

CLASSIFICATION: UNCLASSIFIED												
Exhibit P-40, BUDGET ITEM JUSTIFICATION										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY <i>Aircraft Procurement, Navy/APN-5 Aircraft Modifications</i>							P-1 ITEM NOMENCLATURE <i>Common Avionics</i>					
Program Element for Code B Items:							Other Related Program Elements					
	Prior Years	ID Code		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total
QTY		A										
COST (In Millions)	734.5	A		68.7	147.5	167.5	225.6	201.2	182.3	173.6	1,154.1	3,055.0
<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 Embedded Global Positioning System/Inertial Navigation System (EGI) contains full Precise Position Service GPS on a single electronic module, plus a state-of-the-art Ring Laser Gyro inertial navigation system. (5) The AN/ARC-182 Reuse Programs utilizes previously procured AN/ARC-182 systems which will become available as the AN/ARC-210 system is retrofitted into Navy aircraft. (6) 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. (7) The Traffic Alert & Collision Avoidance System (TCAS) will provide a display of situation awareness to aid in the prevention of mid-air mishaps. (8) The Advanced Mission Computer and Display (AMC&D) system will replace existing aging/obsolete and performance limited AN/AJK-14(V) Mission Computer and Contractor Furnished Equipment Displays. (9) 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. (10) 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. (11) HH-60 H A/A24G-39 AHRs Reliability Improvement Program. (12) Aircrew Wireless Intercom 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. (13) Attitude Gyro Upgrade replaces obsolete gyros with a more reliable and, maintainable gyro. The overall goal of the modifications budgeted in FY 2005 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		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total
71-88	NAVSTAR GPS (Hardware)	282.0		4.4	2.3		17.9	22.2	22.6	23.0	381.0	755.5
04-94	AN/ARC-210 (Hardware)	221.2		7.9	26.9	23.6	9.9	1.5				291.0
43-94	Crash Survivable Flight Incident Recorders (CSFIR)	74.0		4.8	4.2	3.7	1.5					88.3
40-95	AN/ARC-182 Reuse Program	2.2		0.2	0.1							2.6
14-97	GPWS (CAT I) Fixed Wing	38.3		13.4	18.0	1.9	13.8	9.3	9.1	5.6	9.1	118.4
17-98	GPWS (CAT III) Rotary Wing	53.1		10.6	7.3	3.0	0.3					74.2
25-98	Traffic Alert & Collision Avoidance System (TCAS)	42.8		5.3	5.9	3.3	4.9	4.0	1.9	0.9		69.0
21-01	CNS/ATM	0.8		0.6	22.8	70.7	85.0	80.7	69.5	82.1	569.8	982.0
02-02	Tactical Air Moving Map Capability (TAMMAC)	1.9		4.5	17.2	15.0	17.1	20.1	15.1	6.4	3.5	100.8
01-02	AMC&D/MPCD	18.1		17.0	35.1	23.4	54.5	42.3	45.9	49.1	132.0	417.6
07-04	Attitude Gyro Upgrade				4.4	15.0	12.4	12.7	13.3	1.8		59.6
08-04	HH-60 AHRs Reliability & Improvement (CREI)				1.0	0.7						1.7
09-04	Aircrew Wireless Internal Communications System (AWICS)				2.2	7.3	8.4	8.4	4.9	4.7	58.6	94.5
Total		734.5		68.7	147.5	167.5	225.6	201.2	182.3	173.6	1,154.1	3,055.0
Note: Totals may not add due to rounding.												

