CLASSIFICATION: UNCLASSIFIED

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2005**

APPROPRIATION/BUDGET ACTIVITY
Aircraft Procurement, Navy/APN-5 Aircraft Modifications

P-1 ITEM NOMENCLATURE
Common Avionics

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	To Complete	Total
QTY		A										
COST (In Millions)	**802.2**	A	**137.6**	**166.9**	**214.2**	**192.5**	**170.1**	**165.5**	**168.0**	**171.1**	**1,092.0**	**3,280.0**

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.

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/AYK-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. (14) 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. The overall goal of the modifications budgeted in FY 2006 is to procure the common equipment required for the individual aircraft platforms. The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	To Complete	Total
71-88	NAVSTAR GPS (Hardware)	286.1	2.3		18.0	22.3	22.8	23.3	24.6	26.0	464.7	**890.1**
04-94	AN/ARC-210 (Hardware)	228.8	26.8	23.4	9.4	1.4						**289.8**
43-94	Crash Survivable Flight Incident Recorders (CSFIR)	77.7	4.2	3.7	1.4							**87.0**
40-95	AN/ARC-182 Reuse Program	2.4	0.1									**2.6**
14-97	GPWS (CAT I) Fixed Wing	52.5	14.7	1.9	13.6	9.1	8.8	5.4	4.3	4.6	9.1	**124.0**
17-98	GPWS (CAT III) Rotary Wing	61.9	7.2	3.0								**72.1**
25-98	Traffic Alert & Collision Avoidance System (TCAS)	47.6	5.9	3.3	4.7	3.9	1.9	0.9				**68.3**
21-01	CNS/ATM	1.4	21.2	70.5	64.6	64.1	52.6	65.5	72.2	110.5	589.6	**1,112.2**
02-02	Tactical Air Moving Map Capability (TAMMAC)	9.1	18.6	14.9	23.1	25.6	19.9	12.3	6.4			**130.1**
01-02	AMC&D/MPCD	34.7	31.1	23.3	58.7	45.4	46.1	49.7	52.6	21.6	2.1	**365.4**
07-04	Attitude Gyro Upgrade		4.4	14.9	12.4	12.7	13.2	1.8				**59.4**
08-04	HH-60 AHRS Reliability & Improvement (CREI)		1.0	0.7								**1.7**
09-04	Aircrew Wireless Internal Communications System (AWICS)			7.2	8.1	8.0	4.6	4.4	4.6	4.4	26.5	**67.8**
XX-08	Military Flight Operations Quality Assurance (MFOQA)						0.1	2.2	3.4	4.0		**9.7**
Total		**802.2**	**137.6**	**166.9**	**214.2**	**192.5**	**170.0**	**165.5**	**168.1**	**171.1**	**1,092.0**	**3,280.0**

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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
NAVWAR	111	1.5					120	4.0	86	3.0												
Installation Kits N/R																						
Installation Equipment																						
GPS	2,047	173.8																				
NAVWAR	123	4.5					108	7.2	86	9.3												
Installation Equipment N/R		18.7																				
Engineering Change Orders																						
NAVWAR Kit ECO		0.3																				
Data		7.8						*		0.3												
Training Equipment																						
GPS	114	7.8																				
NAVWAR	1	0.1																				
Support Equipment		0.3																				
ILS		0.4																				
Other Support		69.5		2.3				6.6		7.8												
Interim Contractor Support																						
Installation Cost	111	1.5					12	0.1	108	1.9												
Total Procurement		**286.1**		**2.3**				**18.0**		**22.3**												

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: 3

PRODUCTION LEADTIME: 10

CONTRACT DATES: FY 2004: _____ FY 2005: _____ FY 2006: Dec-05 FY 2007: Dec-06

DELIVERY DATE: FY 2004: _____ FY 2005: _____ FY 2006: Oct-06 FY 2007: Oct-07

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits	111	1.5																				
FY 2004 ( ) kits																						
FY 2005 ( ) kits																						
FY 2006 ( ) kits							12	0.1	108	1.9												
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL	**111**	**1.5**					**12**	**0.1**	**108**	**1.9**												

Installation Schedule

	FY 2003	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	111										12			27	27	27	27								
Out	111										12			27	27	27	27								

