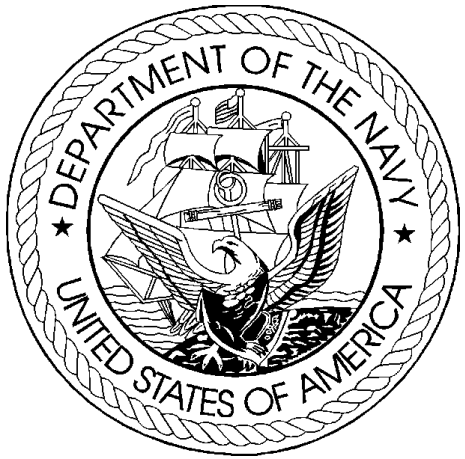
DEPARTMENT OF THE NAVY
FISCAL YEAR (FY) 2012
BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES
FEBRUARY 2011

AIRCRAFT PROCUREMENT, NAVY
Volume II:
BUDGET ACTIVITY 5

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Aircraft Procurement, Navy

For construction, procurement, production, modification, and modernization of aircraft, equipment, including ordnance, spare parts, and accessories therefore; specialized equipment; expansion of public and private plants, including the land necessary therefore, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, $18,587,033,000, to remain available for obligation until September 30, 2014.

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Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: Aircraft Procurement, Navy

Budget Activity	FY 2010 (Base & OCO)	FY 2011 Base Request with CR Adj*	FY 2011 OCO Request with CR Adj*	FY 2011 Total Request with CR Adj*
01. Combat Aircraft	14,601,304	14,882,184	88,500	14,970,684
02. Airlift Aircraft	73,716			
03. Trainer Aircraft	255,443	266,065		266,065
04. Other Aircraft	416,219	71,396		71,396
05. Modification of Aircraft	2,682,811	1,623,739	328,358	1,952,097
06. Aircraft Spares and Repair Parts	1,268,061	1,244,673	3,500	1,248,173
07. Aircraft Support Equip & Facilities	493,328	420,556		420,556
20. Undistributed		77,105	703,466	780,571
Total Aircraft Procurement, Navy	19,790,882	18,585,718	1,123,824	19,709,542

P-1P: FY 2012 President's Budget (With FY 2011 CR Adjustments), as of January 31, 2011 at 13:53:38
* Reflects the FY 2011 President's Budget with an undistributed adjustment to match the Annualized Continuing Resolution funding level by appropriation.

Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: Aircraft Procurement, Navy

Budget Activity	FY 2011 Annualized CR Base**	FY 2011 Annualized CR OCO**	FY 2011 Annualized CR Total**
01. Combat Aircraft	14,944,182	236,604	15,180,786
02. Airlift Aircraft			
03. Trainer Aircraft	267,173		267,173
04. Other Aircraft	71,694		71,694
05. Modification of Aircraft	1,630,503	877,864	2,508,367
06. Aircraft Spares and Repair Parts	1,249,858	9,356	1,259,214
07. Aircraft Support Equip & Facilities	422,308		422,308
20. Undistributed			
Total Aircraft Procurement, Navy	18,585,718	1,123,824	19,709,542

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** Adjusts each budget line included in the FY 2011 President's Budget request proportionally to match the Annualized Continuing Resolution funding level for each appropriation. Quantities - TBD

Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: Aircraft Procurement, Navy

Budget Activity	FY 2012 Base	FY 2012 OCO	FY 2012 Total
01. Combat Aircraft	14,428,258	193,500	14,621,758
02. Airlift Aircraft			
03. Trainer Aircraft	266,906		266,906
04. Other Aircraft	292,046	21,882	313,928
05. Modification of Aircraft	1,830,281	461,618	2,291,899
06. Aircraft Spares and Repair Parts	1,331,961	39,060	1,371,021
07. Aircraft Support Equip & Facilities	437,581	14,900	452,481
20. Undistributed			
Total Aircraft Procurement, Navy	18,587,033	730,960	19,317,993

P-1P: FY 2012 President's Budget (With FY 2011 CR Adjustments), as of January 31, 2011 at 13:53:38

Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2010 (Base & OCO) Quantity	FY 2010 (Base & OCO) Cost	FY 2011 Base Request with CR Adj* Quantity	FY 2011 Base Request with CR Adj* Cost	FY 2011 OCO Request with CR Adj* Quantity	FY 2011 OCO Request with CR Adj* Cost	FY 2011 Total Request with CR Adj* Quantity	FY 2011 Total Request with CR Adj* Cost	Sec
	Budget Activity 05: Modification of Aircraft										
	Modification Of Aircraft										
29	EA-6 Series	A		84,691		14,891		15,000		29,891	U
30	AEA Systems					33,772				33,772	U
31	AV-8 Series	A		48,044		19,386		72,100		91,486	U
32	F-18 Series	A		536,631		492,821		43,250		536,071	U
33	H-46 Series	A		58,763		17,685				17,685	U
34	AH-1W Series	A		32,886		11,011		35,510		46,521	U
35	H-53 Series	A		237,812		25,871		36,248		62,119	U
36	SH-60 Series	A		91,058		67,779		6,430		74,209	U
37	H-1 Series	A		31,114		3,060				3,060	U
38	EP-3 Series	A		92,245		90,323				90,323	U
39	P-3 Series	A		455,003		221,982		6,000		227,982	U
40	E-2 Series	A		50,284		47,046				47,046	U

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Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2011 Annualized CR Base** Quantity	FY 2011 Annualized CR Base** Cost	FY 2011 Annualized CR OCO** Quantity	FY 2011 Annualized CR OCO** Cost	FY 2011 Annualized CR Total** Quantity	FY 2011 Annualized CR Total** Cost	Sec
	Budget Activity 05: Modification of Aircraft								
	Modification Of Aircraft								
29	EA-6 Series	A		14,953		40,102		55,055	U
30	AEA Systems			33,913				33,913	U
31	AV-8 Series	A		19,467		192,759		212,226	U
32	F-18 Series	A		494,874		115,629		610,503	U
33	H-46 Series	A		17,759				17,759	U
34	AH-1W Series	A		11,057		94,936		105,993	U
35	H-53 Series	A		25,979		96,909		122,888	U
36	SH-60 Series	A		68,061		17,191		85,252	U
37	H-1 Series	A		3,073				3,073	U
38	EP-3 Series	A		90,699				90,699	U
39	P-3 Series	A		222,907		16,041		238,948	U
40	E-2 Series	A		47,242				47,242	U

P-1P: FY 2012 President's Budget (With FY 2011 CR Adjustments), as of January 31, 2011 at 13:53:38
** Adjusts each budget line included in the FY 2011 President's Budget request proportionally to match the Annualized Continuing Resolution funding level for each appropriation. Quantities - TBD

Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2012 Base Quantity	FY 2012 Base Cost	FY 2012 OCO Quantity	FY 2012 OCO Cost	FY 2012 Total Quantity	FY 2012 Total Cost	Sec
	Budget Activity 05: Modification of Aircraft								
	Modification Of Aircraft								
29	EA-6 Series	A		27,734				27,734	U
30	AEA Systems			34,065		53,100		87,165	U
31	AV-8 Series	A		30,762		53,485		84,247	U
32	F-18 Series	A		499,597		46,992		546,589	U
33	H-46 Series	A		27,112				27,112	U
34	AH-1W Series	A		15,828		39,418		55,246	U
35	H-53 Series	A		62,820		70,747		133,567	U
36	SH-60 Series	A		83,394				83,394	U
37	H-1 Series	A		11,012		6,420		17,432	U
38	EP-3 Series	A		83,181		20,800		103,981	U
39	P-3 Series	A		171,466				171,466	U
40	E-2 Series	A		29,215				29,215	U

Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2010 (Base & OCO) Quantity	FY 2010 (Base & OCO) Cost	FY 2011 Base Request with CR Adj* Quantity	FY 2011 Base Request with CR Adj* Cost	FY 2011 OCO Request with CR Adj* Quantity	FY 2011 OCO Request with CR Adj* Cost	FY 2011 Total Request with CR Adj* Quantity	FY 2011 Total Request with CR Adj* Cost	Sec
41	Trainer A/C Series	A		20,554		23,999				23,999	U
42	C-2A	A		27,870		16,020				16,020	U
43	C-130 Series	A		75,142		17,839				17,839	U
44	FEWSG	A		9,351		21,928				21,928	U
45	Cargo/Transport A/C Series	A		19,369		16,092				16,092	U
46	E-6 Series	A		102,309		149,164				149,164	U
47	Executive Helicopters Series	A		42,325		43,443				43,443	U
48	Special Project Aircraft	A		12,331		14,679		6,100		20,779	U
49	T-45 Series	A		52,615		61,515				61,515	U
50	Power Plant Changes	A		27,865		19,948				19,948	U
51	JPATS Series	A		3,013		1,831				1,831	U
52	Aviation Life Support Mods	A		5,577		8,084				8,084	U
53	Common ECM Equipment	A		296,417		21,947		38,700		60,647	U
54	Common Avionics Changes	A		145,768		101,120		14,100		115,220	U
55	Common Defensive Weapon System	A		5,500				10,500		10,500	U
56	ID Systems	A		24,051		20,397				20,397	U
57	P-8 Series										U
58	MAGTF EW for Aviation	A									U
59	RQ-7 Series					18,121		8,000		26,121	U

P-1P: FY 2012 President's Budget (With FY 2011 CR Adjustments), as of January 31, 2011 at 13:53:38
* Reflects the FY 2011 President's Budget with an undistributed adjustment to match the Annualized Continuing Resolution funding level by appropriation.

Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2011 Annualized CR Base** Quantity	FY 2011 Annualized CR Base** Cost	FY 2011 Annualized CR OCO** Quantity	FY 2011 Annualized CR OCO** Cost	FY 2011 Annualized CR Total** Quantity	FY 2011 Annualized CR Total** Cost	Sec
41	Trainer A/C Series	A		24,099				24,099	U
42	C-2A	A		16,087				16,087	U
43	C-130 Series	A		17,913				17,913	U
44	FEWSG	A		22,019				22,019	U
45	Cargo/Transport A/C Series	A		16,159				16,159	U
46	E-6 Series	A		149,785				149,785	U
47	Executive Helicopters Series	A		43,624				43,624	U
48	Special Project Aircraft	A		14,740		16,308		31,048	U
49	T-45 Series	A		61,771				61,771	U
50	Power Plant Changes	A		20,031				20,031	U
51	JPATS Series	A		1,839				1,839	U
52	Aviation Life Support Mods	A		8,118				8,118	U
53	Common ECM Equipment	A		22,038		103,464		125,502	U
54	Common Avionics Changes	A		101,541		37,696		139,237	U
55	Common Defensive Weapon System	A				28,072		28,072	U
56	ID Systems	A		20,482				20,482	U
57	P-8 Series								U
58	MAGTF EW for Aviation	A							U
59	RQ-7 Series			18,196		21,388		39,584	U

P-1P: FY 2012 President's Budget (With FY 2011 CR Adjustments), as of January 31, 2011 at 13:53:38
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Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2012 Base Quantity	FY 2012 Base Cost	FY 2012 OCO Quantity	FY 2012 OCO Cost	FY 2012 Total Quantity	FY 2012 Total Cost	Sec
41	Trainer A/C Series	A		22,090				22,090	U
42	C-2A	A		16,302				16,302	U
43	C-130 Series	A		27,139		59,625		86,764	U
44	FEWSG	A		2,773				2,773	U
45	Cargo/Transport A/C Series	A		16,463		25,880		42,343	U
46	E-6 Series	A		165,253				165,253	U
47	Executive Helicopters Series	A		58,011				58,011	U
48	Special Project Aircraft	A		12,248		11,184		23,432	U
49	T-45 Series	A		57,779				57,779	U
50	Power Plant Changes	A		21,847				21,847	U
51	JPATS Series	A		1,524				1,524	U
52	Aviation Life Support Mods	A		1,069				1,069	U
53	Common ECM Equipment	A		92,072		27,200		119,272	U
54	Common Avionics Changes	A		147,093		13,467		160,560	U
55	Common Defensive Weapon System	A				3,300		3,300	U
56	ID Systems	A		37,330				37,330	U
57	P-8 Series			2,930				2,930	U
58	MAGTF EW for Aviation	A		489				489	U
59	RQ-7 Series			11,419				11,419	U

P-1P: FY 2012 President's Budget (With FY 2011 CR Adjustments), as of January 31, 2011 at 13:53:38

Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2010 (Base & OCO) Quantity	FY 2010 (Base & OCO) Cost	FY 2011 Base Request with CR Adj* Quantity	FY 2011 Base Request with CR Adj* Cost	FY 2011 OCO Request with CR Adj* Quantity	FY 2011 OCO Request with CR Adj* Cost	FY 2011 Total Request with CR Adj* Quantity	FY 2011 Total Request with CR Adj* Cost	Sec
60	V-22 (Tilt/Rotor ACFT) Osprey	B		94,223		21,985		36,420		58,405	U
Total Modification of Aircraft				2,682,811		1,623,739		328,358		1,952,097	

P-1P: FY 2012 President's Budget (With FY 2011 CR Adjustments), as of January 31, 2011 at 13:53:38
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Department of the Navy
FY 2012 President's Budget
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(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2011 Annualized CR Base** Quantity	FY 2011 Annualized CR Base** Cost	FY 2011 Annualized CR OCO** Quantity	FY 2011 Annualized CR OCO** Cost	FY 2011 Annualized CR Total** Quantity	FY 2011 Annualized CR Total** Cost	Sec
60	V-22 (Tilt/Rotor ACFT) Osprey	B		22,077		97,369		119,446	U
Total Modification of Aircraft				1,630,503		877,864		2,508,367	

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** Adjusts each budget line included in the FY 2011 President's Budget request proportionally to match the Annualized Continuing Resolution funding level for each appropriation. Quantities - TBD

Department of the Navy
FY 2012 President's Budget
Exhibit P-1 FY 2012 President's Budget
Total Obligational Authority
(Dollars in Thousands)

31 Jan 2011

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2012 Base Quantity	FY 2012 Base Cost	FY 2012 OCO Quantity	FY 2012 OCO Cost	FY 2012 Total Quantity	FY 2012 Total Cost	Sec
60	V-22 (Tilt/Rotor ACFT) Osprey	B		60,264		30,000		90,264	U
Total Modification of Aircraft				1,830,281		461,618		2,291,899	

P-1P: FY 2012 President's Budget (With FY 2011 CR Adjustments), as of January 31, 2011 at 13:53:38

Exhibit P-40, BUDGET ITEM JUSTIFICATION									DATE: **February 2011**				
APPROPRIATION/BUDGET ACTIVITY **Aircraft Procurement, Navy/APN-5 Aircraft Modifications**							P-1 ITEM NOMENCLATURE **051100, EA-6 SERIES**						
Program Element for Code B Items:							Other Related Program Elements						
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	**3,213.2**	A	**84.7**	**29.9**	**27.7**		**27.7**	**16.9**	**13.2**	**8.2**	**6.2**	**0.5**	**3,400.6**

DESCRIPTION:

This line item funds modifications to the EA-6B aircraft. The EA-6B Prowler is a four-seat, twin-engine, mid-wing, tactical, electronic attack aircraft. The EA-6B is employed in both Navy and Marine Corps squadrons to provide DoD tactical electronic attack capability. Modifications budgeted and programmed include: procurement of Improved Capability III (ICAP III) block upgrades and installation, avionics upgrades and installation, mission planning upgrades and installation, missile control modifications, and readiness initiatives to ensure EA-6B viability in an ever-changing threat environment.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
019-79	ALQ-99 PODS	990.6	77.4	15.0									1,082.9
032-85	EA-6B STRUCTURAL IMPRC	1,105.4	1.4	8.9	15.3		15.3	9.4	7.3	4.7	3.6		1,156.0
001-01	ICAP III	483.6	0.9	6.0	12.5		12.5	7.5	5.9	3.5	2.6	0.5	523.0
018-10	INTREPID TIGER (AN/ALQ-2		5.0										5.0
	INACTIVE OSIPS	633.7											633.7
Total		**3,213.2**	**84.7**	**29.9**	**27.7**		**27.7**	**16.9**	**13.2**	**8.2**	**6.2**	**0.5**	**3,400.6**

Note:
1. Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

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

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES | TYPE MODIFICATION: SAFETY OF FLIGHT / RELIABILITY

DESCRIPTION/JUSTIFICATION:

This Operational and Safety Improvement Program covers EA-6B Structural, Systems, Sub-Systems, and Avionics modifications and improvement to mission degrading deficiencies discovered during test reviews, flight line inspections, and preventive maintenance inspections related to reliability, maintainability, sustainability, training, and safety of flight.

Structural readiness improvements: Includes required modifications based upon fatigue life analysis and aircraft changes to ensure EA-6B aircraft availability, reliability, and maintainability of airframe structural components through FY-19.

Systems/Sub-Systems readiness improvements: Includes modifications required to improve reliability and maintainability of avionics, electrical, life support, propulsion/power, landing gear, hydraulics, pneumatic, primary/secondary flight controls, and environmental control systems.

Avionics readiness improvements: Includes modifications to improve reliability and maintainability of avionics, software, components, wiring, weapons control, communication, navigation, radar, and display systems.

Funding is requested to support all EA-6B airframe readiness, hardware readiness, electrical component readiness, obsolescence prevention, inspections, installations, and safety of flight improvements throughout remaining airframe service. Fund application to the structure, system/subsystem, and avionics deficiencies will be made to ensure aircraft service readiness and reliability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Major milestones include the completion of the Digital Flight Control System (DFCS) test program and Wing Center Section production deliveries.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
PRIOR YR (A Kits)	3,101	36.3																					3101	36.3
2ND EGI/ ASN-130A REPLACEMENT	113	1.1																					113	1.1
AIRCRAFT WIRING UPGRADE	60	2.1																					60	2.1
AN/USQ-113 KITS	257	34.8																					257	34.8
DFCS	112	4.8																					112	4.8
FLIGHT CONTROL	181	4.3																					181	4.3
HYDRAULIC SYSTEMS UPGRADE	88	10.6																					88	10.6
OUTER WING PANEL	1	25.4																					1	25.4
OUTER WING PANEL (SUPP)	47	130.1																					47	130.1
SDRS Kit	122	1.7																					122	1.7
USQ-113 A KITS (SUPPLEMENTAL)	2	7.4																					2	7.4
AVIONICS/ELECTRICAL READINESS (SUPP)		1.6																						1.6
AIR VEHICLE STRUCTURES READINESS (SUPP)		1.9																						1.9
SUB-SYSTEMS READINESS (SUPP)		1.8																						1.8
WING CENTER SECTION	114	335.9																					114	335.9
A/C SYSTEMS								1.0				1.0		1.0		0.8		0.8						3.6
A/C AVIONICS								1.0				1.0		1.0		0.6		0.5						3.1
A/C STRUCTURES								1.0				1.0		1.0		0.8		0.8						3.6
Installation Kits N/R	4	56.7																					4	56.7
Installation Equipment																								
ASN-130A REPLACEMENT/2ND EGI	1	4.2																					1	4.2
DFCS	73	9.3		0.6																			73	9.9
EJECTION SEAT	1	0.3																					1	0.3
HYDRAULIC SYSTEM UPGRADE - PR	1	0.2																					1	0.2
MISSION REPROGRAMMING		11.2																						11.2
POWER PC INTEGRATION	4	4.0																					4	4.0
PRIOR YR EQUIPMENT (B Kits)	1,949	89.3																					1949	89.3
USQ-113 EXT B KITS (SUPP)	1	1.6																					1	1.6
USQ-113 TOG B KITS (SUPP)	2	2.3																					2	2.3
A/C SYSTEMS								1.5				1.5		1.0		0.8		0.7		1.0				5.0
A/C AVIONICS								1.5				1.5		1.0		0.8		0.6		1.0				4.9
A/C STRUCTURES								1.5				1.5		1.0		0.8		0.6		1.0				4.9
Installation Equipment N/R		57.2				2.4		3.3				3.3		1.4		1.1		0.6		0.2				66.2
Engineering Change Orders		2.6				5.4		3.9				3.9		1.4		1.2								14.5
Data		14.5																						14.5
Training Equipment	15	10.9																					15	10.9
Support Equipment		16.6						0.6				0.6		0.6		0.5		0.2		0.4				18.8
ILS		5.1				1.2																		6.3
Other Support		82.9		0.8																				83.7
Interim Contractor Support		0.5																						0.5
Installation Cost	1,473	136.5																					1473	136.5
Total Procurement		**1,105.4**		**1.4**		**8.9**		**15.3**				**15.3**		**9.4**		**7.3**		**4.7**		**3.6**				**1,156.0**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: ICAP III (OSIP 001-01)

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES | TYPE MODIFICATION: SAFETY OF FLIGHT / RELIABILITY

DESCRIPTION/JUSTIFICATION:

This Operational and Safety Improvement Program covers the EA-6B Improved Capabilities III (ICAP III) system modifications to install required radar and communication receivers, displays, and connectivity improvements. Additionally, this modification removed over 70 aging and unreliable Weapons Replaceable Assemblies. Specifically, the modification program: replaced the ALQ-99 Receiver System with the ALQ-218 receiver system, replaced the TDY-43 display system with a new COTS based display system for the Pilot and three Electronic Countermeasures Officers (ECMOs), upgraded the Recorder Reproducer Set with a new Digital Recorder, incorporated the Multi-Mission Advanced Tactical Terminal to provide reception of data links, incorporated the USQ-113 Communication Receiver/Jammer with the ALQ-218, updated mission planning for ICAP III to Joint Mission Planning System (JMPS), and incorporated Link-16 to include basic electronic warfare battle management capabilities. The course of maturing ICAP III to full potential consists of Block upgrades with delivery approximately 24 months apart. FY07 Overseas Contingency Operations (OCO) supplemental funding provided for the purchase of 7 additional ICAP III ALQ-218 systems to upgrade 7 EA-6B ICAP II 89A aircraft, the corresponding MIDS Link 16 systems, and associated installation cost. LITENING Pod integration provides a demonstrated capability and usefulness to support integrated targeting and convoy protection when using the AN/AAQ-28 LITENING Pod system on AV/8B aircraft in conjunction with EA-6B aircraft. LITENING Pod is a critical capability in detection and defeat of terrorist threats. FY08 Supplemental funds procured 9 ICAP III kits, with installs in FY10, to support future USMC requirements.

AVIONICS KITS: Software/hardware modifications for capability improvements and to address obsolescence issues. Hardware modification kits include APX118 to APX123 conversion, MIDs block upgrades, MATT replacement and CRYPTO mod kits.

ICAP III BLOCK MODIFICATION/UPGRADES: Efforts associated with the integration of future block upgrades to correct any discovered deficiencies and capitalization of advanced technology to improve performance.

MISSION PLANNING ENVIRONMENT (MPE): MPE requirements include upgrades to the MPE baseline as improvements via ICAP III Block upgrades arise. MPE requires framework integration upgrades to avoid Microsoft Operating System obsolescence.

JAMMER MANAGEMENT REHOST (JMR):
Rehosting of mission software in Higher Order Language provides a significant reduction in cycle time and allows timely response to evolving OCO threats. JMR reduces maintenance costs for future mission software updates, enables additional jammer control unachievable with current code, and greatly enhances our ability to respond to changing world threats at significantly reduced cost.

HARM BLOCK 5A MISSILE CONTROL: All HARM Block 5 missiles in the fleet are being converted to Block 5A. EA-6B aircraft requires software and control panel modifications as well as integration efforts for HARM Block 5A missile control.

Additional outyear funds are provided to ensure aircraft mission systems readiness and reliability to counter increasingly sophisticated and agile threats to Fleet and Operating Forces throughout the remaining airframe service. These must be applied to all ICAP II and ICAP II systems, to include the avionics, mission system hardware, mission system software, mission planning environment and all other aircraft mission sub-systems.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ICAP III	30	292.9																					30	292.9
AVIONICS							92	5.7			92	5.7	56	2.0	32	1.6	32	1.6	32	1.6			244	12.5
Litening		0.8																						0.8
Installation Kits N/R		6.0																						6.0
Installation Equipment		9.7																						9.7
Installation Equipment N/R		1.7				1.6		2.7				2.7		1.5		0.9		0.2						8.5
ECO						0.6																		0.6
DATA		1.5																						1.5
TRAINING EQUIP	2	79.1																					2	79.1
Support Equipment		18.2																						18.2
ILS		4.2		0.9		0.8		0.6				0.6		0.2		0.1		0.1		0.1				7.0
Other Support		36.1				3.0		3.5				3.5		2.6		2.4		1.1		0.4				49.1
Interim Contractor Support		0.1																						0.1
Installation Cost	21	33.3	9										92	1.3	56	0.8	32	0.5	32	0.5	32	0.5	274	37.0
Total Procurement		**483.6**		**0.9**		**6.0**		**12.5**				**12.5**		**7.5**		**5.9**		**3.5**		**2.6**		**0.5**		**523.0**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Commercial.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2009 & PY (30) kits	21	33.3	9																**30**	**33.3**
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**21**	**33.3**	**9**																**30**	**33.3**

FY 2010 quantity of 9 (nine) were procured and associated installation costs were funded with FY2008 Supplemental.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	21	2	3	3	1																
Out	14		1	2	2	2	2	3	3	1											

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										30
Out										30

Exhibit P-3a

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Depot Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Mar-12 FY 2013: Mar-13

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Sep-12 FY 2013: Sep-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (92) kits									92	1.3									**92**	**1.3**
FY 2013 (56) kits											56	0.8							**56**	**0.8**
FY 2014 (32) kits													32	0.5					**32**	**0.5**
FY 2015 (32) kits															32	0.5			**32**	**0.5**
FY 2016 (32) kits																	32	0.5	**32**	**0.5**
To Complete () kits																				
TOTAL									**92**	**1.3**	**56**	**0.8**	**32**	**0.5**	**32**	**0.5**	**32**	**0.5**	**244**	**3.7**

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	0													23	23	23	23	14	14	14	14
Out	0													23	23	23	23	14	14	14	14

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	8	8	8	8	8	8	8	8	32	244
Out	8	8	8	8	8	8	8	8	32	244

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: **February 2011**						
APPROPRIATION/BUDGET ACTIVITY **Aircraft Procurement, Navy/APN-5 Aircraft Modifications**							P-1 ITEM NOMENCLATURE **051300 AEA SYSTEMS**						
Program Element for Code B Items:							Other Related Program Elements						
	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)		A		**33.8**	**34.1**	**53.1**	**87.2**	**38.1**	**35.9**	**29.9**	**51.3**		**276.1**

DESCRIPTION:

This line item funds modifications to Airborne Electronic Attack (AEA) products that are used on multiple platforms. Modifications budgeted and programmed include: procurement of Low Band Transmitter (LBT) inventory, ALQ-99 upgrades and viability modifications, Airborne Electronic Attack Expendable (AEAE) upgrades and integration, Intrepid Tiger II (ALQ-231) upgrades and integration, and Area Chaff Dispenser (ALE-43) upgrades and integration.

AEA products were funded in FY10 and earlier under the EA-6 Series Budget Line Item (0511).

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
007-11	Airborne Electronic Attack Sy			33.8	31.8	37.9	69.7	37.9	35.9	29.9	19.8		226.8
009-12	Airborne Electronic Attack Ex				2.3		2.3	0.2					2.5
022-12	Intrepid Tiger II (ALQ-231)					15.2	15.2						15.2
002-16	Area Chaff Dispenser (ALE-4										31.6		31.6
Total				**33.8**	**34.1**	**53.1**	**87.2**	**38.1**	**35.9**	**29.9**	**51.3**		276.1

Note: Totals may not add due to rounding.

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: Airborne Electronic Attack (AEA) Systems (OSIP 007-11)

MODELS OF SYSTEMS AFFECTED: MULTIPLE PLATFORMS — TYPE MODIFICATION: RELIABILITY / MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

LOW BAND TRANSMITTER:
The Low Band Transmitter (LBT) provides an expanded jamming capability against the Early Warning/Acquisition Radars and Communication Links of modern Integrated Air Defense Systems. LBT reliability and maintainability is greatly improved over that of current ALQ-99 Transmitters. ALQ-99 Transmitters are readily removed and installed Weapons Replaceable Assemblie s within the ALQ-99 Pod. Aircraft Operational Flight Program changes are required to support aircraft integration of this transmitter.

LBT replaces three AN/ALQ-99 transmitters and experiences new and greatly expanded employment in Overseas Contingency Operations (OCO), providing protection to Coalition air and ground units in continuous and direct contact with enemy forces. LBT combines the functionality of the modified transmitters into a single highly reliable solid state transmitter increasing both availability and mission effectiveness. The LBT increases reliability and flexibility. OCO support has required more sustained jamming than projected and resulted in higher system failure rates. The LBT is an O-Level remove and replace item. This capability will be available for all EA-6B/EA-18G aircraft, which includes four Naval Air Reserve aircraft. The Extended Low Band Radome (ELBR) currently flown on the EA-6B is structurally incompatible with the EA-18G. EA-18G compatible Extended Low Band Radomes (GELBRs) need to be produced for the integration of the ALQ-99 onto the EA-18(

SUPPORT EQUIPMENT:
Introduction of new/modified ALQ-99 pod equipment requires new/modified organizational, intermediate and depot level support equipment, such as modifications and additions to the pod test set to support Low Band Transmitter and modifications to High Power Device Test S extend frequency coverage to test Band 9/10 transmitters. Changes to existing support equipment will be needed to improve reliability, maintainability, availability, address obsolescence issues, and correct deficiencies found in testing or in the field.

ENGINEERING CHANGES:
This Operational and Safety Improvement Program covers system investigation, analysis, and modifications required to improve ALQ-99 reliability, maintainability, availability, resolve obsolescence issues, and correct deficiencies found in testing or in the field. Engineering changes are needed to enhance mission capability and integration of evolving Electronic Warfare systems, including the Area Chaff Dispenser (ALE-43), to address increased mission requirements and emerging threats in support of EA-6B, EA-18G, FA-18 Series, AV-8B, and rotary aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Following a competitive acquisition and Milestone II approval, Engineering and Manufacturing Prototype and Low Rate Initial Production (LRIP) testing conducted at government and contractor facilities successfully demonstrated the key performance parameters identified in OPNAV/N88 ltr Ser No. N880C3/6S663399 of 26 JUL 96 can be attained with the present LBT design. LRIP unit Testing began in April 2007, Milestone III was achieved in April 2008 and a Full Rate Production (FRP) contract was awarded June 2008. In response to the increasing force protection requirement, an Early Operational Capability (EOC) for LBT was met in August 2006.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits N/R																								
Installation Equipment																								
EXTENDED LOW BAND RADOME (GELBR)					28	3.3	26	3.1			26	3.1	18	2.3									72	8.7
ALE 43 AREA CHAFF DISPENSER															11	7.2	13	8.7					24	15.9
ALQ 99 BAND TWT IM																								
BAND 9/10 GFE																								
BAND 9/10 RADOME																								
BAND 9/10 TRANSMITTER CONG ADD																								
LOW BAND TRANSMITTER					9	12.6	17	23.0			17	23.0	22	30.2	12	17.9							60	83.7
LOW BAND TRANSMITTER OCO									28	37.9	28	37.9											28	37.9
PAO TRANSMITTER MOD																								
REPAIR OF GFE (UEU)																								
UNIVERSAL EXCITER UPGRADE																								
Installation Equipment N/R						6.4		2.1				2.1		0.9		4.2		8.6		7.7				29.9
Engineering Change Orders						6.5		1.7				1.7		1.7		0.8		0.7		0.8				12.2
Data						*								*		0.1		0.1		0.1				0.3
Training Equipment																								
Support Equipment						*										0.5		0.5		0.2				1.2
ILS						4.2		1.9				1.9		1.5		3.4		8.0		7.8				26.9
Other Support						0.7								1.2		1.9		3.2		3.2				10.2
Interim Contractor Support																								
Installation Cost																								
Total Procurement						**33.8**		**31.8**		**37.9**		**69.7**		**37.9**		**35.9**		**29.9**		**19.8**				**226.8**

Notes:
1. Totals may not add due to rounding.
2. Asterisk indicates amount value less than $51K.
3. Install schedules not provided for GFE that fits into the POD without structural modification, or for equipment not requiring APN-5 funding for installation into the POD/aircraft (e.g.: LBT, UEU).

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Airborne Electronic Attack Expendable (AEAE) (OSIP 009-12)

MODELS OF SYSTEMS AFFECTED: MULTIPLE PLATFORMS | TYPE MODIFICATION: RELIABILITY/ MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

The Airborne Electronic Attack Expendable (AEAE) program will address unmitigated Integrated Air Defense System (IADS) threats in the mid term by implementing ADM-160 Miniature Air Launched Decoy (MALD) expendable active electronic attack variant, capable of deception and jamming against multi-function phased array Target Engagement Radars (TERs) and other EW threats. This program will produce and field a tactical air launched decoy with jammer payloads capable of being supported and maintained in future years. Original efforts assessed the ITALD-J vehicle, and will now assess use and modifications of the MALD vehicle to meet operational requirements in naval scenario and environments, and to correct deficiencies.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Modification of AEAE payload within ITALD-J capabilities complete. Efforts will purchase modified MALD platforms to support Electronic Attack System (EAS) jammer payload.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
A KITS																								
Installation Kits N/R																								
Installation Equipment																								
Installation Equipment N/R																								
ECO																								
Data								0.7				0.7												**0.7**
Training Equipment																								
Support Equipment																								
ILS																								
Other Support								1.6				1.6		0.2										**1.8**
Interim Contractor Support																								
Installation Cost																								
Total Procurement								**2.3**				**2.3**		**0.2**										**2.5**

Notes:

1. Totals may not add due to rounding.

2. Install schedule not provided for GFE that fits into MALD vehicle without structural modification.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Intrepid Tiger II (ALQ-231) (OSIP 022-12)

MODELS OF SYSTEMS AFFECTED: MULTIPLE PLATFORMS | TYPE MODIFICATION: RELIABILITY/MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

Effort for Intrepid Tiger II capabilty is designed to expand Electronic Warfare (EW) effectiveness against current threats and provide adaptability to future threats. Key to this capability is network accessibility that includes CORPORAL derived infrastructure and EW services for integration on multiple aviation platforms including the AV-8B Harrier, F/A-18, and UAS platforms.

The design includes Open Architecture compliant and easily expandable hardware and software. Technique Generator Upgrades: Upgrades will enable new techniques to provide additional capability that counters existing and anticipated threat system while maintaining an open architecture to allow future counter threat upgrades. Antenna Upgrades: Upgrades will expand transmit and receive frequency coverage to that of current and anticipated threat systems dynamically operating in a broa spectrum. Network and EW Services Upgrade: Will enable a non-co-located operator access to pod functions and information exchanges via radio signals to enhance operational and tactical flexibility. Interface Upgrades: Will enable ground and air based users to configure and monitor pod status, operation and effectiveness. Other Supporting Upgrades: Includes hardware and software components that enable functions of power, cooling, status, control and connectivity as through processors, sensors, radios, RF components and support equipment critical to overall pod and system operation to include techniques, mission planning, operational execution, postflight analysis and shipping containers.

SUPPORT EQUIPMENT: Introduction of new/modified ALQ-231 equipment requires new/modified organizational, intermediate and depot level support equipment. Changes to existing support equipment will be needed to improve reliability/maintainability/availability, address obsolescence issues, and correct deficiencies found in testing or in the field.

ENGINEERING CHANGES: This ALQ-231 Program covers system investigation, analysis, and modifications required to improve reliability/maintainability/availability, enhance mission capability, interface/integrate with evolving Electronic Attack systems, resolve obsolescence issues, and correct deficiencies found in testing or in the field.

Development Status/Major Development Milestones:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment									18	10.1	18	10.1											18	10.1
Installation Equipment N/R										2.3		2.3												2.3
Engineering Change Orders										0.4		0.4												0.4
Data																								
Training Equipment																								
Support Equipment										0.4		0.4												0.4
ILS										1.1		1.1												1.1
Other Support										0.9		0.9												0.9
Interim Contractor Support																								
Installation Cost																								
Total Procurement										**15.2**		**15.2**												**15.2**

Notes:

1. Totals may not add due to rounding.

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
051400, AV-8 SERIES

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	**814.5**	A	**48.0**	**91.5**	**30.8**	**53.5**	**84.2**	**28.8**	**29.1**	**25.6**	**18.8**	**322.1**	**1,462.7**

DESCRIPTION: This line item funds modifications to T/AV-8B aircraft. The AV-8B is a single engine, single crew member aircraft capable of vertical/short take-off and landing operations (V/STOL). The AV-8B meets the Marine Corps requirements for a light attack aircraft to provide responsive offensive air power that can operate from ships and austere forward bases in direct support of ground forces. The overall goal of the modifications budgeted in FY 2012 is to continue incorporation of Readiness Management Plan systems; electrical and structural changes; upgrade air-to-air weapon system employment and integration components; inventory sustainment and upgrade efforts to offset obsolescence and attrition; incorporation of Litening Pod upgrades; and incorporation of AV-8B F402-RR-408 engine safety and operational changes. FY09 Overseas Contingency Operations (OCO) funding was received for AV-8B Expeditionary Litening Pod Upgrade to increase combat capability and ALE-47 capability to address obsolescence and improve readiness. FY10 OCO funds provided for Attrition Recovery upgrade to address mission availability, and combat relevance and operational safety and Expeditionary Litening Pod Upgrade to increase combat capability on USMC TACAIR platforms, to include AV-8B, F/A-18 A-D, and EA-6B. FY11 OCO provides Expeditionary Litening Pod Upgrades to increase combat capability across USMC TACAIR platforms. The FY12 OCO request continues Expeditionary Litening Pod upgrades and complete ALE-47 installations.

The AV-8B active inventory (07 Jan 2011) consists of 4 major configurations:

16 Two-Seat TAV-8B aircraft
5 DAY Attack aircraft
35 NIGHT Attack aircraft
89 Night Attack/RADAR aircraft

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

The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
023-00	AV-8B LITENING POD	283.7	11.0	76.1	1.9	51.5	53.4	2.0	2.1	2.2	2.2	152.6	585.2
012-02	OPEN SYSTEMS CORE AVIONICS REQUIREMENTS & PRECISION STRIKE	108.6	1.6										110.2
002-04	ENGINE LIFE MANAGEMENT PROGRAM	31.5	4.6	4.4	4.6		4.6	4.0	4.3	4.1	4.0	11.9	73.4
025-04	ALE-47	17.8	0.1	0.1		2.0	2.0						20.0
006-06	OBSOLESCENCE REPLACEMENT	30.9	24.7	10.1	24.1		24.1	22.8	22.7	19.3	12.6	157.6	324.9
015-07	AV-8 ATTRITION RECOVERY DAY TO NIGHT	45.5	6.1	0.8	0.2		0.2						52.6
	Inactive OSIPS	296.5											296.5
Total		**814.5**	**48.0**	**91.5**	**30.8**	**53.5**	**84.2**	**28.8**	**29.1**	**25.6**	**18.8**	**322.1**	**1,462.7**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION:
The system will integrate and procure an external targeting pod that includes an infared (IR) and low-light TV targeting device capable of detecting, classifying, auto-tracking, and designating air-to-surface targets. The system will support first-pass autonomous delivery of conventional, precision guided, and accurate munitions to include Laser Maverick, GBU-12 and GBU-16 and Joint Direct Attack Munition (JDAM). The system will provide targeting capabilites for the AV-8B fleet of Night Attack and Radar aircraft through the end of its service life. The addition of the LITENING II Targeting Pod gives the AV-8B (Night and Radar) the capability to perform precision targeting. Congressional adds of FY01 $80M, FY02 $24.7M, FY03 $28.0M and FY04 $37.0M were provided to procure additional pods. Congressional add of $3.25M FY-07 provided to upgrade litening targeting pods. FY07 supplemental funds were provided for AV-8B Litening capability on Station 4/Centerline to support the movement of the LITENING targeting pod to the AV-8B centerline station allowing carriage of both left and right hand configured pods, which increased the AV-8Bs ordnance capacity by 200%. Reduced sensor masking and elimination of asymmetry problems associated with targeting pod carriage on a wing station will yield better aircraft handling, increased bring-back capability, and significantly increased combat effectiveness in support of Operation Iraqi Freedom and Overseas Contingency Operations (OCO). FY08 supplemental provided for Station 4 kit procurement. Per direction of HQMC Aviation Plans and Weapons - the AV-8B Program Office has been designated as the single management authority in order to procure, integrate and manage the Litening Pod program on all USMC (AV-8B/F/A-18/EA-6B) platforms in order to maintain commonality within the USMC TACAIR for Litening capabilities. FY09 OCO $32.0M was provided to procure, upgrade and integrate GEN4 LITENING Targeting pods ability on the AV8B, F/A-18, and EA-6B platforms via aircraft software Operational Flight Programs (OFPs). FY11 OCO of $72.1M supports the Common OFP integration effort info platform OFPs that was initiated with FY09 OCO, and to further the requirement of the USMC to obtain operational LITENING Pod and associated Datalink II quantity of 191. The FY12 OCO request continues LITENING Pod GEN4 procurements, upgrades Block I pods to GEN4, and procures associated Datalink II components. The GEN4 upgrade vastly improves combat capabilities through increased coverage, expanded IED detection capability, and expanding range of video downlink to support units equipped with R.O.V.E.R. and Video Scout ground stations. Theater Joint Tactical Air Requests (JTARs) are specifically requesting Litening datalink capabilities for Intelligence Surveillance and Reconnaissance. The upgrade doubles the FLIR resolution, and adds Laser Target Image Processing (LTIP) for enhanced detection and targeting capability; increasing the survivability and effectiveness of ground forces. This funding will ensure required upgrades for all three of the USMC TACAIR expeditionary platforms that are currently supporting OEF and OCO combat operations, and all CMC directed pre-deployment training requirements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
The Targeting Pod is a non developmental item and has been in full production for several years. It was a winner of a targeting Forward Looking Infrared competition for the Air Force Reserve and Air National Guard and put in service on their F-16s 2nd Qtr FY00. The design, integration, and testing of the Targeting Pod for the AV-8B was done on the Radar and/or Night Attack during 3rd Qtr FY00. The integration utilized existing aircraft software, a weapons station adapter, and Targeting Pod interface software. PEO(A) had approved the acquisition strategy to acquire the pods through an existing USAF contract and provided a targeting pod capability to the Fleet in 1st Qtr FY02. Additional full Litening integration to utilize targeting information from the Litening Pod in OC1.2 to create aircraft targeting solutions was developed and tested under this OSIP and introduced under the H2.0 OFP program. Video datalink with the ability to transmit Litening POD video (to Rover III ground stations utilized by forward air controllers) was introduced as Rover upgrades. Station 4 efforts determine feasbility of carrying the Pod on centerline station to allow for more weapons carriage on other wing stations. The ability to carry the Litening Pod on wing stations 2, 5, 6 and multi-target cueing is included in the H4.0/H5.0 Program. Upgrades include retrofit of current Rover Pods with new transmitters and upgrading existing Pods to Rover configuration. Congressionally directed funding in the amount of $1.7M in FY06 and $4.2M in FY07 was allocated for Litening on Station 4 (Centerline) in support of Overseas Contingency Operations (OCO). Congressionally directed funding in the amount of $3.25M in FY07 for LITENING Pod Upgrade. FY07 Supplemental directed funding, in the amount of $9.5M, enabled IP communications (chat, status of forces, imagery, and pre-formatted messages) via radio relay among dispersed tactical elements and provide enhanced collaboration capability between EA-6B, F/A-18 and AV-8B pilots and corresponding Joint Forward Air Controllers and Tactical Air Control Party/Post (TACP) personnel, allowing more accurate targeting and faster assessments. FY07 Supplemental directed funding, in the amount of $19.5M for the CORPORAL Joint Capability Technology Demonstration (JCTD) which provides a capability that is extended through the EPLRS radio resident in the LITENING Pod and is flown on the AV8B, F/A-18, and EA-6B. That capability requires modification to existing services or the addition of new services to all providers that will be part of the network that the JCTD will construct to include Litening Pods, Ground Users, and UAVs. Funds will also be used to procure additional Litening pods and upgrade pods in the present inventory. FY09 OCO directed funding, in the amount of $32.0M and FY11 OCO requested funding of $72.1M initiates procurement of GEN 4 Litening Pod for USMC platforms (AV8B, F/A-18, and EA-6B) and also initiates LITENING Pod common operational flight program (OFP) development and integration on all USMC LITENING Pod capable platforms. Integration of the Common LITENING Pod OFP will be achieved via aircraft platform software OFPs. FY09 and 11 OCO will also procure LITENING pod peculiar support equipment to enable the loading of Pods onto deployed aircraft, and will update training equipment across platforms to support the Common LITENING OFP.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E,N																								
PROCUREMENT																								
Installation Kits																								
Litening PD/ROVER Upgrade	2	4.9																					2	4.9
Night	44	0.1																					44	0.1
Radar	47	0.1																					47	0.1
Reman	47	0.1																					47	0.1
Pod Retrofit Kits (ER to AT)	47	3.9																					47	3.9
Station 2/5/6 Wiring Kits (multi station)	127	1.9																					127	1.9
Station 4 Wiring Kits	119	6.4																					119	6.4
Station 5 Mod Kit (OCO)					12	0.3																	12	0.3
Installation Kits N/R		7.8																						7.8
Installation Equipment																								
CFE Litening PODs	96	124.6																					96	124.6
Pod Upgrade Kits (AV-8B)	43	10.3																					43	10.3
Pod Upgrade Kits (BLOCK 1 to GEN4)	1	1.3	1	1.2	1	1.3													1	1.3	104	145.0	108	150.1
Pod Upgrade Kits (BLOCK 1 to GEN4) O			4	5.2	1	1.3			19	24.7	19	24.7											24	31.2
GEN4 LITENING PODs	12	21.2																					12	21.2
GEN4 LITENING PODs (OCO)					16	28.8			9	16.2	9	16.2											25	45.0
Datalink II	20	7.3	3	0.6	2	0.5									1	0.2	3	0.8					29	9.4
Datalink II (OCO)			5	1.2	17	4.1			28	6.7	28	6.7											50	12.0
Installation Equipment N/R		30.0																						30.0
Installation Equipment N/R (OCO)						26.6				2.5		2.5												29.1
Engineering Change Orders		1.7																						1.7
Data		1.2				0.1		0.1				0.1		0.1		0.1		0.1		0.1		0.3		1.9
Data (OCO)				0.1		0.4				0.1		0.1												0.6
Training Equipment		8.4																						8.4
Training Equipment (OCO)						5.0																		5.0
Support Equipment		3.2																						3.2
Support Equipment (OCO)						1.2																		1.2
ILS		2.5		0.3		0.4		0.2				0.2		0.2		0.2		0.2		0.2		1.0		5.1
ILS (OCO)						0.7																		0.7
Other Support		46.9		1.5		1.3		1.1				1.1		1.0		1.0		1.1		0.7		6.3		60.9
Other Support (OCO)						3.7				1.3		1.3												4.9
Interim Contractor Support																								
Installation Cost	1	*	34	0.8	21	0.5	22	0.6			22	0.6	23	0.7	18	0.5							119	3.1
Installation Cost (OCO)					12	0.1																	12	0.1
Total Procurement		**283.7**		**11.0**		**76.1**		**1.9**		**51.5**		**53.4**		**2.0**		**2.1**		**2.2**		**2.2**		**152.6**		**585.2**

Notes:
1. Totals may not add due to rounding and Asterisk indicates amount less than $51K.
2. Litening Pod and Datalink II quantities do not total to USMC requirement of 191 due to prior year procurements occurring under F/A-18's BLI 52500, OSIP 024-04.
3. Installations are required for Station 4 wiring and Station 5 mod kits only.
4. FY10 total does not reflect a recent $2.7M reprogramming action.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B Night Attack & Radar/Reman

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Various

ADMINISTRATIVE LEADTIME: Various Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: N/A FY 2011: Various FY 2012: N/A FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: Various FY 2012: N/A FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (119) kits	1	*	34	0.8	21	0.5	22	0.6	23	0.7	18	0.5							119	3.1
FY 2010 ( ) kits																				
FY 2011 (12) kits					12	0.1													12	0.1
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**1**	*	**34**	**0.8**	**33**	**0.6**	**22**	**0.6**	**23**	**0.7**	**18**	**0.5**							131	3.2

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1	8	8	9	9	9	8	8	8	6	6	5	5	6	6	6	5	5	5	4	4
Out	1		8	8	9	9	9	8	8	8	6	6	5	5	6	6	6	5	5	5	4

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										131
Out	4									131

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04)

MODELS OF SYSTEMS AFFECTED: TAV-8B, AV-8B Day, AV-8B Night, AV-8B Night/Radar — TYPE MODIFICATION: Safety

DESCRIPTION/JUSTIFICATION:
The AV-8B is a single engine aircraft with unique capabilities. The V/STOL environment is very unforgiving and allows no tolerance for engine problems. In the past, the Pegasus F402 has suffered from a sub-optimal safety and reliability record. The Engine Life Management Program is a comprehensive program to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine. Funding provided is to incorporate Engineering Change Proposals to increase safety of flight and operational readiness of the F-402-RR-408 Engine.

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

ECP-3532 Bulkhead Cracking	ECP-3733 PPC 213	ECP-3813 Oil Piping #3 Vane	ECP-3868R1 Improved GB Lubrication	ECP-3903 Modified BOV to prevent stiction
ECP-3584 PPC 180	ECP-3739 PPC 214	ECP-3843 Sand Tolerant NGV	ECP-3881 FMU Shut Off Valve	ECP-3904 Encapsulated Revision
ECP-3629 Revised Oil Breather Vent Pipe	ECP-3743 PPC 215	ECP-3848R1 HPC Casing Manifold Bridge Pipe	ECP-3883 Introduction of IBI	ECP-3892 LPC Rotor 2 Blade with Revised Stagger Angle
ECP-3641C1/AYC-1365	ECP-3800 PPC 223, QEC 3	ECP-3852 LPC Stage 2 Vanes Hard Coating	ECP-3886 PDR Assembly	ECP-3893 LPS 1, 2, & 3 Van Serialization
ECP-3705R1 Two Piece Bottom Heat Shield	ECP-3800 PPC 216	ECP-3854R1 LPC3 Vane Sealing Strip	ECP-3887 IGV Position Transmitter/Rev. Drive Shaft	IPPC 227 FDS
ECP- 3754 HP8 Pipe Clamps	ECP-3806 Rear Nozzle Trimmers	ECP-3855 LPCI Dampening Foil	ECP-3898 Replacement Gears	

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

ECP-TBD GTS PWR Turbine/Compressor RGV	ECP-TBD EVICS HMU Pilot Valve	ECP-TBD No 2 Bearing Re-design	ECP-TBD Obsolescence, protection unit	ECP-TBD SET 2006-F402-01 (LPB Vanes)
ECP-TBD CCOC Thermocouples	ECP-TBD DECU Obsolescence	ECP-TBD LPC1 Vane Thick Trailing Edge	ECP-TBD Obsolescence, starter motor	ECP-TBD LPCI Redesign
ECP-TBD HPC Vane Modification	ECP-TBD Final Drive End	ECP-TBD DECU/FMU WOW/ Improvements	ECP-TBD New break-in box with expanded capability	ECP-TBD DECU Phase Software
ECP-TBD LPT1 Liner	ECP-TBD Hot Nozzle Redesign	ECP-TBD LPC 1 Blade FOD Tolerance (LPB)	ECP-TBD Power turbine rotor blade failure fix	ECP-TBD Disk Slot Treatment (LPB)
ECP-TBD Introduction of new HPT2 Blade	ECP-TBD Exhaust Diffuser Redesign	ECP-TBD LPC 1 Blade Dovetail Coatings (LPB)	ECP-TBD New Starter Contactor - improved reliability	ECP-TBD GTS Break Seal
ECP-TBD Fine Oil Filter	ECP-TBD Thrust Push Improvements	ECP-TBD #2 Bearing Redesign	ECP-TBD FMU Obsolescence ECP	ECP-TBD F402 LPC 1 Blade Root LPB Production Processing
ECP-TBD Control System Obsolescence	ECP-TBD LPB Improvements	ECP-TBD PLAU Shut Off Valve	ECP-TBD DCU Redesign	ECP-TBD F402 LPC Stage 1 Disk Slots LPB Production Processing
ECP-TBD EVICS IDEC POR Correction	ECP-TBD GTS Improvements	ECP-TBD Obsolescence, starter contactor	ECP-TBD HPT Blade Coating (Aluminide)	ECP-TBD Nozzle and spigot ring assy reliability improvement
ECP-TBD EVICS Obsolescence	ECP-TBD In Service Oil Analysis	ECP-TBD Air Turbine Starter Obsolescence	ECP-TBD Intermediate IGV Test Set Improvements	ECP-TBD Engine Adapter Reliability Improvements

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E,N																								
PROCUREMENT																								
Installation Kits																								
ECP-3843 SAND TOLERANCE	121	8.2	8	0.8	6	0.6																	135.0	9.6
ECP-TBD PMA Lip Seal Re-Design																								
ECP-589 MAGNETIC CHIP DETECTOR	309	1.4																					309.0	1.4
Installation Kits N/R		0.1																						0.1
Installation Equipment																								
ECP-TBD LPB Improvements																								
Installation Equipment N/R		0.4																						0.4
Engineering Change Orders																								
Data		2.3		0.4		0.4		0.4				0.4		0.5		0.5		0.5		0.5		2.8		8.3
Training Equipment																								
Support Equipment		7.7		1.6		1.5		1.5				1.5		1.0		1.2		1.1		1.0		1.5		18.2
Engine Adapter Reliability Improvements (OCO)																								
Intermediate IGV Test Sets Improvements (OCO)																								
In Service Oil Analysis Kits (OCO)																								
Air Turbine Starter Obsolescence (OCO)																								
Generator Control Unit Test Set Obsolescence (OCO)																								
Generator Control Unit Test Set Obsolescence								0.7				0.7												0.7
EVICS Interrogator													3	0.2	3	0.2							6	0.3
ECP-TBD GTS Improvements														0.5		0.5		0.6		0.6				2.2
ILS		7.9		1.6		1.7		1.6				1.6		1.6		1.6		1.7		1.6		5.7		25.1
Other Support		3.4		0.3		0.2		0.3				0.3		0.3		0.3		0.3		0.3		1.8		7.1
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**31.5**		**4.6**		**4.4**		**4.6**				**4.6**		**4.0**		**4.3**		**4.1**		**4.0**		**11.9**		**73.4**

Notes:
1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Sand Tolerance Kits installs are conducted in conjunction with engine overhauls

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: ALE-47 (OSIP 025-04)

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

DESCRIPTION/JUSTIFICATION:
ALE-47 is a form-fit enhanced functionality countermeasures dispenser system replacement for the obsolete ALE-39. This OSIP installs more reliable digital sequencers and dispenser magazines to improve aircraft readiness. When fully funded, the Warfare Management Computer (WMC) software will be modified to allow full ALE-47 functionality. FY09 & FY12 OCO funds are provided for the procurement and installation of 125 ALE 47 wiring kits. These kits will provide the deployed fleet with increased readiness, reducing the risk associated with the limited electronic warfare capabilities that the current ALE-39 configuration provides.This effort provides for the update of the WMC Software and procurement of additional hardware to bring the present day system up to full ALE-47 functionality.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Improves aircraft readiness by replacing failure prone analog sequencers and providing expanded countermeasures capability. Positions the AV-8B for future integration of advanced countermeasures expendables and programs.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E,N																								
PROCUREMENT																								
Installation Kits																								
ALE-47 Wiring ECP 311	83	1.6																					83	1.6
ALE-47 Wiring ECP 311R1	125	1.3																					125	1.3
Installation Kits N/R																								
Installation Equipment																								
Installation Equipment N/R		3.4																						3.4
Engineering Change Orders		1.3																						1.3
Data		0.8																						0.8
Training Equipment		2.1																						2.1
Support Equipment																								
ILS		5.4																						5.4
Other Support		1.9		0.1		0.1																		2.1
Interim Contractor Support																								
Installation Cost									125	2.0	125	2.0											125	2.0
Total Procurement		**17.8**		**0.1**		**0.1**				**2.0**		**2.0**												**20.0**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B

MODIFICATION TITLE: ALE-47 (OSIP 025-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by a field MOD team.

ADMINISTRATIVE LEADTIME: Months

PRODUCTION LEADTIME: Months

CONTRACT DATES: FY 2010: N/A FY 2011: N/A FY 2012: N/A FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: N/A FY 2012: N/A FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (125) kits							125	2.0											125	2.0
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**125**	**2.0**											125	2.0

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										31	31	31	32								
Out											31	31	31	32							

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										125
Out										125

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: OBSOLESCENCE REPLACEMENT (OSIP 006-06)

MODELS OF SYSTEMS AFFECTED: T/AV-8B — TYPE MODIFICATION: Safety

DESCRIPTION/JUSTIFICATION:
This OSIP provides for maintaining the readiness of the AV-8B weapons system until its projected end of service, which is now 2022 or until replaced by short take-off and vertical landing operations (STOVL) JSF. This requires the airframe and integrated systems to exceed planned service life and will require both systems modification and obsolescence solutions. Funds will be utilized to manage, prepare, process and incorporate ECPs and implement changes to sustain and improve AV-8B weapons system readiness including safety, mission availability, structural integrity, air-to-air weapon system employment, and component (avionics/systems) reliability, maintainability, and obsolescence conditions as they arise. This program may be required to provide timely remedial action for any aircraft system, component or structure. Due to Fleet aircraft PAA inventory shortfalls, all depot level modification installations must be planned and programmed concurrent with Integrated Maintenance Plan (IMP) scheduled depot overhaul events to minimize aircraft out-of-service periods, unless safety or aircraft availibility require stand alone installations.

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E,N																								
PROCUREMENT																								
Installation Kits																								
ECP-282 Fuel Coupling P1	151	0.3																					151	0.3
ECP-282 Fuel Coupling P2	56	0.7	25	0.3	31	0.6	30	0.6			30	0.6											142	2.1
ECP-283 Water Tank Pre-Filter	149	0.5																					149	0.5
ECP-CP-042 Ctr Tank Mod	21	1.0	8	0.4	8	0.3	7	0.4			7	0.4	21	1.2	13	0.8	13	0.8	17	1.1	5	0.3	113	6.4
ECP-CP-044 PMI/EMU	150	0.1																					150	0.1
ECP-CP-045 DC Contactor	1	*	145	1.3																			146	1.3
ECP-PMA-001 Pylon Hooks	1,057	*																					1057	*
ECP-321 MLG UTLP	146	0.6																					146	0.6
ECP-323 NLG Steering Dowel Pin	50	0.1	48	*	48	*	37	0.1			37	0.1											183	0.3
ECP-322 Blow-Down Bottle	148	0.1																					148	0.1
ECP-324 Forward ECS Ram Air Duct	89	0.7																					89	0.7
ECP-TBD Bullet Fairing Replacement													4	0.6			4	2.9	2	2.4	72	11.8	82	17.6
ECP-TBD Tail Plane Guide													42	1.0	40	0.9	39	1.0					121	2.9
ECP PMA-2009-0004 Frame 43 Bushings			2	0.1	40	0.8	20	0.4			20	0.4	24	0.5	21	0.5	21	0.5					128	2.8
ECP TBD Advanced Memory Unit (AMU)													145	1.6									145	1.6
ADU-830 Adapters (OCO)			55	2.2																			55	2.2
LAU-127 Launcher																					55	1.5	55	1.5
ECP-TBD Frame 29 Replacement							4	0.1			4	0.1	5	0.1			6	0.1	8	0.2	12	0.2	35	0.7
ECP-TBD ECS System Improvement																	2	0.7			113	41.9	115	42.6
Installation Kits N/R		4.3		2.2		1.7		0.2				0.2		3.0		1.1		3.6		0.1		0.7		17.0
Installation Kits N/R (OCO)				4.5																				4.5
Installation Equipment																								
30KVA Generators	18	4.1																					18	4.1
ECP-TBD Display Computer Kits							11	1.6			11	1.6	16	2.6	33	5.5					39	6.5	99	16.2
ECP-303 EAAS			168	0.5																			168	0.5
ECP-TBD Thermal Battery P1					43	0.3	28	0.1			28	0.1	27	0.1	26	0.1	22	0.1					146	0.9
ECP-TBD Thermal Battery P2			2	*	27	0.3	28	0.3			28	0.3	27	0.3	26	0.3	22	0.3					132	1.6
ECP-326 Struct Servicing Indicators																					97	2.5	97	2.5
FLE TRACKING		0.4																						0.4
ECP-PMA-002 Cargo Pods	36	1.1																					36	1.1
ECP-TBD Takeoff & Ldg Checklist	1	*	162	0.6																			163	0.6
ECP TBD Digital Video Recorder (DVR)							137	7.5			137	7.5									16	1.0	153	8.5
ECP-TBD Flight Control Computer																	1	0.1	21	2.6	115	15.0	137	17.7
ECP-TBD Single Card Programmer							32	1.2			32	1.2	55	2.2	56	2.3							143	5.6
ECP-TBD Airborne VMF Terminal																					137	27.4	137	27.4
Installation Equipment N/R		0.6		5.5		1.2		3.3				3.3		1.8		1.1		1.2		1.1		0.7		16.5
Engineering Change Orders																								
Data		1.4		0.3		0.3		1.4				1.4		1.0		0.6		0.7		0.3		0.5		6.5
Training Equipment				*				0.2				0.2		0.8		0.1						0.6		1.7
Support Equipment		4.1		0.8		0.1								0.3		0.1		0.1		0.1		0.3		5.9
Support Equipment (OCO)																								
ILS		0.7		0.1		0.1		0.6				0.6		0.2		0.1		0.2				0.3		2.3
Other Support		8.2		2.1		2.6		1.5				1.5		2.0		1.7		1.9		2.0		17.8		39.7
Interim Contractor Support																								
Installation Cost	85	2.0	51	3.7	78	1.7	157	4.5			157	4.5	169	3.6	238	7.6	156	5.2	40	2.7	241	28.7	1215	59.5
Total Procurement		**30.9**		**24.7**		**10.1**		**24.1**				**24.1**		**22.8**		**22.7**		**19.3**		**12.6**		**157.6**		**324.9**

Notes:
1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T/AV-8B MODIFICATION TITLE: OBSOLESCENCE REPLACEMENT (OSIP 006-06)

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

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

ADMINISTRATIVE LEADTIME: Various Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

DELIVERY DATE: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (179) kits	85	2.0	46	3.3	48	0.2													179	5.6
FY 2010 (85) kits			5	0.3	30	1.4	50	0.3											85	2.1
FY 2011 (162) kits							107	4.2	55	0.6									162	4.8
FY 2012 (158) kits									112	3.0	46	0.7							158	3.6
FY 2012 OCO ( ) kits																				
FY 2013 (194) kits									2	*	192	6.9							194	6.9
FY 2014 (156) kits													156	5.2					156	5.2
FY 2015 (40) kits															40	2.7			40	2.7
FY 2016 (42) kits																	42	6.6	42	6.6
To Complete (199) kits																	199	22.1	199	22.1
TOTAL	**85**	**2.0**	**51**	**3.7**	**78**	**1.7**	**157**	**4.5**	**169**	**3.6**	**238**	**7.6**	**156**	**5.2**	**40**	**2.7**	**241**	**28.7**	**1,215**	**59.5**

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3.0	4	1.0	2	3.0	4	1.0	2	3.0	4	1.0	2	3.0	4	1.0	2	3.0	4
In	85	12	13	13	13	19	19	20	20	39	39	39	40	42	42	42	43	59	59	60	60
Out	85	12	13	13	13	19	19	20	20	39	39	39	40	42	42	42	43	59	59	60	60

	FY 2015				FY 2016				To	Total
	1	2	3	4.0	1	2.0	3	4.0	Complete	
In	39	39	39	39	27	13			241	1215
Out	39	39	39	39	27	13			241	1215

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION:
The present AV-8B inventory is insufficient to maintain Primary Authorized Aircraft (PAA), provide for an effective Integrated Maintenance Plan (IMP), allow for crash damage repair and attrition, and accomplish timely reliability and capability upgrades through transition to JSF. Currently obsolete configured AV-8B Harrier aircraft will be restored to fleet representative configuration through modifications primarily integrated by the prime contractor to compensate for attrition and the resultant PAA shortfall. Individual aircraft kits will vary based on utilization and configuration at the time the aircraft was taken out of service. Rolls-Royce Pegasus-408B engines will be provided from current fleet inventory. Modification engineering integration and incorporation of components and systems are to be performed by the contractor, augmented by government field activity GFE component baselining and RFI certifications as required. FY07 Overseas Contingency Operations (OCO) supplemental funding was provided to accelerate upgrade of the first attrition recovery aircraft, a Day Attack configured aircraft, into a Night capable asset. Failure to address inventory shortfalls will progressively aggravate the effect of PAA deficiencies on mission availability and combat relevance to OCO, as well as operational safety. While this is not a total aircraft inventory solution, the additional aircraft will help sustain AV-8B operational aircraft in squadrons supporting OCO.