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 (altitude 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 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
NAVWAR	84	1.1	45	0.6																	
Installation Kits N/R																					
Installation Equipment																					
GPS	2,047	173.8																			
NAVWAR	129	4.7																			
Installation Equipment N/R		18.1																			
Engineering Change Orders		0.2		*																	
Data		7.7		*																	
Training Equipment																					
GPS	114	7.8																			
NAVWAR	1	0.1		*																	
Support Equipment		0.3																			
ILS		0.1		0.2																	
Other Support		67.7		2.3		1.9															
Interim Contractor Support																					
Installation Cost																					
NAVWAR	25	0.3	87	1.2	17	0.4															
Total Procurement		282.0		4.4		2.3															

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All aircraft 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: Three to Six Months PRODUCTION LEADTIME: Six to Twelve Months

CONTRACT DATES: FY 2003: Oct-02 FY 2004: _____ FY 2005: _____

DELIVERY DATE: FY 2003: Apr-03 FY 2004: _____ FY 2005: _____

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits	25	0.3	59	0.8																	
FY 2003 () kits			28	0.4	17	0.4															
FY 2004 () kits																					
FY 2005 () kits																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL	25	0.3	87	1.2	17	0.4															

Installation Schedule

FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	25	21	22	22	22	17															
Out	25	21	22	22	22	17															

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

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, UH-1N, C-130, 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, hopssets 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.

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 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AN/ARC-210 Kit					28	2.6	50	1.6													
Installation Kits N/R						3.1		1.5													
Installation Equipment																					
AN/ARC-210 Equip	2,661	157.0	34	2.6	242	16.1	193	13.5													
Installation Equipment N/R		4.8		0.1		0.1		0.8													
Engineering Change Orders		8.0																			
Data		4.2		0.4		0.2		0.3													
Training Equipment	36	2.9		0.1		*		0.1													
Support Equipment		9.4		0.1		0.2		0.2													
ILS		9.5		1.0		1.4		1.6													
Other Support		25.5		3.6		3.3		3.5													
Interim Contractor Support																					
Installation Cost								7	0.6												
Total Procurement		221.2		7.9		26.9		23.6													

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K
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: 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: 12 Months

CONTRACT DATES: FY 2003: _____ FY 2004: Mar-04 FY 2005: Mar-05

DELIVERY DATE: FY 2003: _____ FY 2004: Feb-05 FY 2005: Feb-06

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits																					
FY 2003 () kits																					
FY 2004 () kits **							7	0.6													
FY 2005 () kits **																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL							7	0.6													

*Note: KC-130 installation reflected in OSIP 02-92.
 F/A-18 installations are reflected in OSIP 10-99.
 Installation Schedule

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In											1	3	3									
Out											1	3	3									

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Crash Survivable Flight Incident Recorders (CSFIR) (OSIP 43-94)

MODELS OF SYSTEMS AFFECTED: AV-8B, F/A-18, VH-3D/60N, C/T-130, C-2, C-12, T-39, U/VP-3 TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION: Chief of Naval Operations letter, Ser N8/5U640779 of 2 May 1995, directed the CSFIR implementation policy on Naval Aircraft. This modification will provide procurement and integrated logistics support of Navy common CSFIR and will include addressing obsolescence of commercial components. The CSFIR will be a crash hardened recorder of selective aircraft systems and position parameters to be used in support of aircraft mishap and incident investigations. RDC01-88-97 validate this modification.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Commercial off-the-shelf and non-developmental systems will be procured to the maximum extent feasible via open competition. Completed F/A-18 val/ver in 3rd quarter FY00. F/A-18 installations delayed due to war-time efforts; schedule extended out into FY06.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
CSFIR Kit	342	11.8	23	0.1	40	0.1	27	0.1													
Installation Kits N/R	12	20.6																			
Installation Equipment																					
CSFIR Equip	359	8.2	23	0.4	40	0.8	27	0.5													
Installation Equipment N/R		3.6																			
Engineering Change Orders																					
Data		1.2																			
Training Equipment	2	0.4																			
Support Equipment		3.1		0.1		0.1															
ILS		2.7		0.4		0.4		0.4													
Other Support		14.3		3.1		2.1		2.1													
Interim Contractor Support																					
Installation Cost	259	8.122	50	0.7	50	0.7	46	0.7													
Total Procurement		74.0		4.8		4.2		3.7													