	FY 2010				FY 2011				To	Total
	1	2	3	4	1	2	3	4	Complete	
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 SINCGARS). 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 SINCGARS. 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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	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	42	0.3														
Installation Kits N/R				3.1		1.5																
Installation Equipment																						
AN/ARC-210 Equip	2,695	159.6	249	16.1	223	13.5	100	5.5														
Installation Equipment N/R		4.9		0.1		0.8																
Engineering Change Orders		8.0																				
Data		4.5		0.2		0.3																
Training Equipment	36	2.9		*		0.1		*														
Support Equipment		9.5		0.2		0.2																
ILS		10.3		1.4		1.6		0.6														
Other Support		28.9		3.2		3.3		1.4		0.4												
Interim Contractor Support																						
Installation Cost					7	0.6	20	1.7	12	1.0												
Total Procurement		**228.8**		**26.8**		**23.4**		**9.4**		**1.4**												

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: 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

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 2004: Mar-04 FY 2005: Mar-05 FY 2006: Mar-06 FY 2007:

DELIVERY DATE: FY 2004: Feb-05 FY 2005: Feb-06 FY 2006: Feb-07 FY 2007:

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits																						
FY 2004 ( ) kits					7	0.6																
FY 2005 ( ) kits							20	1.7	10	0.9												
FY 2006 ( ) kits									2	0.2												
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL					**7**	**0.6**	**20**	**1.7**	**12**	**1.0**												

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

Installation Schedule

	FY 2003 & Prior	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							1	3	3	5	5	5	5	5	4	3									
Out							1	3	3	5	5	5	5	5	4	3									

	FY 2010				FY 2011				To	Total
	1	2	3	4	1	2	3	4	Complete	
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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
CSFIR Kit	365	11.8	40	0.1	27	0.1																
Installation Kits N/R	12	20.6																				
Installation Equipment																						
CSFIR Equip	382	8.7	40	1.0	27	0.6																
Installation Equipment N/R		3.6																				
Engineering Change Orders																						
Data		1.2																				
Training Equipment	2	0.4																				
Support Equipment		3.1				*																
ILS		2.9		0.2		0.3		0.2														
Other Support		16.6		2.4		2.0		0.8														
Interim Contractor Support																						
Installation Cost	307	8.7	50	0.6	46	0.7	29	0.4														
Total Procurement		**77.7**		**4.2**		**3.7**		**1.4**														

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: 8 Months

CONTRACT DATES: FY 2004: Jun-04 FY 2005: Dec-04 FY 2006: FY 2007:

DELIVERY DATE: FY 2004: Feb-05 FY 2005: Jul-05 FY 2006: FY 2007:

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits	307	8.7	50	0.6	8	0.1																
FY 2004 ( ) kits					38	0.6	2	*														
FY 2005 ( ) kits							27	0.4														
FY 2006 ( ) kits																						
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL	**307**	**8.7**	**50**	**0.6**	**46**	**0.7**	**29**	**0.4**														

Installation Schedule

	FY 2003 & Prior	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	307	12	12	13	13	13	13	11	9	10	10	9													
Out	307	12	12	13	13	13	13	11	9	10	10	9													

	FY 2010				FY 2011				To	
	1	2	3	4	1	2	3	4	Complete	Total
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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	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	180	0.6	5	*																		
Installation Equipment N/R																						
Engineering Change Orders																						
Data		0.2																				
Training Equipment																						
Support Equipment																						
ILS																						
Other Support		1.7		0.1																		
Interim Contractor Support																						
Installation Cost																						
Total Procurement		**2.4**		**0.1**																		

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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
GPWS CAT I Kit	134	2.1	17	0.3			39	0.5	53	0.5												
Installation Kits N/R	1	9.0		1.5				0.4		*												
Installation Equipment																						
GPWS CAT I Equip	156	8.3	17	1.2			39	2.5	53	3.0												
Installation Equipment N/R		4.0		1.8				2.1		0.4												
Engineering Change Orders																						
Data		0.7		0.2				0.1		0.1												
Training Equipment	3	1.3		0.9				0.5														
Support Equipment																						
ILS		2.1		0.5		0.3		0.9		0.7												
Other Support		22.0		8.1		1.2		6.4		3.7												
Interim Contractor Support																						
Installation Cost	122	2.9	11	0.3	9	0.4	8	0.2	39	0.8												
Total Procurement		**52.5**		**14.7**		**1.9**		**13.6**		**9.1**												