The program has been funded $22.5M of FY07 OCO funding. $19.3M of FY10 OCO funding was provided for a fifth upgraded aircraft, however, the USMC reduced the FY10 requirement. Available funds were executed against other USMC OCO requirements. These aircraft may directly support ground operations in Afghanistan and deploy aboard LHA/D ships in support of global security missions.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Non-recurring engineering, engineering change order work, and kit buys funded with 07 supplemental funding will deliver one upgraded aircraft in FY10. Two further aircraft mods began in FY08 and FY09, which will each also deliver upgraded aircraft in FY10. Fourth aircraft mod is scheduled to begin kit procurement in FY09, with mods to occur starting in FY10, delivering an upgraded aircraft in FY12. FY10 OCO completes the Attrition Recovery requirement with the upgraded aircraft delivering in second quarter FY11.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E,N																								
PROCUREMENT																								
Installation Kits																								
Installation Kits (A Kits)	4	7.2																					4	7.2
Installation Kits (A Kits)--GFE	3	5.1	1	0.4																			4	5.5
Installation Kits N/R		14.6		1.6																				16.2
Installation Equipment																								
Install Equip (B Kits)	1	0.1																					1	0.1
Install Equip (B Kits)--GFE	2	4.1																					2	4.1
Installation Equipment N/R																								
Engineering Change Orders																								
Data		1.6		0.3																				1.9
Training Equipment																								
Support Equipment		0.2																						0.2
ILS		0.9		0.1																				1.0
Other Support		3.0		1.8		0.8		0.2				0.2												5.7
Interim Contractor Support																								
Installation Cost	3	8.7	1	2.0																			4	10.7
Total Procurement		**45.5**		**6.1**		**0.8**		**0.2**				**0.2**												**52.6**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B

MODIFICATION TITLE: AV-8 Attrition Recovery Day to Night (OSIP 015-07)

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

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

ADMINISTRATIVE LEADTIME: 9 Months

PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2010: Various FY 2011: N/A FY 2012: N/A FY 2013: N/A

DELIVERY DATE: FY 2010: Various FY 2011: N/A FY 2012: N/A FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (3) kits	3	8.7																	3	8.7
FY 2010 (1) kits			1	2.0															1	2.0
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**3**	**8.7**	**1**	**2.0**															4	10.7

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	3	1																			
Out	3						1														

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										4
Out										4

Exhibit P-40, BUDGET ITEM JUSTIFICATION | DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE: **52500 F-18 Series**

Program Element for Code B Items: 0204136N

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	3,922.9	A	536.6	536.1	499.6	47.0	546.6	685.4	1,044.1	921.6	967.2	1,845.2	11,005.7

DESCRIPTION:

This line item funds modifications to all models of the F/A-18 aircraft. The F/A-18 Naval Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft. The F/A-18 is employed in both Navy and Marine Corps squadrons. Commencing with the FY 1988 procurement, both the single seat and two-seat F/A-18's include a night attack capability. The F/A-18 can be missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality provides the Operational Commander more flexibility in employing his tactical aircraft in a dynamic scenario. The primary design mission for the F/A-18 is a strike fighter which includes the traditional fighter applications, such as fighter escort and fleet air defense, combined with the attack applications, such as interdiction and close air support. Since fighter capabilities are available in either mission, a robust self-defense capability is retained.

The overall goal of the modifications budgeted in FY 2012 is to implement commonality/capability and structural safety and reliability improvements. An FY 2012 OCO request of $47.0 million is requested to support detection and prosecution of OCO IED threats. The specifi modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
011-84	Correction of Discrep.	770.2	78.6	58.6	40.3		40.3	76.7	123.8	81.4	137.4	56.7	1,423.6
010-99	DCS	23.9	0.7		39.2		39.2	9.6	16.0				89.5
011-99	SLMP	589.4	106.6	117.5	146.6		146.6	277.7	463.0	368.8	300.3	238.9	2,608.7
012-99	MIDS	383.6	9.9	*				0.1	0.4	20.9	27.4		442.4
021-00	USMC F/A-18 UPGRADE (ECP583)	300.4	18.0	18.2	38.8		38.8	33.1	15.2	15.5	5.8		445.0
024-00	JHMCS	177.1	36.7	38.3	43.4		43.4	41.4	14.5	14.5			365.8
012-01	ATFLIR	710.0	33.3	29.2	5.4	47.0	52.4	6.3	6.7	5.6	5.3		848.9
019-01	E/F 2000 hr Correction of Discrep.	41.4	2.4										43.8
006-02	C/D Training System	94.8	6.5	13.1	12.6		12.6	13.3	27.9	24.5	24.9	129.6	347.1
012-03	E/F 4000 hr Correction of Discrep.	10.4	0.5										10.9
013-03	E/F 6000 hr Correction of Discrep.	4.9	0.5										5.4
014-03	E/F Correction of Operational Discrep.	190.7	55.0	36.8	29.9		29.9	78.6	29.0	23.6	92.5	407.6	943.6
023-04	Core Avionics Upgrade	41.8	19.1	6.8	6.6		6.6	6.7	6.7	6.7	6.8		101.2
002-07	AESA	220.1	44.0	126.2	68.3		68.3	76.5	134.5	140.4	143.0	791.4	1,744.5
021-08	EW Unique	3.1	96.0	35.0	5.3		5.3						139.3
001-10	Network Centric Ops		26.3	47.6	53.9		53.9	55.7	66.1	48.3	49.1	40.6	387.6
011-10	EA-18G Unique		2.5	8.8	9.4		9.4	9.7	7.3	5.2	5.3		48.1
004-14	IRST								133.0	166.4	169.4	180.5	649.2
	Inactive OSIPS	361.2											361.2
Total		**3,922.9**	**536.6**	**536.1**	**499.6**	**47.0**	**546.6**	**685.4**	**1,044.1**	**921.6**	**967.2**	**1,845.2**	**11,005.7**

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-84)

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

DESCRIPTION/JUSTIFICATION:

Corrections to discrepancies found during testing and evaluation can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Additionally, deficiencies discovered during fleet operations must be corrected. The unacceptable alternative to retrofitting would be multiple configurations in the fleet, which will create maintenance and supply problems, and in many cases the mission capability of the aircraft would be adversely affected as well as reduced service life. Corrections to the following items/conditions are requirec

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

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

ECP 087S1 External Stores EMI Protection	Provide for the application of external stores EMI Protection. This ECP includes Installation Costs ONLY.
ECP 592 - Side Fuselage Crack	Safety improvement to the fatigue life of the forward skin section of the chem.-milled panels.
ECP 608 - Crease Longeron	Restores the load path lost when the Crease Longeron cracks at FS 453.
ECP MB9425 Modified NACES Backplate	Modification to the NACES backplate to prevent cracks
ECP 536 ST-16 Failures	Modifies aircraft between Lot VI and Lot XVI or realize Full Life Airframe (6000 Fatigue Hours)
ECP592 AFT Fuselage Skin Crack	Safety improvement to the fatigue life of the forward skin section of the chem.-milled panels.
ECP XXX5 Wing SPAR Crack	Strengthens the existing front inner wing SPAR to improve fatigue life.
ECP NI 931 Forward Lower Keel Modification	Improves fatigue life of the Nose Landing Gear (NLG) Drag Brace.
ECP 974NI MLG Y488 Bulkhead	Restores Full Life to Y488 Bulkhead due to cracks around MLG Uplock hardware holes
ECP 590 OBOGS Solid-State Oxygen Monitor (SSOM), CRU-99/A	Safety improvement to the OBOGS oxygen system, providiing an additional monitoring capabilitites against Hypoxia resulting in safer flight operation.
ECP 608 Crease Longeron	Restores the load path lost when the Crease Longeron cracks at FS 453.
ECP 609 F/A-18 A-D INNER WING CONVERSION	Convert Lots 5 through 9 Inner Wings to be used on Lot 10 and above F/A-18C/D aircraft, and convert Lot 10 and 11 InnerWings to be used on Lot 12 and above F/A-18C/D aircraft.
ECP-JAX-F18-001 NFDS Mods, C&D Conversion	Removing the weapon systems from the aircraft, install Smoke Generation System and install Auxiliary Fuel Pumps for extended inverted flight.
ECP-609 ((Bundled in) Interwing Conversion ECP XXX-21 (Bundled in ECP-609)	Converting Lot 10/11 Wings to Lot 12 and above configuration.
ECP-1022NI Inner Wing Structure Fatigue Improvemnent	Improving inner wing fatigue life Front SPAR.
ECP-1034NI TEF-Aileron Attach Lug Bushing	To prevent electronic magnetic interference (EMI) tabs from gouging TEF/AIL hinges causing life limited restrictions.
ECP-1054NI LEF Stop Module & Torque Limiter Improvement	Modification to correct failures in the LEF Torque Tubes Drive System Failures
ECP 1071 NI F/A-18 A-D MLG Planing Mechanism Assembly Perf Upgrade	Modification to provide the fleet with upgraded MLG planing mechanism components by replacing hollow piston with a solid piston to increase the resistance to bending/buckling
ECP MB9431 NACES Bracket Interim Support Kits	Modification to upgrade the NACES alloy catapult mounting bracket with stainless steel mounting bracket eliminating recurring periodic inspections
ECP XXX13 Bay 3 Shelf Redesign	Modify avionic shelves to withstand catapult fatigue loads.
ECP XXX14 Bay 4 Shelf Redesign	Modify avionic shelves to withstand catapult fatigue loads.
ECP XXX-16 Vertical Tail	Modify vertical tail former and spars to prevent fatigue cracking.
ECP XXX-17 Canopy/Windscreen	Modify canopy/windscreen frames and address delamination.
ECP-XXX18 NLG/MLG Fatigue Improvements	Fatigue Improvements to include arresting gear planning link redesign
ECP-XXX23 AFT Fuselage Structure Failures	Modification to correct failed AFT fuselage areas
ECP-XXX24 NACES Improved Upper Catapult Sleeve, Safety ECP	Modification to incorporate a redesigned NACES upper catapult sleeve
ECP XXX25 F/A-18 B/D Canopy Sill Longeron Crack	Modification to beef up the canopy sill Longeron to prevent severing condition
ECP XXX26 F/A-18 A-D Structural Stress Corrosion Cracking Issues	Modification to correct structural stress corrosion issues during fleet usage
ECP XXX27 F/A-18 A-D Subsystems Retrofit Upgrades Issues	Modification to correct discrepancies in the aircraft mechanical, hydraulic, electrical, and cooling systems
ECP XXX28 F/A-18 A-D ECS Subsystems Upgrade Issues	Modification to correct discrepancies within the ECS components and sub-component elements
ECP XXX29 F/A-18 A-D Fuel Related Updgrade Issues	Modification to correct discrepancies within the internal and external fuel tanks and fuel plumbing, including electrical components
ECP XXX30 F/A-18 A-D Flight Control Surfaces Issue	Modification to flight control surfaces issues during fleet usage
ECP XXX31 F/A-18 A-D KAPTON Wiring Modification Improvement	Modification to upgrade aircraft electical wiring
ECP-1086 NI F/A-18 A-D Modification of A/C (ECS) Test Set	Publication related updates
ECP 1088 F/A-18 A-D Fuel Valve Interchangeability	Modification to upgrade fuelk valves for configuration purposes
ECP 1095 F/A-18 A-D MLG Side Brace Downlock Actuator Connection Link	Modification to upgrade the MLG Actuator link
ECP 6343 F/A-18 A-D External Fuel Tank Air Pressure Regulator (ETPR)	Modification to upgrade the external fuel tank air pressure regulator for the A-D fleet
ECP MB9445 Replacement of NACES Radio Beacon Actuator	Modification to Incorporate a new and improved radio beacon signal in order to comply with new satellite requirements

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-84)

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ECP 121R1/Auto AC Bus Isolation	356	0.7																					356	0.7
ECP 165R1/Battery Control Relay Unit	251	0.5																					251	0.5
ECP 178/FY86 Block Upgrade	82	4.7																					82	4.7
ECP 241R1/Center Fuselage Structural Mods	1,719	0.6																					1,719	0.6
ECP 251/Dorsal Longeron	1,926	0.8																					1,926	0.8
ECP 251R1/Dorsal Longeron	443	8.6																					443	8.6
ECP 262/470.5 Bulkhead	494																						494	
ECP 267R1/Righthand AMAD Bay	287																						287	
ECP 276/Y508 Former	836	1.0																					836	1.0
ECP 305/AFT Engine Mount	619																						619	
ECP 306/Y657.35 Engine Bay Door Former	688	0.9																					688	0.9
ECP 311/Main Landing Gear (MLG) Planing Link	10	*																					10	*
ECP 319/MLG Trunnion Upgrade	1,405																						1,405	
ECP 320/Y488 Bulkhead	473	1.2																					473	1.2
ECP 353/Wing Fatigue Repair	98	0.7																					98	0.7
ECP 355/MLG Shoulder Belt	350	0.2																					350	0.2
ECP 364/ASPJ System Improvement	225																						225	
ECP 365/Y470 Bulkhead Improvement	982	1.0																					982	1.0
ECP 367/#1 Fuel Cell Floor	557	0.3																					557	0.3
ECP 375/MLG Retract Actuator	1,323	5.7																					1,323	5.7
ECP 391/Fretting on Former's & SpindleS	582	0.3																					582	0.3
ECP 402/Fuselage Skin, Y518 to Y533	638	*																					638	*
ECP 402R1/Fuselage Skin, Y518 to Y534	720	2.1																					720	2.1
ECP 417/Inlet Duct Skin at Y453	575	2.0																					575	2.0
ECP 428/Y470.5 Bulkhead MLG Trunnion	2	0.1																					2	0.1
ECP 440/Speed Brake Trough	591	1.0																					591	1.0
ECP 488/SUU-63 Wing Pylon Door Panel	1,351	0.8																					1,351	0.8
ECP 492/Y470.5 Bulkhead Fatigue Change	688	1.4																					688	1.4
ECP 498/Fuselage Skin at Y453	696	0.7																					696	0.7
ECP 501/Nacelle Skin Fatigue Improvements	663	3.7																					663	3.7
ECP 506/LAU-115 Sparrow Mod	935																						935	
ECP 536/ST-16 Failures	157	20.5	14	1.4	25	3.5	25	3.9			25	3.9	8	1.3									229	30.5
ECP 544/Improvement of Inner Wing SPAR	29	0.3																					29	0.3
ECP 548/Fuel Barrier Web	750	1.4																					750	1.4
ECP 550/Wing Drag Longeron	119	0.2																					119	0.2
ECP 561/Y326.5 Plate Nut	532	0.2																					532	0.2
ECP 562/Lower Center Keel Fire Hazard	798	0.4																					798	0.4
ECP 574/Trailing Edge Flaps	1,026	26.8																					1,026	26.8
ECP 574/Aileron	707	18.2																					707	18.2
ECP 598 Servocylinder Test Station	9	1.4																					9	1.4

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-84)

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

NI 879/Hydraulic Temp Guages	150	0.2																					150	0.2
NI 742/Environment Control System Wiring	150	0.2																					150	0.2
NI 796/Wing Fuel Dams	515	0.8																					515	0.8
NI 824/MLG Trunnion Assembly	425	13.4																					425	13.4
NI 827/Heat Exchanger	37	0.4																					37	0.4
NI 830/Night Vision Display System (NVDS)	14	0.3																					14	0.3
NI 839/Trailing Edge Flap	1,150	9.4																					1,150	9.4
ECP XXX - ANTI G VALVE	800	1.0																					800	1.0
ECP 973 Fuel Cell Floor Crack	200	2.2																					200	2.2
ECP 952 - MLG Axle	688	17.1																					688	17.1
ECP 974 NI MLG Y488 Bulkhead					80	0.7							120	1.1	240	2.2	120	1.1	70	0.7			630	5.8
ECP 590 OBOGS SSOM, Safety ECP					80	0.3	200	0.8			200	0.8	200	0.8	200	0.8							680	2.6
ECP NI-1013-05 Heat Derrent	630	8.8																					630	8.8
ECP 1057 NI MLG Planning Mechanism Improvements	623	10.0																					623	10.0
ECP 6217 Cockpit Pressurization Warning System (CPWS)	604	8.0																					604	8.0
ECP 609 Inner Wing Conversion/ Modification	9	1.7			38	0.1							53	4.6	68	6.3	5	1.6					173	14.3
ECP JAX F-18-001 NFDS MODS, C&D Conversion	12	5.3																					12	5.3
ECP 0147 Repeatable Release Holdback Bar	285	1.5																					285	1.5
ECP 9384 Redesign of Backrest Operation Plunger, Safety ECP	443	*																					443	*
ECP 1022 NI Inner Wing Fatigue Improvement					100	1.0							100	1.0	250	2.5	150	1.6	30	0.3			630	6.3
ECP 1034 NI Trailing Edge Flap/Aileron Attach Log Bushing					100	0.1	150	0.1			150	0.1	150	0.1	150	0.1	97	0.1					647	0.4
ECP 1054 NI LEF Stop Module & Torque Limiter Improvement	830	2.6	150	7.7																			980	10.3
ECP XXX23 AFT Fuselage Structure Failure							80	0.8			80	0.8	80	0.9	80	0.9	100	1.1	60	0.7			400	4.4
ECP 1036 NI ONBOARD OXYGEN SYSTEM (OBOGS), Safety ECP	331	*																					331	*
ECP 1071 NI F/A-18 A-D MLG Planing Mechanism Assembly Perf Upgrade			315	4.8	450	4.0							199	8.7	111	5.0	148	6.8	172	8.0			1,395	37.3
ECP 6321R1 F/A-18 A-D MLG Doors Hing Pins Hdw Conv	640	0.2																					640	0.2
ECP MB9431 NACES Bracket Interim Support Kits	46	0.1																					46	0.1
ECP XXX25 F/A-18 B/D Canopy Sill Longeron Crack					80	0.8																	80	0.8
ECP XXX26 F/A-18 A-D Structural Stress Corrosion Cracking Issues													100	5.1	200	9.2	100	5.3	75	4.1			475	23.7
ECP XXX27 F/A-18 A-D Subsystems Retrofit Upgrades Issues													60	2.5	140	5.6	100	4.2	175	6.1			475	18.5
ECP XXX28 F/A-18 A-D ECS Subsystems Upgrade Issues													100	2.5	100	2.6	100	2.6	175	4.6			475	12.3
ECP XXX29 F/A-18 A-D Fuel Related Upgrade Issues															475	4.8							475	4.8
ECP-XXX30 F/A-18 A-D Flight Control Surfaces Issues															200	2.1	100	1.1	75	0.8			375	4.0
ECP-XXX31 F/A-18 A-D KAPTON Wiring Modification Improvement															475	4.0							475	4.0
ECP-1094 NI F/A-18 A-D AFT Fuselage Insulation Blankets Upgrade	638	3.0																					638	3.0
ECP-1095 NI F/A-18 A-D MLG side Brace Downlock Actuator Upgrade			638	1.1																			638	1.1
ECP-6343 F/A-18 A-D External Fuel Tank Air Pressure Regulator			175	0.3			155	0.3			155	0.3											330	0.7
ECP MB9445 Replacement of NACES Radio Beacon Actuator			289	0.2																			289	0.2
Installation Kits N/R		58.1		9.2		1.6		0.9				0.9				18.4								88.1
Installation Equipment		2.3																						2.3
Installation Equipment N/R		0.1																						0.1
Engineering Change Orders																								
Data		14.7		0.7		*		*				*												15.4
Training Equipment																								
Support Equipment		1.5																						1.5
ILS		264.2		44.8		24.8		18.3				18.3		28.0		29.5		25.0		27.6		37.1		499.2
Other Support																								
Interim Contractor Support																								
Installation Cost	29,293	235.0	368	8.3	473	21.8	472	15.3			472	15.3	868	20.1	1,177	30.0	997	31.0	1093	84.4	543	19.6	35284	465.4
Total Procurement		**770.2**		**78.6**		**58.6**		**40.3**				**40.3**		**76.7**		**123.8**		**81.4**		**137.4**		**56.7**		**1,423.6**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Unit cost variances are due to (a) many ECP Kits provided to the Navy at no additional cost (warranty kits), (b) some ECPs have numerous Technical Directives with different unit costs, and (c) some ECPs require no kits, installs only.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: DIGITAL COMMUNICATIONS SYSTEM (DCS) (OSIP 10-99)

MODELS OF SYSTEMS AFFECTED: F/A-18 and EA-18G | TYPE MODIFICATION: CAPABILITY IMPROVEMENT

DESCRIPTION/JUSTIFICATION:

The Digital Communications System (DCS) consists of an upgraded AN/ARC-210 Receiver Transmitter (RT) (with embedded digital message transfer capability and embedded Communications Security (COMSEC)) installed in the F/A-18 and integrated with the F/A-18 weapons system (mission computer, controls and displays, and communication subsystem). The DCS utilizes preformatted messages to communicate with standard United States Marine Corps (USMC), United States Navy (USN), and United States Air Force (USAF) digital communications devices to facilitate Close Air Support (CAS), Deep Air Strike (DAS), and Tactical Air Control (TAC) missions. DCS reduces voice communications requirements which tend to be slow, inaccurate, and susceptible to Meaconing, Interference, Jamming, and Intrusion (MIJI). DCS will enhance mission effectiveness by decreasing pilot workload which allows the pilot more time to counter increased threat capabilities (ORD# 486-88-98). This Operational Safety Improvement Program (OSIP) will also be used to address parts obsolescence issues and to perform non-recurring work associated with Network Centric operations and Interoperability requirements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The AN/ARC-210 RT is being upgraded to a DCS RT. The Initial Engineering Developmental Model (EDM) was delivered (using RDT&E,N resources) in FY1998 as scheduled. The F/A-18C/D requirements will be satisfied by retrofitting DCS into Lot X through Lot XXI. Functionality was provided in the Operational Flight Program (OFP) 15C fleet release in FY2000. Initial procurement of installation kits was awarded May 1999. F/A-18C/D Lots X and XI require an ACI and DCS radio. Additional ACI requirements for increased install provisions are currently funded under OSIP 12-99.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Lot XII through XXI Kit	360	1.1																					360	1.1
Lot X through XI Kit	123	0.7																					123	0.7
Installation Kits N/R		0.6																						0.6
Installation Equipment																								
DCS (WRA)							368	37.6			368	37.6	77	7.7	61	6.2							506	51.5
Lot XII through XXI Kit ("B" Kit)	40	1.9																					40	1.9
Lot X through XI Kit (ACI)	128	8.7																					128	8.7
Installation Equipment N/R																								
Engineering Change Orders		0.5																						0.5
Data		*																						*
Training Equipment		0.6																						0.6
Support Equipment		0.8																						0.8
ILS		2.6																						2.6
Other Support		0.1						1.6				1.6		1.9		9.8								13.4
Interim Contractor Support																								
Installation Cost	517	6.4	15	0.7																			532	7.1
Total Procurement		**23.9**		**0.7**				**39.2**				**39.2**		**9.6**		**16.0**								**89.5**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Installation cost varies depending on aircraft configuration and Lot being retrofit.
4. DCS requirements were listed in OSIP 01-10 in FY11.
5. DCS (WRA)s requested in FY12 are O-level install items and have no related install cost/schedule.

Exhibit P-3a — Individual Modification

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

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

DESCRIPTION/JUSTIFICATION:

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

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Currently all Lot VI through XVII aircraft have 78% life limits without the SLMP modifications to bring them to 100% airframe life. McDonnell Douglas Corporation (MDC) and Northrop Grumman Corporation (NGC) developed ECP536 retrofit repair to modify these aircraft so they could restore the airframe to full life. ECP 536 was approved and Validation was completed May 2001. The FRC North Island developed ECP 904NI (CBR+) which was approved on 27 April 2000, ECP 904NI supersedes ECP 536. Validation started October 2000 and was completed in August 2001. Verification started August 2001 and was completed June 2002. ECP 536 moved from OSIP 11-99 to OSIP 11-84 in FY2002.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ECP 904 Part 1 (Basic) WRFLE SLEP	250	228.3	29	30.9	33	38.3	33	40.5			33	40.5	33	47.9	43	57.0							421	442.8
ECP 904 Part 2	116	57.8	10	0.2	10	0.2	10	0.2			10	0.2	10	0.2	10	0.2	3	0.1	3	0.1			172	58.8
ECP 904 Part 3	10	0.9	10	0.3	10	0.3	10	0.3			10	0.3	10	0.3	10	0.3	10	0.3	10	0.3			80	3.0
ECP XXXX FWD Fuselage SLEP (Pt 4)	10	4.4	12	5.2	21	9.2	5	2.2			5	2.2	30	13.8	20	9.4	10	4.8	29	14.3	13	6.6	150	69.9
ECP XXXX CTR Fuselage SLEP (Pt 4)							10	6.5			10	6.5	36	21.8	43	26.6	10	6.3	39	25.3	12	8.0	150	94.5
ECP XXXX AFT Fuselage SLEP (Pt 4)							10	7.1			10	7.1	36	26.2	43	32.0	10	7.6	39	30.4	12	9.6	150	112.9
ECP XXXX Sub-System SLEP (Pt 4)							10	4.5			10	4.5	90	41.5	225	106.3	70	33.9	115	56.9			510	243.1
Installation Kits N/R		21.7																						21.7
Installation Equipment																								
Installation Equipment	154	12.1	36	5.9	36	5.9	40	6.6			40	6.6	40	6.6	40	6.6	36	6.6	38	6.3			420	56.6
Installation Equipment N/R		1.4		1.9		1.5		1.5				1.5		4.3		4.3				1.2				16.0
Engineering Change Orders																								
Data		30.1		7.9		4.9		5.8				5.8		8.0		8.1		8.4		8.7		8.6		90.5
Training Equipment																								
Support Equipment																								
ILS		51.5		10.1		9.4		14.4				14.4		27.5		29.0		26.9		27.8		29.0		225.7
Other Support																								
Interim Contractor Support																								
Installation Cost	254	181.2	73	44.2	68	47.8	81	56.9			81	56.9	95	79.7	252	183.1	387	273.9	151	129.0	272	177.2	1633	1,173.1
Total Procurement		**589.4**		**106.6**		**117.5**		**146.6**				**146.6**		**277.7**		**463.0**		**368.8**		**300.3**		**238.9**		**2,608.7**

Notes:

1. Totals may not add due to rounding.
2. Kit pricing is quantity sensitive. FMS procurements in some years affect unit price.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **F/A-18A/B/C/D** MODIFICATION TITLE: F/A-18 AIRCRAFT STRUCTURAL LIFE MANAGEMENT PLAN (SLMP) (OSIP 11-99) CBR+ (ECP 904 P1-P3)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR PROVIDING 1 WARRANTY KIT, DEPOT LEVEL INSTALLS**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 26 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: Jun-12 FY 2011: Apr-13 FY 2012: Apr-14 FY 2013: Apr-15

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (376) kits	254	181.2	63	42.1	56	45.3	3	2.6											376	271.3
FY 2010 (49) kits							49	42.9											49	42.9
FY 2011 (53) kits							8	7.0	45	41.5									53	48.5
FY 2012 (53) kits									15	13.8	38	35.8							53	49.7
FY 2012 OCO ( ) kits																				
FY 2013 (53) kits											22	20.7	31	28.8					53	49.6
FY 2014 (63) kits													25	23.2	38	40.8			63	64.1
FY 2015 (13) kits															13	14.0			13	14.0
FY 2016 (13) kits																	13	0.2	13	0.2
To Complete ( ) kits																				
TOTAL	**254**	**181.2**	**63**	**42.1**	**56**	**45.3**	**60**	**52.6**	**60**	**55.3**	**60**	**56.6**	**56**	**52.1**	**51**	**54.8**	**13**	**0.2**	673	540.2

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	254	15	16	16	16	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15
Out	254	15	16	16	16	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	14	14	14	14	13	13	13	12	13	673
Out	14	14	14	14	13	13	13	12	13	673

Notes:

1. In July 2006, both Fleet Repair Centers (FRCs) declared they would not meet the CBR induction schedule. Restructured procurement and install profiles to relieve FRC backlog. Prior year kit install sched was affected.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **F/A-18A/B/C/D** MODIFICATION TITLE: F/A-18 AIRCRAFT STRUCTURAL LIFE MANAGEMENT PLAN (SLMP) (OSIP 11-99) CBR+ (ECP 904 P4)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR PROVIDING 1 WARRANTY KIT**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 14 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: Jun-11 FY 2011: Apr-12 FY 2012: Apr-13 FY 2013: Apr-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (10) kits			10	2.1															10	2.1
FY 2010 (12) kits					12	2.5													12	2.5
FY 2011 (21) kits							21	4.3											21	4.3
FY 2012 (35) kits									35	24.4									35	24.4
FY 2012 OCO ( ) kits																				
FY 2013 (192) kits											192	126.6							192	126.6
FY 2014 (331) kits													331	221.8					331	221.8
FY 2015 (100) kits															100	74.2			100	74.2
FY 2016 (222) kits																	222	151.8	222	151.8
To Complete (37) kits																	37	25.3	37	25.3
TOTAL			**10**	**2.1**	**12**	**2.5**	**21**	**4.3**	**35**	**24.4**	**192**	**126.6**	**331**	**221.8**	**100**	**74.2**	**259**	**177.1**	960	632.9

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				5	5			6	6			11	10			18	17			96	96
Out				5	5			6	6			11	10			18	17			96	96

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In			161	160			55	55	259	960
Out			161	160			55	55	259	960

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION:

This Operational Safety Improvement Program (OSIP) upgrades USMC F/A-18A/B/C/Ds avionics including both hardware and software capabilities. This requirement is critical to meet the Marine Corps requirements for the Tactical Aircraft (TACAIR) Integration Plan. The Avionics Upgrade includes avionics subsystems already incorporated or being incorporated into USMC and/or Foreign Military Sales (FMS) F/A-18 aircraft. The Basic Engineering Change Proposal (ECP) 583 incorporates the following subsystems: AN/ARC-210(V) with HAVEQUICK II and SINCGARS; Digital Communication Systems (DCS) Receiver/Transmitter (RT-1824(C)); Combined Interrogator/Transponder AN/APX-111 (V); Night Vision Display System (NVDS); Mission Computer CP-2360 (XN-8); Radar (AN/APG-73); Stores Management Set (SMS, AN/AYQ-9); AMRAAM Capability (radar modification, launchers, weapons pylons and control stick); Digital Display Indicator (DDI) Upgrade; Mission Data Loader (AN/ASQ-215); Targeting Forward-Looking Infrared (FLIR) provisions (AAS-38B). ECP 583R1 adds a digital wingtip modification, allowing use of the AIM-9X air-to-air missile. ECP 583R2 adds the following capabilities to A+ aircraft: Multi-functional Information Distribution System (MIDS LVT); Color Displays; Joint Helmet Mounted Cueing System (JHMCS); ALE-47; Tactical Aircraft Moving Map Capability (TAMMAC); and Auxiliary Memory Unit (AMU). ECP 583 R3 was cancelled. ECP583R4 will incorporate the United States Navy Aircrew Common Ejection Seat (NACES) for utilization with the JHMCS system on A+ aircraft. ECP583R6 will incorporate the NACES for utilization with the JHMCS system on C+ aircraft. ECP 583R7 adds the following capabilities to C+ aircraft: MIDS LVT; Color Displays; JHMCS; ALE-47; TAMMAC; and AMU. ECP 583-TBD for B+ will incorporate the NACES, MIDS LVT; Color Displays; JHMCS; ALE-47; TAMMAC; and AMU on the B+ aircraft. This OSIP also provided limited integration of the LITENING Enhanced Range Forward Looking Infrared (FLIR) on 24 USMC F/A-18Ds. This allowed the USMC to utilize existing LITENING pods, currently in the AV-8B inventory, on USMC F/A-18Ds to provide the Air Ground Task Force capability and flexibility in the execution of operations in the combat spectrum.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The number of aircraft to be retrofitted in the program of record has changed; the USMC has deferred retrofitting some early lot F/A-18C/Ds vice only F/A-18A/Bs due to greater remaining life on those aircraft. ECP 583 was approved 25 March 1999. ECP 583R1 was approved in August 2001. ECP 583R2 was approved in 2004. ECP 583R3 was cancelled and ECP 583R4 was approved in 2006. A New Start notification was sent to Congress in FY2003 to initiate the LITENING integration and procurement of the FY2004 Installation Kits. Due to lower than expected pricing, 24 aircraft are able to be modified with the originally identified funding.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ECP-583	27	7.5																					27	7.5
ECP583R1	82	0.3																					82	0.3
ECP583R2	13	8.2																					13	8.2
ECP583R4	51	1.5																					51	1.5
Litening	24	0.9																					24	0.9
Installation Kits N/R		13.9				3.0																		16.9
Installation Equipment																								
ECP 583 GFE (B Kits)	895	157.5																					895	157.5
ECP583R1	104	1.6																					104	1.6
ECP583R2 (A+)	158	35.7	9	6.7	6	8.2																	173	50.6
ECP583R4 (A+ NACES)	53	11.8	9	1.8	6	1.5																	68	15.1
ECP583R2/R7 (A+/C+ Obsolescence Mgmt)			7	2.4			8	3.0			8	3.0	6	2.3	13	5.1	20	8.4	12	5.0			66	26.1
ECP583R6 (C+ NACES)							14	4.4			14	4.4	12	3.3									26	7.7
ECP583R7 (C+)							14	25.0			14	25.0	12	22.0									26	47.0
Installation Equipment N/R																								
Engineering Change Orders																								
Data		1.7																		0.2				1.9
Training Equipment		0.7																						0.7
Support Equipment		1.5																						1.5
ILS		22.3		1.9		2.4		1.0				1.0		1.0		1.8		2.0		0.2				32.6
Other Support		4.7						0.3				0.3		2.3		2.5				0.3				10.1
Interim Contractor Support																								
Installation Cost	81	30.4	14	5.2	9	3.2	9	5.2			9	5.2	6	2.3	14	5.8	12	5.2					145	57.3
Total Procurement		**300.4**		**18.0**		**18.2**		**38.8**				**38.8**		**33.1**		**15.2**		**15.5**		**5.8**				**445.0**

Notes:

1. Totals may not add due to rounding.
2. 34 "Installation Kits" were purchased with NGRE Funds to include: 4 Val/Vers - FY1998; 20 "A" Kits - FY1999; and 10 "A" Kits - FY2000. The cost of these kits are not displayed in this OSIP.
3. The Installation Kit procurement of ECP583R2 is for Validation/Verification.
4. The additional ECP 583R1 kits are being procured to retrofit Navy Reserve aircraft already modified to an ECP 583 configuration under an OSIP that is no longer active.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **F/A-18A/B/C/D** MODIFICATION TITLE: USMC F/A-18 UPGRADE ECP-583 (OSIP 21-00)

INSTALLATION INFORMATION:

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

ADMINISTRATIVE LEADTIME: various/3 Months PRODUCTION LEADTIME: various/24 Months

CONTRACT DATES: FY 2010: Jan-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: Nov-11 FY 2011: Nov-12 FY 2012: Nov-13 FY 2013: Nov-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (104) kits	81	30.4	14	5.2	9	3.2													104	38.8
FY 2010 (9) kits							9	5.2											9	5.2
FY 2011 (6) kits									6	2.3									6	2.3
FY 2012 (14) kits											14	5.8							14	5.8
FY 2012 OCO ( ) kits																				
FY 2013 (12) kits													12	5.2					12	5.2
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**81**	**30.4**	**14**	**5.2**	**9**	**3.2**	**9**	**5.2**	**6**	**2.3**	**14**	**5.8**	**12**	**5.2**					**145**	**57.3**

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	81	4	4	3	3	3	2	2	2	3	2	2	2	2	2	1	1	3	3	4	4
Out	81	4	4	3	3	3	2	2	2	3	2	2	2	2	2	1	1	3	3	4	4

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	3	3	3	3						145
Out	3	3	3	3						145

Notes:

1. 34 "Installation Kits" were purchased with NGRE funds, not included in this OSIP.
2. FY2004 Installations are funded with FY2002 Congressional add funding.
3. FY2005 installations are funded with FY2003 Congressional add funding.
4. FY2004 installations are for Litening. FY2006 installations are for ECP 583.
5. Quantities in prior years reflect procurement of components. Quantities for kits procured in FY10 to FY13 reflect aircraft affected.

Exhibit P-3a — Individual Modification

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

MODELS OF SYSTEMS AFFECTED: F/A-18 and EA-18G — TYPE MODIFICATION: CAPABILITY IMPROVEMENT

DESCRIPTION/JUSTIFICATION:

The Joint Helmet-Mounted Cueing System (JHMCS) is a multi-service system that provides United States Air Force (USAF), United States Navy (USN), and United States Marine Corps (USMC) aircraft the capability to cue and verify on-board weapons and weapons sensors to a specific azimuth/elevation determined by the pilot's head position and to confirm sensor line-of-sight. The intent is to reduce tasks required of aircrews, verify seeker/sensor position, and enhance weapons employment opportunities. Th JHMCS incorporates an ejection-compatible helmet-mounted display system, with capability to cue and verify cueing of high off-axis sensors and weapons, on USAF and USN single seat and two seat fighter aircraft. JHMCS Night Vision Cueing and Display (NVCD will provide the ability to cue and display weapons and sensors at night through the initial fielding of a narrow field of view Night Vision Device that integrates the JHMCS cueing and display symbology. The capability will be upgraded to a wide field of view syste when available.

"Installation Equipment" quantities have been planned by the Joint Program Office to maximize the quantity fielded across all service platforms as expeditiously as possible, while balancing contractor production capacity. In order to meet this objective, in some cas the "Installation Equipment" is procured a year prior to the "Installation Kit" procurement. However, due to a year difference in production lead-times both the "Installation Kits" and "Installation Equipment" will be delivered at essentially the same time. This allows for the quickest introduction to the fleet of this critical war fighting capability and balances the needs of all services with production capacity.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
C/D A-Kit	224	21.3	48	4.3	22	2.0	49	4.0			49	4.0	25	2.1									368	33.6
E/F A-Kit	92	7.8	15	1.5	44	5.8	23	4.2			23	4.2											174	19.3
Canopy A Kits (AYC-1321)	357	2.2	48	0.2	46	0.4	63	0.3			63	0.3	28	0.1									542	3.2
Ejection Seat A Kits (NACES Retrofit)							17	*			17	*	25	0.1									42	0.1
Ejection Seat A Kits (ACC-695)	284	1.5	66	0.3	32	0.2	56	0.4			56	0.4	6	*									444	2.5
Installation Kits N/R		17.8		2.4		2.1		2.0				2.0		1.9										26.3
Installation Equipment																								
C/D B-Kit	518	55.6	81	6.1	24	4.9	58	13.6			58	13.6	50	13.9									731	94.1
E/F B-Kit (AFC-445 F/A-18F)	224	15.6	17	2.5	44	8.2	20	4.6			20	4.6	15	1.5									320	32.4
Installation Equipment N/R		1.0																						1.0
Engineering Change Orders		0.8																						0.8
Data		5.9				0.1		0.7				0.7		*										6.8
Training Equipment																								
Support Equipment	158	13.7	28	3.9	5	*	6	*			6	*	8	*									205	17.5
ILS		18.7		6.7		9.0		6.4				6.4		11.6		7.3		11.8						71.5
Other Support																								
Interim Contractor Support																								
Installation Cost	207	15.0	47	8.8	62	5.7	63	7.2			63	7.2	66	10.1	72	7.2	25	2.7					542	56.7
Total Procurement		**177.1**		**36.7**		**38.3**		**43.4**				**43.4**		**41.4**		**14.5**		**14.5**						**365.8**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Installation Equipment is procured one year prior to Installation Kits due to a one year greater production lead time.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **F/A-18 and EA-18G**

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **FIELD MOD TEAMS**

ADMINISTRATIVE LEADTIME: 4 Months

PRODUCTION LEADTIME: 21 Months

CONTRACT DATES: FY 2010: Feb-10 FY 2011: Feb-11 FY 2012: Feb-12 FY 2013: Feb-13

DELIVERY DATE: FY 2010: Nov-11 FY 2011: Nov-12 FY 2012: Nov-13 FY 2013: Nov-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (316) kits	207	15.0	47	8.8	62	5.7													316	29.5
FY 2010 (63) kits							63	7.2											63	7.2
FY 2011 (66) kits									66	10.1									66	10.1
FY 2012 (72) kits											72	7.2							72	7.2
FY 2012 OCO ( ) kits																				
FY 2013 (25) kits													25	2.7					25	2.7
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**207**	**15.0**	**47**	**8.8**	**62**	**5.7**	**63**	**7.2**	**66**	**10.1**	**72**	**7.2**	**25**	**2.7**					**542**	**56.7**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	207	12	12	12	11	16	16	15	15	16	16	16	15	17	17	16	16	18	18	18	18
Out	207	12	12	12	11	16	16	15	15	16	16	16	15	17	17	16	16	18	18	18	18

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	7	6	6	6						542
Out	7	6	6	6						542

Notes:

1. Quantities installed reflect C/D and E/F A-kits.

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION:

The Advanced Targeting Forward Looking Infrared (ATFLIR) (ORD# 700-88-06) will provide the F/A-18A+/C/D/E/F with an enhanced capability to detect, track and attack air and ground targets. Laser guided and global positioning system (GPS) standoff weapon systems with greater standoff ranges require improved performance over second generation targeting pods. The ATFLIR currently utilizes the third generation of FLIR technology and provides a quantum leap in operational effectiveness to fully support the standoff precision strike mission. This OSIP is used to perform efforts to address parts obsolescence and to examine and incorporate potential ATFLIR-related capability upgrades associated with Network Centric Operations, interoperability requirements, upgraded targeting capability requirements, and FRP Operational Test Program Sets (ECP 6375).

FY 2012 Overseas Contingency Operations (OCO) request procures ATFLIR-ROVER Data Link A and P Kits, installation labor, and associated ILS for 4 Air Wings or approximately 176 F/A-18 aircraft. This eye in the sky capability saves lives by enabling convoys to avoid Improvised Explosive Devices (IEDs) and ambushes, and reduces fratricide by increasing situational awareness for airborne and ground forces. It shortens kill chain timelines by speeding up target identification and reducing communications.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

ATFLIR development began in FY1997. OPEVAL testing was completed in June 2003 and the Operational Evaluation (OPEVAL) report was issued 4 September 2003. Full Rate Production approval was given in October 2003. Navigational forward looking Infra-Red (NAVFLIR) capability was removed from the system in December 2003.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
A-Kit (ARDL Datalink)	303	6.4	290	5.2																			593	11.6
ARDL RDC Datalink - OCO					176	2.1			176	2.3	176	2.3											352	4.4
Installation Kits N/R		1.0		3.3																				4.3
Installation Equipment																								
ATFLIR Pods C/D ("O" Level)	187	411.6																					187	411.6
ATFLIR PAU C/D		1.3																						1.3
ATFLIR Pods E/F ("O" Level)		0.5																						0.5
ARDL RDC Datalink	145	2.8																					145	2.8
ARDL RDC Datalink (C/D)			94	3.2																			94	3.2
ARDL RDC Datalink (E/F)			93	3.1																			93	3.1
IR Marker - OCO					29	12.8			50	8.0	50	8.0											79	20.8
ARDL RDC Datalink(C/D) - OCO					72	2.8			72	3.0	72	3.0											144	5.8
ARDL RDC Datalink(E/F) - OCO					72	2.8			72	3.0	72	3.0											144	5.8
ATFLIR EOSU ECP10							35	1.1			35	1.1	70	2.2	75	2.8	75	2.8	60	2.5			315	11.4
Pod Data Link (Ku) (To ECP-0035)		6.8							278	30.0	278	30.0											278	36.8
Installation Equipment N/R		72.9						2.9				2.9		3.4		2.5		1.4		1.4				84.6
Engineering Change Orders																								
Software Upgrades		1.8				0.3																		2.1
ATFLIR ECPs		8.1																						8.1
I2P ECP		1.4																						1.4
IR Marker ECP	68	55.7	20	8.6																			88	64.3
Data		7.7		0.1		0.1		0.2				0.2				0.3		0.4		0.5				9.1
Training Equipment		3.4				*																		3.4
Support Equipment		67.0		1.3		0.5																		68.8
ILS		57.4		7.0		6.4																		70.8
Other Support		4.0		1.4		1.3		0.8		0.8		1.6				0.2		0.2		0.2				8.9
Interim Contractor Support																								
Installation Cost							35	0.4			35	0.4	70	0.7	75	0.9	75	0.9	60	0.8			315	3.8
Total Procurement		**710.0**		**33.3**		**29.2**		**5.4**		**47.0**		**52.4**		**6.3**		**6.7**		**5.6**		**5.3**				**848.9**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. 8 B-kits used for Val/Ver and will not be installed on aircraft.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **F/A-18A+/C/D/E/F** MODIFICATION TITLE: ADVANCED TARGETING FORWARD LOOKING INFRARED (ATFLIR) (OSIP 12-01)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **RoR Depot Attrition**

ADMINISTRATIVE LEADTIME: 12 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Jul-12 FY 2013: Jul-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (35) kits							35	0.4											35	0.4
FY 2012 OCO ( ) kits																				
FY 2013 (70) kits									70	0.7									70	0.7
FY 2014 (75) kits											75	0.9							75	0.9
FY 2015 (75) kits													75	0.9					75	0.9
FY 2016 (60) kits															60	0.8			60	0.8
To Complete ( ) kits																				
TOTAL							**35**	**0.4**	**70**	**0.7**	**75**	**0.9**	**75**	**0.9**	**60**	**0.8**			**315**	**3.8**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In													35				70				75
Out													35				70				75

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In				75				60		315
Out				75				60		315

Notes:

1. Quantities installed reflect C/D and E/F A-kits.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: F/A-18C/D/E/F and EA-18G TRAINING SYSTEM (OSIP 006-02)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F and EA-18G | TYPE MODIFICATION: TRAINERS UPGRADE

DESCRIPTION/JUSTIFICATION:

F/A-18C/D/E/F and EA-18G training funds will be used to meet current Fleet Readiness Squadron (FRS) and Fleet Training and Readiness (T&R) requirements by purchasing new components and software to prevent obsolescence of the various trainers as F/A-18C/D/E/F and EA-18G aircraft are modified for capability enhancement and service life extension. Funding will also be used to update courseware and Computer Based Training (CBT) as new capabilities are introduced to the fleet, and will enable the fleet to institute an aggressive post-FRS training environment to bring F/A-18C/D/E/F and EA-18G trainers into High Level Architecture/Navy Aviation Simulator Master Plan (HLA/NASMP) compliance and incorporate the Next Generation Threat System (NGTS).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment		94.8		6.5		13.1		12.6				12.6		13.3		27.9		24.5		24.9		129.6		347.1
Support Equipment																								
ILS																								
Other Support																								
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**94.8**		**6.5**		**13.1**		**12.6**				**12.6**		**13.3**		**27.9**		**24.5**		**24.9**		**129.6**		**347.1**

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: E/F & EA-18G CORRECTION OF OPERATIONAL DISCREPANCIES (OSIP 14-03)
MODELS OF SYSTEMS AFFECTED: F/A-18 E/F & EA-18G
TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

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

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Each change has been or will be tested prior to installation in the F/A-18E/F and EA-18G.

AFT Fuselage Outbd Former Fwd Flange @ Y645, **(ECP-6088)**	Repair former by adding a doubler to bring it back to original specification
AFT Fan Shutoff Valve, **(ECP-6199)**	Modify the Aft Fan with an Improved Shut-Off Valve
AN/APN-194 (RADAR Altimeter) Mounting Tray Modification Step 2 , **(ECP-6313)**	Drill hole in door to allow escape of moisture accumulation in order to prevent corrosion of the antenna
Leading Edge Extension (LEX) Lower Surface/Structure Cracks Redesign, **(ECP-6193R1/R2)**	Modifies LEX structure to prevent cracks induced from aerodynamic loads
MLG Outboard Tire Door Clevis, **(ECP-6145)**	Redesign clevis to eliminate cracking imparted during gear cycling
FT50 Teardown Bulkhead Cracking, **(ECP-XX12)**	Modifies bulkhead to prevent cracking discovered during FT50 testing
FT50 Fuel Barrier Web at Y510, **(ECP-6326)**	Retrofit redesign of the Fuel Barrier Web at Y510 resulting from cracks discovered during FT50 fatigue test article
FT50 18K Fuselage Outboard Former at Y645 Failure **(ECP-6229)**	This ECP describes the effort to redesign the Fuselage Outboard Former Y645 resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
ECS Ejector Cracks, **(ECP-6255)**	Modify ECS ejector to prevent cracks from being induced
ECS Cooling Duct Grounding Strap, **(ECP-6209)**	Add a grounding strap to prevent accidental static discharge to an aircraft maintainer
FT50 18K Y577 Former Redesign, **(ECP-6303R1)**	This ECP describes the effort to redesign the Y577 Former resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
FT50 18K Web and Wing Drag Longeron Redesign, (**ECP-6304R1)**	This ECP describes the effort to redesign the Web and Wing Drag Longeron resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
FT50 18K Y618 Inboard Former (74A342314) Redesign, **(ECP-6306R1)**	This ECP describes the effort to redesign the Y618 Inboard Former resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
TEF Redesign **(ECP-6213R2)**	New design of TEF with the majority of the current cocure replaced with a honeycomb based aluminum bond assembly
Hydraulics Components Improvement, **(ECP-XX33)**	To improve reliability of the Hydraulic components failures
Warm Air Duct Deflections retrofit modline, **(ECP-6308)**	Correction of Warm Air Duct Deflections
Hornet Feather (Vane) Wear PAD Retention System Redesign, **(ECP-6075)**	To redesign the Hornet Feather Wear Pad Retention System. The Hornet Feather pads have caused excessive wear of the engines afterburner ring on flight test a/c
Inlet Nacelle Bleed Plate Crack, **(ECP-6227C1)**	Cracks have been found on the Inlet Nacelle Bleed Plate caused by acoustic fatigue
Throttle Electronics Module Seal Improvement, **(ECP-6228)**	The throttle module sealing improvement adds various seals to the throttle electronics module to permanently prevent water intrusion into the box
Inadequate Clearance b/w APU Surge Control Valve and Y568 Support, **(ECP-6238)**	Redesign the 74A328283 ECS Floor Support so that adequate clearance exists between the APU Surge Control Valve and the ECS Floor Support to meet specification clearance requirements
FT50 18k Fuselage Outboard Former @ Y679 Failure, **(ECP-6239R1)**	To redesign the web of the aft fuselage outboard former at Y679 resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
FT50 18K MLG Sidebrace Fitting Failure, **(ECP-6240R1)**	To redesign the LHS MLG Sidebrace/Retract Actuator Fitting resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article.
FT50 18K Y491 Bulkhead Redesign, **(ECP-6260)**	Cracks were found on the Y491 Bulkhead during the FT-50 Teardown. The cracks were located at the access hole at Z100 and the keel web attachment.
FT50 Y436 BULKHEAD LIFE LIMIT, **(ECP-6264)**	During tear down of the FT-50 test article cracks were found on the Y436 Center Bulkhead (74A325203 -2005) at the attachment of the dorsal deck stiffener on both the LH and RH side. Test Correlation analysis indicates the Safe Life is 3400 SFH.
FT76 Aft Windshield Attach Bolt Life Limit, **(ECP-6269)**	Failure analysis performed on a crack on the LH Aft Windshield Attach Bolt has determined that this bolt does not meet full life requirements
MLG Wheel Well Drainage, **(ECP-6280)**	Water retention in the recesses of the trailing edge casting common to the L/RHS Strut Doors
FT77 Lower Wing Skin Splice Fitting Life Limit, **(ECP-6285C1)**	Failure analysis of a drain hole crack in the Wing Lower Splice Fitting discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour specification requirement
Low Speed Loss of Normal Brakes with Anti-Skid On, **(ECP-6286)**	The aircraft specification requires that the brake control system shall provide a means of controlling brake pressure on all landing surfaces on which the aircraft is designed to operate.

FT50 18K Access Panel Edge Stiffener Redesign, **(ECP-6293)**	Cracks were found on the door edge stiffener at Y524 during the FT-50 Teardown. Test Correlation analysis indicates the Safe Life is 4500 SFH
FT77 Trailing Edge Flap Actuator Rib Life Limit, **(ECP-6294)**	Failure analysis of a fastener hole crack in the TEF Actuator Fitting discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour service life
Inadequate Clearance Between APU SCV and Structure, **(ECP-6211)**	Correct chafing condition between aircraft structural material and the APU SCV to prevent damage to the aircraft structure
FT50 Y591 BULKHEAD AT SIDE LONGERON LIFE LIMIT **(ECP-6287)**	Cracks were found on the Y591 Bulkhead (74A328312) during the FT-50 Teardown. The Y591 Bulkhead is a Maintenance Critical part.
DOORs 37, 307, AND 124 DRAINAGE ISSUES, **(ECP-6301)**	Modification to correct door failures
FT50 STRUCTURAL RELATED ISSUES **(ECP-XX45)**	To Correct A/C Fatigue related discrepancies as a result of FT-50 remaining issues
CRU-99/A Solid-State Oxygen Monitor (SSOM) **(ECP-590) Safety ECP**	Safety improvement to the OBOGS oxygen system, providing an additional monitoring capabilities against Hypoxia resulting in safer flight operation.
Y618 INBRD Former near Keel Longeron Arresting Load, **(ECP-6325)**	Modifies Y618 Former to prevent cracking
FT78 Flight Control Failures, **(ECP-XX47)**	To correct flight control failures discovered during FT78
Tank 3 Bladder, Floor Foam and Backing Board **(ECP-6018)**	This ECP identifies the effort to increase usable fuel and decrease trapped/unusable fuel in Tank #3 by revising the shape of the Tank Floor Foam, Backing Board & Fuel Cell
Nacelle Outboard Bleed Drainage **(ECP-6172)**	To prevent water entrapment in the area of the Nacelle structure
Outer Wing Rib Cracks **(ECP-6187)**	To incorporate a full-life rib into LRIP 1, 2 and 3, and FRP1 aircraft
Engine Bay Door Strut Redesign **(ECP-6089R1)**	This ECP corrects the open forward engine bay door clearance problem with the ground during lateral engine remove and replace as required by the detail specification
FT50 18K Fuel Floor Longeron at Y436 Redesign, **(ECP-6305R1)**	To redesign the Fuel Floor Longeron resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
FT77 Retrofit ECP for the Outer Wing, **(ECP-6309)**	The correct structural discrepancies in the outer wing area
FT77 Inner Wing Kick Rib, **(ECP-6311)**	This is to correct cracks discovered on the FT77 Test Article Analysis initially indicated a Safe life of 4700 SFH in the Inner Wing Kick Rib
Secondary Regulator Bay Vent Line Modification, **(ECP-6336)**	New vent line routing to avoid possible overheating condition in the center keel area
Vertical Tail Rudder Hinge Fairing Fastener Improvements, **(ECP-6337)**	Design change to the fasteners mating the fairings to the intermediate support/stiffening brackets. This change involves changing the 5/32" diameter TiCb rivets to 3/16" diameter steel rivets
Incorporation of GFE Improved Solid State Oxygen Monitoring, **(ECP-6339)**	OEM support for incorporation of GFE Improved Solid State Oxygen Monitoring System CRU-99/P
FT77/78 Aileron Retrofit, **(ECP-6341)**	Failure analysis of a drain hole crack in the aileron, discovered during teardown of the FT78 has determined the safe life is 3400 hours which does not specification
External Fuel Tank Air Pressure Regulator (ETPR), **(ECP-6343)**	Excessive leakage of the external fuel tank air pressure (ETPR) regulator, can potentially cause backpressure in the external air manifold, which in turn can interfere with refueling as identified by on-going investigation into Fleet failures
F/A-18 E/F Missile Rib Corrosion Prevention Improvements, **(ECP-6345)**	Corrosion has been found on the Outer Wing Panel Missile Rib. This ECP will allow coating and sealing configuration changes to improve corrosion protection on the missile rib and surrounding structure.
Fuel Tank Wiring Retrofit Improvements, **(ECP-XX48)**	To incorporate a longer wire harness and install restraining clamp to eliminate wire breakage.
F/A18 NACES Improved Upper Catapult Sleeve, **(ECP-9431MB) Safety ECP**	Retrofit improvement of the upper catapult sleeve components
ALE-47 Structure Missing Drain Path, **(ECP-6230)**	This modification adds a drain hole in the 74A328744 skin beneath the L/RHS ALE 47 Chaff Dispenser Bucket to prevent collection or entrapment of unwanted fluids preventing corrosion condition
Dorsal Cover 26 Interference With Climb Vent, **(ECP-6349)**	This ECP modifies the aircraft by adding electrical bonding to subsystem components and nutplate installation sealing in the Ctr/Aft Fuselage, additionally, modifies the aircraft by adding electrical bonding to the forward fuselage equipment shelf
LH Aileron Servo Cylinder Pressure Tube, **(ECP-6350)**	Modification to replace the 74A681712-1003 & 74A681732-1001 hydraulic tubes with 74A681842-1001 & 74A681843-1001 hydraulic tubes for increased tube clearance to the outer wing lower skin.
F/A-18E/F Lower Wing Hinge Corrosion Improvements, **(ECP-6353)**	This ECP will address severe corrosion on the outer wing outboard aileron hinge, the inner wing inboard and outboard trailing edge flap hinges by incorporating corrosion-resistant coating and sealing configuration
NLG Drag Brace Fairing - Drain Hole, **(ECP-6356)**	Modification to prevent the nose landing gear drag brace fairing from trapping water behind the interior stiffeners. The trapped water results in corrosion forming on the interior surfaces of the fairing. Drainage holes will be added to eliminate corrosion
Canopy Sill Longeron at CY326.5 Inboard Flange Radius Safe Life Limit, **(ECP-6358)**	Modification to beef up the canopy sill Longeron to prevent severing condition
Re-Profiled and Modified NACES Backplate, **(ECP-9425MB)**	Modification to the NACES backplate prevent cracks

Incorporation of EA-18G Operational Flight Program (OFP) Ver.38, **(ECP-6300)**	Modification to provide ILS elements in release of the EA-18G Flight Control Computer (FCC) Operational Flight Program (OFP) software update (V38) for F/A-18E/F
F/A-18E/F Fuel Related Upgrade Issues, **(ECP-XX50)**	Modification to correct discrepancies within the internal and external fuel tanks and fuel plumbing, including electrical components
F/A-18E/F ECS Subsystem Upgrade Issues, **(ECP-XX51)**	Modification to correct discrepancies within the ECS components and sub-component elements
F/A-18E/F Subsystem Retrofit Upgrade Issues, **(ECP-XX52)**	Modification to correct discrepancies in the aircraft mechanical, hydraulic, electrical, and cooling systems
F/A-18E/F Structure Stress Corrosion Cracking Issues, **(ECP-XX53)**	Modification to correct structural stress corrosion issues during fleet usage
F/A-18E/F Outer Wing Panel Inboard Aileron Hinge, **(ECP-XX54)**	Modification to replace a life limited hinge with a full live hinge
F/A-18E/F/G Corrosion Inhancements, **(ECP-6362)**	Inadequate water drainage provisions exist in the Outboard Leading Edge Flap, this ECP will provide the additional corrosion protection required to correct this condition.
Outer-Wing Inboard Aileron Hinge and SPAR 4, **(ECP-6366)**	Modification to correct cracking experienced in the fleet on Pre-CRI outer wing inboard aileron hinges do not meet the fatigue life requirements
Fwd Fuslg Substructure Mod due to RH Sideskin Non-Conformance, **(ECP-6363)**	RH side skin was laid up with non blueprint ply orientations for approximately 170 aircraft. Structural analysis shows the nonconforming skin still meets static and fatigue margins, however seven substructure locations were identified as not meeting the contractually required 6000 hour fatigue life and require retrofit modification to restore this life.
AMAD Oil Pressure Switch, **(ECP-6364)**	Modification to eliminate the wear characteristics resulting from the aircraft operating environment
F/A-18 Wind Tunnel Angle of Attack Transmitter, **(ECP-6370)**	Modification to improve supportability of the F/A-18E/F Angle of Attack Probe by providing enhanced testing on the Fleet Readiness Center - South West (FRC-SW) Wind Tunnel.
Main Landing Gear Trunnion Bearing Rotation Redesign, **(ECP-6373)**	Modification to redesign the MLG Trunnion Bearing Installation in which a corrosion-resistant steel (CRES) washer will be added under the Trunnion Bearing Nut
Y233 Bulkhead Rudder / Break Pully Bracket Attachment Redesign, **(ECP-6372)**	Bulkhead Y233.700 web thickness of machined pocket containing rudder brake cable penetrations is .080 or .060. Web thickness should be .200 (same as A thru D models). A .200 thick doubler will be added to web and rudder brake cable holes in web will be enlarged to meet spec requirements
Main Landing Side Brace Lock Plate Redesign, **(ECP-6376)**	Side Brace Lock Plate requires redesign to provide adequate engagement with retainer for all installation positions
Fuselage Structure RH / NLG Door Aft Hinge Fitting Redesign, **(ECP6377)**	The Right-hand Nose Landing Gear Door Aft Hinge Fitting does not meet service life requirements this ECP will modify the hinge fitting design to meet full life requirements.
F/A-18 FT50 18K Y541 Former Stiffener at ECS Duct Attachment, **(ECP-6378)**	Cracks were found on the Y541 Former at the stiffener at the ECS duct attach during the FT-50 Teardown. Test Correlation analysis indicates the Safe Life is 3000 SFH, the Y541 Former is considered a Fracture Critical part
F/A-18E/F Ailreon Shroud Retrofit, **(ECP-6379)**	The aileron shrood experienced a fatigue failure during fleet usage, this change incorporates improvements to assure fatigue life requirements are met
F/A-18 Replacement of NACES Radio Beacon Actuator, **(ECP-9445MB)**	To Incorporate a new and improved radio beacon signal in order to comply with new satellite requirements
CO Removal from OBOGS **(ECP-xxxxMB)**	Modification to eliminate carbon monoxide (CO) from F/A-18 On-Board Oxygen Generating Systems (OBOGS) thereby eliminating the hypemic hypoxia threat
F/A-18 OBOGS Carbon Monoxide Modification, **(ECP-XX55)**	Modification to eliminate carbon monoxide (CO) from F/A-18 On-Board Oxygen Generating Systems (OBOGS) thereby eliminating the hypemic hypoxia threat
F/A-18 E/F AOA Probe Sensor Redesign Improvements, **(ECP-xx56)**	Modification to incorporate a new and improved AoA sensors.
F/A-18 E/F Control Surface Free Play Inspections and Wear, **(ECP-xx57)**	Modification to eliminate horizontal STAB free play conditions.
F/A-18 E/F Flight Test Loads Aircraft, **(ECP-xx58)**	Modification to incorporate changes into to a new flight test loads aircraft.