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$50K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18, VH-3D/60N, C/T-130, C-2, C-12, T-39, U/VP-3 MODIFICATION TITLE: Crash Survivable Flight Incident Recorders (CSFIR) (OSIP 43-94)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor or USN Field Modification Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2003: Aug-03 FY 2004: Jan-04 FY 2005: Dec-04

DELIVERY DATE: FY 2003: Aug-04 FY 2004: Nov-04 FY 2005: Oct-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits	259	8.1	50	0.7	35	0.5															
FY 2003 () kits					15	0.2	8	0.1													
FY 2004 () kits							38	0.5													
FY 2005 () kits																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL	259	8.1	50	0.7	50	0.7	46	0.7													

Installation Schedule

FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	259	12	12	13	13	12	12	13	13	13	13	11	9								
Out	259	12	12	13	13	12	12	13	13	13	13	11	9								

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a Individual Modification

MODIFICATION TITLE: AN/ARC-182 Reuse Modification Program (OSIP 40-95)

MODELS OF SYSTEMS AFFECTED: P-3C, S-3B, SH-2G TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION: The AN/ARC-182 Modification Program will utilize previously procured AN/ARC-182 systems which will become available as the AN/ARC-210 system is retrofitted into Navy aircraft. The replaced AN/ARC-182 will be upgraded to meet the configuration needs of current AN/ARC-182 users vice procurement of a new system. The AN/ARC-182 modification will include receiver-transmitter and remote control units. Mounts, filters, switching units, and antennas will be procured by the platform OSIP to complete the aircraft AN/ARC-182 configuration requirements. ORD # W0661-CC dated 13 June 78, validates this modification.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: AN/ARC-182 is in production. Modified systems will be provided GFE to user platforms to meet aircraft installation requirements.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AN/ARC-182 Kit																					
Installation Kits N/R																					
Installation Equipment																					
AN/ARC-182 Equip	154	0.6	26	0.1	35	0.1														215	0.7
Installation Equipment N/R																					
Engineering Change Orders																					
Data		0.2																			0.2
Training Equipment																					
Support Equipment																					
ILS																					
Other Support		1.5		0.1		0.0															1.7
Interim Contractor Support																					
Installation Cost																					
Total Procurement		2.2		0.2		0.1															2.6

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K

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 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
GPWS CAT I Kit	123	1.9	11	0.3	34	0.5															
Installation Kits N/R	1	7.9		0.9		1.6															
Installation Equipment																					
GPWS CAT I Equip	145	7.8	11	0.7	34	2.4															
Installation Equipment N/R		1.0		2.2		1.1															
Engineering Change Orders																					
Data		0.7				0.7															
Training Equipment	3	1.3		0.1		1.0															
Support Equipment																					
ILS		1.5		0.4		1.0		0.3													
Other Support		13.7		8.4		9.3		1.2													
Interim Contractor Support																					
Installation Cost	110	2.5	12	0.4	11	0.4	9	0.4													
Total Procurement		38.3		13.4		18.0		1.9													

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K
3. Installation qty differ from Install kits/equipment due to installation of OFT trainers listed in training material.

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: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2003: Feb-03 FY 2004: Feb-04 FY 2005: None

DELIVERY DATE: FY 2003: Dec-03 FY 2004: Dec-04 FY 2005: _____

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits	110	2.5	12	0.4	1	*															
FY 2003 () kits					10	0.4															
FY 2004 () kits							8	0.3													
FY 2005 () kits																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL	110	2.5	12	0.4	11	0.4	9	0.4													

Installation Schedule

FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	110	2	4	3	3	3	5	3		2	3	4									
Out	110	2	4	3	3	3	5	3		2	3	4									

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Ground Proximity Warning System (GPWS CAT III) Rotary Wing (OSIP 17-98)

