Greyhound elevator trim actuators have failed in flight and on deck, causing the aircraft to go into an immediate nose down flight profile. In some cases, the aircraft has lost half its altitude before control was regained. The community assesses this risk as potentially catastrophic. Failure of the elevator trim actuator occurs when an internal thrust bearing fails, allowing the rod end to separate from the actuator housing, resulting in an abrupt nose down trim. Safety ECP (N 1004-04 Trim Actuator) provides a hardware correction by opening the elevator trim actuator, changing the bushing and other component parts. This CSIP funds the installation of 114 Trim Actuators, 72 kits in FY05 and 42 kits in FY06 funded by NAVICP.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

NP2000 Developmental Component Testing is complete. First successful developmental flight test took place in April 01. NP2000 production approved July 03. Flight test completed 2nd QTR 04.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
270 LONGERON	15	0.6																		15	0.6
ACTUATORS	150	2.7																		150	2.7
ECP 1004-04 Trim Actuator	150	0.1																		150	0.1
ECP 367R1-WCS ENHANCEMENT	28	10.6																		28	10.6
ELEVATOR IDLER-ARM	75	0.5																		75	0.5
ENGINE JUNCTION BOX	388	2.4																		388	2.4
LECP NP2000 PROPELLERS	75	1.2																		75	1.2
MLG FITTING	150	0.1																		150	0.1
MOD TRUSS	52	5.2																		52	5.2
OWP MOD	30	1.2																		30	1.2
PRESSURE BULKHEAD	34	*																		34	*
UPPER LONGERON	49	1.2																		49	1.2
WING CENTER SECTION	78	114.3																		78	114.3
WINGFOLD ACTUATORS	200	*																		200	*
INSTALLATION KITS N/R		14.5																			14.5
INSTALL EQUIPMENT																					
GENERATORS (DERF II)	283	4.4																		283	4.4
INSTALL EQUIPMENT N/R		0.1																			0.1
ECO		0.8																			0.8
DATA		0.9																			0.9
TRAINING EQUIP		3.6																			3.6
SUPPORT EQUIP		2.3																			2.3
ILS		6.2		0.3		0.1															6.7
OTHER SUPPORT		31.0		0.3		0.0															31.2
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	464	363.5	52	1.9	1	0.2														517	365.5
TOTAL PROCUREMENT		567.3		2.5		0.3															570.1

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C MODIFICATION TITLE: STRUCTURAL ENHANCEMENTS ( OSIP 121-87 )

INSTALLATION INFORMATION: Trim Actuator

METHOD OF IMPLEMENTATION: Depot Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007 Oct 06 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Nov 06 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS (224) kits	*224	1.8																		224	1.8
FY 2007 (40) kits			40	0.3																40	0.3
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
TO COMPLETE ( ) kits																					
Total	*224	1.8	40	0.3																264	2.1

\*62 units reflected in prior years were funded with FY05 funds. Quantities are higher than kit purchase due to safety forced retrofit of spares.

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	224	20	10	10																		
Out	224	20	20	10	10																	

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										264
Out										264

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C MODIFICATION TITLE: STRUCTURAL ENHANCEMENTS (OSIP 121-87)

INSTALLATION INFORMATION: NP2000 Propeller LECP

METHOD OF IMPLEMENTATION: Contractor Field Mod Team @ Depot

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (75) kits	57	5.0	12	1.6	1	0.2													70	6.7
FY 2007 () kits																				
FY 2008 () kits																				
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
TO COMPLETE () kits																				
Total	57	4.0	12	1.6	1	0.2													70	6.7

\*5 Kits were installed during production line so total should be 70.

Installation Schedule

	1	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	57	4	4	2	2	1																
Out	57	4	4	2	2	1																

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										70
Out										70

Exhibit P-3a

MODIFICATION TITLE: BLOCK UPGRADE II ( OSIP 074-88 )

MODELS OF SYSTEMS AFFECTED: E-2C

TYPE MODIFICATION: Mission Performance Enhancement/Safety

DESCRIPTION / JUSTIFICATION:

The Block II Upgrade OSIP (74-88) funds commercial technology, E-2 Warning Detection System, Radar Obsolescence, Vapor Cycle and Engine Turbine Blade reliability improvements and emerging safety of flight items such as parachute survival ensemble (PSE); cockpit lighting, and flight instruments.

E-2C Warning Detection System: Dual Element Fire Warning (Safety ECP 934-01) and Oil Pressure Transmitter (OPT) Warning Detection System (Safety ECP 938-01) - Replaces T56-A-427 Dual Element Fire Warning and Oil Pressure Warning System in the E-2 Aircraft to alleviate false warning indications.

Radar Obsolescence - Funds non-recurring and recurring engineering efforts for Obsolescence/Readiness Improvements to the APS-145 which is the number one weapon system mission degrader.

ECP 939-01 - "Vapor Cycle" - Funds wiring modification, rebusing of under sized wiring between circuit breakers in the vapor cycle system.

Engine Turbine Blade Cost Reduction & Effectiveness Improvement (CREI) - "T56-A-427 First Stage Turbine Blade - Track Seal Replacement" - A more durable metal blade track seal will replace the current ceramic seal. This design change is consistent with newer technology engines and is expected to increase the reliability of the T56-A-427 engine by reducing low power removals.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Kits are being procured and installed on all applicable aircraft.

FINANCIAL PLAN: (TGA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
RDT&E																						
PROCUREMENT																						
INSTALLATION KITS																						
486 MPCDU	10	1.5																		10	1.5	
CAINS ASN-139	10	3.0																		10	3.0	
COCKPIT PANEL	10	0.5																		10	0.5	
ECP 410-SATCOM	4	0.3																		4	0.3	
EHSP	7	4.5																		7	4.5	
ENG FIRE WALL CONNECTOR	78	0.1																		78	0.1	
ENG OIL PRESSURE SYS	13	0.4																		13	0.4	
ENHANCED DISPLAY (EMDU)	18	28.9																		18	28.9	
GPS	13	0.6																		13	0.6	
IMPROVED IPF	13	22.6																		13	22.6	
JTIDS	13	8.8																		13	8.8	
LOW OIL WARNING		0.7																			0.7	
MPCDU BLOWER	10	0.1																		10	0.1	
MPCDU MOD (SINS)	10	0.1																		10	0.1	
MPCDU MOD	10	0.7																		10	0.7	
OIL PRESSURE TRANSMITTER	74	0.7																		74	0.7	
RADAR GROUP II	13	28.3																		13	28.3	
SAPCS	10	3.2																		10	3.2	
SAFETY ECP 934-01 DUAL ELEMENT	74	1.7																		74	1.7	
SAFETY ECP 939-01 VAPOR CYCLE	52	0.5																		52	0.5	
SINS FILTER	10	*																		10	*	
SINS MOUNT	10	*																		10	*	
INSTALLATION KITS N/R		73.0		0.215																	73.2	
INSTALL EQUIPMENT																						
ECP 400 - AIC 400	9	0.5																			9	0.5
ECP 400 - APX-100	13	0.2																			13	0.2
ECP 400 - JTIDS (NOTE 1)	28	28.7																			28	28.7
ECP 400 - LAMPS ASSY	9	0.1																			9	0.1
ECP 403 - AM95C60 CHIP		0.4																				0.4
ECP 403 - DUAL CAINS (S/S)	10	2.8																			10	2.8
ECP 403 - MDL (DTM)	10	0.1																			10	0.1
ECP 403 - MDL (IRU)	10	0.1																			10	0.1
ECP 403 - RT-1379A	15	0.7																			15	0.7
ECP 403 - SDC	10	0.1																			10	0.1
ECP 403 - TID	24	1.3																			24	1.3
INSTALL EQUIPMENT N/R		1.0																				1.0
ECO																						
DATA		15.2																				15.2
TRAINING EQUIP	2	59.4																			2	59.4
SUPPORT EQUIP		40.9																				40.9
ILS		15.8																				15.8
OTHER SUPPORT		28.3		*		*																28.4
INTERIM CONTRACTOR SUPPORT																						
INSTALLATION COST	132	47.4	13	0.3	4	0.1															149	47.9
TOTAL PROCUREMENT		423.1		0.6		0.1																423.8

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C MODIFICATION TITLE: BLOCK UPGRADE II( OSIP 074-88 )

INSTALLATION INFORMATION: Dual Element Fire Warning Safety ECP 934-01

METHOD OF IMPLEMENTATION: Depot Driven-in-Modification (DIM)

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS (74) kits	65	2.1	5	0.1	4	0.1														74	2.3
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
TO COMPLETE ( ) kits																					
Total	65	2.1	5	0.1	4	0.1														74	2.3

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	65	2	1	1	1	1	1	1	1												
Out	65	2	1	1	1	1	1	1	1												

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										74
Out										74

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C MODIFICATION TITLE: BLOCK UPGRADE II ( OSIP 074-88 )

INSTALLATION INFORMATION: Vapor Cycle Safety ECP 939-01

METHOD OF IMPLEMENTATION: Depot Driven-in-Modification (DIM)

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (52) kits	44	1.1	8	0.2															52	1.3
FY 2007 () kits																				
FY 2008 () kits																				
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
TO COMPLETE () kits																				
Total	44	1.1	8	0.2															52	1.3

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	44	2	2	2	2																
Out	44	2	2	2	2																

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										52
Out										52

Exhibit P-3a

MODIFICATION TITLE: OUTER WING PANELS( OSIP 087-88 )

MODELS OF SYSTEMS AFFECTED: E-2C TYPE MODIFICATION: SAFETY

**DESCRIPTION/ JUSTIFICATION:**

The E-2C fatigue test and inspection of aircraft have identified fatigue stress cracks in Outer Wing Panels (OWP) which could cause loss of aircraft and resulting in injury or loss of personnel. OWP's installed on T56-A-427 configured aircraft are limited to 7,500 flight hours. Teardowns of fleet OWP's showed that overhaul of the OWP is neither technically practical nor cost effective. This modification enhances the high stress areas. This incorporation extends the service life on OWP with Service Life Limit (SLL) of 6000 flight hours. Fourteen (14) OWP's will be enhanced with AYC-1222 (ECP 91145/C2A/859-97 Rev A).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Not Applicable

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RDT&E																				
PROCUREMENT																				
INSTALLATION KITS																				
ATTACHING HARDWARE	5	1.4																	5	1.4
ECP 362R2C2 - OUTER WING PANEL	82	77.7																	82	77.7
ECP 378 - REDESIGNED OWP	10	22.0																	10	22.0
ECP 383R1C1 - SDRS	108	0.6																	108	0.6
ECP 91145/C2A/859-97 Rev A	6	2.2	2	*	2	*	2	*	2	*									14	2.3
INSTALLATION KITS N/R		7.6																		7.6
INSTALL EQUIPMENT																				
ECP 383R1C1 - SDRS		3.0																		3.0
INSTALL EQUIPMENT N/R																				
ECO																				
DATA		1.7																		1.7
TRAINING EQUIP																				
SUPPORT EQUIP		0.9																		0.9
ILS		0.3																		0.3
OTHER SUPPORT		0.6																		0.6
INTERIM CONTRACTOR SUPPORT																				
INSTALLATION COST	84	1.4	2	0.2	2	0.3	2	0.3	2	0.3									92	2.5
TOTAL PROCUREMENT		119.5		0.2		0.3		0.3		0.3										120.6

Asterisk (\*) indicates amount value less than \$51K

**Note:**

- Outer Wing Panels (OWP) technical directive AYC-1222 enhancement of fatigue life was decreased from 34 to 14 due to the latest system engineering specification reducing actual life limits for the E-2C aircraft. The information is based upon latest heat and gravitational stresses provided by Northrop Grumman Corporation.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C MODIFICATION TITLE: OUTER WING PANELS ( OSIP 087-88 )

INSTALLATION INFORMATION: ECP 91145/C-2A/859-97 Rev. A

METHOD OF IMPLEMENTATION: Depot Drive-in Modification (DIM)

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2007 Mar 07 FY 2008 Mar 08 FY 2009 Mar 09

DELIVERY DATE: FY 2007 Sep 07 FY 2008 Sep 08 FY 2009 Sep 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (6) kits	6	1.4																	6	1.4
FY 2007 (2) kits			2	0.2															2	0.2
FY 2008 (2) kits					2	0.3													2	0.3
FY 2009 (2) kits							2	0.3											2	0.3
FY 2010 (2) kits									2	0.3									2	0.3
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
TO COMPLETE ( ) kits																				
<b>Total</b>	<b>6</b>	<b>1.4</b>	<b>2</b>	<b>0.2</b>	<b>2</b>	<b>0.3</b>	<b>2</b>	<b>0.3</b>	<b>2</b>	<b>0.3</b>								<b>14</b>	<b>2.5</b>	

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	6	1	1		1	1			1	1			1	1			1				
Out	6		1	1			1	1			1	1			1	1					

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										14
Out										14

MODIFICATION TITLE: TECHNOLOGY INSERTION( OSIP 005-01 )

MODELS OF SYSTEMS AFFECTED: E-2C TYPE MODIFICATION: Mission Performance Enhancement

DESCRIPTION / JUSTIFICATION:

Commercial technology obsolescence drives hardware and software changes in Computing Resources for the E-2 Aircraft. Funding is required to support capability for assembly, validation, and configuration management of Commercial Off-The-Shelf (COTS) hardware/software provided to fleet squadrons and updated on a 4-year technology cycle. Specific examples include video boards, memory boards, CPU cards, compilers, middleware, backplanes, and operating systems that will change or become obsolete.

Global War On Terrorism (GWOT) effort: "E-2C Maritime Automatic Identification System (\$5M)" was added to Installation Kits, Data and Other Support in FY06. AIS is an O-Level install.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The E-2 Program Support Activity (PSA) will insure software is upgraded, revised, and integrated so it functions with the versions of the COTS hardware and software delivered. The integration effort must start no less than one year prior to the delivery.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
GWOT - MARITIME AUTOMATIC IDEN SYS	*42	0.7																		42	0.7
INSTALLATION KITS N/R																					
GWOT - MARITIME AUTOMATIC IDEN SYS		0.1																			0.1
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		0.2		*		*															0.3
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS		2.7		0.2		0.2		0.2		0.2		0.2		0.2		0.2				0.8	4.6
OTHER SUPPORT		47.8		5.4		8.1		9.5		9.6		10.2		10.3		10.5				36.0	147.4
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT		51.5		5.7		8.2		9.6		9.8		10.3		10.5		10.6				36.8	153.0

\* 2 of the 42 kits are Validation and Verification Kits

Exhibit P-3a

MODIFICATION TITLE: SATCOM CONNECTIVITY ENHANCEMENT ( OSIP 014-07)

MODELS OF SYSTEMS AFFECTED: E-2C TYPE MODIFICATION: Mission Performance Enhancements

**DESCRIPTION/ JUSTIFICATION:**

This funding is for equipment needed to improve the protection of deployed forces by substantially enhancing the E-2Cs Satellite Communication (SATCOM) connectivity. This improvement addresses the E-2Cs CEF squadron's documented SATCOM connectivity deficiencies with current turnstile antenna. This upgrade replaces current turnstile SATCOM Antenna (used on E-2C Group II aircraft) with Conic Spiral SATCOM Antenna (used on E-2C Hawkeye 2000 (HE2K) production aircraft) to provide better SATCOM connectivity, range and communications reliability for 32 non-Hawkeye 2000 aircraft (27 Navigation Upgrade aircraft and 5 Mission Computer Unit/Advanced Control Indicator Set (MCU/ACS) aircraft).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Not Applicable

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
SATCOM Connectivity Enhancement			* 32	6.0																32	6.0
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA				0.2																	0.2
TRAINING EQUIP			2	0.2																2	0.2
SUPPORT EQUIP				0.1																	0.1
ILS																					
OTHER SUPPORT				0.2																	0.2
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST			**	0.3	8	**	24	**												32	0.3
TOTAL PROCUREMENT				7.0																	7.0

\* Install Kit Quantity includes 1 Validation/Verification Kit.

\*\* FY07 Supplemental funds 8 installs in FY08 and 24 installs in FY09.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C MODIFICATION TITLE: SATCOM CONNECTIVITY ENHANCEMENT ( OSIP 014-07)

INSTALLATION INFORMATION: SATCOM Antenna

METHOD OF IMPLEMENTATION: Depot Field Mod Team

ADMINISTRATIVE LEADTIME: 12 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2007 Oct-07 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Jul-08 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS () kits																					
FY 2007 (32) kits			*	0.3	8	*	24	*												32	0.3
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total			*	0.3	8	*	24	*												32	0.3

\* FY07 Supplemental funds 8 installs in FY08 and 24 installs in FY09. 1 kit is validation & verification kit.

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In								8	8	8	8										
Out								8	8	8	8										

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										32
Out										32

Exhibit P-3a

MODIFICATION TITLE: E-2 CORE OA/IP INFRASTRUCTURE & EXPERIMENTATION( OSIP 005-09 )

MODELS OF SYSTEMS AFFECTED: E-2C TYPE MODIFICATION: Mission Performance Enhancements

**DESCRIPTION/ JUSTIFICATION:**

An Open Architected distributed computing environment and Internet Protocol networking infrastructure is required to enable E-2 Global Information Grid (GG) connectivity in a digital networking environment. This technology will reduce the cost and schedule to integrate future software intensive capabilities, such as Single Integrated Air Picture (SIAP), and eases the ability to share applications between platforms and Services. Funding for kits, installation and associated recurring efforts for Open Architecture (OA) computing hardware and software, Tactical Information Services (TIS) hardware and software, and Airborne Automated Digital System (AADN) digital router hardware and software.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Design and integration non-recurring efforts were funded with RDT&E funds starting in FY08. Kit procurements for Fleet aircraft installs will begin in FY09 with the val/ver units.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS (A Kits)							2	1.2	17	6.4	12	4.3								31	11.9
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT								0.4		2.2		1.5		*							4.1
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST									8	0.2	12	0.2	11	0.2						31	0.6
TOTAL PROCUREMENT								1.5		8.8		6.1		0.2							16.7

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C MODIFICATION TITLE: E-2 CORE OA/IP INFRASTRUCTURE & EXPERIMENTATION( OSIP 005-09 )

INSTALLATION INFORMATION: E-2 Core OA/IP Infrastructure & Experimentation

METHOD OF IMPLEMENTATION: Depot-Level Field Team Modification

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 Jan-09

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 Jul 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 (2) kits									2	*										2	*
FY 2010 (17) kits									6	0.1	11	0.2								17	0.4
FY 2011 (12) kits										1	*	11	0.2							12	0.2
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total									8	0.2	12	0.2	11	0.2						31	0.6

Asterisk (\*) indicates amount value less than \$51K

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In													1	1	3	3	2	2	4	4
Out													1	1	3	3	2	2	4	4

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	4	4	2	1						31
Out	4	4	2	1						31

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							054900, TRAINER A C SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	63.1	A	17.0	20.1	26.2	16.8	10.5	10.6	10.9	31.2	206.3	

**DESCRIPTION:**

This line item funds modifications to a group of trainer aircraft which includes T-34C, T-39, T-44A/C, TH-57, T-38, TC-12, and T-2C. The trainer aircraft are described as follows: The T-34C is a single engine turbo-prop, multi-seat aircraft produced by Beech Aircraft used to simulate jet aircraft flight; the T-39 is a dual-engine, multi-purpose aircraft used to train undergraduate flight officers; the T-44 is a twin-engine, multi-seat aircraft produced by Beech Aircraft used to simulate operation of twin engine aircraft, specifically the P-3; the TH-57 and TH-6 are a single-engine, multi-seat rotary wing aircraft used for helicopter training. The T-38 is a two seat twin-engine supersonic jet aircraft utilized by the US Navy Test Pilot School to train pilots, test flight officers, and test engines. The overall goal of the modification is to maintain safe and reliable operation of the trainer aircraft through the timely installation of necessary changes.

The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
005-04 T-44 AVIONICS OBSOLESCENCE	24.0	8.2	7.3	19.0	6.0					64.6
015-04 T-38 A/C CONVERSION	14.8	6.3	5.7						16.7	43.6
006-05 TRAINER LEGACY A/C FAA	1.2	0.1	*						0.1	1.3
006-07 TH-57 SAFETY UPGRADE		2.2	6.2	6.4	10.1	9.7	10.6	10.9	14.4	70.5
007-07 T44 WING WIRING		0.2	0.9	0.7	0.7	0.7				3.2
INACTIVE OSIPs	23.1									23.1
<b>TOTAL</b>	<b>63.1</b>	<b>17.0</b>	<b>20.1</b>	<b>26.2</b>	<b>16.8</b>	<b>10.5</b>	<b>10.6</b>	<b>10.9</b>	<b>31.2</b>	<b>206.4</b>

MODIFICATION TITLE: T-44 AVIONICS OBSOLESCENCE ( OSIP 005-04 )

MODELS OF SYSTEMS AFFECTED: T-44A/C TYPE MODIFICATION: Safety

**DESCRIPTION/ JUSTIFICATION**

The T-44A Avionics are becoming non-supportable due to non-availability of parts. The following avionics systems require replacement: NCS-31A Area Navigation/Control System, AP-106 Autopilot, Flight Director and the RDR-130 Weather Radar. Avionics are being returned from the repair vendor Beyond Economical Repair (BER) due to non-availability of parts. Spare units are not available in the commercial market. Following these Avionics Upgrade the aircraft are designated T-44C. IMPACT: As avionics become BER due to lack of parts, spares will be depleted. Lack of avionics will ground aircraft and severely degrade CNATRA's ability to meet Pilot Training Requirements started in FY04. Current plans call for T-44 to fly its training mission until 2025. There are 54 T-44A in the inventory and all 54 will receive this modification.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

The T-44 Avionics Obsolescence (OSIP 05-04) non-recurring engineering occurred in FY04. Commercially available Non-Development Item (NDI) kit procurement and installations began in FY05.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Install Kits	16	6.6	9	1.3	8	1.0	12	1.7	6	0.8										51	11.5
INSTALLATION KITS N/R	3	4.7																		3	4.7
INSTALL EQUIPMENT																					
Installation Equipment (B kits)	8	4.8	9	4.1	8	4.5	12	7.5	6	3.6										43	24.5
INSTALL EQUIPMENT N/R				2.2																	2.2
ECC																					
DATA		0.3		*																	.3
TRAINING EQUIP	3	6.5	1		1	0.2	4	7.9												9	14.6
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT				*																	*
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	19	1.1	9	0.5	8	1.5	12	2.0	6	1.5										54	6.6
TOTAL PROCUREMENT	49	24.0	28	8.2	25	7.3	40	19.0	18	6.0										160	64.6

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-44A/C MODIFICATION TITLE: T-44 AVIONICS OBSOLESCENCE( OSIP 005-04 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007 Nov 06 FY 2008 Nov-07 FY 2009 Nov-08

DELIVERY DATE: FY 2007 Dec 06 FY 2008 Dec 07 FY 2009 Dec 08

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & FY (19) kits	19	1.1																	19	1.1
FY 2007 (9) kits			9	0.5															9	0.5
FY 2008 (8) kits					8	1.5													8	1.5
FY 2009 (12) kits							12	2.0											12	2.0
FY 2010 (6) kits									6	1.5									6	1.5
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
TO COMPLETE ( ) kits																				
<b>Total</b>	<b>19</b>	<b>1.1</b>	<b>9</b>	<b>0.5</b>	<b>8</b>	<b>1.5</b>	<b>12</b>	<b>2.0</b>	<b>6</b>	<b>1.5</b>								<b>54</b>	<b>6.6</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	19	2	2	2	3	2	2	2	2	2	3	3	3	3	1	1	1	3				
Out	19	2	2	2	3	2	2	2	2	2	3	3	3	3	1	1	1	3				

  

	FY 2012				FY 2013				TO COMPLETE				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															54
Out															54

Exhibit P-3a

MODIFICATION TITLE: T-38 A/C CONVERSION ( OSIP 015-04 )

MODELS OF SYSTEMS AFFECTED: T-38A SUPERSONIC JET TRAINER TYPE MODIFICATION: SAFETY/RELIABILITY

**DESCRIPTION / JUSTIFICATION:**

The T-38A Aircraft was introduced into service between 1961 and 1962 and has undergone numerous changes through the years. The U. S. Navy has allocated 10 aircraft at TPS and relies heavily on the U. S. Air Force for engineering and logistics support. At the close of FY08, the U. S. Air Force will have transitioned all of their aircraft to T-38C and the U.S. Navy will need to stand-up engineering and logistics units for these unique aircraft. Due to the age of the aircraft, operations and support costs will increase over the life of the aircraft. The modifications will reduce O&S costs, allow the U. S. Navy to continue to utilize engineering and logistics infrastructure of the U.S. Air Force, and provide for improved safety of the T-38 Aircraft. The U. S. Navy plans to utilize the T-38 at USNTPS through 2020 and beyond. Future modifications will include improved wings and ejection seats, currently being developed by the U.S. Air Force.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

All components and systems required for this program are being developed and tested by the U.S. Air Force. No U. S. Navy unique operational testing is anticipated under this program.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AUP KITS	10	9.9																	10	9.9	
EJECTION SEATS																	20	6.0	20	6.0	
PMP KITS	2	1.3	10	5.3	8	4.9												20	11.5		
WINGS																	10	10.0	10	10.0	
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP																					
SUPPORT EQUIP		*																			*
ILS																					
OTHER SUPPORT		0.7		0.1		0.2												0.7			1.7
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	12	3.0	10	0.8	8	0.7													30	4.5	
TOTAL PROCUREMENT	24	14.8	20	6.3	16	5.7											30	16.7	90	43.6	

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-38A SUPERSONIC JET TRAINER MODIFICATION TITLE: T-38 A/C CONVERSION ( OSIP 015-04 )

INSTALLATION INFORMATION: AUP KITS

METHOD OF IMPLEMENTATION: CONCURRENCE WITH PHASED DEPOT MAINTENANCE

ADMINISTRATIVE LEADTIME: 0 Months PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (10) kits	10	2.9																	10	2.9
FY 2007 () kits																				
FY 2008 () kits																				
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
TO COMPLETE () kits																				
Total	10	2.9																	10	2.9

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	10																				
Out	10																				

  

	FY 2012				FY 2013				TO COMPLETE				Total	
	1	2	3	4	1	2	3	4	1	2	3	4		
In														10
Out														10

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-38A SUPERSONIC JET TRAINER MODIFICATION TITLE: T-38 A/C CONVERSION ( OSIP 015-04 )

INSTALLATION INFORMATION: PMP KITS

METHOD OF IMPLEMENTATION: CONCURRENCE WITH PHASED DEPOT MAINTENANCE

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007 Nov 06 FY 2008 Nov 07 FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Feb 07 FY 2008 Feb 08 FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (2) kits	2	0.1																		2	0.1
FY 2007 (10) kits			10	0.8																10	0.8
FY 2008 (8) kits					8	0.7														8	0.7
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total	2	0.1	10	0.8	8	0.7														20	1.6

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	2		4	4	2		4	4													
Out	2			4	4	2		4	4												

  

	FY 2012				FY 2013				TO COMPLETE				Total	
	1	2	3	4	1	2	3	4	1	2	3	4		
In														20
Out														20

MODIFICATION TITLE: TRAINER LEGACY A/C FAA( OSIP 006-05 )

MODELS OF SYSTEMS AFFECTED: T-44A, TH-57B/C, TC-12B, T-34C, T-39G/N, T-2C TYPE MODIFICATION: Safety, Reliability, Maintainability

**DESCRIPTION / JUSTIFICATION:**

Federal Aviation Regulations require manufacturers of commercial aircraft and associated systems/subsystems to investigate discrepant conditions, failures, and potential safety problems reported by all operators. The results of these investigations with recommended corrective action are reviewed/approved by the FAA and Navy and provided to all operators as service bulletins. Each service bulletin is a complete technical directive that provides corrective change information or detailed modification instructions. Compliance with many of these FAA bulletins is mandatory to ensure safe, reliable, FAA/Navy certified aircraft and continued flight operations. The Navy must maintain configuration and integrity compatible with FAA certified commercial models by incorporation of applicable service bulletins even when they emerge during the year of execution. The incorporation of certain service bulletins also serves to preclude extensive repairs/repetitive inspections. Crew equipment requirements in accordance with FAA directives and Navy requirements will be incorporated to ensure maximum safety in case of emergency. Specific modifications budgeted in this OSIP include the incorporation of TC-12B, T-34C, T-39G/N, T-44A, T-2C and TH-57B/C FAA Bulletins and Safety of Flight Navy Directives. Specific examples of components that will require modification to conform to FAA bulletins and directives: oxygen masks, brakes, wing wiring, attenuating seats, exceedence warning, flap actuators, UHF/VHF radios, GPS, ELT, Mode S Transponder, Traffic Avoidance System, and Landing Gear.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Applicable FAA data (Supplemental Type Certificates, Service Bulletins and Airworthiness Directives) is reviewed for possible incorporation on an as required basis. All data is previously approved and verified by the FAA.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
T-2C	23	*	23	*	23	*											46	*	115	*	
T-34C	309	*	309	*	309	*											618	*	1,545	.1	
T-39G/N	23	*	23	*	16	*											23	*	85	*	
T-44 Stall Warning	70	0.3	55	*	55	*											55	*	235	.3	
TC-12B	21	*	21	*	21	*											42	*	105	*	
TH-57/BC Night Vision Goggles	240	0.6	120	*	120	*											120	*	600	.6	
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT																					
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	686	0.2	551	*	544	*											904	0.1	2,685	.3	
TOTAL PROCUREMENT	1,372	1.2	1,102	*	1,088	*											1,808	.1	5,370	1.3	

Asterisk (\*) indicates amount value less than \$51K

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-44A, TH-57B/C, TC-12B, T-34C, T-39G/N, T-2C      MODIFICATION TITLE: TRAINER LEGACY A/C FAA( OSIP 006-05 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: Various Months      PRODUCTION LEADTIME: Various Months

CONTRACT DATES:      FY 2007 Various      FY 2008 Various      FY 2009 Various

DELIVERY DATE:      FY 2007 Various      FY 2008 Various      FY 2009 Various

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY (686) Kits	686	0.2																		686	0.2
FY 2007 (551) kits			551	*																551	0.0
FY 2008 (544) kits					544	*														544	*
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE (904) kits																	904	0.1	904	0.1	
<b>Total</b>	<b>686</b>	<b>0.2</b>	<b>551</b>	<b>*</b>	<b>544</b>	<b>*</b>											<b>904</b>	<b>0.1</b>	<b>2,685</b>	<b>0.3</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	686	137	137	137	140	136	136	136	136													
Out	686	137	137	137	140	136	136	136	136													

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									904	2685
Out									904	2685

MODIFICATION TITLE: TH-57 SAFETY UPGRADE( OSIP 006-07 )

MODELS OF SYSTEMS AFFECTED: TH-57B/C TYPE MODIFICATION: Conversion/Safety

**DESCRIPTION/ JUSTIFICATION:**

The TH-57 is the sole platform for primary helicopter flight training for student aviators (USN, USMC, USCG) and foreign military pilots. This modernization effort capitalizes on technology improvements by increasing aircrew survivability and situational awareness while providing a fleet representative digital cockpit configuration.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

The components of this block upgrade will be COTS as turnkey items. ACI by the commercial contractor.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Install Kits					2	0.8	10	2.9	18	5.7	19	6.0	18	6.0	20	6.6	35	8.7	122	36.6	
INSTALLATION KITS N/R				2.0		1.6															3.6
INSTALL EQUIPMENT																					
Equipment					2	*	10	*	18	0.1	19	0.1	18	0.1	20	0.1	35	0.1	122	.5	
INSTALL EQUIPMENT N/R																					
ECC																					
DATA						0.1		*		*											.2
TRAINING EQUIP						2.7		2.1		2.1		1.6		2.1		1.6			1.7		13.9
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT				0.2		0.8		0.6		0.9		0.6		0.6		0.6		0.6			5.0
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST					2	0.2	10	0.7	18	1.4	19	1.5	18	1.8	20	2.0	35	3.2	122	10.8	
TOTAL PROCUREMENT				2.2	6	6.2	30	6.4	54	10.1	57	9.7	54	10.6	60	10.9	105	14.4	366	70.5	

Asterisk (\*) indicates amount value less than \$51K

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: TH-57B/C MODIFICATION TITLE: TH-57 SAFETY UPGRADE( OSIP 006-07 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent with ACI or Drop-in at CLS Depot Facility

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Oct-07 FY 2009 Oct-08

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Jan 08 FY 2009 Jan 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 () kits																					
FY 2008 (2) kits					2	0.2														2	0.2
FY 2009 (10) kits							10	0.7												10	0.7
FY 2010 (18) kits									18	1.4										18	1.4
FY 2011 (19) kits											19	1.5								19	1.5
FY 2012 (18) kits													18	1.8						18	1.8
FY 2013 (20) kits															20	2.0				20	2.0
TO COMPLETE (35) kits																	35	3.2		35	3.2
<b>Total</b>						2	0.2	10	0.7	18	1.4	19	1.5	18	1.8	20	2.0	35	3.2	122	10.8

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																						
Out											3	3	4		6	6	6			6	6	7
											3	3	4		6	6	6			6	6	7

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		6	6	6		6	7	7	35	122
Out		6	6	6		6	7	7	35	122

Exhibit P-3a

MODIFICATION TITLE: T44 WING WIRING( OSIP 007-07 )

MODELS OF SYSTEMS AFFECTED: T44-A/C TYPE MODIFICATION: Safety

**DESCRIPTION / JUSTIFICATION:**

The NAVAIR Wiring System Team, AIR-4.4.4.3, completed a Wiring Integrity Study on the T-44A in FY02 and identified that the aircraft wiring, outside the pressure vessel, has deteriorated to an unacceptable condition. It was recommended that the wiring in the wings, from pressure vessel outward (including the engines) be replaced. Current Navy long-term plans are to operate the T-44A aircraft until the year 2025. In order to safely and economically maintain aircraft availability and PTR, it is necessary to replace the wiring. Note that aircraft designated T-44A are redesignated T-44C upon completion of Avionics Obsolescences (OSIP 005-04) Modifications.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Wing rewiring will be accomplished in conjunction with Avionics Upgrade Mod.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Wing Wiring Kits			2	0.1	12	0.5	14	0.4	10	0.4	16	0.4								54	1.8
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP																					
SUPPORT EQUIP				*																	*
ILS																					
OTHER SUPPORT																					
INTERIM CONTRACTOR SUPPORT						0.1		0.1		0.1		0.1									.4
INSTALLATION COST					14	0.2	14	0.2	10	0.2	16	0.3								54	1.0
TOTAL PROCUREMENT			2	.2	26	.9	28	.7	20	.7	32	.7								108	3.2

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T44-A/C MODIFICATION TITLE: T44 WING WIRING( OSIP 007-07 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent with Avionics Upgrade Modification at Avionics System Upgrade (ASU) Contractor's Facility.

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007 Sep 07 FY 2008 Oct-07 FY 2009 Oct-08

DELIVERY DATE: FY 2007 Oct 07 FY 2008 Nov 07 FY 2009 Nov 08

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY () kits																					
FY 2007 (2) kits					2	0.0														2	0.0
FY 2008 (12) kits					12	0.2														12	0.2
FY 2009 (14) kits							14	0.2												14	0.2
FY 2010 (10) kits									10	0.2										10	0.2
FY 2011 (16) kits											16	0.3								16	0.3
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total					14	0.2	14	0.2	10	0.2	16	0.3							54	1.0	

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					2	4	4	4	4	4	4	2	3	3	3	1	4	4	4	4
Out					2	4	4	4	4	4	4	2	3	3	3	1	4	4	4	4

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										54
Out										54

BUDGET ITEM JUSTIFICATION SHEET										DATE:		
P-40										February 2008		
APPROPRIATION/BUDGET ACTIVITY						P-1 ITEM NOMENCLATURE						
Aircraft Procurement, Navy / APN5 Aircraft Modifications						055600, C-2A(R) Series Modification						
Program Element for Code B Items:						Other Related Program Elements						
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	299.2	A	37.0	32.2	22.1	19.0	5.7	5.8	6.0	39.9	467.0	

**DESCRIPTION:**

The C-2A(R) Greyhound is a high wing monoplane, twin engine turbo-prop aircraft capable of operating from both a shore base and all operational USN aircraft carrier classes. The mission of the C-2A(R) is to provide rapid response Carrier Onboard Delivery (COD) of fleet essential supplies, repair parts, and personnel to sustain at sea operations of deployed battle groups. In addition, the C-2A(R) provides airdrop delivery and mobilization support for special operations forces from land bases and carriers. The design service life of the C-2A(R) is 10,000 flight hours with 15,000 landings. Service Life Extension Program (SLEP) modifications increase the service life to 15,000 flight hours and 36,000 landings, remove and replace all aircraft wiring and install various upgrades to allow C-2A(R) to meet requirements into the next decade. The overall goal of the modifications is to continue procurement efforts for the C-2A(R) SLEP and the Critical Components Program. Critical Components are composed of Alighting & Landings, Avionics Upgrades, Engine Power & Propulsion, Hydraulic's, and Structural/Pressurization Engineering Change Proposals (ECPs).

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
024-94 C-2A SLEP	299.2	32.1	29.9	20.3	16.1	3.7	4.3	5.1	38.9	449.6
011-07 CRITICAL COMPONENTS		5.0	2.3	1.8	3.0	2.0	1.5	0.9	1.0	17.4
<b>TOTAL</b>	<b>299.2</b>	<b>37.0</b>	<b>32.2</b>	<b>22.1</b>	<b>19.0</b>	<b>5.7</b>	<b>5.8</b>	<b>6.0</b>	<b>39.9</b>	<b>467.0</b>

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94)

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft TYPE MODIFICATION: MISSION PERFORMANCE ENHANCEMENTS

**DESCRIPTION / JUSTIFICATION:**

The C-2A(R) Block Upgrade/Service Life Extension Program (SLEP) extends the Navy's Carrier Onboard Delivery (COD) capability beyond current projected service life. Efforts funded in this OSIP include Structural Enhancements, Aircraft Rewiring, L-Probe Kit, CAINS II, ARC-210 Radars, Trim Actuators, Outer Wing Panel Enhancements, and NP-2000 (8 bladed propeller).