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: 2 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2004: Feb-04 FY 2005: None FY 2006: Dec-05 FY 2007: Dec-06

DELIVERY DATE: FY 2004: Dec-04 FY 2005: FY 2006: Dec-06 FY 2007: Dec-07

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits	122	2.9	11	0.3																		
FY 2004 ( ) kits					9	0.4	8	0.2														
FY 2005 ( ) kits																						
FY 2006 ( ) kits									39	0.8												
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL	**122**	**2.9**	**11**	**0.3**	**9**	**0.4**	**8**	**0.2**	**39**	**0.8**												

Installation Schedule

	FY 2003 & Prior	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	122	3	5	3		2	3	4		2	3	3			13	13	13								
Out	122	3	5	3		2	3	4		2	3	3			13	13	13								

	FY 2010				FY 2011				To	
	1	2	3	4	1	2	3	4	Complete	Total
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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
GPWS CAT III Kit	410	4.3	49	0.4																		
Installation Kits N/R		1.3																				
Installation Equipment																						
GPWS CAT III Equip **	411	18.6	49	1.9																		
Installation Equipment N/R		9.1		0.4																		
Engineering Change Orders																						
Data		1.0		*																		
Training Equipment		1.4		*																		
Support Equipment																						
ILS		1.2		*		0.1																
Other Support		19.4		3.3		1.7																
Interim Contractor Support																						
Installation Cost	358	5.7	48	1.1	51	1.2																
Total Procurement		**61.9**		**7.2**		**3.0**																

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $50K
3. 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 2004: Feb-04 FY 2005: FY 2006: FY 2007:

DELIVERY DATE: FY 2004: Dec-05 FY 2005: FY 2006: FY 2007:

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits	358	5.7	48	1.1	4	0.1																
FY 2004 ( ) kits **					47	1.1																
FY 2005 ( ) kits																						
FY 2006 ( ) kits																						
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL	**358**	**5.7**	**48**	**1.1**	**51**	**1.2**																

**(2) kits in FY04 not installed due to loss of aircraft.

Installation Schedule

	FY 2003	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	358	12	12	12	12	13	13	13	12																
Out	358	12	12	12	12	13	13	13	12																

	FY 2010				FY 2011				To	
	1	2	3	4	1	2	3	4	Complete	Total
In										
Out										

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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
TCAS Kit	89	6.0	14	1.2	4	0.2	19	1.1	8	0.5												
Installation Kits N/R	1	7.3																				
Installation Equipment																						
TCAS Equip	90	9.9	14	1.8	4	0.4	19	2.2	8	0.9												
Installation Equipment N/R		2.9		0.2																		
Engineering Change Orders		1.8																				
Data		1.8								0.1												
Training Equipment	8	1.6																				
Support Equipment																						
ILS		2.1		0.3		0.2		0.2		0.2												
Other Support		10.7		1.9		1.6		1.1		1.1												
Interim Contractor Support																						
Installation Cost	79	3.6	10	0.5	15	0.8	4	0.2	19	1.1												
Total Procurement		**47.6**		**5.9**		**3.3**		**4.7**		**3.9**												

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 2004: Jan-04 FY 2005: Dec-04 FY 2006: Dec-05 FY 2007: Dec-06

DELIVERY DATE: FY 2004: Jan-05 FY 2005: Dec-05 FY 2006: Dec-06 FY 2007: Dec-07

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits	79	3.6	10	0.5	1	0.1																
FY 2004 ( ) kits					14	0.8																
FY 2005 ( ) kits							4	0.2														
FY 2006 ( ) kits									19	1.1												
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL	**79**	**3.6**	**10**	**0.5**	**15**	**0.8**	**4**	**0.2**	**19**	**1.1**												

Installation Schedule

	FY 2003	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	79	3	3	2	2	3	4	4	4	2	1	1		5	5	5	4								
Out	79	3	3	2	2	3	4	4	4	2	1	1		5	5	5	4								

	FY 2010				FY 2011				To	
	1	2	3	4	1	2	3	4	Complete	Total
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-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.