MODELS OF SYSTEMS AFFECTED: C/MH-53, H-46, H-60 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 rate of descent, terrain closure rate, inadvertent descent below ILS glidescope and descent below minimum. Commercial GPWS implementation has demonstrated dramatic reduction in controlled flight into terrain (CFIT) accidents. NADEP CP ECP H53-004 and H46-75 will assist pilots in preventing collisions with the ground or water. ORD # 555-88-00 signed 1 May 00 validates this modification.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: GPWS CAT III completed Milestone II in July 1993. DT was fully successful in May 1996. OPEVAL was successfully completed in August 1996. Milestone III was completed in May 1997.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
GPWS CAT III Kit	362	3.8	48	0.5	49	0.5															
Installation Kits N/R		1.3																			
Installation Equipment																					
GPWS CAT III Equip **	363	16.6	48	3.3	49	2.0															
Installation Equipment N/R		9.1		0.2		0.2															
Engineering Change Orders																					
Data		1.0		0.1		0.2															
Training Equipment		1.4		0.1		0.2															
Support Equipment																					
ILS		1.2		0.3		0.2		0.1													
Other Support		14.5		4.6		2.8		1.7													
Interim Contractor Support																					
Installation Cost	280	4.2	80	1.5	48	1.4	51	1.2													
Total Procurement		53.1		10.6		7.3		3.0													

Notes:

- Totals may not add due to rounding
- Asterisk indicates amount less than \$50K
- Two Asterisks indicate that one additional B-Kit was procured for software integration laboratory use in FY98.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C/MH-53, H-46, H-60 MODIFICATION TITLE: Ground Proximity Warning System (GPWS CAT III) Rotary Wing (OSIP 17-98)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor or USN Depot Field Modification Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2003: Feb-03 FY 2004: Feb-04 FY 2005: _____

DELIVERY DATE: FY 2003: Dec-03 FY 2004: Dec-04 FY 2005: _____

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY (362) kits	280	4.2	80	1.5	2	0.1														362	5.7
FY 2003 (48) kits					46	1.3	2	*												48	1.4
FY 2004 (49) kits							49	1.2												49	1.2
FY 2005 () kits																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL	280	4.2	80	1.5	48	1.4	51	1.2												459	8.2

Installation Schedule

FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	280	20	20	20	12	12	12	12	13	13	13	12								
Out	280	20	20	20	12	12	12	12	13	13	13	12								

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										459
Out										459

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Traffic Alert & Collision Avoidance System (TCAS) (OSIP 25-98)

MODELS OF SYSTEMS AFFECTED: C-2, C-130T, VP-3, KC-130, UP-3 TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION: CNO memorandum of 09 Nov 1999 directed TCAS implementation policy on Naval Aircraft. This modification will provide procurement and logistics support of a common TCAS. The TCAS will provide a display of situation awareness to aid in the prevention of midair mishaps. An ECP was approved in FY 99 to incorporate this change.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: TCAS Off-The-Shelf processor was selected. The ECP NRE effort for C-2, VP-3, and C-130T/KC-130 was accelerated and began in FY 98. Milestone III approved March FY01.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
TCAS Kit	80	5.1	9	1.1	14	1.4	4	0.2													
Installation Kits N/R	1	7.4																			
Installation Equipment																					
TCAS Equip	81	8.8	9	1.1	14	2.5	4	0.4													
Installation Equipment N/R		2.7																			
Engineering Change Orders		1.8																			
Data		1.8																			
Training Equipment	8	1.6		0.1																	
Support Equipment																					
ILS		1.7		0.2		0.2		0.2													
Other Support		8.9		2.0		1.4		1.6													
Interim Contractor Support																					
Installation Cost	67	3.0	12	0.7	9	0.4	15	0.8													
Total Procurement		42.8		5.3		5.9		3.3													

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$50K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2, C-130T, VP-3, KC-130, UP-3 MODIFICATION TITLE: Traffic Alert & Collision Avoidance System (TCAS) (OSIP 25-98)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor or USN Field Modification Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2003: Dec-02 FY 2004: Dec-03 FY 2005: Dec-04

DELIVERY DATE: FY 2003: Dec-03 FY 2004: Dec-04 FY 2005: Dec-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits	67	3.0	12	0.7	1	-															
FY 2003 () kits					8	0.4	1	0.1													
FY 2004 () kits							14	0.8													
FY 2005 () kits																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL	67	3.0	12	0.7	9	0.4	15	0.8													

Installation Schedule

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	67	3	3	3	3	3	2	2	2	3	4	4	4								
Out	67	3	3	3	3	3	2	2	2	3	4	4	4								

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

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/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 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.: RNP-4, 2003 to 2005).