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Development and Operational Testing (DT and OT) have been completed for the Structures and Rewire efforts included in this OSIP. Aircraft Rewire effort experienced technical difficulties during initial validation process and program was restructured resulting in a 2 year slip. Procurement of Rewire kits commenced in FY06. NP2000 has also experienced delays due to test article issues related to the program. It has also experienced a two year slip and has been restructured. DT and OT for NP2000 completed in 1st Qtr FY 2008.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
ARC-210	35	3.0																		35	3.0
CAINS II (AFC-156)	36	2.3																		36	2.3
INTERIM AFC	5	0.3																		5	0.3
INTERIM AFC-DERF	2	0.1																		2	0.1
L-PROBE (AFC-161)	36	0.3																		36	0.3
NP2000	6	1.0				1	0.1	2	0.1								26	2.8	35	4.1	
OWP CONVERSION (AYC-A)	19	3.1																		19	3.1
OWP ENHANCEMENT (AFC-378)	47	6.3	10	0.1	9	*	2	*	2	*										70	6.4
OWP ENHANCEMENT (AFC-Y)	4	10.8																		4	10.8
REWIRE (AFC-162)	13	10.8	5	2.7	3	1.7	4	2.3	1	0.6	1	0.7	1	0.6	3	1.9	6	4.0	37	25.4	
REWIRE (AFC-162)-DERF	2	1.7																		2	1.7
STRUCTURE (AFC-171)-DERF	1	0.4																		1	0.4
STRUCTURE KIT (AFC-171)	22	7.5	4	1.4	4	0.6	3	0.8												33	10.3
TRIM ACTUATOR	70	*																		70	*
INSTALLATION KITS N/R	5	44.8	1	0.7		0.3														6	45.7
INSTALL EQUIPMENT																					
CAINS II B KITS	50	6.1																		50	6.1
INSTALL EQUIPMENT N/R		4.2																			4.2
ECO																					
DATA		14.5		0.7		0.1															15.2
TRAINING EQUIP		6.6		0.1		2.0				0.5											9.1
SUPPORT EQUIP		3.3		0.2																	3.5
ILS		6.1		0.4		0.3		0.2		0.2									0.5		7.7
OTHER SUPPORT		120.6		12.8		7.8		4.8		2.8		0.9		1.4		0.8		4.9			156.9
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	297	45.4	19	13.0	21	17.2	18	11.9	11	11.9	1	2.2	1	2.3	1	2.3	35	26.7	404	133.1	
TOTAL PROCUREMENT		299.2		32.1		29.9		20.3		16.1		3.7		4.3		5.1		38.9			449.6

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - Structures Kits (AFC-171)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/PMI

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2007 Oct 06 FY 2008 Oct 07 FY 2009 Oct 08

DELIVERY DATE: FY 2007 Aug 07 FY 2008 Aug 08 FY 2009 Aug 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS (22) kits	17	19.7	5	5.5																22	25.1
FY 2007 (4) kits					4	4.8														4	4.8
FY 2008 (4) kits							4	5.0												4	5.0
FY 2009 (3) kits									3	3.9										3	3.9
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
TO COMPLETE ( ) kits																					
<b>Total</b>	17	19.7	5	5.5	4	4.8	4	5.0	3	3.9										33	38.8

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	17	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1						
Out	14	1		1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										33
Out										33

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - Rewire

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/PMI & Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 14 Months

CONTRACT DATES: FY 2007 Oct 06 FY 2008 Oct 07 FY 2009 Oct 08

DELIVERY DATE: FY 2007 Dec 07 FY 2008 Dec 08 FY 2009 Dec 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS (13) kits *	**8	4.6	4	6.0	1	1.6														13	12.2	
FY 2007 (5) kits					5	8.9															5	8.9
FY 2008 (3) kits							3	5.0													3	5.0
FY 2009 (4) kits									4	7.3											4	7.3
FY 2010 (1) kits											1	2.2									1	2.2
FY 2011 (1) kits													1	2.3							1	2.3
FY 2012 (1) kits																1	2.3				1	2.3
FY 2013 (3) kits																		3	7.2		3	7.2
TO COMPLETE (6) kits																		6	14.5		6	14.5
<b>Total</b>	<b>8</b>	<b>4.6</b>	<b>4</b>	<b>6.0</b>	<b>6</b>	<b>10.5</b>	<b>3</b>	<b>5.0</b>	<b>4</b>	<b>7.3</b>	<b>1</b>	<b>2.2</b>	<b>1</b>	<b>2.3</b>	<b>1</b>	<b>2.3</b>	<b>1</b>	<b>2.3</b>	<b>9</b>	<b>21.6</b>	<b>37</b>	<b>61.9</b>

\*2 Kits purchased in prior years were installed yet no longer reflect current design and could not be used

\*\*3 Kits were used for Prototype, Validation and Verification

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	8	1	1	1	1	1	2	1	2	1	1	1		1	1	1	1			1			
Out	5			1	2	1	1	1	1	1	2	1	2	1	1	1				1	1	1	1

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		1				1			9	37
Out		1				1			10	37

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - Outer Wing Panel Enhancement

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Navy Forced Retrofit Component

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2007 Oct 06 FY 2008 Oct 07 FY 2009 Oct 08

DELIVERY DATE: FY 2007 Feb 07 FY 2008 Feb 08 FY 2009 Feb 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (47) kits	41	10.2	6	0.9															47	11.1
FY 2007 (10) kits			4	0.6	6	0.9													10	1.6
FY 2008 (9) kits					3	0.5	6	1.0											9	1.4
FY 2009 (2) kits							2	0.3											2	0.3
FY 2010 (2) kits									2	0.3									2	0.3
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
TO COMPLETE ( ) kits																				
<b>Total</b>	<b>41</b>	<b>10.2</b>	<b>10</b>	<b>1.6</b>	<b>9</b>	<b>1.4</b>	<b>8</b>	<b>1.3</b>	<b>2</b>	<b>0.3</b>								<b>70</b>	<b>14.7</b>	

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	41	3	2	3	2	3	2	2	2	2	2	2	2	1	1						
Out	39	2	3	2	3	2	3	2	2	2	2	2	2	2	1	1					

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									70	
Out									70	

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - NP2000

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/PMI Drive in Mod

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Oct 07 FY 2009 Oct 08

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Oct 08 FY 2009 Oct 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS (6) kits	*1		**1		2	0.4	2	0.4												6	0.8	
FY 2007 ( ) kits																						
FY 2008 (1) kits								1	0.2											1	0.2	
FY 2009 (2) kits										2	0.4									2	0.4	
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
FY 2012 ( ) kits																						
FY 2013 ( ) kits																						
TO COMPLETE (26) kits																			26	5.1	26	5.1
Total	1		1		2	0.4	3	0.6	2	0.4								26	5.1	35	6.6	

\* Prototype Kit  
 \*\* Kit was Validation & Verification Kit

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1	1				1		1		1		1	1	1				1	2	3	4
Out	1			1		1		1		1		1	1	1	1						

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									26	35
Out									26	35

MODIFICATION TITLE: C-2A(R) CRITICAL COMPONENTS (OSIP 011-07)

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft TYPE MODIFICATION: MISSION PERFORMANCE ENHANCEMENTS

**DESCRIPTION / JUSTIFICATION:**

The C-2A(R) Service Life Extension Program (SLEP) extends the Navy's Carrier Onboard Delivery (COD) capability beyond current projected service life. With this longer airframe life, problems with other non-SLEP systems require upgrade/modifications. This OSIP procures a portion of the Critical Components avionics, hydraulics, structural and power and propulsion subsystems.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
ALIGHTING & LANDING			1	*	4	.1	7	.3	10	.4	7	.3	6	.2						35	1.3
AVIONICS UPGRADE			1	*	4	.2	7	.3	10	.5	7	.4	6	.3						35	1.8
ENGINE POWER & PROPULSION			4	*	7	.1	8	.1	16	.2										35	.4
HYDRAULIC			4	*	7	*	8	*	16	*										35	.1
STRUCTURAL/PRESSURIZATION			4	.1	7	.2	8	.2	16	.5										35	1.0
STRUCTURAL							2	*	4	.1	7	.2	6	.2	6	.2	10	.3		35	1.0
INSTALLATION KITS N/R			2	2.3				.1												2	2.3
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP				1.5		.1		*		*											1.6
SUPPORT EQUIP										.2											.2
ILS						.7															.7
OTHER SUPPORT				.2		.1		.1		*		*		*		*			.1		.5
INTERIM CONTRACTOR SUPPORT				.8		.5		.4		.4		.1		.1		.1		.6			3.0
INSTALLATION COST					4	.2		6	.3	12	.7	20	1.0	14	.7	12	.6			68	3.6
TOTAL PROCUREMENT				5.0		2.3		1.8		3.0		2.0		1.5		.9		1.0			17.4

Asterisk (\*) indicates amount value less than \$51K

INSTALLATION KITS N/R includes Val/Ver and installs

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft MODIFICATION TITLE: C-2A(R) CRITICAL COMPONENTS (OSIP 011-07) - Alighting & Landing

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Mod Team (FMT)

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007 Jun 07 FY 2008 Jan 08 FY 2009 Jan 09

DELIVERY DATE: FY 2007 Sep 07 FY 2008 Apr 08 FY 2009 Apr 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS () kits																						
FY 2007 (1) kits			1	*																	1	*
FY 2008 (4) kits					2	0.1	2	0.1													4	0.1
FY 2009 (7) kits							1	*	6	0.2											7	0.2
FY 2010 (10) kits											10	0.3									10	0.3
FY 2011 (7) kits													7	0.2							7	0.2
FY 2012 (6) kits															6	0.2					6	0.2
FY 2013 () kits																						
TO COMPLETE () kits																						
Total			1	*	2	0.1	3	0.1	6	0.2	10	0.3	7	0.2	6	0.2					35	1.1

\* Indicates amount less than \$51K

Note: FY07 is a Validation/Verification

INSTALLATION KITS N/R includes Val/Ver and installs

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				1			1	1		1	1	1	2	2	1	1	3	3	2	2
Out					1			1	1	1	1	1	1	2	2	1	1	3	3	2

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	2	2	2	1	2	2	2			35
Out	2	2	2	2	1	2	2	2		35

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft MODIFICATION TITLE: C-2A(R) CRITICAL COMPONENTS (OSIP 011-07) - Avionics Upgrade

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Mod Team (FMT)

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2007 Jun 07 FY 2008 Jan 08 FY 2009 Jan 09

DELIVERY DATE: FY 2007 Sep 07 FY 2008 Apr 08 FY 2009 Apr 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS () kits																					
FY 2007 (1) kits			1	*																1	*
FY 2008 (4) kits					2	0.1	2	0.1											4	0.3	
FY 2009 (7) kits							1	0.1	6	0.5									7	0.6	
FY 2010 (10) kits											10	0.7							10	0.7	
FY 2011 (7) kits													7	0.5					7	0.5	
FY 2012 (6) kits															6	0.4			6	0.4	
FY 2013 () kits																					
TO COMPLETE () kits																					
Total			1	*	2	0.1	3	0.2	6	0.5	10	0.7	7	0.5	6	0.4			35	2.5	

\* Indicates amount less than \$51K

Note: FY07 is a Validation/Verification

INSTALLATION KITS N/R includes Val/Ver and installs

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				1			1	1		1	1	1	2	2	1	1	3	3	2	2
Out					1				1	1	1	1	1	2	2	1	1	3	3	2

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	2	2	2	1	2	2	2			35
Out	2	2	2	2	1	2	2	2		35

<b>CLASSIFICATION: UNCLASSIFIED</b>																																			
<b>Exhibit P-40, BUDGET ITEM JUSTIFICATION</b>									DATE: <b>February 2008</b>																										
APPROPRIATION/BUDGET ACTIVITY <b>Aircraft Procurement, Navy/APN-5 Aircraft Modifications</b>							P-1 ITEM NOMENCLATURE <b>056000, C-130 Series</b>																												
Program Element for Code B Items:							Other Related Program Elements																												
	Prior Years	ID Code	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	To Complete	Total																								
QTY																																			
COST (In Millions)	115.5	A	46.7	2.2	6.5	24.4	69.2	63.6	51.3	474.9	854.2																								
<p>DESCRIPTION: This item funds modifications to C/KC-130 aircraft. The Lockheed C/KC-130 aircraft is a four engine, high-wing, all metal, long range, land based monoplane capable of all weather transport of cargo or personnel and in-flight refueling. There are currently 98 aircraft in the Navy and Marine Corps inventory (50 active and 48 reserve). The expected Service Life is as follows:</p> <table border="0" style="width:100%;"> <tr> <td>T/M/S</td> <td>Service Date</td> <td>Service Life</td> <td>Expected Life</td> </tr> <tr> <td>C-130T</td> <td>10/91 - 11/95</td> <td>450 mos.</td> <td>2028-2032</td> </tr> <tr> <td>KC-130F</td> <td>03/60 - 11/62</td> <td>600 Mos.</td> <td>2010-2012</td> </tr> <tr> <td>KC-130R</td> <td>09/75 - 06/78</td> <td>480 mos.</td> <td>2015-2018</td> </tr> <tr> <td>KC-130T</td> <td>04/84 - 02/96</td> <td>450 mos.</td> <td>2021-2033</td> </tr> <tr> <td>KC-130J</td> <td>09/00 - 10/13</td> <td>450 mos.</td> <td>2037-2048</td> </tr> </table>												T/M/S	Service Date	Service Life	Expected Life	C-130T	10/91 - 11/95	450 mos.	2028-2032	KC-130F	03/60 - 11/62	600 Mos.	2010-2012	KC-130R	09/75 - 06/78	480 mos.	2015-2018	KC-130T	04/84 - 02/96	450 mos.	2021-2033	KC-130J	09/00 - 10/13	450 mos.	2037-2048
T/M/S	Service Date	Service Life	Expected Life																																
C-130T	10/91 - 11/95	450 mos.	2028-2032																																
KC-130F	03/60 - 11/62	600 Mos.	2010-2012																																
KC-130R	09/75 - 06/78	480 mos.	2015-2018																																
KC-130T	04/84 - 02/96	450 mos.	2021-2033																																
KC-130J	09/00 - 10/13	450 mos.	2037-2048																																
(TOA, \$ in Millions)																																			
OSIP No.	Description	Prior Years	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	To Complete	Total																								
002-92	AN-ARC-210 Radio	15.1	2.4								17.5																								
020-03	ASE	67.7	35.5								103.2																								
013-04	Avionics Modernization Program					1.5	39.7	51.7	51.3	458.3	602.4																								
010-06	C-130J CNS/ATM	14.7	8.8		4.9	21.8	29.5	11.9		16.6	108.2																								
007-08	KC-130 Variable Speed Drogue			1.2	1.5	1.1					3.9																								
022-08	Aircraft Health Monitoring System (AHMS)			1.0							1.0																								
	Inactive OSIPs	18.0									18.0																								
<b>Total</b>		<b>115.5</b>	<b>46.7</b>	<b>2.2</b>	<b>6.5</b>	<b>24.4</b>	<b>69.2</b>	<b>63.6</b>	<b>51.3</b>	<b>474.9</b>	<b>854.2</b>																								
<p>1. FY2007 funding total includes \$29.8 received in GWOT supplemental.                  2. FY2008 funding totals do not include \$53.1 previously requested for current FY2008 GWOT requirements.</p> <p><b>Note: Totals may not add due to rounding.</b></p>																																			

Exhibit P-3a Individual Modification

MODIFICATION TITLE: AN/ARC-210 Radio (OSIP 002-92)

MODELS OF SYSTEMS AFFECTED: C-130T, KC-130F/R/T TYPE MODIFICATION: Performance Enhancement (HONA Category C)

**DESCRIPTION/JUSTIFICATION:**  
 The AN/ARC-210 is a combination UHF/VHF, AM/FM jam-resistant radio that was developed to allow for Electronic Protection (EP) interoperability with the Air Force, Army and NATO. The radio provides dual UHF capability for CV based TACAIR; VHF FM for close air support and maritime channels; VHF AM for air traffic control; and EP capabilities using the Air Force developed waveforms (UHF-AM HAVEQUICK I and II), and the Army developed waveform (VHF-FM SINGGARS). The AN/ARC-210 can be controlled by either a remote control unit or via a MIL-STD-1553 multiplex data bus. The EP parameters and single channel preset information can be loaded via a CYZ-10 Data Transfer Device (DTD). The fill information can consist of word-of-day for HAVEQUICK; the KGV-10 transear variable, hopsets and frequency lock-out tables for SINGGARS. Baseline for this program is GPS (OSIP 25-92). This modification is covered by a singular ECP (C-130-99) and will be incorporated in 38 C-130 aircraft (12 active and 26 reserve). PMA209 funded the 2 validation/verification kits and installs. PMA209's ARC-210 OSIP covers 21 recurring kits. This OSIP covers the remaining 16 kits and 36 aircraft installs plus the 21 retrofit kits with installs. This modification was approved 20 Apr 93, ORD 333-06-093.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**  
 The AN/ARC-210 radio replaces the AN/ARC-159 radios in the C-130 aircraft. Validation/verification was performed during FY 1994-FY 1996. FOT&E was performed in FY97 for the KC-130F and KC-130R configurations. Recurring production installations started in April 1997. The previous program plan called for 91 total aircraft (77 to be equipped with 1556 radios and 14 aircraft to be equipped with 1794C radios that were SATCOM capable). Reduction in quantity from 91 to 84 was based on the plan to retire KC-130F aircraft as they are replaced by KC-130J aircraft. Changes in the technical requirements for SATCOM capability have caused us to alter the program and install the 1794C in all aircraft. OSIP had been changed to reflect SATCOM incorporation in all 84 aircraft (of which four were to be funded under a Common Avionics OSIP). Twenty-one aircraft previously modified will have to be retrofitted with the 1794C capability. The 21 reflects the 1556 kits acquired in FY98 and prior. Quantity of affected aircraft has been further reduce from 84 to 38 (12 Active and 26 Reserve) due to the increased numbers of KC-130J aircraft and the start of the AMP program (OSIP 13-04) in FY04.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
-900 CDNU Kits	40	3.8	30	1.3																70	5.1
1556 CT Kits	1	0.1																		1	0.1
1556 F Kits	5	0.2																		5	0.2
1556 KT Kits	6	0.4	3	0.2																9	0.6
1556 R Kits	9	0.5																		9	0.5
Direction Finder (DF) Antennas	97	*																		97	*
Retro-Retrofit Kits (1F, 7R) A3	5	0.4																		5	0.4
SATCOM CT (A7) Kits	3	0.4																		3	0.4
SATCOM F (A5) Kits	1	0.1																		1	0.1
SATCOM KT (A7) Kits	2	0.3																		2	0.3
SATCOM R (A6) Kits	1	0.1																		1	0.1
Installation Kits N/R																					
Installation Equipment																					
Install Support	2	0.4																		2	0.4
Installation Equipment N/R																					
Engineering Change Orders																					
Data		0.3																			0.3
Training Equipment		*																			*
Support Equipment		*																			*
ILS																					
Other Support		2.9		0.5																	3.4
Interim Contractor Support																					
Installation Cost	51	5.0	3	0.5																54	5.4
<b>Total Procurement</b>		<b>15.1</b>		<b>2.4</b>																	<b>17.5</b>

- Notes:
1. Totals may not add due to rounding
  2. Asterisk indicates amount less than \$51K
  3. Due to accelerated retirement of KC-130F/R aircraft, the program is installing 3 ARC-210 Kits slated for F/R aircraft onto KC-130T Aircraft. The 3 Kits in FY07 reflect differences "A" kit materials between KC-130F/R and KC-130T Aircraft.
  4. The Reserves are installing the remaining 3 KT ARC-210 kits under this OSIP
  5. FY07 CDNU-900 Kits will be an "O" level install.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-130T, KC-130F/R/T MODIFICATION TITLE: AN/ARC-210 Radio (OSIP 002-92)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive-In Modification

ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2007: May-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: Sep-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (51) kits	51	5.0																		51	5.0
FY 2007 (3) kits			3	0.5																3	0.5
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
<b>TOTAL</b>	<b>51</b>	<b>5.0</b>	<b>3</b>	<b>0.5</b>																<b>54</b>	<b>5.4</b>

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	51		3																		
Out	51			3																	

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										54
Out										54

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Aircraft Survivability Equipment (ASE) (OSIP 020-03)

MODELS OF SYSTEMS AFFECTED: C/KC-130F/R/T/J TYPE MODIFICATION: Safety

**DESCRIPTION/JUSTIFICATION:**

Subject funding is being used to improve aircraft survivability by upgrading or replacing certain Defensive Electronic Countermeasures (DECM), installing Fuel Tank Foam, and installing ballistic armor protection. DECM Upgrades/Replacements: The existing AN/AAI 47 Missile Warning System (MWS), AN/ALQ-157(V)1 Infrared Countermeasures (IRC) system, and replacing the AN/ALE-39 Countermeasure Dispensing System (CMDS). The AN/AAR-47(V)2 (MWS) improves performance over the existing system in the following areas: reduction in signal noise and false alarms, increased sensor sensitivity and range, greater detection efficiency, extends the overall temperature range sensed, and improves reliability. The new AN/ALQ-157(V)2 IRCM provides many reliability and maintainability enhancements. The new AN/ALE-47 CMDS is an integrated, threat adaptive, reprogrammable, computer-controlled expendable dispensing system. Installation of fuel tank foam in the main, external, and auxiliary fuel tanks reduces the susceptibility of loss or severe damage to the aircraft and loss of life from fuel fire/tank rupture due to surface-to-air or air-to-air fire. The installation of ballistic armor provides crew protection and enhances aircraft survivability. The KC-130 Advanced Situational Awareness Radar System (ASARS) system allows aircrews to receive real-time threat updates after mission deployments allowing them to alter their mission profiles while in flight to avoid hostile/threat areas.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
47 (5F7R/8KT) Kit	57	3.6																		57	3.6
KC-130 ASAR A-Kit	7	0.8																		7	0.8
KC-130 DECM A-Kit	13	17.0	6	18.9																19	35.9
KC-130J Armor A-Kit	21	*																		21	*
KC-130T NVL Kit	6	6.7	6	5.6																12	12.3
Installation Kits N/R		4.3																			4.3
Installation Equipment																					
AAR-47 B-Kit	7	0.5	6	0.5																13	1.0
ALE-47 B-Kit	7	0.7	6	0.6																13	1.3
C-130 APR-39 B-Kit	7	2.0	6	1.8																13	3.9
C-130T Armor	28	1.3																		28	1.3
C-130T Fuel Foam Tank Kit	20	0.7																		20	0.7
KC-130 ASAR B-Kit	14	1.3																		14	1.3
KC-130 Fuse Tank Foam Kit			19	0.9																19	0.9
KC-130F/R/T Fuel Tank Foam Kits	34	1.2																		34	1.2
KC-130J Armor B-Kit	25	3.1	7	1.0																32	4.1
Installation Equipment N/R		1.7		0.2																	1.9
Engineering Change Orders																					
Data		0.7		0.3																	1.0
Training Equipment		0.2		0.3																	0.5
Support Equipment		0.4		*																	0.4
ILS		1.9		0.7																	2.6
Other Support		5.1		3.0																	8.0
Interim Contractor Support																					
Installation Cost	79	14.6	26	1.6																105	16.2
<b>Total Procurement</b>		<b>67.7</b>		<b>35.5</b>																	<b>103.1</b>

Notes:  
 1. Totals may not add due to rounding  
 2. Asterisk indicates amount less than \$51K  
 3. FY05-07 DECM and NVL efforts are utilizing turnkey procurement and installation strategy.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C/KC-130F/R/T/J MODIFICATION TITLE: Aircraft Survivability Equipment (ASE) (OSIP 020-03)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive-In Modification

ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2007: May-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: Jul-07 FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (86) kits	79	14.6	7	0.7																86	15.3
FY 2007 (19) kits			19	0.9																19	0.9
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
<b>TOTAL</b>	<b>79</b>	<b>14.6</b>	<b>26</b>	<b>1.6</b>																<b>105</b>	<b>16.2</b>

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	53	4	7	16	23	2																
Out	47	9	6	17	19	7																

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4.0	1	2	3	4		
In										105
Out										105

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Avionics Modernization Program (OSIP 013-04)

MODELS OF SYSTEMS AFFECTED: C-130T, KC-130T TYPE MODIFICATION: Safety

**DESCRIPTION/JUSTIFICATION:**

Objectives of the USN/USMC AMP are to lower the cost of ownership and increase survivability of the U.S. Navy/Marine Corps' Reserve C-130 fleet, while complying with Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements. The AMP effort will upgrade the overall electrical system, modernize the cockpit by adding current Night Vision Lighting (NVL) requirements, and the inclusion of newer, faster and more robust data processing systems. Additional improvements to the C-130's precision approach and landing capability will also be installed, as well as interfaces necessary to integrate real-time information in the cockpit (RTIC). In addition to providing enhanced capabilities, AMP will lower the overall cost of ownership of the C-130 fleet by generating a reduction of cockpit crew manning and by implementing a cost-effective and open-systems architecture to increase reliability, maintainability, and sustainability (RM&S) of the avionics suite. AMP objectives will be achieved through a comprehensive cockpit modernization.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

The AMP affects 48 USN/USMC C/KC-130T Reserve aircraft. One kit will be installed in a test aircraft during the SDD phase. The 47 production kits and installs for the basic avionics portion of this upgrade will follow the successful integration/test effort. ACAT-IVT designation approved 1 May 2007 which brings the program into the acquisition model post MS-B. MS-C is anticipated in 3rd Quarter FY09. For FY10 and out, production kit buys/installs, training devices and technical data will be procured through the anticipated full and open competition single contract award in 2nd Quarter FY07 as options on the R&D contract.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
A Kit for Production										3	5.3	4	7.1	4	7.3	36	69.8	47	89.5		
Installation Kits N/R																					
Installation Equipment																					
B Kit for Production										3	15.8	4	21.4	4	21.9	36	209.5	47	268.5		
Installation Equipment N/R																					
Engineering Change Orders											1.5		1.5		1.5			9.0		13.5	
Data									0.1		0.4		0.5		0.5			2.4		3.9	
Training Equipment											7.6		6.9		1.2					15.8	
Support Equipment																					
ILS									0.8		6.7		2.7		4.1			20.3		34.6	
Other Support									0.6		2.5		2.5		2.6			15.0		23.2	
Interim Contractor Support																					
Installation Cost												3	9.0	4	12.2	40	132.2	47	153.5		
<b>Total Procurement</b>									<b>1.5</b>		<b>39.7</b>		<b>51.7</b>		<b>51.3</b>		<b>458.3</b>		<b>602.4</b>		

Notes:

1. Totals may not add due to rounding

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-130T, KC-130T MODIFICATION TITLE: Avionics Modernization Program (OSIP 013-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive-In Modification

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 (3) kits														3	9.0					3	9.0
FY 2012 (4) kits																4	12.2			4	12.2
FY 2013 (4) kits																		4	12.5	4	12.5
To Complete (36) kits																		36	119.7	36	119.7
<b>TOTAL</b>														<b>3</b>	<b>9.0</b>	<b>4</b>	<b>12.2</b>	<b>40</b>	<b>132.2</b>	<b>47</b>	<b>153.4</b>

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																					
Out																					

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		2	1		2	2			40	47
Out			2	1			2	2	40	47

Exhibit P-3a Individual Modification

MODIFICATION TITLE: C-130J CNS/ATM (OSIP 010-06)

MODELS OF SYSTEMS AFFECTED: KC-130J, KC-130T, C-130T TYPE MODIFICATION: Safety

**DESCRIPTION/JUSTIFICATION:**

Objective of the Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) OSIP is to preserve utilization of current KC-130J capabilities world-wide by meeting International Civil Aviation Organization (ICAO) Air Traffic Management mandates through a series of commercial procurements and post-production retrofit installations. ICAO mandates enhanced Mode-S and Required Navigation Performance/Area Navigation (RNP/RNAV) capabilities in the European Flight Information Region (FIR) started in FY06, followed by the requirement of enhanced Mode-S, which is the Automatic Dependent Surveillance-Broadcast (ADS-B) comm-link component of Mode-S, and will be required in FY07. The USMC has determined that re-joining with the C-130J Co-Operative Software and Systems Upgrade Requirements Management (COSSURM) Block Upgrade Community to be the most expedient and cost-effective means to meet CNS/ATM Mandates as well as incorporate other mission critical software changes through spiral upgrade initiatives or "Blocks". This OSIP will upgrade the KC-130J to enhanced Mode-S and RNP/RNAV through two separate initiatives. The first and least intensive, Block 6.5 which includes enhanced Mode-S, began in FY06. The second and extremely complex Block 7.0 which includes the RNP/RNAV solution to begin in FY09. This OSIP is required in order to avoid airspace utilization limitations, ranging from usage restrictions to total airspace exclusion, as well as ensuring continuous KC-130J transport of personnel, material and aerial refueling services within and through these FIRS. Major DoD logistic hubs supporting Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) are located in the European FIR. This OSIP affects all 51 KC-130J aircraft. Future Blocks (8.0, 9.0, and 10.0) are being developed which will include additional CNS/ATM requirements as mandated by the ICAO.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

Lockheed Martin was tasked to deliver, by November 2005, an ECP to incorporate Mode S & 8.33 KHZ into Military Baseline 5.4 Software already developed for the USAF on C-130J aircraft. The new software version was planned to be become available in FY07 as Block 5.5 but was superseded by Block 6.5 which became available in FY06. Through incorporation of Block 6.5 the USMC KC-130J aircraft will be postured to re-enter the COSSURM Community in a common configuration. This allows the USMC to step into Block 7.0 with the USAF and COSSURM which includes RNP/RNAV and the civil component of Receiver Autonomous Integrity Monitoring (RAIM). Block 8.0 will incorporate Military Embedded GPS Inertial (EGI) with Selective Availability Anti Spoofing Module (SAASM) and the military component of Receiver Autonomous Integrity Monitoring (RAIM).

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
RNP/RNAV System Block 7.0									6	4.9	30	25.2					8	7.0	44	37.1	
Installation Kits N/R																					
Installation Equipment																					
Mode (S) System Block 6.5		13.0																			13.0
Mode (S) C/KC-130T			48	3.0																48.0	3.0
Installation Equipment N/R		1.7						3.5		7.4											12.6
Engineering Change Orders																					
Data								0.1		0.3		0.4		0.4					0.2		1.3
Training Equipment										7.0											7.0
Support Equipment										0.5											0.5
ILS				0.5				0.1		0.1		0.2							0.5		1.6
Other Support				5.2				1.3		1.5		2.1		1.1					4.1		15.4
Interim Contractor Support																					
Installation Cost										6	1.7	30	10.3				8	4.8	44	16.8	
<b>Total Procurement</b>		<b>14.7</b>		<b>8.8</b>				<b>4.9</b>		<b>21.8</b>		<b>29.5</b>		<b>11.9</b>				<b>16.6</b>		<b>108.2</b>	

**Notes:**

1. Totals may not add due to rounding
2. FY06 effort to support Block 6.5 (Mode S) is a turnkey effort. Installations will be done at the "O" level. No installation costs are associated with this effort.
3. FY07 Mode (S) C/KC-130T effort is a turnkey effort.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: KC-130J, KC-130T, C-130T MODIFICATION TITLE: C-130J CNS/ATM (OSIP 010-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive-in Modification

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 (6) kits											6	1.7								6	1.7
FY 2011 (30) kits													30	10.3						30	10.3
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete (8) kits																	8	4.8		8	4.8
<b>TOTAL</b>											<b>6</b>	<b>1.7</b>	<b>30</b>	<b>10.3</b>			<b>8</b>	<b>4.8</b>	<b>44</b>	<b>16.8</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																		3	3		
Out																		3	3		

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	10	10	10						8	44
Out		10	10	10					8	44

Exhibit P-3a	Individual Modification																				
MODIFICATION TITLE:	<u>KC-130 Variable Speed Drogue (OSIP 007-08)</u>																				
MODELS OF SYSTEMS AFFECTED:	<u>KC-130F/R/T/J</u>	TYPE MODIFICATION: <u>Performance Enhancement</u>																			
<p>DESCRIPTION/JUSTIFICATION:                  The KC-130 is a 4-engine, high-wing, long-range, land-based monoplane. The primary mission of the KC-130 is to provide aerial refueling for both high-speed fixed-wing aircraft and low speed rotary wing aircraft. Currently, a ground change of the refueling drogue is required for low speed and high speed refueling operations. The objective of the USMC Variable Speed Drogue (VSD) is to equip the KC-130 fleet with a Variable Speed Drogue capable of refueling both high speed and low speed aircraft with the same drogue. The VSD's required capability will enable the KC-130 to perform aerial refueling throughout the 105-250 KTS TAS range without changing drogues. This will support the low-speed, high-speed and V-22 single engine failure aerial refueling requirements.</p> <p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:                  Currently the Variable Speed Drogue is in Phase 2 prototyping with testing expected to be completed by the end of FY07. Production and modification will commence in FY08.</p>																					
FINANCIAL PLAN: (TOA, \$ in Millions)																					
	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Installation Kits N/R																					
Installation Equipment																					
KC-130 VSD B Kits					30	1.0	38	1.5	28	1.1										96	3.7
Installation Equipment N/R																					
Engineering Change Orders																					
Data						0.2															0.2
Training Equipment																					
Support Equipment																					
ILS																					
Other Support																					
Interim Contractor Support																					
Installation Cost																					
<b>Total Procurement</b>						<b>1.2</b>	<b>1.5</b>		<b>1.1</b>												<b>3.9</b>
Notes:																					
1. Totals may not add due to rounding																					
2. Installation of the new Variable Speed Drogue will be an "O" level change of the refueling basket. No installation costs are associated with this effort.																					

Exhibit P-3a	Individual Modification																																																																																																																																																																																																																																																																																																																																																																																																									
MODIFICATION TITLE:	<u>Aircraft Health Monitoring System (AHMS) (OSIP 022-08)</u>																																																																																																																																																																																																																																																																																																																																																																																																									
MODELS OF SYSTEMS AFFECTED:	<u>C/KC-130F/R/T/J</u> <span style="float: right;">TYPE MODIFICATION: <u>Safety / Readiness Improvement</u></span>																																																																																																																																																																																																																																																																																																																																																																																																									
<p>DESCRIPTION/JUSTIFICATION:                  Currently, the USMC KC-130 and USN C-130T aircraft utilize an Aircraft Health Monitoring System that is insufficient and inaccurate. This system is utilized to record propulsion and structural data to be used for maintenance and safety of flight purposes. The current system records very limited data that is difficult to extract, has an ineffective data capture rate and data latency that degrades the overall collection system and creates negative variances in data's final calculation. The purpose of this OSIP is to incorporate a new AHMS that targets significantly increased data parameters, improved data capture rates, reduced latency, improved crew interface and increased reliability.</p> <p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:</p>																																																																																																																																																																																																																																																																																																																																																																																																										
FINANCIAL PLAN: (TOA, \$ in Millions)																																																																																																																																																																																																																																																																																																																																																																																																										
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<b>Total Procurement</b>						<b>1.0</b>															<b>1.0</b>																																																																																																																																																																																																																																																																																																																																																																																					
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BUDGET ITEM JUSTIFICATION SHEET											DATE:		
P-40											February 2008		
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE						
Aircraft Procurement, Navy / APN-5 Aircraft Modifications							056100, Fleet Electronic Warfare Support Group (FEWSG)						
Program Element for Code B Items:							Other Related Program Elements						
	PRIOR YEARS	ID Code		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY													
COST (In Millions)	63.1	A		0.6	0.6	0.7	0.7	0.7	0.7	0.7	3.5	71.4	

**DESCRIPTION:**

This line item funds modifications to several aircraft and equipment. The overall goal of the budgeted modification is to accurately simulate the known and postulated electronic warfare characteristics and tactics of different threats for fleet training. OSIP 119-83 FEWSG equipment, AN/DLQ-3, AN/AST-6(V), AN/ALQ-167 are installed and/or carried aboard the F/A-18, EA-6B, and on the Gulfstream G-1. OSIP 119-83 FEWSG equipment was previously installed on the F-14 prior to deactivation.

OSIP No. / DESCRIPTION	PRIOR YEARS	(TOA, \$ in Millions)										
		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	COMPLETE	TOTAL		
119-83 AN/ALQ-167/AST-4 POD	63.1	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	3.5	71.4
<b>TOTAL</b>	<b>63.1</b>	<b>0.6</b>	<b>0.6</b>	<b>0.7</b>	<b>3.5</b>	<b>71.4</b>						

Exhibit P-3a

MODIFICATION TITLE: AN/AST-6 (V), AN/DLQ-3, AN/ULQ-21, & AN/ALQ-167 (OSIP 119-83)

MODELS OF SYSTEMS AFFECTED: Not Applicable TYPE MODIFICATION: RELIABILITY, MAINTAINABILITY, CAPABILITY

**DESCRIPTION/ JUSTIFICATION:**

The AN/ALQ-167 pods electronically simulate threat airborne radar jamming systems. The AN/ALQ-167 pods internal components are also installed internally in aircraft. When these components are utilized in this type of installation, they are nomenclatured AN/DLQ-3 and AN/ULQ-21. The AN/AST-6(V) pod electronically simulates several types of threat anti-ship missile seeker systems. These podded devices were first introduced into the fleet in 1980 and proved exceptionally useful in readiness exercises. The AN/ALE-43(V) Countermeasures, Chaff Dispenser Set (CCDS) is an integral, high capacity, bulk chaff cutting/dispersing system used for self-protection, fleet screening, corridor seeking and training operations. This program provides for the procurement and continued support of additional quantities of these pods for use by logistics support squadrons and other operational fleet units. No aircraft modifications are required to use these pods.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

The objective for the AN/ALQ-167 is 186 pods. There are currently 146. There are 25 AN/AST-6(V) production assets. The objective is to achieve a total of 50 pods. The AN/ALQ-167 avionics are being upgraded. When these upgraded avionics are internally installed in aircraft, they are nomenclatured as AN/ULQ-21 systems.

**FINANCIAL PLAN: (TOA, \$in Millions)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIP (B Kits)	1,017	51.5	2	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2	.1	9	.4	1,040	52.7	
INSTALL EQUIPMENT N/R		.5		*		.1		.1		.1		.1		.1		.1		.4		1.3	
ECO*		2.7																			2.7
DATA		.1		*		*		*		*		*		*		*		.1			.4
TRAINING EQUIP		.6		*		*		*		*		*		*		*		.1			.8
SUPPORT EQUIP		5.2		.2																	5.4
ILS		1.0		*		*		*		.1		.1		.1		.1		.5			1.9
OTHER SUPPORT		1.4		.2		.4		.5		.4		.4		.4		.4		1.9			6.3
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT	1,017	63.1	2	.6	2	.6	2	.7	2	.7	2	.7	2	.7	2	.7	9	3.5	1,040	71.4	

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K

\* ECO. Additional funds were needed in FY 2006 to complete the modification efforts on the ALE-43 PODs in order to make them carrier qualified.