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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
CNS/ATM Kit					13	0.6	69	3.5	122	6.9												
Installation Kits N/R				4.3		15.3		10.9		1.1												
Installation Equipment																						
CNS/ATM Equip					13	2.5	69	10.8	122	21.5												
CNS/ATM P-ILS	132	0.7	278	1.5	327	1.8																
Installation Equipment N/R				0.8		2.2				0.9												
Engineering Change Orders				0.2		0.9		1.6		1.5												
Data				0.1		0.5		0.4		0.9												
Training Equipment						4.7		6.0		4.4												
Support Equipment				*		0.4		0.5		1.1												
ILS				0.4		2.1		2.5		2.4												
Other Support		0.7		13.9		39.5		26.4		20.0												
Interim Contractor Support																						
Installation Cost					4	*	24	2.1	63	3.5												
Total Procurement		**1.4**		**21.2**		**70.5**		**64.6**		**64.1**												

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $50K
3. A-Kits, B-Kits, and Installation cost varies due to multiple & different functionalities/systems on each aircraft T/M/S
4. B-Kits quantities differ from A-Kits where B-Kits consists of a card or module that will be integrated without A-Kit requirement.
5. Installation Kit/Installation Equipment quantities reflect number of units procurred, installation quantity reflects number of aircraft.

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 2004: FY 2005: Feb-05 FY 2006: Feb-06 FY 2007: Feb-07

DELIVERY DATE: FY 2004: FY 2005: Jan-06 FY 2006: Jan-07 FY 2007: Jan-08

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits																						
FY 2004 ( ) kits																						
FY 2005 ( ) kits					4	*	9	1.4														
FY 2006 ( ) kits							15	0.7	54	3.0												
FY 2007 ( ) kits									9	0.5												
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL					**4**	**0.0**	**24**	**2.077**	**63**	**3.5**												

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

Installation Kit/Installation Equipment quantities reflect number of units procurred, installation quantity reflects number of platforms

Installation Schedule

	FY 2003 & Prior	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							4			6	6	6	6	15	15	16	17								
Out							4			6	6	6	6	15	15	16	17								

	FY 2010				FY 2011				To	Total
	1	2	3	4	1	2	3	4	Complete	
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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
TAMMAC Kit			111	0.2	112	0.2	118	0.2	118	0.2												
Installation Kits N/R																						
Installation Equipment																						
TAMMAC Equip	143	5.8	61	3.7	156	9.9	153	10.3	177	11.3												
Installation Equipment N/R		*		12.2		1.0		5.5		5.8												
Engineering Change Orders				0.1		0.1		0.4		0.4												
Data		0.3				0.1		0.3		0.2												
Training Equipment						0.1		*		0.2												
Support Equipment				0.7		0.5		0.6		0.6												
ILS		0.4		0.1		0.3		0.4		0.7												
Other Support		2.6		1.7		1.5		1.5		1.5												
Interim Contractor Support																						
Installation Cost					111	1.3	112	4.0	118	4.7												
Total Procurement		**9.1**		**18.6**		**14.9**		**23.1**		**25.6**												

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 2004: Jan-04 FY 2005: Jan-05 FY 2006: Jan-06 FY 2007: Jan-07

DELIVERY DATE: FY 2004: Jan-05 FY 2005: Jan-06 FY 2006: Jan-07 FY 2007: Jan-08

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits																						
FY 2004 ( ) kits					111	1.3																
FY 2005 ( ) kits							112	4.0														
FY 2006 ( ) kits									118	4.7												
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL					**111**	**1.3**	**112**	**4.0**	**118**	**4.7**												

Installation Schedule

	FY 2003	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							31	40	40		32	40	40		38	40	40								
Out							11	30	30	32	30	30	30	30	23	30	30								

	FY 2010				FY 2011				To	Total
	1	2	3	4	1	2	3	4	Complete	
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 Fiber 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 (no installation required) and AMC&D LRIP production buys began in FY01 with FRP buys planned 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 an 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 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.