Prioritization of platform type and quantity is based on mission and anticipated operation in affected airspace. Enhanced equipment includes Mode S, 8.33KHz VHF channel spacing, RNP-4 integrity, Protected Instrument Landing System (P-ILS), Multi-Mode Receiver, and cockpit processing and display capability. FY01 Initiated an interim subprogram to provide near term capability to meet European mandates of 1 January 2001 for P-ILS via new start notification letter to Congress.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Begin Mode S integration into P-3C in 04. Achieve IOC by 07
 Begin RNP-4 integration into EA-6B by 05. Achieve IOC by 07
 Begin Integration of 8.33 KHz VHF Radio into P-3C by 05. Achieve IOC by 2007

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
CNS/ATM Kit							25	2.1													
Installation Kits N/R						7.0		20.9													
Installation Equipment																					
CNS/ATM Equip								25	7.1												
CNS/ATM P-ILS	132	0.7			278	1.5	327	1.9													
Installation Equipment N/R						0.8		2.4													
Engineering Change Orders						0.2		0.9													
Data						0.1		0.5													
Training Equipment								4.8													
Support Equipment							*	0.4													
ILS						1.6		2.8													
Other Support		0.2		0.6		11.5		26.8													
Interim Contractor Support																					
Installation Cost								4	*												
Total Procurement		0.8		0.6		22.8		70.7													

Notes:

- Totals may not add due to rounding
- Asterisk indicates amount less than \$50K
- A-Kits, B-Kits, and Installation cost varies due to multiple & different functionalities/systems on each aircraft T/M/S
- B-Kits quantities differ from A-Kits where B-Kits consists of a card or module that will be integrated without A-Kit requirement.

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: 12 Months

CONTRACT DATES: FY 2003: _____ FY 2004: _____ FY 2005: Feb-05

DELIVERY DATE: FY 2003: _____ FY 2004: _____ FY 2005: Jan-06

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits																					
FY 2003 () kits																					
FY 2004 () kits																					
FY 2005 () kits							4	*													
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL							4	*													

**Note: E-2C GNS-350 COTS item; no production lead time.

Installation Schedule

FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In									1	1	2										
Out									1	1	2										

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

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 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 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
TAMMAC Kit					110	0.2	112	0.3													
Installation Kits N/R																					
Installation Equipment																					
TAMMAC Equip	8	0.5			195	10.8	156	9.9													
Installation Equipment N/R		0.3		1.0		0.3		1.0													
Engineering Change Orders						1.9		0.1													
Data		0.2		0.7		0.2		0.1													
Training Equipment						0.1		0.1													
Support Equipment				0.3	84	1.8	78	0.5													
ILS				0.6		0.1		0.4													
Other Support		0.9		2.0		1.7		1.5													
Interim Contractor Support																					
Installation Cost							110	1.2													
Total Procurement		1.9		4.5		17.2		15.0													

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K
3. Difference in A and B kits reflect procurements of AMU only and DVMC retrofits - no A kit required.
4. F/A-18 OSIP # 16-01 reflects 29 AMU only procurements in FY01.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B 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 2003: _____ FY 2004: Jan-04 FY 2005: Jan-05

DELIVERY DATE: FY 2003: _____ FY 2004: Dec-04 FY 2005: Dec-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits																					
FY 2003 () kits																					
FY 2004 () kits							110	1.2													
FY 2005 () kits																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL							110	1.2													