<b>CLASSIFICATION: UNCLASSIFIED</b>											
<b>Exhibit P-40, BUDGET ITEM JUSTIFICATION</b>										DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY <i>Aircraft Procurement, Navy/APN-5 Aircraft Modifications</i>							P-1 ITEM NOMENCLATURE <b>CARGO TRANSPORT A C SERIES, 056200</b>				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	To Complete	Total
QTY											
COST (In Millions)	89.1	A	34.5	20.8	18.0	18.1	18.5	18.9	19.3	85.8	322.8
<p><b>DESCRIPTION:</b>                      This line item funds modifications to the following cargo and transport aircraft: (C-9B/DC-9B, C-40A, C-20A/D/G, C-37A/B, UC-35C/D, RC-12F/M, UC-12B/F/M, NC-12B and C/EC/RC-26D.</p> <p>The C-9B/DC-9B Skytrain II, C-40A Clipper, C-20A/D/G Gulfstream IV, C-37A/B Gulfstream V and UC-35C/D Cessna Citation, are commercial twin jet transport aircraft that provide time-critical medium lift logistic support for the fleet combatant commanders. C-9/DC-9 is capable of carrying up to 32,000 pounds of cargo and personnel for over 3,300 nautical miles at a maximum speed of 430+ knots. C-40 can accommodate 121 passengers, or 8 pallets of cargo, or a combination configuration of 3 pallets and 70 passengers with a range of 3,400 nautical miles. C-20D/G is capable of high-speed transport of 13 passengers or cargo over a range of 4,100 nautical miles at 437 knots. C-20A and C-37 provides worldwide executive transport to SECNAV, CNO, CMC, and Fleet Commanders. C-35 provides transport for high priority passenger/cargo missions with time, place or mission sensitive requirements. C-35 can accommodate six passengers or 1,200 pounds of cargo with a range of 1,300 nautical miles at 234 knots. The C-12 King Air and C-26 Metro variants are commercial twin turbo-prop aircraft that provide shorter-range light lift passenger/cargo transport and range control missions. C-12 is capable of carrying six passengers or maximum cargo capacity of 2,850 pounds, 1, 075 nautical miles at 225 knots. C-26 is capable of carrying 19 passengers 1, 300 nautical miles at 234 knots.</p>											
(TOA, \$ in Millions)											
<b>OSIP No.</b>	<b>Description</b>	<b>Prior Years</b>	<b>FY2007</b>	<b>FY2008</b>	<b>FY2009</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>	<b>FY2013</b>	<b>To Complete</b>	<b>Total</b>
071-86	FAA CONFIGURATION UPDATES	20.8	*	*	*	*	*	*	*	*	21.0
012-04	CNS/ATM	30.1	30.2	20.7	17.9	18.1	18.5	18.8	19.3	85.8	259.5
019-07	C9B ENGINE MODIFICATIONS		4.3								4.3
	INACTIVE OSIPs	38.2									38.2
<b>Total</b>		<b>89.1</b>	<b>34.5</b>	<b>20.8</b>	<b>18.0</b>	<b>18.1</b>	<b>18.5</b>	<b>18.9</b>	<b>19.3</b>	<b>85.8</b>	<b>322.9</b>
<b>Notes:</b>											
1. FY2007 funding total includes \$4.3 received in GWOT supplemental.											
2. Totals may not add due to rounding.											
3. Asterisk indicates amount less than \$51K.											

Exhibit P-3a Individual Modification

MODIFICATION TITLE: FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES (OSIP 071-86)

MODELS OF SYSTEMS AFFECTED: CARGO TRANSPORT A C SERIES TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION / JUSTIFICATION:

Federal Aviation Regulations require manufacturers of commercial aircraft and associated systems/subsystems to investigate discrepant conditions, failures, and potential safety problems reported by all operators. The results of these investigations with recommended corrective action are reviewed/authorized by FAA designated representatives and provided to all operators as service bulletins. Each service bulletin is a complete technical directive that provides corrective change information or detailed modification instructions. To ensure safe, reliable, FAA/Navy certified aircraft and to provide a program that will assure continued life extension at minimum cost, the Navy must maintain configuration and integrity compatible with FAA certified commercial models by incorporation of applicable service bulletins. The incorporation of certain service bulletins also serves to preclude extensive repairs/repetitive inspections. Crew equipment requirements in accordance with FAA directives and/or Navy requirements will be incorporated to ensure maximum safety in case of emergency. Specific examples of systems that will require modification to conform to FAA Service Bulletins and Directives include Brakes, Landing Gear Systems, Avionics, Communication Systems, Navigational Systems, Flight Controls, Engine Modifications, Propeller Modifications, Airframe Modifications, Hydraulics, Electrical/Mechanical Systems & Components, Fuel Systems, Software Modifications/Upgrades, Fire Detection Systems, Interior Environmental Systems, Pressurization Systems, Oxygen Systems, Pitot-Static Systems and Smoke/Fire Detection Systems. Modifications budgeted in this OSIP include the incorporation of Service Bulletins/Directives requirements into the C-9B, DC-9, C-40A, C-20A, C-20D, C-20G, C-37A, C-37B, C-26D, EC-26D, RC-26D, UC-35C, UC-35D, UC-12B, UC-12F, UC-12M, RC-12F, RC-12M, and NC-12B aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Service Bulletins are reviewed for possible incorporation on an as required basis. Prototype verification has been previously accomplished and approved by the FAA.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Tech Directive Implementation							*		*		*		*		*						0.1
C-12 PROPELLERS	74	1.0																		74	1.0
C-20	298	1.0																		298	1.0
C-26	11	0.4																		11	0.4
C-9	282	5.2																		282	5.2
C-9 ENGINES	13	0.2																		13	0.2
C-9 HUSH KITS	1	1.2																		1	1.2
Installation Kits N/R		2.7																			2.7
Installation Equipment																					
Installation Equipment N/R																					
Engineering Change Orders																					
Engineering Change Orders		0.3		*		*															0.4
Data		0.3																			0.3
Training Equipment		0.2																			0.2
Support Equipment																					
ILS		*																			*
Other Support		0.5																			0.5
Interim Contractor Support		0.2																			0.2
Installation Cost	679	7.6																		679	7.6
<b>Total Procurement</b>		<b>20.8</b>		*		*		*		*		*		*		*					<b>21.0</b>

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K

Exhibit P-3a Individual Modification

MODIFICATION TITLE: CNS/ATM (OSIP 012-04)  
 MODELS OF SYSTEMS AFFECTED: CARGO TRANSPORT A C SERIES TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION / JUSTIFICATION:

World-wide airspace congestion and communication bandwidth saturation has lead the International Civil Aviation Organization (ICAO) to restructure the world-wide airspace structure to improve safety through a series of equipment and performance mandates implemented by regional authorities. The above Type/Series/Models will be required to comply with the following mandates to retain the Navy's capability to operate these aircraft worldwide. Failure to comply with these time-phased mandates will result in being denied access to high-volume airspace (routing and altitudes) and airfields, or at a minimum resulting in circuitous routing and sub optimal altitudes for fuel consumption. The following CNS-ATM mandates will be implemented in post production aircraft in this OSIP: Communications - 8.33Khz VHF channel spacing, SATCOM voice and data, Controller Pilot Data Link Communications (CPDLC), Automatic Dependent Surveillance ADS-B. Navigation - Required Navigation Performance (RNP) 10NM, 5NM, 4NM, and less than NM; Reduced Separation Minimum (RVSM); Protected-ILS; and digital navigation databases. Navigational accuracy mandate progressively tightens over time until GPS based aircraft routing, Standard Instrument Departures (SID) and Standard Terminal Arrival Routes (STARs) are implemented worldwide. This will result in a series of equipment changes. Surveillance - Enhanced Terrain Awareness Warning System (TAWS), Traffic Alert and Collision Avoidance System (TCAS), Automatic Dependent Surveillance ADS-B, Emergency Locator Transmitter (ELT) and Mode S Transponder.

To minimize the impact of successive modifications and maximize aircraft availability, a block upgrade approach has been taken during this budget submit. C-20D, C-12 and C-26 expenditures in FY04 and prior years comprise part of Block 1 as noted below by an \*. Block upgrades have been prioritized and phased to meet regional mandates' just in time' to ensure that commercial CNS-ATM solutions are available off the shelf to minimize non-reoccurring engineering associated with FAA supplemental type certification. In order to incorporate CNS-ATM mandates several older aircraft (C-20A, C-37A, C-35C, all C-26 and C-12) required the installation of a digital flight management and communication system

CNS-ATM capabilities associated with each Block Upgrade listed below:

C-9 C-9B: Block 1 - CPDLC, Mode S, TAWS Upgrade, and ELT; Block 2 - ADS-B  
 C-40 C-40A: Block 1 - Mode S, and TAWS Upgrade; Block 2 - CPDLC  
 C-20 C-20A: Block 1 - RNP-1 Flight Management System, Mode S, ELT, TAWS upgrade, DME upgrade, and CPDLC; C-20D -Block 1 Avionics Upgrade\* HF Radio Upgrade\*, Mode S, ELT, TAWS upgrade; Block 2 - CPDLC; C-20G - CPDLC, Mode S and TAWS upgrade  
 C-37 C-37A: Block 1 - RNP-1, Flight Management System, CPDLC, Mode S, and TAWS upgrade; Block 2 - ADS-B; C-37B - Block 1 Mode S, CPDLC; Block 2 - ADS-B  
 C-35 C-35C: Block 1 - RNP-1, Flight Management System, Mode S, ELT, DME upgrade; Block 2 - CPDLC; C-35D Block 1 - CPDLC, Mode S, and TAWS upgrade; Block 2 - ADS-B  
 C-26 EC/RC/JC-26D: Block 1 - TAWS\* and TCAS-II\*; Block 2 - RNP-1, Flight Management System, RVSM and CPDLC  
 C-12 C-12B: Block 1 - P-ILS\*, 8.33 KHz VHF Channel Spacing\*; Block 2 -SATCOM, CPDLC, RNP-1, Flight Management System, Mode S, ADS-B; C-12F Block - 1 Flight Management System, 8.33 KHz VHF Channel Spacing\*, P-ILS\*, RVSM, ELT and Mode S; Block 2 - SATCOM, CPDLC and ADS-B; C-12M Block 1 - 8.33 KHz VHF Channel Spacing\*, ELT, RNP-1, Flight Management System, ELT, and RVSM; Block 2 - SATCOM, CPDLC and ADS-B

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
8.33 KHZ	16	0.7																		16	0.7
AVIONICS UPGRADE C-20D	1	2.4																		1	2.4
BLOCK 1	5	1.4	14	3.2	12	2.6	8	1.9	5	1.7	2	0.8	6	2.0	6	2.0	12	4.8	70	20.3	
BLOCK 2					2	0.5			14	1.3	13	2.9	8	1.8	19	2.0	34	4.9	90	13.3	
DATA LINK	7	0.6																		7	0.6
HF RADIO UPGRADE C-20A	1	0.2			1	0.5														2	0.7
P-ILS	42	0.5																		42	0.5
INSTALLANTION KITS N/R		6.4		14.5		3.3		0.8		4.1		1.5		3.1		1.0		4.8		39.6	
INSTALLATION EQUIPMENT																					
AVIONICS UPGRADE C-20D					1	0.1	1	0.1												2	0.1
BLOCK 1	25	11.3	11	5.3	10	4.0	8	5.0	5	4.1	8	4.2	6	4.6	8	5.5	43	24.9	124	69.0	
BLOCK 2					12	1.9			14	1.7	19	2.4	8	1.7	19	2.2	47	8.1	119	18.1	
HF RADIO UPGRADE C-20A					1	0.5														1	0.5
Installation Equipment N/R		0.3		0.6		0.5		0.2		0.3		0.3		0.2		0.2		0.7		3.3	
Engineering Change Orders																					
Engineering Change Orders						0.2		*			0.1										0.3
Data		1.4		0.8		0.7		1.5		0.6		0.4		0.6		0.3		1.5		7.8	
Training Equipment		0.3		0.2		0.3		0.6		0.1		0.2		0.4		0.4		1.7		4.1	
Support Equipment		*		*		*		0.1		0.1		*		0.1		0.1		0.2		0.7	
ILS		0.3		0.3		0.6		0.9		0.6		0.4		0.6		0.5		2.0		6.2	
Other Support		1.4		0.7		0.8		0.9		0.5		0.4		0.9		0.5		2.0		8.0	
Interim Contractor Support																					
Installation Cost	55	3.0	14	4.6	11	4.4	19	5.8	21	3.2	19	4.6	11	3.0	24	4.5	88	30.1	262	63.3	
Total Procurement		30.1		30.2		20.7		17.9		18.1		18.5		18.8		19.3		85.8		259.5	

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-40A / C-9

MODIFICATION TITLE: CNS /ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007: N/A

FY 2008: Dec-07

FY 2009: N/A

DELIVERY DATE: FY 2007: N/A

FY 2008: Jan-08

FY 2009: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (*) kits	*																				
FY 2007 ( ) kits																					
FY 2008 (12) kits							8	3.1	4	1.0										12	4.1
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 (12) kits																		12	6.0	12	6.0
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete (26) kits																		26	13.1	26	13.1
<b>TOTAL</b>							<b>8</b>	<b>3.1</b>	<b>4</b>	<b>1.0</b>							<b>38</b>	<b>19.1</b>	<b>50</b>	<b>23.2</b>	

NOTE: \* PRIOR YEAR (FY2006) 8 KITS WERE INSTALLED AT THE ORGANIZATIONAL LEVEL. NO INSTALLATION COST TO BE INCURRED.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In											3	3	2		2	2						
Out											3	3	2		2	2						

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In									38	50
Out									38	50

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-37A

MODIFICATION TITLE: CNS /ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007: Dec-06 FY 2008: Dec-07 FY 2009: N/A

DELIVERY DATE: FY 2007: Jan-07 FY 2008: Jan-08 FY 2009: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PY ( ) kits																						
FY 2007 (2) kits			2	0.2																	2	0.2
FY 2008 (4) kits					4	0.4															4	0.4
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 (3) kits										3	0.6										3	0.6
FY 2012 (2) kits												2	0.1								2	0.1
FY 2013 (3) kits														3	0.1						3	0.1
To Complete (5) kits																	5	0.5			5	0.5
<b>TOTAL</b>			<b>2</b>	<b>0.2</b>	<b>4</b>	<b>0.4</b>					<b>3</b>	<b>0.6</b>	<b>2</b>	<b>0.1</b>	<b>3</b>	<b>0.1</b>	<b>5</b>	<b>0.5</b>	<b>19</b>	<b>1.9</b>		

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In		2				4														3		
Out		2				4														3		

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		2				3			5	19
Out		2				3			5	19

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: UC-35

MODIFICATION TITLE: CNS /ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007: Dec-06 FY 2008: Dec-07 FY 2009: Dec-08

DELIVERY DATE: FY 2007: Jan-07 FY 2008: Jan-08 FY 2009: Jan-09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					
FY 2007 (3) kits			3	1.5																3	1.5
FY 2008 (1) kits					1	0.4														1	0.4
FY 2009 (1) kits							1	0.4												1	0.4
FY 2010 (1) kits									1	0.5										1	0.5
FY 2011 ( ) kits																					
FY 2012 (4) kits													2	1.4	2	1.5				4	2.9
FY 2013 (4) kits																	4	1.7		4	1.7
To Complete (10) kits																	10	4.3		10	4.3
<b>TOTAL</b>			<b>3</b>	<b>1.5</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.5</b>			<b>2</b>	<b>1.4</b>	<b>2</b>	<b>1.5</b>	<b>14</b>	<b>6.0</b>	<b>24</b>	<b>11.6</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In			1	2			1				1				1						
Out			1	2			1				1				1						

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		2				2			14	24
Out		2				2			14	24

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-26

MODIFICATION TITLE: CNS /ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007: Dec-06 FY 2008: Dec-07 FY 2009: Dec-08

DELIVERY DATE: FY 2007: Jan-07 FY 2008: Jan-08 FY 2009: Jan-09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (9) kits	9	0.9																		9	0.9
FY 2007 (4) kits			4	1.6																4	1.6
FY 2008 (1) kits					1	0.4														1	0.4
FY 2009 (1) kits							1	0.4												1	0.4
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 (2) kits												1	0.1	1	0.1					2	0.2
FY 2013 (2) kits														2	0.2					2	0.2
To Complete (3) kits																3	0.3			3	0.3
<b>TOTAL</b>	<b>9</b>	<b>0.9</b>	<b>4</b>	<b>1.6</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.4</b>				<b>1</b>	<b>0.1</b>	<b>3</b>	<b>0.3</b>	<b>3</b>	<b>0.3</b>			<b>22</b>	<b>4.2</b>

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	9		4				1				1										
Out	9		4				1				1										

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		1				3			3	22
Out		1				3			3	22

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-20 MODIFICATION TITLE: CNS /ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007: N/A FY 2008: Dec-07 FY 2009: Dec-08

DELIVERY DATE: FY 2007: N/A FY 2008: Jan-08 FY 2009: Jan-09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (2) kits	2	0.1																		2	0.1
FY 2007 ( ) kits																					
FY 2008 (4) kits					2	1.2	2	0.2												4	1.4
FY 2009 (2) kits							2	0.2												2	0.2
FY 2010 (4) kits									4	0.6										4	0.6
FY 2011 ( ) kits																					
FY 2012 (2) kits												2	0.5							2	0.5
FY 2013 (2) kits														2	0.5					2	0.5
To Complete (8) kits																	8	1.6		8	1.6
<b>TOTAL</b>	<b>2</b>	<b>0.1</b>			<b>2</b>	<b>1.2</b>	<b>4</b>	<b>0.5</b>	<b>4</b>	<b>0.6</b>			<b>2</b>	<b>0.5</b>	<b>2</b>	<b>0.5</b>	<b>8</b>	<b>1.6</b>	<b>24</b>	<b>4.9</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	2					2					4				4							
Out	2					2					4				4							

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		2				2			8	24
Out		2				2			8	24

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-12

MODIFICATION TITLE: CNS /ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2007: Dec-06

FY 2008: Dec-07

FY 2009: Dec-08

DELIVERY DATE: FY 2007: Jan-07

FY 2008: Jan-08

FY 2009: Jan-09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (61) kits *	60	1.9	1	0.3																61	2.2
FY 2007 (5) kits			4	1.0	1	0.7														5	1.7
FY 2008 (5) kits					2	1.3	3	0.9												5	2.2
FY 2009 (4) kits							2	0.6	2	0.2										4	0.8
FY 2010 (14) kits									10	1.0	4	1.0								14	2.0
FY 2011 (12) kits											12	3.0								12	3.0
FY 2012 (4) kits													4	1.0						4	1.0
FY 2013 (14) kits															14	2.1				14	2.1
To Complete (20) kits																	20	2.6		20	2.6
<b>TOTAL</b>	<b>60</b>	<b>1.9</b>	<b>5</b>	<b>1.3</b>	<b>3</b>	<b>2.0</b>	<b>5</b>	<b>1.5</b>	<b>12</b>	<b>1.2</b>	<b>16</b>	<b>4.0</b>	<b>4</b>	<b>1.0</b>	<b>14</b>	<b>2.1</b>	<b>20</b>	<b>2.6</b>	<b>20</b>	<b>139</b>	<b>17.5</b>

\* Qty of 16 8.33khz radios were installed concurrently with the 42 P-ILS systems.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	60		3	2			2	1			3	2			6	6				8	8	
Out	60		3	2		2	1			3	2			6	6					8	8	

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		2	2			7	7		20	139
Out		2	2			7	7		20	139

Exhibit P-3a Individual Modification

MODIFICATION TITLE: C-9B ENGINE MODIFICATIONS (OSIP 019-07)

MODELS OF SYSTEMS AFFECTED: CARGO TRANSPORT A C SERIES TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION / JUSTIFICATION:  
 C-9 Engines without SB 5021 repeatedly overtemp, particularly in hot climates. Aircraft is used to carry USN/USMC personnel and equipment in/around CENTCOM supporting GWOT. C-9B aircraft support OEF and GWOT by carrying USN/USMC personnel intratheater. 3,085 passengers and 228,000 lbs cargo used in direct support of OEF were carried by C-9B aircraft in CENTCOM during FY05. C-9B aircraft operating in hot climates experience an unsupportable quantity of high EGT (overtemp) engines, which require extensive troubleshooting, and repair. This modification effectively prevents engines from reaching high EGT, and makes the engine more reliable. Between 2003-2005 the fleet reported 34 occurrences of these engines exceeding EGT limits. Overtemp is the C9 fleet's #1 engine degrader. C-9B aircraft are operated by the U.S. Navy Reserve.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:  
 Service Bulletins are reviewed for possible incorporation on an as required basis. Prototype verification has been previously accomplished and approved by the FAA.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Tech Directive Implementation																					
C-12 PROPELLERS																					
C-20																					
C-26																					
C-9																					
C-9 ENGINES			12	4.3																12	4.3
C-9 HUSH KITS																					
Installation Kits N/R																					
Installation Equipment																					
Installation Equipment N/R																					
Engineering Change Orders																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
ILS																					
Other Support																					
Interim Contractor Support																					
Installation Cost																					
<b>Total Procurement</b>			12	4.3																12	4.3

- Notes:  
 1. Totals may not add due to rounding  
 2. Asterisk indicates amount less than \$51K

MODELS OF SYSTEMS AFFECTED: C-9

MODIFICATION TITLE: C-9B ENGINE MODIFICATIONS (OSIP 019-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT/CONTRACTOR

ADMINISTRATIVE LEADTIME: N/A Months

PRODUCTION LEADTIME: N/A Months

CONTRACT DATES: FY 2007: N/A

FY 2008: N/A

FY 2009: N/A

DELIVERY DATE: FY 2007: N/A

FY 2008: N/A

FY 2009: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					
FY 2007 (*) kits																					
FY 2008 ( ) kits																					
FY 2009 ( ) kits																					
FY 2010 ( ) kits																					
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
TOTAL																					

NOTE: \* FY2007 - 12 KITS TO BE INSTALLED CONCURRENT WITH REWORK AT DEPOT.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																						
Out																						

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

BUDGET ITEM JUSTIFICATION SHEET										DATE:	
P-40										February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE				
Aircraft Procurement, Navy / APN5 Aircraft Modifications							056400, E-6 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
QUANTITY											
COST (In Millions)	914.4	A	54.7	84.6	88.9	121.0	125.4	123.6	114.9	184.2	1811.8

**DESCRIPTION:**

This line item funds modifications to E-6 "Take Charge and Move Out", TACAMO aircraft. All sixteen (16) aircraft in the TACAMO fleet will receive each modification. The E-6 TACAMO is a manned airborne communications relay platform designed to provide a survivable, reliable, endurable airborne Command and Control Communications link between the President, Secretary of Defense and U.S. strategic and non-strategic forces. E-6 Mission Support (OSIP 007-02) will procure various ground support and Peculiar Support Equipment (PSE) for the E-6B aircraft and will upgrade the aircraft Frequency Reference Auto Paralleling Unit (FRAPU) to allow proper power transfer from/to ground/aircraft power. Safety Deficiencies (OSIP 008-02) includes replacement of Auxiliary Power Unit (APU) crossover and exhaust ducts, replacement of aircraft Kapton wiring, installation of the Crash Survivable Flight Incident Recorder (CSFIR), replacement of the Fuel Quantity Indicating System (FQIS) and replacement of the aircraft thermal blankets. Tech Insertion (OSIP 003-04) addresses obsolescence, supportability, new technologies, systems updates and interoperability issues in the area of the Secure Telephone Unit (STU), Mission Computer Set (MCS), Flight Management Computer System (FMCS), Standard Distribution Switching Unit (SDSU) and existing KG-3X crypto Communications (IP/T3) Upgrade (OSIP 012-07) increases communications bandwidth to 45 Mbps to support battlestaff command and control and first responder operations. Service Life Extension Program (SLEP) (OSIP 003-07) is designed to extend the service life of the E-6B aircraft to 2040+. E-6 Mission Deficiencies Improvements (Block I), replaces the Digital Airborne Intercommunication Switching Set (DAISS) and installs an Open System Architecture that will allow low cost modifications for emerging requirements. It also replaces the Mission Computer Set, adds flat panel displays in the battle staff area and replaces the UHF C3 modem. Block Recapture (Block IA) installs a new Auxiliary Power Unit (APU) to meet mission requirements and replaces the VLF Transmit Terminal and High Power Transmit Set (HPTS) subsystems due to obsolescence.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
007-02 E-6 MISSION SUPPORT	11.1	1.1	2.6	0.3	5.1					20.2
008-02 SAFETY DEFICIENCIES	8.1	2.7	14.8	16.7	8.8	11.4				62.6
003-04 TECH INSERTION	13.8	18.2	12.8	5.0	1.7	3.4	4.1	2.7		61.9
003-07 SLEP		2.5	7.5	1.5	12.7	13.0	16.2	16.5	35.3	105.2
012-07 COMMUNICATIONS (IP/T3) UPGRADE		30.2	46.9	65.4	36.5	22.5	14.3	9.6	5.7	231.1
008-10 E-6 MISSION DEFICIENCIES IMPROVEMENTS (BLOCK I)					56.2	75.0	66.7	62.4	103.3	363.6
002-12 BLOCK RECAPTURE							22.4	23.7	40.0	86.0
INACTIVE OSIPs	881.3									881.3
<b>TOTAL</b>	<b>914.4</b>	<b>54.7</b>	<b>84.6</b>	<b>88.9</b>	<b>121.0</b>	<b>125.4</b>	<b>123.6</b>	<b>114.9</b>	<b>184.2</b>	<b>1811.8</b>

1. FY2008 funding totals do not include \$1.0 previously requested for current FY2008 GWOT requirements.

MODIFICATION TITLE: E-6 MISSION SUPPORT( OSIP 007-02 )

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

**DESCRIPTION / JUSTIFICATION:**

The Mission Support program corrected Follow-On Test & Evaluation (FOT&E) (September 1998) deficiencies by funding design update and fabrication of new rewind machines and purchasing of "off-the-shelf" power carts to provide adequate aircraft power for full mission ground checkout. The Mission Support program upgrades the Frequency Referencing Auto Parallel Unit (FRAPU) to provide uninterrupted transfer of power from aircraft to ground systems. Existing power carts do not provide adequate ground power causing system shutdown and failure of critical system components during aircraft startup. FRAPU will prevent system shutdown and failure of critical system components during transfer from aircraft to ground power systems. The program also procures various ground support and Peculiar Support Equipment (PSE) for the E-6B aircraft.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Planned procurement of PSE in FY07 and FY08. FRAPU NRE and purchase of 16 aircraft kits in FY10 with the installation of all kits in FY10.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
FRAPU									16	0.6									16	.6	
INSTALLATION KITS N/R										1.5											1.5
INSTALL EQUIPMENT																					
FRAPU									16	1.9									16	1.9	
INSTALL EQUIPMENT N/R																					
ECO																					
DATA				*																	*
TRAINING EQUIP									1	0.2									1	.2	
SUPPORT EQUIP		10	10.4	16	0.8	4	2.3													30	13.5
ILS																					
OTHER SUPPORT			0.8		0.3		0.3		0.3		0.3										1.9
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST									17	0.6										17	.6
TOTAL PROCUREMENT			11.1		1.1		2.6		.3		5.1										20.2

Asterisk (\*) indicates amount value less than \$51K

Totals may not add due to rounding.

Includes an Electrical Trainer

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES MODIFICATION TITLE: E-6 MISSION SUPPORT ( OSIP 007-02 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Modification

ADMINISTRATIVE LEADTIME: NA Months PRODUCTION LEADTIME: NA Months

CONTRACT DATES: FY 2007: NA FY 2008: NA FY 2009: NA

DELIVERY DATE: FY 2007: NA FY 2008: NA FY 2009: NA

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (0) kits																					
FY 2007 (0) kits																					
FY 2008 (0) kits																					
FY 2009 (0) kits																					
FY 2010 (16) kits										16	0.6									16	0.6
FY 2011 (0) kits																					
FY 2012 (0) kits																					
FY 2013 (0) kits																					
TO COMPLETE(0)																					
Total										16	0.6									16	0.6

Note: Does not include one trainer install.

FRAPU Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In															5	5	6				
Out															5	5	5				

	FY 2011				FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														16
Out	1													16

MODIFICATION TITLE: SAFETY DEFICIENCIES( OSIP 008-02 )

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

**DESCRIPTION / JUSTIFICATION:**

The Safety program corrects safety deficiencies in order to protect personnel and equipment. FAA APA 19-98 requires a smoke detection system in the aircraft lower avionics bays. The Safety program replaces the Auxiliary Power Unit (APU) crossover and exhaust ducts to prevent potential fire or explosion, replaces aircraft Kapton wiring and the Fuel Quantity Indicating System (FQIS) to comply with FAA SFAR 88 requirements. Safety also installs the Crash Survivable Flight Incident Recorder (CSFIR) to meet DoD requirements and replaces the aircraft acoustic thermal blankets to meet FAA requirements. Other safety modifications completed: Installed aircraft APU heat shield, installed new improved inertia reels and shoulder harnesses, replaced unsafe fuel boost pumps to comply with FAA SFAR 88 requirements and replaced the current aircraft battery and charging system which was prone to thermal run-away. The safety program leverages available and emerging commercial technology for crew/aircraft safety.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Smoke Detection NRE in FY03 and FY05 with kit procurement in FY06. Installs in FY06, installation complete in FY07. APU crossover and exhaust ducts NRE in FY07 and kit buys in FY07 and FY08 with installation in FY07 and FY08 at no cost using fleet resources. Aircraft Kapton wiring NRE in FY07 with kit buys and installation in FY08-09. CSFIR NRE in FY08 with kit buys in FY08 -FY09 and installation in FY09. FQIS NRE in FY08 with kit buys and installation in FY08-FY09. Aircraft acoustic thermal blanket NRE in FY09 with kit buys and installation in FY09-FY11.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
A/C BATTERY	16	*																		16	*
APU	16	0.4																		16	0.4
APU DUCTS			9	*	7	*														16	*
BLANKETS								2	*	6	0.1	8	0.2							16	0.3
CSFIR					9	0.3	7	0.2												16	0.5
FQIS					9	0.2	7	0.2												16	0.4
FUEL BOOST PUMPS	16	0.8																		16	0.8
KAPTON WIRE					12	0.4	4	0.1												16	0.5
SMOKE DETECTOR	16	0.3																		16	0.3
INSTALLATION KITS N/R			0.2		0.9		4.3		2.1												7.6
INSTALL EQUIPMENT																					
A/C BATTERY	16	0.7																		16	0.7
APU DUCTS			9	0.1	7	0.1														16	0.1
BLANKETS								2	0.2	6	0.6	8	0.8							16	1.7
CSFIR					9	0.5	7	0.4												16	0.9
FQIS					9	0.6	7	0.5												16	1.0
HPTS CAD CUTTER	16	0.1																		16	0.1
INERTIA REELS	16	0.4																		16	0.4
KAPTON WIRE FUEL PUMP	16	0.6																		16	0.6
SMOKE DETECTOR	16	0.3																		16	0.3
INSTALL EQUIPMENT N/R			1.3			2.3															3.6
ECO																					
DATA		0.1																			0.1
TRAINING EQUIP	1	*	1	0.1	2	1.1		0.7												4	1.8
SUPPORT EQUIP					1	0.2	20	0.8												21	1.0
ILS				*		1.3		*													1.4
OTHER SUPPORT		2.4		1.1		1.5		1.5		1.8		2.3									10.6
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	41	0.6	9	0.5	23	2.0	29	9.9	6	6.3	8	8.1								116	27.4
TOTAL PROCUREMENT		8.1		2.7		14.8		16.7		8.8		11.4									62.6

Asterisk (\*) indicates amount value less than \$51K

Totals may not add due to rounding.

Inertia Reels do not require install kits.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES MODIFICATION TITLE: SAFETY DEFICIENCIES ( OSIP 008-02 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Modification

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2007 Nov 06 FY 2008 Various FY 2009 Various

DELIVERY DATE: FY 2007 Dec 06 FY 2008 Various FY 2009 Various

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
Prior Years (48) kits	40	0.6	8	0.5															48	1.0
FY 2007 (0) kits																				
FY 2008 (30) kits					21	1.7	9	3.9											30	5.6
FY 2009 (20) kits							20	6.0											20	6.0
FY 2010 (6) kits									6	6.3									6	6.3
FY 2011 (8) kits											8	8.1							8	8.1
FY 2012 (0) kits																				
FY 2013 (0) kits																				
TO COMPLETE(0)																				
<b>Total</b>	<b>40</b>	<b>0.6</b>	<b>8</b>	<b>0.5</b>	<b>21</b>	<b>1.7</b>	<b>29</b>	<b>9.9</b>	<b>6</b>	<b>6.3</b>	<b>8</b>	<b>8.1</b>						<b>112</b>	<b>27.0</b>	

Notes: Does not include four trainers installs. No installs required for Fuel Boost Pump, Inertia Reels, APU and APU Crossover ducts.

CSPIR Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									1	4	5	6				
Out									1	4	5	5	1			

  

	FY 2011				FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														16
Out														16

FQIS Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						3	3	3	1	1	4	1				
Out						2	3	4	1	1	4	1				

  

	FY 2011				FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														16
Out														16

Smoke Detectors Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	8	1	3	3	1											
Out	8	1	3	3	1											

  

	FY 2011				FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														16
Out														16

Kapton Wire 1A Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						4	4	4	4							
Out						3	4	4	4	1						

	FY 2011				FY 2012				FY 2013				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															16
Out															16

Blankets Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										2				1	2	3
Out										2				1	1	4

	FY 2011				FY 2012				FY 2013				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In	1	2	3	2											16
Out	1	2	2	3											16

Exhibit P-3a

MODIFICATION TITLE: TECH INSERTION( OSIP 003-04 )

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

**DESCRIPTION / JUSTIFICATION:**

Tech Insertion program fixes supportability and obsolescence issues, addresses interoperability issues, updates systems and inserts new technologies into the E-6B platform. The E-6 aircraft have 35 individual computers dealing with communications and mission systems. Technology Insertion addresses supportability, new technologies, obsolescence, systems updates and interoperability issues in the areas of: Mission Computer Set (MCS) and Flight Management Computer System (FMCS). The MCS is rapidly becoming unsupportable. Intervention is required to ensure this mission critical system continues to operate. Also, the FMCS will become obsolete and will need an upgrade in order to be supportable beyond FY08. The unsupportable Standard Distribution Switching Unit (SDSU) provides mission critical timing throughout the aircraft and will be replaced with an off-the shelf unit (TFD8000.) Existing KG-3X crypto must be replaced with DoD standard equipment for compatibility. The existing Secure Telephone Unit (STU) must be replaced with the Secure Telephone Equipment (STE) due to obsolescence.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

MCS update is divided into Spirals. Spiral 1, which added an uninterruptible power supply and replaced the current mechanical hard drive with a solid state device, completed in FY05. NRE for Spiral 2, the Message Processing System (MPS), started in FY06, with kit buys in FY 06-FY07; all obsolete equipment was replaced by the end of FY07. STE NRE commenced in FY07 with NRE kit installation in FY08 and kit buys in FY08, followed by installation of 14 kits in FY09; the last kit will be installed with Block I. KG-3X family crypto NRE and replacement kits will be provided by Air Force at no cost to Navy with installation occurring in FY11-FY12. FMCS Single Board NRE in FY07-FY08 with kit buys and installs in FY08. TFD8000 (SDSU) NRE in FY07 with kit buys and installation in FY07 and FY08.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
85HP MOTOR	16	0.4																	16	0.4	
LAB					2	0.1													2	0.1	
MAPS Upgrade																					
MCS SPIRAL 1 (UPS)	16	0.2																	16	0.2	
MCS SPIRAL 2 (MPS)																					
SDSU			10	0.1	6	0.1													16	0.2	
SIL	1	*	1	*															2	*	
STE			1	0.1	15	1.3													16	1.4	
INSTALLATION KITS N/R			*		5.1																5.2
INSTALL EQUIPMENT																					
85 HP Motor	16	0.4																	16	0.4	
FMCS Single Board			1	0.1	15	1.2													16	1.3	
LAB					2	*													2	*	
MAPS Upgrade																					
MCS SPIRAL 1 (UPS)	16	1.2																	16	1.2	
MCS SPIRAL 2 (MPS)	1	0.2	14	1.2															15	1.4	
SDSU			10	1.4	6	0.8													16	2.2	
SIL	1	0.1	2	0.3															3	0.4	
STE			1	*	15	0.3													16	0.3	
INSTALL EQUIPMENT N/R			6.5		4.3		0.9														11.7
ECO																					
DATA			0.1		0.3																0.5
TRAINING EQUIP	2	*	8	1.0	4	2.1		*											14	3.1	
SUPPORT EQUIP																					
ILS				0.5		0.8		0.1													1.5
OTHER SUPPORT		4.6		3.2		4.1		3.6		1.7		2.2		2.6		2.7					24.7
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	19	0.1	32	0.6	28	1.1	16	1.3			7	1.2	10	1.5						112	5.8
TOTAL PROCUREMENT		13.8		18.2		12.8		5.0		1.7		3.4		4.1		2.7					61.9

Asterisk (\*) indicates amount value less than \$51K

Totals may not add due to rounding

MCS Spiral 2 (MPS) requires no installation kits. But incurs install cost and 1 SIL.

KG-3X does not require install equipment kits. But requires Installation cost.

Training Equip totals do not include 1 kit provided by AF for KG-3X.

MCS Spiral 1 : three install kits and three install equipment kits used for two trainers and a lab.

FMCS Single Board install kits not required, but incurs install cost.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES MODIFICATION TITLE: TECH INSERTION( OSIP 003-04 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Modification

ADMINISTRATIVE LEADTIME: Various Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2007 Various FY 2008 Various FY 2009 Various

DELIVERY DATE: FY 2007 Various FY 2008 Various FY 2009 Various

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
Prior Years (17) kits	16	0.1	1	*															17	0.1
FY 2007 (26) kits			24	0.5	2	0.1													26	0.5
FY 2008 (35) kits					21	0.2	14	1.2											35	1.5
FY 2009 (0) kits																				
FY 2010 (0) kits																				
FY 2011 (7) kits										7	1.2								7	1.2
FY 2012 (9) kits												9	1.3						9	1.3
FY 2013 (0) kits																				
TO COMPLETE(0)																				
Total	16	0.1	25	0.5	23	0.3	14	1.2		7	1.2	9	1.3						94	4.6

Notes:

Does not include 3 SIL or 15 trainer installs.  
 FY2011 & FY2012 install cost quantities reflect KG-3X kits that were procured by the Air Force.  
 MPS does not require install kits,  
 One STE (FY08 Buy) install under the Block 1 program.

MCS Spiral 2 Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY2010				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	1	3	6	5													
Out	1	3	6	5													

	FY 2011				FY2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														15
Out														15

SDSU Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY2010				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In			1	4	5	4	2										
Out			1	4	4	4	3										

	FY 2011				FY2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														16
Out														16

KG-3X Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY2010				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																	
Out																	

	FY 2011				FY2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In			3	4	4	4	1							16
Out			2	4	4	4	2							16

FMCS Single Board Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					1	3	6	6								
Out					1	3	6	6								

	FY 2011				FY2012				FY2013				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															16
Out															16

STE Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									1	3	4	4	3			
Out									1	3	4	4	3			

	FY 2011				FY2012				FY2013				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															15
Out															15

Exhibit P-3a

MODIFICATION TITLE: SLEP (OSIP 003-07)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

**DESCRIPTION / JUSTIFICATION:**

The Service Life Extension Program (SLEP) extends the E-6B service life to 2040+, based on extensive engineering analysis using modern analytic tools (Service Life Assessment Program – SLAP.) FY07& 08 NRE will be used for the Individual Aircraft Tracking System (IATS) and ECP generation. Full and open competition will be conducted in FY09 with contract award scheduled for FY10. The IATS will enable the fleet and program office to track the fatigue life expended on each E-6B aircraft. This tracking capability will identify the next critical fatigue damaged component that will need repair. It will also generate cost savings by allowing future modifications to be tailored to meet each aircraft's need, thus also increasing E-6B fleet availability for operational use. Current E-6B usage indicates modification must commence in FY10 to prevent the E-6B from being unable to perform its mission with the downing of more than two aircraft in 2016. There is a potential safety of flight issue due to unknown rate of deterioration of the E-6B airframe.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

FY07 MS C for SLEP. SLEP contract award in FY10 with prototype installation in FY10. SLEP full rate production in FY10-FY14. Installation ends in FY15.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E		10.0																			10.0
PROCUREMENT																					
INSTALLATION KITS																					
SLEP									3	4.3	3	3.6	3	3.9	3	3.7	4	5.8	16	21.4	
INSTALLATION KITS N/R				2.0		6.8															8.8
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS																					
OTHER SUPPORT				0.5		0.8		1.5		1.9		2.7		1.3		1.5		5.4			15.6
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST									2	6.4	2	6.7	3	11.0	3	11.3	6	24.0	16	59.5	
TOTAL PROCUREMENT				2.5		7.5		1.5		12.7		13.0		16.2		16.5		35.3			105.2

Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES MODIFICATION TITLE: SLEP(OSIP 003-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive-In Modification

ADMINISTRATIVE LEADTIME: NA Months PRODUCTION LEADTIME: NA Months

CONTRACT DATES: FY 2007 NA FY 2008 NA FY 2009 NA

DELIVERY DATE: FY 2007 NA FY 2008 NA FY 2009 NA

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 (3) kits									2	6.4	1	3.3								3	9.8
FY 2011 (3) kits											1	3.3	2	7.3						3	10.7
FY 2012 (3) kits												1	3.7	2	7.5					3	11.2
FY 2013 (3) kits															1	3.8	2	8.0		4	16.0
TO COMPLETE (4) kits																	4	16.0		4	16.0
Total									2	6.4	2	6.7	3	11.0	3	11.3	6	24.0		16	59.5

SLEP Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In															1	1
Out																

  

	FY 2011				FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In		1	1		1	1		1	1		1	1	6	16
Out	1	1		1	1		1	1	1		1	1	7	16

MODIFICATION TITLE: COMMUNICATIONS (IP/T3) UPGRADE( OSIP 012-07 )

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

**DESCRIPTION / JUSTIFICATION:**

Mission tasking requires the establishment and maintenance of Internet Protocol (IP) connectivity using various wideband communications links in support of command and control operations onboard the E-6B aircraft. Effort scope has required a rephased approach to modifications. The IP effort installs INMARSAT commercial satellite access for global communications connectivity (Phase 1); removes the Utility Trailing Wire Antenna (UTWA) to provide weight and space margin for aircraft modifications (Phase 3); and provides the Northstar Digital Ground Entry Point (GEP) capability for high speed UHF LOS communications (Phase 4).