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.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
AMC&D Kit									22	1.6												
Installation Kits N/R																						
Installation Equipment																						
AMC&D / MPCD Equip	210	23.6	55	7.1	76	9.4	121	40.1	101	29.3												
Installation Equipment N/R		1.5		18.6		9.5		11.7		6.7												
Engineering Change Orders								0.9		1.3												
Data		0.6		0.4				0.1		0.1												
Training Equipment		0.4		1.0		0.6																
Support Equipment								0.6		0.6												
ILS		1.0		1.7		1.8		2.7		3.0												
Other Support		7.5		2.3		2.0		2.6		2.4												
Interim Contractor Support																						
Installation Cost									12	0.3												
Total Procurement		**34.7**		**31.1**		**23.3**		**58.7**		**45.4**												

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: 5 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2004: _____ FY 2005: _____ FY 2006: Mar-06 FY 2007: Mar-07

DELIVERY DATE: FY 2004: _____ FY 2005: _____ FY 2006: Mar-07 FY 2007: Mar-08

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits																						
FY 2004 ( ) kits																						
FY 2005 ( ) kits																						
FY 2006 ( ) kits									12	0.3												
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL									**12**	**0.3**												

Installation Schedule

	FY 2003	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In															4	4	4								
Out															4	4	4								

	FY 2010				FY 2011				To	
	1	2	3	4	1	2	3	4	Complete	Total
In										
Out										

* 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 15 months.

Note 1:

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

Lot	**Year of Procurement**	**Description**
Lot 25	2008/2009	39 A-Kits
Lot 26	2008/09/10/11	B-Kits only
Lot 27	2006/07/08/10	B-Kits only
Lot 28	2006/07/08/09/10/11	B-Kits only- AMC's (no installation costs)
Lot 29	2006/10/11	B-Kits only- AMC's (no installation costs)

Year of Installation

2009/2010 (12 month lead time for A-kit). Lot 25 a/c will not require as extensive an A-kit because it already has AMC

2009/10/11/+ (15 month lead time) A-kit previously provisioned.

2007/08/11 (15 month lead time) A-kit previously provisioned. Only (25) 8x10 displays and FCNS require install costs.

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: Initial procurement awards were Rate Gyro's - March 2004 and Displacement Gyro's - May 2004.
COTS/NDI replacement system.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	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			68	0.8	1,115	9.4	1,173	10.3	1,316	10.5												
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		4.9		2.2		2.1												
Interim Contractor Support																						
Installation Cost																						
Total Procurement				**4.4**		**14.9**		**12.4**		**12.7**												

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 reliablity, 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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	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																
Installation Equipment N/R				0.3																		
Engineering Change Orders																						
Data				0.2																		
Training Equipment																						
Support Equipment																						
ILS						*																
Other Support																						
Interim Contractor Support																						
Installation Cost																						
Total Procurement				**1.0**		**0.7**																

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 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY2010		FY2011		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
AWICS Kit					105	0.1	162	0.2	171	0.2												
Installation Kits N/R						0.2		0.1		0.1												
Installation Equipment																						
AWICS Equip					105	3.7	162	5.8	171	6.1												
Installation Equipment N/R					5	0.7																
Engineering Change Orders																						
Data						0.5		0.1		0.1												
Training Equipment						0.1		*		*												
Support Equipment					31	0.2																
ILS						0.3																
Other Support						1.5		1.7		1.2												
Interim Contractor Support																						
Installation Cost							105	0.2	162	0.3												
Total Procurement						**7.2**		**8.1**		**8.0**												

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: 6 Months

CONTRACT DATES: FY 2004: FY 2005: Mar-05 (LRIP) FY 2006: Mar-06 FY 2007: Mar-07

DELIVERY DATE: FY 2004: FY 2005: Oct-05 FY 2006: Oct-06 FY 2007: Oct-07

($ in Millions)

Cost:	Prior Years		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2003 & PY ( ) kits																						
FY 2004 ( ) kits																						
FY 2005 ( ) kits							105	0.2														
FY 2006 ( ) kits									162	0.3												
FY 2007 ( ) kits																						
FY 2008 ( ) kits																						
FY 2009 ( ) kits																						
FY 2010 ( ) kits																						
FY 2011 ( ) kits																						
To Complete ( ) kits																						
TOTAL							**105**	**0.2**	**162**	**0.3**												

Installation Schedule

	FY 2003 & Prior	FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										30	30	30	15	60	60	42									
Out										30	30	30	15	60	60	42									

	FY 2010				FY 2011				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										
Out										