Installation Schedule

FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									35	37	38									
Out									35	37	38									

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

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 Fibre Channel Network Switches (FCNS) and an 8x10 display. AMC&D system will have modular components integrated 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) display, the AMC&D program is leveraging the 5x5 DH to provide a form, fit, function and interface replacement (no install funding required). MPCD production buys begin in FY02 and AMC&D LRIP production buys began in FY01 with FRP buys planned in FY04. The F/A-18E/F Retrofit Program goal is to achieve a 2-block configuration. Block 1 aircraft include Lots 21-25 and Block 2 includes Lots 26 and above. Block 1 will consist of replacing the AN/AYK-14 computers in Lots 21-24 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 06 procurement for Lots 26 consists of FCNS, displays and digital video mapping card. The 06 procurement for Lot 27 consists 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 outyears. 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.

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 - 3rd Qtr FY04, OA - 3rd Qtr FY02, FOT&E 2nd Qtr FY04.
 AV-8B DT-IIB-2 - 4th Qtr FY01, OPEVAL - 4th Qtr FY02, Milestone III - 2nd Qtr FY03.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AMC&D / MPCD Kit																					
Installation Kits N/R																					
Installation Equipment																					
AMC&D / MPCD Equip	70	11.6	55.0	4.7	83	11.3	76	9.4													
Installation Equipment N/R				6.9		17.6		9.5													
Engineering Change Orders																					
Data		0.4		0.3																	
Training Equipment		0.4				1.1		0.6													
Support Equipment																					
ILS		1.2		0.8		2.1		1.2													
Other Support		4.6		4.3		3.0		2.6													
Interim Contractor Support																					
Installation Cost																					
Total Procurement		18.1		17.0		35.1		23.4													

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K
3. MPCD is a drop-in-replacement. No A-kit required.
4. B-Kit (WRA) procured in outyears are necessary to meet common block configuration.
5. 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: 2 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2003: _____ FY 2006: Jun-06 + FY 2007: Dec-07

DELIVERY DATE: FY 2003: _____ FY 2006: Sep-07 FY 2007: Mar-09

+Awaiting MS III Decision

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits																					
FY 2003 () kits																					
FY 2004 () kits																					
FY 2005 () kits																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL																					

Installation Schedule

	FY 2002	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In																						
Out																						

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

* A-Kits, B-Kits and Installs do not align. A or B-Kits which require installation are shown.

** F/A-18 has 15-month lead time.

*** T-45 has 12-month lead time.

Note 1:

F/A-18E/F Installation Equipment per Lot that have cost

Lot	Year of Procurement	Description	Year of Installation
Lot 21	2011	12 A-Kits/ 12 B-Kits (AMPD)	2012 (12 month lead time for A- kit)
Lot 22	2011	20 A-Kits/20 B-Kits (AMPD)	2012 (12 month lead time for A- kit)
Lot 23	2011	30 A-Kits/ 30 B-Kits (AMPD)	2012 (12 month lead time for A- kit)
Lot 24	2010/2011	36 A-Kits/ 36 B-Kits (AMPD)	2011/2012 (12 month lead time for A- kit)
Lot 25	2008/2009	39 A-Kits	2009/2010 (12 month lead time for A-kit). Lot 25 a/c will not require as extensive an A kit because if already has AMC
Lot 26	2006/2010-2012	B-Kits only (2006- 96 FCNS, 19 8x10 displays, 48 DVMC) (2009/2010-2012 AMC)	2008 (15 month lead time) A-kit previously provisioned. AMC in 2011-2013 is remove/replace - no install \$ needed
Lot 27	2006/2009/2010	B-Kits only (2006 - 21 8x10 displays, 44 DVMCs, 84 V1 IPM Cards) (2008/2009-2010 AMC)	2008 (15 month lead time) A-kit previously provisioned. AMC in 2010/2011 is remove/replace - no install \$ needed
Lot 28	2008/2009	B-Kits only - AMCs (no installation costs)	2009/2010
Lot 29	06/2007/2008	B-Kits only - AMCs (no installation cost)	2007/2008/2009