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Phase 1 INMARSAT and Phase 3 UTWA removal NRE in FY07-FY08 with NRE kit installation in FY09. Aircraft production kit buys in FY09-FY12 (15 A/C) with installs in FY10-FY13 (15 A/C). FOC FY13 (16 A/C). Phase 4 Digital GEP contract award in FY08, NRE in FY08 and FY09 with NRE kit buy in FY08 and installation in FY10. Production kit buys FY10-15 (15 A/C) with installation in FY11-FY16 (15 A/C). FOC FY16 (16A/C).

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
LAB KITS					3	1.4														3	1.4
PHASE FIVE KITS																					
PHASE FOUR KITS					1	0.1			2	0.2	3	0.3	3	0.3	3	0.3	4	0.4	16	1.6	
PHASE ONE KITS					1	0.6	7	4.3	3	1.9	3	2.0	2	1.4					16	10.2	
PHASE THREE KITS					1	0.7	7	5.4	3	2.5	3	2.6	2	1.7					16	13.0	
PHASE TWO KITS																					
INSTALLATION KITS N/R				22.7		22.5		13.1													58.3
INSTALL EQUIPMENT																					
LAB KITS					3	1.6														3	1.6
PHASE FIVE KITS																					
PHASE FOUR KITS					1	0.2			2	0.4	3	0.7	3	0.7	3	0.7	4	1.0	16	3.6	
PHASE ONE KITS					1	1.0	7	6.8	3	3.0	3	3.1	2	2.1					16	16.0	
PHASE THREE KITS					1	0.7	7	5.4	3	2.5	3	2.6	2	1.7					16	13.0	
PHASE TWO KITS																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA				0.1		0.6		1.7		0.4		0.9		0.3		0.1					4.1
TRAINING EQUIP						2.2	5	3.2	7	3.7		0.1	2	0.6						14	9.9
SUPPORT EQUIP																					
ILS						3.5		2.9		1.9						0.2		0.2			8.6
OTHER SUPPORT				7.4		11.7		18.2		5.3		1.9		1.2		1.6		3.4			50.6
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST							5	4.4	21	14.8	14	8.3	7	4.3	11	6.8	7	0.7	65	39.3	
TOTAL PROCUREMENT					30.2	46.9		65.4		36.5		22.5		14.3		9.6		5.7			231.1

Totals may not add due to rounding.

Installation Cost Includes 3 Lab and 14 trainer installs.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES MODIFICATION TITLE: COMMUNICATIONS (IP/T3) UPGRADE( OSIP 012-07 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Modification

ADMINISTRATIVE LEADTIME: Various Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2007 NA FY 2008 Various FY 2009 Various

DELIVERY DATE: FY 2007 NA FY 2008 Various FY 2009 Various

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
Prior Years (0) kits																						
FY 2007 (0) kits																						
FY 2008 (3) kits							2	1.7	1	0.1										3	1.8	
FY 2009 (14) kits									13	11.5	1	1.2								14	12.8	
FY 2010 (8) kits											8	6.1								8	6.1	
FY 2011 (9) kits													7	4.3	2	2.1				9	6.3	
FY 2012 (7) kits															7	4.4				7	4.4	
FY 2013 (3) kits																			3	0.3	3	0.3
TO COMPLETE(4)																			4	0.4	4	0.4
Total								2	1.7	14	11.6	9	7.3	7	4.3	9	6.5	7	0.7	48	32.2	

Note:  
Does not include 3 LAB and 14 trainer installs.

Phase One Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In													1	2	1	2	1	1	1	1	1	
Out													1	1			1	2	1	2	1	1

  

	FY 2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	1		1		1	1	1			16
Out	1	1	1	1	1	1	1	1		16

Phase Three Installation Schedule

	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In										1				2	2	1	2	1		1	1
Out											1			2	2	1	2	2	1	2	1

  

	FY 2012				FY2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	1		1		1	1	1			16
Out	1	1	1	1	1	1	1	1		16

Phase Four Installation Schedule

	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In														1						1	1	
Out															1						1	1

  

	FY 2012				FY2013				To Complete	Total	
	1	2	3	4	1	2	3	4			
In		1	1	1	1	1	1			7	16
Out		1	1	1	1	1	1	1		7	16

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							056600, EXECUTIVE HELICOPTERS SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	220.2	A	40.5	46.9	31.8	43.4	45.6	18.8	11.6	11.6	470.3	

DESCRIPTION: This line item funds modifications to the (11) VH-3D and (8) VH-60N Executive Helicopters. These aircraft are assigned to Marine Helicopter Squadron One to support the President of the United States. The VH-60N Cockpit Upgrade consists of an upgrade to all-glass instrumentation. The Communication Suite Upgrade consists of DAMA SATCOM radio upgrade, Digital FM radio upgrade, HF radio upgrade, the Presidential redundant secure communications upgrade, Data Transfer capability upgrade, and Crypto Modernization Upgrade. The VH-3D Lift Improvement program consists of the operational level installation of 55 composite main rotor blades on all eleven VH-3Ds. Eight of the fifty five blades were provided by a no cost blade exchange agreement with the legacy blades. The Structural Enhancement Program consists of the efforts to increase the maximum operating weight of the VH-3D, replace critical aircraft structure on the VH-60N, replace the VIP seats on the VH-3D, upgrade the safety of the fuel system on the VH-3D, and a Service Life Extension on the VH-60N. The Obsolescence Management Program will manage impending Executive Helicopter obsolescence issues. A variety of factors will be addressed including communication and navigation upgrades to remain mission relevant. The overall goal of the modifications budgeted in FY 2009 is to continue procurement efforts in accordance with the procurement strategy to maintain the VH-3D and VH-60N until the VH-71 Helicopter becomes fully operationally capable.

The specific modifications budgeted and programmed are:

009-02 VH-60N COCKPIT UPGRADE	52.7		19.0	12.3	16.9	15.3	11.1	1.2			128.4
014-02 VH COMM UPGRADE	45.5		5.2	6.8	4.1	9.0	15.0	6.3	5.1	2.6	89.4
011-06 VH-3D LIFT IMPROVEMENTS	5.0		16.3	11.7	0.5						33.6
016-08 VH STRUCTURAL ENHANCEMENTS				16.1	10.4	15.2	13.4	4.9	4.9	9.0	73.9
004-10 OBSOLESCENCE MANAGEMENT PROGRAM						3.9	6.1	6.4	1.6		17.9
Inactive OSIPs	127.2										127.2
<b>TOTAL</b>	<b>93.0</b>		<b>40.5</b>	<b>46.9</b>	<b>31.8</b>	<b>43.4</b>	<b>45.6</b>	<b>18.8</b>	<b>11.6</b>	<b>11.6</b>	<b>470.3</b>

1. FY2008 funding totals do not include \$3.4M previously requested for current FY2008 GWOT requirements.

Exhibit P-3a

MODIFICATION TITLE: VH-60N COCKPIT UPGRADE ( OSIP 009-02 )

MODELS OF SYSTEMS AFFECTED: VH-60N TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: In order to meet the requirement of providing safe and timely transportation for the President, Vice President, and other parties as directed by the Director of the White House Military Office (WHMO), and in support of the alert and contingency mission requirement of the WHMO Operations Plan, the VH-60N aircraft cockpit must be upgraded to provide enhanced communication, navigation, and survivability capabilities while reducing pilot workload. The cockpit upgrade will be an all-glass instrumentation built around pilot, co-pilot, and Communications Systems Operator (CSO) Multi-Function Displays (MFD) and Control Display Units (CDU). A moving map display complete with terrain database will be incorporated, while maintaining the current capabilities of TACAN, VOR, ILS, ADF, TCAS, CSFIR, FM Immunity, Mode S IFF, ALE-47 and ALQ-144. The Survivability capabilities will provide a countermeasure dispenser and an infrared countermeasure system interface. The navigation system should include laser ring gyro Inertial Navigation Systems (INS) with embedded Global Positioning System (GPS)-(EGI) that has integrity monitoring/IFR. A color weather radar will be incorporated. Communication capabilities must be consistent with White House communications Agency (WHCA) planning and National Security Agency (NSA) requirements. Three UHF/VHF/FM radios (ARC-210s) shall be included. Four FM radios and the HF with ALE currently on the VH-60N must be maintained. A coupled autopilot function shall be incorporated into the cockpit management system. Preplanned Product Improvement (P3I) will include Digital Map, Ground Proximity Warning System (GPWS), Communication, Navigation and Surveillance/ Air Traffic Management (CNS/ATM), and GPS Non-precision approach (RNP/RNAV).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This ACAT IV-T program was approved in July 2001. Milestone B was approved November 2003. The program was re-designated as ACAT IV-M in November 2003. Milestone C was approved April 2006. Test bed aircraft modification and first kit procurement began in FY 2006. Installation of 1st production kit began in FY 2007. Development Testing is scheduled for FY 2007/8. Initial Operating Capability is scheduled for FY 2009 with Full Operating Capability scheduled for FY 2012. Preplanned Product Improvement efforts will begin in FY 09 and finish in FY 12.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
VH-60N Cockpit Upgrade Kit	1	0.5	1	0.8	2	1.1	2	1.4	2	1.3									8	5.2	
INSTALLATION KITS N/R		24.6		5.1					2.2		3.1										35.0
INSTALL EQUIPMENT																					
Production		1.4		1.4		2.5		2.7		2.7											10.5
INSTALL EQUIPMENT N/R		18.7		1.6					1.1		0.4		*								21.9
ECO - Preplanned Prod Improvement								3.9	1.1												4.9
Engineering Change Orders		0.6																			.6
DATA						2.2				*		0.4									2.6
TRAINING EQUIP		*		1.0			1	0.6			0.1									1	1.7
SUPPORT EQUIP						1.0															1.0
ILS						1.6															1.6
OTHER SUPPORT		6.8		4.1		2.8		2.3		2.4		2.6		1.1							22.3
INTERIM CONTRACTOR SUPPORT						1.0		0.5													1.5
INSTALLATION COST			2	5.0				3	5.5	2	4.5	2	4.5							9	19.5
TOTAL PROCUREMENT	1	52.7	3	19.0	2	12.3	6	16.9	4	15.3	2	11.1		1.2						18	128.4

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VH-60N MODIFICATION TITLE: VH-60N COCKPIT UPGRADE ( OSIP 009-02 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: INSTALLATION OF COCKPIT UPGRADE DURING SPAR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2007 Jun 07 FY 2008 Dec 07 FY 2009 Dec 08

DELIVERY DATE: FY 2007 Sep 07 FY 2008 Apr 09 FY 2009 Feb 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (1) kits			1	2.5																1	2.5
FY 2007 (1) kits			1	2.5																1	2.5
FY 2008 (2) kits							2	4.5												2	4.5
FY 2009 (3) kits*							1	1.0	2	4.5										3	5.5
FY 2010 (2) kits											2	4.5								2	4.5
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
TO COMPLETE ( ) kits																					
<b>Total</b>			2	5.0			*3	5.5	2	4.5	2	4.5								9	19.5

\* Total quantity includes 1 trainer.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				1	1							1	1		1	1		1	1		
Out						1			1							1	1		1	1	1

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										8
Out		2								8

MODIFICATION TITLE: VH COMM UPGRADE( OSIP 014-02 )

MODELS OF SYSTEMS AFFECTED: VH-60N/VH-3D TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION:

The White House Military Office (WHMO) has directed the upgrade to the data transfer computer and printer on board the VH-60N, which is required to transmit, receive, and print secure data files via the SATCOM and HF radios. Satisfaction of the Data Transfer Computer/Printer requirement will require the procurement of a compatible TEMPEST certified data transfer computer and printer. WHMO has also directed that VHF FM radios operate in the APCO-25 digital mode. New radios must be procured in order to meet this requirement. JCS Directive MJCS-63-89 states that all users of UHF SATCOM shall have demand assigned multiple access (DAMA) capability. The White House Communication Agency (WHCA) has directed that all White House Military Organization (WHMO) elements be connected and have the ability to operate in the DAMA mode by 2005. Satisfaction of the DAMA SATCOM requirement will require the incorporation of two DAMA capable radios in each aircraft to satisfy the need for full duplex communication. An install kit will be built to house the radio, amplifier, and aircraft interface module, and then it will be installed in the aircraft as one unit. WHCA has also directed that all WHMO elements have the ability to operate in the High Frequency/Automatic Link Establishment (HF/ALE) mode by 2007. To meet the HF/ALE requirement, software modifications to the OFP must be completed to fully utilize all automatic link establishment (ALE) capabilities of the current HF radio. OFP software will be modified by NAWC-AD to allow new systems to work in the aircraft. The FM (YZ) radio replacement is required in order to have a redundant secure voice capability due to the obsolescence of the YZ radio system employed by White House Communication Agency (WHCA). An upgrade to all radios is required to maintain crypto security requirements. Required upgrades vary from software/firmware mods to the replacement of multiple radios on the VH-3D/VH-60N.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This program was approved as an Abbreviated Acquisition Program in July 2001. Program was upgraded to ACAT IV-M in March 2003. Digital FM capability was performed between FY 2003 through FY 2005, with a VAL/VER in FY 2004. The Data Transfer Computer/Printer capability modification has been performed between FY 2003 through FY 2005 with a VAL/VER in FY 2006. DAMA SATCOM upgrade will be performed between FY 2002 through FY 2009. DAMA SATCOM installations are performed in conjunction with scheduled depot maintenance. VAL/VER was performed on the delivery of the VH-3D (2005) and VH-60N (2006) DAMA SATCOM modifications. The HF/ALE modification will be performed between FY 2005 through FY 2009 with a VAL/VER completed in FY 2007. FM radio replacement did occur in FY 2008. The crypto modernization effort for both aircraft will begin in FY 2010 and continue through FY 2014. All performance testing and EMC/EMI testing will be performed by NAWC-AD. VAL/VER will be performed by HMX-1 to ensure interoperability with all WHMO elements.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RDT&E																				
PROCUREMENT																				
INSTALLATION KITS																				
CRYPTO - ARC-231 VH-3D/60N									2	*	12	0.2	5	0.1					19	.4
CRYPTO - ARC-210 VH-60N									1	*	3	0.1	2	*	2	*			8	.2
CRYPTO - ARC-210 VH-3D									1	*	6	0.2	2	0.1	2	0.1			11	.4
CRYPTO - HF CRYPTO VH-3D/60N											2	*	13	0.3	4	0.1			19	.4
FM Radio Replacement (O-level)					19	0.1													19	.1
SATCOM (O-level)				0.5																.5
VH Digital FM	28	1.0																	28	1.0
VH-3D SATCOM	11	0.6																	11	.6
VH-60 SATCOM	8	1.3																	8	1.3
INSTALLATION KITS N/R		18.8				1.8				6.0		5.9		0.4						32.9
INSTALL EQUIPMENT																				
CRYPTO - ARC-231 VH-3D/60N									2	0.2	12	1.2	5	0.5					19	2.0
CRYPTO - ARC-210 VH-60N									1	0.5	3	1.4	2	1.0	2	1.0			8	3.8
CRYPTO - ARC-210 KITS VH-3D									1	0.5	6	3.1	2	1.0	2	1.0			11	5.6
CRYPTO - HF CRYPTO VH-3D/60N											2	0.1	13	0.5	4	0.2			19	.8
Data Transfer Computer/ Printer	8	0.2																	8	.2
Digital FM	21	0.3																	21	.3
FM Radio Replacement					19	0.7													19	.7
SATCOM	27	1.9																	27	1.9
INSTALL EQUIPMENT N/R		5.0		0.8		0.2				0.5		0.5								7.0
ECO																				
Crypto										0.1		0.1								.2
Data Transfer		0.3																		.3
Digital FM		0.7																		.7
FM Radio Replacement						0.4				0.2										.6
SATCOM		0.5																		.5
DATA		2.6		1.6		0.5		0.5		0.3		0.3		0.1		0.2		0.4		6.4
TRAINING EQUIP	5	0.5		0.2												1.0		0.5	5	2.2
SUPPORT EQUIP		2.1				0.5								0.4		0.3		0.3		3.6
ILS						0.1												0.5		.6
OTHER SUPPORT		7.0		1.4		2.0		2.6		0.8		0.4		0.5		0.5		0.5		15.7
INTERIM CONTRACTOR SUPPORT																				
INSTALLATION COST	9	2.3	5	1.2	3	0.7	2	0.8			4	1.4	4	1.4	2	0.7	1	0.5	30	8.9
TOTAL PROCUREMENT	117	45.5	5	5.2	41	6.8	2	4.1	8	9.0	50	15.0	48	6.3	18	5.1	1	2.6	290	99.5

Asterisk (\*) indicates amount value less than \$51K.

Note: FM Radio Replacement kits will be installed at the O level.

Note: All Crypto installed at O level except ARC-210 for the VH-3D.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VH-60N/VH-3D MODIFICATION TITLE: VH COMM UPGRADE( OSIP 014-02 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation of DAMA SATCOM - COMM SUITE Upgrade during SPAR.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 Sep 08 FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY (19) kits	9	2.3	5	1.2	3	0.7	2	0.8												19	5.0
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total	9	2.3	5	1.2	3	0.7	2	0.8												19	5.0

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	9	2	1	1	1	2	1				1	1										
Out	5	1	2		3	2		3	1					1	1							

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										19
Out										19

Installs must follow VH-60N SPAR schedule.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VH-3D MODIFICATION TITLE: VH COMM UPGRADE( OSIP 014-02 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation of ARC-210 (CRYPTO UPGRADE) in the VH-3D - COMM SUITE Upgrade during SPAR.

ADMINISTRATIVE LEADTIME: 7 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 (1) kits											1	0.4								1	0.4
FY 2011 (6) kits											3	1.0	3	1.0						6	2.0
FY 2012 (2) kits													1	0.4	1	0.4				2	0.8
FY 2013 (2) kits															1	0.3	1	5.0		2	8.0
TO COMPLETE () kit																	1	0.5			
Total											4	1.4	4	1.4	2	0.7	1	0.5		11	4.0

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																	2	1			1
Out																					2

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		1	1	2	1	1	1		1	11
Out	1		1		1	1	2		3	11

Exhibit P-3a

MODIFICATION TITLE: VH-3D LIFT IMPROVEMENTS( OSIP 011-06 )

MODELS OF SYSTEMS AFFECTED: VH-3D TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: The VH-3D Lift Improvement program consists of the operational level install of 55 composite main rotor blades on all eleven VH-3D aircraft. These blades will improve performance allowing increased passengers and fuel loads. Composite blades reduce the torque required to hover and for level flight. Composite blades reduce vibrations and structural loads. The VH-3D is the only aircraft in the inventory using metal blades.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Flight Test for the procurement of the VH-3D composite main rotor blades did take place in the 1st and 2nd quarter of FY 2008. Procurement and operational install of these blades did take place in 2nd quarter of FY 2008. The blades are being individually procured vice procured as entire shipsets. Eight of the fifty five blades were provided by a no cost blade exchange agreement with the legacy blades.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIP (B Kits)			12	3.7	35	10.5														47	14.2
INSTALL EQUIPMENT N/R		5.0		11.6																	16.6
ECO																					
DATA				0.6																	.6
TRAINING EQUIP				0.1		0.3															.4
SUPPORT EQUIP				0.1																	.1
ILS																					
OTHER SUPPORT				0.3		0.9		0.5													1.8
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT		5.0	12	16.3	35	11.7		.5												47	33.6

\* Blades are installed at O level.

Exhibit P-3a

MODIFICATION TITLE: VH STRUCTURAL ENHANCEMENTS ( OSIP 016-08 )

MODELS OF SYSTEMS AFFECTED: VH-60N TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: The VH Structural Enhancement Program consists of the efforts to replace critical aircraft structure on the VH-60N, replace the VIP seats on the VH-3D, and upgrade the safety of the fuel system on the VH-3D. VH-60N airframe cracks have been identified and repaired by depot contractor both during scheduled Special Progressive Aircraft Rework (SPAR) and unscheduled/unplanned maintenance at HMX-1. These cracks and the required repairs will significantly extend aircraft out of service time, reducing aircraft availability and impacting HMX-1's ability to support White House Military Office missions.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Non-recurring engineering began in the 1st quarter of FY 2008. Kit procurement will commence in time to meet the installations, which will be performed in conjunction with planned SPAR periods starting in the 3rd quarter of FY 2009 and ending in FY 2013. Installation of VH-3D VIP seats will begin in FY 2009 and will be complete by FY 2010. VH-3D fuel system upgrades will begin in FY 2009 and will be complete by FY 2013. The Service Life Extension for the VH-60N will start FY 2012.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
VH-60N TOP DECK KITS					2	2.2	2	2.2	2	2.3	2	2.3								8	9.0
VH-3D SEAT KITS							7	0.7	4	0.4										11	1.1
VH-3D FUEL SURVIVABILITY KITS							3	0.8	6	1.4	2	0.5								11	2.6
VH-60N SLEP KITS													1	1.0	1	2.0	6	4.0		8	7.0
INSTALLATION KITS N/R						10.1							1.0								11.1
INSTALL EQUIPMENT																					
VH-3D SEATS							7	2.5	4	1.4										11	3.9
VH-60 SLEP													1	0.4	1	0.4	6	1.0		8	1.8
INSTALL EQUIPMENT N/R																					
ECO																					
Engineering Change Orders						0.9		0.3		0.6		0.3									2.1
DATA								0.2		0.6				0.5							1.3
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS						2.1		0.2		0.1						0.5					2.9
OTHER SUPPORT						0.9		1.2		1.3		0.4		1.0		1.0			1.0		6.9
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST								11	2.4	11	7.1	6	9.9	2	1.0	2	1.0	6	3.0	38	24.4
TOTAL PROCUREMENT					2	16.1	30	10.4	27	15.2	10	13.4	4	4.9	4	4.9	18	9.0	95	73.9	

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VH-60N MODIFICATION TITLE: VH STRUCTURAL ENHANCEMENTS ( OSIP 016-08 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: INSTALLATION OF VH-60N TOP DECK - STRUCTURAL ENHANCEMENTS DURING SPAR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Dec 07 FY 2009 Dec 08

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Apr 09 FY 2009 Feb 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY () kits																					
FY 2007 () kits																					
FY 2008 (2) kits							2													2	0.0
FY 2009 (2) kits									2	5.0										2	5.0
FY 2010 (2) kits											2	8.6								2	8.6
FY 2011 (2) kits													1			1					
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total							2		2	5.0	2	8.6	1		1					8	13.6

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In												1	1		1	1		1	1		
Out															1	1		1	1		1

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In				1		1				8
Out		2					1	1		8

\* Installs must follow VH-60N SPAR schedule. No VH-60N in SPAR for FY 08, therefore installations must occur in FY 09.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VH-3D MODIFICATION TITLE: VH STRUCTURAL ENHANCEMENTS ( OSIP 016-08 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: INSTALLATION OF VH-3D VIP SEATS - STRUCTURAL ENHANCEMENTS DURING SPAR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 Dec-08

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 Jun 08

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 (7) kits								6	1.4	1	0.2									7	1.6
FY 2010 (4) kits										4	0.6									4	0.6
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total								6	1.4	5	0.8									11	2.2

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											1	2	3	1	1	2	1				
Out													1	2	3	1	1	2	1		

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										11
Out										11

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VH-3D MODIFICATION TITLE: VH STRUCTURAL ENHANCEMENTS ( OSIP 016-08 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: INSTALLATION OF VH-3D FUEL SYSTEMS UPGRADE - STRUCTURAL ENHANCEMENTS DURING SPAR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 (3) kits								3	1.0												
FY 2010 (6) kits									4	1.3											
FY 2011 (2) kits											4	1.3									
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total								3	1.0	4	1.3	4	1.3							11	3.6

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In											1	1	1	1	1	1	1	1	2	1		1
Out															1	1	1	1	1	1	1	2

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										11
Out	1		1							11

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VH-60N MODIFICATION TITLE: VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: INSTALLATION OF VH-60N SLEP - STRUCTURAL ENHANCEMENTS DURING SPAR

ADMINISTRATIVE LEADTIME: 7 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		0		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & FY () kits																						
FY 2007 () kits																						
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 (1) kits													1	1.0						1	1.0	
FY 2013 (1) kits															1	1.0				1	1.0	
TO COMPLETE (6) kits															6	3.0				6	3.0	
Total														1	1.0	1	1.0		6	3.0	8	5.0

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																					
Out																				1	

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In				1	1				6	
Out								1	7	

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							056700, SPECIAL PROJECT AIRCRAFT					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	215.7	A	22.3	20.0	14.1	15.3	15.3	15.9	16.2	84.2	419.0	

**DESCRIPTION:**

The Special Projects program modifies and/or replaces obsolete intelligence collection equipment and integrates Quick Reaction Capability in FY09 as required in (6) P-3 aircraft. Procurements vary in each fiscal year and include common Navy systems for increased capability, reduced operator workload and common logistics, as well as procurement of special mission equipment as directed by the Chief of Naval Operations. Active Primary Aircraft Authorization (PAA) inventory is 4 with additional 2 Backup Aircraft Authorization (BAA) aircraft in the Special Mission inventory. A total of 6 aircraft have been delivered. The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
019-97 INTELLIGENCE SENSORS	141.3		22.3	20.0	14.1	15.3	15.3	15.9	16.2	84.2	344.6
INACTIVE OSIPS	74.4										74.4
TOTAL	215.7	0.0	22.3	20.0	14.1	15.3	15.3	15.9	16.2	84.2	419.0

1. FY2007 funding total includes \$5.1 received in GWOT supplemental.
2. FY2008 funding total includes \$2.4 received in the 2008 Consolidated Appropriation Act, Division L.
3. FY2008 funding totals do not include \$5.6 previously requested for current FY2008 GWOT requirements.

Exhibit P-3a

MODIFICATION TITLE: INTELLIGENCE SENSORS( OSIP 019-97 )

MODELS OF SYSTEMS AFFECTED: P-3B/C TYPE MODIFICATION: Operational Improvement

**DESCRIPTION/ JUSTIFICATION**

This modification replaces obsolescence intelligence collection equipment in six P-3 Special Project aircraft by:

1. Procurement of special mission equipment as directed by the Chief of Naval Operations.

FY2007 includes a \$2.9M Congressional Add for C4ISR Operations and Training Center for Excellence, and \$5.12M of Supplemental Funding for Blue Force Tracking (BFT) and Collection Equipment.

FY2008 includes a \$4.0M Congressional Add for C4ISR Operations and Training Center for Excellence and \$2.4M of Supplemental funding in support of the Global War on Terrorism (GWOT).

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Approval for full rate production is not required.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
P-3 KITS (MISSION UNIQUE)	4	0.7																	4	.7	
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
IMPROVED COMM & COLLECT CAPABILITY		28.4		0.5		0.5		0.5		1.4		1.7		1.6		1.7		8.4		44.5	
MISSION UNIQUE EQUIPMENT		56.6		6.8		3.0		1.8		3.1		2.6		2.3		2.6		14.5		93.4	
Blue Force Tracking			6	1.8															6	1.8	
Collection Equipment			12	2.1															12	2.1	
INSTALL EQUIPMENT N/R		32.9		3.3		2.6		2.4		2.5		2.4		3.0		3.0		15.0		66.9	
BFT/Collection Equipment				0.1																.1	
ECO																					
DATA		1.5		0.5		0.1		0.4		0.4		0.4		0.4		0.4		2.5		6.6	
TRAINING EQUIP		0.4		2.9		4.0		0.1		0.1		0.1		0.2		0.1		0.7		8.3	
BFT/Collection Equipment				0.1																.1	
SUPPORT EQUIP		0.1						0.1		0.1		0.1		0.1		0.1		0.5		.8	
ILS		2.0		0.3		0.2		0.4		0.4		0.4		0.4		0.4		1.9		6.3	
OTHER SUPPORT		14.3		3.4		3.7		3.9		4.1		3.9		4.1		4.2		21.6		63.2	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST		4.5		0.7		5.9		4.6		3.3		3.8		3.8		3.9		19.4		49.9	
TOTAL PROCUREMENT	4	141.3	18	22.3	0	20.0	0	14.1	0	15.3	0	15.3	0	15.9	0	16.2	0	84.2	22	344.6	

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3B/C MODIFICATION TITLE: INTELLIGENCE SENSORS ( OSIP 019-97 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive In and Navy Field Mod Team.

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2007 May 07 FY 2008 Mar-08 FY 2009 Dec-08

DELIVERY DATE: FY 2007 Jan 08 FY 2008 Nov 08 FY 2009 Aug 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS () kits		4.5		0.7																	5.2
FY 2007 () kits						5.9															5.9
FY 2008 () kits											2.3										2.3
FY 2009 () kits											2.3										2.3
FY 2010 () kits												3.3		3.8							7.1
FY 2011 () kits															3.8						3.8
FY 2012 () kits																			3.9		3.9
FY 2013 () kits																					
TO COMPLETE () kits																					19.4
Total		4.5		0.7		5.9		4.6		3.3		3.8		3.8		3.9					19.4
																					49.9

Installation Schedule

	FY 2006 & PRIOR	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																						
Out																						

  

	FY 2012				FY 2013				TO COMPLETE				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Note: Installation equipment includes both Mission Unique and Improved Communication Capabilities to be installed concurrently.

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							056900, T-45 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	195.0	A	35.7	56.8	67.7	50.1	44.5	47.3	46.2	379.9	923.1	

**DESCRIPTION:**

This line item funds modifications to T-45A aircraft. The T-45A Goshawk is a tandem-seat, carrier capable derivative of the existing British Aerospace Hawk aircraft powered by a single Rolls Royce Adour engine. It serves as the aircraft component of the T45TS integrated jet pilot training system which replaces the three decade old TA-4 and T-2 technology. The overall goal of the modifications budgeted in FY 2009 is to correct discrepancies and deficiencies discovered after delivery of the aircraft and to commence upgrades to the aircraft cockpit and navigation systems. FY03 funded simulator is an analog conversion and supported production aircraft that were delivered to Kingsville in FY04. T-45 aircraft and simulators are facing critical avionics obsolescence and Diminishing Manufacturing Source (DMS) issues. OSIP 08-95 (Corrections Of Deficiencies) was established to resolve safety and reliability issues, improve required mission capabilities, and increase service life of aircraft components. OSIP 03-03 (Engine Surge) was established to resolve an engine surge critical safety issue. OSIPs 10-04 and 17-04 (Avionics Obsolescence) was established to convert the T-45As (analog) to the digital T-45C configuration and add GPS (Required Avionics Modernization Program (RAMP)). OSIP (02-06) (Synthetic Radar) was established because the T-2/T39 are going to be divested in 2008/2012 and the training command cannot complete Undergraduate Military Flight Officer (UMFO) training. No new Type Model Series will be developed to pickup this requirement, as a result, the T-45 will modify 30 aircraft to incorporate Synthetic Radar Training into curriculum. OSIP 13-06 will fund the Non-recurring Engineering (NRE) associated with modification of the Airborne Data Recorder (ADR) to provide a Crash Survivable Memory Unit (CSMU). The CSMU will assure flight incident data is available after an aircraft mishap to assist in reconstructing the cause of mishaps.

The designed service life of the aircraft is 14,400 hours with the average remaining service life of inventory aircraft estimated at 6,092 hours.

The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
008-95 T-45TS CORR OF DEFIC	112.5	6.0	9.2	21.0	10.2	10.9	28.4	28.6	93.4	320.3
003-03 ENGINE SURGE	9.2	3.5	4.6	6.9	9.4	10.3	13.5	13.4	284.8	355.5
010-04 T-45TS GPS	3.9	1.3	1.5	1.6	1.0	0.8	0.8	0.9		11.6
017-04 AVIONICS OBSOLESCENCE	51.7	19.4	23.6	17.0	15.7	15.7	2.7	2.5	1.8	150.1
002-06 SYNTHETIC RADAR		4.5	18.0	21.2	13.9	6.9	1.8	0.8		66.9
013-06 CRASH SURVIVABLE MEMORY UNIT	2.8	1.0								3.8
INACTIVE OSIPs	14.8									14.8
<b>TOTAL</b>	<b>195.0</b>	<b>35.7</b>	<b>56.8</b>	<b>67.7</b>	<b>50.1</b>	<b>44.5</b>	<b>47.3</b>	<b>46.2</b>	<b>379.9</b>	<b>923.1</b>

MODIFICATION TITLE: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)

MODELS OF SYSTEMS AFFECTED: T-45TS TYPE MODIFICATION: Safety, Reliability, Increased Service Life, Improved Mission Capabilities

DESCRIPTION / JUSTIFICATION:

EJECTION SEAT CHANGES: Modifications will enhance aircrew safety. Modifications include pilot tube covers, changes to the ejection sequencer, ejection seat handle modification and rail system.

UNCOMMANDED GEAR EXTENSION: MDA-T45TS-TBDs Modification will increase travel of the landing gear control interconnect cable, increase cable friction, and change the gear selector valve actuation signal to only when the handle is in the full up or full down position. Installation of this ECP is in response to a T45TS Engineering Investigation that documented a deficiency and proposed recommendations relating to uncommanded landing gear extensions.

GROUND TRAINING SYSTEMS: Updates to the T-45 aircraft simulator will be made to match evolving aircraft configurations/modifications and flight characteristics/software/academics enhancements to improve training capabilities.

AIRFRAME ECPs are divided into two categories; Structural and Systems.

STRUCTURAL ECPs: Modifications will incorporate changes to improve structural details to increase aircraft service life to 21,600 flight hours. During FSD testing of the T45 aircraft it was determined that incorporation of redesigned components applicable to the critical load paths will significantly increase the service life of the aircraft. This structural portion of this OSIP effects several structural components to include Wing Dolly, SS 02 Monitor Bracket, Horizontal Stabilizers, Frame 24 Crossbeam Lugs, Wing Leading Edge Redesign, Frame 29 Lower Flange, Uplock Beam Forward Attach, Slat Track Rib 5 Downstop Bolt, Frame 28/32 Boundary/Vertical Fin, Frame 33 Structure, Inlet Close-Out Fuel, Airframe Engine Mount, Frame 21 Structure, MLG Bay Tilted & Fasteners, Longitudinal Systems Viscous, Frame 20 Structures, Frame 12 Vertical Splice, Frame 1 Structures and ballast provisions, NLF Trunnion Beam, Slat Actuator Fitting Angle, Structure Life Improvement, Speed Brake, Engine Mount Link Option, Stabilizer Back-Up Structures, Fuselage/Frame 10 Door, and Fin Bracket Lever Box Assembly, Over Center Locking Mechanism.

SYSTEMS ECPs: Modifications to the airframe other than structural deficiencies are also required to ensure safety of flight, aero-performance and maintainability to enable satisfactory PTR levels. This Airframe OSIP affects several airframe components and their sub-assemblies including: forward, center and aft fuselage components, landing gear, tail cone, wing, horizontal and vertical control surfaces, flaps, canopy/windscreen, hydraulic system, oxygen system, electrical system, fuel system, throttle, instrumentation systems, environmental controls, communications, navigation, and emergency systems.

AVIONICS: Modifications to the Avionics will be required to update the Display Unit, Heads Up Display, Global Positioning System and Inertial Navigation Assembly to enhance effectiveness of pilot training and avoid obsolescence. The following ECPs are part of the Avionics package of the aircraft and include: Air Data Recorder/Signal Data Computer/Advanced Signal Data Computer, Almanac Loading System, Mission Computer, communication systems, navigation systems, including Radar Altimeter, GPS and inverter.

ENGINE/POWER AND PROPULSION: Modifications under this category include modification to the Engine, Gas Turbine Starter, and Electrical System which will increase the reliability, maintainability and safety of these systems. Engine modifications include Engine Mounts, Fuel Pumps, Combustion Chamber, Compressors, Nozzle Guide Vanes, Drive Systems, Oil System, Air Systems, Turbines, Fuel Distribution and Control and modifications to address engine surge/compressor stall. Gas Turbine Starter modifications include updating the starting system with solid state circuitry and incorporation of a new turbine wheel. Electrical modifications include incorporation of generator improvements and wiring modifications.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

T-45 aircraft achieves 14,400 flight hour aircraft service life limit with incorporation of Frame 33 structure modification.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Airframe Structural	1,220	24.5	48	0.1	113	1.1	60	0.6	60	0.6	28	0.3	96	9.9	96	11.2	228	26.7	1,949	75.0	
Airframe Systems	486	5.2	68	0.7	48	0.6	74	0.4	8	*			48	5.3	48	5.3	688	13.7	1,468	31.3	
Avionics	622	9.9	24	0.9	24	1.0	192	5.9	132	3.5	108	2.4	160	9.0	75	3.0	326	25.5	1,663	61.2	
Ejection Seat Handle MB-9155	416	0.4																	416	.4	
Engines/Power & Propulsion	774	6.6	40	0.1	250	2.0	173	0.9	77	0.2					102	0.6			1,416	10.5	
Ground Training Systems TBD	49	2.3																	49	2.3	
Uncommanded Gear Extension	35	0.7																	35	.7	
INSTALLATION KITS N/R		10.8		0.6		1.2		8.7		2.6		6.3		2.6		2.9		5.5		41.2	
INSTALL EQUIPMENT																					
Airframe Structural	8	0.4																	8	.4	
Airframe Systems	2	1.3																	2	1.3	
Avionics	7	1.4																	7	1.4	
Ejection Seat Handle MB-9155	1	0.2																	1	.2	
Engines/Power & Propulsion	2	2.0																	2	2.0	
Ground Training Systems TBD	5	0.7																	5	.7	
Uncommanded Gear Extension	1	*																	1	*	
INSTALL EQUIPMENT N/R		2.0																		2.0	
ECO																					
DATA		0.8																		.8	
TRAINING EQUIP		7.1				0.3														7.4	
SUPPORT EQUIP		0.9		0.5																1.4	
ILS																					
OTHER SUPPORT		1.1						1.0		0.9		1.5		1.0		1.6				7.1	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	1,439	34.2	382	3.1	587	2.8	554	3.6	546	2.5	299	0.4	204	0.6	254	3.9	1,066	22.0	5,331	73.1	
TOTAL PROCUREMENT	5,067	112.5	562	6.0	1,022	9.2	1,053	21.0	823	10.2	435	10.9	508	28.4	575	28.6	2,308	93.4	12,353	320.3	

Asterisk (\*) indicates amount value less than \$51K

Note: In FY2007 there are 36 O-level installs out of 180 procured kits.