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: E/F & EA-18G CORRECTION OF OPERATIONAL DISCREPANCIES (OSIP 14-03)

MODELS OF SYSTEMS AFFECTED: F/A-18 E/F & EA-18G — TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ECP-6106R1 / Exhaust Overtemp Final Fix/Bard Stacks	223	16.0																					223	16.0
ECP-6114 / Aft ECS Cooling Fan	12	0.1																					12	0.1
ECP-6002 / FCC Processor Upgrade	28	1.3																					28	1.3
ECP-6104 / MLG Door Bushing Migration	32	0.1																					32	0.1
ECP-6194 / MLG Trunnion Bearing Loose Retention Nut	80	0.3																					80	0.3
ECP-6171 / Skin 12 Stiffener Back-up Structure	54	0.1																					54	0.1
ECP-6313 / AN/APN-194 (RADAR Altimeter) Mounting Tray Modification Step 2			482	0.5																			482	0.5
ECP-6193R1/R2 / (LEX) Lwr Surface/Structure Cracks Redesign Y286 \ Y294	89	23.9			60	0.6	30	0.3			30	0.3	30	0.3									209	25.2
ECP-6188 / Y436 Inlet Former	183	1.9																					183	1.9
ECP-6203 / FT50 Keel Beam Lower Cap	38	0.1																					38	0.1
ECP-XX12 / FT50 Teardown Bulkhead Cracking					72	0.8	72	0.8			72	0.8	72	0.9	72	0.9	37	0.5					325	3.9
ECP-6326 / FT50 Fuel Barrier Web at Y510	144	0.9			72	0.5	72	0.5			72	0.5	72	0.5	31	0.2							391	2.7
ECP-6229 / FT50 18K Fuselage Outboard Former at Y645 Failure					60	0.1	72	0.2			72	0.2	72	0.2	72	0.2	72	0.2	72	0.2	77	0.2	497	1.1
ECP-6183R1 / FT50 Failure of Upper Wing Skin Splice Plate	96	0.6																					96	0.6
ECP-6098C1 / DOOR 49 Replacement	12	0.2																					12	0.2
ECP-6068 / Horizontal Actuator Cover Door 71	62	1.1																					62	1.1
ECP-6196C1 / MLG R/H Upper Planing Link Attach Fitting Failure	88	0.3																					88	0.3
ECP-6208 / LEX Vent Mechanism Support Assembly Rod end Clevis Failure	92	*																					92	*
ECP-6216 / LDS Fuel Wash Filter	98	0.6																					98	0.6
ECP-6321 MLG DOOR HINGE PINS STANDARD HARDWARE CONVERSION	362	0.2																					362	0.2
ECP-6217 / Cockpit Pressure Warning System (CPWS)	190	1.7																					190	1.7
ECP-6235 / MLG Strut Door Departures	136	0.8																					136	0.8
ECP-6076 / MLG Proximity Switches & Sidebrace Downlock Mechanism	14	0.1																					14	0.1
ECP-6190 / Fuel System Ground Pressurization Tube Water Entrapment	54	0.1																					54	0.1
ECP-6198 / Radar Bay Vent Valve Fail - MSP 862	76	*																					76	*
ECP-6206 / Y679 Former Boot Strap Interface Fillet Seal Missing	80	*																					80	*
ECP-6221/ Bay $L-Y357 Bulkhead Horizontal Flange Life Limit	109	1.0																					109	1.0
ECP-6262 / Y591 Bulkhead Missing Fasteners at Keel Longeron	181	1.1																					181	1.1
ECP-6303R1 / FT50 18K Y577 Former Redesign	216	0.4			85	0.2																	301	0.7
ECP-6304R1 / FT50 18K Web and Wing Drag Longeron Redesign	216	0.5			67	0.2																	283	0.7
ECP-6306R1 / FT50 18K Y618 Inboard Former (74A342314) Redesign	216	0.8			73	0.2																	289	1.0
ECP-6241R1 / Wing-Aft Shear Tie Bushing Migration	186	0.2																					186	0.2
ECP-6213R2 / TEF Redesign		0.1			36	0.4													95	71.0	305	226.9	436	298.3
ECP-6219 / Wing - Fuel Probe Corrosion Protection	286	0.1																					286	0.1
ECP-6034 / Procures Common Preamps not funded in Lot 24	36	6.0																					36	6.0

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: E/F & EA-18G CORRECTION OF OPERATIONAL DISCREPANCIES (OSIP 14-03)

MODELS OF SYSTEMS AFFECTED: F/A-18 E/F & EA-18G — TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

ECP-6258 / FT76 Forward Windshield Bolt Life Limit	76	*																					76	*
ECP-XX33 / Hydraulics Components Improvement					72	0.1															155	0.1	227	0.2
ECP-6319 / IN-FLIGHT REFUELING (IFR) PROBE LINKAGE REDESIGN	198	1.1																					198	1.1
ECP-6323 / Bleed Orifice Oversize	361	0.1																					361	0.1
ECP-6320 / LANDING GEAR CONTROL UNIT (LGCU) MIT UPGRADE	424	4.3																					424	4.3
ECP-6282 / FT77 Wing Pylon Changes	208	22.2											44	9.8									252	32.0
ECP-XX39 / AFT Engine Mount Attach Fitting					72	0.4																	72	0.4
ECP-IRRHB-0147 / Repeatable Release Holdback Bar	85	0.4																					85	0.4
ECP-6283 / LEX Right Hand Walkway Mat	438	0.4																					438	0.4
ECP-6228 / Throttle Electronics Module Seal Improvement															60	0.9	60	1.0	60	1.0	45	0.8	225	3.7
ECP-6234 / Horizontal Stabilator Fuselage Rubbing	267	6.4																					267	6.4
ECP-6239R1 / FT 50 18K Fuselage Outboard Formal @Y679 Failure	144	0.1			72	0.1																	216	0.2
ECP-6240R1 / FT50 18K MLG Sidebrace Fitting Failure	216	9.6			72	4.1	36	1.7			36	1.7	47	2.3									371	17.7
ECP-6243 / FT76 Jackpoint Support Fitting Life Limit	14	0.1																					14	0.1
ECP-6245 / INBOARD WING CLOSURE BOLT, ANTI-ROTATION RETAINER	58	0.2																					58	0.2
ECP-6246 / FT76 Y301 Sheet Metal Routing Closure Life Limit	6	*																					6	*
ECP-6247R1 / FT50 18K Y520 Former Cracks at Lower Drop Link	216	0.4																					216	0.4
ECP-6248 / Tank 1 Improvements - Vent Cap Addition	98	*																					98	*
ECP-6249 / Nut Plate Installation Sealing	38	0.1																					38	0.1
ECP-6256 / FT76 Bay 3-4 Avionics Door Seal Support	15	*																					15	*
ECP-6257 / HFC-125 Fire Extinguisher Mount - Final Corrective Action	266	1.6																					266	1.6
ECP-6259 / FT76 Z90 Longeron Life Limit	13	*																					13	*
ECP-6260 / FT50 18K Y491 Bulkhead Redesign					60	0.9																	60	0.9
ECP-6264 / FT50 Y436 BULKHEAD LIFE LIMIT					60	1.2																	60	1.2
ECP-6271 / FT76 NLG Retract Actuator Supports & X7 Keel	12	*																					12	*
ECP-6275C1 / FT77 Wing Inboard Closure Rib Life Limit	84	*																					84	*
ECP-6278 / FT76 Canopy Sill Longeron & Upr Nose Barrel Longeron @ Y204 Life Limit	3	*																					3	*
ECP-6284 / TEF SHROUD LINK	58	0.3																					58	0.3
ECP-6292 / FT76 Avionics Bay 3 & 4 Door Hinges	9	*																					9	*
ECP-6294 / FT77 Trailing Edge Flap Actuator Rib Life Limit					72	0.7																	72	0.7
ECP-6295 / FT77 Wing Spar 6 Life Limit	137	0.1																					137	0.1
ECP-XX / AESA OBSOLESCES PARTS		1.9																						1.9
ECP-9384MB / Redesign of Backrest Operation Plunger MBEU148542 - Safety	572	*																					572	*
ECP-6310 / LEX Retrofit Bundle ECPs (6261/6263/6270/6276)	8	0.2																					8	0.2
ECP-XX45 / FT50 STRUCTURAL RELATED ISSUES					60	0.1															265	22.4	325	22.5
ECP-XX46 / ARRESTING HOOK FAILURES					60	0.9																	60	0.9
ECP-6325 / Y618 INBRD FORMER NEAR KEEL LONGERON ARRESTMENT LOAD			72	0.4	60	0.3	72	0.4			72	0.4	72	0.4	72	0.4	72	0.4	15	0.1			435	2.5
ECP-XX47 / FT78 FLIGHT CONTROL FAILURES					60	0.3															325	19.4	385	19.7
ECP-6185 / Centerline Pylon Feed-Thru Assembly Interface	12	*																					12	*
ECP-6089R1 / Engine Bay Door Strut Redesign					59	0.4																	59	0.4
ECP-1036NI / RETRO OF ECS/OBUGS TEE & ELBOW - CORROSION ISSUES	369	*																					369	*
ECP-1049NI / Fuel Pressurization System Check Valve Failure	59	0.1																					59	0.1
ECP-5051 / MLG Planing Mechanism Bellcrank Pivot Bolt Redesign	310	0.5																					310	0.5

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: E/F & EA-18G CORRECTION OF OPERATIONAL DISCREPANCIES (OSIP 14-03)

MODELS OF SYSTEMS AFFECTED: F/A-18 E/F & EA-18G | TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

ECP-5046C1 / BALD Transponder Rotation - Change Incorporation Level	133	0.1																					133	0.1
ECP-6309 / FT77 Retrofit ECP for the Outer Wing	192	0.1			72	0.2																	264	0.3
ECP-6322 / Dry Bay Fire Suppression System (DBFSS)	1	*																					1	*
ECP-6337 / Vertical Tail Rudder Hinge Fairing Fastener Improvements			72	0.4	72	0.4							72	0.4	72	0.4	31	0.2			72	0.4	391	2.1
ECP-6338 / Design Improvements to FPU-11A 480G External Fuel Tank Modular Valve	400	2.1																					400	2.1
ECP-6343 / External Fuel Tank Air Pressure (ETPR) Regulator	156	0.3			72	0.1	150	0.3			150	0.3	94	0.2									472	0.9
ECP-XX48 / Fuel Tank Wiring Retrofit Improvements					60	0.3															409	2.4	469	2.8
ECP-9431MB / F/A18 NACES Improved Upper Catapult Sleeve	66	0.1																					66	0.1
ECP-6328 / Bay 1L Cable Routing Change	139	*																					139	*
ECP-6350 / LH Aileron Servo Cylinder Pressure Tube			313	1.0																			313	1.0
ECP-6353 / F/A-18E/F Lower Wing Hinge Corrosion Improvements	78	0.8	72	0.7	72	0.7																	222	2.2
ECP-6356 / NLG Drag Brace Fairing - Drain Hole			305	*																			305	*
ECP-6358 / Canopy Sill Longeron at CY326.5 Inboard Flange Radius Safe Life Limit					72	0.8																	72	0.8
ECP-XX50 / F/A-18E/F Fuel Related Upgrade Issues																					500	3.0	500	3.0
ECP-XX51 / F/A-18E/F ECS Subsystem Upgrade Issues																					500	3.4	500	3.4
ECP-XX52 / F/A-18E/F Subsystem Retrofit Upgrade Issues																					500	4.2	500	4.2
ECP-XX53 / F/A-18E/F Structure Stress Corrosion Cracking Issues																					500	11.3	500	11.3
ECP-XX54 / F/A-18E/F Outer Wing Panel Inboard Aileron Hinge																					500	11.3	500	11.3
ECP-6362 F/A-18E/F/G Corrosion Inhancements			305	*																			305	*
ECP-6366 Outer-Wing Inboard Aileron Hinge and SPAR 4			84	1.5																			84	1.5
ECP-6372 Y233 Bulkhead Rudder / Break Pully Bracket Attachment Redesign			72	0.2																	352	1.0	424	1.2
ECP-6376 Main Landing Side Brace Lock Plate Redesign			358	4.3																			358	4.3
ECP-6377 Fuselage Structure RH / NLG Door Aft Hinge Fitting Redesign			72	1.1																			72	1.1
ECP-9445MB F/A-18 Replacement of NACES Radio Beacon Actuator			900	0.3																			900	0.3
ECP-xx56 F/A-18 E/F AOA Probe Sensor Redesign Improvements																					200	8.3	200	8.3
ECP-xx57 F/A-18 E/F Control Surface Free Play Inspections and Wear																					500	0.2	500	0.2
ECP-xx58 F/A-18 E/F Flight Test Loads Aircraft													1	29.8									1	29.8
Installation Kits N/R		24.1		13.5		0.8		0.3				0.3		0.3								1.9		40.9
Installation Equipment																								
Install Equip	312	0.1																					312	0.1
ECP-6039 FT77 Outerwing Retrofit	72	*	76	*																			148	*
Installation Equipment N/R																								
Engineering Change Orders																								
Data		1.8		0.1																				1.9
Training Equipment																								
Support Equipment		1.7																						1.7
ILS		26.9		14.8		5.4		1.7				1.7		1.5		4.4		6.0		3.6		8.3		72.6
Other Support																								
Interim Contractor Support																								
Installation Cost	1,087	21.9	822	16.2	1,886	15.4	1,995	23.6			1,995	23.6	2,221	32.1	1,522	21.6	1,026	15.4	647	16.6	1,279	82.2	12485	245.0
Total Procurement		**190.7**		**55.0**		**36.8**		**29.9**				**29.9**		**78.6**		**29.0**		**23.6**		**92.5**		**407.6**		**943.6**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Costs vary due to some ECPs being O-Level Installs, some ECPs do not require kits, and some ECPs require installs and Non-Recurring efforts.

Exhibit P-3a | Individual Modification

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

MODELS OF SYSTEMS AFFECTED: F/A-18A-F and EA-18G | TYPE MODIFICATION: Capability and Reliability Improvements

DESCRIPTION/JUSTIFICATION:

This OSIP is required to retrofit upgrades and improvements to various avionics systems that have been or are being incorporated into production aircraft, to provide updates to Automated Maintenance Environment, and to provide Mission Planning updates. Specifically for Mission Planning, the F/A-18 Unique Planning Component (UPC) for the Joint Mission Planning system (JMPS) must implement frequent software changes in conjunction with production aircraft modifications. The JMPS UPC changes required in conjunction with System Configuration Set (SCS) changes must include software regression tests to ensure proper operation and integration with other aircraft systems in JMPS components, and the core mission planning equipment and software procured elsewhere within the Navy budget. Upgrades include a retrofit of Solid State Recorder (SSR) into F/A-18 E/F aircraft. This OSIP also includes a requirement to retrofit the Deployable Flight Incident Recorder System (DIFRS) to address the issue of the current COSPAT SARSAT satellite becoming obsolete. To support updates to Operational Flight Program (OFP) for on-going aircraft modernization and modification efforts necessitate periodic software releases. The procurement of SCS is not a stand alone cost but integration for the overall improvement to the end item to allow the integration of new capabilities and or performances to be complete. The SCS builds anticipated are used to support retrofit hardware configuration changes and the accompanying software change and associated testing driven by the APN5 funded OSIP's. SCS builds will include 20X, 21X, 23X, 25X, H4, H5, H6, H7, H8, H9, H10 and H12. SCS build integration will comprise of Operational Flight Programs (OFP), Support Equipment Test Program Sets (TPS) Updates, PALS assessment, Operational analysis and functional retrofit implementation of aircrew and maintenance training systems, OFP Memory Loader Verifier Set Personal Computer Memory Card International Association (PCMCIA) cards, associated software licenses and data rights and publication updates.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
"A" Kits E/F Solid State Recorder & USSR	136	5.0																					136	5.0
E "A" Kits Solid State Recorder					12	0.3	24	0.5			24	0.5	5	0.1									41	0.9
F "A" Kits Solid State Recorder					12	0.2	24	0.5			24	0.5	21	0.4									57	1.1
Civilian ILS kits			14	2.5																			14	2.5
Installation Kits N/R		9.1		3.7																				12.8
Installation Equipment																								
MP/UPC Software		6.3				4.4		2.4				2.4		1.0		0.4		0.7		2.5				17.6
"B" Kits E/F Solid State Recorder	136	5.1																					136	5.1
"B" Kit SSR& RMM Test and Check from ECP-6318					24	0.1	48	0.2			48	0.2	26	0.1									98	0.3
"B" Kit RMM Test and Check from ECP-6318					24	*	48	0.1			48	0.1	26	*									98	0.1
"B" Kits SMUG for ECP-6042			14	0.5																			14	0.5
SCS				1.8																				1.8
20X		0.6		0.8																				1.4
21X		1.9																						1.9
23X		1.2		0.7		0.8																		2.7
H5		0.6																						0.6
H6		1.2		2.2																				3.5
H7						0.2																		0.2
H8		2.5		3.7																				6.2
Installation Equipment N/R																								
Engineering Change Orders		0.4																						0.4
Data		0.7																						0.7
Training Equipment		0.1																						0.1
Support Equipment		2.5		0.2		0.3		0.4				0.4		0.4		0.2		0.3		0.2				4.4
ILS		2.8		0.8		0.1		0.3				0.3		2.0		4.2		4.1		0.4				14.6
Other Support		1.4		2.3		0.4		2.3				2.3		2.7		2.0		1.6		3.7				16.3
Interim Contractor Support																								
Installation Cost	108	0.5	28	0.1	24	0.1	48	*			48	*	26	*									234	0.7
Total Procurement		**41.8**		**19.1**		**6.8**		**6.6**				**6.6**		**6.7**		**6.7**		**6.7**		**6.8**				**101.2**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. ILS funding in FY13 to FY15 includes AME ILS.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **F/A-18A-F and EA-18G**

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Fleet Readiness Center (FRCs)**

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2010: FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: FY 2011: Jun-11 FY 2012: Jun-12 FY 2013: Jun-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (136) kits	108	0.5	28	0.1															136	0.5
FY 2010 ( ) kits																				
FY 2011 (24) kits					24	0.1													24	0.1
FY 2012 (48) kits							48	*											48	*
FY 2012 OCO ( ) kits																				
FY 2013 (26) kits									26	*									26	*
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**108**	**0.5**	**28**	**0.1**	**24**	**0.1**	**48**	*****	**26**	*****									234	0.7

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	108	14	14					12	12			24	24			13	13				
Out	108	14	14					12	12			24	24			13	13				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										234
Out										234

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION:

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

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Forward fit of the AN/APG-79 AESA RADAR system began with 8 units in Lot 27, 12 units in Lot 28 and 22 units in Lot 29. Beginning in Lot 30, all F/A-18 E/F and EA-18G aircraft will be forward fit with the AN/APG-79 AESA RADAR. This OSIP includes the retrofit of the AN/APG-79 AESA system into 133 Lot 26-29 F/A-18E/F aircraft previously outfitted with AN/APG-73. Obsolescence is included for the AN/APG-79 AESA to address non-recurring activities driven by vanishing suppliers and limited military demand for commercial parts/components. The procurement of kits commenced in FY 2008 with the first installation occurring in FY 2009. The installation of kits will be accomplished by a Fleet Support Team traveling to two locations (NAS Oceana and NAS Lemoore) and executing the retrofit or aircraft by squadron. This OSIP also includes funds to support ECP 508 that converts some AN/APG-65 radars to AN/APG-73 and non-recurring for reliability and operational safety improvements /obsolescence into the AN/APG-65 and AN/APG-73-RADAR's. FY 2009 Congressional funding ($7.6M) received for Expand 4/5 funding for software integration and to procure 3 Hardware Kits. FY 2009 OCO funding ($10M) received for Target Location Error Integration / Electronic Protection Integration.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Radars	38	108.0			20	54.9	3	10.1			3	10.1	6	21.4	2	7.4	3	11.4	10	41.2	51	443.8	133	698.2
Installation Kits N/R		12.3																						12.3
Installation Equipment																								
B KIT 2 - Radome (ECP-6038)	11	8.0			29	12.9	25	9.3			25	9.3	6	2.4	2	0.9	3	1.5	10	5.4	47	28.0	133	68.4
B KIT 3 - Modules Kits (WRAs) (ECP-6279)	30	12.3			26	20.5	8	6.6			8	6.6	17	13.9							87	80.0	168	133.3
B Kit -4 Component/Install (ECP-6297)	17	0.1																					17	0.1
B Kit -5 (ECP-6298)	20	1.4																					20	1.4
B Kit Expand 4/5 SMPE	40	2.3																					40	2.3
B-Kit Expand 4/5 Kits (OCO)	38	18.4																					38	18.4
B-Kit LCFU	150	0.5																					150	0.5
B-Kit APG-65/73					40	1.8	31	1.5			31	1.5	33	1.5	15	0.7	14	0.6					133	6.1
B-Kit GPP3 Step 2 (ECP 6381)																					513	233.2	513	233.2
B-Kit Static Discharge software mod							245	2.0			245	2.0											245	2.0
Installation Equipment N/R		0.6						22.0				22.0		23.0		87.6		73.2		65.4				271.7
Engineering Change Orders																								
EMI Improvements (ECP-6298)		0.2																						0.2
Other ECO				4.5												3.0		5.2						12.7
GPP Respin NRE		7.7		21.4		25.5																		54.6
Multi Jammer		1.4		1.2		0.8																		3.4
Data		1.8		0.1																				1.9
Training Equipment																								
Support Equipment		0.1				0.1		0.1				0.1		0.1		3.0		3.0						6.4
ILS																5.0		8.7						13.7
Other Support		44.9		16.8		6.8		15.9				15.9		11.5		25.4		35.0		30.3				186.7
Interim Contractor Support																								
Radar Deliveries	2		15		15		6				6		20		3		6		2		64		133	
Installation Cost					10	2.9	41	0.9			41	0.9	42	2.6	35	1.6	19	1.9	7	0.7	147	6.4	301	17.0
Total Procurement		**220.1**		**44.0**		**126.2**		**68.3**				**68.3**		**76.5**		**134.5**		**140.4**		**143.0**		**791.4**		**1,744.5**

Notes:

1. Unit cost in FY15 and FY16 assumes FMS procurement.
2. Totals may not add due to rounding.
3. The APG-79 Retrofit Efforts are on a lead time installation schedule. The installation process begins with the delivery of the radars. The radars have a lead time of approximately 24 months to delivery. In order to capture the $276M cost avoidance, ECP 6279 and ECP 6038 are dependent upon the delivery of the radars. Once the radars deliver, then the ECP 6279 process begins which converts the radars which were removed from the aircraft from Configuration A to Configuration B. Once the radar has been converted under ECP 6279, it is then retrofitted into the aircraft as ECP 6038.
4. Funding in Other Support includes costs for obsolescence.
5. RADAR quantities in FY14 - FY16 reflect procurements below the minimum Economic Ordering Quantity of 24 kits.

Exhibit P-3a

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

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **O-level install**

ADMINISTRATIVE LEADTIME: 4 Months

PRODUCTION LEADTIME: 24 Months

CONTRACT DATES: FY 2010: ____ FY 2011: Feb-11 FY 2012: Feb-12 FY 2013: Feb-13

DELIVERY DATE: FY 2010: ____ FY 2011: Jan-13 FY 2012: Jan-14 FY 2013: Jan-15

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (38) kits	2		15		15		6												38	
FY 2010 ( ) kits																				
FY 2011 (20) kits									20										20	
FY 2012 (3) kits											3								3	
FY 2012 OCO ( ) kits																				
FY 2013 (6) kits													6						6	
FY 2014 (2) kits															2				2	
FY 2015 (3) kits																	3		3	
FY 2016 (10) kits																	10		10	
To Complete (51) kits																	51		51	
TOTAL	**2**		**15**		**15**		**6**		**20**		**3**		**6**		**2**		**64**		133	

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2	3	2	6	4	1	3	7	4	2	4				6	8	6		3		
Out	2	3	2	6	4	1	3	7	4	2	4				6	8	6		3		

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		2	2	2			2		64	133
Out		2	2	2			2		64	133

Notes:

1. Quantities refer to RADAR deliveries.

Exhibit P-3a

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

MODIFICATION TITLE: AESA/AN-APG-65/AN-APG-73 (OSIP 002-07) (ECP 6279)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Teams**

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: _____ FY 2011: Feb-11 FY 2012: Feb-12 FY 2013: Feb-13

DELIVERY DATE: FY 2010: _____ FY 2011: Apr-12 FY 2012: Apr-13 FY 2013: Apr-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (30) kits					10	2.9	20	0.1											30	3.0
FY 2010 ( ) kits																				
FY 2011 (26) kits							14	0.1	12	0.1									26	0.1
FY 2012 (8) kits									5	0.0	3	0.0							8	0.0
FY 2012 OCO ( ) kits																				
FY 2013 (17) kits											17	0.1							17	0.1
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete (87) kits																	87	0.4	87	0.4
TOTAL					**10**	**2.9**	**34**	**0.2**	**17**	**0.1**	**20**	**0.1**					**87**	**0.4**	168	3.7

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						2	2	3	3	8	9	9	8	4	4	5	4	3		9	8
Out						2	2	3	3	8	9	9	8	4	4	5	4	3		9	8

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									87	168
Out									87	168

Notes:
The APG-79 Retrofit Efforts require a series of sequential actions with a total lead time of 36 months. The installation process begins with the delivery of the radars. The radars have a nominal 24 month lead time to delivery. ECP 6279 is dependent upon the delivery of the radars. Once the radars deliver, then there is a nominal 12 month lead time from the radar delivery to radar conversion (ECP 6279) which is required to convert the radars that have been removed from the aircraft from a Configuration A to a Configuration B radar (this occurs in parallel with ECP 6038). ECP 6038 has a nominal 15 month lead time from procurement to installation in the aircraft.

Exhibit P-3a

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

MODIFICATION TITLE: AESA/AN-APG-65/AN-APG-73 (OSIP 002-07) (ECP 6038)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Teams**

ADMINISTRATIVE LEADTIME: 9 Months

PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2010: _____ FY 2011: Mar-11 FY 2012: Mar-12 FY 2013: Mar-13

DELIVERY DATE: FY 2010: _____ FY 2011: Apr-13 FY 2012: Apr-14 FY 2013: Apr-15

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (11) kits							7	0.7	4	0.4									11	1.1
FY 2010 ( ) kits																				
FY 2011 (29) kits									21	2.1	8	0.8							29	2.9
FY 2012 (25) kits											7	0.7	18	1.8					25	2.5
FY 2012 OCO ( ) kits																				
FY 2013 (6) kits													1	0.1	5	0.5			6	0.6
FY 2014 (2) kits															2	0.2			2	0.2
FY 2015 (3) kits																	3	0.3	3	0.3
FY 2016 (10) kits																	10	1.0	10	1.0
To Complete (47) kits																	47	4.7	47	4.7
TOTAL							**7**	**0.7**	**25**	**2.5**	**15**	**1.5**	**19**	**1.9**	**7**	**0.7**	**60**	**6.0**	133	13.3

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										1	2	2	2	4		11	10	4	4	3	4
Out										1	2	2	2	4		11	10	4	4	3	4

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In	6	6	6	1	2	3	1	1	60	133
Out	6	6	6	1	2	3	1	1	60	133

Notes:
The APG-79 Retrofit Efforts require a series of sequential actions with a total lead time of 36 months. The installation process begins with the delivery of the radars. The radars have a nominal 24 month lead time to delivery. ECP 6279 is dependent upon the delivery of the radars. Once the radars deliver, then there is a nominal 12 month lead time from the radar delivery to radar conversion (ECP 6279) which is required to convert the radars that have been removed from the aircraft from a Configuration A to a Configuration B radar (this occurs in parallel with ECP 6038). ECP 6038 has a nominal 15 month lead time from procurement to installation in the aircraft.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: EW Unique (OSIP 021-08)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D ALR-67(V)3 Retrofit | TYPE MODIFICATION: Capability Improvements

DESCRIPTION/JUSTIFICATION:

Purchase additional ALR-67(V)3 RWR systems to be used to retrofit F/A-18C/D platforms. These systems will replace existing ALR-67(V)2 systems. This will significantly increase aircrew survivability in the legacy F/A-18. The repetitive obsolescence issues of the V(2) system is a consistent issue in the F/A-18 community. The F/A-18 is flying missions in direct support of troops on the ground in Iraq and Afghanistan. The RWR ALR-67(V)3 is the threat recognition providing Situational Awareness for the aircrew and is vital to their own safety as well as providing the opportunity to support the ground troops. If not funded, there would be a greater risk of lost aircraft and aircrew in a hostile environment, and loss of ability to provide close air support for ground missions and possible Blue on Blue Fratricide.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
F/A-18C/D ALR-67(V)3 Retrofit			64	1.2																			64	1.2
FY2011 OCO ALR 67(V)3					17	15.5																	17	15.5
Installation Kits N/R				2.5																				2.5
Installation Equipment																								
F/A-18C/D ALR-67(V)3 Retrofit			48	46.2																			48	46.2
FY2011 OCO ALR 67(V)3					17	15.5																	17	15.5
ALR 67(V)3 RWR G4							7	1.0			7	1.0											7	1.0
ALR 67(V)3 OPR/DCR							28	3.2			28	3.2											28	3.2
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment		3.1																						3.1
ILS																								
Other Support																								
Interim Contractor Support																								
Installation Cost			48	46.1	17	4.0	35	1.1			35	1.1											100	51.2
Total Procurement		**3.1**		**96.0**		**35.0**		**5.3**				**5.3**												**139.3**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **F/A-18C/D ALR-67(V)3 Retrofit** MODIFICATION TITLE: EW Unique (OSIP 021-08)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Modification**

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: Mar-11 FY 2012: Mar-12 FY 2013:

DELIVERY DATE: FY 2010: Mar-11 FY 2011: Mar-12 FY 2012: Jul-12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 (48) kits				46.1	48														48	46.1
FY 2011 (17) kits						4.0	17												17	4.0
FY 2012 ( ) kits																				
FY 2012 OCO (35) kits							35	1.1											35	1.1
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL				**46.1**	**48**	**4.0**	**52**	**1.1**											100	51.2

Qty of 48 kits procured in FY10 are installed with FY10 OCO funding in FY11. Qty of 17 kits procured in FY11 are installed with FY11 OCO funding in FY12.

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								24	24			9	43								
Out								24	24			9	43								

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										100
Out										100

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Network Centric Operations: OSIP 001-10

MODELS OF SYSTEMS AFFECTED: F/A-18 | TYPE MODIFICATION: Avionics Upgrade

DESCRIPTION/JUSTIFICATION:

OSIP 001-10 will implement a common configuration and capability across all F/A-18E/F Block 2 aircraft. Improving platform performance in all mission areas including SuW, Air-to-Air, Strike, Suppression of Enemy Air Defenses (SEAD)/Defensive Electroni Counter Measurements (DECD) and interoperability which will result in a reduction of a number of aircraft and weapons to execute SuW and Strike missions in most stressing scenarios, decrease in time on target to execute SuW, SEAD/DECD missions in MCO scenarios and will improve survivability due to decreased time on target.

The F/A-18 program has developed and integrated multiple systems to be installed in Lot 26 and subsequent Block 2 aircraft. The integration of the systems: Distributed Targeting System (DTS), Digital Memory Unit, Advanced Navigation, Upgraded Solid State Recorder, Digital Cueing Systems and G4 Processor, and Interoperability modifications due to MIDS Lvt and DCS radio Mil-Std will greatly improve the weapon systems threat capability. This OSIP will implement the required architecture in support of NAVPLAN 2030. The ANAV retrofit implements an advanced Inertial Navigation System/Global Positioning System (INS/GPS) that increases platform navigation accuracy and smart weapon targeting solutions.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

DMD, ANAV, DCR, G4/OPR are fully developed and delivered with Lot 30 and above in FY 2008. Distributed Targeting Processor, PR09 funded issue is currently under development and planned to be completed in FY 2011 with IOC in FY 2012. ECP's included: ANAV xxx1, DMD: ECP xxx2, DTP/MSU: ECP xxx3, DCR: ECP xxx4, G4/OPR: ECP xxx5, USSR: ECP 6318 and Interoperability: ECP: xxx7

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
A2 Kit (Tray Assy.)					36	1.6	36	1.5			36	1.5	33	1.2	36	1.1	27	0.7	28	0.7			196	6.8
A3 Kit (Couplings/HW)					36	0.8	36	0.7			36	0.7	33	0.6	36	0.6	27	0.3	28	0.4			196	3.5
USSR A-Kit			17	0.9	50	3.2	40	2.1			40	2.1	25	2.1	28	1.8							160	10.1
DTS A Kit (LOTS 30 ABOVE)					30	14.3	18	5.8			18	5.8	31	11.9	29	9.8	17	5.5	65	23.4	11	4.1	201	74.6
DTS A KITS (LOTS 26-29)							41	17.2			41	17.2	41	17.2	47	19.2	41	17.0					170	70.6
DMD A Kit (LOTS 26-29)							29	8.9			29	8.9	19	9.4	34	17.4	30	14.9	29	15.3	32	16.5	173	82.4
Installation Kits N/R				1.6		7.6		6.6				6.6												15.8
Installation Equipment																								
ANAV (WRA)					37	1.6	36	2.7			36	2.7	33	3.6	36	3.9	26	2.6	28	2.8			196	17.3
ALR 67(V)3 RWR G4			19	3.9	21	4.2																	40	8.1
ALR 67(V)3 OPR/DCR			26	4.0	28	4.3																	54	8.3
USSR Operational RMMs			17	0.1	50	0.5	40	0.4			40	0.4	25	0.3	28	0.3							160	1.7
Installation Equipment N/R																								
Engineering Change Orders																								
Advanced Navigation (ANAV) ECO				6.3																				6.3
Data				2.2		0.3		0.3				0.3		0.3		3.0		0.2		0.2				6.4
Training Equipment				0.4				0.6				0.6		0.7										1.7
Support Equipment						0.5		0.8				0.8		0.4		0.6		0.4		0.4		4.3		7.4
ILS				1.4		1.3		1.2				1.2		1.1		1.7		0.6		0.8		3.0		11.1
Other Support				5.6		6.1		3.8				3.8		4.3		4.0		3.4		2.8		10.4		40.4
Interim Contractor Support																								
Installation Cost					55	1.1	83	1.3			83	1.3	171	2.5	167	2.9	162	2.7	144	2.4	137	2.4	919	15.2
Total Procurement				**26.3**		**47.6**		**53.9**				**53.9**		**55.7**		**66.1**		**48.3**		**49.1**		**40.6**		**387.6**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **F/A-18** MODIFICATION TITLE: Network Centric Operations: OSIP 001-10

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Mod Team**

ADMINISTRATIVE LEADTIME: Various Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

DELIVERY DATE: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (19) kits					19	0.1													19	0.1
FY 2010 (17) kits							17	0.1											17	0.1
FY 2011 (116) kits					36	1.1	30	0.1	50	0.2									116	1.4
FY 2012 (164) kits							36	1.1	88	1.3	40	0.2							164	2.6
FY 2012 OCO ( ) kits																				
FY 2013 (149) kits									33	1.0	91	1.6	25	0.2					149	2.7
FY 2014 (174) kits											36	1.1	110	1.7	28	0.2			174	2.9
FY 2015 (115) kits													27	0.8	88	1.4			115	2.2
FY 2016 (122) kits															28	0.8	94	1.5	122	2.4
To Complete (43) kits																	43	0.9	43	0.9
TOTAL					**55**	**1.1**	**83**	**1.3**	**171**	**2.5**	**167**	**2.9**	**162**	**2.7**	**144**	**2.4**	**137**	**2.4**	919	15.2

Note: Install greater than Kit procurement for USSR due to 19 Kits procured previously in OSIP 23-04.

Installation Schedule

USSR	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								10	9	5	4	4	4	13	13	12	12	10	10	10	10
Out								10	9	5	4	4	4	13	13	12	12	10	10	10	10

USSR	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	7	6	6	6	7	7	7	7		179
Out	7	6	6	6	7	7	7	7		179

DMD	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In														8	7	7	7	5	5	5	4
Out														8	7	7	7	5	5	5	4

DMD	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	9	9	8	8	8	8	7	7	61	173
Out	9	9	8	8	8	8	7	7	61	173

DTS	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										8	8	7	7	16	15	14	14	18	18	18	18
Out										8	8	7	7	16	15	14	14	18	18	18	18

DTS	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In	19	19	19	19	15	15	14	14	76	371
Out	19	19	19	19	15	15	14	14	76	371

ANAV	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						9	9	9	9	9	9	9	9	9	8	8	8	9	9	9	9
Out						9	9	9	9	9	9	9	9	9	8	8	8	9	9	9	9

ANAV	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In	7	7	7	6	7	7	7	7		196
Out	7	7	7	6	7	7	7	7		196

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: EA-18G Unique OSIP (011-10)

MODELS OF SYSTEMS AFFECTED: EA-18G | TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

DESCRIPTION/JUSTIFICATION:
With EA-18G aircraft achieving Initial Operational Capability (IOC) in FY2009, an OSIP to perform required safety of flight modifications, address obsolescence issues, and incorporate system improvements was established. Funds are required to retrofit Weapons Replaceable Assemblies (WRAs) and Shop Replaceable Assemblies (SRAs). Funding will also support maintenance of a common configuration. Additionally, funding will be used to retrofit the MATT Replacement systems on the aircraft at the completion of the development program.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
MATT Replacement NRE in FY08-10. Aircraft production kit buys in FY11-12 (32 A/C) with installs in FY12-13 (32 A/C). Retrofit kit buys in FY11-13 (53 A/C) with installations in FY12-14.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
IBS Receiver Replacement					18	0.5	18	0.5			18	0.5	17	0.5									53	1.6
Installation Kits N/R				2.5																				2.5
Installation Equipment																								
IBS Receiver Replacement					18	2.4	18	2.6			18	2.6	17	2.6									53	7.6
Installation Equipment N/R																								
Engineering Change Orders						4.2		4.2				4.2		4.6		6.8		4.6		4.7				29.1
Data																								
Training Equipment																								
Support Equipment																								
ILS						1.0		1.4				1.4		1.4		0.5		0.6		0.6				5.5
Other Support																								
Interim Contractor Support																								
Installation Cost					18	0.6	18	0.6			18	0.6	17	0.6									53	1.9
Total Procurement				**2.5**		**8.8**		**9.4**				**9.4**		**9.7**		**7.3**		**5.2**		**5.3**				**48.1**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **EA-18G**

MODIFICATION TITLE: EA-18G Unique OSIP (011-10)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **FIELD MOD TEAMS**

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 7 Months

CONTRACT DATES: FY 2010: | FY 2011: Nov-10 | FY 2012: Nov-11 | FY 2013: Nov-12

DELIVERY DATE: FY 2010: | FY 2011: Jun-11 | FY 2012: Jun-12 | FY 2013: Jun-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (18) kits					18	0.6													18	0.6
FY 2012 (18) kits							18	0.6											18	0.6
FY 2012 OCO ( ) kits																				
FY 2013 (17) kits									17	0.6									17	0.6
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL					**18**	**0.6**	**18**	**0.6**	**17**	**0.6**									53	1.9

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								9	9			9	9			9	8				
Out								9	9			9	9			9	8				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										53
Out										53

Exhibit P-40, BUDGET ITEM JUSTIFICATION													**DATE:** **February 2011**
APPROPRIATION/BUDGET ACTIVITY **Aircraft Procurement, Navy / APN-5 Aircraft Modifications**									P-1 ITEM NOMENCLATURE **052600, H-46 SERIES**				
Program Element for Code B Items:									Other Related Program Elements				
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY													
COST (In Millions)	621.0	A	58.8	17.7	27.1	0.0	27.1	2.4	2.3	2.3	2.5	0.0	734.0

DESCRIPTION:
This line item funds modifications to the H-46 aircraft. The H-46 is a twin-turbine powered dual-piloted tandem-rotor helicopter. The cabin contains provisions for accommodating 25 troops and crew members. The cabin also contains an integral cargo and rescue system The overall goal of the modification budget in FY 2012 is to keep the H-46 a viable platform until a replacement aircraft can be fielded. H-46 helicopters are used by the Marine Corps for troop transport and search and rescue missions. USMC inventory: total (148) aircraft: (119) CH-46E active + (3) HH-46E + (26) CH-46E reserve aircraft. Average age of aircraft (as of April 2010) is currently 41.5 years (or 10,680 hours). Original design service life was 10,000 hours. It was subsequently extended to 12,500 hours on 18 Dec 1992 and to 15,000 hours on 16 Feb 1996. Aircraft will continue to be flown past 15,000 flight hours on an age exploration program

(TOA, $ in Millions)

OSIP No. / Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
025-97 SAFETY IMPROVEMENT	78.9	1.3										80.1
011-05 LIGHTWEIGHT COCKPIT SEATS	15.9	0.4	0.4									16.7
018-07 H-46 GASSP	109.3	34.6	17.3	27.1		27.1	2.4	2.3	2.3	2.5	0.0	197.7
017-08 AVIONICS UPGRADE	47.5	22.5										70.0
INACTIVE OSIPS	369.5											369.5
Total	**621.0**	**58.8**	**17.7**	**27.1**	**0.0**	**27.1**	**2.4**	**2.3**	**2.3**	**2.5**	**0.0**	734.0

Notes:
1. Totals may not add due to rounding.
2. Reserve funding included in total.

Exhibit P-3a Individual Modification

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

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

DESCRIPTION / JUSTIFICATION: Provides targeted initiatives to remedy the top age-related safety and reliability issues engineered to address the heavy wear-and-tear effects of high-tempo Overseas Contingency Operations (OCO) (400% of planned utilization rate) on CH-46 airframes and subsystems in order to ensure safe, reliable and effective aircraft operation throughout the USMC Medium Lift transition period.

This OSIP will execute multiple Engineering Change Packages (ECPs), grouped in three sequential Block upgrades (A, B, and C). Elements within each Block upgrade have been grouped by similar complexities and lead times.
Specific ECPs:
1. Redesign and modernize wiring harnesses in airframe areas subject to high levels of heat, sand contamination and/or vibration.
2. Redesign and modernize hydraulics subsystems using common or Commercial Off The Shelf (COTS) components.
3. Redesign and improve portions of airframe structure subject to high levels of fatigue, corrosion and other stress.
4. Improve and modernize critical avionics, Aircraft Survival Equipment (ASE) and other aircraft systems to resolve obsolescence, reliability or safety issues using common, previously qualified or COTS solutions.
5. Incorporate Infrared Suppression System - Headquarters Marine Corps (letter dated 18 Aug 2009) requested termination of this effort as a result of a combination of technical performance issues and weight concerns.
6. Incorporate New Ramp Gun Mounts.
7. Incorporate Wire Strike Protection System (WSPS).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
Block A: NRE efforts began in FY07. Successful Validation completed in 1st QTR FY08, initial kit procurements in 2nd Qtr FY-08, and production installs in 4th QTR FY08.
Block B: NRE began in FY 08 followed by VAL/VER installation in 4th QTR 09. Initial production installs began 3rd QTR FY10.
Block C: Production installs began 2nd QTR FY11.
Infrared Suppression System effort was termintated. Headquarters Marine Corps (letter dated 18 Aug 2009) requested termination of this effort as a result of a combination of technical performance issues and weight concerns.

FINANCIAL PLAN: (TOA, $ IN MILLIONS)

FISCAL YEAR	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
GASSP BLOCK A (A-KIT)	371	13.4																					371	13.4
GASSP BLOCK B (A-KIT)	37	1.9	23	1.0	18	0.5																	78	3.4
GASSP BLOCK C (A-KIT)	131	16.2	62	6.9	41	4.5																	234	27.6
GASSP KITS (IMP MOD)	190	6.0																					190	6.0
INSTALLATION KITS N/R		6.1		0.4		0.2																		6.7
INSTALL EQUIPMENT	3,467	28.1	624	15.2	753	1.3	833	12.3			833	12.3	180	0.2									5,857	57.1
INSTALL EQUIPMENT N/R	1	11.0																					1	11.0
ECO								2.5				2.5												2.5
DATA		1.0		0.2		0.7		2.6				2.6		*										4.5
TRAINING EQUIP	5	0.4	3	0.1	2	0.1																	10	0.6
SUPPORT EQUIP		5.6		2.1		0.7		0.1				0.1		0.1										8.6
ILS		1.1		0.7		1.2		1.1				1.1												4.1
OTHER SUPPORT		14.9		5.5		4.6		6.1				6.1		1.8		2.3		2.3		2.5				40.1
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST	198	3.7	229	2.4	252	3.5	179	2.4			179	2.4	24	0.2									882	12.2
TOTAL PROCUREMENT		**109.3**		**34.6**		**17.3**		**27.1**				**27.1**		**2.4**		**2.3**		**2.3**		**2.5**				**197.7**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES

MODIFICATION TITLE: H-46 GASSP (OSIP 18-07) (BLOCK A INSTALLS)

INSTALLATION INFORMATION:

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

ADMINISTRATIVE LEADTIME: N/A Months

PRODUCTION LEADTIME: N/A Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (371) kits	183	3.5	126	1.3	65	0.8													374	5.6
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	183	3.5	126	1.3	65	0.8													374	5.6

Note:

QTY of 374 GASSP Block A Installs = 119 each shipsets + 1 trainer for Wire Strike Protection System (WSPS), 126 each shipsets + 1 trainer for Electrical Hydraulic Pump (EHP) and 126 each shipsets + 1 trainer for Electrical Block Upgrade.

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	183	31	32	31	32	32	33														
Out	183		31	32	31	32	32	33													

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In									0	374
Out									0	374

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP (OSIP 18-07) (BLOCK B INSTALLS)

INSTALLATION INFORMATION:

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

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: Oct-09 FY 2011: Oct-10 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Nov-09 FY 2011: Nov-10 FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (37) kits	3	*	34	0.3															37	0.3
FY 2010 (24) kits					24	0.3													24	0.3
FY 2011 (18) kits							18	0.2											18	0.2
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	3	*	34	0.3	24	0.3	18	0.2											79	0.8

QTY of 79 GASSP Block B Installs = 78 each shipsets + 1 trainer for AIMS enhancements with HTA

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	3	7	9	9	9	4	6	7	7	5	6	7									
Out	3		7	9	9	9	4	6	7	7	5	6	7								

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In									0	79
Out									0	79

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP (OSIP 18-07) (BLOCK C INSTALLS)

INSTALLATION INFORMATION:

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

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: Oct-09 FY 2011: Oct-10 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Nov-09 FY 2011: Nov-10 FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (131) kits			6	0.1	97	1.8	28	0.4											131	2.3
FY 2010 (64) kits							64	1.0											64	1.0
FY 2011 (43) kits							35	0.5	8	0.1									43	0.6
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL			6	0.1	97	1.8	127	1.9	8	0.1									238	3.9

QTY of 238 GASSP Block C Installs = 58 each shipsets for MDP & OH (+ 1 trainer), 59 each shipsets for ICS (+1 trainer), 59 each shipsets for VOR/ILS (+1 trainer), and 58 each shipsets (+1 trainer) for PTU.

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					6	24	24	24	25	31	32	32	32	8							
Out						6	24	24	24	25	31	32	32	32	8						

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In									0	238
Out									0	238

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP (OSIP 18-07) (IMP MOD KITS)

INSTALLATION INFORMATION:

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

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

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (191) kits	12	0.1	63	0.7	66	0.7	34	0.3	16	0.1									191	1.9
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	12	0.1	63	0.7	66	0.7	34	0.3	16	0.1									191	1.9

Qty of (191) kits bought with Supplemental funds in Prior Years.
QTY of 191 INSTALL EQUIPMENT = 71 each shipsets + 1 trainers for Sync Shaft Fairings, 62 each shipsets for APU Deck Upgrade, and 57 each shipsets for Oil Tank & Cradle.

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	12	15	16	16	16	17	16	17	16	8	9	8	9	8	8						
Out	12		15	16	16	16	17	16	17	16	8	9	8	9	8	8					

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In									0	191
Out									0	191

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: CH-46 AVIONICS UPGRADE PROGRAM (OSIP 017-08)

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

DESCRIPTION / JUSTIFICATION: The CH-46E has multiple avionics systems that are in need of upgrade. These systems include the cockpit information displays, the onboard navigation and communication systems and their perspective controls, the instrument flight required situational awareness systems and their associated displays and the survivability systems controls and displays.

ARC-210: *Effort terminated. The existing secure communication equipment in the CH-46E is the KY-58. The KY-58 is functionally obsolete. Integration of the ARC-210 ver 1851 Warrior radio provides an integrated KY secure voice communication capability, eliminating the need for the two KY-58 units. The weight savings from removing the KY 58's will provide approximately 40 pounds of additional payload. This latest version offers much improved capabilities beyond the elimination of the KY-58 and it is common to multiple other US Navy platforms.

LONG RANGE COMM: CH-46E aircraft perform missions over a wide area where they are outside of Line-Of-Sight (LOS) communication range. Mission changes, threat changes, and emergencies require that the crew have ability to communicate over long distances. Long Range Communication Integration provides over the horizon communication capability and mission flexibility. Funds for 55 mission kits of Advanced Long Range Communication System for installation in deployed CH-46E helicopters operating in support of GWOT from land bases and Marine Expeditionary Units amphibious shipping. One operational trainer will receive a partial install.

LAIRCM: Large Aircraft Infrared Counter Measure program (LAIRCM) meets an urgent requirement to improve the survivability of the CH-46E helicopter against infrared guided surface-to-air missiles. LAIRCM is a high-power directional infrared (IR) jammer. It is designed to defeat a wide range of infrared heat seeking missiles. Missile detection and tracking data is provided to the Signal processor by multi-color infrared sensors. The system includes a transformer-rectifier, an embedded GPS inertial navigation system, 5 infrared missile warning sensors and 2 laser jammers. Systems will be installed on 48 aircraft and 2 trainers.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
ARC-210: Program was cancelled as of 21 August 2009 (with concurrence from OPNAV N880B1). HQMC requested termination of this effort due to incomplete funding of the ARC-210 (making the inventory objective unobtainable). POR integrated ARC-210 with the GASSP Block C upgrade and required compatible schedule and quantities for ARC-210 integration. Due to the lack of full funding, this is no longer possible and drives dual configurations for H-46 GASSP Block C aircraft. The dual configuration creates technical risk in terms of integration as well as operational/supportability challenges in the fleet.

LONG RANGE COMM: Preliminary Engineering Design completed May 2010. Preliminary Design Review (PDR) and Critical Design Review (CDR) completed. The equipment contract awarded March 2010 with Rockwell Collins for 3 Validation/Verification kits. Installs began July 2010.

LAIRCM: Validation installation complete. Verification installations complete. Recurring installation began July 2010. All 50 installations will be completed in early FY 2012.

FINANCIAL PLAN: (TOA, $ in Millions)

FISCAL YEAR	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
LONG RANGE COMM PRODUCTION A KITS (OCO)			55	3.1																			55	3.1
LAIRCM PRODUCTION A KITS (B)	14	1.6																					14	1.6
LAIRCM PRODUCTION A KITS (OCO)	125	21.1	5	1.6																			130	22.7
INSTALLATION KITS N/R																								
ARC-210 INSTALLATION KITS N/R (OCO)		0.3																						0.3
LONG RANGE COMMUNICATION INSTALLATION KITS N/R (OCO)				0.3																				0.3
INSTALL EQUIPMENT																								
ARC-210 PRODUCTION KITS (OCO)	3	0.7																					3	0.7
LONG RANGE COMMUNICATION PRODUCTION KITS (OCO)			55	6.7																			55	6.7
LAIRCM PRODUCTION KITS (OCO)																								
INSTALL EQUIPMENT N/R (OCO)																								
LONG RANGE COMMUNICATION INSTALL EQUIPMENT N/R (OCO)				2.0																				2.0
LAIRCM INSTALL EQUIPMENT N/R (OCO)		5.6																						5.6
ECO																								
LAIRCM ECO (OCO)																								
DATA (OCO)																								
LONG RANGE COMMUNICATION INSTALL EQUIPMENT N/R (OCO)				0.3																				0.3
LAIRCM DATA (B)		0.4																						0.4
LAIRCM DATA (OCO)		1.0		0.2																				1.2
TRAINING EQUIP																								
LONG RANGE COMMUNICATION TRAINING A KITS (OCO)			1	0.3																			1	0.3
LAIRCM TRAINING EQUIP (OCO)	2	0.5		0.1																			2	0.6
SUPPORT EQUIP																								
LAIRCM SUPPORT EQUIPMENT (B)		0.2																						0.2
LAIRCM SUPPORT EQUIPMENT (OCO)		0.8																						0.8
ILS																								
LAIRCM ILS (OCO)		0.1		0.3																				0.4
OTHER SUPPORT																								
LONG RANGE COMMUNICATION OTHER SUPPORT (OCO)		0.5		0.7																				1.2
LAIRCM OTHER SUPPORT (B)		1.0																						1.0
LAIRCM OTHER SUPPORT (OCO)		8.7		2.2																				10.9
INTERIM CONTRACTOR SUPPORT																								
LAIRCM CONTRACTOR SUPPORT (OCO)																								
INSTALLATION COST																								
LONG RANGE COMMUNICATION INSTALL (OCO)			3	2.8	27		25																55	2.8
LAIRCM INSTALL (OCO)	1	4.8	23	2.0	24																		48	6.9
TOTAL PROCUREMENT		**47.5**		**22.5**																				**70.0**

Notes:
1. Asterisk (*) indicates amount value less than $51K
2. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: CH-46 AVIONICS UPGRADE PROGRAM (OSIP 017-08) LAIRCM

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: GOCO/FMT/Contractor

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: Oct 09 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Nov 09 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (43) kits	1	4.8	23	1.3	19														43	6.1
FY 2010 (5) kits				0.7	5														5	0.7
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	1	4.8	23	2.0	24														48	6.9

1. Quantity of 5 each FY 2010 LAIRCM installs funded with FY 2008 OCO supplemental funding.
2. Quantity of 16 each FY 2010 LAIRCM installs funded with FY 2009 OCO supplemental funding.
3. Quantity of 12 each FY 2011 LAIRCM installs funded with FY 2009 OCO supplemental funding.
4. Quantity of 12 each FY 2011 LAIRCM installs funded with FY 2010 OCO supplemental funding.
5. PY kit procurement of 139 represents 43 complete kits. An additional procurement of 5 TRUs and 5 EGIs were ordered due to 9 month and 12 month contract delivery lead times, respectively. These procurements were required in order to meet installation schedules.

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1	4		9	10	10	10	4													
Out	1			4		9	10	10	10	4											

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In									0	48
Out									0	48

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: CH-46E AVIONICS UPGRADE PROGRAM (OSIP 017-08) LONG RANGE COMM

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: GOCO FMT & FRC CONCURRENT IMP

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Jun-10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	PRIOR YEARS		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 (55) kits			3	2.8	27		25												55	2.8
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL			3	2.8	27		25												55	2.8

FY 2011 AND FY 2012 INSTALLATIONS ARE FUNDED WITH FY 2010 OCO DOLLARS.

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	0				3		7	10	10	10	10	5									
Out	0					3		7	10	10	10	10	5								

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In									0	55
Out									0	55

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
052700, AH-1W SERIES

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)	538.9	A	32.9	46.5	15.8	39.4	55.2	4.1	10.5			124.0	812.1

DESCRIPTION: This line item funds modifications to the AH-1W aircraft. Modifications prior to FY 1997 were funded in the H-1 Series P-1 line item. In FY12 there are 148 AH-1Ws. The AH-1W is a tandem-seat, two-place attack helicopter. The armament of the AH-1W includes the SIDEWINDER, HELLFIRE, and TOW missile systems, a chin-mounted 20mm turret gun, and wide variety of forward-firing and gravity-released external stores. The overall goal of the modifications budgeted in FY 2012 is to eliminate safety hazards, improve survivability, fulfill operational requirements, remedy obsolescence issues, and maintain significant mission capability. Additionally, the H-1 will continue to upgrade the applicable aircraft sensor and avionics systems and subsystems as well as the weapons rocket delivery system which includes the Advance Precision Kill Weapons System (APKWS). In addition, air vehicle improvements requiring critical reliability enhancements will be incorporated. The platform will continue to fulfill the operational requirements to detect, identify, and destroy tactical-sized armored targets with precision guided munitions during the day, at night, and during adverse weather, as well as providing enhanced conventional weapons delivery by utilizing the system's laser ranging and designating system.

FY 2012 Overseas Contingency Operations (OCO) consists of the following: AH-1W/Z Linkless Feed System $13.5M; AH-1W Tactical Video Data Link (TVDL) $6.6M; Night Targeting System Upgrade (NTSU) $2.9M; Helmet Display & Tracker System $16.4M.

The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
008-90	AH-1W NIGHT TARGETING	341.5	27.7	38.3									407.5
013-00	AH-1 A/C & T700 ENG	91.2		8.2									99.4
002-03	AH-1 20MM LINKLESS FEED	17.6	5.2										22.7
012-12	H-1 AIR VEHICLE IMPROVEMENTS				1.6		1.6	3.1					4.7
013-12	H-1 SENSORS and WEAPONS IMPROVEMENTS				14.3	39.4	53.7	1.0	10.5			124.0	189.1
	INACTIVE OSIPs	88.6											88.6
Total		**538.9**	**32.9**	**46.5**	**15.8**	**39.4**	**55.2**	**4.1**	**10.5**			**124.0**	**812.1**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: AH-1W NIGHT TARGETING (OSIP 008-90)

MODELS OF SYSTEMS AFFECTED: AH-1W | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: The U.S. Marine Corps (USMC) has an operational requirement to detect, identify, and destroy tactical-sized armored targets with precision guided munitions during day, night, and adverse weather conditions. The Night Targeting System (NTS) provides a night/adverse weather and designator TOW and autonomous HELLFIRE capability. In addition, NTS will provide enhanced conventional weapons delivery by utilizing the systems laser ranging system. The NTS will accomplish the USMC requirement for night operations by incorporating a high resolution stabilized forward looking infra-red sensor, charged coupled device camera system, automatic target tracking, and laser range finder/designator into the current M65 telescopic sight ur Due to changes in the TOW missile control by addition of the NTS, a buffer box is being incorporated to ensure proper operation of the TOW missile with the NTS/Heads Up Display (HUD). Additional NTS Upgrades (NTSU) will be made which will include WRA modifications to improve reliability, maintainability, and systems stabilization. The NTSU Digital Video Recorder (DVR) and Mission Data Loader (MDL) will be modified to improve functionality and be incorporated into a single WRA.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The AH-1W Fleet has been fully outfitted with the Night Targeting System. The NTSU is required for the AH-1W to improve system performance to meet aircraft service life expectancy through 2021. Upgrades will include, but are not limited to replacement of the first generation FLIR with a third generation FLIR, replacing the black and white TV with a color TV, improve bore sighting operations of internal components, and continue reliability, maintainability, and stabilization improvements. The NTSU has completed Developmental Test and Operational Test and was found to be operationally effective and operationally suitable. The systems are currently in production.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
A/F Kits	128	37.5																					128	37.5
Accelerated Kits	5	2.0																					5	2.0
NTS Kits	132	129.4																					132	129.4
NTSU Kits	15	14.6	18	18.0	2	2.0																	35	34.6
NTSU Kits-OCO					36	33.1																	36	33.1
Tow Buffer Kits	202	1.8																					202	1.8
Installation Kits N/R		23.7		1.0		0.2																		24.9
Installation Kits N/R-OCO						1.0																		1.0
Installation Equipment																								
ICRS GFE	41	1.8																					41	1.8
Misc. GFE (Repair/Replace)	1	5.5																					1	5.5
NTS GFE	79	1.5																					79	1.5
VCRS (Digital Video Recorder)	137	3.6																					137	3.6
Installation Equipment N/R		2.2		1.6		0.2																		4.0
Installation Equipment N/R-OCO						0.7																		0.7
Engineering Change Orders		7.5		0.6		0.1																		8.2
Engineering Change Orders-OCO						0.3																		0.3
Data		1.5		0.4		0.1																		2.0
Data-OCO						0.1																		0.1
Training Equipment	4	4.5	2	3.2																			6	7.7
Support Equipment	1	15.1																					1	15.1
ILS		15.1		1.1																				16.2
Other Support		29.2		1.0		0.2																		30.4
Other SupportOCO						0.3																		0.3
Interim Contractor Support				0.7																				0.7
Installation Cost	128	45.1																					128	45.1
Total Procurement		**341.5**		**27.7**		**38.3**																		**407.5**

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: AH-1 A/C & T700 ENG (OSIP 013-00)

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

DESCRIPTION/JUSTIFICATION: This program is designed to address safety issues, such as mishap casual factors associated with maintaining an older type model series aircraft. The AH-1W helicopter is powered by two General Electric T700-GE-401 turbo shaft engines which are controlled throughout the normal operating range by the Electrical Control Unit (EECU) and the Hydro-Mechanical Unit (HMU). Safety programs that will be implemented by this OSIP include, but are not limited to incorporation of crash attenuating seat cushions to reduce the likelihood of back injuries to pilots during hard landings or crashes. Additional A/C fatigue life issues, including, but not limited to, rotor blades, stub wings and tail boom technology, will be investigated to improve performance and mitigate aircraft fatigue. Reduction of cockpit vertigo-inducing problems will include an update to the Cockpit Control System, Blue Force Tracker (BFT), Heads-Up-Display (HUD) upgrades (Helmet Display and Tracker System (HDTS)). Tactile Situation Awareness System (TSAS), upgraded Transponder (CXP), and Tactical Video Data Link (TVDL) will also be implemented via this OSIP. Ground and air collision and avoidance systems are mandates that will be integrated. These systems include, but are not limited to, Ground Proximity Warning System (GPWS), Terrain Awareness Warning System (TAWS), Mid-Air Conflict Avoidance System (MACAS), Degraded Visual Environment (DVE) systems, Obstacles Avoidance System (OAS), and Military Flight Operations Quality Assurance (MFOQA). Additional reliability and maintenance upgrades, including replacement of existing Thermal Imaging Recorder (TIR) with a Digital Video Recorder, and Improved Multi-Function Display Unit (MFDU) will also be incorporated. Additional safety improvements to increase aircrew safety and cockpit organization, such as storage for personal weapons, will be implemented as well as, providing enhanced situational awareness and reduced workload through digital updat to existing cockpit capabilities

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The TVDL and HDTS Contracts were awarded in the 4th quarter of FY2009.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AFC XXX DECU Install Kits	175	0.2																					175	0.2
ANVIS HUD	6	1.2			20	2.2																	26	3.4
CCU	150	5.0																					150	5.0
DCC XXX 42 & 90 Degree Gearbox	50	0.9																					50	0.9
Tactical Video Data Link	100	2.4																					100	2.4
Tearaway Windscreen Covers	1	0.7																					1	0.7
Installation Kits N/R		0.5																						0.5
ANVIS HUD		9.5																						9.5
CCU (APX, DVR)																								
Tactical Video Data Link		14.9																						14.9
Installation Equipment																								
ANVIS HUD	6	3.2			20	5.1																	26	8.3
CCU (APX, DVR)																								
Flat Panel Display	1	0.1																					1	0.1
PPC XXX Kits	392	5.8																					392	5.8
Tactical Video Data Link	100	5.2																					100	5.2
Installation Equipment N/R		10.3																						10.3
Engineering Change Orders		0.2																						0.2
Data		1.3																						1.3
Training Equipment		1.5																						1.5
Support Equipment	40	0.9																					40	0.9
ILS		3.6																						3.6
Other Support		20.6				0.3																		20.9
Interim Contractor Support		0.1																						0.1
Installation Cost	120	3.2	75		20	0.6																	215	3.8
Total Procurement		**91.2**				**8.2**																		**99.4**

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AH-1W/AH-1Z

MODIFICATION TITLE: AH-1W/AH-1Z

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2010: N/A FY 2011: Oct-10 FY 2012: N/A FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: Dec-10 FY 2012: N/A FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2012		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (195) kits	120	3.2	75																				195	3.2
FY 2010 ( ) kits																								
FY 2011 (20) kits					20	0.6																	20	0.6
FY 2012 ( ) kits																								
FY 2013 ( ) kits																								
FY 2014 ( ) kits																								
FY 2015 ( ) kits																								
FY 2016 ( ) kits																								
To Complete ( ) kits																								
TOTAL	**120**	**3.2**	**75**		**20**	**0.6**																	**215**	**3.8**

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	120	15	20	20	20	5	5	5	5												
Out	120	15	20	20	20	5	5	5	5												

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										215
Out										215

Exhibit P-3a | Individual Modification

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

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

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

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The Linkless Feed initiative was implemented by issuance of a new contract after a full and open competition between several manufacturers of 20MM weapons systems. Fleet Introduction commenced in the 1st quarter of FY2010.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
Linkless Feed Systems	35	9.1	30	3.5																			65	12.6
Linkless Feed Loaders	27	0.1	26	0.6																			53	0.7
Installation Equipment N/R		0.6																						0.6
Engineering Change Orders		0.1																						0.1
Data		0.2		0.1																				0.3
Training Equipment		0.1																						0.1
Support Equipment	4	1.7																					4	1.7
ILS		1.8		0.5																				2.3
Other Support		3.8		0.5																				4.3
Interim Contractor Support																								
Installation Cost	5	0.2																					5	0.2
Total Procurement		**17.6**		**5.2**																				**22.7**

Notes:

1. Installs are O level.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-1 AIR VEHICLE IMPROVEMENTS (OSIP 012-12)

MODELS OF SYSTEMS AFFECTED: AH-1W | TYPE MODIFICATION: CRITICAL RELIABILITY ENHANCEMENTS

DESCRIPTION/JUSTIFICATION: This OSIP incorporates a number of cost effective changes to the AH-1W, specifically attacking the highest degraders in the H-1 Cost Wise Readiness Integrated Improvement Process (CWRIIP) and on the Critical Logistics Review (CILR) lists in order to improve Ready Based Aircraft and Ready For Tasking rates and reduce the total cost ownership. These improvements are a vital element of the H-1 Upgrades program to significantly enhance the strategy of a more ready, more capable and more survivable H-1 force to accomplish the successful fielding of this new capability to the warfighter in support of the Overseas Contingency Operations (OCO). The increased readiness and capabilities that will be realized support the tenets of Sea Power 21, specifically operational availability, enhanced capabilities, and interoperability. Systems improved on the AH-1W will forward fit to the AH-1Z through the H-1 Upgrades Remanufacture program and utilize existing technology to the maximum extent practicable to minimize development and procurement costs and to reduce the time to field the improved systems.