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Attitude Gyro Upgrade (OSIP 07-04)

MODELS OF SYSTEMS AFFECTED: CH-53E, MH-53E, CH-60S, OP-3C, 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, MH-53E, CH-60S, EP-3C, 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:

COTS/NDI replacement system.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		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					68	0.8	1,115	9.4													
Attitude Upgrade Equip																					
Installation Equipment N/R						1.4	0.4														
Engineering Change Orders																					
Data						1.0	0.2														
Training Equipment																					
Support Equipment																					
ILS																					
Other Support						1.2	5.0														
Interim Contractor Support																					
Installation Cost																					
Total Procurement						4.4	15.0														

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K

Exhibit P-3a Individual Modification

MODIFICATION TITLE: HH-60 AHRS Reliability & Improvement (CREI) (OSIP 08-04)

MODELS OF SYSTEMS AFFECTED: HH-60H TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:

The Attitude Heading Reference Systems (AHRS) Reliability Improvement initiative will address reliability, obsolescence and support problems for the HH-60H. The replacement system, A/A24G-51 is a COTS/NDI system which replaces the gyroscope, amplifier and remote compass transmitter. This more reliable, maintainable system is currently fielded in the CH-46E platform.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

COTS/NDI replacement system.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AHRS Kit																					
Installation Kits N/R																					
Installation Equipment																					
AHRS Equip					15	0.6	17	0.6												32	1.2
Installation Equipment N/R						0.3															0.3
Engineering Change Orders																					
Data						0.2															0.2
Training Equipment																					
Support Equipment																					
ILS																					0.0
Other Support																					
Interim Contractor Support																					
Installation Cost																					
Total Procurement						1.0		0.7													1.7

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Aircrew Wireless Internal Communications System (AWICS) (OSIP 09-04)

MODELS OF SYSTEMS AFFECTED: MH-53E, CH-46E, HH-60H, CH-53D/E, SH-60B/F, MH-60S/R, KC-130R/T, C-130T, KC-130J, MV-22B, C-2A, UH-3H, SH-3D, P-3 (all TMS), and UH-1 TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:
 A wireless intercom system that will allow for unimpeded movement throughout the aircraft. This safety improvement will prevent aircrew/passenger entanglement with ICS (intercom system) cords in the event of a mishap.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: TBD.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AWICS Kit					15	*	105	0.1													
Installation Kits N/R						0.1	0.2														
Installation Equipment																					
AWICS Equip					15	0.8	105	3.7													
Installation Equipment N/R					8	0.4	5	0.5													
Engineering Change Orders																					
Data						0.3	0.5														
Training Equipment						0.1	0.1														
Support Equipment					2	*	31	0.2													
ILS						0.1	0.3														
Other Support						0.5	1.5														
Interim Contractor Support																					
Installation Cost					15	*	105	0.2													
Total Procurement						2.2	7.3														

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$50K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-53E, CH-46E, HH-60H, CH-53D/E, SH-60B/F, MH-60S/R, KC-130R/T, C-130T, KC-130J, MV-22B, C-2A, UH-3H, SH-3D, P-3 (all TMS), and UH-1 MODIFICATION TITLE: Aircrew Wireless Intercom Communications System (AWICS) (OSIP 09-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor or USN Field Modification Team

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2003: _____ FY 2004: Jul-04 (LRIP) FY 2005: Mar-05

DELIVERY DATE: FY 2003: _____ FY 2004: Aug-04 FY 2005: Apr-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2002 & PY () kits																					
FY 2003 () kits																					
FY 2004 () kits					15	*															
FY 2005 () kits							105	0.2													
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
To Complete () kits																					
TOTAL					15	*	105	0.2													

Installation Schedule

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In									15			52	53									
Out								15			52	53										

	FY 2008				FY 2009				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										