Note: In FY2008 there are 190 O-level installs out of 435 procured kits.

Note: In FY2009 there are 84 O-level installs out of 499 procured kits.

Note: In FY2010 there are 84 O-level installs out of 277 procured kits.

Note: In FY2012 there are 72 O-level installs out of 304 procured kits, in FY2013 12 out of 321.

Note: In To Complete there are 588 O-level installs out of 1242 procured kits.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS

MODIFICATION TITLE: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: "I" and "D" Level Installation: Contractor Field Modification Team-Separate Contract

ADMINISTRATIVE LEADTIME: Various Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2007 Various FY 2008 Various FY 2009 Various

DELIVERY DATE: FY 2007 Various FY 2008 Various FY 2009 Various

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY (3003) kits	1,439	34.2	382	3.1	587	2.8	410	2.4	185	0.8									3,003	43.4	
FY 2007 (180) kits							144	1.2											144	1.2	
FY 2008 (435) kits									228	1.0	17	*							245	1.1	
FY 2009 (499) kits									133	0.6	282	0.4							415	1.0	
FY 2010 (277) kits													193	0.5					193	0.5	
FY 2011 (136) kits													11	*	125	1.9			136	2.0	
FY 2012 (304) kits															129	2.0	103	0.7	232	2.7	
FY 2013 (321) kits																		309	3.8	309	3.8
TO COMPLETE (1242) kits																		654	17.5	654	17.5
<b>Total</b>	<b>1439</b>	<b>34.2</b>	<b>382</b>	<b>3.1</b>	<b>587</b>	<b>2.8</b>	<b>554</b>	<b>3.6</b>	<b>546</b>	<b>2.5</b>	<b>299</b>	<b>0.4</b>	<b>204</b>	<b>0.6</b>	<b>254</b>	<b>3.9</b>	<b>1066</b>	<b>22.0</b>	<b>5,331</b>	<b>73.0</b>	

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1439	96	96	96	94	146	146	146	149	139	139	139	137	136	136	136	138	75	75	75	74
Out	1439	96	96	96	94	146	146	146	149	139	139	139	137	136	136	136	138	75	75	75	74

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	51	51	51	51	63	63	63	65	1066	5331
Out	51	51	51	51	63	63	63	65	1066	5331

Exhibit P-3a

MODIFICATION TITLE: ENGINE SURGE (OSIP 003-03)

MODELS OF SYSTEMS AFFECTED: T-45TS TYPE MODIFICATION: PS Safety

DESCRIPTION / JUSTIFICATION:  
 Engine Surge: T-45 engine surge is a critical safety concern for a single engine aircraft with over 195 surge events documented. Kits include modifications to airframe, engine, and fuel control system.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:  
 Funding was provided to correct T-45 F405 engine surge. Non-Recurring Engineering efforts started in FY03. Kit procurement began in FY07.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Airframe Kits			43	1.3	52	1.6	52	1.6	51	1.5									198	5.9	
Engine Kits					1	1.3	3	3.9	6	7.8	8	10.2	8	13.5	8	13.4	163	284.4	197	334.5	
INSTALLATION KITS N/R		9.2		1.5		0.2		0.6		*		*									11.5
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		0.1				0.1		0.4		*		*		*		*		0.1			.6
TRAINING EQUIP				*				0.1													.2
SUPPORT EQUIP				0.6		0.1		0.2		*		*		*				0.1			.9
ILS		*				0.1		0.1		*								*			.2
OTHER SUPPORT						1.3		0.1													1.4
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST					43	*	53	*	55	*	57	*	8	*	8	*	171	0.2	395		.3
TOTAL PROCUREMENT		9.2	43	3.5	96	4.6	108	6.9	112	9.4	65	10.3	16	13.5	16	13.4	334	284.8	790	355.5	

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS MODIFICATION TITLE: ENGINE SURGE (OSIP 003-03)  
T45TS AIRFRAME KITS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2007 Mar 07 FY 2008 Mar-08 FY 2009 Mar-09

DELIVERY DATE: FY 2007 Sep 08 FY 2008 Sep 09 FY 2009 Sep 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY () kits																					
FY 2007 (43) kits					43	*														43	*
FY 2008 (52) kits							52	*												52	*
FY 2009 (52) kits									52	*										52	*
FY 2010 (51) kits											51	*								51	*
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total					43	*	52	*	52	*	51	*								198	0.1

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									43				52				52				51
Out									43				52				52				51

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										198
Out										198

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS MODIFICATION TITLE: ENGINE SURGE (OSIP 003-03 )  
T45TS ENGINE KITS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Mar-08 FY 2009 Mar-09

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Sep 09 FY 2009 Sep 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & FY () kits																						
FY 2007 () kits																						
FY 2008 (1) kits							1	*												1	*	
FY 2009 (3) kits									3	*											3	*
FY 2010 (6) kits										6	*										6	*
FY 2011 (8) kits												8	*								8	*
FY 2012 (8) kits														8	*						8	*
FY 2013 (8) kits																8	*				8	*
TO COMPLETE (163) kits																163	0.2				163	*
Total							1	*	3	*	6	*	8	*	8	*	171	.2			197	0.2

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In																							6
Out																							6

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In				8				8	171	197
Out				8				8	171	197

Exhibit P-3a

MODIFICATION TITLE: T-45TS GPS (OSIP 010-04)

MODELS OF SYSTEMS AFFECTED: Analog Cockpit TYPE MODIFICATION: PS Safety

**DESCRIPTION / JUSTIFICATION:**

Congressional requirement that all DoD aircraft be capable of navigating via Global Positioning System Inertial Navigation Assembly (GNA) to support T45TS mission to train the next generation of warfighters in the use of INS, GPS, and GPS/INS hybrid systems by the end of year 2005. A retrofit program will incorporate GPS in the existing Analog aircraft. There are currently 73 aircraft that will be retrofitted. Kits procured in 2010 through 2011 address obsolescence issues for the entire fleet.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Kits deliveries and installations began in FY06.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
GPS Kits	36	3.6	12	1.3	12	1.4	13	1.3												73	7.7
Obsolescence Kits									111	0.5	110	0.2								221	.7
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R								0.2		0.2		0.2									.7
ECO																					
DATA		0.1																			.1
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS		0.1																			.1
OTHER SUPPORT																					
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	12	*	12	*	12	*	12	*	12	0.2	13	0.3	111	0.8	110	0.9				294	2.3
TOTAL PROCUREMENT	48	3.9	24	1.3	24	1.5	25	1.6	123	1.0	123	.8	111	.8	110	.9				588	11.6

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: Analog Cockpit MODIFICATION TITLE: T-45TS GPS (OSIP 010-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 21 Months

CONTRACT DATES: FY 2007 Jan 07 FY 2008 Jan-08 FY 2009 Jan-09

DELIVERY DATE: FY 2007 Oct 08 FY 2008 Oct 09 FY 2009 Oct 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY (36) kits	12	*	12	*	12	*														36	*
FY 2007 (12) kits							12	*												12	*
FY 2008 (12) kits									12	0.2										12	0.2
FY 2009 (13) kits											13	0.3								13	0.3
FY 2010 (111) kits													111	0.8						111	0.8
FY 2011 (110) kits															110	0.9				110	0.9
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total	12	*	12	*	12	*	12	*	12	0.2	13	0.3	111	0.8	110	0.9				294	2.3

Installation Schedule

	FY2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	12	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4
Out	12	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	28	28	28	27	28	28	28	26		294
Out	28	28	28	27	28	28	28	26		294

MODIFICATION TITLE: AVIONICS OBSOLESCENCE (OSIP 017-04)

MODELS OF SYSTEMS AFFECTED: T-45TS A/C TYPE MODIFICATION: PS Safety

**DESCRIPTION / JUSTIFICATION:**

T45TS is facing critical obsolescence/performance issues. Components of various avionics boxes will not be supportable as a result of Diminishing Manufacturing Source issues that result in part obsolescence or supplier mortality. RAMP will resolve obsolescence issues with such items as the Global Positioning Inertial Navigation Assembly (GINA) (FPGA and processor), Mission Display Processor (MDP) (Diode), Display Processor (Diode), Airborne Data Recorders (Line in Buffer Amplifier), Display Unit, Signal Data Computer, Azimuth Computer and various other avionics components.

The Required Avionics Modernization Program (RAMP) is the Analog to Digital conversion of the T-45A aircraft. The RAMP effort consists of a Glass Cockpit upgrade consisting of two Multi-Function Displays per cockpit, mission display processor, recorder, associated cockpit controls and a 1553 digital, integrating them with the existing head-up display (HUD), the airborne data recorder, and a separately procured Global positioning system inertial navigation assembly.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

FY03 provided funding (OSIP 16-96) for 1 Simulator conversion and OSIP 17-04 provided FY04 funding for DMS/obsolescence risk mitigation efforts.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
RDT&E																						
PROCUREMENT																						
INSTALLATION KITS																						
RAMP KITS	24	19.6	9	5.9	9	6.1	9	5.8	13	8.1	7	6.2								71	51.7	
RAMP/Obsolescence Kits	12	0.2	334	1.0	200	4.2	200	*	200	*	200	0.9	200	0.1	200	1.1	200	1.5	1,746	8.9		
INSTALLATION KITS N/R		8.7		0.6		0.5		0.1		0.1		0.6		0.5		0.1		0.3			11.5	
INSTALL EQUIPMENT																						
AS-3822/URN (GPS ANTENNA (FRPA-3)	24	*	9	*	9	*	9	*	13	*	7	*									71	.1
ASDC	24	0.8	9	0.3	9	0.3	9	0.3	13	1.2	7	0.5									71	3.5
ATTITUDE INDICATOR																					35	.5
CP-2092 (P)/A (DDS)	24	0.4	9	0.1	9	0.1	9	0.1	13	0.2	7	0.1									71	1.1
FFI	24	0.1	9	*	9	*	9	*	13	*	7	*									71	.3
MDP	24	5.1	9	2.1	9	2.1	9	2.1	13	2.6	7	2.1									71	16.1
MFCD	24	3.4	9	1.3	9	1.3	9	1.3	13	1.8	7	1.3									71	10.3
MU-1053/A (PROGRAM LOADER)	24	0.1	9	*	9	*	9	*	13	*	7	*									71	.3
PDU	24	0.3	9	0.1	9	0.1	9	0.1	13	0.2	7	0.1									71	1.1
PYROTECHNIC	24	0.1	9	*	9	*	9	*	13	*	7	*									71	.2
RECORDER																					60	2.5
SADS	24	0.1	9	*	9	*	9	*	13	0.1	7	*									71	.3
INSTALL EQUIPMENT N/R																						
ECO																						
DATA																						
TRAINING EQUIP	1	12.1	1	6.3	2	5.6	2	5.6		*		*									6	29.7
SUPPORT EQUIP		0.1																				.1
ILS																						
OTHER SUPPORT		0.7		0.8		0.9		0.1		0.1		1.0		0.2								3.7
INTERIM CONTRACTOR SUPPORT																						
INSTALLATION COST			4	0.8	14	1.4	12	0.8	10	0.4	12	2.2	11	1.2	12	1.4	2				77	8.2
TOTAL PROCUREMENT	277	51.7	438	19.4	324	23.6	331	17.0	379	15.7	309	15.7	233	2.7	212	2.5	202	1.8	2,705	150.1		

Asterisk (\*) indicates amount value less than \$51K

\*Note: Aircraft was conditionally DD250 without Prior year buys of the Recorder Install Equipment B kits, B kits will be put in FY12.

\*Note: Attitude Indicator install equipment was not required in all aircraft.

\*Note: Obsolescence kits will be installed "O" level by the fleet.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS A/C

MODIFICATION TITLE: AVIONICS OBSOLESCENCE (OSIP 017-04)

DP & MDP/RAMP/AVIONICS OBSOLESCENCE

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 24 Months

CONTRACT DATES: FY 2007 Dec 07 FY 2008 Dec-07 FY 2009 Dec-08

DELIVERY DATE: FY 2007 Dec 09 FY 2008 Dec 09 FY 2009 Dec 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY (25) kits *			4	0.8	12	1.2	9	0.6												25	2.6
FY 2007 (10) kits					1	0.1			9	0.4										10	0.5
FY 2008 (11) kits					1	0.1	1	0.1	1	0.1	8	1.4								11	1.7
FY 2009 (11) kits							2	0.1			4	0.8	5	0.5						11	1.4
FY 2010 (13) kits													6	0.8	7	0.7				13	1.5
FY 2011 (7) kits															5	0.6	2			7	0.6
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
<b>Total</b>			4	0.8	14	1.4	12	0.8	10	0.4	12	2.2	11	1.2	12	1.4	2			77	8.2

\*Includes trainers

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In			1	1	2	4	3	3	4	4	3	4	1	1	3	3	3	3	3	3	3	3
Out					1	3	3	3	3	4	3	4	4		1	3	4	3	3	3	3	3

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	3	2	3	3	3	3	3	3	2	77
Out	3	3	3	3	3	3	3	3	5	77

MODIFICATION TITLE: SYNTHETIC RADAR (OSIP 002-06)

MODELS OF SYSTEMS AFFECTED: T-45TS TYPE MODIFICATION: PS Safety

DESCRIPTION / JUSTIFICATION:

With the T-2 and T-39 divestiture in 2008 and 2012 respectively, the training command cannot complete UMFO training. No new Type Model Series will be developed to pick up this requirement. As a result, the T-45 will modify 19 aircraft to incorporate Virtual Mission Training System into the curriculum. The effort will include two phases of integration to incorporate a commercial off the shelf synthetic radar system into the T-45. Phase I includes determining the integration requirements for the air-to-air (A/A) and minimal air-to-ground (A/G) synthetic radar capabilities and completing the T-45 integration effort. Phase II includes determining the integration requirements for increased A/G fidelity simulation and weapons sensors simulation while also completing the Phase II integration effort. Two prototype kits will be utilized for testing.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

FY07 provides funding for NRE, FY08-10 provides funding for NRE and 21 kits.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR MILLIONS)	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
VMTS					2	2.0	10	12.0	6	7.2	3	3.6							21	24.8	
INSTALLATION KITS N/R				2.1		5.0		2.0		0.9		0.5									10.4
INSTALL EQUIPMENT																					
VMTS Equipment					2	2.0	10	4.0	6	2.4	3	1.2								21	9.6
INSTALL EQUIPMENT N/R				2.1		4.7		1.0		1.0		0.4									9.2
ECO																					
DATA				0.1		0.9															1.0
TRAINING EQUIP			1	0.1	1	1.0			1	0.4										3	1.5
SUPPORT EQUIP						1.2															1.2
ILS				0.1																	.1
OTHER SUPPORT						1.2		2.0						1.2		0.8					5.1
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST								2	0.2	10	2.0	6	1.2	3	0.6					21	4.0
TOTAL PROCUREMENT			1	4.5	5	18.0	22	21.2	23	13.9	12	6.9	3	1.8		.8				66	66.9

Asterisk (\*) indicates amount value less than \$51K

MODELS OF SYSTEMS AFFECTED: T-45TS MODIFICATION TITLE: SYNTHETIC RADAR (OSIP 002-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 Mar-08 FY 2009 Mar-09

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 Jun 09 FY 2009 Jun 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY () kits																					
FY 2007 () kits																					
FY 2008 (2) kits							2	0.2												2	0.2
FY 2009 (10) kits									10	2.0										10	2.0
FY 2010 (6) kits											6	1.2								6	1.2
FY 2011 (3) kits													3	0.6						3	0.6
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
<b>Total</b>							2	0.2	10	2.0	6	1.2	3	0.6						21	4.0

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																						
Out												2					5	5			3	3

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In			2	1						21
Out			2	1						21

Exhibit P-3a

MODIFICATION TITLE: CRASH SURVIVABLE MEMORY UNIT (OSIP 013-06 )

MODELS OF SYSTEMS AFFECTED: T-45TS TYPE MODIFICATION: PS Safety

**DESCRIPTION / JUSTIFICATION:**

The T45 Airborne Data Recorder is not a crash survivable recorder. As a result, flight incident data may not be available after a mishap to assist investigators in reconstructing the cause of the mishap. T45 should have a modern state of art crash survivable unit to assure critical data is preserved.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Non-Recurring Engineering began in FY2006.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
RDT&E																						
PROCUREMENT																						
INSTALLATION KITS																						
Crash Survivable Memory Unit			38	0.9																38	.9	
INSTALLATION KITS N/R		2.8																			2.8	
INSTALL EQUIPMENT																						
Crash Survivable Memory Unit			38	0.1																	38	.1
INSTALL EQUIPMENT N/R																						
ECO																						
DATA																						
TRAINING EQUIP																						
SUPPORT EQUIP																						
ILS																						
OTHER SUPPORT																						
INTERIM CONTRACTOR SUPPORT																						
TOTAL PROCUREMENT		2.8	76	1.0																76	3.8	

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							057000, POWER PLANT CHANGES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013		TO COMPLETE	TOTAL
QUANTITY												
COST (In Millions)	391.3	A	21.9	22.3	28.2	27.0	26.8	27.0	27.3		20.5	592.3

DESCRIPTION: This line item funds modifications to all in-service aircraft engines. Power Plant Changes are required throughout the service life of each aircraft to correct flight deficiencies and improve operational readiness while reducing engine operating costs. This program finances the procurement and installation of retrofit kits for all Navy and Marine Corps aircraft engines and related propulsion hardware such as propellers, starters, and transmissions. The overall goal of the modifications budgeted in FY 2009 is to continue efforts previously initiated on the engines for the AV-8B, S-3, H-60, EA-6B, A-6, AH-1W, F-5, F/A-18C/D/E/F, H-46, H-3, C-2, E-2, H-53, MH-60, C-130, T-2, P-3, VH-60, UH-1N, T-45, F-16, and V-22 aircraft.

The following funding is budgeted for Power Plant Changes:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
040-00 POWER PLANT CHANGES	391.3	21.9	22.3	28.2	27.0	26.8	27.0	27.3	20.5	592.3
TOTAL	391.3	21.9	22.3	28.2	27.0	26.8	27.0	27.3	20.5	592.3

1. FY2008 funding totals do not include \$11.3 previously requested for current FY2008 GWOT requirements.

Asterisk (\*) indicates amount value less than \$51K

MODIFICATION TITLE: POWER PLANT CHANGES( OSIP 040-00 )

MODELS OF SYSTEMS AFFECTED: POWER PLANT CHANGES TYPE MODIFICATION: Approx. 80% Safety, 20% Reliability

DESCRIPTION/ JUSTIFICATION: This program corrects aircraft safety deficiencies, improves operational fleet readiness and reduces engine cost of ownership by incorporating approved power plant changes. Power plant changes are required throughout the aircraft service life as the engine ages and operationally revealed deficiencies are identified, researched, and solutions engineered. The Component Improvement Program (CIP), which is funded in RD TEN, develops and demonstrates engineering solutions to these deficiencies and initiates changes through the Engineering Change Proposal (ECP) process. The power plant change program procures the necessary power plant change retrofit kits, its installation, and technical data packages. The program provides retrofit kits for all Navy and Marine Corps aircraft engines and propulsion related hardware such as propellers, starters, generators, and transmissions. Reliability improvements are designed to increase the Mean Time Between Failure and the Mean time Between Engine Removal by an average of 30% and are expected to generate a cost avoidance in excess of \$50M annually. Aircraft engines included in power plant changes include:

- F100 Engine F-16
- F402 Engine A/V-8B
- F404 Engine F/A-18
- F405 Engine T-45
- F414 Engine F/A-18E/F
- J52 Engine EA-6B, A-6
- J85 Engine F-5, T-2
- T400 Engine AH-1W, UH-1N
- T406 Engine V-22
- T56 Engine P-3, C-2, E-2, C-130
- T58 Engine H-3, H46
- T64 Engine H-53
- T700 Engine H-60, AH-1
- TF34 Engine S-3

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E		433.412		57.370		56.379		59.963		59.246		60.410		60.945		62.093					
PROCUREMENT																					
INSTALLATION KITS																					
F100 (F-16)	22	0.110																	22	0.110	
F402 (A/V-8B)	3,118	16.199	3,751	1.632	325	0.696	302	0.846	235	0.973	400	1.712	373	2.551	295	1.543	2.000	8,799	28.152		
F404 (F/A 18)	9,129	10.080	3,222	1.972	1,797	0.811	560	0.744	460	0.480	235	0.631	206	0.569	340	0.959	1.000	15,949	17.246		
F405 (T-45)	1,922	9.860	336	0.362	36	1.646	65	3.250	86	4.300								2,445	19.418		
F414 (F/A18-E/F)	2,540	8.928	2,241	2.008	2,066	1.447	1,042	0.820	192	0.450	50	0.500	50	0.500	100	1.000	1.000	8,281	16.653		
J52 (EA 6/B, A-6)	822	9.303	3,280	1.663	1,811	1.864	258	1.355	240	1.260	210	1.110	240	1.260	280	1.460	1.000	7,141	20.275		
J85 (F-5, T-2)	623	2.212	90	0.080	40	0.040	60	0.100										813	2.432		
T400 (AH1W, UH1N)	875	1.090	318	0.469	159	0.746	88	0.559	63	0.300	63	0.300						1,566	3.464		
T406 (V22)	12	0.099	10	0.086														22	0.185		
T56 (P-3, C-2, E-2, C-130)	5,060	9.756	1,216	5.588	1,205	4.462	2,043	11.997	1,747	11.130	1,631	14.879	1,013	10.085	1,200	9.775	7.000	15,115	84.672		
T58 (H-3, H-46)	947	1.980	674	0.760	695	1.875	127	0.646	50	0.496								2,493	5.757		
T64 (H-53)	5,756	6.937	2,696	4.442	3,258	5.150	2,905	5.100	2,576	5.025	1,981	4.625	3,571	6.750	4,123	8.398	8.000	26,866	54.427		
T700 (H-60, AH-1)	6,128	32.873	447	1.137	200	0.900	200	0.900	100	0.500	100	0.500	100	0.500	100	0.500	0.500	7,375	38.310		
TF34 (S-3)	346	0.450																346	0.450		
Completed ECPs From Prior Years	35,198	200.505																35,198	200.505		
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		0.421		0.045		0.050		0.050		0.150		0.050		0.051		0.050				0.867	
Non Recurring		0.164																		0.164	
TRAINING EQUIP																					
SUPPORT EQUIP		0.106				0.050		0.050		0.150		0.050		0.317		0.050				0.773	
ILS		5.313		0.268		0.200		0.200		0.200		0.200		0.500		0.200				7.081	
OTHER SUPPORT		40.497		0.700		0.551		0.402		0.398		1.062		1.162		1.335				46.107	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	9,310	34.377	968	0.673	1,209	1.814	756	1.200	675	1.161	740	1.200	500	2.785	500	2.043		14,658	45.253		
TOTAL PROCUREMENT	81,808	391.3	19,249	21.9	12,801	22.3	8,406	28.2	6,424	27.0	5,410	26.8	6,053	27.0	6,938	27.3	20.5	147,089	592.3		

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: Power Plant Changes MODIFICATION TITLE: POWER PLANT CHANGES( OSIP 040-00 )

INSTALLATION INFORMATION: The tables below list the quantities, installation schedules, and costs for those ECPs for which there is an installation cost. Of those ECPs with installation costs, three are not they are labor-only modifications and require no kit. The reason they are not shown in these tables is that the procurement quantity and installation quantities would not be equal.

METHOD OF IMPLEMENTATION: Current with engine/module repair (where installation cost is zero), or by forced retrofit (shown below).

ADMINISTRATIVE LEADTIME: Average of 6 Months PRODUCTION LEADTIME: Average of 12 Months

CONTRACT DATES: FY 2007 Varies FY 2008 Varies FY 2009 Varies

DELIVERY DATE: FY 2007 Varies FY 2008 Varies FY 2009 Varies

(\$ in Millions)

Cost:	Prior Years		FY07		FY08		FY09		FY10		FY11		FY12		FY13		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (9310) kits	9,310	34,377																	9,310	34,377
FY 2007 (968) kits			968	673															968	673
FY 2008 (1209) kits					1,209	1,814													1,209	1,814
FY 2009 (756) kits							756	1,200											756	1,200
FY 2010 (675) kits									675	1,161									675	1,161
FY 2011 (740) kits											740	1,200							740	1,200
FY 2012 (500) kits													500	2,785					500	2,785
FY 2013 (500) kits															500	2,043			500	2,043
TO COMPLETE																				
Total	9,310	34,377	968	673	1,209	1,814	756	1,200	675	1,161	740	1,200	500	2,785	500	2,043			14,658	45,253

Installation Schedule

	Prior Years	FY07				FY08				FY09				FY10			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	9310	242	242	242	242	302	302	302	303	189	189	189	189	168	169	169	169
Out	9310	242	242	242	242	302	302	302	303	189	189	189	189	168	169	169	169

	FY11				FY12				FY13				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In	184	184	187	185	125	125	125	125	125	125	125	125		14658
Out	184	184	187	185	125	125	125	125	125	125	125	125		14658

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							057100, JPATS SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	2.5	A	1.6	9.8	8.9	6.9		1.6	1.6	104.1	137.1	

**DESCRIPTION:**

This line item funds modifications to T-6 aircraft. The T-6A Texan II is a tandem-seat, turboprop aircraft derivative of the Pilatus PC-9 aircraft powered by a single Pratt & Whitney PT6A-68 engine. It serves as the aircraft component of the JPATS integrated primary pilot training system which replaces the T-34C primary training aircraft. The overall goal of the modifications budgeted in FY 2009 is to correct discrepancies and deficiencies discovered after delivery of the aircraft, maintain joint configuration with Air Force aircraft and the joint program. The T-6B derivative incorporates major upgrades to the aircraft cockpit, navigation system, and aircrew life support system (ALSS).

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
011-04 JPATS CORRECTION OF DEFICIENCIES	2.5	1.6	9.8	8.9	6.9		1.6	1.6	104.1	137.1
TOTAL	2.5	1.6	9.8	8.9	6.9		1.6	1.6	104.1	137.1

MODIFICATION TITLE: JPATS CORRECTION OF DEFICIENCIES (OSIP 011-04 )MODELS OF SYSTEMS AFFECTED: T-6A/B TYPE MODIFICATION: PS Safety

## DESCRIPTION / JUSTIFICATION:

Corrections to discrepancies found during testing and evaluation can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Additionally, deficiencies discovered during Fleet operations must be corrected. The unacceptable alternative to retrofitting would be multiple configurations in the Fleet, which creates maintenance and supply problems, and in many cases the mission capability of the aircraft would be adversely affected as well as reduced service life. Corrections to the following items/conditions are required:

VHF radio ECP (ECP-055)	Provide for the correction of volume and reception level discrepancies. Current volume inequities between the UHF/VHF radios make the radio unintelligible and a safety concern for aircrew.
Nose Wheel Centering (ECP-052)	Safety modification to provide positive nose wheel centering inflight.
Category 1 Dfcy, MLG door tie rods	Retrofit of improved durability MLG door tie rod.
MLG Sidebrace Redesign (ECP-059)	Re-work of existing MLG drag link. Improve grease fitting access to maintainability improvement.
Oil Pressure Warning	Safety modifications to correct oil pressure cockpit warning indications and associated systems to improving aircrew situational awareness and overall systems operation.
OBOGS upgrades (ECP-049)	Safety modifications to improve the normal and emergency aircrew oxygen supply systems. Mods address increased supply, delivery control box and software logic corrections.
Trim System Redesign	Safety modification to reduce trim actuator force limit, decrease activation speed. Results in shorter landing distances.
Braking (anti-skid)	Safety modification to improve the short field abort and stopping distances of the aircraft through the introduction of improved tires and braking system.
NACWS replacement	Safety modification to replace the obsolete and unsupported Naval Aircraft Collision Warning System (NACWS) due to FAA changes in the National Airspace System.
Ejection Mode Selector	Modifies Interseat Sequencing System (Ejection system) to add two additional modes allowing command ejection authority designated to each seat.
ASV Regulator/EL Panel	Safety modification addressing excessive force required to breathe utilizing current Anti-Suffocation Valve (ASV). This Correction will solve unconsciousness aircrew air supply requirements. In addition, a safety modification will current EL Panel to increase the oxygen regulator blinker visibility at night. Deficiency noted during OPEVAL.
Landing Gear Doors & Bellcrank	Structural fixes to gear doors & bellcrank to eliminate cracking.
UWARS addition to ejection seat	Safety modification to add UWARS to Ejection Seat. Current system lacks UWARS, restricting overwater flight operations.
Acceptance of Ground Power (ECP-056)	Operational modification to allow acceptance of electric power commercial ground power carts.
Life Raft Addition to Ejection Seat	Safety modification to install Life raft to ejection seat and incorporate URT-140 radio. Current system lacks raft, restricting overwater flight operations.
Cockpit Improvements (ECP-058/063)	Safety and Human Factors modification to the cockpit to improve aircrew efficiencies and to eliminate excessive pilot workload and other dangerous situations. Modifications include rearview mirrors, improved cockpit storage, improved night lighting, reducing excessive ambient noise, improved trim relays, open avionics wire bundles, communication audio volume solutions, nose wheel position/positioning systems and flight instrument display issues.
Increase Gross Weight	Structural mods to increase weight capacity. Need driven by weight additions for Anti-Skid, Life Raft, Oil Pressure warning system.
OBOGS Low Pressure Switch	Safety modification to improve OBOGS low pressure switch. In-flight failures have caused numerous aborts.
Condenser blower motor-longer life	Replace air conditioning blower with longer life, brushless motor, reducing life cycle costs
Supplemental Oxygen System	Safety modification to increase volume of emergency oxygen. Class A safety board recommendation.
GPS receiver upgrade-LAAS/WAAS	Operational upgrade to GPS system-allows aircraft to utilize LAAS/WAAS approaches.
Engine PMU upgrade	Operational modification to fix engine power management unit (PMU) software. Mod required to eliminate hot-start abort conditions.
ANTI-G valve replacement	Safety modification to improve Anti-G valve with rust resistant valve. Rusty valves have caused numerous inflight emergencies (loss of pressurization).
Avionics Obsolescence	Replace various Avionics components due to supplier and/or technical obsolescence.
Aft Fuselage Structural Upgrade	Add structural components to strengthen the AFT Fuselage to address minor cracks and rivets coming loose and/or breaking in the area of Frame 9 and the Ventral Fins. This is both a safety and maintainability issue.
Sealed Rudder Position Sensor	Replace the current Rudder Position Sensor which has an excessively high failure rate due to water intrusion into the unit resulting in inaccurate information being provided to the flight data recorder. Erroneous data negatively impacts the structural integrity/FLE monitoring program because rudder position affects tail loading (asymmetric g's) and accident/incident replay and investigation.
Engine Oil Dipstick and Bottle	Enhance the Engine Oil Dipstick and add a Collection Bottle which will allow a higher total engine oil volume to provide an allowable range for safe operation. This effort is a direct response to a Navy Class B engine incident.
MFOQA	Improve the flight data recorder, change the data cartridge adapter, and install a larger capacity data storage module (PCMCIA) to allow for participation in the Military Flight Operations Quality Assurance (MFOQA) Program. MFOQA is part of a DoD-wide safety emphasis.
Emergency Locator Transmitter	DoD mandated installation of a 121.5/406 MHz ELT system in the T-6 to replace the current 121.5/243 MHz emergency beacon.
Communications Cord/Oxygen Hose	Replace the current T-6 single Line Replaceable Unit (LRU) Communications Cord and Oxygen Hose with a Communications Cord and Oxygen Hose that consists of two (2) separate LRUs.
Unique Identification (UID)	Per MIL-STD-130M dated 2 Dec 05 and the DoD Unit Identification Guide, each T-6 will be marked with a two-dimensional PDF214 or equivalent machine-readable unique identification (UID).
Canopy Fracturing Initiation Sys (CFIS)	Redesign Safety related modification will replace the current T-6 laser system CFIS with an electro-mechanical CFIS that will improve reliability and reduce life-cycle costs.
Avionics Upgrade Program (AUP)	Upgrade T-6 avionics to include multifunctional displays controlled by two (2) redundant Integrated Avionics Computers (AICs), add a Heads-Up Display (HUD) to the front cockpit, a radar altimeter and additional navigational capability.
Landing Gear Handle	Safety modification to T-6 Landing Gear Handle to reduce the risk of gear up landings. Effort includes redesign of cams and down-lock solenoid, replacing lights with LEDs and changing Programmable Array Logic to improve voltage thresholds.
Landing Gear Shimmy	Modify the T-6 Landing Gear to mitigate excessive vibration (shimmy) that has been experienced during landings and takeoffs. No mishaps have occurred to date, but the potential exists.
Power Control Lever (PCL) Cut-Off	Safety related effort to install a mechanical barrier to PCL to prevent inadvertent engine shutdown (cut-off). Result of Class A safety investigation.
Structural Improvement	Change structural components to strengthen the T-6 Airframe to address cracks and structural fatigue issues. This is both a safety and maintainability issue.
Nosewheel Actuator	Replace existing T-6 Nosewheel Actuator with longer life, better sealed actuator, reducing life cycle costs.
Engine Redesign	Redesign turbine blades, discs, seals, support case and compressor in the T-6 engine to eliminate safety, reliability and maintainability issues, turbine blade crack development and propagation.

## DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Feb 93 received MS 0 and MSI approval, Aug 95 received MSII and LRIP approval, Dec 01 received MSIII approval, and Navy IOC occurred 4th Qtr FY03.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AFT Fuselage Structural Upgrades	20	*	23	*	5	*	1	*												49	*
ASV Regulator/EL Panel	48	0.2	40	*	10	*														98	.3
Acceptance of Ground Power	43	0.1																		43	.1
Anti-G Valve					2	*	1	*	1	*			1	*	1	*	46	*		52	*
Avionics Obsolescence					49	*	49	*	49	*			49	*	49	*	291	4.8		536	4.9
Avionics Upgrade Program															1	0.5	42	50.4		43	50.9
Braking Improvement (Anti-skid)					16	1.9	9	1.7	18	2.6			3	0.4	2	0.3	4	0.7		52	7.6
CFIS Redesign					3	0.1	2	0.1	2	0.1			2	0.1	1	*	42	1.3		52	1.7
Cockpit Improvements	23	0.1	47	0.2	4	*	3	*	6	0.1			15	0.2						98	.6
Communication Cord/Oxygen Hose					24	0.2	24	0.2	4	*										52	.5
Condensor Blower Motor - Longer Life					1	*	1	*	1	*			1	*	1	*	31	0.2		36	.3
ENGINE REDESIGN									1	0.1			1	0.1	3	0.2	61	3.4		66	3.7
Ejection Mode Selector			10	*	24	0.1	15	0.1												49	.2
Emergency Locator Transmitter			43	0.1	6	*														49	0.1
Engine Oil Dipstick and Bottle	51	*			14	*	12	*	14	*							11	*		102	.1
Engine PMU Upgrade					1	*	2	*	3	*			3	*	1	*	56	0.7		66	.8
GPS Receiver Upgrade - LAAS					5	*	12	0.1	12	0.1			12	0.1	1	*	10	0.1		52	.3
Increase Gross Weight					11	0.1	14	0.1	14	0.1			4	*	4	*	5	*		52	.3
LANDING GEAR HANDLE							5	*	5	*			5	*	5	*	46	0.1		66	.2
LANDING GEAR SHIMMY							5	*	5	*			5	*	5	*	46	0.3		66	.5
Landing Gear Doors & Bellcrank	66	0.1			24	0.2	24	0.2	4	*										118	.5
Life Raft Addition to Ejection Seat					24	0.3	22	0.3	6	0.1							22	0.3		74	1.1
MFOQA					20	0.1	30	0.2	1	*							1	*		52	.4
MLG Door Tie Rods					18	0.1	18	0.1	7	*			2	*	2	*	5	*		52	.2
MLG Sidebrace Redesign	36	0.1																		36	.1
NACWS Replacement					16	1.4	18	2.3	12	1.2							3	0.1		49	5.0
NOSE WHEEL ACTUATOR							8	0.2	8	0.2			4	0.1	4	0.1	19	0.4		43	.9
Nose Wheel Centering	36	0.2																		36	.2
OBOGS Low Pressure Switch					24	0.1	24	0.1	3	*			1	*						52	.2
OBOGS upgrades (BCP-049)	33	0.2	4	*	3	*														40	.3
Oil Pressure Warning	23	0.1	23	0.1	3	*														49	.2
PCL CUT-OFF							5	*	5	*			5	*	5	*	46	*		66	.1
STRUCTURAL IMPROVEMENT							5	*	5	*			5	*	5	*	46	0.2		66	.3
Sealed rudder Position Sensor					36	*	10	*	6	*										52	*
Supplemental Oxygen System					2	*	3	*	3	*			3	*	3	*	38	0.3		52	.4
Trim System Redesign	8	*	73	0.2	59	0.1	10	0.1												150	.5
UWARS Addition to Ejection Seat					6	0.1	1	*	1	*							66	0.4		74	.6
Unique Identification (UID)					3	0.1	4	0.1	7	0.2			3	0.1	1	*	34	0.9		52	1.2
VHF Radio (Audio Volume)	39	0.1																		39	.1
INSTALLATION KITS N/R		*			1.2		0.3		*				*		*		2.5			4.1	
INSTALL EQUIPMENT																					
AFT Fuselage Structural Upgrade			23	*	5	*														28	*
ASV Regulator/EL Panel	14	*	40	*	10	*	14	*												78	.1
Acceptance of Ground Power	43	0.1																		43	.1
Anti-G Valve					2	*	1	*	1	*			1	*	1	*	29	*		35	*
Avionics Obsolescence					49	*	49	*	49	*			49	*	49	*	242	0.1		487	.1
Avionics Upgrade Program															1	*	42	0.5		43	.5
Braking Improvement (Anti-skid)					16	*	9	*	18	*			3	*	2	*				48	*
CFIS Redesign					3	*	4	*	7	*			2	*	1	*	35	*		52	*
Cockpit Improvements	7	*	47	*	4	*	3	*	6	*			15	*						82	.1
Communication Cord/Oxygen Hose					24	*	24	*	4	*										52	*
Condensor Blower Motor - Longer Life					1	*	1	*	1	*			1	*	1	*	30	0.1		35	.1
ENGINE REDESIGN									1	*			1	*	3	*	61	0.3		66	.3
Ejection Mode Selector			10	*	24	*	15	*												49	*
Emergency Locator Transmitter			43	*	6	*														49	*
Engine Oil Dipstick and Bottle					14	*	12	*	14	*							7	*		47	*
Engine PMU Upgrade					1	*	2	*	3	*			3	*	1	*	56	0.2		66	.2
GPS Receiver Upgrade - LAAS					5	*	12	*	12	*			12	*	1	*	9	*		51	*
Increase Gross Weight					11	*	14	*	14	*			4	*	4	*	4	0.1		51	.1
LANDING GEAR HANDLE							5	*	5	*			5	*	5	*	46	*		66	.1
LANDING GEAR SHIMMY							5	*	5	*			5	*	5	*	46	*		66	.1
Landing Gear Doors & Bellcrank	66	0.1			24	*	12	*	4	*										106	.2
Life Raft Addition to Ejection Seat					24	*	7	*	1	*										32	*

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
MFOQA					20	*	30	*	1	*									51	*		
MLG Door Tie Rods					18	*	18	*	7	*			2	*	2	*			3	*	50	*
MLG Sidebrace Redesign	36	0.1																		36	.1	
NACWS Replacement					16	*	18	*	12	*											46	*
NOSE WHEEL ACTUATOR							8	*	8	*			4	*	4	*			19	*	43	*
Nose Wheel Centering	36	0.3																		36	.3	
OBOGS Low Pressure Switch					24	*	24	*	2	*			1	*							51	*
OBOGS upgrades (ECP-049)	24	*	4	*	3	*															31	*
Oil Pressure Warning			23	*	3	*															26	*
PCL CUT-OFF							5	*	5	*			5	*	5	*			46	*	66	.1
STRUCTURAL IMPROVEMENT							5	*	5	*			5	*	5	*			46	*	66	.1
Sealed Rudder Position Sensor					36	*	10	*	1	*											47	*
Supplemental Oxygen System					2	*	3	*	3	*			3	*	3	*			37	0.1	51	.2
Trim System Redesign			73	*	59	*	9	*	9	*											150	*
UWARS Addition to Ejection Seat					6	*	1	*	1	*											8	*
Unique Identification (UID)					3	*	4	*	7	*			3	*	1	*			34	*	52	*
VHF Radio (Audio Volume)	39	0.1																			39	.1
INSTALL EQUIPMENT N/R						*	*	*	*	*			*	*	*	*					0.6	
ECO						*	*	*	*	*			*	*	*	*						.1
DATA						*	*	*	*	*			*	*	*	*						.1
TRAINING EQUIP	5	*	6	0.1	8	*	17	*	26	0.1			30	*	30	*			96	0.1	218	.4
SUPPORT EQUIP						*	*	*	*	*			*	*	*	*					*	*
ILS						*	*	*	*	*			*	*	*	*					*	*
OTHER SUPPORT						*	*	*	*	*			*	*	*	*					*	.1
INTERIM CONTRACTOR SUPPORT																						
INSTALLATION COST	426	0.4	263	0.8	413	3.2	337	2.5	203	1.9			124	0.3	94	0.2			971	34.5	2,831	43.8
TOTAL PROCUREMENT	1,122	2.5	795	1.6	1,247	9.8	1,015	8.9	638	6.9			402	1.6	312	1.6			2,830	104.1	8,361	137.1

Asterisk (\*) indicates amount value less than \$51K

NOTE: Install kits and equipment quantities differ because those specific airframe kits do not require a corresponding "B kit".