Planned improvements under this OSIP cover airframes, propulsion, survivability, reliability and maintainability, and weight and balance. This OSIP intends to utilize upgrades to existing technology to the maximum extent practicable to minimize development and procurement costs, and to reduce the time to field the improved systems. Safety programs that will be implemented by this OSIP include, but are not limited to, reliability improvements covering non-recurring engineering and eventual replacement of the D generator, canopy door frames, anti-collision lights, engine mount bearings, main driveshaft, aircraft NiCad battery, weight reduction/gross weight increase initiatives, cold spray magnesium/aluminum improvements, and armor flooring survivability enhancements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Main Driveshaft													120	2.4									120	2.4
Installation Kits N/R														0.2										0.2
Installation Equipment																								
Cold Spray							4	0.5			4	0.5											4	0.5
Installation Equipment N/R								0.6				0.6												0.6
Engineering Change Orders														0.1										0.1
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support								0.5				0.5		0.4										0.9
Interim Contractor Support																								
Installation Cost																								
Total Procurement								**1.6**				**1.6**		**3.1**										**4.7**

Notes:

1. Asterisk indicates amount less than $51K.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 013-12)

MODELS OF SYSTEMS AFFECTED: AH-1W | TYPE MODIFICATION: SAFETY/SURVIVABILITY/READINESS/COMBAT EFFECTIVENESS

DESCRIPTION/JUSTIFICATION: This OSIP incorporates a number of cost effective changes to the AH-1W, specifically attacking the highest degraders in the H-1 Cost Wise Readiness Integrated Improvement Process (CWRIIP) and on the Critical Logistics Review (CILR) lists in order to improve Ready Based Aircraft and Ready For Tasking rates and reduce the total cost ownership. These improvements are a vital element of the H-1 Upgrades program to significantly enhance the strategy of a more ready, more capable and more survivable H-1 force to accomplish the successful fielding of this new capability to the warfighter in support of the Overseas Contingency Operations (OCO). The increased readiness and capabilities that will be realized support the tenets of Sea Power 21, specifically operational availability, enhanced capabilities, and interoperability. Systems improved on the AH-1W will forward fit to the AH-1Z through the H-1 Upgrades Remanufacture program and utilize existing technology to the maximum extent practicable to minimize development and procurement costs and to reduce the time to field the improved systems.

Safety programs that will be implemented by this OSIP include, but are not limited to, spatial disorientation issues that will be addressed through aircraft upgrades such as integration of an upgrade to the Cockpit Control System, Heads-Up-Display (HUD) improvements, Helmet Display and Tracker System (HDTS), Transponder (CXP) upgrade, and Tactical Video Data Link (TVDL) system integration, and ground and air collision. Avoidance issues will be addressed through integration of systems such as Ground Proximity Warning System (GPWS), Terrain Awareness Warning System (TAWS), Mid-Air Conflict Avoidance System (MACAS), Degraded Visual Environment (DVE) systems, Obstacles Avoidance System (OAS), and Military Flight Operations Quality Assurance (MFOQA). Aircrew safety system upgrades include incorporation of the AN/ALE-47 Countermeasures Chaff Containers. This OSIP also addresses improvements to H-1 series helicopters' weapons systems to support and improve mission success, to include missile, rocket, and gun reliability and accuracy. These weapon systems include, Joint Air-to-Ground Missile (JAGM), Advanced Precision Kill Weapon System (APKWS), Hellfire, 20MM Gun, launchers, turrets, and 20MM Linkless Feed System (LFS). The LFS ammo can/feeder assembly addresses the highest reliability degrader in the gun system. Additional weapons modifications that will significantly increase the accuracy and reliability of this critical weapons system and enhance the survivability of the flight crew incl improved laser pointers (including mounting), an improved turret test console, and improved barrels. This OSIP addresses the U.S. Marine Corps' (USMC) operational requirement to detect, identify, and destroy tactical-sized armored targets with precision guided munitions during day, night, and adverse weather conditions. The Night Targeting System (NTS) and Night Targeting System Upgrade (NTSU) provide a night/adverse weather Forward-Looking InfraRed (FLIR) and laser designator for TOW and Hellfire capability. In addition, NTS/NTSU provides enhanced conventional weapons delivery by utilizing the systems laser ranging system. Additional NTS/NTSU improvements will include WRA modifications to improve reliability, maintainability, and systems stabilization. NTS/NTSU obsolescence improvements will include, but are not limited to, integration of a Digital Video Recorder (DVR), incorporation of the Mission Data Loader (MDL) functionality within the DVR, and integration of a Color Mulit-Functional Display (CMFD). Additionally, this OSIP will provide enhanced situational awareness and reduced workload through digital updates to existing cockpit capabilities

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ANVIS HUD							16	1.8	18	3.6	34	5.4			10	1.2					30	6.2	74	12.8
NTSU Kits							5	5.1	2	2.1	7	7.2			6	6.1					52	54.1	65	67.4
Tactical Video Data Link									18	0.2	18	0.2									82	1.0	100	1.2
Installation Kits N/R								0.2				0.2				*						4.5		4.7
Installation Equipment																								
ANVIS HUD							16	4.5	18	4.2	34	8.7			10	2.6					30	7.1	74	18.3
LINKLESS FEED System									36	9.7	36	9.7									36	9.9	72	19.6
LINKLESS FEED Loader									22	0.8	22	0.8									63	2.6	85	3.4
Tactical Video Data Link									18	0.6	18	0.6									82	3.0	100	3.6
Installation Equipment N/R								0.5		4.4		4.8				0.2						2.7		7.7
Engineering Change Orders								0.2		1.0		1.2		0.2								6.0		7.3
Data								0.1		0.4		0.5										1.7		2.2
Training Equipment									2	2.2	2	2.2											2	2.2
Support Equipment								0.5	18	1.1	18	1.6									30	2.6	48	4.2
ILS								0.4		2.8		3.2		0.3								4.7		8.2
Other Support								0.5		5.0		5.5		0.5		*						13.4		19.4
Interim Contractor Support										0.3		0.3										0.3		0.5
Installation Cost							16	0.5	36	1.1	52	1.6			10	0.3					112	4.5	174	6.4
Total Procurement								**14.3**		**39.4**		**53.7**		**1.0**		**10.5**						**124.0**		**189.1**

Notes:

1. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AH-1W

MODIFICATION TITLE: AH-1 ANVIS HUD

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2010: N/A FY 2011: N/A FY 2012: Oct-11 FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: N/A FY 2012: Dec-11 FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (16) kits							16	0.5											16	0.5
FY 2012 (18) kits-OCO							18	0.6											18	0.6
FY 2013 ( ) kits																				
FY 2014 (10) kits											10	0.3							10	0.3
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete (30) kits																	30	1.2	30	1.2
TOTAL							**34**	**1.1**			**10**	**0.3**					**30**	**1.2**	**74**	**2.6**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										8	8	9	9					3	3	2	2
Out										8	8	9	9					3	3	2	2

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									30	74
Out									30	74

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AH-1W

MODIFICATION TITLE: AH-1 TACTICAL VIDEO DATA LINK

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2010: N/A FY 2011: N/A FY 2012: Oct-11 FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: N/A FY 2012: Dec-11 FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 (18) kits-OCO							18	0.5											18	0.5
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete (82) kits																	82	3.3	82	3.3
TOTAL							**18**	**0.5**									**82**	**3.3**	**100**	**3.8**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										4	4	5	5								
Out										4	4	5	5								

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									82	100
Out									82	100

Exhibit P-40, BUDGET ITEM JUSTIFICATION | DATE: February 2011

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

P-1 ITEM NOMENCLATURE: **052800, H-53 SERIES**

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)	966.4	A	237.8	62.1	62.8	70.7	133.6	42.9	47.1	39.0	30.6	272.8	1832.3

DESCRIPTION: This line item funds modifications to the CH-53D/CH-53E/MH-53E aircraft. The aircraft inventories to be modified vary by OSIP, dependant on kit modification production lead-time. The CH-53E is a seven blade main rotor and a four-blade canted tail rotor helicopter powered by three T64-GE-416A turbo shaft engines while the CH-53D has six main rotor blades and two T64-GE-413 engines. The CH-53D/E aircraft are capable of both land and ship based transport of heavy equipment, supplies, and personnel. The MH-53E is similar to the CH-53E with additional capabilities for Airborne Mine Countermeasures (AMCM), Vertical On-Board Delivery (VOD), and Special Missions which require longer range and more precise navigation than that of the CH-53E. The overall goal of the modifications budgeted in FY12 was increased communication and navigation, integrated mechanical diagnostics, propulsion, degraded visual environment mitigation, survivability and sustainment initiatives, night vision capability, and fleet operation and safety performance in the H-53 community.

The overall goal of the FY2012 Supplemental request is for the following:

OSIP 010-05 Engine Reliability Improvement Program (ERIP) - CH-53E Improved Hot Day Performance to improve performance at ambient temperatures greater than 75 degrees Fahrenheit and pressure altitudes above sea level.
OSIP 015-05 Medivac - FBCB2 Compliant Blue Force Tracker (BFT) with Moving Map and Visuallly Degraded Environment (VDE) symbology display; and CH-53 Critical Systems Armor (CSA).
OSIP 008-06 Aircraft Sustainment - CH-53E Single Point Pendant Box (SPPB) , CH-53E Kapton Wiring Replacement , Engine Air Particle Separator (EAPS) Improvements, and H-53 Rotor Blade Erosion Resistant Coating.
OSIP 031-12 Avionics - Satellite Communication/Shipboard Inertial Navigation System (SATCOM/SINS) alignment capability for ARC -210 Receiver Transmitter Units which provide Over the Horizon (OTH) communication abilities.

The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
012-92	HNVS	180.3	26.0	1.0								18.6	225.9
020-97	ATTEN. TRP SEATS	51.9	1.1	0.3	2.3		2.3	0.3					56.0
007-98	INTEGRATED MECH DIAG	115.1	14.9	6.5	11.8		11.8	9.7	7.5	7.7	7.4	18.5	199.1
009-01	NACELLES	17.0	2.6									34.0	53.6
021-03	H-53 INTERIOR BALLISTIC ARMOR		10.1										10.1
010-05	H-53 ERIP	124.5	39.4	10.3	10.9	14.3	25.1	5.7	6.9	10.8	10.9	66.4	300.0
015-05	H-53 MEDIVAC	52.4	37.5	8.4		33.8	33.8						132.1
008-06	H-53 A/C SUSTAINMENT	93.5	37.8	11.1	32.6	20.9	53.4	25.1	25.1	19.6	11.5	105.0	382.1
020-07	H-53 VDE	18.7	36.5									29.6	84.7
010-08	DIRCM	176.1	12.0	24.5	5.3		5.3	2.1	7.6	0.9	0.9	0.7	230.1
020-09	H-53 HUD	5.0	19.8										24.8
031-12	AVIONICS					1.9	1.9						1.9
	Inactive OSIPs	131.9											131.9
Total		**966.4**	**237.8**	**62.1**	**62.8**	**70.7**	**133.6**	**42.9**	**47.1**	**39.0**	**30.6**	**272.8**	**1832.3**

Note: Totals may not add due to rounding.

RESERVE FUNDING INCLUDED IN TOTAL		7.4	7.3	7.4	16.3		16.3	21.8	23.4	19.1	10.0		

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: HNVS (OSIP 012-92)

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

DESCRIPTION/JUSTIFICATION: The Helicopter Night Vision System (HNVS) will provide an infrared night vision system for the CH-53E transport helicopters. The HNVS provides an improved night/all weather mission capability. This OSIP includes integration of the off the shelf APN-217(V)6 Doppler Navigation System and AAQ-29A FLIR. Future configuration for CH-53E transport helicopter will be the AAQ-29A FLIR due to obsolescence issues for OEM with AAQ-16B. Program is structured to replace AAQ-16 with AAQ-29A to establish a single configuration.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The AAQ-16B/29 FLIR is a non-developmental Item (NDI) currently installed on a number of U.S. Army, Air Force, and Navy helicopters. DT-IIIA on the CH-53E/HNVS was completed in the third quarter FY 94. Extension of application for CH-53E was granted first quarter FY 95. The AAQ-29A is currently in production.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
A-Kits (EER)	156	11.6																					156	11.6
Installation Kits N/R		3.1																						3.1
Installation Equipment																								
AAQ-29A TFU/SEU	26	14.8	1	0.5	1	0.5															28	15.1	56	30.9
AAQ-29A TFU/SEU Supp	54	25.3	42	25.2																			96	50.5
CH-53E Installation Equipment	195	18.7																					195	18.7
CH-53E TFU/SDC AAQ-16B/29	223	72.3																					223	72.3
Installation Equipment N/R		1.0																						1.0
Engineering Change Orders																								
Data		1.0																						1.0
Training Equipment		8.4																						8.4
Support Equipment																								
ILS		1.0																						1.0
Other Support		13.8		0.3		0.5																3.5		18.0
Interim Contractor Support																								
Installation Cost	156	9.5																					156	9.5
Total Procurement		**180.3**		**26.0**		**1.0**																**18.6**		**225.9**

Notes:

1. Totals may not add due to rounding
2. All installations are O-Level.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: ATTEN. TRP SEATS (OSIP 020-97)

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152), MH-53E (31), 219 Total | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: Utility and Troop transport mission increasing in importance. Current troop/passenger seats are 1950 generation. Design does not provide impact protection of current rotorcraft seat designs. The impulsive type loading experienced during survivable mishaps produces amplified seat/floor anchor loads and potentially injurious occupant decelerations. Due to this operational deficiency, NDI crashworthy troop seat program established. NDI are lightweight off-the-shelf seats that provide protection by limiting an occupants inertial loading to survivable levels by attenuating impact forces to below survivable ranges and enables the occupant to rapidly egress a downed aircraft are being sought.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: NDI procedures utilized for the Procurement, Installation and Support of the seats for all 46 CH-53D Helicopters. Funding for the 46 seats and associated requirements were appropriated in 1997. Program consists of a one-time procurement with a turn-key installation approach. FY-98 through FY04 provided for procurement, installation, and support of the CH-53E and MH-53E helicopters. FY05 supplemental funds provided for the NRE and initial procurement of troop seat upgrades to better accommodate today's troops and their body bourn equipment. FY06 supplemental funding provided NRE, qualification, initial procurement, and support for Crash Attenuating Crew Chief Seat for all H-53 Type/Model/Series helicopters.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
CATS Upgrade Kits	239	5.2					7	1.4			7	1.4											246	6.6
CH-53D Kits	46	4.6																					46	4.6
CH-53E Kits	154	11.9																					154	11.9
MH-53E Cruise Box Kits	26	0.2																					26	0.2
MH-53E Extention Brackets	20	0.1																					20	0.1
MH-53E Kits	22	1.9																					22	1.9
Installation Kits N/R		2.3																						2.3
Installation Equipment																								
Crew Chief Seats (B kits)	219	1.9																					219	1.9
Seat Testing	1	0.7																					1	0.7
Installation Equipment N/R																								
Engineering Change Orders																								
Eng Change Orders		0.5																						0.5
Data		1.0																						1.0
Training Equipment	6	0.1																					6	0.1
Support Equipment		0.3																						0.3
ILS		0.3																						0.3
Other Support		15.4																						15.4
Interim Contractor Support																								
Installation Cost	242	5.6	106	1.1	33	0.3	33	0.9			33	0.9	40	0.3									454	8.2
Total Procurement		**51.9**		**1.1**		**0.3**		**2.3**				**2.3**		**0.3**										**56.0**

Notes:

1. Totals may not add due to rounding
2. CATS Upgrade kits (QTY 246) are installed at O-level.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (36), CH-53E (152), MH-53E (31)** MODIFICATION TITLE: ATTEN. TRP SEATS (OSIP 020-97)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR INSTALLED - Field Modification Team**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Jan-12 FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Jan-13 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (447) kits	242	5.6	106	1.1	33	0.3	33	0.9	33	0.3									447	8.2
FY 2010 PY () kits																				
FY 2011 PY () kits																				
FY 2012 PY (7) kits									7	0.1									7	0.1
FY 2013 PY () kits																				
FY 2014 PY () kits																				
FY 2015 PY () kits																				
FY 2016 PY () kits																				
To Complete () kits																				
TOTAL	**242**	**5.6**	**106**	**1.1**	**33**	**0.3**	**33**	**0.9**	**40**	**0.3**									454	8.2

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	242	34	31	20	21	8	8	8	9	8	8	8	9	11	11	11	7				
Out	242	34	31	20	21	8	8	8	9	8	8	8	9	11	11	11	7				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										454
Out										454

Notes:

1. Quantity of 222 Troop seats installed in prior years (46 CH-53D kits, 154 CH-53E kits, and 22 MH-53E kits).
2. Quantity of 225 Crew Chief seat installs includes 213 B-kits, 6 Val/Ver B-kits, and 6 trainer kits.

Exhibit P-3a | Individual Modification

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

MODELS OF SYSTEMS AFFECTED: CH-53E (152), MH-53E (29), 181 Total | TYPE MODIFICATION: SAFETY, READINESS AND MAINTAINABILITY

DESCRIPTION/JUSTIFICATION: IMD is a helicopter monitoring and diagnostics system that provides continuous on board monitoring and diagnostics of engine health, gearbox and drive train vibrations, oil debris, rotor track and balance. Full incorporation of IMDS capabilities will allow rapid transition from the current costly philosophies of the 70s to today's cost wise initiatives and concepts. Lessons learned from this effort were incorporated into the solicitation for the fleet wide IMD effort with CH/MH-53E aircraft designated as the lead platforms. IMDS produces the aircraft interface required to implement military flight operations quality assurance (MFOQA), a capability designed to provide hazard monitoring and mitigation. Condition Based Maintenance (CBM) is a concept intended to direct maintenance by predicting failures based on real-time assessment of equipment condition obtained from IMDS embedded sensors. CBM program includes software algorithm analysis for condition and health indicators of components, implementation of diagnostic/analysis tools and information infrastructure. CBM will enable a reduction in spares and maintenance while increasing safety of flight.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The CH-53E IMDS successfully completed operational evaluation (OPEVAL) in October 2005. The Milestone Decision Authority approved full-rate production for CH-53E IMDS in December 2004. MH-53E Val/Ver completed1st Qtr FY11. Advanced diagnostics enhancements & airframe structural life extension database interfaces are being incorporated to provide comprehensive platform operational & maintenance status awareness to the Squadron Commanders & key decision makers.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AVC-5102 Panel Lens (LBAD)	1	0.1																					1	0.1
Accelerometers	2	0.2																					2	0.2
CH-53E A-Kits	115	35.7	2	0.4																			117	36.1
CH-53E A-Kits (CONG)	30	11.7																					30	11.7
CH-53E A-Kits - Supp			5	1.5																			5	1.5
MH-53E Kits (A-kits)	3	0.9	14	5.6			11	4.4			11	4.4	1	0.4									29	11.3
Installation Kits N/R		4.3																						4.3
Installation Equipment																								
IMDS Ground Equipment		*																						*
Installation Equipment N/R																								
Engineering Change Orders														0.3										0.3
Data		1.1		0.2										0.5										1.7
Training Equipment		0.5	2	1.1	1	0.4																	3	2.1
Support Equipment		3.0		0.2		0.1		0.5				0.5		0.2		0.2		0.2				0.9		5.2
Condition Based Maint (CBM)								2.8				2.8		3.5		3.7		3.8		4.1		8.7		26.7
Condition Based Maint (CBM)-OCO																								
ILS		3.0						0.9				0.9		0.9		0.3		0.3		0.3				5.7
Other Support		45.6		3.5		3.6		2.1				2.7		3.7		2.6		3.4		3.0		8.9		76.4
Interim Contractor Support																								
Installation Cost	109	9.0	23	2.4	29	2.5	11	1.1			11	1.1	11	0.2	1	0.7							184	15.9
Total Procurement		**115.1**		**14.9**		**6.5**		**11.8**				**11.8**		**9.7**		**7.5**		**7.7**		**7.4**		**18.5**		**199.1**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53E (152)**

MODIFICATION TITLE: INTEGRATED MECH DIAG (OSIP 007-98) - CH-53

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR INSTALLED - Field Modification Team**

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Sep-10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (145) kits	108	8.7	20	1.9	17	1.5													145	12.2
FY 2010 PY (9) kits			2	0.4			7	0.8											9	1.2
FY 2011 PY ( ) kits																				
FY 2012 PY ( ) kits																				
FY 2013 PY ( ) kits																				
FY 2014 PY ( ) kits																				
FY 2015 PY ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL	**108**	**8.7**	**22**	**2.3**	**17**	**1.5**	**7**	**0.8**											154	13.4

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	108	5	5	6	6	5	4	4	4	4	3										
Out	108	5	5	6	6	5	4	4	4	4	3										

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										154
Out										154

Notes:

1. Quantity of 154 installs includes 2 trainer kits.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-53E (29)**

MODIFICATION TITLE: INTEGRATED MECH DIAG (OSIP 007-98) - MH-53

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR INSTALLED - Field Modification Team**

ADMINISTRATIVE LEADTIME: 10 Months

PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: Aug-10 FY 2011: FY 2012: Aug-12 FY 2013: Aug-13

DELIVERY DATE: FY 2010: Feb-11 FY 2011: FY 2012: Feb-13 FY 2013: Feb-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (3) kits	1	0.3	1	0.1	1	0.1													3	0.5
FY 2010 PY (14) kits					10	0.8	4	0.3											14	1.1
FY 2011 PY (1) kits					1	0.1													1	0.1
FY 2012 PY (11) kits									11	0.2									11	0.2
FY 2013 PY (1) kits											1	0.7							1	0.7
FY 2014 PY ( ) kits																				
FY 2015 PY ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL	**1**	**0.3**	**1**	**0.1**	**12**	**0.9**	**4**	**0.3**	**11**	**0.2**	**1**	**0.7**							30	2.5

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1			1		2	3	3	4	2	2				3	3	5		1		
Out	1			1		2	3	3	4	2	2				3	3	5		1		

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										30
Out										30

Notes:

1. Quantity of 30 installs includes 1 trainer kit.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: NACELLES (OSIP 009-01)

MODELS OF SYSTEMS AFFECTED: CH-53D(36), CH-53E(152), MH-53E(29), 217 Total | TYPE MODIFICATION: MISSION/MISSION ENHANCEMENT

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

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
CH/MH-53E KITS (Radian)	46	3.2																					46	3.2
CH/MH-53E KITS (TBD)	12	1.8	17	2.5																	188	31.2	217	35.5
CH/MH-53E Kits - Val/Ver	2	0.1																					2	0.1
Installation Kits N/R		5.0																						5.0
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data		0.1																						0.1
Training Equipment																								
Support Equipment																								
ILS		0.1																						0.1
Other Support		6.6		0.2																		2.8		9.6
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**17.0**		**2.6**																		**34.0**		**53.6**

Notes:

1. Totals may not add due to rounding
2. All installations are O-Level.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-53 INTERIOR BALLISTIC ARMOR (OSIP 21-03)

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152) | TYPE MODIFICATION: SAFETY, MISSION/PERFORMANCE ENHANCEMENT

DESCRIPTION/JUSTIFICATION: Ballistic Protection System (BPS) provides increased protection and survivability for H-53 aircrew and passengers against small arms and anti-aircraft fragmentation type threats. BPS is a mission kit of protective armor panels secured to the cockpit and cargo compartment floor and to the sidewall area around the gunners' doors. These panels have been used in OCO and have been subject to extreme wear and tear. There are not enough BPS panels to outfit each airframe and as units continue to rotate in the Areas of Responsibility (AORs). These BPS systems will need to be repaired or replaced. While panels are being repaired and replaced, those aircraft continue to do their mission and the necessity of the BPS panels are critical. The procurement and installation of these BPS panels will allow every aircraft the capability of conducting their missions regardless of whether the panels are being repaired or replaced. This effort provides for improved survivability of crew and passengers against small arms and anti-aircraft fragmentation type threats that the fleet is increasingly exposed to during OCO.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The BPS production kits were completed for the CH-53E, CH-53D, and MH-53E in Aug 06. Every H-53 received installation provisions (A-Kit). An armor panel set (B-Kit) will go to approximately half of the aircrafts. The BPS can be quickly moved from aircraft to aircraft according to mission needs.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
CH-53E BPS B-kits			85	8.0																			85	8.0
CH-53E BPS B-kits-OCO																								
CH-53D BPS B-kits			22	2.1																			22	2.1
Installation Equipment N/R				*																				*
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support-OCO																								
Interim Contractor Support																								
Installation Cost																								
Total Procurement				**10.1**																				**10.1**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a — Individual Modification

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

MODELS OF SYSTEMS AFFECTED: H-53 T64 Turbo-shaft engines

TYPE MODIFICATION: SAFETY, READINESS AND MAINTAINABILITY

DESCRIPTION/JUSTIFICATION: The T64 Engine reliability Improvement Program upgrades top age related engine degraders, fatigue limiters, and performance degradation on the T64 engine. A concentrated effort is to upgrade the T64-416 engines to the T64-416A configuration by replacin components of the engine with improved hardware designs to increase reliability and reduce logistical requirements by conforming to one configuration. T64 engines will be modified to incorporate titanium nitride-coated compressor airfoils. Titanium nitride coating provides significantly improved durability and reliability for operation in austere environments. Degraded and obsolete peculiar support equipment will also be improved.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: 186 of 462 engines have been upgraded from the T64-416 to T64-416A configuration. T64-416A upgrade kits procured with FY04 Title IX Supplemental funding began installs in FY05. T64-416 and -416A engines began incorporating titanium nitride in FY04. T64-419 engines began incorporating titanium nitride in FY06. T64-413 engines began incorporating titanium nitride in FY07

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
416A CONVERSION KITS	21	2.7																					21	2.7
416A UPGRADE (GE)	84	12.4																					84	12.4
AIR STARTER KITS	8	0.2																					8	0.2
COMPR ROTOR SET KITS	960	0.7																					960	0.7
REL IMPROV KITS (GE)	38	3.2																					38	3.2
T2 HOUSNG KICKSTD (GE)	933	0.2																					933	0.2
T64 Comp Cases - sppt TiN	5	0.3																					5	0.3
T64 ERIP Kits (ERP convert)	93	15.7																					93	15.7
T64 ERIP Kits	100	14.0																					100	14.0
T64 ERIP Kits (SUPP)	254	5.0																					254	5.0
TIN SETS (GE)	86	20.5																					86	20.5
TIN SETS (GE) SUPP	140	14.2																					140	14.2
CH-53D TiN Kits			33	6.6																			33	6.6
MH-53E TiN Kits			33	6.6																			33	6.6
419 TiN Kits							5	1.0			5	1.0											5	1.0
VG ACTUATOR KITS	1,100	*																					1100	*
H-53E EAPS Improvements	47	1.4																					47	1.4
Hot Day fire warning sensors			152	5.8																			152	5.8
PPC 109 Rev A Kits	67	10.5	36	6.8			29	6.0			29	6.0	8	1.5	14	2.6	32	6.0	11	1.9	122	23.4	319	58.8
Hot Day PPC-109RevA OCO					24	4.7			40	7.7	40	7.7											64	12.4
419 Fuel Control Kits	144	1.7	258	3.0	101	1.2																	503	5.9
Hot Day Fuel Controls OCO					24	0.3																	24	0.3
Fuel Nozzle Kits					25	0.9	26	0.9			26	0.9	22	0.8	22	0.8	32	1.2	80	2.9	664	15.9	871	23.4
419 Fuel Pump Kits	144	0.4	320	0.8													35	0.1			124	0.4	623	1.7
PPC-117 VGV Kits			236	6.6															80	2.2	555	20.0	871	28.8
Installation Equipment N/R		3.4																						3.4
Engineering Change Orders																								
Data		1.0																						1.0
Training Equipment		*																						*
Support Equipment		5.8		0.2		0.2																		6.3
ILS		0.3																						0.3
Other Support		10.3		2.9		3.0		2.9				2.9		3.4		3.5		3.5		3.9		6.7		40.1
Other Support-OCO										6.6		6.6												6.6
Interim Contractor Support																								
Installation Cost	118	0.5																					118	0.5
Total Procurement		**124.5**		**39.4**		**10.3**		**10.9**		**14.3**		**25.1**		**5.7**		**6.9**		**10.8**		**10.9**		**66.4**		**300.0**

Notes:
1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Quantity of ERIP kits reflects the various modification requirements for 101 CH-53D engines, 638 CH-53E engines, and 132 MH-53E engines. Quantities reflect total engine inventory.

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: H-53 MEDIVAC (OSIP 015-05)

MODELS OF SYSTEMS AFFECTED: CH-53D(36), CH-53E(152), MH-53E(31), 219 Total

TYPE MODIFICATION: SAFETY, READINESS AND MAINTAINABILITY

DESCRIPTION/JUSTIFICATION: This funding effort is established for procurement and integration of survivability systems that will improve H53 aircrew and passengers against hostile threats through more effective self-defense methods. The H53 survivability strategy is to upgrade threat detection ability, increase countermeasure capability, reduce vulnerability, enhance situational awareness by communicating aircraft position to deconflict with friendly forces in the area of operation, and improve vulnerability to battle damage by better developing protection for both the aircrew and critical components. This increased survivability will protect the H-53 during all aspects of its various missions; assault support, shipboard delivery of cargo, anti-mine warfare, casualty transport/Medivac, and heavy cargo transport.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Aircraft Survivability Equipment (ASE) effort (8 aircraft) completed Aug 2008. Blue Force Tracker (BFT) fully equipped aircraft deployment completed June 2008. BFT production installation effort was completed Aug 2010. BFT is an Army ACAT IC program, encryption and L-band enhancements are anticipated.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
BFT A Kits (CH-53)	78	2.8																					78	2.8
BFT A Kits (CH-53) (ESAD)	1	*																					1	*
BFT A Kits CH-53 (SUPP)	156	2.7	33	0.3																			189	2.9
BFT A Kits CH-53 (OCO)					50	1.5			40	24.8	40	24.8											90	26.3
BFT A Kits (MH-53)	16	0.4																					16	0.4
BFT A Kits (MH-53) SUPP	16	0.6																					16	0.6
H-53 NVD Kits	355	0.1																					355	0.1
MH ASE Suite A-Kits	30	2.4																					30	2.4
MH-53E ASE Prerequisite Kits	20	0.1																					20	0.1
MH-53E ASE Prereq Kits SUPP	150	0.3																					150	0.3
CH-53E CSA Val/Ver			2	*																			2	*
MH-53E CSA Val/Ver			2	*																			2	*
CH-53E CSA A Kits			150	1.2																			150	1.2
CH-53E CSA A Kits-OCO									22	1.5	22	1.5											22	1.5
MH-53E CSA A Kits			29	0.2																			29	0.2
SMFCD A Kits-OCO			5	0.1																			5	0.1
Installation Kits N/R		0.5		9.3																				9.9
Installation Kits N/R - OCO						0.8																		0.8
Installation Equipment																								
BFT B Kits (CH-53)	113	4.0																					113	4.0
BFT B Kits (CH-53) (SUPP)	98	8.5																					98	8.5
BFT B Kits (CH-53) OCO					141	1.5																	141	1.5
BFT B Kits (MH-53)	34	1.0																					34	1.0
BFT B kits	39	2.3																					39	2.3
BFT L-Band, Crypto upgrade			33	0.5																			33	0.5
BFT TOC kit upgrade			27	1.1																			27	1.1
MH AAR-47 (P-Kit)	31	1.5																					31	1.5
MH ALE-47 (P-Kit)	124	0.6																					124	0.6
SPARES	10	0.5																					10	0.5
CH-53E CSA B Kits			92	9.5																			92	9.5
MH-53E CSA B Kits			19	2.0																			19	2.0
CH-53E CSA B Kits-OCO									25	4.7	25	4.7											25	4.7
SMFCD B Kits-OCO			5	0.9																			5	0.9
SMFCD B Kits (Val/Ver)-OCO			2	0.4																			2	0.4
Installation Equipment N/R		1.5																						1.5
Engineering Change Orders		0.1		*																				0.1
Engineering Change Orders - OCO						*																		*
Data		1.0		0.2																				1.2
Data - OCO				0.5		*																		0.5
Training Equipment		0.7	3	0.2																			3	0.8
Training Equipment-OCO			2	0.5																			2	0.5
Support Equipment		0.3		*																				0.3
Support Equipment - OCO						*																		*
ILS		1.3		0.9																				2.2
ILS - OCO						0.5																		0.5
Other Support		11.4		1.7																				13.2
Other Support - OCO				0.8		0.5																		1.3
Interim Contractor Support		1.5		2.7																				4.2
Interim Contractor Support OCO						3.1																		3.1
Installation Cost	195	6.4	157	4.3	183																		535	10.7
Installation Cost - OCO				0.1	50	0.4			67	2.7	67	2.7											117	3.2
Total Procurement		**52.4**		**37.5**		**8.4**				**33.8**		**33.8**												**132.1**

Notes:
1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Quantity of 352 BFT A-kits includes TOC and KGV-72 Crypto upgrades in accordance with Army spiral upgrade program.
4. Quantity of 224 BFT A-kits in prior years includes 5 trainers with no install cost
5. Quantity of 422 installs includes 57 ASE kits and 365 BFT A Kits.
6. Quantity of 31 ASE installs were completed in prior years ($2.407M), install schedule is not required.
7. Quantity of 183 CSA kits procured with FY10 supplemental are installed in FY11
8. Quantity of 5 SMFCD kits procured with FY10 supplemental (via ATR Oct 10) are installed in FY12

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D(36), CH-53E(152), MH-53E(31), 219 Total**

MODIFICATION TITLE: H-53 MEDIVAC (OSIP 015-05) - Blue Force Tracker

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Teams**

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: Nov-09 FY 2011: Nov-10 FY 2012: Nov-11 FY 2013:

DELIVERY DATE: FY 2010: Dec-10 FY 2011: Dec-10 FY 2012: Dec-11 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (319) kits	195	6.4	124																319	6.4
FY 2010 PY (33) kits			33	0.4															33	0.4
FY 2011 PY (50) kits-OCO					50	0.4													50	0.4
FY 2012 PY (40) kits-OCO							40	2.7											40	2.7
FY 2013 PY ( ) kits																				
FY 2014 PY ( ) kits																				
FY 2015 PY ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL	**195**	**6.4**	**157**	**0.4**	**50**	**0.4**	**40**	**2.7**											442	9.9

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	195	31	31	39	56	25	25			10	10	10	10								
Out	195	31	31	39	56	25	25			10	10	10	10								

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										442
Out										442

Notes:

1. Quantity of 422 installs includes 57 ASE kits and 365 BFT A Kits.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D(31), CH-53E(137), MH-53E(26), 194 Total**

MODIFICATION TITLE: H-53 MEDIVAC (OSIP 015-05) - Critical Systems Armor

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Teams**

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: Mar-11 FY 2011: FY 2012: Mar-13 FY 2013:

DELIVERY DATE: FY 2010: Oct-11 FY 2011: FY 2012: Oct-13 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 PY (183) kits				3.9	183														183	3.9
FY 2011 PY () kits																				
FY 2012 PY (22) kits-OCO							22	0.1											22	0.1
FY 2013 PY ( ) kits																				
FY 2014 PY ( ) kits																				
FY 2015 PY ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL				**3.9**	**183**		**22**	**0.1**											205	4.0

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						45	46	46	46					5	6	6	5				
Out						45	46	46	46					5	6	6	5				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										205
Out										205

Notes:

1. Quantity of 183 CSA kits procured with FY10 supplemental will be installed in FY11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D(31), CH-53E(137), MH-53E(26), 194 Total**

MODIFICATION TITLE: H-53 MEDIVAC (OSIP 015-05) - Smart Multi-Function Color Display

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Teams**

ADMINISTRATIVE LEADTIME: 4 Months

PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2010: Jan-11 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Feb-12 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 PY (5) kits-OCO				0.1			5												5	0.1
FY 2011 PY () kits																				
FY 2012 PY () kits																				
FY 2013 PY ( ) kits																				
FY 2014 PY ( ) kits																				
FY 2015 PY ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL				**0.1**			**5**												5	0.1

Notes:
1. Quantity of 5 SMFCD kits procured with FY10 supplemental (via ATR Oct 10) are installed in FY12

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											1	4									
Out											1	4									

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										5
Out										5

Notes:

Exhibit P-3a — Individual Modification

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

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152), MH-53E (29), 217 Total — TYPE MODIFICATION: MISSION/PERFORMANCE SUSTAINMENT

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

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
#2 Engine Backflow (CH/MH-E)			60	1.7	20	0.6	22	0.8			22	0.8											102	3.1
Aircrew Cooling A-kits	49	1.4																					49	1.4
CH-53E Aircrew Cooling OCO			45	0.7																			45	0.7
CH-53D Aircrew Cooling OCO			36	0.5																			36	0.5
Arc Fault Circuit Break (H-53)	214	0.5																					214	0.5
Cooling Shroud Kits	50	0.1																					50	0.1
Common GCU Ship-sets (H-53)			30	0.6	30	0.6	30	0.6			30	0.6	30	0.7	38	0.8							158	3.3
CH-53E EAPS Seal - OCO			152	0.6																			152	0.6
MH-53E EAPS Seal - OCO			31	0.1																			31	0.1
CH-53D EAPS Seal - OCO					36	0.2																	36	0.2
CH-53 EAPS Bypass - OCO			79	1.6					40	0.9	40	0.9											119	2.5
MH-53 EAPS Bypass - OCO			31	0.6																			31	0.6
CH-53D EAPS Improv - OCO					36	0.7																	36	0.7
EAPS Improv Kits (CH/MH-E)			15	0.5	11	0.6																	26	1.1
Emergency Egress Light (H-53)	219	0.5																					219	0.5
Engine Sling Kits	60	0.3																					60	0.3
Gyro Replacement (CH-D)	40	1.4																					40	1.4
Gyro Replacement (CH-D) Supp	32	1.1																					32	1.1
Kapton Wiring Kits (H-53)	3	2.8	23	8.1			17	7.7			17	7.7	11	5.1	16	7.2	2	0.7	4	1.8	19	8.7	85	42.0
Kapton Wiring Kits (H-53) Supp	35	8.7																					35	8.7
Kapton Wiring Kits (H-53) OCO									40	14.9	40	14.9											40	14.9
CH-53E Kapton Val/Ver OCO			4	1.8																			4	1.8
MH-53E Kapton Val/Ver OCO			2	1.3																			2	1.3
MRH Weight Bracket Supp	2	0.1																					2	0.1
NGB Improved Seal Kits (H-53)	456	3.2																					456	3.2
NLG Door Bracket (H-53)	220	0.3																					220	0.3
Obsolescent Components (H-53)	131	2.4	26	1.3	8	0.4	38	1.9			38	1.9	5	0.2	58	2.3	90	3.2	90	3.2	151	25.7	597	40.6
Ramp Conversion Kits	35	0.0																					35	*
Rotor Blade Coating (H-53)							13	1.9			13	1.9					4	0.5	4	0.5	200	3.5	221	6.4
Rotor Blade Coating (H-53)-OCO									40	2.9	40	2.9											40	2.9
CH-53E Single Point Pendant Box Kits(SPPB)-OCO									40	0.6	40	0.6											40	0.6
Station 820 Bulkhead - H-53 A/C SUSTAINMENT (OSI	157	0.8	4	*																			161	0.9
Transition Bulkhead (CH/MH-E)	52	4.0	14	1.3	15	1.4	11	1.1			11	1.1	8	0.8	12	1.2	17	1.9	17	1.9	16	2.1	162	15.6
#6 TRDS Fitting Kit (CH/MH-E)	37	0.1																					37	0.1
Wiring Diagnostics Kits (H-53)			18	0.1																			18	0.1

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
Wiring Diagnost Kits (H-53) SUPP	5	0.4																					5	0.4
Installation Kits N/R (includes N/R for AFCS)		4.5		4.0				13.5				13.5		14.4		9.1		8.0		0.8		14.8		69.2
Installation Kits N/R - OCO						0.5																		0.5
Installation Equipment																								
CH-53D HEELS B KITS	2	0.0																					2	*
CH-53E HEELS B KITS	2	0.0																					2	*
Aircrew Cooling B-kits	599	3.4																					599	3.4
CH-53E Aircrew Cooling OCO			45	1.4																			45	1.4
CH-53D Aircrew Cooling OCO			36	1.1																			36	1.1
Aircrew Cooling Garments	172	0.1																					172	0.1
Electric Cargo Winch	20	3.1																					20	3.1
H-53 HEELS B-kits (CONG)	216	1.9																					216	1.9
IRB SUPP	92	7.3																					92	7.3
MH-53E HEELS B KITS	2	0.0																					2	*
Ramp Cables B Kits	120	0.0																					120	*
Installation Equipment N/R		0.1																						0.1
Engineering Change Orders																								
Data - OCO						0.1																		0.1
Data		0.5		1.8				0.2				0.2		0.2		0.3		0.4		0.6		3.9		7.8
Training Equipment	6	0.0																					6	*
Training Equipment - OCO			10	0.1	4	0.1																	14	0.2
Support Equipment		4.1																						4.1
ILS		2.6		0.7																				3.3
Other Support		30.7		3.6		2.9		3.4				3.4		1.4		3.0		3.9		1.0		38.8		88.7
Other Support - OCO						0.3				1.6		1.6												1.9
Interim Contractor Support		0.3		0.4																				0.7
Installation Cost	336	6.5	429	4.0	256	2.7	78	1.5			78	1.5	62	1.7	60	1.2	29	1.0	72	1.6	394	7.6	1716	27.9
Installation Cost - OCO													40	0.6									40	0.6
Total Procurement		**93.5**		**37.8**		**11.1**		**32.6**		**20.9**		**53.4**		**25.1**		**25.1**		**19.6**		**11.5**		**105.0**		**382.1**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Station 820 kits were procured with other prior year funding. Installation costs are funded in this OSIP.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53E (152), MH-53E (29), 181 Total**

MODIFICATION TITLE: #2 Engine Backflow kits - H-53 A/C SUSTAINMENT (OSIP 008-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Team**

ADMINISTRATIVE LEADTIME: 4 Months

PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010: Jan-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: Nov-10 FY 2011: Nov-11 FY 2012: Nov-12 FY 2013: Nov-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 (60) kits					60	0.4													60	0.4
FY 2011 (20) kits							20	0.2											20	0.2
FY 2012 (22) kits									22	0.2									22	0.2
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL					**60**	**0.4**	**20**	**0.2**	**22**	**0.2**									102	0.7

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						20	20	20		10	10			10	12						
Out						20	20	20		10	10			10	12						

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										102
Out										102

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (36), CH-53E (152), MH-53E (29), 217 Total** MODIFICATION TITLE: Aircrew Cooling Kits - H-53 A/C SUSTAINMENT (OSIP 008-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Team**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2010: Nov-09 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Jan-10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (49) kits	33	0.6	16																49	0.6
FY 2010 (81) kits			81	1.2															81	1.2
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL	**33**	**0.6**	**97**	**1.2**															130	1.8

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	33	12	4	40	41																
Out	33	12	4	40	41																

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										130
Out										130

Notes:

1. Quantity of 4 kits installed in prior years reflect generation 1 A-kits. Balance of 16 generation 1 kits will be installed with generation 2 kits.
2. Quantity of 29 kits installed reflects 29 generation 2 A-kits procured in FY09 (with 16 generation 1 kits incorporated).
3. Quantity of 16 kits installed in FY10 with FY09 funding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53E (152), MH-53E (29), 181 Total**

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Team**

ADMINISTRATIVE LEADTIME: 4 Months

PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2010: Jan-10 FY 2011: Jan-11 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Jun-10 FY 2011: Jun-11 FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 (183) kits			60	0.3	123	0.4													183	0.7
FY 2011 (36) kits					18	0.2	18	0.2											36	0.4
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL			**60**	**0.3**	**141**	**0.6**	**18**	**0.2**											219	1.1

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				30	30	30	31	40	40	9	9										
Out				30	30	30	31	40	40	9	9										

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										219
Out										219

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (36), CH-53E (152), MH-53E (29), 217 Total** MODIFICATION TITLE: Emergency Egress Lighting - H-53 A/C SUSTAINMENT (OSIP 008-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Team**

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (219) kits	85	1.8	134																219	1.8
FY 2010 PY() kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL	**85**	**1.8**	**134**																219	1.8

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	85	33	33	34	34																
Out	85	33	33	34	34																

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										219
Out										219

Notes:

1. Quantity of 85 kits procured in FY08 with Congressional add funds are installed in FY09 with FY08 Congressional add funds.
2. Quantity of 134 kits procured in FY09 with Congressional add funds are installed in FY10 with FY09 Congressional add funds.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (36), CH-53E (152), MH-53E (29), 217 Total** MODIFICATION TITLE: Kapton Wiring - H-53 A/C SUSTAINMENT (OSIP 008-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Team, IMC**

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010: Jan-10 FY 2011: FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: Nov-10 FY 2011: FY 2012: Nov-12 FY 2013: Nov-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (38) kits	35	0.9	3	0.1															38	1.0
FY 2010 PY(29) kits				0.5	29	0.6													29	1.1
FY 2011 PY () kits																				
FY 2012 PY (17) kits									17	0.5									17	0.5
FY 2012 PY (40) kits-OCO									40	0.6									40	0.6
FY 2013 PY (11) kits											11	0.3							11	0.3
FY 2014 PY (16) kits													16	0.4					16	0.4
FY 2015 PY (2) kits															2	0.1			2	0.1
FY 2016 PY (4) kits																	4	0.1	4	0.1
To Complete (9) kits																	9	0.2	9	0.2
TOTAL	**35**	**0.9**	**3**	**0.5**	**29**	**0.6**			**57**	**1.1**	**11**	**0.3**	**16**	**0.4**	**2**	**0.1**	**13**	**0.4**	166	4.4

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	35	3				11	6	6	6					14	14	14	15	3	3	5	
Out	35	3				11	6	6	6					14	14	14	15	3	3	5	

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	4	4	4	4	2				13	166
Out	4	4	4	4	2				13	166

Notes:

1. Quantity of 35 kits procured in prior years with supplemental funding are installed in FY09 with prior year supplemental funding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (36), CH-53E (152), MH-53E (29), 217 Total** MODIFICATION TITLE: Obsolescent Components - H-53 A/C SUSTAINMENT (OSIP 008-06)

INSTALLATION INFORMATION:

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

ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 17 Months

CONTRACT DATES: FY 2010: May-10 FY 2011: May-11 FY 2012: May-12 FY 2013: May-13

DELIVERY DATE: FY 2010: Oct-11 FY 2011: Oct-12 FY 2012: Oct-13 FY 2013: Oct-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (131) kits			120	1.2	11	0.1													131	1.3
FY 2010 PY(26) kits							26	0.3											26	0.3
FY 2011 PY (8) kits									8	0.1									8	0.1
FY 2012 PY (38) kits											38	0.4							38	0.4
FY 2013 PY (5) kits													5	0.1					5	0.1
FY 2014 PY (58) kits															58	0.6			58	0.6
FY 2015 PY (90) kits																	90	0.9	90	0.9
FY 2016 PY (90) kits																	90	0.9	90	0.9
To Complete (151) kits																	151	1.5	151	1.5
TOTAL			**120**	**1.2**	**11**	**0.1**	**26**	**0.3**	**8**	**0.1**	**38**	**0.4**	**5**	**0.1**	**58**	**0.6**	**331**	**3.310**	597	6.0

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In		30	30	30	30	3	3	2	3	6	6	7	7	2	2	2	2	9	9	10	10
Out		30	30	30	30	3	3	2	3	6	6	7	7	2	2	2	2	9	9	10	10

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	2	1	1	1	15	15	15	13	331	597
Out	2	1	1	1	15	15	15	13	331	597

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53E (152), MH-53E (29), 181 Total**

MODIFICATION TITLE: Station 820 Bulkhead - H-53 A/C SUSTAINMENT (OSIP 008-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Team, IMC**

ADMINISTRATIVE LEADTIME: N/A Months

PRODUCTION LEADTIME: N/A Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (161) kits	157	1.8	4	*															161	1.8
FY 2010 PY() kits																				
FY 2011 PY () kits																				
FY 2012 PY () kits																				
FY 2013 PY () kits																				
FY 2014 PY () kits																				
FY 2015 PY () kits																				
FY 2016 PY () kits																				
To Complete ( ) kits																				
TOTAL	**157**	**1.8**	**4**	*****															161	1.8

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	157	2	2																		
Out	157	2	2																		

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										161
Out										161

Note:

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

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53E (152), MH-53E (29), 181 Total**

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **IMC**

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 19 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: Mar-11 FY 2012: Mar-12 FY 2013: Mar-13

DELIVERY DATE: FY 2010: Oct-11 FY 2011: Oct-12 FY 2012: Oct-13 FY 2013: Oct-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (52) kits	26	1.4	11	0.7	15	1.0													52	3.2
FY 2010 PY(14) kits							14	0.9											14	0.9
FY 2011 PY (15) kits									15	1.0									15	1.0
FY 2012 PY (11) kits											11	0.5							11	0.5
FY 2013 PY (8) kits													8	0.5					8	0.5
FY 2014 PY (12) kits															12	1.0			12	1.0
FY 2015 PY (17) kits																	17	1.3	17	1.3
FY 2016 PY (17) kits																	17	1.3	17	1.3
To Complete (16) kits																	16	1.3	16	1.3
TOTAL	**26**	**1.4**	**11**	**0.7**	**15**	**1.0**	**14**	**0.9**	**15**	**1.0**	**11**	**0.5**	**8**	**0.5**	**12**	**1.0**	**50**	**3.9**	162	11.0

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	26	3	3	3	2	3	4	4	4	3	3	4	4	3	4	4	4	3	3	3	2
Out	26	3	3	3	2	3	4	4	4	3	3	4	4	3	4	4	4	3	3	3	2

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	2	2	2	2	3	3	3	3	50	162
Out	2	2	2	2	3	3	3	3	50	162

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: VISUALLY DEGRADED ENVIRONMENT (OSIP 020-07)

MODELS OF SYSTEMS AFFECTED: CH-53E (96) | TYPE MODIFICATION: SAFETY/PERFORMANCE

DESCRIPTION/JUSTIFICATION: VDE is the greatest unmitigated challenge faced by Marine Aviation in its current operating environment. The loss of visual ground reference during night landings to unimproved, dusty landing zones is the greatest safety risk to H-53 aircrew, passengers and aircraft. The H-53 will continue to operate in VDE and continue to endanger flight crews and passengers while flying in a low altitude/low airspeed regime or landing in unimproved landing zones in conditions that may cause loss of a visual reference due to dust, snow, fog, smoke or darkness. A VDE solution will facilitate mission accomplishment in all degraded cueing environments, prevent degraded cueing environment mishaps and subsequent loss of life and assets. Reference: CH-53 Zero Visibility Landing System UNS # 06069UB, approved 27 Feb 06.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: PMA261 is currently supporting technology development, demonstration, and integration in a phased approach to the VDE solution. Prototype installation of a system providing enhanced cuing to the flying pilot is underway. Technology development and demonstration of laser and RF based systems are underway with flight test of a laser-based system, as installed on an H-53 September, 2009.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
VDE A-Kits			24	1.9																	72	6.2	96	8.1
CNS/ATM Kits SUPP	4	2.3	9	12.9																			13	15.1
Installation Kits N/R																								
Installation Equipment																								
VDE B-Kits			24	4.3																	72	14.5	96	18.8
Installation Equipment N/R		3.6																						3.6
Engineering Change Orders																								
Data		2.6																						2.6
Training Equipment		6.1		9.2																		2.5		17.8
Support Equipment		0.2																						0.2
ILS																								
Other Support		3.8		0.1																		0.9		4.8
Interim Contractor Support																								
Installation Cost			33	8.2																	63	5.4	96	13.6
Total Procurement		**18.7**		**36.5**																		**29.6**		**84.7**

Notes:

1. Totals may not add due to rounding

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53E (96)** MODIFICATION TITLE: VISUALLY DEGRADED ENVIRONMENT (OSIP 020-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Teams**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2010: Nov-09 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Feb-10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 20133		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 PY (33) kits			33	8.2															33	8.2
FY 2011 PY ( ) kits																				
FY 2012 PY ( ) kits																				
FY 2013 PY ( ) kits																				
FY 2014 PY ( ) kits																				
FY 2015 PY ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete ( ) kits																				
TOTAL			**33**	**8.2**															33	8.2

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
In	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Out			11	11	11																
			11	11	11																

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										33
Out										33

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: DIRCM (OSIP 010-08)

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152), 188 Total — TYPE MODIFICATION: MISSION/PERFORMANCE SUSTAINMENT

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

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Non-Recurring engineering for the CH-53E began in May 07 and concluded with a completed and verified TD in early FY09. T&E for the CH-53E began with risk-reduction testing in April 08 and concluded with IOT&E in late FY09, reports for that testing is in work. Critical to early fielding was the Quick reaction assessment, completed in Aug 08 which lead to an Early Operational Capability decision in Nov 08. Validation & verification were conducted for the CH-53E between May - Sep 08. Non-Recurring engineering for the CH-53D began in May 08 and concluded with a completed and verified TD in early FY10. T&E for the CH-53D will take place in late FY09/FY10. Fielding for the CH-53D will begin in FY11. DIRCM is being procured as a mission kit by PMA-272. All CH-53Ds & CH-53Es must be modified with an A-kit to accept the mission kit. Installations surged in FY09 to achieve an EOC and then continue through FY14.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
CH-53E Kits (Ph I)	24	5.2																					24	5.2
CH-53E Kits (Ph II)	30	6.2																					30	6.2
CH-53E Kits (LBAD) SUPP	14	4.0																					14	4.0
CH-53E A Kits SUPP	14	3.7																					14	3.7
CH-53E Kits	28	6.3																					28	6.3
CH-53E Kits OCO	24	5.3			18	4.0																	42	9.3
CH-53D Kits																								
CH-53D Kits OCO	3	1.1	17	3.4	16	3.2																	36	7.7
DIRCM A Kits (Pax) SUPP		0.8																						0.8
DIRCM A Kits (SUPP 1)																								
DIRCM TRUs	117	2.5																					117	2.5
Installation Kits N/R		5.8				5.8																		11.6
Installation Equipment																								
DIRCM B Kits (Phase I)	16	56.5																					16	56.5
DIRCM B Kits (Phase II)	16	43.3																					16	43.3
DIRCM B Kits (EGI)	132	9.4	56	4.0																			188	13.4
DIRCM B Kits (EGI) (OCO)																								
DIRCM B Kits (AIS)																6.0								6.0
Installation Equipment N/R																								
Engineering Change Orders																								
Data		0.5																						0.5
Training Equipment						2.0																		2.0
Support Equipment																								
ILS		2.0				1.4																		3.4
Other Support		10.5		0.6		2.8		1.4				1.4		2.1		1.6		0.7		0.7		0.7		21.0
Interim Contractor Support		6.0				3.5												0.2		0.2				9.9
Installation Cost	43	4.9	60	4.0	34	2.0	34	3.9			34	3.9											171	14.8
Installation Cost - SUPP	14	1.6																					14	1.6
Installation Cost - OCO	3	0.3																					3	0.3
Total Procurement		**176.1**		**12.0**		**24.5**		**5.3**				**5.3**		**2.1**		**7.6**		**0.9**		**0.9**		**0.7**		230.1

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. QTY (17) CH-53D kits bought with FY10 OCO money

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (36), CH-53E (152), 188 Total** MODIFICATION TITLE: DIRCM (OSIP 010-08)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Teams**

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: Nov-10 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Mar-11 FY 2011: Nov-11 FY 2012: FY 2013:

FINANCIAL PLAN: (TOA, $ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (137) kits	60	6.9	60	2.7	17	2.0													137	11.5
FY 2010 PY (17) kits (OCO)				1.3	17														17	1.3
FY 2011 PY (34) kits							34	3.9											34	3.9
FY 2012 PY () kits																				
FY 2013 PY () kits																				
FY 2014 PY ( ) kits																				
FY 2015 PY ( ) kits																				
FY 2016 PY ( ) kits																				
To Complete () kits																				
TOTAL	**60**	**6.9**	**60**	**4.0**	**34**	**2.0**	**34**	**3.9**											188	16.8

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	60	15	15	15	15	17	17			17	17										
Out	60	15	15	15	15	17	17			17	17										

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										188
Out										188

Notes:

1. Quantity of 188 kits installed includes 171 A-kits procured in this OSIP, and 17 kits procured with FY10 OCO.

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: H-53 HUD (OSIP 20-09)

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152), MH-53E (31), 219 Total

TYPE MODIFICATION: MISSION/PERFORMANCE SUSTAINMENT

DESCRIPTION/JUSTIFICATION: The integration of the ANVS Heads-up Display (HUD) system will provide a Visually Degraded Environment (VDE) solution for the CH-53. As currently fielded, the CH-53 cockpit configuration forces the flying pilot to break their visual scan of objects outside the aircraft in order to view critical flight and mission performance data such as power, altitude, and speed presented only on the instrument panel. With this integrated HUD system, all critical flight parameters are presented the operator providing the pilot with the capability to continuously keep eyes on the target or landing zone. Additionally, with the integration of the Directed Infrared Counter Measures (DIRCM) system, the associated Embedded GPS / INS Laser Ring Gyro (EGI) will provide real-time velocity and acceleration data. This data, when presented on the HUD, will significantly enhance operator situational awareness in the low airspeed flight regime – the flight condition where Degraded Visual Environments are encounte

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The ANVS HUD has been installed on the CH-53E for over a decade. This funds deployment of an additional mission kit providing HUD capability during daylight conditions. The first delive of 20 Day HUD kits delivered in June 2009 with delivery completed September 2009.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
CH-53D HUD Kit			28	0.2																			28	0.2
Installation Kits N/R				1.0																				1.0
Installation Equipment																								
HUD B kits	254	4.8																					254	4.8
ANVIS-24 HUD P-kits			28	17.0																			28	17.0
Installation Equipment N/R				0.7																				0.7
Engineering Change Orders																								
Data				0.1																				0.1
Training Equipment																								
Support Equipment																								
ILS				0.2																				0.2
Other Support		0.2																						0.2
Interim Contractor Support																								
Installation Cost				0.6	28																		28	0.6
Total Procurement		**5.0**		**19.8**																				**24.8**

Notes:

1. Totals may not add due to rounding

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (36)** MODIFICATION TITLE: H-53 HUD (OSIP 20-09)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Modification Teams**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2010: Nov-09 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Oct-10 FY 2011: FY 2012: FY 2013:

($ In Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 ( ) kits																				
FY 2010 (28) kits				0.6	28														28	0.6
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL				**0.6**	**28**														28	0.6

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						14	14														
Out						14	14														

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										28
Out										28

Notes: 1. Quantity of 28 kits installed in FY11 with FY10 funding.