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-6A/B MODIFICATION TITLE: JPATS CORRECTION OF DEFICIENCIES ( OSIP 011-04 )

INSTALLATION INFORMATION: VHF Radio (Audio Volume)/OBOGS Upgrades (ECP-049)/Oil Pressure Warning/ASV Regulator/EL Panel/Ejection Mode Selector/Cockpit Improvements/NACWS Replacement/Avionics Obsolescence/Braking Improvement (Antiskid)/Nose Wheel Centering/MLG Door Tie Rods/MLG Sidebrace Redesign/Trim System Redesign/Landing Gear Doors & Bellcrank/UWARS Addition to Ejection Seat/Acceptance of Ground Power/Life Raft Addition to Ejection Seat/Increase Gross Weight/OBOGS Low Pressure Switch/GPS Repeater for Simulator/Baro Altimeter Repeater for Simulator/Condenser Blower Motor-Longer Life/Supplemental Oxygen System/GPS Receiver Upgrade-LAAS-WAAS Engine PMU Upgrade/Anti-G Valve/Simulator Mods to Reflect A/C Systems/AFT Fuselage Structural Upgrade/Sealed Rudder Position Sensor/Engine Oil Dipstick and Bottle/MFOQA Landing Gear Handle, Landing Gear Shimmy, PCL Cut-Off, Structural Improvement, Nose Wheel Actuator, Engine Redesign.

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 0 Months PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY 2007 Various FY 2008 Various FY 2009 Various

DELIVERY DATE: FY 2007 Various FY 2008 Various FY 2009 Various

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (426) kits	426	0.4																	426	.4
FY 2007 (263) kits			263	0.8															263	.8
FY 2008 (413) kits					413	3.2													434	3.2
FY 2009 (337) kits							337	2.5											361	2.5
FY 2010 (203) kits									203	1.9									204	1.9
FY 2011 (0) kits																				
FY 2012 (124) kits													124	0.3					124	.3
FY 2013 (94) kits															94	0.2			94	.2
TO COMPLETE (971) kits																	971	34.5	971	34.5
<b>Total</b>	<b>426</b>	<b>0.4</b>	<b>263</b>	<b>0.8</b>	<b>413</b>	<b>3.2</b>	<b>337</b>	<b>2.5</b>	<b>203</b>	<b>1.9</b>			<b>124</b>	<b>0.3</b>	<b>94</b>	<b>0.2</b>	<b>971</b>	<b>34.5</b>	<b>2,831</b>	<b>43.8</b>

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	426	65	65	65	68	103	103	103	104	84	84	84	85	51	51	51	50				
Out	426	65	65	65	68	103	103	103	104	84	84	84	85	51	51	51	50				

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	31	31	31	31	24	24	23	23	971	2831
Out	31	31	31	31	24	24	23	23	971	2831

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY						P-1 ITEM NOMENCLATURE						
<b>Aircraft Procurement, Navy / APN5 Aircraft Modifications</b>						<b>057500, AVIATION LIFE SUPPORT MODS</b>						
Program Element for Code B Items:						Other Related Program Elements						
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	3.7	A	0.7	8.3	7.2	8.4	13.5	11.2	11.5	326.3	390.9	

**DESCRIPTION:**

The specific modifications budgeted and planned are:

- (1) Detector installation on rotary and cargo aircraft to identify the presence of chemical warfare (CW) vapors.
- (2) The addition of the Mobile Aircrew Restraint System (MARS) to helicopters. MARS will replace existing fixed length tether with a locking retraction system that allows safe movement of the aircrew within the cargo area while affording protection during a mishap or combat. MARS will be mounted to the aircraft overhead.
- (3) Installation of new aircrew endurance modifications in legacy ejection seat equipped aircraft due to extended range missions.
- (4) Installation of new aircrew endurance modifications in non-ejection seat equipped aircraft due to extended range missions.
- (5) Installation of the Joint Helmet Mounted Cueing System (JHMCS) night mission system into tactical aircraft. This will provide the ability to cue and display weapons and sensors at night using Night Vision Device (NVD) that integrates the JHMCS cueing and display symbology and scene viewed through the NVD.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
002-05 CW DETECTORS	0.8	0.4	4.2	5.2	5.5	5.8	5.9	5.9	251.7	285.3
001-07 MARS			2.0	0.1	0.5	5.2	5.4	5.6	74.0	92.8
001-08 EJECTION SEAT ENDURANCE			2.1	1.6					0.4	4.2
004-09 NON-EJECTION SEAT ENDURANCE		0.3		0.3	1.0	1.0			0.2	2.7
007-10 JOINT HELMET MOUNTED CUEING SYSTEM					1.5	1.5				3.0
Inactive OSIPs	2.9									
<b>TOTAL</b>	<b>3.5</b>	<b>0.7</b>	<b>8.3</b>	<b>7.2</b>	<b>8.4</b>	<b>13.5</b>	<b>11.2</b>	<b>11.5</b>	<b>326.3</b>	<b>388.0</b>

1. FY2007 funding total includes \$0.3M received in GWOT supplemental.

Asterisk (\*) indicates amount value less than \$51K

MODIFICATION TITLE: CW DETECTORS( OSIP 002-05 )

MODELS OF SYSTEMS AFFECTED: AH-1W/Z CH-53E KC-130J/T MH-53E MH-60S/R MV-22B UAV UH-1N/Y TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: Installation of the Joint Chemical Agent Detector (JCAD) will automatically and simultaneously detect, identify and qualify CW agent vapors by agent classes (e.g. nerve, blister and blood agents).The JCAD Detectors will be provided to NAVAIR by the Joint Chemical Biological Defense Program (CBDP) office. The CH-53, MV-22B, MH-60S/R, and MH-53E installations have 2 JCADS per platform. Installation of the Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD) on the aircraft will provide standoff detection of CW agents at a distance of 0-5 km. All aircraft installations will have 1 per platform, except MH-53E will not receive JSLSCAD on MH-53E.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: JPEO (CBD) MS-C for JCAD detectors is planned for 1st QTR FY09. All CW Dector installation equipment will be provided to NAVAIR by CBDP procurements. The Kits for each platform are unique. The first year kits for each platform will be for validation and verification and installed the same year. The additional kits will follow the schedule below.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AH-1W/Z JCAD KITS							2	*	21	0.2	21	0.2	20	0.2	20	0.2	29	0.3	113	1.2	
AH-1W/Z JSLSCAD KITS																	113	23.7	113	23.7	
CH-53E JCAD KITS					2	*	29	0.3	29	0.3	29	0.3	30	0.3	13	0.1	46	0.5	178	1.9	
CH-53E JSLSCAD KITS											1	0.2	1	0.2	2	0.4	85	17.9	89	18.7	
KC-130 JCAD KITS									2	*	2	*	20	0.2	19	0.2	47	0.5	90	1.0	
KC-130 JSLSCAD KITS													1	0.2	1	0.2	43	9.0	45	9.5	
MH-53E JCAD KITS															23	0.2	29	0.3	52	.5	
MH-60S/R JCAD KITS									1	*	19	0.2	19	0.2	16	0.2	793	8.3	848	8.9	
MH-60S/R JSLSCAD KITS											1	0.2	1	0.2	1	0.2	421	88.4	424	89.0	
MV-22B JCAD KITS							2	*	20	0.2	28	0.3	29	0.3	28	0.3	431	4.5	538	5.7	
MV-22B JSLSCAD KITS											1	0.2	1	0.2	1	0.2	266	55.9	269	56.5	
UAV (MQ-8B) JSLSCAD KITS													1	0.2	1	0.2	16	3.4	18	3.8	
UH-1N/Y JCAD KITS					2	*	21	0.2	26	0.3	20	0.2	9	0.1	2	*	11	0.1	91	1.0	
INSTALLATION KITS N/R		0.7		0.2		0.6		1.6		0.8		1.1		1.0		0.7		0.2		6.9	
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R						0.7		0.5		1.2								1.0		3.4	
ECO																					
DATA						0.2		0.5		0.1											.8
TRAINING EQUIP						0.2		0.2		0.2											.6
SUPPORT EQUIP																					
ILS				0.1		0.2		0.8		0.4		0.4		0.2		0.2		1.0		3.4	
OTHER SUPPORT		0.1		0.1		0.6		0.7		0.6		0.6		0.3		0.4		5.0		8.4	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST					4	1.5		4	0.2	53	1.2	96	1.8	123	2.0	131	2.1	2,457	31.7	2,868	40.5
TOTAL PROCUREMENT		.8		.4		8	4.2	58	5.2	152	5.5	218	5.8	255	5.9	258	5.9	4,787	251.7	5,736	285.3

Asterisk (\*) indicates amount value less than \$51K

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT, CONTRACTOR

ADMINISTRATIVE LEADTIME: Varies Months PRODUCTION LEADTIME: Varies Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_ FY 2010 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_ FY 2010 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS (0) kits																						0	0.0
FY 2007 (0) kits																						0	0.0
FY 2008 (4) kits					4	1.5																4	1.5
FY 2009 (54) kits							4	0.2	50	1.1												54	1.3
FY 2010 (99) kits									3	0.1	96	1.8										99	1.9
FY 2011 (122) kits													122	2.0								122	2.0
FY 2012 (132) kits													1	0.0	131	2.1						132	2.1
FY 2013 (127) kits																	127	1.6				127	1.6
TO COMPLETE (2330) kits																	2,330	30.1				2,330	30.1
																						0	0.0
Total	0	0.0	0	0.0	4	1.5	4	0.2	53	1.2	96	1.8	123	2.0	131	2.1	2457	31.7			2868	40.5	

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							2	2			2	2	13	13	13	14	24	24	24	24
Out							2	2			2	2	13	13	13	14	24	24	24	24

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	30	31	31	31	32	33	33	33	2457	2868
Out	30	31	31	31	32	33	33	33	2457	2868

MODIFICATION TITLE: MARS( OSIP 001-07 )

MODELS OF SYSTEMS AFFECTED: CH-130 CH-53D/E H-46 H-60S MH-53E MV-22B UH-1Y TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: Safety initiative to replace the existing mobile crewmember safety belt with the Mobile Aircrew Restraint System (MARS). The new MARS design increases crash survivability by providing improved aircrew restraint with the cabin through the use of acceleration force and velocity sensitive locking mechanism and crewmember harness. The MARS retractor systems and associated aircraft installation modifications will be procured and provided to the NAVAIRSYCOM by the PMA 202 office. For MH-60R MARS has no "A" kit install. The "B" kit bolt into red ring holes that are part of the aircraft baseline.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Milestone C for MARS installation in large cabin aircraft planned for 1st QTR FY11.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$			
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
C-130T INSTALL																	20	0.6	20	.6			
CH-46/HH-46 INSTALL																	39	1.1	39	1.1			
CH-53E INSTALL														26	1.3	18	0.9	92	4.8	136	7.0		
MH-53E INSTALL										26	1.5									26	1.5		
MH-60S INSTALL										20	0.3	20	0.3	20	0.3			196	3.2	256	4.1		
MV-22B INSTALL																				277	8.0		
UH-1Y INSTALL																				98	1.7		
INSTALLATION KITS N/R									*	0.3	0.5					0.6				6.4	7.8		
INSTALL EQUIPMENT																							
C-130T EQUIPMENT (5 per a/c)																				100	0.6		
a/c)																				195	1.1		
CH-53E EQUIPMENT (10 per a/c)														260	1.5	180	1.0			920	5.5		
MH-53E EQUIPMENT (11 per a/c)																					286	1.6	
MH-60R EQUIPMENT (2 per a/c)						148	1.5	4	*												152	1.5	
MH-60S EQUIPMENT (2 per a/c)											40	0.2	40	0.2	40	0.2				396	1.9		
MV-22B EQUIPMENT (5 per a/c)																					1,385	8.0	
UH-1Y EQUIPMENT (3 per a/c)																					294	1.7	
INSTALL EQUIPMENT N/R																							
ECO																							
DATA												0.1			*	0.4					0.9	1.5	
TRAINING EQUIP																							
SUPPORT EQUIP																							
ILS												0.4		0.2		0.2					1.8	2.6	
OTHER SUPPORT						0.5		*		0.2	0.6		0.3		0.4						4.3	6.4	
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST														46	1.6	46	1.6			760	22.4	852	25.5
TOTAL PROCUREMENT						148	2.0	4	.1	.5	372	5.2	392	5.4	304	5.6	4,772	74.0	5,992	92.8			

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-130 CH-53D/E H-46 H-60S MH-53E MV-22B UH-1Y MODIFICATION TITLE: MARS( OSIP 001-07 )

INSTALLATION INFORMATION: NAVY FIELD MOD TEAM

METHOD OF IMPLEMENTATION: DEPOT, CONTRACTOR

ADMINISTRATIVE LEADTIME: Varies Months PRODUCTION LEADTIME: Varies Months

CONTRACT DATES: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_ FY 2010 \_\_\_\_\_

DELIVERY DATE: FY 2007 \_\_\_\_\_ FY 2008 \_\_\_\_\_ FY 2009 \_\_\_\_\_ FY 2010 \_\_\_\_\_

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
PRIOR YEARS (0) kits																					0	0	
FY 2007 (0) kits																						0	0
FY 2008 (0) kits																						0	0
FY 2009 (0) kits																						0	0
FY 2010 (0) kits																						0	0
FY 2011 (46) kits														46	1.6							46	2
FY 2012 (46) kits																46	1.6					46	2
FY 2013 (38) kits																		38	1.2			38	1
TO COMPLETE (722) kits																		722	21.2			722	21
<b>Total</b>		0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	46	1.6	46	1.6	760	22.4			852	25.5

Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
In																							
Out																							

  

	FY 2012				FY 2013				To Complete	Total	
	1	2	3	4	1	2	3	4			
In			23	23	11	11	12	12		760	852
Out			23	23	11	11	12	12		760	852

MODIFICATION TITLE: EJECTION SEAT ENDURANCE( OSIP 001-08 )

MODELS OF SYSTEMS AFFECTED: AV-8B EA-6B F/A-18A/C/E F/A- 18B/D/F/G T-45 TYPE MODIFICATION: SAFETY

DESCRIPTION JUSTIFICATION: New cushion system in front line ejection system equipped aircraft. Incorporates phase changing textiles and rate dependent materials to reduce significant aircrew fatigue being experienced during long duration flights. New cushions will be integrated into complex ejection seat designs to eliminate interference. There are no installation costs because the seat cushions are just being replaced.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Milestone C is planned for 2nd QTR FY08.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
AV-8B /TAV-8B EQUIP (1 per a/c)							141	0.2											141	.2	
EA-6B EQUIP (4 per a/c)							230	0.4								126	0.2		356	.6	
F/A-18A/C/E EQUIP (1 per a/c)					363	0.6	227	0.4											590	1.0	
F/A-18B/D/F/G EQUIP (2 per a/c)					618	1.0	158	0.3											776	1.3	
T-45 EQUIP (2 per a/c)					311	0.5	127	0.2											438	.7	
INSTALL EQUIPMENT N/R																					
ECO																					
DATA																					
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS								0.1										0.1		.2	
OTHER SUPPORT						0.1		0.1										0.1		.3	
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT					1,292	2.1	883	1.6								126	.4		2,301	4.2	

Asterisk (\*) indicates amount value less than \$51K

MODIFICATION TITLE: NON-EJECTION SEAT ENDURANCE( OSIP 004-09 )

MODELS OF SYSTEMS AFFECTED: CH-46 E-2 H-53 H-60 MV-22 TH-57 UH-1 TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: Introduce new cushion systems into "non-ejection" aircraft with phase changing textiles to reduce -eliminate significant aircrew fatigue due to longer mission requirements. There are no installation costs because the seat cushions are just being replaced.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Milestone C is planned for 2nd QTR FY09.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
CH-46 (2 per a/c)							204	0.2												204	.2
E-2 (2 per a/c)											122	0.1								122	.1
H-53 (2 per a/c)									88	0.1	316	0.3								404	.3
H-60 (2 per a/c)									798	0.6	188	0.2								986	.8
HH-60 (2 per a/c) (supplemental)			38	0.1																38	.1
MV-22 (2 per a/c)									132	0.1	142	0.1								274	.2
TH-57 (2 per a/c)											90	0.1								90	.1
UH-1 (2 per a/c)											124	0.1					58	0.1		182	.1
INSTALL EQUIPMENT N/R				0.2				0.1		*		*									.3
ECO																					
DATA								*		*		*									*
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS								*		0		0.1								0.1	.5
OTHER SUPPORT																					
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT			38	.3			204	0.3	1,018	1.0	982	1.0					58	0.2		2,300	2.7

Asterisk (\*) indicates amount value less than \$51K

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications BA5							057600, COMMON ECM EQUIPMENT					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	431.6	A	107.6	103.8	66.4	48.5	117.4	158.9	152.1	2538.3	3724.5	

**DESCRIPTION:**

This line item funds common equipment (B kits) for multiple aircraft. The overall goal of the modification budget is to provide a reprogrammable radar and missile warning system, provide attacking missile declaration and sector direction finding, laser detection, and self protection capability devices to applicable user aircraft.

(TOA, \$ IN MILLIONS)

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
072-88 AN/ARR-47 DETECTION	269.8	61.9	4.0							335.7
006-00 ALE-39 to 47 RETROFIT	68.9	10.9		4.5	4.4	3.9	6.4	6.7	6.5	112.3
007-03 IDECM	92.9	34.9	35.9	36.2	36.5	38.3	39.6	40.9	100.7	455.8
005-08 DIRCM			29.4	25.8	2.8	43.8	44.7	45.5	1910.6	2102.6
014-08 Generation II Missile Warning System (MWS) Upgrade			34.5						310.5	345.0
009-10 F-18A+/C/D & AV-8 DRFM JAMMER					4.7	31.3	68.2	59.0	210.0	373.2
<b>TOTAL</b>	<b>431.6</b>	<b>107.6</b>	<b>103.8</b>	<b>66.4</b>	<b>48.5</b>	<b>117.4</b>	<b>158.9</b>	<b>152.1</b>	<b>2538.3</b>	<b>3724.5</b>

1. FY2007 funding total includes \$71.9 received in GWOT supplemental.
2. FY2008 funding total includes \$34.5 received in the 2008 Consolidated Appropriation Act, Division L.
3. FY2008 funding totals do not include \$148.68 previously requested for current FY2008 GWOT requirements.

Exhibit P-3a

MODIFICATION TITLE: AN/AAR-47 DETECTION ( OSIP 072-88 )

MODELS OF SYSTEMS AFFECTED: CH-46E, CH-53A/D/E, RH-53D, MH-53E, UH-1, AH-1, C-130, P-3, HH-60H, SH-60B, VH-3, VH-60, V-22 TYPE MODIFICATION: MISSION CAPABILITY

**DESCRIPTION / JUSTIFICATION:**

The AN/AAR-47 warns of approaching missiles by detecting radiation associated with the missile rocket motor and automatically initiates flare ejection. Detection algorithms are used to discriminate against non-approaching radiation sources. The AN/AAR-47 is a passive missile approach warning system consisting of four sensor assemblies housed in two or more sensor domes, a central processor unit and a control indicator. The AN/AAR-47 provides attacking missile declaration and sector direction finding and will be interfaced directly to the ALE-39/47 countermeasures dispenser. Without the AAR-47, helicopters and Fixed Wing Aircraft have no capability to detect an infrared missile attack.

FY 2007 Supplemental funds were received to provide AAR-47B(V)2 Probability of Detection Improvement ECP Retrofit Program. Current deployed system has performance limitation in certain GWOT operating environments, supporting USMC Urgent Need Statement (UNS) # 03606uc.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

Milestone II was passed in 1982. OPEVAL (on the CH-53E) was passed in October 1986.

Milestone III was passed in May 1987 for full production with extension of application to all other platforms. Production of 709 systems and preparation of a Level III data package followed, with deliveries completed in early 1992. Under full and open competition, a contract for up to 1200 systems was awarded to Hercules (now Alliant) in December 1991. Actual orders were for 1122 systems with deliveries completed in January 1997. Under full and open competition, a contract for up to 1077 systems was awarded to Lockheed Martin in September 1995. Deliveries began in January 1997 and were completed in July 1999.

There are two upgrade programs: The Computer Processor Microprocessor upgrade program FY97-FY99 replaced the 8086 MP board with an MP 80486 Board with new software to enhance threat declaration and to better control false alarms. The Second Upgrade: AAR-47(V)2 Sensor upgrade, contained two phases; Phase one upgraded the UV sensors with a solid state spectral filter assembly with embedded Laser warning capability. Phase two incorporated a Class I Sensor Engineering Change Proposal (ECP)(Dynamic Blanking) which upgraded the AAR-47(V)2 Sensors to the AAR-47A(V)2 sensor design. Due to the current operational environment a third Sensor Class I ECP is required which improves probability of detection in the current theaters of operation. The requested APN-5 funds will fund procurement of 5 First Article Test units for USMC/USN/USAF Operational Assessment and the accelerated development of a class I ECP for multiple T/M/S and delivery of 300 PDX upgrade kits consisting of four sensors and one CP unit. This is planned as an O-level replacement with the existing sensors being sent to the contractor, upgraded and then sent back to the fleet. Congressional Add funds provided in FY08 to fund the Operational Flight Software for the Hostile Fire Indication Capability.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
ECO (SENSOR UPGRADE EQUIP ECO)	1,836	53.8																	1,836	53.8	
FY05 SUP (CP UPGRADE EQUIP ECO)	1	0.3																	1	.3	
FY05 Sup (Sensor Upgrade Equip)	98	3.7																	98	3.7	
FY06 Title IX Sup (Dynamic Blk ECO)	4	8.1																	4	8.1	
FY07 Sup (PDX ECO)				32.2																	32.2
INSTALL EQUIP (AAR-47 EQUIP)	1,250	90.2																		1,250	90.2
Title 9 Sup (Sensor Upgrade)	151	11.3																		151	11.3
FY08 Cong Add (Hostile Fire Operational Flight SW)						4.0															4.0
INSTALL EQUIPMENT N/R		24.6																			24.6
ECO																					
ECO (CP UPGRADE EQUIP ECO)		7.7																			7.7
ECO (Dynamic Blanking)		1.9																			1.9
FY05 Sup (Dynamic Blanking ECO)		8.9																			8.9
Title 9 Sup (Dynamic Blanking)		0.6																			.6
FY07 Sup (PDX Upgrade Kit)			300	18.8																300	18.8
DATA		1.8																			1.8
TRAINING EQUIP		0.6																			.6
SUPPORT EQUIP		5.8		3.0																	8.8
ILS		5.2		0.6																	5.7
OTHER SUPPORT		45.4		7.3																	52.7
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT	3,340	269.8		61.9		4.0														3,640	335.7

MODIFICATION TITLE: ALE-39 to 47 RETROFIT ( OSIP 006-00 )

MODELS OF SYSTEMS AFFECTED: CH-53E(148), EA-6B(80), AH-1W(180), CH-46E(202), UH-1N(86), KC-130FRT(25), CH-53D(36), MH-53D(34), F/A-18C/D(240), AV-8B(133), MV-22(24) TYPE MODIFICATION: MISSION CAPABILITY

**DESCRIPTION / JUSTIFICATION:**

The replacement of the ANALE-39 Dispenser System with the ANALE-47 Dispenser System will correct some serious safety problems and greatly improve aircraft survivability. The ANALE-39 system has serious problems with Things Falling Off Aircraft (TFOA) as well as numerous occurrences of uncommanded firing of chaff and flare stores. The reliability of the ALE-39 is another major factor with continuous reports of hung or unfired stores- a serious ground safety concern as well as serious aircraft survivability concern. The ANALE-47 System has been developed to correct the safety issues of the ALE-39. USD (Acq) memo of November 1986 directed U.S. Navy and U.S. Army to participate in EMD phase. Requirements established by Air Force Statement of Operational Requirements Document (SORD) number 341.88-aa-D of 8 July 92. OSIP 006-00 had been cancelled beginning FY04, but operational requirements in support of the Global War on Terrorism have resulted in accelerated installs and additional aircraft being identified for retrofit incorporation.

FY07 Supplemental funding is provided to begin Non-oriented Engineering (NRE) and installation of two additional dispensers mounted in forward-firing location on USMC assault platforms. All Army and Special Forces platforms with self-protection systems have oriented their dispenser magazines to provide essential forward firing self-protection capability. This improvement has been implemented on USMC new AH-1Z and UH-1Y platforms and HQMC supports this capability on all assault/rotary wing aircraft. these new forward-firing dispensers require new countermeasure techniques specific to each Type/Model Series due to differences in infrared signature and exhaust suppression. FY09 and out funding supports installatoin of ALE-47 on F/A-18 A+/C/D aircraft. This installation is required to support the installation of a Bulk Chaff Dispensing Pod that is being developed under the EW Development PE0604270N, PU2175. The Pod will be controlled via the ALE-47.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

The ANALE-47 System is in production and being installed in multiple U.S. Navy and Marine aircraft. MS III decision awarded March 1993. FY 2000 systems procured under Air Force contract F09603-01-D-0367. Procurements ordered under U.S. Air Force production contract awarded in September 2006.

FY07 supplemental provided NRE for technique development using the latest accredited modeling and simulation threat data and effectiveness training.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AV8 Install Kits (FY05 Sup)	48	0.9																		48	0.9
EA6B Install Kits (FY06 Sup)	35	0.3																		35	0.3
INSTALLATION KITS (A Kits)	637	1.6					2	0.1	27	1.5	25	1.4	48	2.7	48	2.8	34	2.0		821	12.1
INSTALLATION KITS N/R		2.0	4	1.7				2.6		0.5										4	6.9
INSTALL EQUIPMENT																					
GWOT FY05 SUPP (Install Equip) B Kits	266	3.0																		266	3.0
INSTALL EQUIP (39 SEQUENCER SWITCHES)	1	2.0																		1	2.0
INSTALL EQUIP (TACAIR/HELOS)	1,223	30.4	350	4.5			2	0.1	27	0.8	25	0.7	48	1.5	48	1.5	34	1.1		1757	40.6
Title 9 Supplemental (Install Equip)	7	5.6																		7	5.6
INSTALL EQUIPMENT N/R																					
ECO																					
ECO		0.8																			0.8
DATA		0.1																			0.1
TRAINING EQUIP		3.2																			3.2
SUPPORT EQUIP		5.4		0.3				0.2		0.2		0.2		0.3		0.3		0.2			7.0
ILS		0.8		0.2																	1.0
OTHER SUPPORT		10.0		4.0				1.4		0.9		1.0		0.8		0.9		0.9			20.1
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	720	2.9		0.1	4		2	*	27	0.6	25	0.6	48	1.1	48	1.2	34	2.2		908	8.8
TOTAL PROCUREMENT	2,217	68.9	354	10.9			4	4.5	54	4.4	50	3.9	96	6.4	96	6.7	68	6.5		2939	112.3

Asterisk (\*) indicates amount value less than \$51K

\*FY2008 installs (qty. 4) are funded with FY2007 Supplemental funds.

Exhibit P-3a

CH-53E(148), EA-6B(80), AH-1W(180), CH-46E(202),  
UH-1N(86), KC-130FRT(25), CH-53D(36), MH-53D(34),  
F/A-18C/D(240), AV-8B(133)

MODIFICATION TITLE: ALE-39 to 47 RETROFIT( OSIP 006-00 )

MODELS OF SYSTEMS AFFECTED:

INSTALLATION INFORMATION:

ALE-47 Retrofit requires different types of Installation Equipment kits based on the quantity of dispensers in each aircraft. TACAIR (F/A-18, EA-6B) and Helos (CH-53D, CH-46, AH-1W, UH-1) require two (2) dispensers per aircraft, C-130 F/R/T require 10 dispensers per aircraft, and AV-8B require 6 dispensers per aircraft.

METHOD OF IMPLEMENTATION:

Depot Level Installations

ADMINISTRATIVE LEADTIME:

3 Months PRODUCTION LEADTIME: 7 Months

CONTRACT DATES:

FY 2007 Dec 07 FY 2008 \_\_\_\_\_ FY 2009 Dec-08

DELIVERY DATE:

FY 2007 Jul 08 FY 2008 \_\_\_\_\_ FY 2009 Jul 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS (720) kits	720	2.9																	720	2.9
FY 2007 (4) kits				0.1	4														4	0.1
FY 2008 ( ) kits																			0	0.0
FY 2009 (2) kits							2	*											2	0.0
FY 2010 (27) kits									27	0.6									27	0.6
FY 2011 (25) kits											25	0.6							25	0.6
FY 2012 (48) kits													48	1.1					48	1.1
FY 2013 (48) kits															48	1.2			48	1.2
TO COMPLETE (34) kits																	34	2.2	34	2.2
<b>Total</b>	<b>720</b>	<b>2.9</b>	<b>0</b>	<b>0.1</b>	<b>4</b>	<b>0.0</b>	<b>2</b>	<b>*</b>	<b>27</b>	<b>0.6</b>	<b>25</b>	<b>0.6</b>	<b>48</b>	<b>1.1</b>	<b>48</b>	<b>1.2</b>	<b>34</b>	<b>2.2</b>	<b>908</b>	<b>8.8</b>

\*Note: FY2008 installs (qty. 4) are funded with FY2007 Supplemental funds.  
Installation Schedule

PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	720							4				2				27				25
Out	720						720		4			2			6	7	7	7		7

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In			48				48		34	908
Out	6	6	6	7	12	12	12	12	82	908

MODIFICATION TITLE: INTEGRATED DEFENSIVE ELECTRONIC COUNTERMEASURE (IDECM) RADIO FREQUENCY COUNTERMEASURE (RFCM) ( OSIP 007-03 )

MODELS OF SYSTEMS AFFECTED: F/A-18E/F TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION / JUSTIFICATION:

IDECM RFCM consists of an Onboard Electronic Countermeasure Set, an Electronic Frequency Converter (EFC), an Improved Multi Platform Launch Controller (IMPLC) and Fiber Optic Towed Decoy (FOTD) that improves the survivability of aircraft against modern RF threats. The IDECM RFCM Operational Requirements Document (ORD) numbers are 494-88-98, 544-88-00 and 624-78-03. Current IDECM RFCM configurations are: Block 1 (IB-1) consisting of the ALQ-165 and ALE-50 (AAED); IDECM Block 2 (IB-2) consisting of the ALQ-214 and the ALE-50 (AAED); IDECM Block 3 (IB-3) consisting of ALQ-214, the ALE-55 (FOTD), and the EFC. The EFC enables dataflow via the fiber optic cable to the decoy. This Operational Safety Improvement Program is for the onboard portion of the IDECM Block 2 and 3 configuration.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

IDECM Block 2 received MS III approval in January 2004. Full Rate Production 1, 2, 3, and 4 were awarded in FY04, FY05, FY06, and FY07 respectively. Annual production contract awards are expected to continue until the total inventory objective of 424 systems have been procured. The EFC inventory objective is one (1) for every ALQ-214. The total inventory objective of 424 systems will be procured with APN-5 and APN-1.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
ALQ-214	35	61.5	15	24.8	16	27.0	17	29.4	16	29.2	12	27.1	12	27.6	12	28.2	26	62.3	161	317.1	
EFC			6	1.1	21	4.0	10	2.1	12	3.0	26	6.5	28	7.0	30	7.4	84	21.3	217	52.4	
INSTALL EQUIPMENT N/R		0.3																			.3
ECO																					
ECO (ALR-67V3)		1.8																			1.8
DATA		0.1																			.1
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS		0.3		0.8		0.6		0.6		0.1		0.5		0.6		0.7		4.4			8.6
OTHER SUPPORT		29.0		8.1		4.3		4.1		4.2		4.2		4.4		4.6		12.6			75.6
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT	35	92.9	21	34.9	37	35.9	27	36.2	28	36.5	38	38.3	40	39.6	42	40.9	110	100.7	378.0	455.8	

Remarks:

1. Electronic Frequency Converter (EFC) replaced the Signal Conditioning Assembly (SCA) - shown in PB08.

MODIFICATION TITLE: DIRECTED INFRARED COUNTERMEASURE ( OSIP 005-08 )

MODELS OF SYSTEMS AFFECTED: V-22;UH-1Y;MU-22;CH-53E;HLR;MH-60R;MH-60S;AH-1Z TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION / JUSTIFICATION:

CH-53E - Urgent Global War On Terrorism (GWOT) requirement to provide aircraft survivability against Infrared Surface-to-Air Missile (IR SAM) threats for USN/USMC rotary wing aircraft in support of Operation Iraqi Freedom and Operation Enduring Freedom. This funding is for the B-kit procurement of a Directed Infrared Countermeasure (DIRCM) capability (FY2008-FY2011) until the next generation DIRCM is produced. Beginning in FY2012, with Low Rate Initial Production (LRIP), the next generation missile warning will be designated as the Joint and Allied Threat Awareness System (JATAS). This capability will increase survivability against current and next generation infrared threats.

The Assault DIRCM Program consists of a Missile Warning System (MWS/JATAS) and an Infrared Jammer. JATAS is being procured in FY2012 per guidance from OPNAV to field the Assault DIRCM capability in increments. The first increment of Assault DIRCM is the JATAS missile warning capability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Assault DIRCM Program MS B is scheduled for 3rd quarter FY2008. A System Development and Demonstration (SDD) contract award is scheduled for the 3rd quarter of FY2008. MS C is scheduled for 3rd quarter of FY2011. A Full Rate Production Decision Review is scheduled for the 1st quarter of FY 2013 with Initial Operating Capability (IOC) planned in FY2014.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
ASSAULT DIRCM (NEXT GEN/MWS/JATAS)													34	39.6	35	39.6	1,146	1338.2	1,215	1,417.4	
DIRCM CH-53					7	20.3	7	20.3	1	2.4	13	37.7							28	80.7	
INSTALL EQUIPMENT N/R																					
ECO																					
ECO						*		*		*		0.1			0.1		0.1		59.6		59.9
DATA						2.9		0.6			0.3			0.2		0.2		119.0		123.1	
TRAINING EQUIP						0.9		0.5			0.4			0.2		0.4		83.3		85.7	
SUPPORT EQUIP						0.5		0.2			1.0			0.3		1.0		47.6		50.6	
ILS						1.0		0.9			1.1			0.8		0.8		48.6		53.2	
OTHER SUPPORT						3.9		3.3		0.4	3.3			3.5		3.4		214.3		231.9	
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT					7	29.4	7	25.8	1	2.8	13	43.8	34	44.7	35	45.5	1,146	1,910.6	1,243	2,102.6	

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODIFICATION TITLE: Generation II Missile Warning System (MWS) Upgrade (OSIP 014-08)

MODELS OF SYSTEMS AFFECTED: KC-130, AH-1W, UH-1N, CH-53D/E, MV-22, and CH-46 TYPE MODIFICATION: MISSION CAPABILITY

**DESCRIPTION / JUSTIFICATION:**

Current USMC operations require improved capability for the MANPADs threat. This upgrade will provide improved MWS performance in current theaters of operation. The upgrade incorporates improvements to reduce false alarm rates in a multi-target and high clutter environments. Outfitting of a total of 162 aircraft mix of KC-130, AH-1W, UH-1N, CH-53D/E, MV-22, and CH-46 USMC aircraft with A-Kits and P-Kits is required. If unfunded, aircraft with the currently fielded AAR-47(V)2 MWS will operate in a degraded mode in certain operational environments allowing increased risk to aircraft and aircrew.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

AAR-47 Missile Warning System is a Gen I system that provides a cost effective solution to the Infra-Red (IR) threat with limited ability to distinguish non-threat from threat energy in high clutter environments. FY 2005 Supplemental funds enabled a analysis of a current Gen I MWS with current Countermeasure dispense techniques as compared to Gen II MWS. A Directed IR Countermeasures (DIRCM) system (CH-53 Technology Assessment Program TAP) from the FY 2007 Supplemental, funds development of Airframe Changes (AFC) A-Kit, B-Kit test articles. AOA for Assault DIRCM program is scheduled to complete in March 2008. This program will develop the next generation system incorporating improved MWS with advanced DIRCM solution. The Assault DIRCM effort is a pre-milestone B program with a expected IOC date of 2014. FY2008 Consolidated Appropriations Act, Division L provided funds to continue effort. This OSIP will provide currently available improvements to survivability to USMC aircraft currently in support of OIF and the Global War on Terror.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
INSTALLATION KITS (A Kits)							24	8.4											138	48.3	162	56.7	
INSTALLATION KITS N/R																							
INSTALL EQUIPMENT																							
INSTALL EQUIPMENT - B KITS							10	22.5											114	262.2	124	284.7	
INSTALL EQUIPMENT N/R																							
ECO																							
DATA								1.0															1.0
TRAINING EQUIP								.2															.2
SUPPORT EQUIP								.4															.4
ILS								.3															.3
OTHER SUPPORT								1.2															1.2
INTERIM CONTRACTOR SUPPORT								.6															.6
INSTALLATION COST																							
TOTAL PROCUREMENT							34	34.5											252	310.5	286	345.0	

CLASSIFICATION: UNCLASSIFIED											
Exhibit P-40, BUDGET ITEM JUSTIFICATION										DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications						P-1 ITEM NOMENCLATURE 057700 Common Avionics					
Program Element for Code B Items:						Other Related Program Elements					
	Prior Years	ID Code	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	To Complete	Total
QTY		A									
COST (In Millions)	1,372.5	A	178.5	147.8	148.9	143.4	138.2	141.7	145.5	701.4	3,117.9
<p>DESCRIPTION:</p> <p>This line item funds common avionics equipment for multiple aircraft. With the exception of OSIPs 43-94 (Flight Data Recorders), 14-97 (KC-130T GPWS), 17-98 (Helo GPWS), and 24-99 (CAS), the individual aircraft platforms fund the "A" kits and installation in the appropriate aircraft line.</p> <p>The specific modifications budgeted and programmed are: (1) The NAVSTAR GPS (Global Positioning System) is designed to provide a highly accurate passive position (16 meters) velocity (0.1 meter/sec) and time to users worldwide in all weather conditions. The GPS will interface with communication, navigation, and weapon systems equipment (standard attitude heading reference systems, inertial navigation systems, on-board computers, etc.) in selected applications. GPS is a DoD mandated requirement for all aircraft operating in the National Air Space System after the year 2000. (2) The AN/ARC-210 Electronic Protection (EP) Combination Radio provides dual UHF capability for CV based TACAIR; VHF AM for close air support and maritime channels; VHF AM for air traffic control; and EP capabilities. The AN/ARC-210 can be controlled by either a remote control unit or via MIL-STD-1553 multiplex data bus. (3) The Crash Survivable Flight Incident Recorder (CSFIR) is a crash hardened recorder which will be used in support of aircraft mishap and incident investigations. (4) The Ground Proximity Warning System (GPWS) provides visual and aural warnings to the pilot when the aircraft is in conditions that could result in a controlled flight into terrain accident. (5) The Traffic Alert &amp; Collision Avoidance System (TCAS) will provide a display of situation awareness to aid in the prevention of mid-air mishaps. (6) The Advanced Mission Computer and Display (AMC&amp;D) system will replace existing aging/obsolete and performance limited AN/AYK-14(V) Mission Computer and Contractor Furnished Equipment Displays. (7) The Tactical Air Moving Map Capability (TAMMAC), the common solution for US Naval Aviation, provides a common tactical aircraft moving map and data loading capability and replaces current obsolete Fleet equipment. (8) Communication Navigation Surveillance/ Air Traffic Management (CNS/ATM) provides civil upgrades to communications, navigation, and surveillance systems enabling shift from Air Traffic Control to Air Traffic Management in increasingly congested airspace and frequency spectrum. (9) Aircrew Wireless Internal Communications System (AWICS) will provide a wireless, spread spectrum intercom system to allow for unimpeded movement throughout the aircraft and prevent aircrew/passenger entanglement with intercom system cords in the event of mishap. (10) Attitude Gyro Upgrade replaces obsolete gyros with a more reliable and, maintainable gyro. (11) Military Flight Operations Quality Assurance (MFOQA) is a program that provides the warfighter with timely and quantitative information regarding aircrew and system performance for improving safety, operational efficiency, and readiness every flight. (12) Avionics Component Improvement Program (AVCIP) provides resources to address critical readiness and reliability deficiencies, obsolescence, loss of sustainability and top Fleet repair cost drivers in Naval avionics systems. The overall goal of the modifications budgeted in FY 2009 is to procure the common equipment required for the individual aircraft platforms. The specific modifications budgeted and programmed are:</p>											
(TOA, \$ in Millions)											
OSIP No.	Description	Prior Years	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	Complete	To Total
71-88	NAVSTAR GPS (Hardware)	296.7	21.7	9.2	9.1	7.9	8.8	9.0	9.2	141.8	513.4
04-94	AN/ARC-210 (Hardware)	288.4	1.5	2.4	7.6	3.9					303.8
43-94	Crash Survivable Flight Incident Recorders (CSFIR)	85.2	0.6								85.8
14-97	GPWS (CAT I) Fixed Wing	84.7	8.4	6.5	2.9	2.9	1.5	1.8	2.2	4.4	115.3
25-98	Traffic Alert & Collision Avoidance System (TCAS)	59.6	0.8								60.4
21-01	CNS/ATM	136.5	68.6	49.8	61.2	62.7	93.8	103.0	110.1	470.0	1155.8
02-02	Tactical Air Moving Map Capability (TAMMAC)	50.1	16.3	17.8	17.0	13.3	8.0	2.3			124.7
01-02	AMC&D/MPCD	159.2	43.1	45.3	42.4	44.0	16.1	10.2	8.8		369.2
07-04	Attitude Gyro Upgrade	37.4	8.7	12.1	0.9						59.0
09-04	Aircrew Wireless Internal Communications System (AWICS)	6.5	8.7	4.6	4.4	4.6	4.4	7.7	7.3	56.0	104.2
10-09	Military Flight Operations Quality Assurance (MFOQA)				1.6	2.1	3.6	4.7	4.1	28.9	44.9
11-09	Avionics Component Improvement Program (AVCIP)				2.0	2.0	2.0	2.9	3.8	0.4	13.1
	Inactive OSIPs	168.3									168.3
<b>Total</b>		<b>1372.5</b>	<b>178.5</b>	<b>147.8</b>	<b>148.9</b>	<b>143.4</b>	<b>138.2</b>	<b>141.7</b>	<b>145.5</b>	<b>701.4</b>	<b>3117.9</b>

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Global Positioning System (GPS) (OSIP 71-88)

MODELS OF SYSTEMS AFFECTED: All aircraft TYPE MODIFICATION: Common Avionics (Safety) (Added Capability)

**DESCRIPTION/JUSTIFICATION:**

The NAVSTAR GPS is designed to provide highly accurate passive position (16 meters), velocity (0.1 meter/sec) and time to users worldwide in all weather conditions. GPS will be integrated with communication, navigation, and weapon systems equipment (attitude heading reference systems, inertial navigation systems, mission computers, etc.). This OSIP procures the GPS B-kit equipment (receivers, antennas, amplifiers, CDNU, DDS, SDC, etc.) as required for the above platforms. Hardware configuration varies depending on the TMS of the aircraft. Approximately 2500 aircraft will be modified with equipment provided through this OSIP. The Global Positioning System Operational Requirement Document (ORD) 003-78 dated 22 Jan 90 was based on an Air Force General Operating Requirement (GOR) dated 28 Jan 1978. The Navy ORD for Enhanced GPS User Equipment for Navigation Warfare and GPS Modernization was approved on 7 June 2000.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

The NAVSTAR GPS program completed Phase II (Full Scale Engineering Development) and completed Milestone IIIA (Approval for Limited Production) in June 1986. Milestone IIIB (Approval for Full Production) was completed in January 1992. Research, Development, Test and Evaluation, Navy (RDT&E,N) is funded under program element #0604777N.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
NAVWAR	143	1.9	184	2.2	31	0.6	37	1.0	27	0.7	29	2.9	27	2.7	27	2.8	306	43.2	811	58.0	
Installation Kits N/R	1	3.4		3.3		1.4		0.6		1.0		1.1		1.1		1.1			1	12.9	
Installation Equipment																					
GPS	2,047	173.8																		2,047	173.8
NAVWAR	143	6.1	184	5.7	31	3.0	37	3.9	27	2.7	29	1.3	27	1.2	27	1.2	306	17.9	811	43.0	
Installation Equipment N/R		18.7		1.7																	20.4
Engineering Change Orders																					
NAVWAR Kit ECO		0.3																			0.3
Data		7.9		0.1																	8.0
Training Equipment																					
GPS	114	7.8																		114	7.8
NAVWAR	2	0.2																		2	0.2
Support Equipment		0.4																			0.4
ILS		0.5		0.1		*		*		*		0.1		0.1		0.1		0.6			1.4
Other Support		74.3		8.6		2.3		2.2		2.9		2.9		2.9		3.4		69.4			168.9
Interim Contractor Support																					
Installation Cost	122	1.4			123	1.8	80	1.3	32	0.5	40	0.7	53	1.1	27	0.6	333	10.7	810	18.1	
<b>Total Procurement</b>		<b>296.7</b>		<b>21.7</b>		<b>9.2</b>		<b>9.1</b>		<b>7.9</b>		<b>8.8</b>		<b>9.0</b>		<b>9.2</b>		<b>141.8</b>		<b>513.4</b>	

Notes:

- Totals may not add due to rounding
- Asterisk indicates amount less than \$51K
- Installation Equipment NR provides non recurring engineering on kits installed in subsequent years. Qty of 1 in FY03 procured as prototype and not installed. Qty of 1 in FY03 HH-60H unit bought will not be installed.
- Installation Kit, Installation Equipment and Installation unit costs vary by platform due to different equipment configurations.

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: All Aircraft (Excluding AV-8B) MODIFICATION TITLE: Global Positioning System (GPS) (OSIP 71-88)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Equipment is provided to the platform PMA and installed as per airframe ECP/AFC.

ADMINISTRATIVE LEADTIME: 3 PRODUCTION LEADTIME: 10

CONTRACT DATES: FY 2007: Dec-06 FY 2008: Dec-07 FY 2009: Dec-08

DELIVERY DATE: FY 2007: Oct-07 FY 2008: Oct-08 FY 2009: Oct-09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PY (126) kits	122	1.4			4	0.3														126	1.7	
FY 2007 (158) kits					109	1.4	49	0.8													158	2.2
FY 2008 (1) kits							1	*													1	*
FY 2009 (4) kits									4	0.1											4	0.1
FY 2010 (4) kits											4	0.1									4	0.1
FY 2011 (29) kits													29	0.7							29	0.7
FY 2012 (27) kits															27	0.6					27	0.6
FY 2013 (27) kits																	27	0.9			27	0.9
To Complete (306) kits																	306	9.8			306	9.8
<b>TOTAL</b>	<b>122</b>	<b>1.4</b>			<b>113</b>	<b>1.7</b>	<b>50</b>	<b>0.9</b>	<b>4</b>	<b>0.1</b>	<b>4</b>	<b>0.1</b>	<b>29</b>	<b>0.7</b>	<b>27</b>	<b>0.6</b>	<b>333</b>	<b>10.7</b>	<b>682</b>	<b>16.1</b>		

\*\*FY03 (1) HH-60 A-kit installation reflected in Installation Kit N/R line. Qty of 1 in FY03 HH-60H unit bought will not be installed.

\*\*\*Asterisk indicates amount less than \$51K

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	122					28	28	28	29	12	12	13	13	1	1	1	1	1	1	1	1	1
Out	122					28	28	28	29	12	12	13	13	1	1	1	1	1	1	1	1	1

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	7	7	7	8	6	7	7	7	333	682
Out	7	7	7	8	6	7	7	7	333	682

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: AV-8B

MODIFICATION TITLE: Global Positioning System (GPS) (OSIP 71-88)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Equipment is provided to the platform PMA and installed as per airframe ECP/AFC.

ADMINISTRATIVE LEADTIME: 11 PRODUCTION LEADTIME: 13

CONTRACT DATES: FY 2007: Sep-07 FY 2008: Sep-08 FY 2009: Sep-09

DELIVERY DATE: FY 2007: Oct-08 FY 2008: Oct-09 FY 2009: Oct-10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (16) kits					10	0.2	6	0.1												16	0.2
FY 2007 (26) kits							24	0.4	2	*										26	0.4
FY 2008 (30) kits									26	0.4	4	0.1								30	0.5
FY 2009 (33) kits											32	0.5	1	*						33	0.5
FY 2010 (23) kits													23	0.4						23	0.4
FY 2011 ( ) kits																					
FY 2012 ( ) kits																					
FY 2013 ( ) kits																					
To Complete ( ) kits																					
<b>TOTAL</b>					<b>10</b>	<b>0.2</b>	<b>30</b>	<b>0.5</b>	<b>28</b>	<b>0.5</b>	<b>36</b>	<b>0.6</b>	<b>24</b>	<b>0.4</b>					<b>128</b>	<b>2.1</b>	

\*\*Water Tank Panel AV-8B 16 month delivery (FY08-12)

\*\*\*Asterisk indicates amount less than \$51K

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							5	5	7	7	8	8	7	7	7	7	9	9	9	9
Out							5	5	7	7	8	8	7	7	7	7	9	9	9	9

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	6	6	6	6						128
Out	6	6	6	6						128

Exhibit P-3a Individual Modification

MODIFICATION TITLE: AN/ARC-210 Electronic Protection (EP) Combination Radio (OSIP 04-94)

MODELS OF SYSTEMS AFFECTED: AH-1W, AV-8B, C-2, CH-46E, C/MH-53D/E, EA-6B, KC-130F/R/T, F/A-18C/D E/F, UH-1N, HH-60 TYPE MODIFICATION: Common Avionics Modification

**DESCRIPTION/JUSTIFICATION:**

The AN/ARC-210 is a combination UHF/VHF, AM/FM jam-resistant radio that was developed to allow for EP interoperability with the Air Force, Army and NATO. The radio provides dual UHF capability for CV based TACAIR; VHF AM for close air support and maritime channels; VHF AM for air traffic control; and EP capabilities using the Air Force developed waveforms (UHF-AM HAVEQUICK I and II), and the Army developed waveform (VHF-FM SINGGARS). The AN/ARC-210 can be controlled by either a remote control unit or via a MIL-STD-1553 multiplex data bus. The EP parameters and single channel preset information can be loaded via a CYZ-10 Data Transfer Device (DTD). The fill information can consist of word-of-the-day for HAVEQUICK; the KGV-10 transec variable, hopsets and frequency lock-out tables for SINGGARS. Engineering Change Proposal (ECP) 12 incorporated embedded Demand Assigned Multiple Access (DAMA) Satellite Communications (SATCOM), embedded COMSEC, embedded Variable Message Format (VMF), Link 4A, and is compatible with the memory loader verifier. ORD # 333-06-93 dated 4/20/93 validated this modification. FY09 and out funding is required for non-recurring engineering and test efforts to determine Communication Security (COMSEC) retrofit solution in response to National Security Agency (NSA) policies and mandates.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

The AN/ARC-210 Common OSIP provides B-kits and common logistics requirements to multiple aircraft. Individual platform OSIPs include non-recurring engineering, integration, A-kit manufacturing and unique aircraft logistic requirements. Full rate Production Decision was approved in May 1994. Incorporation of these hardware mods will be accomplished via an ECP to the production receiver/transmitters configuration. Corresponding platform OSIP numbers; C-2A OSIP 24-94; AH-1W OSIP 3-93; AV-8B OSIP 23-93; CH-46E OSIP 9-92; EA-6B OSIP 42-93; F/A-18C/D OSIP 39-92 and 10-99; K/C-130F/R/T OSIP 2-92; UH-1N OSIP 15-92; CH/MH-53D/E OSIP 11-92.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AN/ARC-210 Kit	155	5.0																	155	5.0	
Installation Kits N/R		6.9		0.1																	7.0
Installation Equipment																					
AN/ARC-210 Equip	3,182	189.1																	3,182	189.1	
Installation Equipment N/R		5.8					20	2.2		0.4									20	8.4	
Engineering Change Orders		8.0				0.3		1.3													9.6
Data		5.4		0.4		0.4		0.4		0.4											6.9
Training Equipment	36	4.1		0.1				0.2											36	4.3	
Support Equipment		9.7						0.2													9.9
ILS		12.3		0.1		0.6		1.3		0.9											15.1
Other Support		40.3		0.9		1.1		2.0		2.3											46.5
Interim Contractor Support																					
Installation Cost	38	1.9																	38	1.9	
<b>Total Procurement</b>		<b>288.4</b>		<b>1.5</b>		<b>2.4</b>		<b>7.6</b>		<b>3.9</b>									<b>38</b>	<b>1.9</b>	<b>303.8</b>

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K
3. A-Kits for F/A-18C/D and KC-130 procured in FY 04-06. Installs are reflected in platform OSIP's.
4. A kits in FY04-06 are for KC-130, F/A-18C/D, HH-60

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: AH-1W, AV-8B, C-2, CH-46E, C/MH-53D/E, EA-6B, KC-130F/R/T, F/A-18C/D E/F, UH-1N, HH-60      MODIFICATION TITLE: AN/ARC-210 Electronic Protection (EP) Combination Radio (OSIP 04-94)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Prime Contractor

ADMINISTRATIVE LEADTIME: 5 Months      PRODUCTION LEADTIME: 11 Months

CONTRACT DATES:      FY 2007: \_\_\_\_\_      FY 2008: \_\_\_\_\_      FY 2009: \_\_\_\_\_

DELIVERY DATE:      FY 2007: \_\_\_\_\_      FY 2008: \_\_\_\_\_      FY 2009: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (38) kits	38	1.9																	38	1.9
FY 2007 ( ) kits																				
FY 2008 ( ) kits																				
FY 2009 ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
To Complete ( ) kits																				
<b>TOTAL</b>	<b>38</b>	<b>1.9</b>																	<b>38</b>	<b>1.9</b>

\*Note: KC-130 installation reflected in OSIP 02-92.  
F/A-18 installations are reflected in OSIP 10-99.

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	38																			
Out	38																			

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In										38
Out										38

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Ground Proximity Warning System (GPWS CAT I) Fixed Wing (OSIP 14-97)

MODELS OF SYSTEMS AFFECTED: KC-130T/F/R, VP-3, C-2A, S-3, UP-3, EA-6B, T-45 TYPE MODIFICATION: Common Avionics Modification

**DESCRIPTION/JUSTIFICATION:**

The Ground Proximity Warning System (GPWS) is a low-cost, highly reliable stand-alone commercial set built to provide reliable integration of on-board sensor data and provides an aural warning for excessive descent rate, terrain closure rate, inadvertent descent below glideslope and descent below minimum. Commercial GPWS implementation has shown a demonstrated dramatic reduction in controlled flight into terrain incidents. ECP-130-108 increases system safety by eliminating known deficiencies and applies to military application during normal and low level mission requirements. ORD # 555-88-00 signed 1 May 00 validates this modification.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

GPWS CAT-I OPEVAL (P-3C) was successfully completed October 1993. USAF retrofitting all C-130 T/M/S with same unit as part of Autopilot Upgrade Program. USAF OPEVAL in C-130.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
GPWS CAT I Kit	207	3.6	2	*			28	0.1	30	0.1	15	*	27	0.1	20	*	50	0.1	379	4.0	
Installation Kits N/R	1	9.2																	1	9.2	
Installation Equipment																					
GPWS CAT I Equip	229	13.8	2	0.2			28	0.8	30	0.9	15	0.5	27	0.9	20	0.7	50	1.8	401	19.5	
Installation Equipment N/R		10.1				0.6															10.7
Engineering Change Orders																					
Data		0.9		*		0.3															1.2
Training Equipment	3	1.6		0.1		0.3		0.3		0.1									3	2.4	
Support Equipment																					
ILS		3.1		0.4		0.2		0.2		0.2		0.1		0.2		0.3		0.4			5.1
Other Support		37.9		5.9		4.1		1.5		1.3		0.5		0.5		0.8		1.2			53.7
Interim Contractor Support																					
Installation Cost	162	4.5	28	1.8	17	1.1			28	0.3	30	0.4	15	0.2	27	0.3	70	0.9	377	9.5	
<b>Total Procurement</b>		<b>84.7</b>		<b>8.4</b>		<b>6.5</b>		<b>2.9</b>		<b>2.9</b>		<b>1.5</b>		<b>1.8</b>		<b>2.2</b>		<b>4.4</b>		<b>115.3</b>	

Notes:

- Totals may not add due to rounding
- Installation qty differ from Install kits/equipment due to installation of OFT trainers listed in training material.
- EA-6B GPWS was cancelled on 15 May 2007 by N883C2A. This cancellation caused changes to the funding profile in FY08 and subsequent outyears.
- Asterisk indicates amount less than \$51K

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: KC-130T/F/R, VP-3, C-2A, S-3, UP-3, EA-6B, T-45      MODIFICATION TITLE: Ground Proximity Warning System (GPWS CAT I) Fixed Wing (OSIP 14-97)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor or USN Field Modification Team

ADMINISTRATIVE LEADTIME: 2 Months      PRODUCTION LEADTIME: 12 Months

CONTRACT DATES:      FY 2007: Dec-06      FY 2008: \_\_\_\_\_      FY 2009: Dec-08

DELIVERY DATE:      FY 2007: Dec-07      FY 2008: \_\_\_\_\_      FY 2009: Dec-09

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (205) kits	162	4.5	28	1.8	15	1.0													205	7.2
FY 2007 (2) kits					2	0.1													2	0.1
FY 2008 ( ) kits																				
FY 2009 (28) kits									28	0.3									28	0.3
FY 2010 (30) kits											30	0.4							30	0.4
FY 2011 (15) kits													15	0.2					15	0.2
FY 2012 (27) kits															27	0.3			27	0.3
FY 2013 (20) kits																	20	0.3	20	0.3
To Complete (50) kits																	50	0.7	50	0.7
<b>TOTAL</b>	<b>162</b>	<b>4.5</b>	<b>28</b>	<b>1.8</b>	<b>17</b>	<b>1.1</b>			<b>28</b>	<b>0.3</b>	<b>30</b>	<b>0.4</b>	<b>15</b>	<b>0.2</b>	<b>27</b>	<b>0.3</b>	<b>70</b>	<b>0.9</b>	<b>377</b>	<b>9.5</b>

\*Installation qty differ from Install kits/equipment due to installation of OFT trainers listed in training material.

\* EA-6B GPWS was cancelled on 15 May 2007 by N883C2A. This cancellation caused changes to the funding profile in FY08 and subsequent outyears.

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	162	5	7	8	8	4	4	4	5					5	7	8	8	7	7	8	8
Out	162	5	7	8	8	4	4	4	5					5	7	8	8	7	7	8	8

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	3	4	4	4	6	7	7	7	70	377
Out	3	4	4	4	6	7	7	7	70	377

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)

MODELS OF SYSTEMS AFFECTED: P-3C, EP-3E, C-2A, EA-6B, KC130J, VH-3D, VH-60N, F/A-18E/F, F/A-18C/D, E-2C, MH-60S, MH-60R, F/A-18A+, H-1, CH-53E, AV-8B, TAV-8B, UP/VP-3A, NP-3C/D, MV-22B, MH-53E TYPE MODIFICATION: Common Avionics Modification

**DESCRIPTION/JUSTIFICATION:**

CNS/ATM provides new and enhanced Common Avionics equipment to comply with increasing ICAO (International Civil Aviation Organization) Standards and mandates. Areas impacted are worldwide, including transoceanic routes, as well as European and US National Air Space. Aircraft which are non-compliant with these standards and country mandates will be operationally delayed, circuitously rerouted, or denied access to controlled airspace. Some requirements are already in place (i.e. 8.33kHz VHF radio channels in Europe, Oct 99), while others are scheduled for implementation throughout the next several years (i.e.: Mode S, March 2009).

Prioritization of platform type and quantity is based on mission and anticipated operation in affected airspace. Enhanced functionality includes Mode S (Common Transponder and Aircraft Personality Module), 8.33KHz VHF channel spacing, RNP-4 integrity, Protected Instrument Landing System (P-ILS), Multi-Mode Receiver, and cockpit processing and display capability.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

Began Mode S and RNP/RNAV integration into P-3 and C-2 in 2004. Achieve IOC in 2007  
 Began Mode S and RNP/RNAV integration into E-2 in 2005. Achieve IOC in 2008  
 Began integration of 8.33 KHz VHF Radio into P-3C in 2005. Achieve IOC in 2007

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
CNS/ATM Kit	116	5.1	51	2.2	45	6.3	41	5.8	37	6.1	42	7.9	32	6.4	33	6.4	171	35.5	568	81.6	
Installation Kits N/R		2.3		2.4		0.1		0.5		1.7		1.6		0.3				0.9		9.9	
Installation Equipment																					
CNS/ATM Equip	179	16.1	372	11.4	54	10.3	71	22.2	62	23.2	126	39.7	66	26.3	64	27.0	612	159.8	1606	336.0	
CNS/ATM P-ILS	713	2.7																	713	2.7	
Installation Equipment N/R		58.3		13.4		2.4		0.8		2.4		14.8		35.6		38.1		70.2		236.1	
Engineering Change Orders				0.6		0.3		0.1		0.2		0.5		0.9		1.0		4.4		8.0	
Data		1.8		2.7		0.1		0.3		0.1		0.3		0.6		0.6		2.2		8.9	
Training Equipment		0.5		4.5		4.0		7.5		7.1		0.2		0.1		*		27.8		51.8	
Support Equipment				*		0.4		0.2		0.2		0.5		0.2		0.2		2.1		3.8	
ILS		3.1		1.4		0.7		0.6		0.7		1.6		2.7		3.2		12.2		26.3	
Other Support		45.1		24.2		18.4		19.1		13.8		18.8		20.2		26.4		112.0		298.0	
Interim Contractor Support																					
Installation Cost	40	1.6	51	5.7	283	6.8	16	4.0	39	7.3	37	7.8	42	9.6	47	7.0	396	42.9	951	92.7	
<b>Total Procurement</b>		<b>136.5</b>		<b>68.6</b>		<b>49.8</b>		<b>61.2</b>		<b>62.7</b>		<b>93.8</b>		<b>103.0</b>		<b>110.1</b>		<b>470.0</b>		<b>1155.8</b>	

- Notes:
1. Totals may not add due to rounding
  2. A-Kits, B-Kits, and Installation cost varies due to multiple & different functionalities/systems on each aircraft T/M/S
  3. B-Kits quantities differ from A-Kits where B-Kits consists of a card or module that will be integrated without A-Kit requirement.
  4. Installation Kit/Installation Equipment quantities reflect number of units procured, installation quantity reflects number of aircraft.
  5. Asterisk indicates amount less than \$51K

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: P-3C, EP-3E, C/KC-130, C-2A, EA-6B, KC130J, VH-3D, VH-60N, F/A-18E/F, F/A-18C/D E-2C, MH-60S, MH-60R, F/A-18A+, H-1, CH-53E, AV-8B, TAV-8B,UP/VP-3A, NP-3C/D, MV-22B, MH-53E MODIFICATION TITLE: CNS/ATM (OSIP 21-01)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: USN Field Modification Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2007: Feb-07 FY 2008: Feb-08 FY 2009: Feb-09

DELIVERY DATE: FY 2007: Jan-08 FY 2008: Jan-09 FY 2009: Jan-10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (76) kits	40	1.6	35	3.9	1	*														76	5.5
FY 2007 (267) kits			16	1.8	251	6.0														267	7.8
FY 2008 (45) kits					31	0.7	14	3.5												45	4.3
FY 2009 (41) kits							2	0.5	39	7.3										41	7.8
FY 2010 (37) kits											37	7.8								37	7.8
FY 2011 (42) kits													42	9.6						42	9.6
FY 2012 (47) kits															47	7.0				47	7.0
FY 2013 (64) kits																	64	7.5		64	7.5
To Complete (332) kits																	332	35.3		332	35.3
<b>TOTAL</b>	<b>40</b>	<b>1.6</b>	<b>51</b>	<b>5.7</b>	<b>283</b>	<b>6.8</b>	<b>16</b>	<b>4.0</b>	<b>39</b>	<b>7.3</b>	<b>37</b>	<b>7.8</b>	<b>42</b>	<b>9.6</b>	<b>47</b>	<b>7.0</b>	<b>396</b>	<b>42.8</b>	<b>951</b>	<b>92.6</b>	

**\*\*Notes:** E-2C GNS-530 COTS item; no production lead time.  
 Difference in A-kits and Installations (383) are as follows: KC-130J (16) B-kits, MH-60R (19) B-kits, MH-60S (137) B-kits, F/A-18A+ (72) B-kits, F/A-18C/D (135) B-kits, EA-6B (31) B-kits,  
 Decrease of MH-53E (-2) and P-3C/EP-3 (-25) installed by platform OSIP.

\*\*\*Asterisk indicates amount less than \$51K  
 Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	40	12	13	13	13	70	71	71	71	4	4	4	4	9	10	10	10	9	9	9	10
Out	40	12	13	13	13	70	71	71	71	4	4	4	4	9	10	10	10	9	9	9	10

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	10	10	11	11	11	12	12	12	396	951
Out	10	10	11	11	11	12	12	12	396	951

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Tactical Aircraft Moving Map Capability (TAMMAC) (OSIP 02-02)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, AH-1W, UH-1Y TYPE MODIFICATION: Common Avionics Modification

**DESCRIPTION/JUSTIFICATION:**

TAMMAC provides the aircrew an easily assimilated graphical presentation of the aircraft's position and the relative positions of targets, threats, terrain features, planned mission flight path, no fly zones, safe bases and other objects. TAMMAC will present the aircraft's current situation on a map using new or existing cockpit displays. In addition to providing a basic moving map capability, the TAMMAC system will serve as a memory resource for the overall aircraft mission system and will incorporate an improved data transfer and recording capability. This memory resource includes a data loader function of sufficient memory capacity and speed to load/update all required map theater and mission specific databases as well as the ability to record mission and maintenance data. TAMMAC will also provide a Terrain Awareness Warning System (TAWS) capability. The principle benefits anticipated, increased mission effectiveness and survivability, arise from improved situation awareness, reduced crew workload and enhanced capability for precision navigation, targeting, terrain avoidance, and mission replanning. TAMMAC is comprised of two Weapon Replaceable Assemblies (WRA), the Advanced Memory Unit (AMU) and the Digital Map Computer (DMC). The Digital Video Map Computer (DVMC) a DMC variant, will be utilized for Lot 26 and above F/A-18E/F aircraft. The TAMMAC system will replace the existing Navy AN/ASQ-196 Digital Map Set in the older aircraft, which is facing major parts obsolescence problems and is not capable of growing to support future requirements. TAMMAC will also replace the AN/ASQ-194 Data Storage Set which has insufficient memory and loading speed to load map theater databases. DVMCs are procured to replace F/A-18E/F DMCs installed in Lot 26 and 27. The DMC will be reused in the C/D retrofit program.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**  
Milestone III approved April 01.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
RDT&E																						
<b>PROCUREMENT</b>																						
Installation Kits																						
TAMMAC Kit	258	1.1	109	0.5	125	1.2	50	1.0	14	0.4									556	4.3		
Installation Kits N/R																						
Installation Equipment																						
TAMMAC Equip	436	22.1	159	7.2	116	6.1	59	4.3	19	1.2									789	41.0		
Installation Equipment N/R		14.1		2.6		3.8		4.2		4.2		1.5									30.4	
Engineering Change Orders		0.3				0.5		0.5		0.8		0.5									2.6	
Data		0.4		0.3						0.3											0.9	
Training Equipment		0.1																			0.1	
Support Equipment	216	1.3	90	0.3	90	0.3	27	0.1											423		1.9	
ILS		0.9		0.5		0.6		0.6		0.6		0.6									3.8	
Other Support		9.4		3.5		3.4		3.1		2.9		2.2									24.5	
Interim Contractor Support																						
Installation Cost	18	0.4	104	1.5	117	1.9	153	3.2	114	2.8	35	3.2	18	2.3							559	15.3
<b>Total Procurement</b>		<b>50.1</b>		<b>16.3</b>		<b>17.8</b>		<b>17.0</b>		<b>13.3</b>		<b>8.0</b>		<b>2.3</b>								<b>124.7</b>

**Notes:**

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K
3. Difference in A and B kits reflect procurements of AMU only and DVMC retrofits - no A kit required.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, AH-1W, UH-1Y MODIFICATION TITLE: Tactical Aircraft Moving Map Capability (TAMMAC) (OSIP 02-02)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: USN Field Modification Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007: Jan-07 FY 2008: Jan-08 FY 2009: Jan-09

DELIVERY DATE: FY 2007: Jan-08 FY 2008: Jan-09 FY 2009: Jan-10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
FY 2006 & PY (261) kits	18	0.4	104	1.5	117	1.9	22	0.5												261	4.3	
FY 2007 (109) kits							109	2.3													109	2.3
FY 2008 (125) kits							22	0.5	103	2.6											125	3.0
FY 2009 (50) kits									11	0.3	35	3.2	4	0.5							50	3.9
FY 2010 (14) kits													14	1.8							14	1.8
FY 2011 ( ) kits																						
FY 2012 ( ) kits																						
FY 2013 ( ) kits																						
To Complete ( ) kits																						
<b>TOTAL</b>	<b>18</b>	<b>0.4</b>	<b>104</b>	<b>1.5</b>	<b>117</b>	<b>1.9</b>	<b>153</b>	<b>3.2</b>	<b>114</b>	<b>2.8</b>	<b>35</b>	<b>3.2</b>	<b>18</b>	<b>2.3</b>						<b>559</b>	<b>15.3</b>	

\*\*Notes:

\*\* FY02 F/A-18 C/D/E/F (8) VAL/VER units: corresponding A-kits are in F-18 OSIP NRE line.

\*\* FY04 AV-8B (3) VAL/VER units: corresponding A-kits are in AV-8B OSIP NRE line.

\*\*FY05 AV-8B Trainer (5) units: corresponding A-kits are in AV-8B OSIP NRE line.

Installation Schedule

	FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	18		34	35	35		39	39	39		51	51	51		38	38	38			35		
Out	18		34	35	35		39	39	39		51	51	51		38	38	38			35		

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	18									559
Out	18									559

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Advanced Mission Computer & Displays (AMC&D)/ Multipurpose Color Display (MPCD) (OSIP 01-02)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, T-45 TYPE MODIFICATION: Common Avionics Modification

**DESCRIPTION/JUSTIFICATION:**

Advanced Mission Computer and Displays (AMC&D) System is targeted to replace existing aging/obsolete and performance limited AN/AYK-14(V) Mission Computer (MC) and Contractor Furnished Equipment Displays. AMC&D system consists of an Advanced Mission Computer (AMC) which includes Mission Processing and Display Processing, Display Heads (DH), High-Speed Data Bus interfaces with Fiber Channel Network Switches (FCNS) and an 8x10 display. AMC&D system will have modular components integrate on an Open Systems Architecture so that it can be tailored and configured for each application, and can address new performance requirements and technologies with minimum cost. AMC&D will provide improved mission computers and displays to handle increased requirement for flight, mission, and imagery data. Due to obsolescence problems with the current Multipurpose Color Display (MPCD), the AMC&D program is leveraging the 5x5 DH to provide a form, fit, function and interface replacement (no install funding required). Analysis of parts obsolescence will be required to maintain current AMC&D configuration and to determine life of type procurements as required. MPCD production buys begin in FY02 (no installation required) and AMC&D LRIP production buys began in FY01 with FRP buys beginning in FY04. The F/A-18E/F Retrofit Program (begins in FY06) goal is to achieve a 2-block configuration. Block 1 aircraft include Lots 23-25 and Block 2 includes Lots 26 and above. Block 1 will consist of replacing the AN/AYK-14 computers in Lots 23-24 and replacing the AMC with a newer configuration AMC in Lot 25. The computers are obtained as part of a reuse program from Block 2 portion of the upgrade and all Lots will require an A-kit. Lots 26 and 27 of Block 2 are provisioned to accept all WRAs for Block 2. The FY06 procurement for Lots 26 consisted of FCNS, displays and digital video mapping card. The FY06 procurement for Lot 27 consisted of displays, DVMC, and upgrade to a card in the AMC. To maintain the common block configuration, new AMCs are procured for both Lots in the out years. The AMCs removed from Lots 26 and 27 will be part of the reuse to the Block 1 configuration. The AMCs procured for Lot 28 and 29 do not require installation costs since they are a form fit function replacement for as-delivered AMCs. The systems removed from Lots 28 and 29 will be part of the reuse process. AMC&D MNS - M061-88-94 of 2 December 1994. AMC&D ORD Ser. No. 549-88-00 Approved 21 March 2000. The FY08, 09 and 10 procurements include B-kits to provide digital output for the 8x10 AMPD (HRRRI) to address a COMOPTEVFOR finding of poor ready room playback quality of the current analog video signal.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

AMC and 5x5 display CDR - 2nd Qtr FY01. FCNS CDR - 4th Qtr FY01, 8x10 CDR - 2nd Qtr FY02.  
 F/A-18E/F: OPEVAL - 2nd Qtr FY03, Milestone III - 4th Qtr FY04, OA - 3rd Qtr FY02, FOT&E 3rd Qtr FY04.  
 AV-8B DT-IIB-2 - 4th Qtr FY01, OPEVAL - 4th Qtr FY02, Milestone III - 2nd Qtr FY03.  
 Due to variation in lead times, B-kits are procured in year 1, A-kits in year 2 and installs in year 3. B-kit lead time 19 months, A-kit lead time 8 months.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AMC&D Kit			32	0.7	11	0.2	17	1.2	51	4.1	12	0.8								123	7.0
Installation Kits N/R																					
Installation Equipment																					
AMC&D / MPCD Equip	507	85.4	89	32.3	108	36.4	83	32.6	55	30.5										842	217.2
Installation Equipment N/R		46.9		4.7		3.1		3.4		2.9		4.4		5.6		6.1					77.1
Engineering Change Orders		0.4		0.3		0.3		0.3		0.3		0.3		0.3		0.3					2.2
Data		1.1																			1.1
Training Equipment		2.0																			2.0
Support Equipment		1.3		1.7		0.9		0.9		0.3		0.3		0.3		0.3					5.8
ILS		7.5		1.7		2.0		1.9		2.0		0.7		0.5		0.4					16.9
Other Support		14.6		1.7		1.3		1.3		1.4		1.5		1.7		1.8					25.2
Interim Contractor Support																					
Installation Cost					70	1.2	41	0.7	45	2.7	98	8.1	12	1.9						266	14.7
<b>Total Procurement</b>		<b>159.2</b>		<b>43.1</b>		<b>45.3</b>		<b>42.4</b>		<b>44.0</b>		<b>16.1</b>		<b>10.2</b>		<b>8.8</b>					<b>369.2</b>

**Notes:**

- Totals may not add due to rounding
- MPCD is a drop-in-replacement. No A-kit required.
- B-Kit (WRA) procured in outyears are necessary to meet common block configuration.
- See Install footnote for further clarification.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, T-45

MODIFICATION TITLE: Advanced Mission Computer & Displays (AMC&D)/ Multipurpose Color Display (MPCD) (OSIP 01-02)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Prime Contractor

ADMINISTRATIVE LEADTIME: 5 Months

PRODUCTION LEADTIME: 19 Months

CONTRACT DATES: FY 2007: Jan-07 FY 2008: Jan-08 FY 2009: Jan-09

DELIVERY DATE: FY 2007: Aug-08 FY 2008: Aug-09 FY 2009: Aug-10

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2006 & PY (32) kits					32	0.6													32	0.6
FY 2007 (23) kits					23	0.4													23	0.4
FY 2008 (49) kits					15	0.3	34	0.6											49	0.9
FY 2009 (86) kits							7	0.1	45	2.7	34	2.8							86	5.6
FY 2010 (64) kits											64	5.3							64	5.3
FY 2011 (12) kits													12	1.9					12	1.9
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
To Complete ( ) kits																				
<b>TOTAL</b>					<b>70</b>	<b>1.2</b>	<b>41</b>	<b>0.7</b>	<b>45</b>	<b>2.7</b>	<b>98</b>	<b>8.1</b>	<b>12</b>	<b>1.9</b>				<b>266</b>	<b>14.6</b>	

Note: Lots 26 (64) B-kits with associated installation cost included in schedule, no A-kit required.