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: H-53 AVIONICS (OSIP 031-12)

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152), MH-53E (31), 219 Total — TYPE MODIFICATION: MISSION/PERFORMANCE SUSTAINMENT

DESCRIPTION/JUSTIFICATION: This OSIP will fund avionics systems for the H-53 helicopter. The H-53 strategy is to address system obsolescence and deficiencies that require correction to maintain platform relevance on an increasingly networked battlefield. Targeted improvements include, Satellite Communication/Shipboard Inertial Navigation System (SATCOM/SINS) alignment capability for ARC-210 Receiver Transmitter Units which provide required Over the Horizon (OTH) communication capabilities. OTH voice capability allows crews to communicate over the mountains found in Operation Enduring Freedom (OEF) and Horn of Africa (HOA). This funding effort seeks to eliminate these, and other, avionics related system level deficiencies and safety hazards.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: NRE efforts to develop Shipboard Inertial Navigation System (SINS) alignment capability for the ARC-210 radio will be complete June 2013. Production installation effort will complete June 2014.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
CH-53 ARC-210 SATCOM mission kit-OCO									40	1.6	40	1.6											40	1.6
Installation Equipment-N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support										0.3		0.3												0.3
Interim Contractor Support																								
Installation Cost																								
Total Procurement										**1.9**		**1.9**												**1.9**

Notes:

1. Totals may not add due to rounding

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE: **053000, SH-60 SERIES**

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	**375.2**	A	**91.1**	**74.2**	**83.4**		**83.4**	**84.2**	**92.0**	**90.5**	**103.5**	**639.8**	**1,633.9**

DESCRIPTION: This line item funds modifications to H-60 series aircraft. The H-60 series program of record for modification is comprised of: 30 HH-60H, 138 SH-60B, 65 SH-60F, 173 MH-60S, 84 MH-60R. The HH-60H is a Combat Search and Rescue (CSAR) and Special Warfare Support (SWS) helicopter assigned to carrier airwings aboard Carrier Vessels (CV) and also in two reserve squadrons. The primary missions of the SH-60B are Anti-Submarine (ASW) and Surface Warfare (SUW). The SH-60F is an ASW, dipping sonar helicopter assigned to carrier airwings based aboard aircraft carriers (CV). The SH-60F primary mission is protection of the CV inner zone. The MH-60S is the Fleet Combat Support (HC) Helicopter. The primary missions of the MH-60S are Vertical Replenishment (VERTREP), Search and Rescue (SAR), Organic Airborne Mine Countermeasures (OAMCM), Surface Warfare (SUW), Extended Maritime Interdiction Operations (EMIO), and Navy Organic Combat Search and Rescue (CSAR). The MH-60R is the Multi-Mission Helicopter. The primary missions of the MH-60R are Under Sea Warfare (USW) and Surface Warfare (SUW). The overall goal of the modifications budgeted is for the Integrated Mechanical Diagnostic System (IMDS), Safety Related Systems Upgrade, AMCM/Armed Helo (Correction of Deficiencies) for the MH-60S, Armed Block I Upgrade for the MH-60R, H-60 Helicopter Visit, Board, Search, and Seizure (HVBSS), H-60 Overland Missions, SH-60B KG-45A, MH-60S Warfighting Capability, SH-60B Datalink (KuBand), MH-60R/S Crew Workload - Operator System Interface (OSI), Automatic Radar Periscope Detection Discrimination (ARPDD), and H-60 Aircraft Sustainment. The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
017-00	HEL0 INTG MECH DIAGN (IMDS)	27.6	0.3										27.9
009-03	SAFETY RELATED SYSTEM UPGRADE	38.2	4.1	4.6	3.9		3.9	3.6	2.7	1.6	2.6	9.4	70.6
016-04	MH-60S AMCM/ARMED HELO	28.5	12.3	5.4	0.9		0.9	0.4	0.8	0.3			48.6
001-06	MH-60R ARMED BLOCK I UPGRADE	48.6	33.5	21.5	22.9		22.9	13.5	17.0	12.9	13.0	15.9	198.8
008-07	H-60 HVBSS	17.0	11.2	6.4									34.7
009-07	MH-60S WARFIGHTING CAPABILITY	42.5	15.4	25.9	25.3		25.3	18.2	19.5	27.6	38.7	84.7	297.7
023-08	H-60 OVERLAND MISSIONS	4.7			3.0		3.0	3.7	2.6	0.3			14.4
008-09	SH-60B DATALINK	4.8	5.5	3.2									13.6
009-09	MH-60R/S CREW WORKLOAD - OSI		8.7	7.1	7.0		7.0	2.4				43.4	68.7
005-12	AUTOMATIC RADAR PERISCOPE DTN DSCMN				15.0		15.0	33.9	40.9	43.8	45.3	486.4	665.3
018-12	H-60 AIRCRAFT SUSTAINMENT				5.4		5.4	8.5	8.5	4.0	4.0		30.4
INACTIVE OSIPS		163.3											163.3
Total		375.2	91.1	74.2	83.4		83.4	84.2	92.0	90.5	103.5	639.8	1,633.9

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: HEL0 INTG MECH DIAGN (OSIP 017-00)

MODELS OF SYSTEMS AFFECTED: SH-60B, SH-60F, HH-60H, MH-60R, MH-60S | TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION/JUSTIFICATION: Integrated Mechanical Diagnostic System (IMDS) is a helicopter monitoring and diagnostic system that provides continuous onboard monitoring and diagnostic of engine health, gearbox, drive train vibrations, oil debris, and rotor track and balance. The IMD system also includes a Cockpit Voice Recorder and Flight Data Recorder (CVRFDR) capability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Revised Acquisition Strategy from lease concept to procurement; approved by PEO (A) December 1999. IMDS Development Testing (DT) started on the SH-60B at Rotary Wing January 2000. Limited LRIP decision April 2001, for hardware based on DT-IIA. Software DT-IIB completed November 2002. DT-IIC completed December 2003.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
LEGACY A/C INSTALL KIT	3	1.2																					3	1.2
MH-60R	2	0.5																					2	0.5
MH-60S	10	2.0																					10	2.0
Installation Kits N/R		11.0																						11.0
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data		1.0																						1.0
Training Equipment		0.1																						0.1
Support Equipment		0.3																						0.3
ILS		1.2																						1.2
Other Support		9.2		*																				9.2
Interim Contractor Support																								
Installation Cost	12	1.1	3	0.3																			15	1.4
Total Procurement		**27.6**		**0.3**																				27.9

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **HEL0 INTG MECH DIAGN (OSIP 017-00)** MODIFICATION TITLE: HEL0 INTG MECH DIAGN (OSIP 017-00)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (15) kits	12	1.1	3	0.3															15	1.4
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**12**	**1.1**	**3**	**0.3**															15	1.4

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	12			2	1																
Out	12			2	1																

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										15
Out										15

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: SAFETY RELATED SYSTEM UPGRADE (OSIP 009-03)

MODELS OF SYSTEMS AFFECTED: SH-60B, SH-60F, HH-60H, MH-60R, MH-60S — TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION/JUSTIFICATION: DESCRIPTION/JUSTIFICATION: Safety Related Systems Upgrade funds modifications to improve the safety of operating H-60 Series aircraft in all operations. In addition to those modifications specifically cited below, this OSIP provides the vehicle to expeditiously fund and correct H-60 Series airframe and avionics safety-related deficiencies (HRI 1-10). T700 Engine Safety Improvements (New White Harness) funds ECPs to provide encapsulated (waterproof) engine wire harness. In addition, troubleshoots T700 Engine problems in the H-60 community, and finds fixes. The New White Harness will be installed two (2) per aircraft. Wide Field of Vision (FOV) Night Vision Device increases nighttime situational awareness and improves safety-of-forces. New Torque Shaft and Lever Bearings are less prone to corrosion, which will reduce the chance of flight controls binding in flight. The Global Positioning System (GPS), navigation aides, provides an immediate interim solution to mitigate risk of controlled flight into obstacles and terrain for all T/M/S H-60 helicopters. These systems enhance aircrew situational awareness and provide an obstacle database. New NVD compatible bezels for the SH-60B will eliminate shadows and allow aircrew to see critical flight instrumentation.

DESCRIPTION / JUSTIFICATION (SH-60B, SH-60F, HH-60H): Stabilator Control System Redesign solved problems of uncommanded runaway without caution alerts. H-60 Lighted RAST Probe provides a luminescent messenger cable. Fast Tactical Imaging (FTI) Terminals and Imaging and Communications Environment (ICE) software allow H-60 H/B aircraft to link imagery and target data with Carrier Strike Group and Joint Special Operations forces, increasing battlefield situational awareness,improving safety-of-forces, and enhancing precision strike capability in close-air-support of Special Warfare forces. GAU-17 Weapon Assembly Mod funds (35) A-kits for HH-60H aircraft. Force XXXI Battle Command Brigade and Below (FBCB2) Blue Force Tracker (BFT) is a current theatre requirement for overland helicopter missions. FBCB2 BFT provides two-way, near-real-time friendly force and threat location and display, two-way text messaging, and tactical operation center support. System is designed to improve Commander and cockpit situational awareness to improve combat effectiveness and mitigate fratricide risks.

DESCRIPTION / JUSTIFICATION (MH-60S, MH60R): - The Ground Proximity Warning System (GPWS) will be a software-based system that takes existing aircraft data and calculates a recovery profile to the above ground attitude of the aircraft. If the recovery profile (plus a suitable buffer) intercepts this ground height, GPWS will generate a warning to the pilot. Other means of generating a warning may also be used to ensure maximum detection with minimum nuisance cues. Force XXXI Battle Command Brigade and Below (FBCB2) Blue Force Tracker (BFT) is a current theatre requirement for overland helicopter missions. FBCB2 BFT provides two-way, near-real-time friendly force and threat location and display, two-way text messaging, and tactical operation center support. System is designed to improve Commander and cockpit situational awareness to improve combat effectiveness and mitigate fratricide risks.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: VAL/VER of the improved torque shaft bearings will be complete in 2011.

METHOD OF IMPLEMENTATION: New White Harness, Fast Tactical Imaging are "O" Level Installs.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
H-60 HIGH SPEED SHAFT (ALL TMS)	685	8.4																					685	8.4
H-60 LIGHTED RAST PROBE(SH-60B/F/HH-60H)	202	0.1																					202	0.1
HH-60H GAU-17 Weapon Assembly Mod	15	0.2																					15	0.2
HH-60H GUNNER BELTS (Webbing Retractors)	120	0.2																					120	0.2
MH-60S GUNNER BELTS (Webbing Retractors)	116	0.2																					116	0.2
NEW WHITE HARNESS (ALL TMS)	408	3.1	65	0.4																			473	3.5
SH-60B GUNNER BELTS (Webbing Retractors)	160	0.3																					160	0.3
SH-60F GUNNER BELTS (Webbing Retractors)	222	0.4																					222	0.4
WHITE HARNESS (ALL TMS)	548	0.2																					548	0.2
BLUE FORCE TRACKER (BFT)	36	0.7																					36	0.7
NVD BEZELS			81	1.4																			81	1.4
Installation Kits N/R		3.0																						3.0
Installation Equipment																								
HH-60H/SH-60B FAST TACTICAL IMAGING	54	0.5																					54	0.5
MH-60S GPWS CARDS	128	0.7																					128	0.7
MH-60S/MH-60R GUNNER BELTS	104	0.3																					104	0.3
SH-60B/SH-60F/HH-60H GUNNER BELTS	78	0.2																					78	0.2
SH-60B/SH-60F/HH-60H LIGHTED RAST PROBE	1	0.1																					1	0.1
WIDE FOV NVG (ALL TMS)			28	1.2	52	3.0	52	2.9			52	2.9	46	2.5	30	1.7	20	1.1	25	1.4	80	4.4	333	18.2
BLUE FORCE TRACKER (BFT)	36	1.8																					36	1.8
EMI SLEEVE (ALL TMS)																								
GLOBAL POSITIONING SYSTEM (GPS)	200	0.7																					200	0.7
Installation Equipment N/R		3.1																						3.1
Engineering Change Orders																								
SAFTEY RELATED ECO		*																						*
Data		1.5																						1.5
Training Equipment		0.4																						0.4
Support Equipment																								
ILS		0.6		0.4																				1.0
Other Support		10.3		0.8		1.4		0.9				0.9		1.1		1.0		0.5		1.2		5.0		22.3
Interim Contractor Support																								
Installation Cost	284	0.8			81	0.2																	365	1.0
Total Procurement		**38.2**		**4.1**		**4.6**		**3.9**				**3.9**		**3.6**		**2.7**		**1.6**		**2.6**		**9.4**		**70.6**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **SH-60B** MODIFICATION TITLE: NVD BEZELS (OSIP 09-03)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD**

ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2010: Aug-10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Nov-10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 (81) kits					81	0.2													81	0.2
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL					**81**	**0.192**													81	0.2

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						6	21	27	27												
Out						6	21	27	27												

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										81
Out										81

Exhibit P-3a | Individual Modification

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

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

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

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Bifilar	50	2.6																					50	2.6
ECP 4000 Retrofit	49	10.8																					49	10.8
NVD KITS	44	1.7	32	1.3	31	1.2	3	0.1			3	0.1	9	0.3	15	0.6							134	5.2
ULMB	26	0.6																					26	0.6
Installation Kits N/R		3.8																						3.8
Installation Equipment																								
AMCM Mission Equipment	5	1.7	8	8.4	2	0.7																	15	10.7
Armed Helo Kit Mods	22	0.2																					22	0.2
Aux Tanks	20	2.8																					20	2.8
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support		0.5		0.4		0.2		*				*		0.1		0.1		0.1						1.3
Interim Contractor Support																								
Installation Cost	19	3.7	23	2.3	62	3.4	48	0.8			48	0.8	3	*	9	0.1	15	0.2					179	10.6
Total Procurement		**28.5**		**12.3**		**5.4**		**0.9**				**0.9**		**0.4**		**0.8**		**0.3**						48.6

Notes:

1. Totals may not add due to rounding
2. * Asterisk indicates amount less than $51K

Exhibit P-3a

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (45) kits	19	3.7	11	2.1	14	2.8	1	0.2											45	8.8
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**19**	**3.7**	**11**	**2.1**	**14**	**2.8**	**1**	**0.2**											45	8.8

Note: Four ECP 4000 kits installed as val/ver NRE

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	19	2	3	3	3	3	4	3	4	1											
Out	19	2	3	3	3	3	4	3	4	1											

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										45
Out										45

Exhibit P-3a

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2010: Jul-10 FY 2011: Dec-11 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: May-11 FY 2011: Oct-11 FY 2012: Oct-12 FY 2013: Oct-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (44) kits			12	0.2	32	0.4													44	0.6
FY 2010 (32) kits					16	0.2	16	0.2											32	0.4
FY 2011 (31) kits							31	0.4											31	0.4
FY 2012 (3) kits									3	*									3	*
FY 2012 OCO ( ) kits																				
FY 2013 (9) kits											9	0.1							9	0.1
FY 2014 (15) kits													15	0.2					15	0.2
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL			**12**	**0.2**	**48**	**0.6**	**47**	**0.6**	**3**	*	**9**	**0.1**	**15**	**0.2**					134	1.8

Asterisk indicates amount less than $51K

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				6	6	12	12	12	12	12	12	12	11	1	1	1		3	2	2	2
Out				6	6	12	12	12	12	12	12	12	11	1	1	1		3	2	2	2

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	4	4	4	3						134
Out	4	4	4	3						134

Exhibit P-3a | Individual Modification

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

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

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

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

METHOD OF IMPLEMENTATION: CDL HAWKLINK, Sonar Transducer Receiver (ST/R), GPS SAASM, and DVR are "O" Level Installs.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ACOUSTICS TECH INSERT KITS	14	1.4	15	2.2	7	0.9	10	1.3			10	1.3	8	1.2									54	6.9
AVC KITS					6	3.6																	6	3.6
GPS SAASM KITS	13	0.2													20	0.9					18	0.8	51	1.9
IMDS KITS	12	2.5	18	3.2	11	2.0	12	2.4			12	2.4											53	10.1
CDL HAWKLINK KITS	10	6.4	17	8.6	5	2.5	5	2.5			5	2.5	11	5.7	12	6.5	12	6.6	3	1.7	2	0.9	77	41.4
LINK-16 KITS	15	8.1																	8	4.7			23	12.8
SONAR TRANSDUCER RECEIVER (ST/R)																					3	1.0	3	1.0
DIGITAL VIDEO RECORDER (DVR)	37	1.9	28	1.1	30	0.9	24	0.7			24	0.7											119	4.7
Installation Kits N/R		10.8		*																				10.9
Installation Equipment																								
GPS SAASM KITS	1	0.1																					1	0.1
ACOUSTICS TECH INSERT KITS	14	5.5	15	7.1	7	2.7	10	3.5			10	3.5	8	3.0									54	21.7
FORWARD LOOKING INFRARED RED (FLIR)	3	3.7	4	3.9																			7	7.6
TRANSDUCER ASSEMBLY (TA) BATTERY			13	0.5																			13	0.5
Installation Equipment N/R																								
Engineering Change Orders																								
Data		0.7																						0.7
Training Equipment																					1	10.2	1	10.2
Support Equipment																								
ILS		0.9		0.5		0.3		0.2				0.2				0.4		1.3		1.9				5.5
Other Support		5.4		2.8		6.8		8.6				8.6		1.3		7.5		4.8		4.6		2.0		43.8
Interim Contractor Support				3.0		0.6		1.5				1.5		1.2		1.6								7.8
Installation Cost	16	1.1	10	0.6	19	1.3	37	2.1			37	2.1	28	1.0	10	0.2	8	0.2			8	1.0	136	7.5
Total Procurement		**48.6**		**33.5**		**21.5**		**22.9**				**22.9**		**13.5**		**17.0**		**12.9**		**13.0**		**15.9**		**198.8**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60R** MODIFICATION TITLE: ACOUSTICS TECH INSERT KITS (OSIP 001-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2010: Jan-11 FY 2011: Mar-11 FY 2012: Mar-12 FY 2013: Mar-13

DELIVERY DATE: FY 2010: Jun-12 FY 2011: Sep-12 FY 2012: Sep-13 FY 2013: Sep-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (14) kits							14	0.3											14	0.3
FY 2010 (15) kits							6	0.1	9	0.2									15	0.3
FY 2011 (7) kits									7	0.1									7	0.1
FY 2012 (10) kits											10	0.2							10	0.2
FY 2012 OCO ( ) kits																				
FY 2013 (8) kits													8	0.2					8	0.2
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**20**	**0.4**	**16**	**0.3**	**10**	**0.2**	**8**	**0.2**					54	1.1

Asterisk indicates amount less than $51K

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											7	6	7	4	4	4	4	3	3	2	2
Out											7	6	7	4	4	4	4	3	3	2	2

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In	2	2	2	2						54
Out	2	2	2	2						54

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60R** MODIFICATION TITLE: AVC KITS (OSIP 001-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: FY 2011: Jan-11 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: Dec-11 FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (7) kits					1	0.2	6	1.1											7	1.3
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL					**1**	**0.2**	**6**	**1.1**											7	1.3

Note: Installs include one Val/Ver kit procured as NRE.

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									1	1	2	2	1								
Out									1		3	2	1								

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										7
Out										7

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60R** MODIFICATION TITLE: IMDS KITS (OSIP 001-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: Jan-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013:

DELIVERY DATE: FY 2010: Dec-10 FY 2011: Dec-11 FY 2012: Dec-12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (12) kits	2	0.2	10	0.6															12	0.8
FY 2010 (18) kits					18	1.1													18	1.1
FY 2011 (11) kits							11	0.7											11	0.7
FY 2012 (12) kits									12	0.7									12	0.7
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**2**	**0.2**	**10**	**0.6**	**18**	**1.1**	**11**	**0.7**	**12**	**0.7**									53	3.2

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2				10		6	6	6		4	4	3		4	4	4				
Out	2				5	5	5	5	5	3	4	4	3		4	4	4				

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										53
Out										53

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60R** MODIFICATION TITLE: LINK-16 KITS (OSIP 001-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (14) kits	14	0.9																	14	0.9
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 (8) kits																	8	1.0	8	1.0
To Complete ( ) kits																				
TOTAL	**14**	**0.9**															**8**	**1.0**	22	1.9

Note: One prior year kit was installed as val/ver.

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	14																				
Out	14																				

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In									8	22
Out									8	22

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-60 HVBSS (OSIP 008-07)

MODELS OF SYSTEMS AFFECTED: SH-60B, SH-60F, HH-60H, MH-60R, MH-60S | TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION/JUSTIFICATION: Extended Maritime Interdiction Operations (EMIO) by Helicopter Visit, Board, Search, and Seizure (HVBSS) tactics require Naval Helicopters be compatible with rapid insertion of Special Warfare forces. This OSIP includes all modifications that increase reliability, maintainability and/or mission capability for conduct of the EMIO mission. These modifications include but are not limited to: Fast Tactical imaging systems kits (44), which includes embedded Automated Identification System capability, will be procured for improved battlefield situational awareness for Command and Direct Action elements. Close Air Support improvements for accompanying assault SH-60B and HH-60H helicopters include (62) M240 7.62mm machine gun kits, replacing aging M-60D gun systems. Additional area suppression close air support improvements include (35) GAU-17 weapon kits and corresponding depot level airframe modifications to integrate the GAU-17 into the remaining HH-60H aircraft. Precise weapon aiming required to employ crew-served weapons in close quarters require the coincident procurement of (3) aiming laser systems to kit with each weapon. AAR-47A(V)2 Missle Warning Systems will be installed on SH-60B aircraft as an update to the current AAR-47(V), which will incorporate a new laser warning functionality. A modification to the aircraft must be made to allow for the installation of the new Control Indicator (CI), which will display the laser warning by angle of arrival. An YHS-60R test asset (BROMEO) will be returned back to it's original configuration as an SH-60B Block One aircraft. This aircraft will be used in support of the HVBSS mission. A loudspeaker system will be attached to an SH-60F aircraft to aid in the HVBSS mission. In response to a Fleet urgent need statement, a COTS loudspeaker system was modified and installed on a Fleet SH-60F aircraft. Two Targeted High Output Responser (THOR) loudspeaker systems will be delivered to the Fleet in FY10.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: GAU-17/A, M-240D, Fast Tactical Imaging (FTI) SYSTEMS, IZLID-200 aiming lasers are systems integrated on other H-60 helicopter platforms and are off-the-shelf procurements. Lead time for all systems 30-90 days. TD for HH-60H modifications (AAC 993) signed 30 June 1994. AFC for O-level and D-level mods for SH-60B require 3-month development including prototyping. Completion of the first loudspeaker system installation is planned for October, 2009. BROMEO modifications planned to be completed by July 2010.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
GAU-17 CABIN MOD (HH-60H)	7	0.1																					7	0.1
GAU-17 CABIN MOD (HH-60H) - OCO			30	3.9	30	3.9																	60	7.8
FTI/AIS (SH-60B/F, HH-60H, MH-60R/S)	70	0.8																					70	0.8
FTI/AIS (SH-60B/F, HH-60H, MH-60R/S) - OCO			58	1.0																			58	1.0
AAR-47A(V)2 (SH-60B)	117	0.2																					117	0.2
Installation Kits N/R		8.5																						8.5
Installation Kits N/R - OCO				2.5		1.3																		3.8
Installation Equipment																								
AIMING LASER (SH-60B,HH-60H)	3	*																					3	*
FTI/AIS (SH-60B/F, HH-60H, MH-60R/S)	70	1.1																					70	1.1
FTI/AIS (SH-60B/F, HH-60H, MH-60R/S) - OCO			58	1.3																			58	1.3
GAU-17 (HH-60H)	13	0.5																					13	0.5
GAU-17 (HH-60H) - OCO			18	0.8	18	0.8																	36	1.6
M240 (SH-60B)	62	0.9																					62	0.9
Installation Equipment N/R		2.2																						2.2
Engineering Change Orders																								
Data		0.2																						0.2
Data - OCO				0.2																				0.2
Training Equipment																								
Support Equipment																								
ILS																								
Other Support		0.1																						0.1
Other Support - OCO				0.1																				0.1
Interim Contractor Support																								
Installation Cost	170	2.4	*** 78	***1.3	*** 64	0.4																	312	4.1
Total Procurement		**17.0**		**11.2**		**6.4**																		34.7

Notes:

1. Totals may not add due to rounding
2. * Asterisk indicates amount less than $51K
3. ***FY10 AIS OCO funding will be applied to 34 FY11 Installations

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **SH-60B** MODIFICATION TITLE: FTI/AIS (OSIP 008-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2010: Jan-10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Mar-10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (70) kits	46	1.6	24																70	1.6
FY 2010 (58) kits			24	0.9	*** 34														58	0.9
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**46**	**1.6**	**48**	**0.9**	*** **34**														128	2.5

1. ***FY10 AIS OCO funding will be applied to 34 FY11 Installations

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	46	12	12	12	12	12	12	10													
Out	34	12	12	12	12	12	12	12	10												

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										128
Out										128

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **HH-60H** MODIFICATION TITLE: GAU-17 (OSIP 008-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2010: Jan-10 FY 2011: Nov-10 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Mar-10 FY 2011: Feb-11 FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (7) kits	7	0.1																	7	0.1
FY 2010 (30) kits			30	0.4															30	0.4
FY 2011 (30) kits					30	0.4													30	0.4
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**7**	**0.1**	**30**	**0.4**	**30**	**0.4**													67	0.9

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	7		10	10	10	8	8	8	6												
Out	7			10	10	10	8	8	8	6											

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										67
Out										67

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION: Provides for the retrofit of ECP 4034 which includes two phases: Airborne Mine Countermeasures (AMCM) Block 2B (AMNS &ALMDS) & full 3B P3I effort includes: Link-16, Downed Aviator Locator system (DALS), SASSM, GAS-1, APCM, IFF Mode S and Mode 5, and communication upgrades, airframe provisions into 67 Block 1/2/3 aircraft; ECP 4034 P3I Lite includes Communications Upgrades on 47 Block 1 aircraft; ECP-4015/Armed Helo Block 3A weapons airframe provision into 32 Block 2A aircraft; Airframe provisions for Forward Firing Weapons (FFW). This OSIP also provides the retrofit of ECP 4012 and 4039 required for the aircraft structural loads imposed by the addition of the AMCM and Armed Helo capabilities. OSIP also provides retrofit of Active Vibration Control (AVC) in 138 MH-60S aircraft and Integrated Mechanical Diagnostics System (IMDS) in 170 MH-60S aircraft to achieve a common configuration for vibration and IMDS. IMDS includes a crash survivable flight data recorder capability as well as providing capabilities required for transition to Condition Based Maintenance (CBM) and to employ Military Flight Operations Quality Assurance (MFOQA) capability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The MH-60S Aircraft completed MS III in August 2002. Armed Helo achieved IOC June 2007. IMDS and P3I achieved IOC in December 2009. AMCM will achieve IOC in FY11.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ECP 4015 - Block 3A (H60-050)	22	11.0	4	2.4																			26	13.4
ECP 4034																								
Block 2B/Block 3B full P3I			10	2.0	15	3.3	8	1.8			8	1.8	10	2.3	7	1.6	14	3.3	4	1.0			68	15.3
Block 3B P3I Lite			8	0.2	18	0.4	7	0.1			7	0.1	14	0.3									47	0.9
ECP 4012			24	0.1	16	0.1	10	*			10	*											50	0.2
ECP 4039			10	1.0	10	1.0	7	0.7			7	0.7	10	1.1	14	1.5	20	2.2	17	1.6			88	9.2
GPS GAS-1	25	1.3	21	1.0																			46	2.3
ECP 4046 AVC/DALS					8	2.6	10	3.3			10	3.3	3	1.0	10	3.4	16	5.5	21	7.4	61	21.8	129	44.9
IMDS	18	3.5	9	1.9	11	2.4	7	1.5			7	1.5	7	1.6	7	1.6	16	3.7	29	6.8	66	15.8	170	38.9
FFW					9	0.7	12	0.9			12	0.9	12	0.9	12	0.9	12	0.9	12	0.9			69	5.2
Installation Kits N/R		22.7		0.5																				23.2
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data		*				0.1																		0.2
Training Equipment																								
Support Equipment																								
ILS				0.1		0.1		0.1				0.1		0.2		0.2		0.2		0.2		0.6		1.6
Other Support		0.6		1.6		1.6		0.6				0.6		0.6		1.1		0.9		5.0		4.9		16.9
Interim Contractor Support																								
Installation Cost	6	3.3	57	4.5	94	13.6	82	16.2			82	16.2	54	10.3	41	9.2	34	10.9	60	15.8	222	41.6	650	125.5
Total Procurement		**42.5**		**15.4**		**25.9**		**25.3**				**25.3**		**18.2**		**19.5**		**27.6**		**38.7**		**84.7**		297.7

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. (6) ECP 4015 installs and (20) ECP 4012 installs do not require kit procurements
4. FFW installs are O-Level.
5. Changes to the Warfighter OSIP were driven by lower than anticipated kit prices for ECP-4034 based on Proposal received in March 2010

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60S** MODIFICATION TITLE: ECP 4015 Block 3A A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 20 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Nov-11 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (28) kits	6	3.3	6	3.0	12	6.1	4	2.1											28	14.5
FY 2010 (4) kits																	4	2.2	4	2.2
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**6**	**3.3**	**6**	**3.0**	**12**	**6.1**	**4**	**2.1**									**4**	**2.2**	32	16.7

Notes:

1. Six Prior Year Kits availlable for installs from missed Production installs. Not procured with APN-5.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	6			3	3	3	3	3	3	2	2										
Out	6			3	3	3	3	3	3	2	2										

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									4	32
Out									4	32

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60S** MODIFICATION TITLE: ECP 4034 Block 2B/3B Full P3I A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: Jul-10 FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: Jun-11 FY 2011: Nov-11 FY 2012: Nov-12 FY 2013: Nov-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 (10) kits					10	4.2													10	4.2
FY 2011 (15) kits							15	6.4											15	6.4
FY 2012 (8) kits									8	3.4									8	3.4
FY 2012 OCO ( ) kits																				
FY 2013 (10) kits											10	4.4							10	4.4
FY 2014 (7) kits													7	3.1					7	3.1
FY 2015 (14) kits															14	6.2			14	6.2
FY 2016 (4) kits																	4	1.8	4	1.8
To Complete ( ) kits																				
TOTAL					**10**	**4.2**	**15**	**6.4**	**8**	**3.4**	**10**	**4.4**	**7**	**3.1**	**14**	**6.2**	**4**	**1.8**	68	29.5

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								5	5	3	4	4	4	2	2	2	2	2	3	2	3
Out								4	5	4	4	4	4	2	2	2	2	2	3	2	3

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	2	2	2	1	3	4	3	4	4	68
Out	2	2	2	1	3	4	3	4	4	68

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60S** MODIFICATION TITLE: ECP 4034 Block 3B Partial P3I A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2010: Jul-10 FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: Jun-11 FY 2011: Nov-11 FY 2012: Nov-12 FY 2013: Nov-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 (8) kits					8	0.7													8	0.7
FY 2011 (18) kits							18	1.5											18	1.5
FY 2012 (7) kits									7	0.6									7	0.6
FY 2012 OCO ( ) kits																				
FY 2013 (14) kits											14	1.2							14	1.2
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL					**8**	**0.7**	**18**	**1.5**	**7**	**0.6**	**14**	**1.2**							47	4.0

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								2	6	3	5	5	5	2	2	2	1	3	4	4	3
Out								2	6	3	5	5	4	3	2	2	1	3	4	4	3

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										47
Out										47

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60S** MODIFICATION TITLE: ECP 4012 A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: May-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013:

DELIVERY DATE: FY 2010: Feb-11 FY 2011: Sep-11 FY 2012: Sep-12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (20) kits			20	0.7															20	0.7
FY 2010 (24) kits					22	0.8	2	0.1											24	0.9
FY 2011 (16) kits							14	0.5	2	0.1									16	0.6
FY 2012 (10) kits									10	0.4									10	0.4
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL			**20**	**0.7**	**22**	**0.8**	**16**	**0.6**	**12**	**0.5**									70	2.5

Note: 20 Kits available for install from Vendor. Not procured with APN-5.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In			6	7	7		7	7	8	4	4	4	4	4	4	4					
Out			6	7	7		7	7	8	4	4	4	4	4	4	4					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										70
Out										70

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60S** MODIFICATION TITLE: ECP 4039 (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 24 Months

CONTRACT DATES: FY 2010: May-10 FY 2011: Nov-10 FY 2012: Nov-11 FY 2013: Nov-12

DELIVERY DATE: FY 2010: May-12 FY 2011: Nov-12 FY 2012: Nov-13 FY 2013: Nov-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 (10) kits							10	3.5											10	3.5
FY 2011 (10) kits									10	3.5									10	3.5
FY 2012 (7) kits											7	2.5							7	2.5
FY 2012 OCO ( ) kits																				
FY 2013 (10) kits													10	5.4					10	5.4
FY 2014 (14) kits															14	5.2			14	5.2
FY 2015 (20) kits																	20	7.6	20	7.6
FY 2016 (17) kits																	17	6.4	17	6.4
To Complete ( ) kits																				
TOTAL							**10**	**3.5**	**10**	**3.5**	**7**	**2.5**	**10**	**5.4**	**14**	**5.2**	**37**	**14.0**	88	34.1

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In												5	5	2	3	3	2	2	2	2	1
Out												4	5	2	3	3	2	2	2	2	2

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	2	3	2	3	3	4	3	4	37	88
Out	2	3	2	3	3	4	3	4	37	88

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60S** MODIFICATION TITLE: ECP 4046 AVC/DALS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: FY 2011: Mar-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: FY 2011: Mar-12 FY 2012: Jan-13 FY 2013: Jan-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (8) kits							8	1.4											8	1.4
FY 2012 (10) kits									10	1.7									10	1.7
FY 2012 OCO ( ) kits																				
FY 2013 (3) kits											3	0.5							3	0.5
FY 2014 (10) kits													10	1.8					10	1.8
FY 2015 (16) kits															16	3.0			16	3.0
FY 2016 (21) kits																	21	4.0	21	4.0
To Complete (61) kits																	61	11.5	61	11.5
TOTAL							**8**	**1.4**	**10**	**1.7**	**3**	**0.5**	**10**	**1.8**	**16**	**3.0**	**82**	**15.5**	129	23.9

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											2	3	3		3	3	4		1	1	1
Out											1	3	3	1	3	3	4		1	1	1

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	2	3	2	3		5	5	6	82	129
Out	2	3	2	3		4	5	5	84	129

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60S** MODIFICATION TITLE: GPS GAS-1 ANTENNA (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010: Jun-10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Apr-11 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (25) kits			25	0.3															25	0.3
FY 2010 (21) kits					21	0.3													21	0.3
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL			**25**	**0.3**	**21**	**0.3**													46	0.6

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In			5	10	10			10	11												
Out			5	10	10			10	11												

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										46
Out										46

Exhibit P-3a

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

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Field Mod Team**

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: Feb-11 FY 2011: Dec-11 FY 2012: Dec-12 FY 2013: Dec-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (18) kits			6	0.5	12	0.9													18	1.4
FY 2010 (9) kits					9	0.7													9	0.7
FY 2011 (11) kits							11	0.9											11	0.9
FY 2012 (7) kits									7	0.6									7	0.6
FY 2012 OCO ( ) kits																				
FY 2013 (7) kits											7	0.6							7	0.6
FY 2014 (7) kits													7	0.6					7	0.6
FY 2015 (16) kits															16	1.3			16	1.3
FY 2016 (29) kits																	29	2.5	29	2.5
To Complete (66) kits																	66	5.7	66	5.7
TOTAL			**6**	**0.5**	**21**	**1.6**	**11**	**0.9**	**7**	**0.6**	**7**	**0.6**	**7**	**0.6**	**16**	**1.3**	**95**	**8.2**	170	14.1

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				3	3	5	5	5	6	2	3	3	3	1	2	2	2	1	2	2	2
Out				3	3	5	5	5	5	3	3	3	3	1	2	2	2	1	2	2	2

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	1	2	2	2	2	4	5	5	95	170
Out	1	2	2	2	2	4	5	5	95	170

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-60 OVERLAND MISSIONS (OSIP 023-08)

MODELS OF SYSTEMS AFFECTED: SH-60B, SH-60F, HH-60H, MH-60R, MH-60S | TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION/JUSTIFICATION: The H-60 Overland Missions OSIP funds the modifications to the H-60 series aircraft in support of Fleet operations for in-country / overland missions. The modifications included under this OSIP will protect the aircraft from physical damage due to the operational environment in order to increase reliability, maintainability and /or mission capability for the conduct of the in-country / overland mission. The modifications include sand ingestion filters such as the Engine Inlet Barrier Filter (EIBF), Auxiliary Power Unit Inlet Barrier Filter and ALQ-144 filters. T700 EIBF systems are required for H-60 aircraft deployed in the desert environment. EIBF systems directly reduce T700 power degradation rates and prevent incidence of foreign object damage. Additionally, the modifications may include aircraft avionics and missions systems that allow for overland operations in degraded visual flight environments (DVE) that are unique to missions conducted in unimproved terrain, both day and night and in all weather conditions. This includes terrain avoidance warning systems (TAWS), precision overland navigation awareness displays, enhanced radar laser detection systems for obstacle and powerline avoidance, and additional developmental items that pertain to operations in degraded visual environments. Adding a Dual Embedded GPS Inertial (EGI) Navigation Sensor and upgraded software for the Horizontal Situation Visual Display (HSVD) will provide pilots with instantaneous and precise positioning data and hover-specific symbology, greatly enhancing situational awareness when landing in DVE.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: EIBF development was completed by the Army and is a commercial off-the-shelf (COTS) procurement.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
EIBF (HH-60H)	36	0.8																					36	0.8
DVE Kit													18	2.2	13	1.6	2	0.2					33	4.0
Installation Kits N/R		0.3						3.0				3.0												3.3
Installation Equipment																								
EIBF (HH-60H)	32	2.8																					32	2.8
Installation Equipment N/R																								
Engineering Change Orders																								
Data														0.2		0.1								0.3
Training Equipment																								
Support Equipment	1	*																					1	*
ILS														0.2		0.1								0.3
Other Support														0.3		0.2								0.4
Interim Contractor Support																								
Installation Cost	36	0.8											18	0.9	13	0.7	2	0.1					69	2.5
Total Procurement		**4.7**						**3.0**				**3.0**		**3.7**		**2.6**		**0.3**						14.4

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. (2) DVE val/ver kits will be procured and installed out of NRE.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **HH-60H** MODIFICATION TITLE: HH-60H DVE (OSIP 023-08)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013: Nov-12

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013: May-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 (18) kits									18	0.9									18	0.9
FY 2014 (13) kits											13	0.7							13	0.7
FY 2015 (2) kits													2	0.1					2	0.1
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL									**18**	**0.9**	**13**	**0.7**	**2**	**0.1**					33	1.7

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																8	10			7	6
Out																6	10	2		7	6

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In			2							33
Out			2							33

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION: The SH-60B currently has a C-Band data link (Hawklink) to transmit data between aircraft and ship. The Littoral Combat Ship (LCS) will be built with a new data link system, Ku Band, which is not compatible with the C-Band. The installation of the Tactical Common Data Link (TCDL) kits on SH-60B aircraft are required to support the LCS during a limited time-frame - from FY09 to FY13 - after which, it is expected that the MH-60R aircraft will be available to support the LCS. The SH-60B TCDL will support the relatively short-range transmission of voice and video information with a limited amount of tactical data. The funding in this OSIP will provide the procurement of 25 SH-60B Ku Band B-kit modifications to be compatible and interoperable with LCS. The new Ku Band data link will transfer data from the SH-60B to the LCS to meet LCS Anti-Submarine Warfare (ASW) and Surface Warfare (SUW) mission requirements. The kits will be installed by "O" level.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Common Data Link (CDL)	10	4.4	9	5.2	6	1.6																	25	11.2
Installation Kits N/R		0.2																						0.2
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment						0.1																		0.1
Support Equipment																								
ILS						0.9																		0.9
Other Support		0.1		0.3		0.6																		1.1
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**4.8**		**5.5**		**3.2**																		13.6

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION: This effort reduces crew Operator System Interface (OSI) workload issues for MH-60R and MH-60S aircraft by replacing operator keysets with Control Display Units (CDU's) and Pointing Devices (PD's) in addition to upgrading OSI software to a point-and-click interface. The OSI kit includes a CDU, Pointing Device, and Interface Cabling Kit. This effort corrects deficiencies identified during OPEVAL of the MH-60R. MH-60R requires 3 OSI kits per aircraft and MH-60S requires 2 OSI kits per aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: MH-60S aircraft completed OPEVAL in Mar 2002 and MS III in Aug 2002. MH-60R completed OPEVAL in Sep 2005 and MS III in Mar 06. NRE for Production incorporation of the OSI was funded in FY07, with production cut-in LOT 14 for MH-60S and LOT 9 for MH-60R.

METHOD OF IMPLEMENTATION: OSI is an "O" Level Install.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
MH-60R			66	4.6	66	4.2	66	4.2			66	4.2	36	2.3							229	21.7	463	37.0
MH-60S			57	4.1	46	2.8	44	2.7			44	2.7									302	18.7	449	28.3
Installation Kits N/R																								
Installation Equipment																								
XXX Equip																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support						0.1		0.1				0.1		0.2								3.0		3.4
Interim Contractor Support																								
Installation Cost																								
Total Procurement				**8.7**		**7.1**		**7.0**				**7.0**		**2.4**								**43.4**		**68.7**

Notes:

1. Totals may not add due to rounding
2. Contract proposal received in March resulted in OSIP in dollar and quantity changes in FY11 and out.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: AUTOMATIC RADAR PERISCOPE DETECTION DESCRIMINATION (ARPDD) (OSIP 005-12)

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

DESCRIPTION/JUSTIFICATION: This line item funds modifications to the MH-60R series aircraft. The modification upgrades the AN/APS-147 Multi-Mode Radar (MMR) to incorporate Automatic Radar Periscope Detection and Discriminator (ARPDD) functionality. ARPDD provides the MH-60R the capability to detect very small, low visibility targets, such as periscopes and small vessels, and alert the aircrew to their presence from a very long distances, reducing aircrew workload and increasing battle group survivability. Three hundred MH-60R aircraft will receive ARPDD capability, 154 will be retrofit. The AN/APS-147 MMR consists of the Signal Data Processor (SDP)/ARPDD Enhanced Processor (AEP), Receiver Transmitter (RT), Antenna Pedestal (AP), Antenna Array (AA), and Interrogator Friend or Foe Receiver Transmitter (IFF R/T).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: ARPDD capability was approved with CPD 260-05 dated 28 November 2005. CDR was completed April 2009. Future milestone include contractor test scheduled to complete December 2010, developmental test in December 2011, and operational test in July 2012.

METHOD OF IMPLEMENTATION:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
APRDD Kit							4	0.4			4	0.4	8	0.8	10	1.1	10	1.1	10	1.1	112	24.4	154	28.9
Installation Kits N/R																								
Installation Equipment																								
ARPDD Kit							4	12.6			4	12.6	8	28.9	10	34.3	10	35.0	10	34.5	112	369.8	154	515.1
Installation Equipment N/R																								
Engineering Change Orders																								
APRDD Kit ECO								0.5				0.5		0.4		1.0		1.1		2.4		8.5		13.8
Data								0.7				0.7		1.0		1.0		1.1		1.3		8.4		13.3
Training Equipment														1.3		2.0		2.0						5.3
Support Equipment																						1.5		1.5
ILS														0.7		0.7		1.0		1.5		7.1		11.0
Other Support								0.8				0.8		0.8		0.9		1.0		2.0		15.5		21.0
Interim Contractor Support																								
Installation Cost																	4	1.6	8	2.6	142	51.2	154	55.4
Total Procurement								**15.0**				**15.0**		**33.9**		**40.9**		**43.8**		**45.3**		**486.4**		**665.3**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **MH-60R** MODIFICATION TITLE: ARPPD (OSIP 005-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 36 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Mar-12 FY 2013: Nov-12

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Mar-15 FY 2013: Nov-15

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (4) kits													4	1.6					4	1.6
FY 2012 OCO ( ) kits																				
FY 2013 (8) kits															8	2.6			8	2.6
FY 2014 (10) kits																	10	3.6	10	3.6
FY 2015 (10) kits																	9	3.2	9	3.2
FY 2016 (10) kits																	11	4.0	11	4.0
To Complete (112) kits																	112	40.4	112	40.4
TOTAL													**4**	**1.6**	**8**	**2.6**	**142**	**51.2**	154	55.4

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In			2	2	2	2	2	2	142	154
Out			2	2	2	2	2	2	142	154

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-60 AIRCRAFT SUSTAINMENT (OSIP 018-12)

MODELS OF SYSTEMS AFFECTED: SH-60B, SH-60F, HH-60H, MH-60S, MH-60R | TYPE MODIFICATION: SUSTAINMENT

DESCRIPTION/JUSTIFICATION: The H-60 aircraft sustainment strategy targets initiatives to remedy the top age related maintenance degraders that impede the aircraft's ability to operate into the future. This effort will sustain the H-60 in an affordable manner until the follow on aircraft becomes available. Wire insulation breaches occur in all aircraft regardless of age, and a breach in the wire is a precursor of wire failure, often resulting in forced landings or even loss of the aircraft and crew. The propensity for failure of wire insulation is primarily due to age of the polymer that makes up the wire insulation. Other factors such as vibration, moisture, temperature, installation practices, and routing in the aircraft contribute to the aging process. The bulk of wire troubleshooting on aircraft electrical circuits is perfumed by making pin-to-pin measurements using a hand-held multimeter or manual breakout boxes. It is a slow process, prone to human error, and cannot be used to detect wire faults prior to occurrence. Thus wire maintenance today is purely reactive. The typical wire inspection employed by military electricians is visual and does not meet the needs of emerging aircraft wiring problems. Obvious failures, such as severed wire, can be detected with human sight; however, visual inspections will not detect the slow erosion associated with the aging process of wire. Further, studies have proven that only twenty-five percent of any aircraft wiring system can be visually inspected without extensive removal of access panels, floorboards, and sound proofing.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
SH-60B Wiring							9	1.4			9	1.4	17	2.6	17	2.6	8	1.2					51	7.7
Installation Kits N/R								3.0				3.0												3.0
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data								0.5				0.5		0.1		0.1		0.1						0.8
Training Equipment																								
Support Equipment																								
ILS																								
Other Support								0.6				0.6		0.3		0.3		0.3		0.5				1.9
Interim Contractor Support																								
Installation Cost													16	5.6	16	5.6	7	2.5	10	3.5			49	17.2
Total Procurement								**5.4**				**5.4**		**8.5**		**8.5**		**4.0**		**4.0**				30.4

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Two kits to be installed as NRE val/ver kits in FY12

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **SH-60B** MODIFICATION TITLE: SH-60B Wiring (OSIP 018-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR FIELD MOD TEAM**

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Mar-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Aug-12 FY 2013: Jun-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (7) kits									7	2.5									7	2.5
FY 2012 OCO ( ) kits																				
FY 2013 (17) kits									9	3.2	8	2.8							17	6.0
FY 2014 (17) kits											8	2.8	7	2.5	2	0.7			17	6.0
FY 2015 (8) kits															8	2.8			8	2.8
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL									**16**	**5.6**	**16**	**5.6**	**7**	**2.5**	**10**	**3.5**			49	17.2

Note: The first two FY12 kits will be installed as NRE val/ver kits, therefore reflect FY13 start.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In														4	3	4	5	4	4	4	4
Out														4	3	4	4	4	5	4	4

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	4	3			4	4	2			49
Out	4	3			4	4	2			49

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
053200, H-1 SERIES

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)	250.1	A	31.1	3.1	11.0	6.4	17.4	6.6	25.3	11.0	11.2	145.4	501.3

DESCRIPTION: There are 38 H-1Ns, 72 H-1Ys in the UH configuration in the HH configuration, and 31 H-1Zs in the AH configuration for a total of 141. The total procurement goal for the UH-1Y is 160 and for the AH-1Z is 189, for a total of 349 H-1s. The UH-1 provides command and control and combat assault support under day/night and adverse weather conditions. Additional UH-1 missions include special operations support, controls/coordination/guidance of supporting fire, and aeromedical evacuation. The HH-configured aircraft provide local civilian and military search and rescue support, as well as augmenting Department of Homeland Security resources. The AH-1Z is a tandem-seat, two-place attack helicopter. The armament of the AH-1Z includes the Sidewinder and Hellfire missile systems, a chin-mounted 20mm turret gun, and a wide variety of forward-firing and gravity-released external stores. The overall goal of the modifications budgeted in FY 2012 is to eliminate safety hazards, improve survivability, fulfill operational requirements, remedy obsolescence, and maintain significant mission capability. Additionally, the H-1 will continue to upgrade the applicable aircraft sensor and avionics systems and subsystems as well as weapons rocket delivery system which includes the Advance Precision Kill Weapon System (APKWS). In addition, air vehicle improvements needing critical reliability enhancements will be incorporated. These platforms will continue to fulfill the operational requirements to detect, identify, and destroy tactical-sized armored targe with precision guided munitions during the day, at night, and during adverse weather, as well as providing enhanced conventional weapons delivery by utilizing the system's laser ranging and designating syste

FY 2012 Overseas Contingency Operations (OCO) funding in the amount of $6.4M is provided for UH-1Y Optimized Top Owl (OTO) Hardware.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
031-92	UH-1 NTIS	209.0	19.5	2.8									231.3
018-98	H-1N SAFETY UPGRADES	30.9	0.2	0.3									31.4
021-07	CRITICAL SYSTEMS IMPROVEMENT	3.1	11.5										14.5
015-12	H-1 AVIONICS IMPROVEMENTS					6.4	6.4		9.1	7.3	7.3	71.8	101.9
016-12	H-1 SENSORS and WEAPONS IMPROVEMENTS				11.0		11.0	6.6	16.3	3.7	3.9	73.6	115.0
	INACTIVE OSIPs	7.1											7.1
Total		**250.1**	**31.1**	**3.1**	**11.0**	**6.4**	**17.4**	**6.6**	**25.3**	**11.0**	**11.2**	**145.4**	**501.3**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION/JUSTIFICATION: Solution Planning Directive (serial number C14, dated 26 June 2007) and Capabilities Production Document (CPD) (approved 11 June 2007, JROCM 138-07) states that the UH-1 requires a Navigational Thermal Imaging System (NTIS) to provide the U.S. Marine Corps with a day/night warfighting capability in all weather conditions. This capability reduces the safety risk by allowing the aircrew to see and avoid flight obstructions and locate targets that might not be visible with the naked eye or night vision goggles. The AN/AAQ-22 is a low-cost, stabilized system which provides the required capability in the form of high quality, real time imagery displayed into the UH-1 aircraft cockpit. The NTIS System is comprised of 5 components: Turret FLIR Unit (TFU), Central Electronics Units (CEU), Hand Control Unit (HCU), Thermal Image Recorder (TIR), and the Video Display Unit (VDU). The NTIS is installed on the UH-1N aircraft by AFC-278. The system also includes a Laser Range Finder (LRF) to determine the range to landmarks, targets, and tactical points of interest. Beginning in FY 1997, the NTIS was upgraded from 1st generation to 3rd generation Forward-Looking Infrared (FLIR) technology. The commercial-off-the-shelf (COTS) Star SAFIRE modification consisted of a 3-5 micron focal plane array detector, an eye-safe LRF, and improved optics. Additionally, the NTIS is upgraded with a new Thermal Imaging Recorder (TIR) with mount and a flat panel display replacement for the VDU due to a fire hazard. In FY 2003, the additional modifications to the NTIS were incorporated in order to add a Laser Designator/Laser Pointer capability (BRITE Star I/II), closed captioned device (CCD) (camera), and a new Universal Hand Control Ur (UHCU). The BRITE Star Block II incorporated a new laser pointer, color CCD camera, laser pump diode laser designator (LDR)/LRF, auto focus, and optics (large focal plane array). The LDS capability was a threshold requirement. Additional reliability and maintenance upgrades including replacement of the existing TIR with a Digital Thermal Imaging Recorder to the NTIS components and VDU (UH-1N only) will also be incorporated. BRITE Star Block II integration into the UH-1Y started in FY 2008.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: BRITE Star II development and test completed in FY 2008. The BRITE Star Block II received a Full Rate Production (FRP) decision August 2008. The UH-1Y FOT&E completed 4th QTR F 2009.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AFC-278 A KIT (CONTRACTOR)	105	2.6																					105	2.6
AFC-334 TIR	105	0.1																					105	0.1
AFC-364 (BRITE Star)	99	0.4																					99	0.4
AFC-396 (UH-1Y)	34	0.7	16	0.3	16	0.3																	66	1.3
Installation Kits N/R		5.6		0.3		0.3																		6.2
Installation Equipment																								
BRITE Star I	38	24.1																					38	24.1
BRITE Star II (UH-1Y)	96	90.6	15	13.2																			111	103.8
Laser Spot Trackers																								
Flat Panel Display	91	0.9																					91	0.9
NTIS System (GFE)	84	29.7																					84	29.7
NTIS Upgrade	90	29.3																					90	29.3
TIR (GFE)	107	1.0																					107	1.0
Installation Equipment N/R		0.6		0.6																				1.2
Laser Spot Trackers																								
Engineering Change Orders																								
Data		0.5		0.2																				0.6
Training Equipment	8	1.7	2	2.2																			10	3.9
Support Equipment	3	1.1																					3	1.1
ILS		1.1		0.2		0.3																		1.6
Other Support		15.1		2.2		1.6																		19.0
Interim Contractor Support																								
Installation Cost	225	4.1		0.3	32	0.3																	257	4.6
Total Procurement		**209.0**		**19.5**		**2.8**																		**231.3**

Notes:

1. Totals may not add due to rounding.
2. AFC-396 UH-1Y will be configured to fly with any of the three existing sensors; STAR Safire, BRITE Star Block I or BRITE Star Block II.

Exhibit P-3a

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

MODIFICATION TITLE: BRITE STAR II/UH-1Y (OSIP 031-92)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 0 Months

PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY 2010: Oct-09 FY 2011: Oct-10 FY 2012: N/A FY 2013: N/A

DELIVERY DATE: FY 2010: Oct-09 FY 2011: Oct-10 FY 2012: N/A FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (34) kits	34	0.6																	34	0.6
FY 2010 (16) kits				0.3	16														16	0.3
FY 2011 (16) kits					16	0.3													16	0.3
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**34**	**0.6**		**0.3**	**32**	**0.3**													**66**	**1.1**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	34					8	8	8	8												
Out	34					8	8	8	8												

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										66
Out										66

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-1N Safety Upgrades (OSIP 018-98)

MODELS OF SYSTEMS AFFECTED: HH-1N/UH-1N | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: Solution Planning Directive (serial number C14, dated 26 June 2007) and Capabilities Production Document (CPD) (approved 11 June 2007, JROCM 138-07) requires that the following safety shortfalls be corrected. The HH/UH-1N helicopter fleet was designed in the 1960s, introduced in the 1970s, and is projected to remain in the Department of the Navy inventory until FY 2014. This program is designed to address safety issues such as mishap causal factors associated with maintaining an older type model series aircraft. This safety upgrade program replaced the Tail Drive System (TDS). A COTS/NDI Improved Torque Indicator System was added to provide a digital torque display to the aircrew to improve low power margin situational awarenes Additionally, the overspeed Aural Alert Unit (AAU) will be modified. A modification to the CH-8500 Vibration Analysis Support Equipment (VASE) will also be needed. A COTS replacement Rotor Brake Quill (RBQ) assembly and Low Maintenance Battery (LMB) ha been incorporated into all HH/UH-1N aircraft. Included in this OSIP are the requirements to correct the safety deficiencies of the Defensive Armament System (DAS), machine guns, carriages, mounts, Improved Ammunition Storage System (IASS), ammunition cans, and associated equipment. Improvements and enhancements to airframe Night Vision Goggle (NVG) compatibility and communications equipment for external agency interaction during the Overseas Contingency Operations (OCO) will be made. Aircraft (A/ fatigue life issues include movement of critical controls, Heads Up Display (HUDs), CDNU, and GPS Upgrades (CCU) (radio select, etc.). Mid-air collision avoidance systems and crew weapons mounts will also be accomplished. Tactical Video Data Link (TVDL) mission kits will also be explored in the UH-1N and the UH-1Y.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The upgrades are proprietary, non-developmental items used in other Bell Helicopter Textronic Incorporated (BHTI) produced military and FAA certified commercial helicopters.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
A-1 Kits (TDS)	131	6.3																					131	6.3
Aural Alert Units (AAU) Kits	103	*																					103	*
GAU-17 Gun Control Unit	191	1.3																					191	1.3
IDAS Mounts	110	0.7																					110	0.7
M-16 Rifle Mounting Provision	1	0.1																					1	0.1
M240 Refielding (mount & ejection tube)	210	0.1																					210	0.1
Rotor Brake Quill	136	1.6																					136	1.6
Smart Torque Indicator	268	3.3																					268	3.3
Tailboom Strakes	119	4.0																					119	4.0
Installation Kits N/R		1.1																						1.1
Installation Equipment	103	0.6																					103	0.6
Installation Equipment N/R		0.2																						0.2
Engineering Change Orders		*																						*
Data		0.7																						0.7
Training Equipment	4	1.3																					4	1.3
Support Equipment	101	1.0																					101	1.0
ILS		1.0																						1.0
Other Support		6.9		0.2		0.3																		7.3
Interim Contractor Support																								
Installation Cost	230	0.8																					230	0.8
Total Procurement		**30.9**		**0.2**		**0.3**																		**31.4**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-1 CRITICAL SYSTEMS IMPROVEMENT PROGRAM (OSIP 021-07)

MODELS OF SYSTEMS AFFECTED: UH-1Y/AH-1Z

TYPE MODIFICATION: READINESS IMPROVEMENT/SAFETY OF FLIGHT COMBAT EFFECTIVENESS

DESCRIPTION/JUSTIFICATION: The purpose of this program is to incorporate a number of cost effective changes to the UH-1Y and AH-1Z helicopters, specifically targeting improvements to safety of flight, maintenance, obsolescence (Diminishing Manufacturing Sources/Material Shortages), and readiness degrader items. These improvements are a vital element of the H-1 Upgrades program, significantly enhancing the strategy of a more ready, more capable H-1 force to accomplish the successful fielding and maintaining of this new capability to the Warfighter in support of Overseas Contingency Operations (OCO). The increased readiness and capabilities that will be realized support the tenets of Sea Power 21, specifically operational availability, enhanced capabilities, and interoperability. Planned improvements under this OSIP cover airframe, propulsion, helmet, weapons systems, survivability, reliability & maintainability, weight & balance, and avionics related subsystems. The OSIP intends to utilize upgrades to existing technology to the maximum extent practicable to minimize development and procurement costs, and to reduce the time to field the improved systems. The systems identified for improvement in the OSIP are the digital map, Crash Survivable Flight Incident Recorder, ARC-210 radio, Blue Force Tracker (BFT), Software System Configuration Set (SCS) 07, command and control consoles, correction of deficiencies, SATCOM antenna placement and rocket envelope expansion. Additionally, systems being evaluated for replacement include support equipment (blade fold rack), avionics subsystems, sensors, data link, armor, communication systems, missile warning and radar detection systems, digital video recorder, mission computer upgrades, and increased aircraft electrical power availability system. Other survivability efforts covered by this OSIP include IR signature reduction (IR suppressors, Turned Exhaust), upgrades to existing EW suites equipment which includes AN/AAR-47, ALE-47, ALQ-144 and implementation of improved armor technologies including, but not limited to, transparent armor, armored panels, and crew weapons mounts which enhances aircraft/aircrew survivability. Additional improvements planned under this OSIP includes future improvements in turned exhaust system, Directed Infrared Counter Measures (DIRCM), and Joint and Allied Threa Awareness System (JATAS). The addition of these systems requires a more robust electrical distribution system and upgrades to platform software.

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

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Antenna Relocation Wiring/Hardware	12	0.1																					12	0.1
Antenna Relocation Wiring/Hardware-OCO			30	2.3																			30	2.3
System Configuration Set 7.0																								
Installation Kits N/R																								
Installation Equipment																								
SATCOM Antenna AV2091	12	0.1																					12	0.1
SATCOM Antenna AV2091-OCO			30	5.3																			30	5.3
Redesign Slipping and Standpipe	12	0.4																					12	0.4
Command and Control Consoles	10	0.2																					10	0.2
Command and Control Consoles-OCO			39	0.8																			39	0.8
Correction of OT Deficiencies	30	1.3																					30	1.3
Installation Equipment N/R																								
Engineering Change Orders		0.1																						0.1
Data-OCO				0.1																				0.1
Training Equipment	2	0.6																					2	0.6
Support Equipment	10	0.2																					10	0.2
ILS																								
ILS-OCO				0.5																				0.5
Other Support		0.1		0.1																				0.2
Other Support-OCO				0.6																				0.6
Interim Contractor Support																								
Installation Cost	2	0.1	12	0.1																			14	0.2
Installation Cost-OCO				1.6	30																		30	1.6
Total Procurement		**3.1**		**11.5**																				**14.5**

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: UH-1Y

MODIFICATION TITLE: H-1 SYSTEM IMPROVEMENT PROGRAM (OSIP 021-07) SATCOM ANTENNA RELOCATION

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: Dec-09 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Dec-10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (14) kits	2	0.1	12	0.1															14	0.2
FY 2010 (30) kits-OCO				1.6	30														30	1.6
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**2**	**0.1**	**12**	**1.8**	**30**														**44**	**1.9**

FY10 Supplemental funds are funding FY11 installs.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2	2	3	3	4	7	7	8	8												
Out	2	2	3	3	4	7	7	8	8												

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										44
Out										44

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)

MODELS OF SYSTEMS AFFECTED: UH-1Y/AH-1Z

TYPE MODIFICATION: READINESS IMPROVEMENT/SAFETY OF FLIGHT COMBAT EFFECTIVENESS

DESCRIPTION/JUSTIFICATION: This OSIP incorporates a number of cost effective changes to the UH-1Y/AH-1Z, specifically attacking the highest degraders in the H-1 Cost Wise Readiness Integrated Improvement Process (CWRIIP) and on the Critical Logistics Review (CILR) lists in order to improve Ready Based Aircraft and Ready For Tasking rates and reduce the total cost of ownership. These improvements are a vital element of the H-1 Upgrades program to significantly enhance the strategy of a more ready, more capable, and more survivable H-1 force to accomplish the successful fielding of this new capability to the warfighter in support of the Overseas Contingency Operations (OCO). The increased readiness and capabilities that will be realized support the tenents of Sea Power 21, specifically operational availability, enhanced capabilities, and interoperability. Systems improved on the H-1 Warfighter aircraft will forward fit to the H-1 Upgrades aircraft and utilize existing technology to the maximum extent practicable to minimize development and procurement costs and to reduce the time to field the improved systems.

Systems and changes identified for improvement in the OSIP are the mission computer, Aircraft Wiring Integration Remote Terminal (AWIRT), Cockpit Wiring Integration Remote Terminal (CWIRT), Flight Control Computer (FCC), UHF/VHF radio system, SATCOM, IFF transponder, Inertial Navigation System (INS), Global Positioning System (GPS), radar altimeter, mass data storage, air data systems, digital map, aircraft displays, digital data loader, flight data recorder, maintenance data recorder, video recorder, digital video recorder, Helmet Mounted Sight & Display (HMSD), Blue Force Tracker (BFT), Ground Proximity Warning System (GPWS), Terrain Awareness Warning System (TAWS), Military Flight Operations Quality Assurance (MFOQA), Aircraft Survivability Equipment (ASE), and avionics interfaces for platform weapons and sensors.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Digital Map															40	2.0	40	2.0	40	2.0	45	3.5	165	9.5
System Configuration Set 7.0															32	1.4	41	1.8	42	2.1	60	2.7	175	8.0
Correction of OT Deficiencies																					153	9.0	153	9.0
ARC-210															40	0.1	33	0.1	33	0.1	47	1.9	153	2.2
Blue Force Tracker																					153	8.6	153	8.6
Installation Kits N/R																								
Installation Equipment																								
Correction of OT Deficiencies																					153	8.9	153	8.9
ARC-210															40	3.0	33	2.1	18	1.1	62	5.0	153	11.2
Blue Force Tracker																					153	8.9	153	8.9
Retrofit OTO Hardware									23	6.3	23	6.3											23	6.3
Installation Equipment N/R																						9.2		9.2
Engineering Change Orders																				0.6		0.6		1.2
Data																								
Training Equipment																1.7						2.0		3.7
Support Equipment																								
ILS																		0.2		0.3		4.4		4.8
Other Support										0.2		0.2				0.9		1.1		1.1		7.2		10.4
Interim Contractor Support																								
Installation Cost																								
Total Procurement										**6.4**		**6.4**				**9.1**		**7.3**		**7.3**		**71.8**		**101.9**

1. Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 016-12)

MODELS OF SYSTEMS AFFECTED: UH-1Y/AH-1Z | TYPE MODIFICATION: SAFETY/SURVIVABILITY

DESCRIPTION/JUSTIFICATION: DESCRIPTION/JUSTIFICATION: This OSIP incorporates a number of cost effective changes to the UH-1Y/AH-1Z, specifically attacking the highest degraders in the H-1 Cost Wise Readiness Integrated Improvement Process (CWRIIP) and on the Critical Logistics Review (CILR) lists in order to improve RBA and RFT rates and reduce the total cost of ownership. These improvements are a vital element of the H-1 Upgrades program to significantly enhance the strategy of a more ready, more capable, and more survivable H-1 force to accomplish the successful fielding of this new capability to the warfighter in support of the Overseas Contingency Operations (OCO). The increased readiness and capabilities that will be realized support the tenents of Sea Power 21, specifically operational availability, enhanced capabilities, and interoperability. Systems improved on the H-1 Warfighter aircraft will forward fit to the H-1 Upgrades aircraft and utilize existing technology to the maximum extent practicable to minimize development and procurement costs and to reduce the time to field the improved systems.

This OSIP addresses the U.S. Marine Corps' (USMC) operational requirement to detect, identify, and destroy tactical-sized armored targets with the precision guided munitions during day, night, and adverse weather conditions. The Target Sight System (TSS) and the BRITE Star sensors provide a night/adverse weather Forward-Looking Infrared (FLIR) and laser designator for the H-1 series helicopters' weapons system engagement, including but not limited to TOW, Hellfire, and Joint Air-to-Ground Missile (JAGM) capabilities. This OSIP also addresses improvements to H-1 series helicopters' weapons systems in support of mission success to include missile, rockets, and gun reliability and accuracy. These weapon systems include JAGM, Advanced Precision Kill Weapon System (APKWS), Hellfire, 20MM Gun, launchers, turrets and crew served weapons. The Linkless Feeder System's (LFS) ammo can/feeder assembly addresses the highest reliability degrader in the gun system. Additional modifications that will significantly increase the accuracy and reliability of this critical weapons system and enhance the survivability of the flight crew include enhanced lubrication system/methodology, laser pointers (including mounting), improved turret test console, and improved barrel supports. Other sensor improvements will include WRA modifications to improve weapons reliability, maintainability, and systems stabilization, as well as upgrades to laser spot tracking and laser pointing devices.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AFC-396 (UH-1Y)							16	0.3			16	0.3	16	0.3	16	0.3			17	0.5	49	1.1	114	2.6
Installation Kits N/R								0.4				0.4		0.4		0.4				0.7				1.8
Tactical Video Data Link																						7.6		7.6
Installation Equipment																								
BRITE Star II (UH-1Y)							10	8.8			10	8.8	6	5.3	11	9.7	2	1.8	2	1.8	18	15.8	49	43.1
Laser Spot Trackers															10	1.6					119	19.1	129	20.7
Installation Equipment N/R								0.8				0.8				0.5		0.5				4.3		6.1
Engineering Change Orders																1.3		0.9						2.2
Data																						0.8		0.8
Training Equipment															1	1.2					6	8.0	7	9.2
Support Equipment																								
ILS																0.3		0.3				1.7		2.3
Other Support								0.5				0.5		0.2		0.6		0.3		0.5		14.8		16.8
Interim Contractor Support																								
Installation Cost							16	0.3			16	0.3	16	0.3	16	0.3			17	0.4	49	0.4	114	1.8
Total Procurement								**11.0**				**11.0**		**6.6**		**16.3**		**3.7**		**3.9**		**73.6**		**115.0**

Notes:

1. Totals may not add due to rounding.
2. AFC-396 UH-1Y will be configured to fly with any of the three existing sensors; STAR Safire, BRITE Star Block I or BRITE Star Block II.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-1 Series

MODIFICATION TITLE: AFC 396/BRITE STAR II/UH-1Y (OSIP 016-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 0 Months

PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY 2010: N/A FY 2011: N/A FY 2012: Oct-11 FY 2013: Oct-12

DELIVERY DATE: FY 2010: N/A FY 2011: N/A FY 2012: Oct-11 FY 2013: Oct-12

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (16) kits							16	0.3											16	0.3
FY 2013 (16) kits									16	0.3									16	0.3
FY 2014 (16) kits											16	0.3							16	0.3
FY 2015 ( ) kits																				
FY 2016 (17) kits															17	0.4			17	0.4
To Complete (49) kits																	49	0.4	49	0.4
TOTAL							**16**	**0.3**	**16**	**0.3**	**16**	**0.3**			**17**	**0.4**	**49**	**0.4**	**114**	**1.8**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										4	4	4	4	4	4	4	4	4	4	4	4
Out										4	4	4	4	4	4	4	4	4	4	4	4

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In					4	4	4	5	49	114
Out					4	4	4	5	49	114

Exhibit P-40, BUDGET ITEM JUSTIFICATION | DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE: **053700, EP-3 SERIES**

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)	779.7	A	92.2	90.3	83.2	20.8	104.0	66.8	56.7	30.6	10.1	34.4	1,264.8

Description:

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

In OSIP 11-01, the Spiral 1 kit improved operational capability and aircrew productivity by expanding the Electronic Support Measures (ESM) frequency coverage, applying state-of-the-art signal exploitation/processing/display techniques, expanding Direction Finding (DI frequency coverage, off-board classified communication, and expanding special signal processing capability. Spiral 2 kit improved information fusion/decision-making capabilities was deferred. Spiral 3 procurement provides Low Band Communication System Upgrades, Information Operations (IO) capability, Environmental Control System (ECS) modifications and the replacement of aging and obsolescence aircraft antenna arrays. OSIP 007-09 Recapitalization Capabilities Migration (RCM) procures capabilities to ensure EP-3E relevance through Quick Reaction Changes (QRC). OSIP 014-05 responds to the current, immediate demand for information operations capabilities on the EP-3E in Overseas Contingency Operations (OCO).

Research and Development is funded with National Security Agency (NSA) Military Intelligence Program (MIP) funds. This OSIP provides the procurement tail for RDT&E funds from the Navy's Advanced Signal Recognition line (PE 0305206N). The NSA RDT&E line for the Navy Airborne Sensor System Improvements funds sensor improvements with application for the EP-3E. MIP RDT&E funds are responsible for the development and acquisition of EP-3E sensors, data links, data relays and ground stations to achieve and maintain interoperability with Defense-wide airborne reconnaissance assets. Active Primary Aircraft Authorization (PAA) inventory is 12 with a Backup Aircraft Authorization (BAA) inventory of 4 for a total of 16 aircraft with the completion of OSIP 29-00. Funds budgeted in FY2010-FY2016 are to continue EP-3E Joint Airborne Signal Intelligence (SIGINT) Architecture (JASA) Modification (JMOD) Common Configuration (JCC) Program. The EP-3E has an average age of 36.8 years. The EP-3E service life will be managed through Special Structural Inspection - Kits (SSI-Ks), Outer Wing Replacement (OWA) and other aircraft sustainment activities in the P3 Series Modification program (BLI 0538, OSIP 005-05).

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
011-01	JSAF MODIFICATION (JMOD)	362.1	49.0	82.3	81.2		81.2	64.8	54.7	28.6	8.1	28.4	759.2
014-05	EP-3E INFO OPERATIONS	84.5	6.4			20.8	20.8						111.8
007-09	EP-3E RECAPITALIZATION CAP.	14.5	36.8	8.0	2.0		2.0	2.0	2.0	2.0	2.0	6.0	75.3
INACTIVE OSIPS		318.6											318.6
Total		**779.7**	**92.2**	**90.3**	**83.2**	**20.8**	**104.0**	**66.8**	**56.7**	**30.6**	**10.1**	**34.4**	**1264.8**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

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

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

DESCRIPTION / JUSTIFICATION:

The EP-3E JASA Modification (JMOD) Common Configuration (JCC) Program is an upgrade to the capabilities of the Sensor System Improvement Program (SSIP) configuration of the EP-3E. This OSIP responds to Operational Requirement Document (ORD) #571-78-01 and the CAPSTONE ORD (CAF-002-88). JCC is designed as an evolutionary acquisition program consisting of spiral upgrades. JCC Spirals include an updated EP-3E infrastructure, improved auto-ESM with the Story Finder system, incorporated Joint Signal Processor (JSP), incorporated SSIP corrections, incorporated low band capability which improves special collection capability, Information Operations (IO) and incorporated Quick Response Capabilities (QRC). Data Fusion capability is currently deferred.

In OSIP 11-01, the Spiral 1 ForceNet kit improved operational capability and aircrew productivity by expanding the ESM frequency coverage, applying state-of-the-art signal exploitation/processing/display techniques, expanding Direction Finding (DF) frequency coverage, off-board classified communication, and expanding special signal processing capability. Spiral 3 procurement begins in FY11 with Low Band Communication System Upgrades, IO capability, Environmental Control System (ECS) modification and the replacement of aging and obsolescence aircraft antenna arrays. This OSIP includes ECO funding to replace subsystem obsolescence to ensure EP-3E viability until recapitalization. ECO Obsolesence addresses obsolescence of all fielded EP-3E MIssion Systems including but not limited to ELINT, COMINT, Communications, Mission Management and Special Signals.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
JCC Spiral 1 LRIP decision was approved as planned on 06 June 2005 and Full Rate Production decision and contract awarded 4th Qtr of FY06.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
PRIOR YEAR INSTALL KITS	44	17.0																					44	17.0
JMOD Common SP1	6	4.8																					6	4.8
JMOD Common SP3					3	7.1	3	8.1			3	8.1	2	5.2	1	2.6							9	23.0
INSTALLATION KITS N/R		13.1		4.1		3.4		2.4				2.4												23.0
Installation Equipment																								
PRIOR YEAR INSTALL EQUIP	75	77.3																					75	77.3
JMOD Common SP1	6	25.0																					6	25.0
JMOD Common SP3					3	17.7	2	10.1			2	10.1	2	9.7	1	4.8							8	42.3
Installation Equipment N/R		36.3		0.9		5.7		1.1				1.1												44.1
Engineering Change Orders																								
JCC Obsolescence		48.4		20.2		16.9		19.1				19.1		12.7		11.9		14.8		2.4		8.0		154.3
Data		7.4		1.6		1.6		1.2				1.2		0.5		0.5		0.5						13.3
Training Equipment		7.8		1.0		1.5		2.1				2.1		1.1		1.0		1.0		0.6		2.4		18.5
Support Equipment		6.2		3.1		4.1		4.3				4.3		1.0										18.6
ILS		17.5		1.1		2.8		2.4				2.4		1.8		1.6		1.8		1.0		3.0		33.1
Other Support		65.2		13.0		6.9		8.3				8.3		7.1		6.0		3.6		1.6		9.0		120.7
Interim Contractor Support																								
Installation Cost	46	36.1		4.0	1	14.6	2	22.1			2	22.1	3	25.7	3	26.4		6.9		2.5		6.0	55	144.2
Total Procurement		**362.1**		**49.0**		**82.3**		**81.2**				**81.2**		**64.8**		**54.7**		**28.6**		**8.1**		**28.4**		**759.2**

Notes:

1. Other support includes navy test for obsolescence.
2. B-Kit Rotable Pool will be used to maintain Aircraft inventory.
3. Total may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems

MODIFICATION TITLE: EP-3E Joint Airborne SIGINT Architecture (JASA) Modification Program (JMOD) (OSIP 11-01)
JMOD Installations/JMOD Common Spiral 3

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Commercial Contractor Installation

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2010: FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: FY 2011: Aug-11 FY 2012: Aug-12 FY 2013: Aug-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (3) kits					1	9.3	2	13.5											3	22.8
FY 2012 (3) kits									3	20.0									3	20.0
FY 2012 OCO ( ) kits																				
FY 2013 (2) kits											2	13.1							2	13.1
FY 2014 (1) kits											1	6.6							1	6.6
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete (9) kits					**1**	**9.3**	**2**	**13.5**	**3**	**20.0**	**3**	**19.7**							9	62.4

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									1		1	1			1	1	1		1	1	1
Out												1		1	1			1	1	1	

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										9
Out	1	1	1							9

Notes:

1. Install schedule based on projected aircraft availability.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems

MODIFICATION TITLE: EP-3E Joint Airborne SIGINT Architecture (JASA) Modification Program (JMOD) (OSIP 11-01) Obsolescence ECPs

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2010: Dec-09 FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: Feb-10 FY 2011: Feb-11 FY 2012: Feb-12 FY 2013: Feb-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits		6.9																		6.9
FY 2010 ( ) kits				4.0																4.0
FY 2011 ( ) kits						5.3														5.3
FY 2012 ( ) kits								8.6												8.6
FY 2013 ( ) kits										5.7										5.7
FY 2014 ( ) kits												6.7								6.7
FY 2015 ( ) kits														6.9						6.9
FY 2016 ( ) kits																2.5				2.5
To Complete ( ) kits																		6.0		6.0
TOTAL		**6.9**		**4.0**		**5.3**		**8.6**		**5.7**		**6.7**		**6.9**		**2.5**		**6.0**		52.6

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										
Out										

Note: OBS quantities vary due to emergent Obs issues.

Exhibit P-40, BUDGET ITEM JUSTIFICATION | DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE: **053800, P-3 SERIES**

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY 2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
Cost (In Millions)	3,950.5	A	455.0	228.0	171.5		171.5	82.9	38.2	7.4	8.0		4,941.5

DESCRIPTION:

This line item funds modifications to P-3 aircraft. The P-3 Orion is a four turbo-prop engine, long-range maritime surveillance aircraft which performs Under Sea Warfare (USW), Surface Warfare (SUW) and Intelligence, Surveillance and Reconnaissance (ISR) support of battle group and littoral operations in direct support of Sea Shield and Forcenet pillars of Seapower 21.

In 2003 the CNO approved the P-3 Sustainment Bridge concept. This resulted in P-3C inventory levels being reduced from 227 to 148. The foundational element of this bridge was optimizing the P-3 fleet by investing manpower, AVDLR and Flying Hour Program (FHP) savings into the resulting smaller P-3 force to produce a better productive ratio of aircraft. This investment allows the P-3 force to be smaller, more ready and more capable.

A key investment area is P-3 Mod Programs. Funding for these programs support a multitude of obsolescence, structural, sustainment, training/logistics and warfighting capability upgrades that are key in keeping the P-3 platform relevant through Multi-mission Maritime Aircraft (MMA) Initial Operational Capability (IOC) of 2013 and until the projected MMA Full Operational Capability (FOC) of 2019 (and beyond for Block Mod Upgrade Program (BMUP) and EP-3 configurations). P-3 aircraft mods funded under the APN line have heavily supported Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF) and Overseas Contingency Operations (OCO). Without key technology upgrades and aggressive obsolescence management, P-3 aircraft will be unable to meet Fleet Response Plan (FRP) requirements, leaving key Seapower 21 capabilities in support of the Combatant Commanders at risk. This P-3 Sustainment Bridge provides a roadmap ensuring sufficient P-3 assets for Fleet and Combatant Commanders to fulfill operational and training/readiness requirements.

The overall goal of the modifications budgeted in FY2012 is to continue aircraft sustainment, including: USQ-78 improvements (part of UpdateIII), comm/nav/surveillance weapon system improvements, upgrades/modifications to airframe components/systems (including outer wing replacements), safety improvements and key system obsolescence upgrades. FY11 OCO will fund Full Motion Video (FMV) Metadata modification. The specific modifications budgeted and programmed ar

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
080-84	UPDATE III BLK UPGRADE	1,250.2	37.5	9.4	13.7		13.7	11.4	0.4				1,322.6
053-85	CRITICAL SYSTEMS IMPROV	38.5	0.4	0.4	0.4		0.4	0.4	0.4	0.4	0.4		41.1
029-94	ASUW IMPROVEMENT PROG	1,375.8	21.2	33.9	30.3		30.3	16.5	3.6				1,481.3
013-01	CNS-ATM	134.8	17.6	10.2	11.1		11.1	4.5	4.2	2.3	0.7		185.4
004-04	P-3 READINESS IMPROVEM	181.3	35.8	10.9	4.4		4.4	1.0					233.4
005-05	SSI-K	822.1	329.0	153.5	100.4		100.4	41.4	26.3				1472.8
005-07	PROJECT K-0416	7.3	2.1	2.1	2.1		2.1	2.2	2.2	1.6	1.6		21.1
006-08	P-3 MISSION SYSTEMS	14.1	11.3	7.6	9.2		9.2	5.6	1.2	3.2	5.3		57.4
	DAWDF REALIGNMENT	1.0											1.0
	INACTIVE OSIPS	125.4											125.4
Total		3,950.5	**455.0**	**228.0**	**171.5**		**171.5**	**82.9**	**38.2**	**7.4**	**8.0**		4,941.5

Note: Totals may not add due to rounding.

Exhibit P-3a

MODIFICATION TITLE: UPDT III BLK UPGRDE(OSIP 080-84)

MODELS OF SYSTEMS AFFECTED: P-3C TYPE MODIFICATION: Operational Improvement

DESCRIPTION / JUSTIFICATION:

The Update III Block Upgrade program provides an improved P-3 anti-submarine warfare (ASW) capability required to neutralize current and emerging littoral and open ocean submarine threats in support of Sea Shield/Sea Power 21.

The program initially established a common configuration of AN/USQ-78(V) acoustic processors, acoustic data recorders, sonobuoy receivers, and other acoustic subsystem components for all P-3C Mission Aircraft. Follow-on program efforts continuously modernize this common acoustic subsystem baseline to address COTS component obsolescence, accomplish periodic COTS technology insertions, and provide functional improvements via an Air Acoustic Rapid COTS Insertion (Air ARCI) process. These common configuration efforts and follow-on technology insertion efforts are accomplished with AN/USQ-78(V) Air ARCI upgrade funding.

FY10 thru FY15 objectives of the Update III Block Upgrade Program are to provide improved ASW capability through a series of Air ARCI Technology Insertions/Refreshes to the Acoustic Receiver, Acoustic Processor, and the Acoustic System. These Tech Insertions/Refreshes will: (1) increase digital sonobuoy monitoring capacity and improve acoustic subsystem maintainabilty by replacing the analog ARR-78 sonobuouy receiver with a digital Software Defined Sonobuoy Receiver (SDSR); (2) increase system openness by eliminating the analog signal conditioning and MIL-unique interface cards; (3) increase processing growth to meet emerging under-sea threats and Fleet ASW requirements for multi-static acoustic sensor processing (e.g., Extended Echo Ranging [EER] family), active acoustic sensor processing (e.g., DICASS) and passive acoustic sensor processing (e.g., ADR, DIFAR) by incrementally upgrading system memory and processing capacity with the latest commercial variants of COTS single board computers and digital signal processors; (4) provide additional on going non-recurring engineering (NRE) solutions to support continuous technology insertions/Refreshes and COTS obsolescence mitigation on a regular cycle via an ARCI Tech Refresh process to the USQ78(B) system.

The Update III Common Configuration program is based on Decision Coordinating Paper W-080-AS and the Program Management Plan #0526 serial 902D/6U324405. Up to 97 aircraft and 10 trainers to be modified to a common baseline configuration, then continuously upgraded via an ARCI process.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The original Update III variant received approval for limited production in December 1983 and December 1984. Approval for full production was received in January 1986. The basis of the currently planned common configuration is an AN/USQ-78(V) variant that received approval for full production in February 2002.

FINANCIAL PLAN: (TOA, $ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		Total	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
PRIOR YEAR KITS	658	98.8																					658	98.8
INSTALLATION KITS N/R		64.5																						64.5
INSTALL EQUIPMENT																								
DASD/DASD DOCKS	310	2.6	42	0.3	10	0.1	60	0.4			60	0.4	38	0.2	76	0.4							536	3.9
PRIOR YEAR EQUIPMENT	1895	567.6																					1895	567.6
USQ-78A/CHRDS	97	126.9																					97	126.9
USQ78 APTR RETROFIT CARD SETS			55	8.7	10	1.7																	65	10.4
USQ78 APTR UPGRADE KITS			16	12.9																			16	12.9
USQ78 ASTR RETROFIT CARD SETS					1	0.5	20	7.7			20	7.7	23	9.0									44	17.2
USQ78 SONO RECEIVER UPGRADE	65	44.1																					65	44.1
USQ78 AFTR UPGRADE KITS																								
INSTALL EQUIPMENT N/R		113.2		2.2		1.8		0.6				0.6		0.1										118.0
ECO																								
ECO		0.1		4.0		0.1		0.1				0.1		0.1										4.4
USQ-78B SYSTEM CONTROLLER ECP		1.6																						1.6
USQ7-78 SONO RECEIVER ECP		5.3																						5.3
DATA		17.3		0.2		0.2		0.3				0.3		0.3										18.3
TRAINING EQUIP	49	20.5	12	0.9	2	0.7																	63	22.0
SUPPORT EQUIP		1.6																						1.6
ILS		3.6																						3.6
OTHER SUPPORT		144.7		3.7		2.0		1.9				1.9		1.3		*								153.6
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST	587	37.9	37	4.7	24	2.4	27	2.7			27	2.7	4	0.4									679	48.1
TOTAL PROCUREMENT		1250.2		37.5		9.4		13.7				13.7		11.4		0.4								1322.6

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

Note: The cost of "A" and "B" kits for USQ-78 are not separately priced.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) USQ-78V CHRDS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished on the SMIP contract OR on the SMIP contract and NADEP Jax

ADMINISTRATIVE LEADTIME: 11 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (97) kits	86	7.1	11	2.1															97	9.2
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2010 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
To Complete () kits																				
TOTAL	86	7.1	11	2.1															97	9.2

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	86	4	4	3																	
Out	86	4	4	3																	

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										97
Out										97

Completions same as inductions; one week effort.

The last 11 USQ78s were modified in plant to include the SONO Receiver upgrade.

All 97 USQ78s have been procured.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) SONO RECEIVER (Acoustic Receiver Tech Refresh)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished at NADEP Jacksonville, on the MIP contract, and on-site by a contractor field team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 21 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (65) kits			26	2.6	24	2.4	15	1.5											65	6.5
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2012 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
To Complete () kits																				
TOTAL			26	2.6	24	2.4	15	1.5											65	6.5

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In		6	6	7	7		8	8	8	8	7										
Out		6	6	7	7		8	8	8	8	7										

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										65
Out										65

Completions same as inductions; two week effort.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) SONO RECEIVER (Acoustic Processor Tech Refresh)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished at NADEP Jacksonville, on the MIP contract, and on-site by a contractor field team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2010: 08/10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: 11/11 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (0) kits																				
FY 2010 (16) kits							12	1.2	4	.4									16	1.6
FY 2011 () kits																				
FY 2012 () kits																				
FY 2012 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
To Complete () kits																				
TOTAL							12	1.2	4	0.4									16	1.6

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										2	3	4	3	2	2						
Out										2	3	4	3	2	2						

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										16
Out										16

Completions same as inductions; two week effort.
The last 11 USQ78s were modified in plant to include the SONO Receiver upgrade .

Exhibit P-3a

MODIFICATION TITLE: ASUW IMPROV. PROG.(OSIP 029-94)

MODELS OF SYSTEMS AFFECTED: P-3C TYPE MODIFICATION: Operational Improvement

DESCRIPTION / JUSTIFICATION:

The Navy's Maritime Patrol and Reconnaissance Force (primarily P-3C Orion aircraft) provides three deliverables to Navy and joint commanders worldwide: Undersea warfare; Intelligence Surveillance, and Reconnaissance; and Maritime Surveillance Targeting. The ASUW Improvement Program meets the Navy's requirement to rapidly provide a significant increase in the current P-3's ability to perform Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASUW), Over-the-Horizon Targeting (OTH-T), and Command, Control, Communications, Computers, and Intelligence (C4I).The target aircraft for this modification are P-3C Update II/II.5 and Update III. This modification focuses on improving the weapon system's capability for standoff targeting and classification. Significant sensor improvements and capabilities are provided by the APS-137D (V) 5 imaging radar, the Advanced Imaging Multi-Spectral Sensor (AIMS) electro optical/infrared system, and ESM upgrades that include Specific Emitter Identification (SEI), SEI Utility Improvement, ALR-95,improved pulse processing, and DF accuracy. C4I is improved with a DAMA Satcom radio suite and Multi-mission Advanced Tactical Terminal (MATT)that can receive the Officer in Tactical Command Information Exchange System (OTCIXS), and other fleet broadcasts. Additional planned Phased Capability Upgrade (PCU) improvements include the Maritime Surveillance Targeting (MST) capability as well as Tactical Common Data Link (TCDL). Survivability enhancements include the ALE-47/AAR-47 missile warning countermeasures, explosive suppressant foam, and small circular area of probability weapon system (Maverick, SLAM, SLAM-ER, and provisions to carry and launch all Mil Std 1760 Digital weapons. Additional funding in FY1995 and FY1996 was utilized to meet an urgent fleet requirement to upgrade 17 Pre-AIP aircraft with Maverick armament control kits. FY2005 Emergency Supplemental Appropriation for Defense (ESAD) funds were provided to procure and install additional TCDL systems. The P3 AIP operational requirement document (ORD) is Ser # 355-88-94. Future Engineering Change Proposals (ECPs) are anticipated for the existing systems including APS 137 radar;AIMS EO/IR; MATT; Link 16; Global Communication & Control System - Maritime (GCCS-M); Precision Targeting Workstation (PTW); OASIS;Video Distribution Controller (VDC); Tactical Mission Computer; ALR-95 ESM;DAMA Satcom; MST; TCDL; Recorders including the High Resolution Digital Recorder; ALE47/AAR47; Digital Stores Management System (DSMS); all weapon systems including missiles, torpedoes, mines, as well as acoustic system pgrades. The ASW Maritime Improvement Program (AMIP) will provide for Mission System Sustainment, ASW improvements and improved C4I systems including INMARSAT/Integrated Tactical Picture(ITP), and High Frequency Internet Protocol (HFIP), FY11 OCO provided funds for Full Motion Video (FMV) Metadata.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This modification makes maximum use of previously developed subsystems.

PROCUREMENT

FINANCIAL PLAN: (TOA, $ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		TOTAL FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
PRIOR YEAR KITS	88	384.3																					88	384.3
TCDL A-KIT	25	0.8																					25	0.8
DIGITAL STORES MGT SYSTEM	2	0.4																					2	0.4
INSTALLATION KITS N/R		42.1																						42.1
INSTALL EQUIPMENT																								
BMUP ASE FOAM KITS	4	0.2																					4	0.2
C4 FOR ASW LINK16	14	8.0	2	1.2	13	8.1	18	11.4			18	11.4	8	5.1									55	33.9
C4 FOR ASW (INMARSAT/ITP)	14	11.0	2	1.0	13	6.9	18	10.1			18	10.1	8	4.7									55	33.7
Digital Stores Management	2	0.7																					2	0.7
GFE SENSORS AND AVIONICS		287.0																						287.0
HIGH RESOLUTION DIGITAL RECORDER		0.8																						0.8
HFIP	26	2.6			8	0.9	21	2.3			21	2.3											55	5.8
PHASED CAPABILITY UPGRADE (MST)	74	45.7																					74	45.7
PRIOR YEAR EQUIPMENT		9.5																						9.5
TCDL B-KIT	26	10.8																					26	10.8
FULL MOTION VIDEO (FMV) METADATA (OCO)					30	3.9																	30	3.9
INSTALL EQUIPMENT N/R		101.4		2.5		0.4		*				*												104.4
INSTALL EQUIPMENT N/R (FMV OCO)						1.0																		1.0
ECO																								
ALR-95 UPGRADES		0.3																						0.3
DIGITAL STORES MANAGEMENT SYSTEM		11.9																						11.9
SLAM-ER		23.8																						23.8
C4 FOR ASW				2.7		0.5		0.1				0.1		0.1										3.3
DATA		17.6		0.3		0.3		0.2				0.2		*										18.4
TRAINING EQUIP		82.1		0.6		0.4																		83.1
SUPPORT EQUIP		15.1		0.3																				15.4
ILS		16.3		0.3		0.3		0.2				0.2		0.2		0.2								17.5
ILS (FMV OCO)						0.2																		0.2
OTHER SUPPORT		165.4		11.6		6.5		2.6				2.6		1.5		0.6								188.2
OTHER SUPPORT (FMV OCO)						0.3																		0.3
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST	205	138.1	15	0.8	29	3.5	26	3.4			26	3.4	36	4.9	16	2.8							327	153.3
INSTALLATION COST (FMV OCO)						0.6	15				15		15										30	0.6
TOTAL PROCUREMENT		1,375.8		21.2		33.9		30.3				30.3		16.5		3.6								1,481.3

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

1. The cost of "A" and "B" kits for all kits (except TCDL) not separately priced.
2. AIP prior year TCDL kits funded with Congressional Add and ESAD funds.
3. Phased Capability Upgrade (MST) prior year kits include two (2) lab assets.
4. FMV Metadata kits installed in FY12 and FY13 with FY11 OCO funds.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) AIS Installations/PCU/MST)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (75) kits ***	*/** 60	*/** 1.8	12	.4															72	2.2
FY 2010 ()kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2012 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
To Complete ( ) kits																				
TOTAL	60*	1.8	12	.4															72	2.2

*FY07 Congressional Add funds 37 installs (12 installs in FY08 and 24 installs in FY09)

** FY07 Title IX funds 21 installs (21 kits in FY09)

*** 1 Prior Year kit was installed in the lab and 2 Prior Year kits are being installed in trainers

(1) lab kit procured under NRE

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	60	12																			
Out	48	12	12																		

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										72
Out										72

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED:

P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) C4 for ASW (INMARSAT/ITPLink-16) Installations

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

Contractor Field Mod Team

ADMINISTRATIVE LEADTIME:

1 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES:

FY 2010: 11/09 FY 2011: 11/10 FY 2012: 11/11 FY 2013: 11/12

DELIVERY DATE:

FY 2010: 10/10 FY 2011: 10/11 FY 2012: 10/12 FY 2013: 10/13

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (14) kits *			3	.4	11	1.6													14	2.0
FY 2010 (2) kits					2	.3													2	.3
FY 2011 (13) kits							13	2.0											13	2.0
FY 2012 (18) kits									18	2.9									18	2.9
FY 2012 OCO ( ) kits																				
FY 2013 (8) kits											8	2.0							8	2.0
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 ( ) kits																				
To Complete () kits																				
TOTAL			3	.4	13	1.9	13	2.0	18	2.9	8	2.0							55	9.1

* FY08 Kits Procured With Cong Add

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					3	3	3	3	4	4	3	3	3	4	5	5	4	3	3	2	
Out						3	3	3	3	4	4	3	3	3	4	5	5	4	3	3	2

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										55
Out										55

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C

MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) High Frequency Internet Protocol (HFIP)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 5 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: FY 2011: 3/11 FY 2012: 02/12 FY 2013:

DELIVERY DATE: FY 2010: FY 2011: 3/12 FY 2012: 02/13 FY 2013:

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (26) kits *					16	1.6	10	1.1											26	2.7
FY 2010 () kits																				
FY 2011 (8) kits							3	.3	5	.6									8	.9
FY 2012 (21) kits									13	1.4	8	.8							21	2.3
FY 2012 OCO ( ) kits																				
FY 2013) kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 ( ) kits																				
To Complete () kits																				
TOTAL					16	1.6	13	1.4	18	2.0	8	.8							55	5.8

* Two kits are to be installed in trainers & one in the PHIC

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						4	4	4	4	4	4	3	2	4	5	5	4	8			
Out							4	4	4	4	4	4	3	2	4	5	5	4	8		

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										55
Out										55

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94; Full Motion Video (FMV) Metadata for P-3

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:
Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 11 Months PRODUCTION LEADTIME: 7 Months

CONTRACT DATES: FY 2010: FY 2011: 09/11 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: 04/12 FY 2012: FY 2013:

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 () kits																				
FY 2011 OCO (30) kits					*	.6	15	*	15	*									30	.6
FY 2012 () kits																				
FY 2012 OCO ( ) kits																				
FY 2013) kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 ( ) kits																				
To Complete () kits																				
TOTAL						.6	*		15	*		*							30	.6

*FY11 kits/installs procured with FY11 OCO funds

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In												7	8	7	8						
Out												7	8	7	8						

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										30
Out										30

Exhibit P-3a

MODIFICATION TITLE: CNS-ATM(OSIP 013-01)

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3 TYPE MODIFICATION: Operational Improvement/Safety

DESCRIPTION / JUSTIFICATION:
P-3C aircraft have a requirement for a Communications, Navigation and Surveillance/ Air Traffic Management (CNS/ATM) upgrades to meet expanding CNS/ATM requirements and ensure global access to commercial airspace. The CNS/ATM requirements consist of various avionics systems upgrades/replacements which currently include; VHF radio with 8.33 kHz channel spacing, IFF (Mode S and Mode 5), protected ILS/VOR with FM Immunity, and an upgraded GPS to provide increased navigation accuracy (RNP5, BRNAV, RVSM) with the capability to be upgraded to meet Automatic Dependent Surveillance Broadcast (ADS-B), Next Generation Communications (NEXCOM), Joint Precision Approach and Landing System (JPALS), Precision Area Navigation (PRNAV), Navigation Warfare (NAVWAR) and Joint Tactical Radio System (JTRS) requirements . Successful integration of any or all of these capabilities, and any future Federal Aviation Administration (FAA) or International Civil Aviation Organization (ICAO) mandates, requires an Flight Management System (FMS) which provides for growth and interface flexibility.
This OSIP provides non-recurring engineering for the development of the CNS/ATM architecture for the P-3 aircraft which includes a FMS/CDU, digital air data computer (DADC) and an Electronic Flight Display Systems (EFDS). This modification program provides CNS/ATM upgrades for 132 P-3C aircraft and 16 EP-3 aircraft. RNAV/ MODE S Kit (JAX ECP P3-828) includes FMS/CDU 7000, Digital Air Data Computer, APX-118 (IFF/MODE S) and RINU-G. EFDS (JAX ECP P3-491), MMR (JAX ECP P3-826 & ARC-210 (8.33KHz) (Jax ECP P3-827) are Stand-Alone ECPs that will be installed separately or in conjunction with RNAV/Mode S ECP. Joint Mission Planning System (JMPS) Unique Planning Componet (UPC) is required to replace the flight and mission planning elements (Flight Planning, ASW Mission Planning, SLAM-ER planning) that presently reside in TAMPS, which will be replaced by JMPS. The JUMPS UPC will reside on laptop computers to be procured for 97 aircraft (72 AIP/25 BMUP). There is no kit or install associated with this effort.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
Acquisition Strategy approved 21 Nov 03/ACAT IVM. Preliminary Design Review for RNAV Mode S completed 16 Jun 04. Began transition of ARC-210 (8.33kHz) Radio and MLR-2020 (P-ILS) from Roll-On/Roll-Off to permanent installation in FY-05 (PMA-209 funded). Milestone C/ Full Rate Production approved on 23 August 2006.

FINANCIAL PLAN: (TOA, $ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		Total	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
5VAC RED LIGHTING BUS	112	0.2	20	*																			132	0.2
8.33kHz VHF RADIO	28	0.1		***		***		***				***		***									28	0.1
ARC-197/210 KIT	28	0.5																					28	0.5
EFDS	146	9.1	6	0.7	2	0.2	2	0.2			2	0.2											156	10.3
MLR-2020 (P-ILS)	75	0.3		***		***		***				***		***									75	0.3
MLR-2020 (PERMANENT)	20	0.1																					20	0.1
RNAV/MODE S	92	8.3	20	2.6	6	0.5	18	1.4			18	1.4	2	0.2	7	0.6							145	13.6
INSTALLATION KITS N/R		11.0		0.1																				11.1
INSTALL EQUIPMENT																								
8.33kHz (ARC-210)	54	1.8		***		***		***				***		***									54	1.8
APX-118 (IFF/MODE S)	5	0.1		***		***		***				***		***									5	0.1
DIGITAL ADC	216	5.5	34	1.0	12	0.3	36	1.0			36	1.0	4	0.1	14	0.4							316	8.3
EFDS	159	12.9	4	0.6	2	0.3	2	0.3			2	0.3											167	14.2
FMS/CDU 7000 (3 per A/C	306	13.7	60	3.0	18	0.9	54	2.7			54	2.7	6	0.3	21	1.2							465	21.8
JMPS UPC			6	*	91	0.5																	97	0.5
MLR-2020 (P-ILS) (2 PER A/C)	148	6.1		***		***		***				***		***									148	6.1
MLR-2020A-1 UPGRADES	40	0.2		***		***		***				***		***									40	0.2
RINU-G (RNP 4/5) (2 PER A/C)	8	0.1		***		***		***				***		***									8	0.1
INSTALL EQUIPMENT N/R		15.0		1.8		1.2																		18.0
ECO																								
ADDU MOD FOR OP TRAINERS	18	0.1																					18	0.1
CDU 7000 SERVICE BULLETINS		0.1																						0.1
JUMPS SOFTWARE				0.1		0.6		0.5				0.5												1.2
DATA		2.7																						2.7
TRAINING EQUIP	20	1.5	2	0.1																			22	1.6
SUPPORT EQUIP																								
ILS		3.0		0.5		0.4		0.4				0.4		0.4		0.4		0.4		0.1				5.4
OTHER SUPPORT		19.8		3.5		1.4		1.0				1.0		0.6		0.5		0.6		0.5				28.0
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST	333	22.7	52	3.8	45	3.9	34	3.5			34	3.5	25	2.9	6	1.1	7	1.3					502	39.2
TOTAL PROCUREMENT		134.8		17.6		10.2		11.1				11.1		4.5		4.2		2.3		0.7				185.4

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

1. Totals do not add due to rounding.

** 60 EFDS funded under GSP OSIP 28-92.

*** Beginning in FY-04, PMA-209 funded NRE, equipment and installs for ARC-210 VHF radio, APX-118, MLR-2020 and RINU-G.

NOTE: APX-118 and RINU-G funding in FY04 is for TKIs.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) RNAV MODE S

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: 03/10 FY 2011: 03/11 FY 2012: 03/12 FY 2013: 03/13

DELIVERY DATE: FY 2010: 03/11 FY 2011: 03/12 FY 2012: 03/13 FY 2013: 03/14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (92) kits	56	10.6	23	3.4	13	2.1													92	16.1
FY 2010 (20) kits					8	1.3	12	2.1											20	3.4
FY 2011 (6) kits							4	.6	2	.3									6	1.0
FY 2012 (18) kits									14	2.3	4	.7							18	3.1
FY 2012 OCO ( ) kits																				
FY 2013 (2) kits											2	.4							2	.4
FY 2014 (7) kits													7	1.3					7	1.3
FY 2015 () kits																				
FY 2016 ( ) kits																				
To Complete () kits																				
TOTAL	56	10.6	23	3.4	21	3.4	16	2.7	16	2.7	6	1.1	7	1.3					145	25.7

P-3C Prototype NRE, prototype kit and prototype installation funded in FY02 with Congressional Plus-Up.

Installs include trainers.

RNAV MODE S installs begin in FY05 and consist of FMS/CDU 7000, Digital Air Data Computer (DADC/ADDU), CXP and RINU-G. CXP & RINU-G Funded by PMA-209.

Final RNAV Mode S Quantity reduced by 16. Final Quantity of 148 equals 130 active P-3Cs, 16 EP-3 and 2 P-3Cs that received RNAV Mode S that have or will be struck.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& PRIOR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	56	9	4	5	5	9	4	4	4	10	2	2	2	2	5	5	4	4	1	1	
Out	51	5	9	4	5	5	9	4	4	4	10	2	2	2	2	5	5	4	4	1	1

	FY 2015						FY 2016				To	
	1	2	3	4	3	4	1	2	3	4	Complete	TOTAL
In	3	4										145
Out		3	4									145

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) Electronic Flight Display Systems (EFDS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010: 03/10 FY 2011: 03/11 FY 2012: 03/12 FY 2013:

DELIVERY DATE: FY 2010: 01/11 FY 2011: 01/12 FY 2012: 01/13 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$		$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 &PY (146) kits	141 *	11.7	3	.3	2	.2													146	12.2
FY 2010 (6) kits					2	.2	4	.5											6	.7
FY 2011 (2) kits							2	.2											2	.2
FY 2012 (2) kits									2	.2									2	.2
FY 2012 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
To Complete () kits																				
TOTAL	141	11.7	3	.3	4	.5	6	.7	2	.2									156	13.4

Installs include trainers.

* 60 Prior year EFDS funded kits under GPS OSIP 29-92

Final Quantity of 156 equals 130 active P-3Cs, 16 EP-3 and 10 P-3Cs that received EFDS that have been or will be struck.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& PRIOR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	141	1	1	1		1	1	1	1	2	2	1	1		1	1					
Out	140	1	1	1	1		1	1	1	1	2	2	1	1		1	1				

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										156
Out										156

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) 5V LIGHTING CB

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Team

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: 01/10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: 09/10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (112) kits	67	.2	26	.1	19	.1													112	.3
FY 2010 (20) kits					1	*	12	*	7	*									20	.1
FY 2011 () kits																				
FY 2012 () kits																				
FY 2012 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
To Complete () kits																				
TOTAL	67	.2	26	.1	20	.1	12	*	7	*									132	.4

Asterisk (*) indicates amount value less than 51K.

Installation Schedule

	FY 2009 & PRIOR	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	67	7	7	6	6	5	5	5	5	3	3	3	3	3	4						
Out	67	7	7	6	6	5	5	5	5	3	3	3	3	3	4						

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										132
Out										132

Exhibit P-3a

MODIFICATION TITLE: SSI-K(OSIP 005-05)

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S TYPE MODIFICATION: Sustainment

DESCRIPTION / JUSTIFICATION:
The Special Structural Inspection - Kits Program is an Operational Safety Improvement Program (OSIP) that will capture the P-3/EP-3 aircraft's test demonstrated fatigue life by replacing airframe structural components in fatigue life limiting critical regions of the P-3/EP-3 aircraft to enable the airframe to fully reach its designed service life but will not extend the fatigue life of those aircraft. Unchecked, these problem areas collectively will result in significant loss of aircraft from the operational inventory due to operational and support funding limitations. SSI-K will manufacture and install a structural mod / replacement kit for P-3 outer wing, center box and other components. Aircraft that have received an Enhanced Special Structural Inspection (ESSI) require only the Center Box subset of an SSI-K. These Center Box subset install kits are shown separately.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Program is in full rate production.

FINANCIAL PLAN: (TOA, $ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
CENTER BOX KIT	6	1.7	1	0.3	11	3.8	3	2.1			3	2.1											21	7.9
ZONE 5 MITIGATION KIT	12	2.0	6	3.1	12	6.4																	30	11.5
OUTER WING REPLACEMENT KIT			12	153.9																			12	153.9
Rotable Pool Outer Wing Kit	3	3.4																					3	3.4
SSI-K KIT (A-Kits)	69	56.0					2	2.7			2	2.7	1	1.6									72	60.3
Supplemental SSIK Kit	13	10.1																					13	10.1
Supplemental Zone 5 Kit	36	15.3																					36	15.3
Supplemental Center Box Kit	24	5.7																					24	5.7
Supplmental OW Replacement Kit	17	210.3																					17	210.3
Supplemental Rotable Pool OW Kit	4	10.1																					4	10.1
INSTALLATION KITS N/R		9.7																						9.7
INSTALL EQUIPMENT																								
INSTALL EQUIPMENT N/R																								
ECO																								
CENTER WING FABRICATION				0.1																				0.1
SSI-K KIT ECP				0.3																				0.3
OUTER WING KIT ECP																								
DATA		1.4		0.2		0.1		0.1				0.1												1.7
TRAINING EQUIP																								
SUPPORT EQUIP		14.5		2.3		0.1																		17.0
ILS		4.1		1.2		0.1		0.6				0.6		0.6										6.6
OTHER SUPPORT		45.4		18.5		7.0		3.5				3.5		2.5		0.9								77.9
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST	103	432.3	41	149.1	36	136.2	31	91.4			31	91.4	10	36.7	4	25.4							225	871.0
TOTAL PROCUREMENT		822.1		329.0		153.5		100.4				100.4		41.4		26.3								1,472.8

1. No Install Costs associated with Rotable Pool Outer Wing Kits.
2. EP SSI-K Kits have been included in SSI-K Kit Line and Zone 5 Mitigation Kit Line.
3. FY-09 OCO funds 6 Zone 5 Installs in FY-09 and 6 Zone 5 Installs in FY-10.
4. FY-10 OCO funds 2 Outer Wing Installs in FY-10 and 6 Outer Wing Installs in FY-11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S

MODIFICATION TITLE: P-3 / EP-3 Special Structural Inspection - Kits (SSI-K) (OSIP 05-05)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 5 Months

PRODUCTION LEADTIME: 17 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: 3/12 FY 2013: 3/13

DELIVERY DATE: FY 2010: FY 2011: FY 2012: 8/13 FY 2013: 8/14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (82) kits	51	254.2	15	91.3	12	72.5	2	13.0	1	6.6	1	6.3							82	444.0
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 (2) kits											2	12.7							2	12.7
FY 2012 OCO ( ) kits																				
FY 2013 (1) kits											1	6.3							1	6.3
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 ( ) kits																				
To Complete () kits																				
TOTAL	51	254.2	15	91.3	12	72.5	2	13.0	1	6.6	4	25.4							85	463.0

1. 12 SSI-K Installs are for EP-3 aircraft

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	51	4	4	4	3	3	3	3	3	1	1			1				1	1	1	1
Out	46	3	2	4	4	4	3	3	3	3	3	1	1			1				1	1

	FY 2015				FY 2016				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										85
Out	1	1								85

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S

MODIFICATION TITLE: P-3/EP-3 Special Structural Inspection - Kits (SSI-K) (OSIP 05-05) Center Box

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: 2/10 FY 2011: 12/10 FY 2012: 12/11 FY 2013:

DELIVERY DATE: FY 2010: 2/11 FY 2011: 12/11 FY 2012: 12/12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (30) kits	14	10.0	14	7.8	2	1.1													30	18.9
FY 2010 (1) kits					1	0.6													1	0.6
FY 2011 (11) kits							11	6.5											11	6.5
FY 2012 (3) kits									3	2.0									3	2.0
FY 2012 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 ( ) kits																				
To Complete () kits																				
TOTAL	14	10.0	14	7.8	3	1.7	11	6.5	3	2.0									45	28.0

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	14	3	3	4	4		1	1	1	1	3	3	4	1	1	1					
Out	14				3	3	4	4		1	1	1	1	3	3	4	1	1	1		

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										45
Out										45

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S MODIFICATION TITLE: P-3 / EP-3 Outer Wing Replacement Kits (OSIP 05-05)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 21 Months

CONTRACT DATES: FY 2010: 9/10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: 6/12 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (17) kits*			2	35.3	15	39.6													17	74.9
FY 2010 (12) kits							6	26.5	6	28.2									12	54.7
FY 2011 () kits																				
FY 2012 () kits																				
FY 2012 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 ( ) kits																				
To Complete () kits																				
TOTAL			2	35.3	15	39.6	6	26.5	6	28.2									29	129.6

*Notes

*FY08 Outer Wing Kits procured with FY08 Supplemental Funds

**FY10 OCO funds 2 Outer Wing Installs in FY-10 and 6 Outer Wing Installs in FY-11

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					2	3	4	4	4			2	4	3	3						
Out								2	3	4	4	4			2	4	3	3			

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										29
Out										29

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S

MODIFICATION TITLE: P-3 / EP-3 Zone 5 Mitigation Kits (OSIP 05-05)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010: 1/10 FY 2011: 1/11 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: 11/10 FY 2011: 11/11 FY 2012: FY 2013:

($ in Millions)

Cost:	Prior years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (48) kits	38	168.0	10	14.7															48	182.7
FY 2010 (6) kits					6	22.3													6	22.3
FY 2011 (12) kits							12	45.4											12	45.4
FY 2012 () kits																				
FY 2012 OCO ( ) kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 ( ) kits																				
To Complete () kits																				
TOTAL	38	168.0	10	14.7	6	22.3	12	45.4											66	250.4

*Notes

*27 Zone 5 Installs funded with FY08 Supplemental; 3 in FY08 and 24 in FY09

**12 Zone 5 Installs funded with FY09 OCO; 6 in FY09 and 6 in FY10

***12 Zone 5 Installs are for EP-3 aircraft

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	38	2	2	3	3	1	1	2	2	3	3	3	3								
Out	12	7	7	12	2	2	3	3	1	1	2	2	3	3	3	3					

	FY 2015				FY 2016				To	
	1	2	3	4	1	2	3	4	Complete	TOTAL
In										66
Out										66

Exhibit P-3a

MODIFICATION TITLE: P-3 MISSION SYSTEMS(OSIP 006-08)

MODELS OF SYSTEMS AFFECTED: P-3C TYPE MODIFICATION: Operational Improvement

DESCRIPTION / JUSTIFICATION:
The Navy's Maritime Patrol and Reconnaissance Force (primarily P-3C Orion aircraft) provides three deliverables to Navy and Joint commanders worldwide: Undersea warfare; Intelligence Surveillance, and Reconnaissance; and Maritime Surveillance Targeting. The P-3C Mission Systems Sustainment program will ensure that the P-3C aircraft continues to meet the Navy's requirement to perform Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASUW), Over-the-Horizon Targeting (OTH-T), and Command, Control, Communications, Computers, and Intelligence (C4I) until Full Operational Capability (FOC) of MMA is achieved (2019). Sustaining the sensor capabilities provided by the APS-137D (V) 5 imaging radar, the Advanced Imaging Multi-Spectral Sensor (AIMS) electro optical/infrared system, ALR 95 ESM, Tactical Common Data Link (TCDL), small circular area of probability weapon system (Maverick, SLAM, SLAM-ER, provisions to carry and launch all MI Std 1760 Digital weapons with Digital Stores Management System, BMUP Sustainment, Fleet Response, P-3 Obsolescence Upgrades, ALE-47/AAR-47 missile warning countermeasures due to obsolescence is essential in order to maintain these vital capabilities. Additional systems and capabilities may be required in order to remain effective in the Sea Power 21 Construct. These systems include: APS 137 radar; Acoustic systems, AIMS EO/IR; MATT; Link 16; Global Communication & Control System - Maritime (GCCS-M); Integrated Tactical Picture (ITP); INMARSAT; Precision Targeting Workstation (PTW); OASIS; Video Distribution Controller (VDC); Tactical Mission Computer; ALR-95 ESM; DAMA Satcom; MST; TCDL; Recorders including the High Resolution Digital Recorder; ALE47/AAR47; Digital Stores Management System (DSMS), Advanced Data Storage System (ADSS); all weapon systems including missiles, torpedoes, mines, as well as acoustic system upgrades.
These improvements are a vital element of the P-3 sustainment bridge for mission aircraft, including AIP and BMUP, significantly enhancing the strategy of a smaller, more ready, more capable P-3 force during the bridge to Multi-Mission Maritime Aircraft (MMA). P-3 C Mission Systems Sustainment is a branch of the ASW Maritime Improvement program (AMIP) to provide for obsolescence, technology refresh and technology insertion to P-3C mission systems.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
This modification makes maximum use of previously developed subsystems.

FINANCIAL PLAN: (TOA, $ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS N/R																								
INSTALL EQUIPMENT																								
BMUP TECH REFRESH/INSERTION																	2	1.5	4	2.8			6	4.3
ADSS w/OASIS FUNCTIONALITY			17	2.8	8	1.3	17	2.6			17	2.6	14	2.1	1	0.2							57	9.0
APS 137 RADAR TECH REFRESH/INSERTION					12	0.5	12	0.5			12	0.5	8	0.3									32	1.2
VIDEO DISTRIBUTION CONTROLLER																								
TACTICAL MISSION COMPUTER					24	2.4	24	2.4			24	2.4	15	1.5									63	6.3
MATT TECH REFRESH/INSERTION																								
TCDL TECH REFRESH/INSERTION					12	0.6	12	0.6			12	0.6	8	0.4									32	1.6
AIRBORNE ADV DIGITAL NETWORK SYSTEM																								
INMARSAT					16	0.7	16	0.7			16	0.7	8	0.4	3	0.1							43	1.8
INTEGRATED TACTICAL PICTURE					16	0.4	16	0.4			16	0.4	8	0.2	4	0.1							44	1.0
ADVANCED DATA STORAGE SYSTEM							8	0.1			8	0.1	4	0.1	4	0.1							16	0.2
BMUP SUSTAINMENT/UPGRADES							8	0.1			8	0.1	4	0.1	4	0.1							16	0.2
FLEET RESPONSE							14	0.1			14	0.1	7	0.1	7	0.1	7	0.1	8	0.1			43	0.3
P-3 OBSCOLESCENCE UPGRADES							14	0.1			14	0.1	7	0.1	7	0.1	7	0.1	8	0.1			43	0.3
INSTALL EQUIPMENT N/R		5.2		3.2				0.4				0.4												8.8
ECO		0.4		0.6		0.1		0.1				0.1		*		*		0.1		0.1				1.3
DATA		*		0.2		0.1		0.1				0.1						0.1		0.1				0.5
TRAINING EQUIP		0.1		0.8		0.2		*				*		*				0.1		0.1				1.3
SUPPORT EQUIP				0.1		0.1		*				*		*										0.3
ILS				0.1		0.1		0.1				0.1		0.1		0.1		0.1		0.3				0.8
OTHER SUPPORT		8.4		3.5		1.1		0.9				0.9		0.4		0.5		1.4		1.9				18.2
INTERIM CONTRACTOR SUPPORT																								
TOTAL PROCUREMENT		14.1		11.3		7.6		9.2				9.2		5.6		1.2		3.2		5.3				57.4

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

1. No install Schedule is depicted because the system are form fit functions done at an Organization Level.

Exhibit P-40, BUDGET ITEM JUSTIFICATION | DATE: February 2011

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

P-1 ITEM NOMENCLATURE
054400, E-2 SERIES

Program Element for Code B Items:

Other Related Program Elements

	Prior ID Years	Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QUANTITY													
COST (In Millions)	1244.9	A	50.3	47.0	29.2		29.2	18.2	35.0	40.0	39.8	102.5	1607.0

DESCRIPTION:
This line item funds modifications to the E-2 aircraft. The E-2 is an all weather, carrier based, airborne early warning and command and control aircraft that extends task force defense perimeters by providing early warning of approaching enemy units and by vectoring interceptors into attack position. Additionally, the HAWKEYE provides strike control, radar surveillance, search and rescue assistance, communications relay and automatic tactical data exchange. The E-2 aircraft design service life is 10,000 flight hours. The E-2 is a critical element of the Navy's Cooperative Engagement Capability (CEC). As the result of technological advancements, the Commercial-Off-The-Shelf (COTS) hardware/software of the Mission Computer (MCU) will change or become obsolete in the very near future.

The Outer Wing Panel (OWP) OSIP (87-88), funds OWP enhancements. The Technology Insertion OSIP (5-01) supports assembly, validation and configuration management of COTS hardware and software of the MCU. The Reliability Enhancements OSIP (22-09) funds radar reliability improvement, cockpit lighting, radar altimeter improvements and In-Flight Propeller Balancing System. High Frequency Internet-Protocol OSIP (2-10) provides Internet-Protocol Networking capability to 31 E-2C (Hawkeye 2000/MCU) aircraft, utilizing existing High Frequency radio set and new airborne Advanced Digital Networking System (ADNS) Internet Protocol router/gateway. The Critical Avionics OSIP (12-10) funds the obsolescence and hazard mitigation efforts for all primary and secondary sensors communication media and basic navigation aids. The TE-2C Conversion OSIP (15-10) provides for mission essential equipment installs into TE-2C aircraft to convert them to the E-2C Hawkeye 2000 configuration. The Automatic Identification System (AIS) OSIP (2-11), will integrate this system into the E-2 mission computer and provide for a means to transfer AIS data from the aircraft to the warships inflight. The Radar Improvement program OSIP (5-11) supports portions of it's APS-145 Radar architecture dated from the 1960s and serious obsolescence issues are expected to disrupt normal operations if left unmitigated. The Dual Transmit Satellite Communications OSIP (8-14), provides the E-2 with an additional Satellite Communications radio satisfying a capability gap that is identified in Operation Enduring Freedom. The MODE 5/S OSIP (9-14) replaces the National Security Administration (NSA) de-certified Mode 4 Identification Friend or Foe capability, which is no longer effective or suitable for modern military operations. Mode 5/S will support the Joint Initial Operational Capability as defined by the Joint Requirements Oversight Council. The CEC Upgrade OSIP (10-14) , will procure CEC Signal Data Processors(SDP) and install kits. The CEC SDP corrects the reliability and availability issues noted during USG-3 Operational Evaluation in addition to CEC Crypto Modernization for the E-2C aircraft. The E-2D Avionics OSIP (11-14) will fund the ARC-210 Gen 5 and Multifunctional Information Distribution System - Low Volume Terminal upgrades required to remain compliant with NSA Directives, as well as Ultra High Frequency (UHF) Guard Radio upgrades which allows the aircrew to monitor the emergency UHF Frequency (243 MHz). The LINK 16 OSIP (1-16), will address E-2C flight and mission critical avionics obsolescence and fact-of-life sustainment issues required to maintain current operational capabilities.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
087-88	OUTER WING PANELS	120.3	0.3										120.6
005-01	TECHNOLOGY INSERTION	75.3	9.8	10.0	9.9		9.9	10.1	10.2	10.4	11.1	53.9	200.7
022-09	RELIABILITY ENHANCEMENTS	16.0	10.0										26.0
002-10	HIGH FREQUENCY INTERNET PROTOCOL		0.3	0.4	0.4		0.4	0.4					1.5
012-10	CRITICAL AVIONICS		12.7	31.2	14.4		14.4	3.6	1.0				62.9
015-10	TE-2C CONVERSION		17.2										17.2
002-11	AUTOMATIC IDENTIFICATION SYSTEM			0.8	0.1		0.1	0.1	0.1	0.1	0.1		1.3
005-11	RADAR IMPROVEMENT PROGRAM			4.6	4.4		4.4	4.0	3.1	2.8			18.9
008-14	DUAL TRANSMIT SATCOM								3.1	3.2	3.3	3.3	12.9
009-14	MODE 5/S								4.2	3.8	3.9	14.3	26.2
010-14	CEC UPGRADE								10.6	13.0	8.2	1.6	33.4
011-14	E-2D AVIONICS								2.7	6.8	7.5	26.0	42.9
001-16	LINK 16 (MIDS/JTIDS for E-2C)										5.8	3.3	9.1
	INACTIVE OSIPS	1033.4											1033.4
Total		1244.9	50.3	47.0	29.2		29.2	18.2	35.0	40.0	39.8	102.5	1607.0

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: TECHNOLOGY INSERTION (OSIP 005-01)

MODELS OF SYSTEMS AFFECTED: E-2C

TYPE MODIFICATION: Mission Performance Enhancement

DESCRIPTION/JUSTIFICATION:

Commercial technology obsolescence drives hardware and software changes in Computing Resources for the E-2 Aircraft. Funding is required to support capability for assembly, validation, and configuration management of Commercial Off-The- Shelf (COTS) hardware/software provided to fleet squadrons and updated on a 4 - year technology cycle. Specific examples include video boards, memory boards, Computer Processing Units cards, compilers, middleware, backplanes, and operating systems that will change or become obsolete.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The E-2 Program Support Activity will insure software is upgraded, revised, and integrated so it functions with the versions of the COTS hardware and software delivered. The integration effort must start no less than one year prior to the delivery.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
OCO - MARITIME AUTOMATIC IDEN SYS	*42	0.7																					*42	0.7
INSTALLATION KITS N/R																								
OCO - MARITIME AUTOMATIC IDEN SYS		0.1																						0.1
INSTALL EQUIPMENT																								
INSTALL EQUIPMENT N/R																								
ECO																								
DATA		0.7		0.1		*		*				*		*		*		*		*		0.2		1.3
TRAINING EQUIP																								
SUPPORT EQUIP																								
ILS		3.5		0.8		0.3		0.5				0.5		0.5		0.5		0.6		0.6		4.8		12.1
OTHER SUPPORT		70.2		9.0		9.7		9.4				9.4		9.5		9.6		9.8		10.5		48.9		186.5
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST																								
TOTAL PROCUREMENT		75.3		9.8		10.0		9.9				9.9		10.1		10.2		10.4		11.1		53.9		200.7

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

Note:

1. * 2 of the 42 kits are Validation and Verification Kits

Exhibit P-3a

MODIFICATION TITLE: CRITICAL AVIONICS (OSIP 012-10)

MODELS OF SYSTEMS AFFECTED: E-2C TYPE MODIFICATION: Mission Performance Enhancements

DESCRIPTION/JUSTIFICATION:

Critical Avionics addresses E-2 avionics obsolescence, reliability, functionality and hazard mitigation efforts for primary and secondary sensors, communication, and navigation systems. Improves the reliability and functionality of the current E-2 fixed wire High Frequency (HF) antenna which supports only a single radio and breaks often, creating safety and operational impacts by upgrading to an antenna suite which is more reliable, capable and provides multiple transmission paths on and off the aircraft. Addresses obsolescence and improves the reliability and functionality of the current HF radio set by upgrading to a more capable and reliable radio suite which includes automatic link establishment, secure data and voice capability and additional voice and data channels. Addresses obsolescence and improves the reliability and functionality of the current Satellite Communications receive system (MATT) radio by upgrading to a radio which can receive current and future broadcast waveforms, can communicate using current and future cryptographic algorithms and can be integrated with the E-2 weapons systems more effectively, reducing startup, load, and set up time and reducing operator workload and troubleshooting requirements. Addresses obsolescence and improves the reliability and functionality of the current Very/Ultra High Frequency radios by incorporating an improved ARC-210 radio which includes secure data and voice capability using current and future cryptographic algorithms and which includes a growth path to future applications such as Joint Precision Approach and Landing System. Addresses obsolescence and improves the reliability and functionality of the current KY-58 Communications Security device by upgrading to a system which provides voice and data encryption using current and future cryptographic algorithms. Improves the Cooperative Engagement Capability (CEC) system reliability which addresses significant obsolescence and crypto upgrade issues by replacement of four Weapon Replacement Assemblies (WRA) (3 processors and the receiver synthesizer) with a single WRA combining these functions. The replacement WRA wil be common to E-2D, surface combatants, and United States Marine Corps deployed versions of CEC.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Not Applicable

FINANCIAL PLAN: (TOA, $ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
MATT REPLACEMENT			1	*	20	0.4	5	0.1			5	0.1	4	0.1									30	0.6
KY-58					1	*	1	*			1	*	62	1.0									64	1.0
HF ANTENNA					1	*	29	0.4			29	0.4											30	0.5
HF RADIO			1	*	16	0.2	13	0.1			13	0.1											30	0.3
ARC-210			1	*	18	0.2																	19	0.2
CEC																								
INSTALLATION KITS N/R				3.5		1.2		*				*												4.7
INSTALL EQUIPMENT																								
MATT REPLACEMENT			4	0.4	20	2.2	5	0.6			5	0.6	4	0.5									33	3.6
KY-58																								
HF ANTENNA					1	0.1	29	2.4			29	2.4											30	2.5
HF RADIO			1	0.4	16	6.3	13	5.2			13	5.2											30	12.0
ARC-210			1	0.3	18	4.7																	19	5.0
CEC																								
INSTALL EQUIPMENT N/R																								
ECO																								
DATA				0.8		1.3		0.5				0.5												2.6
TRAINING EQUIP					9	3.3	2	0.6			2	0.6			5	0.1							16	4.0
SUPPORT EQUIP				0.3		0.9																		1.2
ILS				0.6		1.2		0.6				0.6		0.2		0.1								2.7
OTHER SUPPORT				6.5		9.2		3.1				3.1		1.0		0.4								20.2
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST					3	0.1	56	0.7			56	0.7	48	0.7	66	0.5							173	2.0
TOTAL PROCUREMENT				12.7		31.2		14.4				14.4		3.6		1.0								62.9

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

Note: Totals may not add due to rounding.