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						23	23	24		13	14	14		15	15	15		32	33	33
Out						23	23	24		13	14	14		15	15	15		32	33	33

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In		4	4	4						266
Out		4	4	4						266

\* A-Kits, B-Kits and Installs do not align. A or B-Kits which require installation are shown.

\*\* F/A-18's longest lead time component is 19 months.

Note 1: AMC&D sub-systems may be installed at different times. Aircraft quantity is counted in year of first installation.

Note 2: Kit detail by Lot

Lot	Description
Lot 22-24	A-Kit (a/c mod kit), B-kit (5x5)
Lot 25	A-Kit (a/c mod kit)
Lot 26	B-Kits (AMC, FCNS, 8x10)
Lot 27	A-Kit (8x10 HRR1 kit), B-Kit (AMC, FCNS, 8x10)
Lot 28	A-Kit (8x10 HRR1 kit), B-Kit (AMC)
Lot 29	A-Kit (8x10 HRR1 kit), B-Kit (AMC)
Lot 30	A-Kit (8x10 HRR1 kit)

Note 3: Lots 27-29 AMC retrofits are O-Level mods with no install cost.

Note 4: Due to variation in lead times, B-kits are procured in year 1, A-kits in year 2 and Installs in year 3. B-kit lead time 19 months, A-kit lead time 8 months.

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: Attitude Gyro Upgrade (OSIP 07-04)

MODELS OF SYSTEMS AFFECTED: CH-53E/D, MH-53E, CH-60S, EP-3E, HH-60H/J, P-3C, H-46, SH-60B/F/H, and MH-60R TYPE MODIFICATION: Common Avionics Modification

**DESCRIPTION/JUSTIFICATION:**

There are eleven (11) current attitude gyro systems in the CH-53E/D, MH-53E, CH-60S, EP-3E, HH-60H/J, P-3C, H-46, SH-60B/F/H, and MH-60R aircraft that are significant fleet operational and support cost drivers in the flight hour program. Two state-of-the-art Commercial-off-the-Shelf (COTS) products are available to improve readiness and reduce fleet operational and support costs in the flight hour program. The solution to the problem is to replace these obsolete gyros with a more reliable and maintainable gyro at the very lowest cost. In order to minimize time and cost for fleet introduction, replacement units shall be COTS in nature and be a form, fit, functional replacement.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

Initial procurement awards were Displacement Gyro's - May 2004 and Rate Gyro's - January 2005.  
COTS/NDI replacement system.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Attitude Gyro Upgrade Kit																					
Installation Kits N/R																					
Installation Equipment																					
Attitude Upgrade Equip	3,927	24.9	113	4.0	832	9.4														4872	38.3
Installation Equipment N/R		5.5		0.4																	5.8
Engineering Change Orders																					
Data		0.5		0.3																	0.8
Training Equipment																					
Support Equipment																					
ILS		0.2		0.1		0.2		0.1													0.7
Other Support		6.2		3.9		2.5		0.7													13.4
Interim Contractor Support																					
Installation Cost																					
<b>Total Procurement</b>		<b>37.4</b>		<b>8.7</b>		<b>12.1</b>		<b>0.9</b>													<b>59.0</b>

Notes:

- Totals may not add due to rounding
- H-53 OSIP # 08-06 reflects (7) Displacement Gyros in FY07.
- Asterisk indicates amount less than \$51K

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Military Flight Operations Quality Assurance (MFOQA) (OSIP 10-09)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, MH-60R/S, T-45C, CH-53E, MV22 TYPE MODIFICATION: Common Avionics Modification

**DESCRIPTION/JUSTIFICATION:**

MFOQA improves safety, readiness and asset conservation by assessment of aircrew and aircraft performance; improving training, operations, maintenance, and safety across all Naval Aviation platforms. Efforts will include procuring hardware, as required, to capture aircraft parametric data and data downloading capability to allow the processing & analysis required by MFOQA. Efforts will also include hardware & software upgrades to the various Squadrons' ground/work stations to enable MFOQA implementation. MFOQA Program directed by OSD mandate October 2005 and SECNAV February 06.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

Analysis of Alternatives (AoA) approved Sep 05; Capability Development Document (CDD) approved Jan 06  
 Milestone B 1st Qtr FY07, Milestone C 3rd Qtr FY09, IOC 1st Quarter FY10

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
MFOQA Kit																					
Installation Kits N/R																					
Installation Equipment																					
MFOQA Equip																					
Installation Equipment N/R																					
Engineering Change Orders								*		*		*		0.1					0.2		0.4
Data								0.1		*		0.1		0.1		0.1			0.7		1.2
Training Equipment								0.2		0.2		0.9		0.4		0.3			2.1		4.1
Support Equipment																					
ILS								0.1		*		0.1		0.2		0.2			1.4		2.0
Other Support								1.2		1.8		2.5		3.9		3.5			24.5		37.3
Interim Contractor Support																					
Installation Cost																					
<b>Total Procurement</b>								<b>1.6</b>		<b>2.1</b>		<b>3.6</b>		<b>4.7</b>		<b>4.1</b>			<b>28.9</b>		<b>44.9</b>

**Notes:**

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K
3. Differences in A Kit and B Kit quantities results from Quick Access Recorder procurements in FY13 and out.

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: Avionics Component Improvement Program (AVCIP) (OSIP 11-09)

MODELS OF SYSTEMS AFFECTED: All Aircraft TYPE MODIFICATION: Common Avionics Modification

**DESCRIPTION/JUSTIFICATION:**

AvCIP provides resources to address critical readiness and reliability deficiencies, obsolescence, loss of sustainability and top Fleet repair cost drivers in Naval avionics systems. In the year prior to execution, candidate projects from all T/M/S are collected, reviewed, competed and selected based upon proposal solution maturity and executability, mission criticality and urgency, degree of readiness impact or Fleet maintenance or repair cost burden, return on investment, and Fleet advocacy. AvCIP is considered a better business practice to address cost-wise readiness in support of NAE efficiency objectives. AvCIP is funded by both RDT&E,N and APN accounts to cover non-recurring engineering for design/development or re-design/modification, integration testing, prototype/lab asset development, qualification testing and engineering and logistics documentation and support services. APN funds will cover NRE to insert modern technology to address poor performance or obsolescence, and support initial procurements. Follow-on procurement tails are coordinated with Program Offices and their OSIPs.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:**

AvCIP project selection criteria includes proposed solution maturity and executability. Target project length to start of fielding of the solution is 12-18 months. Each procurement below is representative of initial project lab asset purchases for qualification and productionization validation. Units may be transferred to Fleet platforms as operational assets. Future year specific development profiles/milestones will be dependent upon projects competed and selected. Multiple projects may be selected each year.

**FINANCIAL PLAN: (TOA, \$ in Millions)**

	Prior Years		FY 2007		FY 2008		FY 2009		FY2010		FY2011		FY2012		FY2013		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AVCIP Kit																					
Installation Kits N/R																					
Installation Equipment																					
AVCIP Equip							4	0.4	4	0.4	4	0.4	10	0.7	14	0.9				36	2.8
Installation Equipment N/R								1.0		0.9		0.8		1.4		2.0					6.1
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
ILS								0.2		0.2		0.2		0.2		0.2					0.8
Other Support								0.5		0.5		0.5		0.5		0.5					2.4
Interim Contractor Support																					
Installation Cost									4	0.1	4	0.1	4	0.1	10	0.3	14	0.4		36	0.9
<b>Total Procurement</b>								<b>2.0</b>		<b>2.0</b>		<b>2.0</b>		<b>2.9</b>		<b>3.8</b>		<b>0.4</b>			<b>13.1</b>

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: All Aircraft

MODIFICATION TITLE: Avionics Component Improvement Program (AVCIP) (OSIP 11-09)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Component is provided to the platform PMA and installed as per airframe ECP/AFC.

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: Nov-08

DELIVERY DATE: FY 2007: \_\_\_\_\_ FY 2008: \_\_\_\_\_ FY 2009: Feb-10

(\$ in Millions)

Cost:	Prior Years		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY ( ) kits																					
FY 2007 ( ) kits																					
FY 2008 ( ) kits																					
FY 2009 (4) kits									4	0.1										4	0.1
FY 2010 (4) kits											4	0.1								4	0.1
FY 2011 (4) kits													4	0.1						4	0.1
FY 2012 (10) kits															10	0.3				10	0.3
FY 2013 (14) kits																	14	0.4		14	0.4
To Complete ( ) kits																					
<b>TOTAL</b>									<b>4</b>	<b>0.1</b>	<b>4</b>	<b>0.1</b>	<b>4</b>	<b>0.1</b>	<b>10</b>	<b>0.3</b>	<b>14</b>	<b>0.4</b>	<b>36</b>	<b>0.9</b>	

Installation Schedule

FY 2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In														1	1	2		1	1	2	
Out														1	1	2		1	1	2	

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	1	1	2		2	4	4		14	36
Out	1	1	2		2	4	4		14	36

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY						P-1 ITEM NOMENCLATURE						
Aircraft Procurement, Navy / APN5 Aircraft Modifications						058100, COMMON DEFENSIVE WEAPON SYSTEM						
Program Element for Code B Items:						Other Related Program Elements						
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	21.2	A	10.9	6.4	10.8						49.3	

DESCRIPTION: This line funds Gun Systems for Marine Corps assault support aircraft. OSIP 03-06 funds the Common Defensive Weapon System (CDWS). The CDWS is a .50 Caliber Medium Pintle Head (MPH) mounted weapon system which is being procured to replace the GAU-16 and the XM-218 .50 caliber machine guns. The CDWS provides a significant increase in firepower, accuracy, lethality, and reliability, and will maximize survivability through suppressive fire capabilities for Marine Corps assault support aircraft. Procurement of the system began in FY03. The CDWS consists of a GAU-21 .50 Caliber Machine Gun, a MPH mount with recoil dampening buffers, and an aircraft integration/mounting kit. This system will increase aircraft/aircrew survivability during assault support missions by increasing the effective range and rate of fire as compared to current systems. FY 09 Funding: Procure 172 CDWS for the CH-46E platforms and 44 CDWS for UH1-Y platforms.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
003-06 COMMON DEFENSE WEAPON SYSTEM	21.2	9.6	6.4	10.8						48.0
017-07 CREW-SERVED WEAPONS		1.3								1.3
TOTAL	21.2	10.9	6.4	10.8						49.3

1. FY2007 funding total includes \$0.8M received in GWOT supplemental.

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODIFICATION TITLE: COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06 )

MODELS OF SYSTEMS AFFECTED: CH-53D/E, CH-46, UH-1Y TYPE MODIFICATION: MISSION/ MISSION ENHANCEMENT

DESCRIPTION / JUSTIFICATION: The Common Defensive Weapon System (CDWS) is a .50 Caliber Medium Pintle Head (MPH) mounted weapon system which will provide enhanced defensive and suppressive fire for Marine Corps assault support aircraft. The CDWS consists of a GAU-21 .50 Caliber machine gun, a MPH mount with recoil dampening buffers, and an aircraft integration/mounting kit. This system will increase aircraft/aircrew survivability during assault support missions by increasing the effective range and rate of fire as compared to current systems.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The GAU-21 .50 Caliber Machine Gun is a Commercial Off-the-Shelf (COTS) item ready for deployment on Marine Corps assault support aircraft (CH-46, CH-53, and UH-1Y). The MPH and aircraft integration kit's base designs are also COTS though kit modifications for each T/M/S aircraft. CDWS is also being integrated on USN platform MH-60R/S through their own budget lines, thus enhancing the common configurations between USN and USMC.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
CH-46					84	1.3	172	2.7												256	4.0
CH-53E/D A KITS	65	11.8	334	8.4																399	20.2
UH-1Y					36	1.2	44	1.4												80	2.6
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
CH-46					84	2.6	172	5.4												256	8.0
CH-53E/D	399	6.0																		399	6.0
UH-1Y					36	0.5	44	0.5												80	1.0
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		0.4																			.4
TRAINING EQUIP		*																			*
SUPPORT EQUIP		1.7																			1.7
ILS		0.6		0.6		0.4		0.4													2.0
OTHER SUPPORT		0.7		0.6		0.4		0.4													2.1
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT	464	21.2	334	9.6	240	6.4	432	10.8												1,470	48.0

- Notes:
1. Asterisk indicates amount less than \$51K
  2. Each aircraft requires two guns.
  3. Prior years include buys from FY05-06
  4. The GAU-21's are installed at the organizational level.
  5. Totals may not add due to rounding.

BUDGET ITEM JUSTIFICATION SHEET										DATE:	
P-40										February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE				
Aircraft Procurement, Navy / APN5 Aircraft Modifications BA5							058200, ID SYSTEMS				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
QUANTITY											
COST (In Millions)	9.8	B	11.1	10.2	12.0	24.3	20.5	31.6	26.1	58.5	204.2

**DESCRIPTION:**

MK XIA Mode 5 provides improved secure cooperative combat identification via Identification Friend or Foe (IFF). MODE 5 is a product improvement which is designed to be installed through engineering changes to digital MK XII interrogators and transponders including, but not limited to the APX-118/123, UPX-37/41C, APX-111, RT-1832/1918, APX-119, and XS-950SI. Mode 5 is designed to be installed in all Navy T/M/S aircraft which are currently Mode 4 IFF capable. Mode 5 is developed in cooperation with NATO and is governed by STANAG 4193.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL
015-03 MARK XIIA MODE 5 IFF	9.8	11.1	10.2	12.0	24.3	20.5	31.6	26.1	58.5	204.2
TOTAL	9.8	11.1	10.2	12.0	24.3	20.5	31.6	26.1	58.5	204.2

MODIFICATION TITLE: MARK XIIA MODE 5 IFF (OSIP 015-03 )

MODELS OF SYSTEMS AFFECTED: VARIOUS (49 SEPARATE T/M/S) TYPE MODIFICATION: CAPABILITY IMPROVEMENT

**DESCRIPTION / JUSTIFICATION:**

MK XIIA Mode 5 provides improved secure cooperative combat identification via Identification Friend or Foe (IFF). MODE 5 is a product improvement which is designed to be installed through engineering changes to digital MK XI interrogators and transponders including, but not limited to the APX-118/123, UPX-37/41C, APX-111, RT-1832/1918, APX-119, and XS-950SI. Mode 5 is designed to be installed in all Navy T/M/S aircraft which are currently Mode 4 IFF capable. Mode 5 is developed in cooperation with NATO and is governed by STANAG 4193. Mode 5 was designated a "JROC special interest" program in March 2001 and is interoperable across all services. (CRD# 577-06-01). Mode 5 upgrades existing Mode 4 IFF equipment, including cryptography, support equipment, and associated hardware and software changes.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:**

MODE 5 completed a brassboard development in December 1997. Modeling and simulation to demonstrate interoperability was completed in February of 1998 to support NATO STANAG development. Proof of concept flight testing completed in December 1999. A Preliminary Design Review (PDR) for the proposed Engineering Change Proposal (ECP) to incorporate MODE 5 in the APX-118 was completed in July 2001. Contracts for prototype Cryptographic Module and ECP kit are presently executed. Milestone B was completed in May 2003. Operational Assessment (OA) completed 2nd quarter FY 2006 with Operational Evaluation (OE) scheduled for 3rd quarter FY 2008. Milestone C and Low Rate Initial procurement (LRIP) was approved in July, 2006 including a revised Acquisition Program Baseline Agreement.

**FINANCIAL PLAN: (TOA, \$ IN MILLIONS)**

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E		47.1		13.6		11.6		9.6		15.3		15.0		15.2		15.5					142.9
PROCUREMENT																					
INSTALLATION KITS																					
MODE 5 IFF A-KIT							7	0.1	2	*	80	0.7	80	0.8	80	0.8	133	1.3	382	3.7	
INSTALL EQUIPMENT																					0.0
MODE 5 IFF B-KIT	5	0.1	85	2.6	20	0.3	24	1.2	40	1.6	142	3.1	234	8.1	169	6.4	382	14.3	1,101	37.6	
INSTALL EQUIPMENT N/R		5.6		1.7		2.5		5.4		10.0		8.2		12.7		7.8		12.5			66.4
ECO				0.2		*		0.2		0.4		0.3		0.4		0.5		1.4			3.5
DATA		0.1		0.1		0.1		*		0.1		0.3		0.5		0.3		0.3			1.6
TRAINING EQUIP		*		0.1		0.4		0.1		0.3		1.4		1.5		0.9		3.0			7.7
SUPPORT EQUIP		0.8		3.7		4.1		1.6		7.6		1.6		1.7		0.0					21.0
ILS		0.2		0.5		0.4		0.4		0.9		0.9		1.3		1.7		3.9			10.2
OTHER SUPPORT		3.0		2.2		2.3		3.1		3.5		3.8		4.6		5.3		13.1			40.9
INTERIM CONTRACTOR SUPPORT																					0.0
INSTALLATION COST			5	*	85	0.1	20	*	31	*	42	0.1	222	0.2	314	2.5	764	8.7	1,483		11.5
TOTAL PROCUREMENT	5	9.8		11.1		10.2		12.0		24.3		20.5		31.6		26.1		58.5			204.2

**NOTES:**

- Mode 5 IFF "A" Kits will be required for installation on the F/A-18C/D platform along with the "B" kits. The other platforms will only require "B" kits.
- Asterisk (\*) indicates amount value less than \$51K
- Totals may not add due to rounding

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VARIOUS (49 SEPARATE T/M/S) MODIFICATION TITLE: MARK XIIA MODE 5 IFF (OSIP 015-03 )

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: FIELD INSTALL KITS AND VENDOR DEPOT ECP INSTALLATION

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2007 Nov 06 FY 2008 Nov-07 FY 2009 Nov-08

DELIVERY DATE: FY 2007 Nov 07 FY 2008 Nov 08 FY 2009 Nov 09

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & PY (5) kits			5	*																5	*
FY 2007 (85) kits					85	0.1														85	0.1
FY 2008 (20) kits							20	*												20	*
FY 2009 (31) kits									31	*										31	*
FY 2010 (42) kits											42	0.1								42	0.1
FY 2011 (222) kits													222	0.2						222	0.2
FY 2012 (314) kits															314	2.5				314	2.5
FY 2013 (249) kits																		249	2.4	249	2.4
TO COMPLETE (515) kits																		515	6.3	515	6.3
Total			5	*	85	0.1	20	*	31	*	42	0.1	222	0.2	314	2.5		764	8.7	1483	11.5

Installation Schedule

	FY2006 & Prior	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In			3	2		21	21	21	22	5	5	5	5	7	8	8	8	10	10	11	11
Out			3	2		21	21	21	22	5	5	5	5	7	8	8	8	10	10	11	11

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	55	55	56	56	78	78	79	79	764	1483
Out	55	55	56	56	78	78	79	79	764	1483

NOTES:

1. Asterisk (\*) indicates amount value less than \$51K
2. Totals may not add due to rounding

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											February 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							059000, V-22 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	TO COMPLETE	TOTAL	
QUANTITY												
COST (In Millions)	146.2	B	144.8	67.9	41.5	25.0	25.6	26.0	26.6	1145.3	1648.9	

DESCRIPTION: The V-22 is a tilt-rotor, vertical takeoff and landing aircraft currently being developed for joint service application. The program is being designed to provide an aircraft to meet the amphibious/vertical assault needs of the Marine Corps, the strike rescue needs of the Navy, and supplement USSOCOM special mission aircraft. The aircraft will be capable of flying 2,100 miles with one refueling, giving the Services the advantage of a Vertical/Short Takeoff and Landing (V/STOL) aircraft the could rapidly self-deploy to any location in the world.

The FY 2009 budget request reflects the funding level necessary to correct currently known deficiencies. The FY 2009 modifications program procures retrofit kits necessary to correct discrepancies identified during initial flight testing as well as those resulting from any redesign efforts.

The current procurement objective is 458: 360 MV-22 Marine Corps aircraft, 48 HV-22 Navy aircraft, and 50CV-22 aircraft for USSOCOM.

Type Modifications: Safety, Reliability, Increased Service Life, Improved Mission Capabilities

OSIP No. / DESCRIPTION	PRIOR									TO	
	YEARS	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	COMPLETE	TOTAL	
022-01 MV-22 CORRECTION OF DEFICIENCIES AND PRE BLOCK A THROUGH C	146.2	144.8	67.9	41.5	25.0	25.6	26.0	26.6	1145.3	1648.9	
TOTAL	146.2	144.8	67.9	41.5	25.0	25.6	26.0	26.6	1145.3	1648.9	

1. FY2007 funding total includes \$54.6M received in GWOT supplemental.
2. FY2008 funding totals do not include \$107.8M previously requested for current FY2008 GWOT requirements.

Asterisk (\*) indicates amount value less than \$51K

MODIFICATION TITLE: MV-22 CORRECTION OF DEFICIENCIES AND PRE BLOCK A THROUGH C ( OSIP 022-01 )

MODELS OF SYSTEMS AFFECTED: V-22 Series TYPE MODIFICATION: Safety, Reliability, Increased Service Life, Improved Mission Capabilities

## DESCRIPTION / JUSTIFICATION:

Future ECPs:  
 PRE BLOCK A, BLOCK A, BLOCK B, and BLOCK C: Major configuration changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, Structure/Airframe, Fuel, Software, and Environmental Control System (ECS). Specifically included are Nacelle changes, Avionics, Blade Fold Harness, Fuel Probe, Active Vibration Suppression System, Constant Frequency Generator and Variable Frequency Generator. Additional configuration changes include Effectiveness and Suitability and Enhanced capability. ECPs for (R&M changes, Ice Protection and Clam Shell Doors) are configuration items associated with production Block A, Block B, and Block C changes. Aircraft Retrofits are implemented to coincide with resources and aircraft availability, stand-alone retrofit ECPs are generated. These Retrofit ECPs are the implementation of the approved production Block Configuration changes.

ECP-344:  
 REGULATED CONVERTER: Incorporates fixes to alleviate concerns associated with spec compliance and eliminate nuisance failures for fleet aircraft.  
 SHAFT DRIVEN COMPRESSOR SCREEN: Incorporates a new shaft drive compressor screen with one piece inner and outer frames to reduce the number of parts and larger holes to increase air flow.  
 RAMP ACTUATOR: Incorporates fixes for reliability and life limit deficiencies. There are two ramp actuators per aircraft.  
 CARGO RESTRAINT SYSTEM: Changes the cargo restraint factors from a dynamic to a static tie down system to improve Fleet suitability.  
 FUEL ISOLATION TUBES: Incorporates the productionized final design for resistive tubes on hoses for lightning strike protection.  
 AVIONICS: Avionics modifications to the V-22 will improve display reliability, eliminate communication security issues and alleviate parts obsolescence/vendor problems. Changes to the V-22 avionics will include: Display System upgrade, Cockpit Inter communication System modification, upgraded Mission Computer, updated Data Transfer Module, Control Display Unit/Engine Instrument Caution Advisory System upgrade, Control Display Unit Keyboard upgrad, and Avionics Interface Units upgrades.  
 POWER TRANSMISSION AND CONTROL: Changes to the V-22 Power Transmission and Control System will improve reliability and maintainability. Changes to the V-22 Power Transmission and Control System will include: swashplate reliability upgrades, engine gimbal ring/spherical bearing installation revision, updated refuel/defuel valve, bull gear shroud and engine gimbal ring.  
 COCKPIT: Changes to the V-22 cockpit will improve crew safety, mission suitability and overall reliability. Changes to the V-22 cockpit include: night vision goggle compatible hardware, upgraded inertial reels, upgraded pilot and co-pilot restraint system, throttle control lever soft stop modification, and improved rain removal.  
 STRUCTURAL: Structural changes to the V-22 will increase survivability, improve maintainability and aircraft availability, eliminate component interferences, improve suitability and correct safety related issues. Structural changes include: forward sponson fuel bladder access redesign/install powder panels, environmental control unit Ram air barrier filter, avionics left hand mounting tray, aft upper door strut, add manual drive decal, fold blades in high winds and modified trunnion fitting.  
 PRODUCTION ROTOR LIGHTING PROTECTION: Improves rotor system lighting protection by adding improved bonding harness and grounding strap bracket.  
 BRACKET HYDRAULIC LINE CLAMPING: Relocate clamping provisions from the removable conversion actuator fairing to the frame and improve the tube installation.  
 SWASHPLATE DRAG TUBE: Redesign Swashplate Drag Tube to increase part life.  
 WASHER: Washer to now be included with attach hardware to ensure adequate tying of the assembly.  
 RELIABILITY & MAINTAINABILITY FIXES: Includes Corrective Action Plans to make the aircraft compliant with Operation Requirements Document requirements.

ECP-400: AIRCRAFT MAINTENANCE TRAINER: Improves training and pilot proficiency by incorporating modifications to the AMT #1 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.

ECP-397: FULL FIDELITY SIMULATOR (FFS) UPGRADES: Improves training and pilot proficiency by incorporating modifications to the FFS #1 & #2 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.  
 ECP-###: FLIGHT TRAINING DEVICE (FTD) UPGRADES: Improves training and pilot proficiency by incorporating modifications to the FTD #1 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.

ECP-427R1: MECHANICAL PART TASK TRAINER: Improves maintainer and aircrew proficiency by incorporating Block 'A' configuration changes.

ECP-451: INTERACTIVE MULTIMEDIA INSTRUCTION: Improves maintainer and aircrew proficiency by incorporating Block 'A' configuration changes.

ECP-511: AIRFRAME PART TASK TRAINER, Incorporate Block 'B' configuration changes.

ECP-###: Block B safety configuration changes required to meet mission requirements. Changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, and Structure/Airframe.

ECP-###: Block B safety, reliability and maintainability changes required to meet mission requirements. Changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, and Structure/Airframe.

ECP-722: Shaft Driven Compressor Inlet Barrier Filter, provides an inlet barrier filter to prevent particles from reaching and damaging the Shaft Driven Compressor.

ECP-592: Wing Stow System, Incorporate hydraulic system isolation valve normally closed to inhibit Wing Stow System Forward 2 Lock Pin actuator from extending when performing wing maintenance.

ECP-###: Refuel/Defuel Valve, redesign of the refuel/defuel valve.

ECP-656: Rotor Harness Redesign, Change the moldings area, extending them to the clamp locations on each side of the strap and squaring off the molded area.

ECP-669: MLG Door Hinge Redesign, new-thicker machined hinge replacement designed to meet current loading requirements.

ECP-505: ECU Water Spray Redesign, redesigned the water spray inlet assembly (U-tube) and the heat exchanger/crossover tube assembly so the system tolerance can be increased to sand and dust ingestion.

ECP-559: AMT #2, Improves training and pilot proficiency by incorporating modifications to the AMT #2 to reflect most current Block A and Block B aircraft configuration.

ECP-513R1: Forward Engine Air Bleed, Redesign Air tube will improve reliability and increase aircraft safety.

ECP-539: Plugs & Covers, Redesign plugs and covers to meet durability and operational suitability.

ECP-###: Lightweight Paint, improves aircraft suitability and reduces IR Vulnerability.

ECP-652R1: Cargo Hook Door Actuator, new design improves cargo hook door reliability and operational suitability.

ECP-573: NLG Shock Struts, Nose Landing Gear shock struts are a life limited part, redesigned struts will eliminate safety of flight issue.

ECP-493: Wheel & Brake, Redesign to improve reliability on the wheel, brake and components.

ECP-470: Lateral Mass Balance, design change that will increase lateral mass balance by 9 lbs and add new pads, tungsten plates and bellcrank.

ECP-471: Life Raft, designed for 20-man raft with overflow capacity to 30-man.

ECP-478: SDC Duct Leak Switch Set Point, Reliability change to SDC duct leak switches to reduce false alarm pilot nuisance alarms.

ECP-479: Suction Lift Pump Bypass Valve, Redesign valve to prevent the diaphragm inverting due to pressure spike.

MODIFICATION TITLE: MV-22 CORRECTION OF DEFICIENCIES AND PRE BLOCK A THROUGH C ( OSIP 022-01 )

MODELS OF SYSTEMS AFFECTED: V-22 Series TYPE MODIFICATION: Safety, Reliability, Increased Service Life, Improved Mission Capabilities

ECP-684: Ice Protection System and Fairings, provides automatic anti-ice protection in aircraft icing conditions.

ECP-721: Ramp Mounted Weapon System (RMWS), Provide an all quadrant Defensive Weapon System for the V-22.

ECP-716: Infra-Red Suppressor (IRS) Redesign, Provide a more reliable configuration to items that have contributed to poor system reliability and identify a repair kit for the aircraft Infra-Red Suppressor system.

ECP-####: Cabin Upper Crew Door, Provides redesign to the cabin upper crew door and the proper use of the new door.

ECP-627: Engine Air Particle Separator (EAPS), Provides a more efficient and reliable system by incorporating an upgraded EAPS Blower case drain hose, an upgraded EAPS Blower outlet hose, and the elimination of restrictors in the case drain circuit.

ECP-621: Full Authority Digital Electronic Control (FADEC), Provides modification of the FADEC mount brackets to allow proper seating of FADEC into mounting bracket.

ECP-###: Improved Troop Seats, Provides for the redesign of the seat and the supporting airframe seat mount points.

ECP-557: Additional Force & Drive Rate for TCL, Provides an increased maximum drive rate to meet current design specification requirements.

ECP-544: Slip Ring Commonality, Provides a revised routing of the power feeder lines in the right and left hand Engine Nacelles.

ECP-515: Improved Nacelle Blower, Provides a change to correct current nacelle blower bearing failures.

ECP-685: Incorporation of Miscellaneous ECPs, Implements the following ECPs on Lot 4 aircraft: 2nd source Refuel/Defuel Valve, Block B Cargo Door Actuator Redesign and Cargo Tie Down.

ECP-720: Improved Electrical Contactors & Material Torque Valve, Changes material of nuts for electrical contactors and revises the torque values for fastening wiring to contactors.

ECP-613: Purge Check Valve Cracking Pressure Change, Provides a modified purge valve to increase the cracking pressure range.

ECP-746: Air Cycle Machine Filtration, Modifies the bearing cooling flow path and adds a barrier filter.

ECP-741: Fuel System Changes, Provides redesigned Rupture Disks and Sponson Boost Pumps to decrease fatigue failure and eliminate potential fuel run back.

ECP-649: O2N2 Concentrator, Modifies the O2N2 Concentrator to eliminate false failures at low end of tolerance band for input air pressure.

ECP-647: Landing Gear Isolation Valve, Provides a new Landing Gear Isolation Valve to eliminate single failures in the normal control system which can cause retraction or extension in flight at unsafe airspeed.

ECP-693: Fuel Surge Valve: Provides a regulator in the V-22 refueling system to limit the surge pressures associated with aerial refueling.

ECP-717: Tilt Axis Gear Box Mounting Hardware Change, Provides upgraded hardware for mounting in the tilt axis gear box.

ECP-751: Blade Deice Distributor (BDD) Chassis Redesign, Provides upgraded BDD and mounting bracket to alleviate fretting and cracking associated with original BDD.

ECP-763: Nose Landing Gear (NLG) Door Mechanism Improvements, Provides modified bellcrank stop and clamp-up bushings to prevent damage to NLG doors.

ECP-###: Retractable Refueling Probes, Provides Retractable Refueling Probe installation kits for 4 retrofit aircraft.

ECP-###: FLIR Firmware Improvements, Provides the FLIR System Electronics Unit Video Signal Processor firmware version 2.38.

ECP-###: Aerojet Fire Suppressors Revision, Provides redesigned mounting hardware for fire suppressor cannisters to reduce potential for galling threads during installation.

ECP-782: ALE-47 Forward Firing Bucket, Provides for the ALE-47 Dispenser with Cabin Dispense Switch. Modifications will increase survivability.

## DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The MV-22 aircraft are currently in Low Rate Production. First acceptance and incorporation has been in production aircraft. All Awarded Kit deliveries and Installations are on schedule.

MODIFICATION TITLE: MV-22 CORRECTION OF DEFICIENCIES AND PRE BLOCK A THROUGH C ( OSIP 022-01 )

MODELS OF SYSTEMS AFFECTED: V-22 Series TYPE MODIFICATION: Safety, Reliability, Increased Service Life, Improved Mission Capabilities

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
Addl Force & Drive Rate Output for TCL	39	1.7																		39	1.7
Aerojet Fire Suppressors Revision	46	0.1	13	*	17	*	16	*	21	*	2	*								115	.3
Air Cycle Machine Filtration			12	0.4	41	1.1	22	0.6	13	0.3										88	2.4
Blade Deice Distributor Chassis Redesign	46	1.0	12	0.3	13	0.3														71	1.6
Block A to B (9 A/C) (LOT 5, 41-49)			9	47.0																9	47.0
Block B #1 COD							12	0.4												12	.4
Block B #2 COD							12	0.4												12	.4
Block C (120 A/C)													2	7.5	3	11.5	93	375.2	98	394.2	
Various CCP	184	25																		184	25
Clam Shell Doors (11)					11	6.5														11	6.5
Climb Dive Valve	28	0.4																		28	.4
ECP 471 Life Rafts	3	*																		3	*
ECP 478 SDC DUCT LEAK SWITCH SET POINT	19	*																		19	*
ECP 479 SUCTION LIFT PUMP	20	*																		20	*
ECP 782 ALE-47 Forward Firing Bucket			44	2.5			19	1.1	22	1.2	2	0.1								87	4.9
ECP-V-22-0348 Interface Units	8	0.3																		8	.3
ECP-V-22-0647 Lndng Gear Isolation Valve			39	2.2	38	2.1	14	0.8	19	1.0										110	6.1
ECP-V-22-0649 O2N2 Concentrator			13	0.1	17	0.1														30	.2
ECP-V-22-0693 Fuel Surge Valve			32	0.1	13	*	19	0.1	3	*										67	.2
ECU Water Spray Design			57	*																57	*
Electrical Contactors Matl & Torque Valv			36	*	30	*	15	*	3	*										84	.1
Engine Air Particle Separator	32	0.8	24	8.6	36	10.0														92	19.5
FLIR Firmware Improvements	10	*	12	*	14	*	3	*												39	.1
FWD Engine Bleed Air	27	0.4																		27	.4
Fuel System Changes			47	0.5	13	0.1	19	0.2	3	*										82	.9
Full Authority Digital Engine Controller	20	0.1																		20	.1
IR Suppressor	21	2.0	20	1.3	27	1.7														68	5.1
Ice Protection - Block B	15	0.3	69	*	2	0.7	1	0.3												87	1.3
Incorporation of Misc ECPs			5	0.3	4	0.3	1	0.1												10	.7
MLG Door Hinge Redesign			20	0.3	20	0.3	18	0.3												58	1.0
NLG Door Mechanism Improvements			48	*	6	*														54	*
Plugs & Covers	21	0.5																		21	.5
Pre Block A to B			1	1.3																1	1.3
Pre-Block A to B Supplemental			2	54.6																2	54.6
Purge Chk Valve Cracking Pressure Change			33	*																33	*
Ramp Mounted Weapon System	10	0.5	10	0.2	9	0.7														29	1.5
Refuel/Defuel Valve			28	0.7																28	.7
Retractable Refueling Probes			4	1.7																4	1.7
Rotor Harness Redesign	52	0.7																		52	.7
Shaft Driven Comp Inlet Barrier Filter			20	0.2																20	.2
Swashplate Actuator Hose	53	1.8																		53	1.8
TAGB Mounting Hardware			54	0.4																54	.4
Troop Seats	44	4.8																		44	4.8
Upper Crew Door			12	1.3	22	2.5	22	2.5												56	6.3
INSTALLATION KITS N/R		29.0		0.9		0.8						18.3		12.6							61.6
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R		0.6							0.3												.9
ECO																					
DATA		0.2		*		*		*		*		*		*		*		*		*	.3
TRAINING EQUIP	24	72.2	7	13.5	6	18.7	8	23.2	5	9.8								16	179.9	66	317.2
SUPPORT EQUIP		0.2		0.4		1.8		3.0		5.5		4.2		4.6		3.7					23.4
ILS		1.0																			1.0
OTHER SUPPORT		0.8		1.2		1.5		2.1		2.0		2.0		1.3		1.4			5.7		18.0
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	199	2.3	83	4.7	245	18.3	193	6.5	152	4.8	17	0.9			2	9.9	112	584.5	1,003	631.9	
TOTAL PROCUREMENT	921	146.2	766	144.8	584	67.9	394	41.5	241	25.0	21	25.6	2	26.0	5	26.6	221	1,145.3	3,155	1,648.9	

Asterisk (\*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: V-22 Series MODIFICATION TITLE: MV-22 CORRECTION OF DEFICIENCIES AND PRE BLOCK A THROUGH C (OSIP 022-01)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: Various Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2007 Various FY 2008 Various FY 2009 Various

DELIVERY DATE: FY 2007 Various FY 2008 Various FY 2009 Various

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		TO COMPLETE		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2006 & FY (235) kits	199	2.3	21	0.3	15	0.2														235	2.8
FY 2007 (241) kits			24	2.0	179	16.5	38	0.3												241	18.8
FY 2008 (247) kits			38	2.3	51	1.7	127	5.0	31	0.4										247	9.4
FY 2009 (121) kits							28	1.2	93	3.0										121	4.2
FY 2010 (43) kits									28	1.4	15	0.8								43	2.2
FY 2011 (2) kits											2	0.1	0	0.0						2	0.1
FY 2012 (2) kits																2	9.9			2	9.9
FY 2013 (3) kits																		3	17.3	3	17.3
To Complete (109) kits																		109	567.2	109	567.2
<b>Total</b>	<b>199</b>	<b>2.3</b>	<b>83</b>	<b>4.7</b>	<b>245</b>	<b>18.3</b>	<b>193</b>	<b>6.5</b>	<b>152</b>	<b>4.8</b>	<b>17</b>	<b>0.9</b>	<b>0</b>	<b>0.0</b>	<b>2</b>	<b>9.9</b>	<b>112</b>	<b>584.5</b>	<b>1003</b>	<b>631.9</b>	

Installation Schedule

	PRIOR YEARS	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	199	11	23	24	25	61	61	61	62	48	48	48	49	38	38	38	38	5	4	4	4	
Out	199		11	23	24	25	61	61	61	62	48	48	48	49	38	38	38	38	5	4	4	4

  

	FY 2012				FY 2013				To Complete	Total
	1	2	3	4	1	2	3	4		
In	0	0	0	0	1	1	0	0	112	1003
Out	4	0	0	0	0	1	1	0	112	1003