FY 2010 Install Equipment included 3 lab units.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C

MODIFICATION TITLE: CRITICAL AVIONICS (OSIP 012-10) - MATT REPLACEMENT

INSTALLATION INFORMATION: CRITICAL AVIONICS

METHOD OF IMPLEMENTATION: DEPOT FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010 Mar 10 | FY 2011 Mar 11 | FY 2012 Mar 12 | FY 2013 Mar 13

DELIVERY DATE: FY 2010 Sep 10 | FY 2011 Sep 11 | FY 2012 Sep 12 | FY 2013 Sep 13

($ in Millions)

Cost:	PRIOR YEARS		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 (1) kits					1	*													1	*
FY 2011 (20) kits							20	0.5											20	0.5
FY 2012 (5) kits									5	0.1									5	0.1
FY 2012 OCO () kits																				
FY 2013 (4) kits											4	0.1							4	0.1
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
TO COMPLETE () kits																				
Total					1	*	20	0.5	5	0.1	4	0.1							30	0.7

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

Installation Schedule

	FY2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						1				5	5	5	5	1	1	2	1	2	2		
Out						1				5	5	5	5	1	1	2	1	2	2		

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										30
Out										30

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C

MODIFICATION TITLE: CRITICAL AVIONICS (OSIP 012-10) - KY-58

INSTALLATION INFORMATION: CRITICAL AVIONICS

METHOD OF IMPLEMENTATION: DEPOT FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010 ____ FY 2011 Dec 10 FY 2012 Dec 11 FY 2013 Dec 12

DELIVERY DATE: FY 2010 ____ FY 2011 Sep 11 FY 2012 Sep 12 FY 2013 Sep 13

($ in Millions)

Cost:	PRIOR YEARS		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 () kits																				
FY 2011 (1) kits							1	*											1	*
FY 2012 (1) kits									1	*									1	*
FY 2012 OCO () kits																				
FY 2013 (62) kits											62	0.4							62	0.4
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
TO COMPLETE () kits																				
Total							1	*	1	*	62	0.4							64	0.4

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

Installation Schedule

	FY2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										1				1				15	16	16	15
Out										1				1				15	16	16	15

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										64
Out										64

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C

MODIFICATION TITLE: CRITICAL AVIONICS (OSIP 012-10) - HF ANTENNA

INSTALLATION INFORMATION: CRITICAL AVIONICS

METHOD OF IMPLEMENTATION: DEPOT FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010 Mar 10 | FY 2011 Mar 11 | FY 2012 Mar 12 | FY 2013 Mar 13

DELIVERY DATE: FY 2010 Sep 10 | FY 2011 Sep 11 | FY 2012 Sep 12 | FY 2013 Sep 13

($ in Millions)

Cost:	PRIOR YEARS		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 () kits																				
FY 2011 (1) kits							1	*											1	*
FY 2012 (29) kits									29	0.5									29	0.5
FY 2012 OCO () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
TO COMPLETE () kits																				
Total							1	*	29	0.5									30	0.6

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

Installation Schedule

	FY2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										1				7	7	7	8				
Out										1				7	7	7	8				

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										30
Out										30

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C

MODIFICATION TITLE: CRITICAL AVIONICS (OSIP 012-10) - HF RADIO

INSTALLATION INFORMATION: CRITICAL AVIONICS

METHOD OF IMPLEMENTATION: DEPOT FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010 Mar 10 FY 2011 Mar 11 FY 2012 Mar 12 FY 2013 Mar 13

DELIVERY DATE: FY 2010 Sep 10 FY 2011 Sep 11 FY 2012 Sep 12 FY 2013 Sep 13

($ in Millions)

Cost:	PRIOR YEARS		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 (1) kits					1	*													1	*
FY 2011 (16) kits							16	0.1											16	0.1
FY 2012 (13) kits									13	0.1									13	0.1
FY 2012 OCO () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
TO COMPLETE () kits																				
Total					1	*	16	0.1	13	0.1									30	0.2

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

Installation Schedule

	FY2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						1				4	4	4	4	4	3	3	3				
Out						1				4	4	4	4	4	3	3	3				

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										30
Out										30

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C

MODIFICATION TITLE: CRITICAL AVIONICS (OSIP 012-10) - ARC-210

INSTALLATION INFORMATION: CRITICAL AVIONICS

METHOD OF IMPLEMENTATION: DEPOT FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010 Nov 09 FY 2011 Nov 10 FY 2012 Nov 11 FY 2013

DELIVERY DATE: FY 2010 Sep 10 FY 2011 Sep 11 FY 2012 Sep 12 FY 2013

($ in Millions)

Cost:	PRIOR YEARS		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		TO COMPLETE		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 (1) kits					1	*													1	*
FY 2011 (18) kits							18	0.1											18	0.1
FY 2012 () kits																				
FY 2012 OCO () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY 2016 () kits																				
TO COMPLETE () kits																				
Total					1	*	18	0.1											19	0.1

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

Installation Schedule

	FY2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						1				3	5	5	5								
Out						1				3	5	5	5								

	FY 2015				FY 2016					
	1	2	3	4	1	2	3	4	To Complete	Total
In										19
Out										19

Exhibit P-40, BUDGET ITEM JUSTIFICATION | DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE: **054900, TRAINER A C SERIES**

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	122.9	A	20.6	24.0	22.1		22.1	15.8	17.5	18.9	19.2	29.4	290.3

DESCRIPTION:

This line item funds modifications to a group of trainer aircraft which includes T-44A/C, and TH-57 . The trainer aircraft are described as follows: The T-44 is a twin-engine, multi-seat turboprop aircraft produced by Beech Aircraft used to simulate operation multi engine aircraft, specifically the P-3; the TH-57 is a single-engine, multi-seat rotary wing aircraft used for helicopter training. The overall goal of the modification is to maintain safe and reliable operation of the trainer aircraft through the timely installation necessary changes. Total number of T-44 and TH-57 aircraft are 54 and 126, respectively. A total of 18 aircraft will be modified in FY12 to incorporate Aviation Safety Upgrades. There will be 18 TH-57B/C series converted to the TH-57D configuration.

The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
005-04	T-44 AVIONICS OBS	55.1	13.4	0.9								16.4	85.849
006-07	TH-5 7 SAFETY UPGRADE	14.8	6.4	22.4	22.1		22.1	15.8	17.5	18.9	19.2	9.8	146.907
007-07	T44 WING WIRING	1.8	0.7	0.7								3.2	6.334
	INACTIVE OSIPs	51.2											51.174
Total		122.9	20.6	24.0	22.1		22.1	15.8	17.5	18.9	19.2	29.4	290.3

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: TH-57 SAFETY UPGRADE(OSIP 006-07)

MODELS OF SYSTEMS AFFECTED: TH-57B/C | TYPE MODIFICATION: Conversion/Safety

DESCRIPTION / JUSTIFICATION:

The TH-57 is the sole platform for primary helicopter flight training for student aviators (USN, USMC, USCG) and foreign military pilots. This modernization effort capitalizes on technology improvements by increasing aircrew survivability and situational awareness while providing a fleet representative digital cockpit configuration. Obsolescence upgrades are to replace avionics purchased in 1981 through 1985, when the TH-57B and TH-57C aircraft were originally purchased.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The components of this block upgrade will be COTS as turnkey items. ACI by the commercial contractor.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Install Kits	12	4.4	5	2.0	19	6.0	18	6.0			18	6.0	19	6.2	19	6.4	20	7.6			14	3.7	126	42.2
Install Kits Obsolescence					39	9.4	24	5.8			24	5.8	15	3.7	15	3.8	20	5.3			13	4.1	126	32.1
Installation Kits N/R		2.9																		19.2				22.1
Installation Equipment																								
Equipment	12	*	5	0.1	19	0.2	18	0.2			18	0.2	19	0.1	19	0.1	20	0.1			14	*	126	0.9
Installation Equipment N/R																								
Engineering Change Orders																								
Data		0.1		*																				0.2
Training Equipment		4.9		2.1		2.1		5.4				5.4		2.2		3.3		2.4				0.7		23.1
Support Equipment																								
ILS																								
Other Support		1.6		0.9		1.1		1.3				1.3		0.6		1.0		1.0				0.4		7.8
Interim Contractor Support																								
Installation Cost	12	0.9	5	1.4	19	3.8	18	3.4			18	3.4	19	2.8	19	2.9	20	2.4			14	0.9	126	18.5
Total Procurement		**14.8**		**6.4**		**22.4**		**22.1**				**22.1**		**15.8**		**17.5**		**18.9**		**19.2**		**9.8**		**146.9**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Three simulator kits installed in FY10.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: TH-57B/C

MODIFICATION TITLE: TH-57 SAFETY UPGRADE(OSIP 006-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2010: Oct-09 FY 2011: Oct-10 FY 2012: Oct-11 FY 2013: Oct-12

DELIVERY DATE: FY 2010: Jan-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (12) kits	12	0.9																	12	0.9
FY 2010 (5) kits			5	1.4															5	1.4
FY 2011 (19) kits					19	3.8													19	3.8
FY 2012 (18) kits							18	3.4											18	3.4
FY 2012 OCO ( ) kits																				
FY 2013 (19) kits									19	2.8									19	2.8
FY 2014 (19) kits											19	2.9							19	2.9
FY 2015 (20) kits													20	2.4					20	2.4
FY 2016 ( ) kits																				
To Complete (14) kits																	14	0.9	14	0.9
TOTAL	**12**	**0.9**	**5**	**1.4**	**19**	**3.8**	**18**	**3.4**	**19**	**2.8**	**19**	**2.9**	**20**	**2.4**			**14**	**0.9**	126	18.5

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	12		1	1	3		6	6	7		6	6	6		6	6	7		6	6	7
Out	12		1	1	3		6	6	7		6	6	6		6	6	7		6	6	7

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		6	7	7					14	126
Out		6	7	7					14	126

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: February 2011

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

P-1 ITEM NOMENCLATURE
055600, C-2A(R) Series Modification

Program Element for Code B Items:

Other Related Program Elements

	PRIOR YEARS	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QUANTITY													
COST (In Millions)	393.2	A	27.9	16.0	16.3		16.3	4.9	5.1	5.1	4.9	8.0	481.3

DESCRIPTION:

The C-2A(R) Greyhound is a high wing monoplane, twin engine turbo-prop aircraft capable of operating from both a shore base and all operational United States Navy aircraft carrier classes. The mission of the C-2A(R) is to provide rapid response Carrier Onboard Delivery of fleet essential supplies, repair parts, and personnel to sustain at sea operations of deployed battle groups. In addition, the C-2A(R) provides airdrop delivery and mobilization support for special operations forces from la bases and carriers. The design service life of the C-2A(R) is 10,000 flight hours with 15,000 landings. Service Life Extension Program (SLEP) modifications increase the service life to 15,000 flight hours and 36,000 landings, remove and replace all aircraft wiring, and install various upgrades to allow C-2A(R) to meet requirements into the next decade. The overall goal of the modifications is to continue procurement efforts for the C-2A(R) SLEP and the Critical Components Program. Critical Components are composed of Alighting & Landings, Avionics Upgrades, Engine Power & Propulsion, Hydraulic's, and Structural/Pressurization Engineering Change Proposals. The C-2 Greyhound AIC-14A Internal Communications System (ICS) Operational Safety and Improvement Program (16-10) provides for improvement and redesign of the of the C-2A's AN/AIC-14A C-2645C ICS. The C-2 Critical Brake Upgrade OSIP (7-14) provides funding for air vehicle modifications to improve operational ground controllability of C-2A aricraft.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
024-94	C-2A SLEP	385.3	18.5	13.9	14.6		14.6	3.8					436.0
011-07	CRITICAL COMPONENTS	7.9	2.3	2.1	1.7		1.7	1.1	1.5	1.6	1.6		19.8
016-10	C-2 GREYHOUND AIC-14A INTERNAL COMMUNICATION SYSTEM		7.1										7.1
007-14	C-2 CRITICAL BRAKE UPGRADE								3.6	3.5	3.3	8.0	18.4
TOTAL		**393.2**	**27.9**	**16.0**	**16.3**		**16.3**	**4.9**	**5.1**	**5.1**	**4.9**	**8.0**	**481.3**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94)

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft | TYPE MODIFICATION: MISSION PERFORMANCE ENHANCEMENTS

DESCRIPTION/JUSTIFICATION:

The C-2A(R) Block Upgrade/Service Life Extension Program extends the Navy's Carrier Onboard Delivery capability beyond current projected service life. Efforts funded in this Operational Safety and Improvement Program (OSIP) include Structural Enhancements, Aircraft Rewiring, L-Probe Kit, CAINS I I, ARC-210 Radios, Trim Actuators, Outer Wing Panel Enhancements, and NP-2000 (8 bladed propeller).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Development and Operational Testing (DT and OT) have been completed for the Structures and Rewire efforts included in this OSIP. Aircraft Rewire effort experienced technical difficulties during initial validation process and program was restructured resulting in a 2 year slip. Procurement of Rewire kits commenced in FY06. NP2000 has also experienced delays due to test article issues related to the program. It has also experienced a two year slip and has been restructured. DT and OT for NP2000 completed in 1st Qtr FY 2008.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		Base FY 2012		OCO FY 2012		Total FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
ARC-210	35	3.0																					35	3.0
CAINS II (AFC-156)	36	2.3																					36	2.3
INTERIM AFC	5	0.3																					5	0.3
INTERIM AFC-DERF	2	0.1																					2	0.1
L-PROBE (AFC-161)	36	0.3																					36	0.3
NP2000	9	1.3	2	0.2	8	0.6	1	0.1			1	0.1											20	2.1
OWP CONVERSION (AYC-A)	19	3.1																					19	3.1
OWP ENHANCEMENT (AFC-378)	68	6.1	2	*																			70	6.1
OWP ENHANCEMENT (AFC-Y)	4	10.8																					4	10.8
REWIRE (AFC-162)	28	19.1	3	1.9	5	3.1	1	0.7			1	0.7											37	24.7
REWIRE (AFC-162) - DERF	2	1.7																					2	1.7
STRUCTURE (AFC-171) - DERF	1	0.4																					1	0.4
STRUCTURE KIT (AFC-171)	33	9.1																					33	9.1
TRIM ACTUATOR	70	0.2																					70	0.2
INSTALLATION KITS N/R	6	45.3																					6	45.3
INSTALL EQUIPMENT																								
CAINS II B KITS	50	6.1																					50	6.1
INSTALL EQUIPMENT N/R		4.2																						4.2
ECO																								
DATA		16.7		*		*																		16.7
TRAINING EQUIP		8.0		0.5		0.4																		8.9
SUPPORT EQUIP		4.7		0.1																				4.8
ILS		6.8		0.4		0.3		0.1				0.1		0.4										8.0
OTHER SUPPORT		144.9		2.8		2.3		0.6				0.6		0.8										151.4
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST	357	90.9	11	12.7	5	7.0	13	13.2			13	13.2	2	2.6									388	126.3
TOTAL PROCURMENT		385.3		18.5		13.9		14.6				14.6		3.8										436.0

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

Note: Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - Structures Kits (AFC-171)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/PMI

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (33) kits	30	34.4	3	3.8															33	38.2
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
TO COMPLETE ( ) kits																				
Total	30	34.4	3	3.8															33	38.2

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	30	1	1	1																	
Out	26	1	1	1	1	1	1	1													

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										33
Out										33

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) Rewire (AFC-162)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/PMI & Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 14 Months

CONTRACT DATES: FY 2010: Oct 09 FY 2011: Oct 10 FY 2012: Oct 11 FY 2013:

DELIVERY DATE: FY 2010: Dec 10 FY 2011: Dec 11 FY 2012: Dec 12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (28) kits	**19	30.9	4	8.1															23	39.1
FY 2010 (3) kits					3	6.6													3	6.6
FY 2011 (5) kits							5	11.3											5	11.3
FY 2012 (1) kits									1	2.3									1	2.3
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
TO COMPLETE ( ) kits																				
Total	19	30.9	4	8.1	3	6.6	5	11.3	1	2.3									32	59.3

*2 Kits purchased in prior years were installed yet no longer reflect current design and could not be used

**3 Kits were used for Prototype, Validation and Verification

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	19		1	2	1	1	1	1		2	1	1	1	1							
Out	14	1	1	1	2		2	1	1	1	1	1	2	1	1	1		1			

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										32
Out										32

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - Outer Wing Panel Enhancement

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Navy Forced Retrofit Component

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2010: Oct 09 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Feb 10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (68) kits	68	14.2																	68	14.2
FY 2010 (2) kits			2	0.3															2	0.3
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
TO COMPLETE ( ) kits																				
Total	68	14.2	2	0.3															70	14.5

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	68		1	1																	
Out	66	2		1	1																

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										70
Out										70

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - NP2000

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/PMI Drive in Mod

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: Oct 09 FY 2011: Oct 10 FY 2012: Oct 11 FY 2013:

DELIVERY DATE: FY 2010: Oct 10 FY 2011: Oct 11 FY 2012: Oct 12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (9) kits	*6	0.8	2	0.4															8	1.3
FY 2010 (2) kits					2	0.5													2	0.5
FY 2011 (8) kits							8	1.9											8	1.9
FY 2012 (1) kits									1	0.2									1	0.2
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
TO COMPLETE ( ) kits																				
Total	6	0.8	2	0.4	2	0.5	8	1.9	1	0.2									19	3.8

* Prototype Kit / Kit was Validation & Verification Kit

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	6	1		1		1		1		2	2	2	2	1							
Out	6		1		1		1		1	2	2	2	2	1							

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										19
Out										19

Exhibit P-40, BUDGET ITEM JUSTIFICATION | DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE: **056000 C-130 Series**

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	**208.7**	A	**75.1**	**17.8**	**27.1**	**59.6**	**86.8**	**19.4**	**19.3**	**22.6**	**22.9**	**388.8**	**861.5**
RESERVE FUNDING INCLUDED IN TOTAL			1.8		19.0		19.0	19.2	19.1	22.3	22.7		

DESCRIPTION: This item funds modifications to C/KC-130 aircraft. The Lockheed C/KC-130 aircraft is a four engine, high-wing, all metal, long range, land based monoplane capable of all weather transport of cargo or personnel and in-flight refueling. There are currently 98 aircraft in the Navy and Marine Corps inventory (50 active and 48 reserve). The expected Service Life is as follows:

T/M/S	Service Date	Service Life	Expected Life
C-130T	10/91 - 11/95	450 mos.	2028-2032
KC-130F	03/60 - 11/62	600 Mos.	2010-2012
KC-130R	09/75 - 06/78	480 mos.	2015-2018
KC-130T	04/84 - 02/96	450 mos.	2021-2033
KC-130J	09/00 - 10/13	450 mos.	2037-2048

FY12 OCO:

OSIP 022-07 - Provides $10.2M of funding to procure 3 production Targeting Sight Systems (TSS) to replace Engineering Manufacturing Design (EMD) units currently used on first three aircraft installs.

OSIP 019-12 - Provides $10.0M of funding for KC-130J Propeller Reliability Improvement Program to provide thicker Prop Blades, Leading Edge Guards, and Prop Grease Seals.

OSIP 020-12 - Provides $39.425M for procurement and installation of 8 Large Aircraft Infrared Counter Measures (LAIRCM) Kits for the KC-130J Aircraft.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
010-06	C-130J CNS/ATM	31.5	21.0	17.8	8.1		8.1	0.2	0.2	0.2	0.2	198.0	277.4
022-07	C/KC-130T/J Weapons Missic	36.5	52.3			10.2	10.2						99.0
015-08	Navigation Enhancements	10.9	1.8										12.7
008-12	Avionics/Obsolescence Upgrades				19.0		19.0	19.2	19.1	22.3	22.7	79.3	181.6
019-12	KC-130J Propeller Reliability					10.0	10.0					16.0	26.0
020-12	Electronic Counter Measures					39.4	39.4					95.5	134.9
XXX-XX	Inactive OSIPs	129.9											129.9
Total		**208.7**	**75.1**	**17.8**	**27.1**	**59.6**	**86.8**	**19.4**	**19.3**	**22.6**	**22.9**	**388.8**	861.5

Note: Totals may not add due to rounding.

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: C-130J CNS/ATM (OSIP 010-06)

MODELS OF SYSTEMS AFFECTED: KC-130J, KC-130T, C-130T — TYPE MODIFICATION: Safety

DESCRIPTION/JUSTIFICATION: Objective of the Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) OSIP is to preserve utilization of current KC-130 capabilities world-wide by meeting International Civil Aviation Organization (ICAO) Air Traffic Management mandates through a series of commercial procurements and post-production retrofit installations. ICAO mandates enhanced Mode-S and Required Navigation Performance/Area Navigation (RNP/RNAV) capabilities in the European Flight Information Region (FIR) started in FY06, followed by the requirement of enhanced Mode-S, which is the Automatic Dependent Surveillance-Broadcast (ADS-B) comm-link component of Mode-S, and will be required in FY07. The USMC has determined that re-joining with the C-130J Co-Operative Software and Systems Upgrade Requirements Management (COSSURM) Block Upgrade Community to be the most expedient and cost-effective means to meet CNS/ATM Mandates as well as incorporate other mission critical software changes through spiral upgrade initiatives or "Blocks". This OSIP will upgrade the KC-130J to enhanced Mode-S and RNP/RNAV through two separate initiatives. The first is Block 6.5 which includes enhanced Mode-S, which began in FY06. The second is Block 7.0 which includes the RNP/RNAV solution began in FY09. This OSIP is required in order to avoid airspace utilization limitations, ranging from usage restrictions to total airspace exclusion, as well as ensuring continuous KC-130J transport of personnel, material and aerial refueling services within and through these FIRs. Major DoD logistic hubs supporting Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) are located in the European FIR. Future Blocks (8.1 and 9.0) are being developed which will include additional CNS/ATM requirements as mandated by the ICAO as well as address obsolescence issues and provide necessary performance enhancements to ensure future mission readiness of the KC-130J fleet.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Lockheed Martin was tasked to deliver, by November 2005, an ECP to incorporate Mode S & 8.33 KHZ into Military Baseline 5.4 Software already developed for the USAF on C-130J aircraft. The new software version was planned to be become available in FY07 as Block 5.5 but was superseded by Block 6.5 which became available in FY06. Through incorporation of Block 6.5 the USMC KC-130J aircraft will be postured to re-enter the COSSURM Community in a common configuration. This allows the USMC to step into Block 7.0 with the USAF and COSSURM which includes RNP/RNAV and the civil component of Receiver Autonomous Integrity Monitoring (RAIM). Block 8.0 will incorporate Military Embedded GPS Inertial (EGI) with Selective Availability Anti Spoofing Module (SAASM) and the military component of Receiver Autonomous Integrity Monitoring (RAIM).

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Block 7.0 Kits (44)					8	6.4	6	4.8			6	4.8									30	24.0	44	35.2
Block 8.1 Kits (54)																					54	64.8	54	64.8
Block 9.0 Kits (79)																					79	31.6	79	31.6
Installation Kits N/R																								
Installation Equipment																								
Mode (S) System Block 6.5		14.3																						14.3
Mode (S) C/KC-130T	48	3.7		4.7																			48	8.3
Installation Equipment N/R																								
Mode (S) Block 6.5 GFE		1.7																						1.7
USMC Nat'l Integ Block 7.0		5.3																						5.3
USMC Nat'l Integ Block 8.1						6.0																		6.0
USMC Nat'l Integ Block 9.0																						16.0		16.0
NRE Contractor				1.5																				1.5
Engineering Change Orders																								
Data		0.1		0.1		0.1		*				*										0.9		1.2
Training Equipment				2.8		2.7																10.0		15.5
Support Equipment		*		0.5																				0.6
ILS		0.2		1.2		0.1		0.2				0.2		0.2		0.2		0.2		0.2		0.9		3.6
Other Support		6.2		10.2		0.9		1.9				1.9										15.0		34.2
Interim Contractor Support																								
Installation Cost					8	1.6	6	1.2			6	1.2									163	34.8	177	37.6
Total Procurement		**31.5**		**21.0**		**17.8**		**8.1**				**8.1**		**0.2**		**0.2**		**0.2**		**0.2**		**198.0**		277.4

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: KC-130J, KC-130T, C-130T

MODIFICATION TITLE: C-130J CNS/ATM (OSIP 010-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Drive-in Modification**

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2010: FY 2011: Nov-10 FY 2012: Nov-11 FY 2013:

DELIVERY DATE: FY 2010: FY 2011: Jan-11 FY 2012: Jan-12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (8) kits					8	1.6													8	1.6
FY 2012 (6) kits							6	1.2											6	1.2
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete (163) kits																	163	34.8	163	34.8
TOTAL					**8**	**1.6**	**6**	**1.2**									**163**	**34.8**	177	37.6

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							4	4			3	3									
Out							4	4			3	3									

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									163	177
Out									163	177

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: C/KC-130 ISR / WEAPONS MISSION KIT (022-07)

MODELS OF SYSTEMS AFFECTED: C/KC-130T/J | TYPE MODIFICATION: Performance Enhancement

DESCRIPTION/JUSTIFICATION: The objective of this effort is to integrate an ISR (Intelligence, Surveillance & Reconnaissance) Weapon System Kit into the KC-130J aircraft which provides an armed capability to provide intra-theatre suppressive fire support for ground troops as well as intelligence and reconnaissance capability for theatre commanders. The new KC-130J is a force multiplier. The J tanker is capable of refueling both fixed wing and rotary wing aircraft, as well as conducting rapid ground refueling. KC-130Js have been continuously deployed in support of world-wide combat operations providing multi-mission, tactical aerial refueling, and fixed-wing assault support. This added capability will provide the Marine Air-Ground Task Force (MAGTF) Commander increased capability for real time intelligence gathering and an armed capability for targets of opportunity and suppressive fire-support. The ISR/Weapon System Kit will consist of a ISR pod, rapid fire 30mm cannon, wing mounted air-to-ground missiles and air-to-ground precision guided munitions delivery via the aft cargo door. The system will be configured as a Roll-On/Roll-Off capability to allow for rapid deployment. The program will leverage off of current technology/fielded systems to provide rapid integration of this new capability. Future capabilities will include door modifications to allow the 30mm cannon to be able to fire with the door in the closed position, capability to launch precision guided munitions from within the aircraft while pressurized and moving wing mounted munitions from the 330 wing-station to the 430 wing-station.

FY12 OCO Request provides $10.2M of funding to procure 3 production Targeting Sight Systems (TSS) to replace Engineering Manufacturing Design (EMD) units currently used on first three aircraft install

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
A Kit	3	22.9	6	2.8																			9	25.7
Installation Kits N/R																								
Installation Equipment																								
TSS Sensor			6	19.8					3	10.2	3	10.2											9	30.0
30mm Gun			6	6.0																			6	6.0
FCS			6	1.5																			6	1.5
Hellfire	2	0.1	6	8.8																			8	8.9
BMS	1	4.6	6	6.7																			7	11.3
Installation Equipment N/R		8.6																						8.6
Engineering Change Orders																								
Data				0.9																				0.9
Training Equipment																								
Support Equipment																								
ILS				0.4																				0.4
Other Support		0.4		0.6																				1.0
Interim Contractor Support																								
Installation Cost			6	4.8																			6	4.8
Total Procurement		**36.5**		**52.3**						**10.2**		**10.2**												99.0

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **C/KC-130T/J** MODIFICATION TITLE: C/KC-130T/J ISR/Weapons Mission Kit (022-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Field Mod Team**

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: Nov-09 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: May-10 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 (6) kits			6	4.8															6	4.8
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL			**6**	**4.8**															6	4.8

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				3	3																
Out				3	3																

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										6
Out										6

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Avionics / Obsolescence Upgrades (OSIP 008-12)

MODELS OF SYSTEMS AFFECTED: C/KC-130/F/R/T/J | TYPE MODIFICATION: Safety / Readiness Improvement

DESCRIPTION/JUSTIFICATION: Objective of the Avionics/Obsolescence Upgrades OSIP is to preserve the world-wide capabilities of the C/KC-130 aircraft by providing required capability enhancements and addressing obsolescence. The legacy C/KC-130T and KC-130F model aircraft have been in service for 48 and 20 years respectively and still retain many of their original systems which require upgrade to either enhance performance and mission readiness, meet Communication, Navigation, and Surveillance/A Traffic Management (CNS/ATM) requirements and address obsolescence issues. In addition obsolescence / Diminishing Manufacturing Sources (DMS) issues are already being realized on the KC-130J aircraft and will have to be addressed in the near future. These upgrades will include faster, more robust processing systems and integrated displays enabling compliance with CNS/ATM requirements. It will provide a growth path to Mode 5 and Joint Precision Landing systems. It will replace numerous avionics systems: radar, TACAN, data recorders, and gauges due to obsolescence or DMS. These upgrades will provide open-systems architecture and interfaces necessary to integrate real-time information in the cockpit (RTIC). Changes will also be incorporated into existing training devices.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Initially this effort will affect 25 C/KC-130T aircraft. One kit will be installed and tested (validation) followed by a second aircraft (verification) and 23 production installations. All required capabilities will be provided by non-developmental systems. The required capabilities/systems are currently flying in US Navy aircraft.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Avionics/CNS/ATM "A" Kits															3	1.6	5	2.7	4	2.2	11	8.1	23	14.6
Installation Kits N/R																								
Installation Equipment																								
Avionics/CNS/ATM "B" Kits															3	8.8	5	15.4	4	12.3	11	41.9	23	78.5
Installation Equipment N/R																								
NRE - Government								1.2				1.2		2.1		1.0								4.3
NRE - Contractor								15.1				15.1		12.0										27.1
Engineering Change Orders																								
Data								0.1				0.1		0.7		0.9		0.2		0.1		1.1		3.1
Training Equipment								0.3				0.3		0.2		3.5		0.7		3.1		5.8		13.6
Support Equipment														0.2				0.1		0.1		0.4		0.8
ILS								0.6				0.6		0.6		0.4		0.4		0.4		3.3		5.8
Other Support								1.7				1.7		1.8		1.6		0.4		0.4		2.6		8.4
Interim Contractor Support																								
Installation Cost													1	1.6	1	1.4	3	2.4	5	4.1	15	16.0	25	25.4
Total Procurement								**19.0**				**19.0**		**19.2**		**19.1**		**22.3**		**22.7**		**79.3**		181.6

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C/KC-130F/R/T/J

MODIFICATION TITLE: Avionics / Obsolescence Upgrades (OSIP 008-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Drive-In Modification**

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Dec-12 FY 2013: Dec-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (1) kits									1	1.6									1	1.6
FY 2012 OCO ( ) kits																				
FY 2013 (1) kits											1	1.4							1	1.4
FY 2014 (3) kits													3	2.4					3	2.4
FY 2015 (5) kits															5	4.1			5	4.1
FY 2016 (4) kits																	4	4.2	4	4.2
To Complete (11) kits																	11	11.7	11	11.7
TOTAL									**1**	**1.6**	**1**	**1.4**	**3**	**2.4**	**5**	**4.1**	**15**	**16.0**	25	25.4

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In														1				1			
Out															1				1		

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	1	1	1		2	2	1		15	25
Out		1	1	1		2	2	1	15	25

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: KC-130J Propeller Reliability Improvement Program (OSIP 019-12)

MODELS OF SYSTEMS AFFECTED: KC-130J | TYPE MODIFICATION: Reliability

DESCRIPTION/JUSTIFICATION: Operations supporting OEF are taking a severe toll on the KC-130J Dowty propellers. The austere operating environment in Afghanistan contributes to an excessive amount of foreign object debris damage to the prop blades. Dust intrusion has also been documented as a significant contributor to an increase in prop grease leaks. These issues are top readiness degraders which ultimately will lead to decreased mission availability if left unaddressed. This OSIP will be utilized for a forced retrofit for new prop blades with a thicker poly coating as well as a more robust leading edge guard. In addition, it will introduce a new prop seal kit that will greatly reduce dust intrusion. This OSIP is for equipment modification that is operationally required to provide increased prop reliability and operational readiness for forward deployed squadrons and is a direct result of operations supporting OEF. This effort has not been funded in prior years and is not funded in the baseline FYDP.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
A Kits																								
Installation Kits N/R																								
Installation Equipment																								
B Kits									48	10.0	48	10.0									76	16.0	124.0	26.0
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support																								
Interim Contractor Support																								
Installation Cost																								
Total Procurement										**10.0**		**10.0**										**16.0**		26.0

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Installs are being accomplished at the "O" Level.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Electronic Counter Measures (OSIP 020-12)

MODELS OF SYSTEMS AFFECTED: C/KC-130T/J | TYPE MODIFICATION: Safety

DESCRIPTION/JUSTIFICATION: This OSIP provides funding for the addition of Large Aircraft Infrared Counter Measures (LAIRCM) capability to the KC-130J Aircraft which will increase survivability while allowing the aircraft to operate under expanded threa environments thereby increasing combat effectiveness. Operations in support of OEF will require potential exposure to threat envelopes that the KC-130J aircraft is not currently equipped to operate in with it's current Electronic Counter Measures (ECM) suit particularly with the introduction of the Harvest HAWK capability. The addition of LAIRCM to the KC-130J will ensure that the aircraft is fully deployable in any threat environment to provide aerial refueling, airlift, cargo, rapid ground refueling and ISR and CAS support for the MAGTF Commander. This OSIP will also cover improvements to existing C/KC-130/T/J aircraft survivability equipment by upgrading or replacing Defensive Electronic Counter Measures (DECM) components to maintain the most current threa adaptive, reprogrammable, computer controlled threat defeating systems or by modifying aircraft in the inventory without DECM/LAIRCM for the inclusion of this capability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
LAIRCM A Kits									8	3.6	8	3.6									38	17.1	46	20.7
Installation Kits N/R																								
Installation Equipment																								
LAIRCM B Kits									8	20.8	8	20.8									19	49.4	27	70.2
Installation Equipment N/R																								
NRE - Government										3.2		3.2												3.2
NRE - Contractor										3.2		3.2												3.2
Engineering Change Orders																								
Data																								
Training Equipment										0.8		0.8												0.8
Support Equipment										0.5		0.5												0.5
ILS										0.2		0.2										1.1		1.3
Other Support										1.9		1.9										3.2		5.1
Interim Contractor Support																								
Installation Cost									8	5.2	8	5.2									38	24.7	46	29.9
Total Procurement										**39.4**		**39.4**										**95.5**		**134.9**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C/KC-130T/J

MODIFICATION TITLE: Electronic Counter Measures (OSIP 020-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Drive-In Modification**

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Dec-11 FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Sep-12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO (8) kits							8	5.2											8	5.2
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete (38) kits																	38	24.7	38	24.7
TOTAL							**8**	**5.2**									**38**	**24.7**	46	29.9

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In													2	2	2	2					
Out														2	2	2	2				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									38	46
Out									38	46

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
056100, FLEET ELECTRONIC WARFARE SUPPORT GROUP (FEWSG)

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)	**69.2**	A	**9.4**	**21.9**	**2.8**		**2.8**	**0.7**	**0.7**	**0.7**	**0.7**	**2.0**	**108.0**

DESCRIPTION:
This line item funds modifications to avionics equipment used for Fleet Operational Forces and Adversary Air Electronic Warfare (EW) training exercises. The overall goal is to accurately simulate the known and postulated electronic warfare characteristics and tactics of various radar and jammer threats for fleet training. OSIP 119-83 FEWSG equipment, AN/ALQ-167, AN/AST-4/6/9(V), AN-DLQ-3, AN/ULQ-21/24, & ALE-43 had been installed and/or carried aboard the EA-6B, F-4, F-14, EP-3J, EC-24A and KC 135 aircraft, prior to deactivation.

Current equipment, AN/ALQ-167 pod variants and their internal avionics, AN/ULQ-21/24, as well as AN/AST-6 are installed and/or carried aboard the F/A-18, Lear Jet, Kfir (F-21), Hawker/Hunter (F-58), Gulfstream (G-1), F-16 and F-5 aircraft. AN/AST-4 was replaced by AN/AST-6. AN/AST-6(V) will be phased out of service and replaced by AN/AST-9 by FY11. ALE-43 pods have been transitioned from fleet training use to tactical use. No new ALE-43 nor AST-6 pods or pod modifications are being funded via this OSIP. $3.922M Below Threshold Reprogramming received in FY 08 and FY 10 - 12 funding will procure 34 AN/ALQ-167 Digital Radio Frequency Memory pod variants to address Adversary Air requirements per Naval Strike Air Warfare Center Urgent Operational Need Statement.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
119-83	AN/AST-4/6/9(V), AN-DLQ-3, AN/ULQ-21/24, ALE-43 & AN/ALQ-167	**69.2**	**9.4**	**21.9**	**2.8**		**2.8**	**0.7**	**0.7**	**0.7**	**0.7**	**2.0**	**108.0**
Total		**69.2**	**9.4**	**21.9**	**2.8**		**2.8**	**0.7**	**0.7**	**0.7**	**0.7**	**2.0**	**108.0**

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: AN/AST-4/6/9(V), AN/ULQ-21/24, ALE-43, AN/ALQ-167 (OSIP 119-83)

MODELS OF SYSTEMS AFFECTED: NOT APPLICABLE | TYPE MODIFICATION: RELIABILITY, MAINTAINABILITY, CAPABILITY

DESCRIPTION/JUSTIFICATION: The AN/ALQ-167 pods electronically simulate threat airborne radar jamming systems. The AN/ALQ-167 pod components can also be installed internally in aircraft. When these components are utilized in this type of configuration, they are nomenclatured AN/DLQ-3 and AN/ULQ-21/24. AN/AST-4 was replaced by AN/AST-6. The AN/AST-6(V) pod electronically simulates several types of threat anti-ship missile seeker and air-to-air missile systems. Original variants of these podded devices were first introduced into the fleet in 1980 and proved exceptionally useful in readiness exercises and for tactical contingencies. Subsequent variants were developed to meet the technology advances of the threat systems. The tactical contingency pods were remove from fleet service in FY2002 and returned to the pod depot for component reuse. This program provides for the procurement and continued support of additional quantities of these pods or conversion of older pod variants and/or contingency pods to newer variants for use by Fleet Area Control and Surveillance Facility in support of operational fleet training and for Top Gun/Adversary Squadrons in support of adversary exercises.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The objective for the AN/ALQ-167 was 186 pods. Prior to the tactical contingency pod divestiture, inventory was 146. The AN/ALQ-167 pods avionics are being upgraded to provide increased performance/advanced capability utilizing Digital Radio Frequency Memory (DRFM) technology. Internal installations of the DRFM avionics are planned for Adversary Squadron F-5 aircraft in FY 10 -12. Remaining quantities are for pod carriage capability aboard F-18, F-16, Kfir, Hawker/Hunter and Gulfstream I aircraft. Current pod inventory is 41 with a goal of converting one pod per year to DRFM configuration. There are 20 AN/AST-6(V) production assets. AN/AST-6(V) will be phased out of service and replaced by AN/AST-9 by FY 2011. ALE-43 pods have been transitioned from fleet training use to tactical use. No new AST-6 or ALE-43 pods or pod modifications are being funded via this OSIP.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
Install Equipment (B Kits)	1021	52.5	9	8.0	16	19.9	3	0.8			3	0.8	1	0.4	1	0.4	1	0.4	1	0.4	1	1.2	1,054	84.0
Installation Equipment N/R		0.7		0.4		0.7		0.3				0.3		*		0.1		0.1		*		0.3		2.6
Engineering Change Orders		2.9																						2.9
Data		0.2		0.1		*		*				*		*		*		*		*				0.5
Training Equipment	3	4.6		0.2		*		*				*		*		*		*		*			3	4.9
Support Equipment		5.4		0.1		*		*				*												5.5
ILS		1.1		0.2		0.2		0.2				0.2		0.1		0.1		0.1		0.1		0.3		2.3
Other Support		1.9		0.4		1.0		1.4				1.4		0.1		0.1		0.1		0.1		0.2		5.3
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**69.2**		**9.4**		**21.9**		**2.8**				**2.8**		**0.7**		**0.7**		**0.7**		**0.7**		**2.0**		**108.0**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Total Qty is inclusive of pod systems/variants that were procured, deployed and retired and no longer in inventory. Additionally, the yearly quantity of two has been in many cases, modification of pods vice new production, therefore total quantity shown does not reflect current inventory.
4. FY10 - 12 Install Equipment (B Kits) funding addresses an the updated ALQ-167 Pod that provides enhanced threat simulation capabilities. This new pod unit cost has increased significantly. FY 10 - 12 funding will procure 34 AN/ALQ-167 DRFM pod variants to address Adversary Air requirements per Naval Strike Air Warfare Center Urgent Operational Need Statement.
5. Installation costs will be determined by the Engineering Change Proposal.

Exhibit P-40, BUDGET ITEM JUSTIFICATION													DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 056200 CARGO TRANSPORT AC SERIES						
Program Element for Code B Items:							Other Related Program Elements						
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	172.8	A	19.4	16.1	16.5	25.9	42.3	16.4	16.8	17.1	17.4	59.9	378.3

DESCRIPTION:
This line item funds modifications to the following cargo and transport aircraft: C-9B, C-40A, C-20A/D/G, C-37A/B, UC-35C/D, RC-12F/M, UC-12B/F/M/W, NC-12B and C/EC/RC-26D.

The Skytrain II, C-40A Clipper, C-20A/D Gulfstream III, C-20G Gulfstream IV, C-37A Gulfstream V, C-37 B Gulfstream 550, UC-35C Cessna Ultra, UC-35D Cessna Encore are commercial twin jet transport aircraft that provide time-critical medium lift logisti support for the fleet combatant commanders. C-9 is capable of carrying up to 32,000 pounds of cargo and personnel for over 3,300 nautical miles at a maximum speed of 430+ knots. C-40 can accommodate 121 passengers, or 8 pallets of cargo, or a combination configuration of 3 pallets and 70 passengers with a range of 3,400 nautical miles. C-20D/G is capable of high-speed transport of 13 passengers or cargo over a range of 4,100 nautical miles at 437 knots. C-20A/D and C-37 provide worldwide executive transport to SECNAV, CNO, CMC, and Fleet Commanders. C-35 provides transport for high priority passenger/cargo missions with time, place or mission sensitive requirements. C-35 can accommodate six passengers or 1,200 pounds of cargo with a range of 1,300 nautical miles at 234 knots. The C-12 King Air and C-26 Metro variants are commercial twin turbo-prop aircraft that provide shorter-range light lift passenger/cargo transport and range control missions. C-12 is capable of carrying si passengers or maximum cargo capacity of 2,850 pounds, 1,075 nautical miles at 225 knots. C-26 is capable of carrying 19 passengers 1,300 nautical miles at 234 knots.

OCO FY2012 -
OSIP 023-12 upgrades C-20G with Aircraft Survivability Equipment (ASE).
OSIP 024-12 upgrades UC-35D with ASE.
OSIP 025-12 upgrades UC-12W aircraft with an additional ALE-47 Forward Firing Dispenser and Extended Range (ER) Tanks.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
071-86	FAA CONFIG UPDATES	20.9	*	*	*		*	*	*	*	*		21.0
012-04	CNS-ATM	97.2	16.6	16.1	16.4		16.4	16.4	16.8	17.1	17.4	59.9	273.9
010-10	SFAR 88		2.7										2.7
023-12	C-20G ASE					10.0	10.0						10.0
024-12	UC-35D ASE					3.9	3.9						3.9
025-12	C-12W CAPABILITY IMPRVMNTS					12.0	12.0						12.0
	INACTIVE OSIP'S	54.7											54.7
Total		**172.8**	**19.4**	**16.1**	**16.5**	**25.9**	**42.3**	**16.4**	**16.8**	**17.1**	**17.4**	**59.9**	**378.3**

Note: Totals may not add due to rounding.
Asterisk indicates amount less than $51K

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT (CNS-ATM) OSIP 012-04

MODELS OF SYSTEMS AFFECTED: CARGO TRANSPORT A C SERIES | TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION/JUSTIFICATION:

World-wide airspace congestion and communication bandwidth saturation has led the International Civil Aviation Organization (ICAO) to restructure the world-wide airspace structure to improve safety through a series of equipment and performance mandates implemented by regional authorities. The Type/Models/Series cited below will be required to comply with Communication, Navigation and Surveillance - Air Traffic Management (CNS-ATM) mandates to retain the Navy's capability to operate these aircraft worldwide. Failure to comply with these time-phased mandates will result in being denied access to high-volume airspace (routing and altitudes) and airfields, and result in circuitous routing and sub optimal altitudes. Required modifications to meet these CNS-ATM mandates are being implemented on post production aircraft as capabilities listed in the third paragraph.

To minimize the impact of successive modifications and maximize aircraft availability, a block upgrade approach has been taken during this budget submit. C-20D, C-12 and C-26 expenditures in FY09 and prior years comprise part of Block 1 as noted below by an *. Block upgrades have been prioritized and phased to meet regional mandates' just in time' to ensure that commercial CNS-ATM solutions are available off the shelf to minimize non-reoccurring engineering associated with FAA supplemental type certification. In order to incorporate CNS-ATM mandates several older aircraft (C-20D, C-35C, all C-26 and C-12) required the installation of a digital flight management and communication system.

CNS-ATM capabilities associated with each Block Upgrade are listed below:
C-9B: Block 1 Enhanced Surveillance (EHS) + Flight Management System (FMS) upgrade; Correct Q Switching Block 2 – Required Navigation Performance (RNP) upgrade and Ground Landing System (GLS). No Block 3
C-40A: Block 1 – EHS, Aircraft Communications Addressing and Reporting System (ACARS), Controller Pilot Data Link Communication (CPDLC) and GLS: Block 2 Trajectory based ops+ KIV + L5 GPS Installs + Flight bags; Block 3 - Performance Based Services; Weather Integration
C-37A: Block 1 – EHS upgrade; Block 2– Airframe Service Change (ASC) 183, 186, 187, 188; Trajectory based ops+ KIV + L5 GPS Installs; Block 3– Performance Based Services ; Weather Integration
C-37B – Cert Delta + Runway Awareness and Advisory System (RAAS); Block 2 – ASC 83, 84, 908 RAAS; Trajectory based ops+ KIV + L5 GPS Installs; Block 3– Performance Based Services ; Weather Integration
C-35C: Block 1 – 2nd FMS, Mode S upgrade, and Emergency Locator Transmitter (ELT); Install Emergency Standby Instrument System (ESIS) + new instrument panels+ Wide Area Augmentation System (WAAS); Block 2 Install FMS upgrade & RNP; Trajectory based ops+ KIV + L5 GPS Installs; Block 3 – Performance Based Services ;Weather Integration
C-35D Block 1 – 2nd FMS and Mode S upgrade; Block 2 Install FMS upgrade, WAAS & RNP; Trajectory based ops+ KIV + L5 GPS Installs; Block 3 – Performance Based Services ; Weather Integration
C-26 EC/RC/UC-26D: Block 1 - Terrain Awareness and Warning System (TAWS)* and Traffic Alert and Collision Avoidance System (TCAS)-II*: RNP-1, Flight Management System, and Pro-Line 21 Upgrade; Block 2 Install FMS upgrade, WAAS & RNP; Trajectory based ops+ KIV + L5 GPS Installs; Block 3– Performance Based Services ; Weather Integration
C-20A: Block 1 – Mode S, ELT, TAWS upgrade, and CPDLC; Block 2 - Data Loader Upgrade; No Block 3.
C-20D – Block 1 Avionics Upgrade* High Frequency (HF) Radio Upgrade*, Mode S, ELT, TAWS upgrade; Block 2 – FMS 6.1 upgrade, WAAS & RNP; Trajectory based ops+ KIV + L5 GPS Installs; Block 3- Performance Based Services; Weather Integration
C-20G –Block 1 Mode S and TAWS upgrade, Avionics Upgrade; Block 2– ASC 476, 477, 478 & 479; Trajectory based ops+ KIV + L5 GPS Installs; Block 3 - Performance Based Services; Weather Integration
C-12B: Block 1 – Protected Instrument Landing System (P-ILS)*, ELT, 8.33 KHz VHF Channel Spacing*: Block 2 - ProLine 21 Upgrade. No Block 3.
C-12F Block 1 – Pro-Line 21 Upgrade, Satellite Communications (SATCOM), Reduced Vertical Separation Minima (RVSM), ELT and Mode S upgrade; Block 2 –Install FMS upgrade, WAAS & RNP; KIV + VDL2 CMU installs; Block 3 Performance Based Services + Flight bags + Trajectory based ops + L5 GPS Installs + FANS 1/A w/ CPDLC + ADS-C); Weather Integration
C-12M Block 1 – Pro-Line 21 Upgrade, 8.33 KHz VHF Channel Spacing*, Block 2– Install FMS upgrade, WAAS & RNP; KIV + VDL2 Communication Management Unit (CMU) installs; Block 3 Performance Based Services + Flight bags + Trajectory based ops+ L5 GPS Installs+ Future Air Navigation System (FANS) 1/A w/ CPDLC+ Aircraft Dependent Surveillance-Contract (ADS-C) ; Weather Integration
UC-12W Block 2– Install GLS & WAAS; Trajectory based ops+ KIV + L5 GPS Installs; Block 3 – Performance Based Services ; Weather Integration

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
8.33 KHZ	16	0.7																					16	0.7
AVIONICS UPGRADE C-20D	2	2.4																					2	2.4
BLOCK 1	51	10.5	1	0.1																			52	10.6
BLOCK 2	2	0.5	4	0.6	35	2.3	36	2.2			36	2.2	30	1.5	13	0.7	16	0.9					136	8.7
BLOCK 3															5	0.5	9	0.9	14	1.3	44	5.5	72	8.1
DATA LINK	7	0.6																					7	0.6
HF RADIO UPGRADE C-20A	2	0.7																					2	0.7
P-ILS	42	0.5																					42	0.5
Installation Kits N/R		25.1		2.8		1.1		0.2				0.2		0.9		2.2		0.2		1.7		7.9		42.1
Installation Equipment																								
AVIONICS UPGRADE C-20D	2	0.1																					2	0.1
BLOCK 1	61	27.8	6	4.3																			67	32.1
BLOCK 2	12	1.9	4	1.0	35	7.5	36	8.6			36	8.6	30	7.3	13	4.9	16	5.5					146	36.8
BLOCK 3															5	2.4	9	4.3	14	7.3	44	21.7	72	35.7
HF RADIO UPGRADE C-20A	1	0.5																					1	0.5
Installation Equipment N/R		1.7		0.5		0.5		0.1				0.1		0.3		0.6		0.4				1.7		5.8
Engineering Change Orders		0.2																						0.2
Data		3.4		0.8		0.4		0.2				0.2		0.4		0.4		0.4		0.5		2.1		8.6
Training Equipment		1.0		0.2		0.2		0.2				0.2		0.3		0.8		0.2		1.2		2.7		6.7
Support Equipment		0.3		0.1										0.2		0.4		0.1		0.2		0.5		1.7
ILS		1.5		0.6		0.2		0.1				0.1		0.4		0.8		0.1		0.6		1.8		6.1
Other Support		3.4		0.5		0.3		0.2				0.2		0.4		0.3		0.2		0.3		1.4		7.0
Interim Contractor Support																								
Installation Cost	104	14.5	19	5.2	35	3.6	36	4.6			36	4.6	30	4.7	18	2.6	25	4.1	14	4.4	44	14.7	325	58.3
Total Procurement		**97.2**		**16.6**		**16.1**		**16.4**				**16.4**		**16.4**		**16.8**		**17.1**		**17.4**		**59.9**		273.9

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **C-40A/C-9** MODIFICATION TITLE: CNS-ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **DEPOT CONTRACTOR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: N/A FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (12) kits	8	0.4	4	1.0															12	1.4
FY 2010 ( ) kits																				
FY 2011 (8) kits					8	0.4													8	0.4
FY 2012 (9) kits							9	0.4											9	0.4
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 (2) kits											2	0.3							2	0.3
FY 2015 (7) kits													7	1.1					7	1.1
FY 2016 (9) kits															9	1.4			9	1.4
To Complete (3) kits																	3	0.5	3	0.5
TOTAL	**8**	**0.4**	**4**	**1.0**	**8**	**0.4**	**9**	**0.4**			**2**	**0.3**	**7**	**1.1**	**9**	**1.4**	**3**	**0.5**	50	5.3

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	8		4				2	4	2		3	3	3						1	1	
Out	8		4				2	4	2		3	3	3						1	1	

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		2	3	2		3	3	3	3	50
Out		2	3	2		3	3	3	3	50

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **C-37** MODIFICATION TITLE: CNS-ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **DEPOT CONTRACTOR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: N/A FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: N/A FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (6) kits	6	0.6																	6	0.6
FY 2010 ( ) kits																				
FY 2011 (3) kits					3	0.8													3	0.8
FY 2012 (3) kits							3	0.8											3	0.8
FY 2012 OCO ( ) kits																				
FY 2013 (1) kits									1	0.3									1	0.3
FY 2014 (2) kits											2	0.3							2	0.3
FY 2015 (2) kits													2	0.3					2	0.3
FY 2016 (2) kits															2	0.6			2	0.6
To Complete (2) kits																	2	0.6	2	0.6
TOTAL	**6**	**0.6**			**3**	**0.8**	**3**	**0.8**	**1**	**0.3**	**2**	**0.3**	**2**	**0.3**	**2**	**0.6**	**2**	**0.6**	21	4.2

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	6						1	1	1		1	1	1		1				1	1	
Out	6						1	1	1		1	1	1		1				1	1	

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		1	1			1	1		2	21
Out		1	1			1	1		2	21

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **UC-35** MODIFICATION TITLE: CNS-ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **DEPOT CONTRACTOR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: Dec-09 FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: Jan-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (5) kits	5	2.3																	5	2.3
FY 2010 (1) kits			1	0.5															1	0.5
FY 2011 (5) kits					5	0.3													5	0.3
FY 2012 (2) kits							2	0.8											2	0.8
FY 2012 OCO ( ) kits																				
FY 2013 (2) kits									2	0.2									2	0.2
FY 2014 (4) kits											4	0.5							4	0.5
FY 2015 (6) kits													6	0.7					6	0.7
FY 2016 (3) kits															3	2.4			3	2.4
To Complete (9) kits																	9	7.2	9	7.2
TOTAL	**5**	**2.3**	**1**	**0.5**	**5**	**0.3**	**2**	**0.8**	**2**	**0.2**	**4**	**0.5**	**6**	**0.7**	**3**	**2.4**	**9**	**7.2**	37	14.9

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	5		1				1	2	2		1	1			1	1			1	2	1
Out	5		1				1	2	2		1	1			1	1			1	2	1

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		2	2	2		1	1	1	9	37
Out		2	2	2		1	1	1	9	37

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **C-26** MODIFICATION TITLE: CNS-ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **DEPOT CONTRACTOR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: N/A FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: N/A FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (17) kits	14	3.0	3	1.5															17	4.5
FY 2010 ( ) kits																				
FY 2011 (2) kits					2	0.3													2	0.3
FY 2012 (5) kits							5	0.8											5	0.8
FY 2012 OCO ( ) kits																				
FY 2013 (1) kits									1	0.2									1	0.2
FY 2014 (3) kits											3	0.6							3	0.6
FY 2015 (3) kits													3	0.6					3	0.6
FY 2016 ( ) kits																				
To Complete (7) kits																	7	1.3	7	1.3
TOTAL	**14**	**3.0**	**3**	**1.5**	**2**	**0.3**	**5**	**0.8**	**1**	**0.2**	**3**	**0.6**	**3**	**0.6**			**7**	**1.3**	38	8.2

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	14		1	1	1		1	1			2	2	1		1				1	1	1
Out	14		1	1	1		1	1			2	2	1		1				1	1	1

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		1	1	1					7	38
Out		1	1	1					7	38

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **C-20** MODIFICATION TITLE: CNS-ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **DEPOT CONTRACTOR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: Dec-09 FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: Jan-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (10) kits	10	1.5																	10	1.5
FY 2010 (4) kits			4	0.6															4	0.6
FY 2011 (5) kits					5	0.8													5	0.8
FY 2012 (3) kits							3	0.6											3	0.6
FY 2012 OCO ( ) kits																				
FY 2013 (4) kits									4	0.8									4	0.8
FY 2014 ( ) kits																				
FY 2015 (1) kits													1	0.2					1	0.2
FY 2016 ( ) kits																				
To Complete (6) kits																	6	1.2	6	1.2
TOTAL	**10**	**1.5**	**4**	**0.6**	**5**	**0.8**	**3**	**0.6**	**4**	**0.8**			**1**	**0.2**			**6**	**1.2**	33	5.7

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	10		2	2			1	2	2		1	1	1		1	2	1				
Out	10		2	2			1	2	2		1	1	1		1	2	1				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		1							6	33
Out		1							6	33

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **C-12** MODIFICATION TITLE: CNS-ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **DEPOT CONTRACTOR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: N/A FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: N/A FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (77) kits *	77	6.7	7	1.7															84	8.3
FY 2010 ( ) kits																				
FY 2011 (12) kits					12	1.2													12	1.2
FY 2012 (14) kits							14	1.4											14	1.4
FY 2012 OCO ( ) kits																				
FY 2013 (22) kits									22	3.2									22	3.2
FY 2014 (7) kits											7	1.0							7	1.0
FY 2015 (6) kits													6	1.2					6	1.2
FY 2016 ( ) kits																				
To Complete (17) kits																	17	4.0	17	4.0
TOTAL	**77**	**6.7**	**7**	**1.7**	**12**	**1.2**	**14**	**1.4**	**22**	**3.2**	**7**	**1.0**	**6**	**1.2**			**17**	**4.0**	162	20.2

* Qty of 16 8.33khz radios were installed concurrently with the 42 P-ILS systems.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	77		2	2	3		4	4	4		5	5	4		7	7	8		2	2	3
Out	77		2	2	3		4	4	4		5	5	4		7	7	8		2	2	3

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		2	2	2					17	162
Out		2	2	2					17	162

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: C-20G AIRCRAFT SURVIVABILITY EQUIPMENT (ASE) (OSIP 023-12)

MODELS OF SYSTEMS AFFECTED: C-20G | TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION/JUSTIFICATION:

Southwest Asia Marine Expeditionary Force (MEF) Commanders lack longer range lift assets capable of operating in threat Surface To Air Missile (SAM) environments of Southwest Asia (i.e. Iraq, Afghanistan). As a consequence, limited high value medium lift logistic assets (KC-130s) capable of operating in threat SAM environments, are being tasked to perform transport of personnel and material movement requirements. To fill this C-20 requirement, the Marine C-20G is being modified with an Aircraft Survivability Equipment (ASE) system to provide relief to tactical assets that are better utilized in direct support to the warfighter. The intent is to procure an Infrared Countermeasure (RCM) ASE commercial off the shelf system which is similar to systems already flying on Army and USAF C-37 and C-20 aircraft. ASE system installation for the C-20G will expand aircraft mission capability and better protect and support the Marine Air Ground Task Force (MAGTF) command element as it conducts Expeditionary Operations when deployed in support of OEF.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
C-20G ASE (OCO)									1	1.0	1	1.0											1	1.0
Installation Kits N/R (OCO)										7.0		7.0												7.0
Installation Equipment																								
C-20G ASE (OCO)									1	0.5	1	0.5											1	0.5
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support (OCO)										0.5		0.5												0.5
Interim Contractor Support																								
Installation Cost									1	1.0	1	1.0											1	1.0
Total Procurement										**10.0**		**10.0**												**10.0**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-20G

MODIFICATION TITLE: C-20G AIRCRAFT SURVIVABILITY EQUIPMENT (ASE) (OSIP 023-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR DEPOT**

ADMINISTRATIVE LEADTIME: 7 Months

PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: N/A FY 2011: N/A FY 2012: Apr-12 FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: N/A FY 2012: May-12 FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO (1) kits							1	1.0											1	1.0
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**1**	**1.0**											1	1.0

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In												1									
Out												1									

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										1
Out										1

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: UC-35D AIRCRAFT SURVIVABILITY EQUIPMENT (ASE) (OSIP 024-12)

MODELS OF SYSTEMS AFFECTED: UC-35D | TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION/JUSTIFICATION:

Southwest Asia Marine Expeditionary Force (MEF) Commanders lack light Operational Support Aircraft (OSA) lift assets capable of operating in threat Surface To Air Missile (SAM) environments of Southwest Asia (i.e. Iraq, Afghanistan). As a consequence, limited high value medium lift logistic assets (KC-130s) capable of operating in threat SAM environments, are being tasked to perform light OSA personnel and material movement requirements. To fill this OSA requirement, the UC-35D is being modified with an Aircraft Survivability Equipment (ASE) system to provide relief to tactical assets that are better utilized in direct support to the warfighter. The ASE system consists of an AN/AAR-47 Missile Warning Receiver system with four missile electronic sensors and an AN/ALE-47 Countermeasure Dispensers system with two dispensers. This requirement was validated in the Marine Requirement Oversight Council Decision Memorandum (MROCDM) UC-35D ASE Urgent Universal Needs Statement (UUNS) 05081UA (7-22-2005) and endorsed by Headquarters Marine Corp Deputy Commander for Aviation (HQMC/DC(A)) in letter APP-34/3900, dated Jul 3, 2007. Three of seven Marine UC-35D aircraft have already been modified with an ASE system. This OSIP upgrades the remaining UC-35D aircraft with the same ASE A-Kit configuration.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
UC-35D ASE (OCO)									4	1.4	4	1.4											4	1.4
Installation Kits N/R																								
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support																								
Interim Contractor Support																								
Installation Cost									4	2.5	4	2.5											4	2.5
Total Procurement										**3.9**		**3.9**												**3.9**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: UC-35D

MODIFICATION TITLE: UC-35D AIRCRAFT SURVIVABILITY EQUIPMENT (ASE) (OSIP 024-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR DEPOT**

ADMINISTRATIVE LEADTIME: 7 Months

PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: N/A FY 2011: N/A FY 2012: Apr-12 FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: N/A FY 2012: May-12 FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO (4) kits							4	2.5											4	2.5
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**4**	**2.5**											4	2.5

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In												2	2								
Out												2	2								

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										4
Out										4

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: UC-12W CAPABILITY IMPROVEMENTS (OSIP 025-12)

MODELS OF SYSTEMS AFFECTED: UC-12W | TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION/JUSTIFICATION:

Southwest Asia Marine Expeditionary Force (MEF) Commanders lack light Operational Support Aircraft (OSA) lift assets capable of operating in threat Surface To Air Missile (SAM) environments of Southwest Asia (i.e. Iraq, Afghanistan). As a consequence, limited high value medium lift logistic assets (KC-130s) capable of operating in threat SAM environments, are being tasked to perform light OSA personnel and material movement requirements. To fill this OSA requirement, the UC-12W is being modified in order to provide relief to tactical assets that are better utilized in direct support to the warfighter. A NAVAIR PMA272 study determined the current Aircraft Survivability Equipment (ASE) system on the UC-12W is less effective against the advance Infrared (IR) missile threats now being deployed. Additionally, the limited range of the UC-12W limits the ability of the aircraft to fully support mission requirements of the MEF commander. This OSIP upgrades UC-12W aircraft with an additional ALE-47 Forward Firing Dispenser and Extended Range (ER) Tanks. The additional ALE-47 dispenser will increase the effectiveness of the ASE system against the advanced threats being deployed, allowing the UC-12W to safely support OIF operations in more areas currently requiring the use of high value tactical assets. The addition of the Extended Range Tanks increases the effective range of the UC-12W by 33% to 2,300 nm greatly increasing its ability to support OSA missions over a larger area than currently planned.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
ALE-47 DISPENSERS - OCO									6	1.0	6	1.0											6	1.0
EXTENDED RANGE TANKS - OCO									6	6.0	6	6.0											6	6.0
Installation Kits N/R - OCO										1.2		1.2												1.2
Installation Equipment																								
ALE-47 DISPENSERS - OCO									6	0.5	6	0.5											6	0.5
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support - OCO										2.7		2.7												2.7
Interim Contractor Support																								
Installation Cost									12	0.6	12	0.6											12	0.6
Total Procurement										**12.0**		**12.0**												**12.0**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **C-12W** MODIFICATION TITLE: C-12W CAPABILITY IMPROVEMENTS (OSIP 025-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **CONTRACTOR DEPOT**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2010: N/A FY 2011: N/A FY 2012: Dec-11 FY 2013: N/A

DELIVERY DATE: FY 2010: N/A FY 2011: N/A FY 2012: Jan-12 FY 2013: N/A

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO (12) kits							12	0.6											12	0.6
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**12**	**0.6**											12	0.6

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	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											2	4	4	2							

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										12
Out										12

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: **February 2011**						
APPROPRIATION/BUDGET ACTIVITY **Aircraft Procurement, Navy/APN-5 Aircraft Modifications**							P-1 ITEM NOMENCLATURE **056400, E-6 SERIES**						
Program Element for Code B Items:							Other Related Program Elements **0101402N**						
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	256.7	A	102.3	149.2	165.3		165.3	158.9	182.4	217.7	202.6	384.1	1,819.0

DESCRIPTION:

This line item funds modifications to E-6 "Take Charge and Move Out", TACAMO aircraft. All sixteen (16) aircraft in the TACAMO fleet will receive each modification. The E-6 TACAMO is a manned airborne communications relay platform designed to provide a survivable, reliable, endurable airborne Command and Control Communications link between the President, Secretary of Defense and U.S. strategic and non-strategic forces. E-6 Mission Support (OSIP 007-02) will replace the current DoD Common Global Positioning System with the Secure Global Positioning System (GPS) due to obsolescence. Safety Deficiencies (OSIP 008-02) addresses emerging safety issues and includes replacement of aircraft Kapton wiring; replacement of acoustical thermal blankets; replacement of the Fuel Quantity Indicating System (FQIS); replacement of aircraft thermal blankets; a High Power Transmit Set (HPTS) fire port; and a Digital Roll Indicator (DRI). Tech Insertion (OSIP 003-04) addresses obsolescence, supportability, new technologies, systems updates and interoperability issues in the areas of the existing KG-3X crypto; brakes and seats to reduce aircraft weight to meet weight margins for planned modifications; AN/ARC-210 UHF/VHF radios and obsolete crypto devices to meet NSA directives, and for compatibility with DoD and Defense Support Civil Authority (DSCA) standards; HF Communications and the VLF Transmit Set and Receiver and the Future Area Navigation System (FANS). Communications (IP/T3) Upgrade (OSIP 012-07) increases communications bandwidth to support battlestaff command and control and first responder operations. Service Life Extension Program (SLEP) (OSIP 003-07) is designed to extend the service life of the E-6B aircraft to 2040+, to include installation of the Crash Survivable Flight Incident Recorder (CSFIR) Phase 2. E-6 Block I (OSIP 008-10) installs an Open System Architecture (OSA) that will allow low cost modifications for emerging requirements, updates the Internal Communications System (ICS); replaces the Mission Computer Set with the Mission Avionics Processor System (MAPS); adds operator work stations; replaces the UHF C3 modem and addresses cooling and electrical power system requirements to meet updated equipment demands. Block II (OSIP 013-10) replaces obsolete MILSTAR terminals with Advanced Extremely High Frequency (AEHF) Family of Advanced Beyond-Line-of-Sight Terminals (FAB-T), installs Presidential and National Voice Conferencing (PNVC) to provide highly available, reliable communications for the strategic AEHF satellite communications (SATCOM) system, and installs the Multi-Role Tactical Common Data Link (MR-TCDL) to support USSTRATCOM's migration to a distributed National C2 system. Block Recapture (OSIP 002-12) installs a new Auxiliary Power Unit (APU) to meet mission requirements and replaces the VLF Transmit Terminal and High Power Transmit Set (HPTS) subsystems due to obsolescence

(TOA, $ in Millions)

OSIP No. Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
007-02 E-6 MISSION SUPPORT	13.3			1.0		1.0	1.1	2.3	7.6	1.4		26.6
008-02 SAFETY DEFICIENCIES	61.2	8.0	4.7	2.1		2.1	2.2	2.3	2.3	2.4	10.3	95.5
003-04 TECH INSERTION	51.4	16.3	15.9	25.4		25.4	21.2	12.5	23.5	75.4	269.1	510.7
003-07 SLEP	14.9	11.7	14.9	18.1		18.1	12.1	3.3	19.8	29.8	60.7	185.5
012-07 COM (IP/T3) UPGRADE	115.8	16.8	22.7	18.3		18.3	18.3	21.5	16.8	9.0		239.1
008-10 E-6 BLOCK I		41.5	73.6	59.1		59.1	54.0	58.7	43.2	12.1		342.2
013-10 E-6 BLOCK II		8.2	17.3	20.8		20.8	26.1	63.0	92.9	69.6	43.9	341.8
002-12 BLOCK RECAPTURE				20.4		20.4	23.9	18.8	11.5	3.0		77.5
Total	**256.7**	**102.3**	**149.2**	**165.3**		**165.3**	**158.9**	**182.4**	**217.7**	**202.6**	**384.1**	**1819.0**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: TECH INSERTION (OSIP 003-04)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES | TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:

The E-6 aircraft has 35 individual computers dealing with communications and mission systems. Tech Insertion inserts new technologies into the E-6B platform and addresses supportability, obsolescence, systems updates and interoperability issues. Existin 3X crypto must be replaced with DoD standard equipment for compatibility. Existing brakes and seats will be replaced to reduce the aircraft weight to meet weight margins for planned modifications. ARC 210 installs AN/ARC-210 UHF/VHF radios with internal NSA approved modern programmable crypto and replaces obsolete cryptographic devices to meet NSA directives and for compatibility with DoD and Defense Support Civil Authority (DSCA) standards. High Frequency Automatic Link Establishment (HF ALE) performance must be upgraded to support required additional data and voice through put. Keyer/Converters and components of the High Power Transmit Set (HPTS) will be replaced due to obsolescence. The Modified Miniature Receive Terminal (MMRT) will be replaced by the Compact Very Low Frequency (CVLF) receiver due to obsolescence. CONUS Future Area Navigation System (FANS) requirements must be implemented starting in FY16 to ensure E-6B access to all national airspace.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

KG-3X family crypto NRE, NRE kit and replacement kits will be provided by the Air Force at no cost to the Navy with installs in FY11-FY14 (15 A/C). FOC FY12 (16 A/C). Brake NRE and prototype install Kit buy in FY11 with installation in FY12 at no cost to the Navy; production install kit buys in FY12-15 with installs in FY12-15 at no cost to the Navy (15 A/C). FOC FY15 (16 A/C). Seat install equipment kit buys in FY11 with installation in FY12 at no cost to the Navy (16 A/C). ARC-210 NRE FY11-FY12 with NRE kit buy and installation in FY12; production kit buys in FY13-FY15 with installs in FY13-FY16 (15 A/C). FOC FY16 (16 A/C). NRE FY11 with NRE kit buy in FY11 and installation in FY12; production kit buys FY12-FY13 with installs in FY13-FY14 (15 A/C). FOC FY14 (16 A/C). HF ALE system NRE with NRE kit buy in FY15 and installation in FY16; production kit buys FY16 to beyond t he FYDP and installs beyond the FYDP (15 A/C). FOC beyond the FYDP (16 A/C). Keyers NRE FY15 and NRE kit buy FY15 with installation in FY16; production kit buys FY16 to beyond the FYPD with installation beyond the FYDP (15 A/C). FOC beyond the FYDP (16 A/C). HPTS NRE FY15 to beyond the FYDP with NRE kit buy in FY16 and installation beyond the FYDP; production kit buys and installs beyond the FYDP (15 A/C). FOC beyond the FYDP (16 A/C). CVLF NRE FY15 with NRE kit buy and installation in FY16; production kit buys FY16 to beyond the FYDP with installs FY16 to beyond the FYDP (15 A/C). FOC beyond the FYDP (16 A/C). FANS NRE in FY15-16 with NRE kit buy in FY16 and installation beyond the FYDP; production kit buys and installs beyond the FYDP (15 A/C). FOC beyond the FYDP (16 A/C).

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
85HP MOTOR	16	0.4																					16	0.4
ARC 210 RADIO / Crypto							10	1.7			10	1.7	6	1.3									16	3.0
SDSU	16	0.2																					16	0.2
MCS SPIRAL 1 (UPS)	16	0.2																					16	0.2
Keyers																	1	*	8	0.4	7	0.4	16	0.8
HPTS																			1	0.9	15	14.6	16	15.5
FANS																			1	0.2	15	4.0	16	4.2
CVLF																			3	0.6	13	2.6	16	3.1
HF ALE																	1	0.1	9	0.6	6	0.4	16	1.1
Water Tanks	16	0.1																					16	0.1
Carbon Brakes			1	0.8			6	4.2			6	4.2	4	3.3	4	3.5	1	0.8					16	12.7
STE	15	0.4																					15	0.4
SIL	2	*																					2	*
LAB	2	*			1	0.2											3	0.3	1	0.2			7	0.8
Installation Kits N/R		7.3		5.9		4.0												11.4		43.9		7.7		80.2
Installation Equipment																								
85HP MOTOR	16	0.4																					16	0.4
ARC 210 RADIO / Crypto							10	7.6			10	7.6	6	4.8									16	12.4
FMCS Single Board	16	1.3																					16	1.3
MCS SPIRAL 1 (UPS)	16	1.2																					16	1.2
MCS SPIRAL 2 (MPS)	16	1.4																					16	1.4
CVLF																			3	8.8	13	38.1	16	46.9
FANS																			1	0.6	15	9.1	16	9.7
HPTS																			1	2.8	15	41.6	16	44.4
HF ALE																	1	0.2	9	1.8	6	1.2	16	3.2
Keyers																	1	*	8	0.3	7	0.3	16	0.6
Shredder	16	0.3	5	0.2																			21	0.5
SDSU	16	2.0																					16	2.0
STE	16	0.9																					16	0.9
Seat Assemblies			16	1.5																			16	1.5
SIL	3	0.3																					3	0.3
LAB	3	0.1			1	0.7											3	3.7	1	0.7			8	5.3
Installation Equipment N/R		9.7																						9.7
Engineering Change Orders																								
Data		1.0		0.6		0.4		1.2				1.2		0.1		0.5		0.8		0.8		1.0		6.5
Training Equipment	14	3.1	1	1.2		0.9	7	4.4			7	4.4	1	1.5				0.6	5	7.2	16	24.1	44	42.9
Support Equipment	7	1.0	3	0.3															6	1.0	5	1.8	21	4.1
ILS		0.8		1.4										1.4		0.6		0.9		1.5		1.0		7.6
Other Support		15.0		4.4		8.4		4.8				4.8		6.2		6.3		4.3		2.6		7.3		59.3
Interim Contractor Support																								
Installation Cost	98	4.4			7	1.2	12	1.5			12	1.5	12	2.6	7	1.5	3	0.3	3	0.4	103	114.1	245	126.0
Total Procurement		**51.4**		**16.3**		**15.9**		**25.4**				**25.4**		**21.2**		**12.5**		**23.5**		**75.4**		**269.1**		**510.7**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. KG-3X family crypto NRE and replacement kits will be provided by the Air Force at no cost to the Navy with installation of 15 A/C in FY11-FY12. The 16th A/C kit will be installed under the Block I program.
4. Shredder does not require an Installation Kit.
5. Water Tanks and Carbon Brakes do not require Installation Equipment Kits.
6. Shredder, Water Tanks and Carbon Brakes installed at no cost the the Navy.
7. Carbon Brakes fleet install not cost to Navy.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES

MODIFICATION TITLE: TECH INSERTION (OSIP 003-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Drive IN**

ADMINISTRATIVE LEADTIME: Various Months

PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2010: Various FY 2011: NA FY 2012: Various FY 2013: Various

DELIVERY DATE: FY 2010: Various FY 2011: NA FY 2012: Various FY 2013: Various

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits	78	3.2																	78	3.2
FY 2010 ( ) kits																				
FY 2011 (7) kits					7	1.2													7	1.2
FY 2012 (18) kits							8	1.2	10	1.7									18	2.9
FY 2012 OCO ( ) kits																				
FY 2013 (6) kits											6	1.2							6	1.2
FY 2014 ( ) kits																				
FY 2015 (2) kits															2	0.1			2	0.1
FY 2016 (22) kits																	22	12.8	22	12.8
To Complete (56) kits																	56	83.1	56	83.1
TOTAL	**78**	**3.2**			**7**	**1.2**	**8**	**1.2**	**10**	**1.7**	**6**	**1.2**			**2**	**0.1**	**78**	**95.9**	**189**	**104.5**

Does not include 13 Lab & SIL kits and 43 trainer kits.

Installation Schedule: SDSU

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	16																				
Out	16																				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										16
Out										16

Installation Schedule: ARC 210 RADIO

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																1	9			1	5
Out																	10				6

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										16
Out										16

Installation Schedule: KG-3X

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							1	3	3	3	3	2									
Out								1	3	3	3	3	2								

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										15
Out										15

Installation Schedule: Keyers

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In					1				15	16
Out						1			15	16

Installation Schedule: HF ALE

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In					1				15	16
Out						1			15	16

Installation Schedule: FMC Single Board

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	16																				
Out	16																				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										16
Out										16

Installation Schedule: HPTS

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									16	16
Out									16	16

Installation Schedule: FANS

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									16	16
Out									16	16

Installation Schedule: CVLR

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									16	16
Out									16	16

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: SLEP (OSIP 003-07)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES | TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:
The Service Life Extension Program (SLEP) extends the E-6B service life to 2040+, based on extensive engineering analysis using modern analytic tools (Service Life Assessment Program – SLAP). Current E-6B usage indicates modification must commence in FY10 to prevent the E-6B from being unable to perform its mission with the downing of more than two aircraft in 2016. There is a potential safety of flight issue due to unknown rate of deterioration of the E-6B airframe. CSFIR kit buys and installs complete FY09 (16 A/C).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
SLEP Installation Kit production buys in FY09 to beyond the FYDP with installs in FY09 to beyond the FYDP (16 A/C). CSFIR Phase 2 NRE FY15-16 with NRE and production install kits and NRE and production installation beyond the FYDP. FOC (16 A/C) beyond the FYDP.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		10.7																						10.7
PROCUREMENT																								
Installation Kits																								
SLEP Phase 1 Kits	2	0.8	2	0.8	5	1.9	2	0.8			2	0.8			2	0.8	1	0.4	1	0.4	1	0.4	16	6.1
CSFIR Phase 2 Kits																					16	12.2	16	12.2
Installation Kits N/R		6.4																5.8		13.3				25.6
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data																				0.4				0.4
Training Equipment																				1.0	6	3.6	6	4.6
Support Equipment		0.8																						0.8
ILS																				1.2				1.2
Other Support		3.1		2.0		5.2		1.8				1.8		4.3		2.6		5.8		9.7		15.9		50.4
Interim Contractor Support																								
Installation Cost	1	3.9	2	8.9	2	7.8	4	15.6			4	15.6	2	7.8			2	7.8	1	3.9	24	28.6	38	84.2
Total Procurement		**14.9**		**11.7**		**14.9**		**18.1**				**18.1**		**12.1**		**3.3**		**19.8**		**29.8**		**60.7**		**185.5**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES

MODIFICATION TITLE: SLEP (OSIP 003-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Drive IN**

ADMINISTRATIVE LEADTIME: 11 Months

PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: Sep-10 FY 2011: Sep-11 FY 2012: Sep-12 FY 2013: NA

DELIVERY DATE: FY 2010: Dec-10 FY 2011: Dec-11 FY 2012: Jun-13 FY 2013: NA

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (2) kits	1	3.9	1	4.5															2	8.3
FY 2010 (2) kits			1	4.5	1	3.9													2	8.3
FY 2011 (5) kits					1	3.9	4	15.6											5	19.5
FY 2012 (2) kits									2	7.8									2	7.8
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 (2) kits													2	7.8					2	7.8
FY 2015 (1) kits															1	3.9			1	3.9
FY 2016 (1) kits																	1	3.9	1	3.9
To Complete (17) kits																	17	19.5	17	19.5
TOTAL	**1**	**3.9**	**2**	**8.9**	**2**	**7.8**	**4**	**15.6**	**2**	**7.8**			**2**	**7.8**	**1**	**3.9**	**18**	**23.4**	**32**	**79.0**

Does not include 6 trainer kits.

Installation Schedule: SLEP PHASE ONE

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1			1	1			1	1			2	2			1	1				
Out		1			1	1			1	1			2	2			1	1			

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In			1	1			1		2	16
Out				1	1			1	2	16

Installation Schedule: CSFIR Phase 2

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									16	16
Out									16	16

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: COMMUNICATIONS (IP/T3) UPGRADE (OSIP 012-07)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES | TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:

The Defense Department requires the E-6B establish and maintain Internet Protocol (IP) connectivity using various wideband communications links in support of command and control operations onboard the E-6B aircraft. The IP effort installs International Marine/Maritime Satellite (INMARSAT) commercial satellite access for global communications connectivity (Phase 1); removes the Utility Trailing Wire Antenna (UTWA) to provide weight and space margin for aircraft modifications (Phase 3); and provides the Northstar Digital Ground Entry Point (GEP) capability for high speed UHF Line of Sight (LOS) communications (Phase 4).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Phase 1 INMARSAT NRE complete FY09 with NRE kit buy complete FY08 and installation complete in FY10. Phase 3 UTWA removal NRE and NRE kit buy complete in FY08 with installation complete in FY10. Phase 1 and 3 aircraft production kit buys in FY10-FY15 (15 A/C) with installs in FY11 to FY16 (15 A/C). FOC FY16 (16 A/C). Phase 4 Digital GEP contract awarded in FY09 using FY08 funds. NRE complete in FY10 with two NRE kits bought in FY09 (using FY08 funds) and installs complete FY10. Production kits bought FY09 with installs in FY11. FOC FY11 (16A/C)

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Phase One Kits	1	0.5	1	0.5	3	1.5	3	1.5			3	1.5	3	1.5	3	1.6	2	1.1					16	8.2
Phase Three Kits	1	0.6	1	0.6	3	1.8	3	1.9			3	1.9	3	1.9	3	1.9	2	1.3					16	9.9
Phase Four Kits	16	4.6																					16	4.6
Lab Kits	3	1.4																					3	1.4
Installation Kits N/R		53.8																						53.8
Installation Equipment																								
Phase One Kits	1	0.6	1	0.5	3	1.8	3	1.8			3	1.8	3	1.8	3	1.8	2	1.2					16	9.5
Phase Three Kits	1	0.6	1	0.5	3	1.7	3	1.7			3	1.7	3	1.8	3	1.8	2	1.2					16	9.3
Phase Four Kits	16	2.4																					16	2.4
Lab Kits	3	1.3																					3	1.3
Installation Equipment N/R																								
Engineering Change Orders																								
Data		1.5		0.4		0.9		0.1				0.1		0.1										3.1
Training Equipment		2.1	12	7.0		0.9							2	1.1	2	1.2							16	12.3
Support Equipment																								
ILS		3.2																						3.2
Other Support		28.7		6.2		7.3		2.5				2.5		2.2		3.1		2.8		2.7				55.4
Interim Contractor Support																								
Installation Cost	7	14.7	17	1.1	11	6.8	6	8.7			6	8.7	6	7.9	10	10.1	6	9.3	4	6.3			67	64.9
Total Procurement		**115.8**		**16.8**		**22.7**		**18.3**				**18.3**		**18.3**		**21.5**		**16.8**		**9.0**				**239.1**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES

MODIFICATION TITLE: COMMUNICATIONS (IP/T3) UPGRADE (OSIP 012-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Drive IN**

ADMINISTRATIVE LEADTIME: Various Months

PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

DELIVERY DATE: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (18) kits	4	13.6	14	0.9															18	14.5
FY 2010 (2) kits					2	4.2													2	4.2
FY 2011 (6) kits							6	8.7											6	8.7
FY 2012 (6) kits									6	7.9									6	7.9
FY 2012 OCO ( ) kits																				
FY 2013 (6) kits											6	9.1							6	9.1
FY 2014 (6) kits													6	9.3					6	9.3
FY 2015 (4) kits															4	6.3			4	6.3
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**4**	**13.6**	**14**	**0.9**	**2**	**4.2**	**6**	**8.7**	**6**	**7.9**	**6**	**9.1**	**6**	**9.3**	**4**	**6.3**			**48**	**60.1**

Does not include 3 labs and 16 trainers

Installation Schedule: Phase One

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1						1			1	1		1	1		1	1	1		1	1
Out		1						1			1	1		1	1		1	1	1		1

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	1	1	1		1	1				16
Out	1	1	1	1		1	1			16

Installation Schedule: Phase Three

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1						1			1	1		1	1		1	1	1		1	1
Out		1						1			1	1		1	1		1	1	1		1

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	1	1	1		1	1				16
Out	1	1	1	1		1	1			16

Installation Schedule: Phase Four

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2	3	3	4	4																
Out	2	1	3	4	4	2															

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										16
Out										16

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: E-6 MISSION DEFICIENCIES IMPROVEMENTS (BLOCK I) (OSIP 008-10)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES | TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:

The Block I Modification corrects ABNCP FOT&E deficiencies and replaces equipment that is obsolete or degrades mission performance. The modification installs an Open Systems Architecture (OSA), updates the Internal Communications System (ICS); replaces the Mission Computer Set with the Mission Avionics Processor System (MAPS); adds operator work stations; replaces the UHF C3 modem and addresses cooling and electrical power system requirements to meet updated equipment demands.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

MS-B achieved Mar 2004; DRR complete Aug 2007; DT complete 2Q FY10; MS-C 3Q FY10; OPEVAL 4Q FY10; Low Rate Initial Production (LRIP) of 1 kit buy in FY10 and 3 kit buys in FY11 with installs in FY11 and FY12. Full Rate Production (FRP) kit buys FY12-FY15 (11 A/C) with installs in FY13 to FY16. IOC FY12 (5 A/C). FOC FY16 (16 A/C).

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		200.0		16.1																				216.1
PROCUREMENT																								
Installation Kits																								
Block One Kits			1	3.3	3	7.3	3	6.1			3	6.1	3	6.1	3	6.2	2	5.0					15	33.9
Installation Kits N/R																								
Installation Equipment																								
Block One Kits			1	14.5	3	32.9	3	27.4			3	27.4	3	27.6	3	27.7	2	21.3					15	151.4
Installation Equipment N/R																								
Engineering Change Orders																								
Data				0.5		0.5		0.4				0.4		0.5		0.5		0.5		0.3				3.2
Training Equipment			4	13.5	3	10.4		2.0				2.0											7	25.9
Support Equipment			1	3.9	1	3.7	1	3.4			1	3.4	1	3.5	1	3.6							5	18.1
ILS				2.1		2.5		0.5				0.5												5.0
Other Support				3.7		10.0		9.5				9.5		7.7		12.4		8.1		5.9				57.3
Interim Contractor Support																								
Installation Cost					4	6.4	7	9.8			7	9.8	3	8.6	3	8.4	3	8.4	2	5.9			22	47.5
Total Procurement				**41.5**		**73.6**		**59.1**				**59.1**		**54.0**		**58.7**		**43.2**		**12.1**				**342.2**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES

MODIFICATION TITLE: E-6 MISSION DEFICIENCIES IMPROVEMENTS (BLOCK I) (OSIP 008-10)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Drive IN**

ADMINISTRATIVE LEADTIME: Various Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: Jun-10 FY 2011: Nov-10 FY 2012: Nov-11 FY 2013: Nov-12

DELIVERY DATE: FY 2010: Jun-11 FY 2011: Nov-11 FY 2012: Nov-12 FY 2013: Nov-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 (1) kits					1	4.2													1	4.2
FY 2011 (3) kits							3	9.4											3	9.4
FY 2012 (3) kits									3	8.6									3	8.6
FY 2012 OCO ( ) kits																				
FY 2013 (3) kits											3	8.4							3	8.4
FY 2014 (3) kits													3	8.4					3	8.4
FY 2015 (2) kits															2	5.9			2	5.9
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL					**1**	**4.2**	**3**	**9.4**	**3**	**8.6**	**3**	**8.4**	**3**	**8.4**	**2**	**5.9**			**15**	**44.8**

Does not include 7 trainers

Installation Schedule Block 1

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								1		1	1	1		1	1		1	1	1		1
Out									1		1	1		1	1		1	1	1		1

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	1		1	1	1		1			15
Out	1	1		1	1		1	1		15

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: BLOCK II (OSIP 013-10)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES | TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:

Defense Department requirements call for the replacement of obsolete MILSTAR terminals with Advanced Extremely High Frequency (AEHF) Family of Advanced Beyond-Line-of-Sight Terminals (FAB-T), as well as to integrate the systems required to provide a T-3 capability to support USSTRATCOM's migration to a distributed National C2 system. Presidential and National Voice Conferencing (PNVC) will provide highly available and reliable communications for the strategic AEHF satellite communications (SATCOM) system. Block II will leverage the Army Multi-Role Tactical Common Data Link (MR-TCDL) program to meet the T-3 capability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Navy integration of production systems from existing programs. FAB-T (Air Force) achieved KDP-C in 2Q FY09; MR-TCDL (Army) currently in production. Air Force to provide FAB-T systems at no cost to Navy. FY10 purchase of MR-TCDL Install Equipment Kit as GFE for NRE Lab installation. MR-TCDL contract award FY11; NRE in FY11-FY12 with NRE kit buy in FY12 and installation in FY13. Production kit buys in FY14 to FY16 (15 A/C), with installs FY15 to beyond the FYDP (15 A/C). FOC beyond the FYDP (16A/C). FAB-T contract award FY12; NRE in FY12-FY14 with NRE kit buy in FY14 and installation in FY15. Production kit buys in FY16 to beyond the FYDP (15 A/C), with installs beyond the FYDP (15 A/C). FOC beyond the FYDP (16A/C). PNVC NRE in FY14. Production kit buys in FY15 (16 A/C), with instals in FY15-FY16. FOC FY16 (16 A/C).

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AEHF															1	0.6			6	4.1	9	6.4	16	11.1
MR-TCDL							1	1.3			1	1.3			5	7.0	7	10.1	3	4.5			16	22.8
PNVC																	16	3.9					16	3.9
Lab Kits					1	1.3							1	0.6			1	0.2					3	2.1
Installation Kits N/R						5.8		9.2				9.2		11.4		7.9		3.9						38.2
Installation Equipment																								
AEHF																								
MR-TCDL					1	3.6									5	20.1	7	29.1	3	12.9			16	65.7
PNVC																	16	4.8					16	4.8
Lab Kits			1	3.4													1	0.3					2	3.7
Installation Equipment N/R																								
Engineering Change Orders																								
Data																1.4		1.0						2.4
Training Equipment															1	5.1	6	10.4	4	10.9			11	26.4
Support Equipment																								
ILS						1.3		1.1				1.1		0.6		0.8		0.8						4.5
Other Support				4.8		5.4		7.0				7.0		11.3		20.1		9.2		9.5		4.8		72.0
Interim Contractor Support																								
Installation Cost							1	2.2			1	2.2	1	2.2			14	19.2	23	27.8	22	32.8	61	84.1
Total Procurement				**8.2**		**17.3**		**20.8**				**20.8**		**26.1**		**63.0**		**92.9**		**69.6**		**43.9**		**341.8**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. I Lab Kit (FY13) does not get installed.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES

MODIFICATION TITLE: BLOCK II (OSIP 013-10)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Drive IN**

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2010: NA FY 2011: NA FY 2012: Nov-11 FY 2013: NA

DELIVERY DATE: FY 2010: NA FY 2011: NA FY 2012: Oct-12 FY 2013: NA

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (1) kits									1	2.2									1	2.2
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 (6) kits													6	12.8					6	12.8
FY 2015 (23) kits													3	1.2	20	22.5			23	23.7
FY 2016 (9) kits																	9	15.4	9	15.4
To Complete (9) kits																	9	12.2	9	12.2
TOTAL									**1**	**2.2**			**9**	**13.9**	**20**	**22.5**	**18**	**27.6**	**48**	**66.3**

11 Trainers and 2 Lab installation

AEHF Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In			1						15	16
Out					1				15	16

MR-TCDL Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In														1							
Out																1					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	1	1	2	1	2	2	2	1	3	16
Out		1	1	2	1	2	2	2	4	16

PNVC Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In				3	6	7				16
Out				3	5	7	1			16

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: BLOCK Recapture (OSIP 02-12)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES | TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:

Block Recapture corrects ABNCP FOT&E deficiencies not funded under the Block I Program by replacing equipment that is obsolete or degrades mission performance. The modification installs a new Auxiliary Power Unit to meet mission requirements and replaces the VLF Transmit Terminal and High Power Transmit Set Camera System due to obsolescence.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Research and Development engineering FY09-FY12 with PDR complete FY10 and CDR 3Q FY10. Prototype SIL and A/C development kit delivery in FY10 with installation in FY11. SIL and A/C testing 2Q FY11 to 1Q FY12. Full Rate Production (FRP) kit buys FY12-FY15 (15 A/C) with installs in FY13-FY16. IOC FY13 (5 A/C). FOC FY16 (16 A/C).

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		9.7		30.1		10.3		10.2				10.2		1.4										61.7
PROCUREMENT																								
Installation Kits																								
Block Recapture Kits							4	1.6			4	1.6	5	2.1	4	1.7	2	0.9					15	6.2
Installation Kits N/R																								
Installation Equipment																								
Block Recapture Kits							4	6.2			4	6.2	5	8.0	4	6.6	2	3.4					15	24.3
Installation Equipment N/R																								
Engineering Change Orders																								
Data								0.4				0.4												0.4
Training Equipment							8	6.0			8	6.0		*									8	6.1
Support Equipment							3	1.4			3	1.4											3	1.4
ILS								1.8				1.8		0.3		0.8								3.0
Other Support								3.0				3.0		1.6		0.5		0.5		0.1				5.8
Interim Contractor Support																								
Installation Cost													12	11.7	5	9.1	4	6.7	2	2.9			23	30.4
Total Procurement								**20.4**				**20.4**		**23.9**		**18.8**		**11.5**		**3.0**				**77.5**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES

MODIFICATION TITLE: BLOCK Recapture (OSIP 02-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Drive IN**

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: NA FY 2011: NA FY 2012: Nov-11 FY 2013: Nov-12

DELIVERY DATE: FY 2010: NA FY 2011: NA FY 2012: Nov-12 FY 2013: Nov-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (4) kits									4	8.7									4	8.7
FY 2012 OCO ( ) kits																				
FY 2013 (5) kits											5	9.1							5	9.1
FY 2014 (4) kits													4	6.7					4	6.7
FY 2015 (2) kits															2	2.9			2	2.9
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL									**4**	**8.7**	**5**	**9.1**	**4**	**6.7**	**2**	**2.9**			**15**	**27.3**

Does not include 8 trainers

Block Recapture Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In														1		1	2	1	2	1	1
Out															1		1	2	2	1	2

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	1	1	1	1		1	1			15
Out		2		1	1		1	1		15

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
056600, EXECUTIVE HELICOPTERS SERIES

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	**357.2**	A	**42.3**	**43.4**	**58.0**		**58.0**	**46.5**	**49.1**	**49.3**	**50.1**	**152.8**	**848.9**

DESCRIPTION: This line item funds modifications to the (11) VH-3D, (8) VH-60N, (1) TH-3D, and (1) TH-60N. These aircraft are assigned to Marine Helicopter Squadron One to support the President of the United States. The VH-60N Cockpit Upgrade consists of an upgrade to all-glass instrumentation. The Communication Suite Upgrade consists of DAMA SATCOM radio upgrade, Digital FM radio upgrade, HF radio upgrade, the Presidential redundant secure communications upgrade, Data Transfer capability upgrade, and Crypto Modernization Upgrade. The VH-3D Lift Improvement program consists of the operational level installation of 55 composite main rotor blades on all eleven VH-3Ds. The Structural Enhancement Program consists of the efforts to increase the maximum operating weight of the VH-3D, replace critical aircraft structure on the VH-60N, replace the VIP seats on the VH-3D, upgrade the safety of the fuel system on the VH-3D, and a Service Life Extension on the VH-3D and VH-60N. The Obsolescence Management Program will manage impending Executive Helicopter obsolescence issues. A variety of factors will be addressed including communication, navigation, operational weight, and engine upgrades to remain mission relevant. An H-3 and H-60 will be converted to a TH-3D and TH-60N to reduce usage on the VH-3D and VH-60N. This reduction in utilization provides for better availability and enhanced sustainability. The VH-3D Cockpit Upgrade consists of an upgrade to all-glass instrumentation. The overall goal of the modifications budgeted in FY 2012 is to continue procurement efforts in accordance with the procurement strategy to maintain the VH-3D and VH-60N until the VXX Replacement Helicopter becomes fully operationally capable.

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
009-02	VH-60N Cockpit Upgrade	102.5	21.6	10.3	5.6		5.6						**140.0**
014-02	VH Comm Upgrade	48.2	9.6	15.4	8.3		8.3	5.1	3.1				**89.8**
	DERF (non add)	10.1											**10.1**
011-06	VH-3D Lift Improvements	69.5	1.6										**71.1**
016-08	VH Structural Enhancements	4.6	4.5	5.4	2.8		2.8	12.8	20.5	25.6	27.1	59.6	**162.9**
023-09	Obsolescence Management Program	5.2	5.0	6.1	9.1		9.1	2.0	7.1	6.6	4.4	31.9	**77.4**
009-11	VH-3D/VH-60N Trainers Conversion			6.2	12.9		12.9	6.2					**25.3**
010-12	VH-3D Cockpit Upgrade				19.2		19.2	20.5	18.5	17.1	18.6	61.4	**155.3**
	Inactive OSIPs	127.2											**127.2**
Total		**357.2**	**42.3**	**43.4**	**58.0**		**58.0**	**46.5**	**49.1**	**49.3**	**50.1**	**152.8**	**848.9**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: VH-60N COCKPIT UPGRADE (OSIP 009-02)

MODELS OF SYSTEMS AFFECTED: VH-60N | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: In order to meet the requirement of providing safe and timely transportation for the President, Vice President, and other parties as directed by the Director of the White House Military Office (WHMO), and in support of the alert and contingency mission requirement of the WHMO Operations Plan, the VH-60N aircraft cockpit must be upgraded to provide enhanced communication, navigation, and survivability capabilities while reducing pilot workload. The cockpit upgrade will be an all-glass instrumentation built around pilot, co-pilot, and Communications Systems Operator (CSO) Multi-Function Displays (MFD) and Control Display Units (CDU). A moving map display complete with terrain database will be incorporated, while maintaining the current capabilities of TACAN, VOR, ILS, ADF, TCAS, CSFIR, FM Immunity, Mode S IFF, ALE-47 and ALQ-144. The Survivability capabilities will provide a countermeasure dispenser and an infrared countermeasure system interface. The navigation system should include laser ring gyro Inertial Navigation Systems (INS) with embedded Global Positioning System (GPS)-(EGI) that has integrity monitoring/IFR. A color weather radar will be incorporated. Communication capabilities must be consistent with White House Communications Agency (WHCA) planning and National Security Agency (NSA) requirements. Three UHF/VHF/FM radios (ARC-210s) shall be included. Four FM radios and the HF with ALE currently on the VH-60N must be maintained. A coupled autopilot function shall be incorporated into the cockpit management system. Preplanned Product Improvement (P3I) will include Digital Map, Ground Proximity Warning System (GPWS), Communication, Navigation and Survellance/ Air Traffic Management (CNS/ATM), and GPS Non-precision approach (RNP/RNAV).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: This ACAT IV-T program was approved in July 2001. Milestone B was approved November 2003. The program was re-designated as ACAT IV-M in November 2003. Milestone C was approved April 2006. Test bed aircraft modification and first kit procurement began in FY 2006. Installation of 1st production kit began in FY 2008. Development Testing was completed in FY 2009. Full Rate Production (FRP) approved August 2009. Initial Operating Capability was achieved in February 2010, with Full Operating Capability scheduled for FY 2012. Preplanned Product Improvement efforts began in FY 09 and will finish in FY 12.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
VH-60N Cockpit Upgrade Kit	6	6.2	2	2.4																			8	8.6
Installation Kits N/R		32.1				2.3																		34.4
Installation Equipment																								
Production Equip		9.2		3.1																				12.3
Installation Equipment N/R		21.3		0.5		0.4																		22.2
Engineering Change Orders																								
Preplanned Prod Improvement		0.6		4.1																				4.7
Data		2.5		0.1		0.4																		2.9
Training Equipment	1	3.9		0.4		0.1																	1	4.4
Support Equipment		1.1																						1.1
ILS		0.5																						0.5
Other Support		19.5		6.6		2.6		1.1				1.1												29.9
Interim Contractor Support																								
Installation Cost	3	5.5	2	4.5	2	4.5	2	4.5			2	4.5											9	19.1
Total Procurement		**102.5**		**21.6**		**10.3**		**5.6**				**5.6**												140.0

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VH-60N** MODIFICATION TITLE: VH-60N COCKPIT UPGRADE (OSIP 009-02)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Installation of Cockpit Upgrade during SPAR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 13 Months

CONTRACT DATES: FY 2010: Aug-10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Sep-11 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (7) kits	3	5.5	2	4.5	2	4.5													7	14.6
FY 2010 (2) kits							2	4.5											2	4.5
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	***3**	**5.5**	**2**	**4.5**	**2**	**4.5**	**2**	**4.5**											9	19.1

* Total quantity includes 1 trainer

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	3	2				2				2											
Out	3							1	1			1	1			1	1				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										9
Out										9

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: VH COMM UPGRADE (OSIP 014-02)

MODELS OF SYSTEMS AFFECTED: VH-60N/VH-3D — TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: The White House Military Office (WHMO) has directed the upgrade to the data transfer computer and printer on board the VH-60N, which is required to transmit, receive, and print secure data files via the SATCOM and HF radios. Satisfaction of the Data Transfer Computer/Printer requirement will require the procurement of a compatable TEMPEST certified data transfer computer and printer. WHMO has also directed that VHF FM radios operate in the APCO-25 digital mode. New radios must be procured in order to meet this requirement. JCS Directive MJCS-63-89 states that all users of UHF SATCOM shall have demand assigned multiple access (DAMA) capability. The White House Communication Agency (WHCA) has directed that all White House Military Organization (WHMO) elements be connected and have the ability to operate in the DAMA mode by 2005. Satisfaction of the DAMA SATCOM requirement will require the incorporation of two DAMA capable radios in each aircraft to satisfy the need for full duplex communication. An install kit will be built to house the radio, amplifier, and aircraft interface module, and then it will be installed in the aircraft as one unit. WHCA has also directed that
all WHMO elements have the ability to operate in the High Frequency/Automatic Link Establishment (HF/ALE) mode by 2007. To meet the HF/ALE requirement, software modifications to the OFP must be completed to fully utilize all automatic link establishment (ALE) capabilities of the current HF radio. OFP software will be modified by NAWC-AD to allow new systems to work in the aircraft. The FM (YZ) radio replacement is required in order to have a redundant secure voice capablilty due to the obsolescence of the YZ radio system employed by White house Communication Agency (WHCA). An upgrade to all radios is required to maintain crypto security requirements. Required upgrades vary from software/firmware mods to the replacement of multiple radios on the VH-3D/VH-60N.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: This program was approved as an Abbreviated Acquisition Program in July 2001. Program was upgraded to ACAT IV-M in March 2003. Digital FM was completed in FY 2005. The HF/ALE modification was completed in FY 2009. FM radio replacement was completed in FY 2009. The crypto modernization effort for both aircraft began in FY 2010 and continue through FY 2014. All performance testing and EMC/EMI testing will be performed by NAWC-AD. VAL/VER will be performed by HMX-1 to ensure interoperability with all WHMO elements.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
CRYPTO - ARC-210 SATCOM VH-3D/60N			2	*	12	0.2	5	0.1			5	0.1											19	0.4
CRYPTO - ARC-210 VH-60N			1	*	3	0.1	2	*			2	*	2	*									8	0.2
CRYPTO - ARC-210 VH-3D			1	*	6	0.2	2	0.1			2	0.1	2	0.1									11	0.4
CRYPTO - HF CRYPTO VH-3D/60N					2	*	13	0.3			13	0.3	4	0.1									19	0.4
FM Radio Replacement (O-level)	19	0.2																					19	0.2
SATCOM (O-level)	4	0.5																					4	0.5
VH Digital FM	28	1.0																					28	1.0
VH-3D SATCOM	11	0.6																					11	0.6
VH-60 SATCOM	8	1.3																					8	1.3
Installation Kits N/R		9.0		3.2		6.0		0.4				0.4												18.6
Installation Equipment																								
CRYPTO - ARC-210 SATCOM VH-3D/60N			2	0.2	12	1.2	5	0.5			5	0.5											19	2.0
CRYPTO - ARC 210 VH-60N			1	0.5	3	1.4	2	1.0			2	1.0	2	1.0									8	3.8
CRYPTO - ARC 210 VH-3D			1	0.5	6	3.1	2	1.0			2	1.0	2	1.0									11	5.6
CRYPTO - HF VH-3D/60N					2	0.1	13	0.5			13	0.5	4	0.2									19	0.8
Data Transfer Computer/Printer	8	0.2																					8	0.2
Digital FM	21	0.3																					21	0.3
FM Radio Replacement	19	0.4																					19	0.4
SATCOM	27	3.6																					27	3.6
Installation Equipment N/R		5.8				0.5																		6.3
Engineering Change Orders																								
Crypto						0.1																		0.1
Pre-Planned Product Improvements				1.3																				1.3
Data Transfer		0.3																						0.3
Digital FM		0.7																						0.7
FM Radio Replacement																								
SATCOM																								
Data		4.4				0.3		2.1				2.1		0.2		0.4								7.4
Training Equipment	5	0.7												1.0		0.5							5	2.2
Support Equipment		2.7						0.4				0.4		0.3		0.3								3.7
ILS																0.9								0.9
Other Support		11.7		3.9		2.1		1.9				1.9		1.2		1.1								21.9
Interim Contractor Support																								
Installation Cost	19	5.0																					19	5.0
Total Procurement		**48.2**		**9.6**		**15.4**		**8.3**				**8.3**		**5.1**		**3.1**								89.8

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. All Crypto installed at O level

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: VH-3D LIFT IMPROVEMENTS (OSIP 011-06)

MODELS OF SYSTEMS AFFECTED: VH-3D | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: The VH-3D Lift Improvement program consists of the operational level install of 55 composite main rotor blades on all eleven VH-3D aircraft. These blades will improve performance allowing increased passengers and fuel loads. Composite blades reduce the torque required to hover and for level flight, reduce vibrations and reduce structural loads. The VH-3D is the only aircraft in the inventory using metal blades.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Flight Test for the procurement of the VH-3D composite main rotor blades did take place in the 1st and 2nd quarter of FY 2008.Procurement and operational install of these blades occurred ir FY 2010. The blades are being individually procured vice procured as entire shipsets.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Blade Kit	65	0.8																					65	0.8
Installation Kits N/R		2.6																						2.6
Installation Equipment																								
Blade Equip	65	13.7																					65	13.7
Installation Equipment N/R		37.5																						37.5
Engineering Change Orders																								
Data	65	12.2																					65	12.2
Training Equipment		*																						*
Support Equipment																								
ILS		*																						*
Other Support		2.7		1.6																				4.3
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**69.5**		**1.6**																				71.1

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Blades will be installed at the O level
4. Quantities include 10 val/ver blades.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: VH Structural Enhancements (OSIP 016-08)

MODELS OF SYSTEMS AFFECTED: VH-3D/VH-60N | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: The VH Structural Enhancements Program consists of the necessary efforts to extend the service lives of the VH-3D and VH-60N. Due to the cancellation of the VH-71 program, additional service life is required of the current VH-3D and VH-60N fleet. In order to meet these requirements, a Service Life Extension Program (SLEP) has been established. The SLEP program will implement upgrades identified in the Service Life Assessment Program (SLAP), as well as upgrades to the VH-3D VIP seats and safety of the fuel system.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The Service Life Extension for the VH-3D and VH-60N will begin in FY 2011.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
VH-60N SLEP Kits													1	3.5	1	3.6	2	7.3	1	3.7	3	11.4	8	29.4
VH-3D SLEP Kits													1	1.4	1	1.5	2	3.0	2	3.0	5	7.8	11	16.7
Installation Kits N/R		3.8		0.4		3.4		0.9				0.9		0.9		0.7		0.2		0.1		*		10.4
Installation Equipment																								
VH-60N SLEP Equip													1	2.0	1	2.1	2	4.2	1	2.1	3	6.6	8	17.0
VH-3D SLEP Equip													1	0.3	1	0.3	2	0.7	2	0.7	5	1.8	11	3.8
Installation Equipment N/R								0.2				0.2		0.5										0.7
Engineering Change Orders																								
Data						0.1		0.1				0.1		0.4		1.0		1.1		1.9		1.3		5.9
Training Equipment																								
Support Equipment														0.7		0.8		0.4		0.4		0.3		2.5
ILS						0.1		0.1				0.1		0.5		0.6		0.4		0.4		0.7		2.8
Other Support		0.8		4.1		1.8		1.4				1.4		2.6		3.7		2.0		2.4		6.3		25.0
Interim Contractor Support																								
Installation Cost															2	6.4	2	6.4	4	12.4	11	23.5	19	48.7
Total Procurement		**4.6**		**4.5**		**5.4**		**2.8**				**2.8**		**12.8**		**20.5**		**25.6**		**27.1**		**59.6**		162.9

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VH-3D/VH-60N** MODIFICATION TITLE: VH Structural Enhancements (OSIP 016-08)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Installation of VH SLEP - Structural Enhancements during SPAR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 13 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013: Dec-12

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013: Jan-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 (2) kits											2	6.4							2	6.4
FY 2014 (2) kits													2	6.4					2	6.4
FY 2015 (4) kits															4	12.4			4	12.4
FY 2016 (3) kits																	3	7.6	3	7.6
To Complete (8) kits																	8	15.9	8	15.9
TOTAL											**2**	**6.4**	**2**	**6.4**	**4**	**12.4**	**11**	**23.5**	19	48.7

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																			1	1	
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		1	1			1	1	2	11	19
Out	1	1			1	1			15	19

* Installs must follow VH-60N SPAR schedule

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)

MODELS OF SYSTEMS AFFECTED: VH-3D/VH-60N | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: This OSIP provides for the readiness of the VH-3D and VH-60N Presidential Helicopters. The projected end of service for the VH-3D and VH-60N is now expected to extend beyond 2020. Funds will be utilized to manage and prepare, process, and incorporate Engineering Change Proposals and implement changes to sustain and improve all Executive Helicopter Series system readiness including safety, mission availability, structural integrity, and component (avionics/systems) reliability, maintainability, operational weight, and obsolescence conditions as they arise. This program contains the following efforts: Conversion of VH-60N and VH-3D engines. Non-recurring efforts will include multiple ECPs for change kits, integration testing and ILS updates. Recurring efforts include installation kits, installation equipment and installations. Replace/upgrade the Integrated Logistics Support Avionics test benches used to support VH unique avionics. Effort will install new operating systems, replace obsolete components and core computers, test equipment and basic test program hardware.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: VH-3D and VH-60N NRE for engine modifications began in FY09. NRE for the VH-60N T700-401C engine conversions began in FY 10. This modification will cover 16 engine upgrades for 8 installations on VH-60N helicopters. 2 T700-401C engines are required per aircraft.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Engines Kit					3	0.3	4	0.4			4	0.4	1	0.1									8	0.8
Avionics Kit																	2	0.6	2	0.8	1	0.4	5	1.9
Installation Kits N/R		0.4		4.2		0.4										3.6		2.6		0.9		8.5		20.5
Installation Equipment																								
Engines Equip					3	4.2	4	5.5			4	5.5	1	1.4									8	11.1
Avionics Equip																	2	0.4	2	0.5	1	0.2	5	1.1
Installation Equipment N/R																3.1		1.6		0.6		5.2		10.4
Engineering Change Orders																								
ECO																						8.2		8.2
Data																								
Training Equipment		4.8																						4.8
Support Equipment						0.4		0.8				0.8												1.2
ILS						0.5		1.1				1.1						0.5		0.6		1.2		3.9
Other Support				0.9		0.4		0.6				0.6		0.4		0.4		1.0		1.0		8.2		12.8
Interim Contractor Support																								
Installation Cost							7	0.7			7	0.7	1	0.1									8	0.8
Total Procurement		**5.2**		**5.0**		**6.1**		**9.1**				**9.1**		**2.0**		**7.1**		**6.6**		**4.4**		**31.9**		77.4

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Avionics kits will be installed at the O level

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VH-60N** MODIFICATION TITLE: OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Contractor Mod Team**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: FY 2011: Jan-11 FY 2012: Nov-11 FY 2013: Nov-12

DELIVERY DATE: FY 2010: FY 2011: Oct-11 FY 2012: Aug-12 FY 2013: Aug-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (3) kits							3	0.2											3	0.2
FY 2012 (4) kits							4	0.5											4	0.5
FY 2013 (1) kits									1	0.1									1	0.1
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**7**	**0.7**	**1**	**0.1**									8	0.8

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										1	2		4				1				
Out											1	2		4				1			

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										8
Out										8

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: VH-3D / VH-60N Trainers Conversion (OSIP 009-11)

MODELS OF SYSTEMS AFFECTED: VH-3D / VH-60N | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: In order to meet the requirement of providing safe and timely transportation for the President, Vice President, and other parties as directed by the Director of the White House Military Office (WHMO), and in support of the alert and contingency mission requirement of the WHMO Operations Plan, a trainer conversion program has been established to convert an H-60A and SH-3D into VH-3D and VH-60N trainer aircraft to alleviate pressure on national fleet assets. This effort will allow for more in-service aircraft to be available for the mission and will preserve flight hours on in-service aircraft. The conversion will allow for modifications including the VH-60N Cockpit Upgrade, VH Communication Suite Upgrade, VH-3D Lift Improvement, and VH Structural Enhancements (Top Deck Kits and Service Life Extension Plan (SLEP) modifications). Funds will also be utilitized to manage and prepare, process, and incorporate Engineering Change Proposals and implement changes that were made on all operational Executive Helicopter Series aircraft including safely, mission availability, structural integrity, and component (avionics/systems) reliability, maintainability, and obsolescence conditions as they arise.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Procurement efforts for the TH-3D and TH-60N conversion will begin in FY11, with completion of the conversions projected in FY13.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
TH-3D Conversion Kit					1	0.8																	1	0.8
TH-3D Structural Mod Kit							1	1.0			1	1.0											1	1.0
TH-60N Conversion Kit					1	0.8																	1	0.8
TH-60N Structural Kit							1	3.2			1	3.2											1	3.2
Installation Kits N/R																								
Installation Equipment																								
TH-3D Conversion Equip					1	0.9																	1	0.9
TH-3D Structural Mod Equip							1	1.4			1	1.4											1	1.4
TH-60N Conversion Equip					1	1.8																	1	1.8
TH-60N Structural Equip							1	4.6			1	4.6											1	4.6
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment								0.1				0.1												0.1
ILS																								
Other Support						0.7		0.5				0.5		0.2										1.3
Interim Contractor Support																								
Installation Cost					1	1.2	2	2.1			2	2.1	1	6.0									4	9.3
Total Procurement						**6.2**		**12.9**				**12.9**		**6.2**										25.3

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VH-3D**

MODIFICATION TITLE: VH-3D / VH-60N Trainers Conversion (OSIP 009-11)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Installation of TH-3D Conversion - Contractor Mod Team**

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2010: FY 2011: Jan-11 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: Apr-11 FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (1) kits					1	1.2													1	1.2
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL					**1**	**1.2**													1	1.2

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								1													
Out									1												

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										1
Out										1

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VH-3D**

MODIFICATION TITLE: VH-3D / VH-60N Trainers Conversion (OSIP 009-11)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Installation of TH-3D Structural Mod - Contractor Mod Team**

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Dec-11 FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Sep-12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 () kits																				
FY 2012 (1) kits							1	0.7											1	0.7
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**1**	**0.7**											1	0.7

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In													1								
Out														1							

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										1
Out										1

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VH-60N**

MODIFICATION TITLE: VH-3D / VH-60N Trainers Conversion (OSIP 009-11)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Installation of TH-60N Conversion - Contractor Mod Team**

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: _____ FY 2011: Jan-11 FY 2012: _____ FY 2013: _____

DELIVERY DATE: FY 2010: _____ FY 2011: Oct-11 FY 2012: _____ FY 2013: _____

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (1) kits							1	1.4											1	1.4
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**1**	**1.4**											1	1.4

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										1											
Out											1										

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										1
Out										1

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VH-60N**

MODIFICATION TITLE: VH-3D / VH-60N Trainers Conversion (OSIP 009-11)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Installation of TH-60N Structural Mod - Contractor Mod Team**

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 16 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: Dec-11 FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: Mar-13 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (1) kits									1	6.0									1	6.0
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL									**1**	**6.0**									1	6.0

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In															1						
Out																1					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										1
Out										1

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: VH-3D COCKPIT UPGRADE (OSIP 010-12)

MODELS OF SYSTEMS AFFECTED: VH-3D | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: In order to meet the requirement of providing safe and timely transportation for the President, Vice President, and other parties as directed by the Director of the White House Military Office (WHMO), and in support of the alert and contingency mission requirement of the WHMO Operations Plan, a VH-3D Cockpit Upgrade program has been established to extend the VH-3D service life requirements. The VH-3D Cockpit Upgrade eliminates pending obsolescence & supportability issues with key avionics components and brings the VH-3D in compliance with mandated avionics capabilities (CNS/ATM, TAWS/GPWS, Mode 5 IFF). In addition, an upgraded cockpit improves system safety, reduces pilot workload and training requirements, and provides a cockpit common with the VH-60N. The baseline upgrade includes digital map and GPS approach functionality, bringing the VH-3D in line with VH-60N capabilities. Modern, common avionics equipment will reduce logistics cost and increase reliability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Procurement efforts for the VH-3D Cockpit Upgrade begin in FY12, with completion projected in FY20.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
VH-3D Cockpit Upgrade Kit															1	1.4	1	2.4	2	3.5	7	10.7	11	18.0
Installation Kits N/R								11.5				11.5		7.3		4.8								23.7
Installation Equipment																								
VH-3D Cockpit Upgrade Kit															1	1.7	1	2.7	2	4.2	7	13.0	11	21.6
Installation Equipment N/R								5.8				5.8		9.8		4.5								20.0
Engineering Change Orders																								
Data																0.6		1.3		1.1		1.0		4.0
Training Equipment																0.4		1.9		2.9		1.2		6.4
Support Equipment																								
ILS																0.6		1.1		0.8		0.7		3.1
Other Support								1.9				1.9		3.4		4.6		4.4		2.8		3.0		20.1
Interim Contractor Support																								
Installation Cost																	1	3.3	1	3.4	9	31.8	11	38.5
Total Procurement								**19.2**				**19.2**		**20.5**		**18.5**		**17.1**		**18.6**		**61.4**		155.3

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VH-3D** MODIFICATION TITLE: VH-3D COCKPIT UPGRADE (OSIP 010-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Installation of Cockpit Upgrade during SPAR**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 13 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 (1) kits													1	3.3					1	3.3
FY 2015 (1) kits															1	3.4			1	3.4
FY 2016 (2) kits																	2	6.8	2	6.8
To Complete (7) kits																	7	24.9	7	24.9
TOTAL													**1**	**3.3**	**1**	**3.4**	**9**	**31.8**	11	38.5

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		1				1			9	11
Out								1	10	11

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: **February 2011**						
APPROPRIATION/BUDGET ACTIVITY **Aircraft Procurement, Navy/APN-5 Aircraft Modifications**							P-1 ITEM NOMENCLATURE **056700, SPECIAL PROJECT AIRCRAFT**						
Program Element for Code B Items:							Other Related Program Elements						
	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)	**365.8**	A	**12.3**	**20.8**	**12.2**	**11.2**	**23.4**	**15.1**	**15.3**	**15.6**	**15.8**	**82.9**	**566.9**

DESCRIPTION:

The Special Projects program modifies and/or replaces obsolete special mission equipment and integrates Quick Reaction Capability as required in six P-3 aircraft. Procurements vary in each fiscal year and include common Navy systems for increased capability, reduced operator workload and common logistics, as well as procurement of special mission equipment as directed by the Chief of Naval Operations. Active PAA inventory is 4 with additional 2 BAA aircraft in the Special Mission inventory. FY2011 $6.1M for OCO Request is for VORTEX communication and P496 Production systems. FY2012 $11.2M for OCO Request for P496 (V4.0) Production systems and Traffic Collision Avoidance System (TCAS) Integration.

The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No. Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
019-97 INTELLIGENCE SENSORS	291.4	12.3	20.8	12.2	11.2	23.4	15.1	15.3	15.6	15.8	82.9	492.6
INACTIVE OSIPS	74.4											74.4
Total	**365.8**	**12.3**	**20.8**	**12.2**	**11.2**	**23.4**	**15.1**	**15.3**	**15.6**	**15.8**	**82.9**	**566.9**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: INTELLIGENCE SENSORS (OSIP 019-97)

MODELS OF SYSTEMS AFFECTED: P-3B/C | TYPE MODIFICATION: Operational Improvement

DESCRIPTION/JUSTIFICATION:

This modification replaces obsolescent intelligence collection equipment in six P-3 Special Project aircraft by procurement of special mission equipment as directed by the Chief of Naval Operations.

FY2011 includes $6.1M for OCO Request for VORTEX communication and P496 Production systems.
FY2012 includes $4.2M for OCO Request for P496 (V4.0) Production systems.
FY2012 includes $6.984M for OCO Request for Traffic Collision Avoidance System (TCAS) Integration.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
P-3 KITS (MISSION UNIQUE)	4	0.7																					4	0.7
INSTALLATION KITS N/R																								
INSTALL EQUIPMENT																								
IMPROVED COMM & COLLECT CAPABILITY		30.1		0.2		1.8		1.1				1.1		0.5		0.5		3.2		1.4		9.6		48.2
Impr Comm and Coll Cap OCO						1.2																		1.2
MISSION UNIQUE EQUIPMENT		69.3		2.0		2.7		1.4				1.4		4.5		9.4		5.5		5.3		13.0		113.0
SPA Replacement (Special Mission)		46.7																						46.7
Mission Unique Equip OCO						1.9				6.7		6.7												8.6
Blue Force Tracking	6	1.8																					6	1.8
Collection Equipment	12	3.1																					12	3.1
INSTALL EQUIPMENT N/R		56.2		1.8		2.9		4.1				4.1		4.1		1.7		1.7		2.4		17.7		92.5
INSTALL EQUIPMENT N/R (OCO)										1.7		1.7												1.7
BFT/Collection Equipment		0.1																						0.1
ECO																								
DATA		2.5		0.4		0.4		0.5				0.5		0.5		0.4		0.5		0.5		2.7		8.6
DATA (OCO)										0.1		0.1												0.1
TRAINING EQUIP		10.3		0.1		0.1		0.2				0.2		0.1		0.1		0.1		0.1		0.5		11.3
BFT/Collection Equipment		0.2																						0.2
SUPPORT EQUIP		0.2		*		0.1		0.1				0.1		0.1		0.1		0.1		0.1		0.4		1.0
ILS		2.8		0.1		0.2		0.1				0.1		0.2		0.2		0.2		0.2		2.0		6.0
ILS (OCO)										0.1		0.1												0.1
OTHER SUPPORT		28.6		3.8		3.8		3.6				3.6		3.9		2.2		2.6		2.7		25.1		76.3
OTHER SUPPORT (OCO)										0.2		0.2												0.2
INTERIM CONTRACTOR SUPPORT																								
INSTALLATION COST		39.1		3.9		2.7		1.3				1.3		1.3		0.7		1.8		3.2		12.0		65.8
Installation OCO						3.0				2.5		2.5												5.5
Total Procurement		**291.4**		**12.3**		**20.8**		**12.2**		**11.2**		**23.4**		**15.1**		**15.3**		**15.6**		**15.8**		**82.9**		**492.6**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3B/C

MODIFICATION TITLE: Operational Improvement

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive In and Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2010: FY 2011: Nov-10 FY 2012: Jan-12

DELIVERY DATE: FY 2010: FY 2011: Jul-11 FY 2012: Sep-12

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (22) kits	22	39.1		3.9															22	43.0
FY 2010 ( ) kits						0.8														0.8
FY 2011 ( ) kits						4.9		0.9												5.8
FY 2012 ( ) kits								0.5		1.3										1.8
FY 2012 OCO ( ) kits								2.5												2.5
FY 2013 ( ) kits												0.7								0.7
FY 2014 ( ) kits														1.8						1.8
FY 2015 ( ) kits																2.2				2.2
FY 2016 ( ) kits																1.0				1.0
To Complete ( ) kits																		12.0		12.0
TOTAL	**22**	**39.1**		**3.9**		**5.7**		**3.8**		**1.3**		**0.7**		**1.8**		**3.2**		**12.0**	22	**71.4**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Note: Installation equipment includes both Mission Unique and Improved Communication Capabilities to be installed concurrently.

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: **February 2011**						
APPROPRIATION/BUDGET ACTIVITY: **Aircraft Procurement, Navy/APN-5 Aircraft Modifications**							P-1 ITEM NOMENCLATURE: **056900, T-45 SERIES**						
Program Element for Code B Items:							Other Related Program Elements						
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	351.8	A	52.6	61.5	57.8		57.8	61.0	79.8	86.3	87.6	310.1	1,148.6

DESCRIPTION:

This line item funds modifications to T-45A aircraft. The T-45A Goshawk is a tandem-seat, carrier capable derivative of the existing British Aerospace Hawk aircraft powered by a single Rolls Royce Adour engine. It serves as the aircraft component of the T45TS integrated jet pilot training system which replaces the three decade old TA-4 and T-2 technology. The overall goal of the modifications budgeted in FY 2012 is to correct discrepancies and deficiencies discovered after delivery of the aircraft and to commence upgrades to the aircraft cockpit and navigation systems. T-45 aircraft and simulators are facing critical avionics obsolescence and Diminishing Manufacturing Source (DMS) issues. OSIP 08-95 (Correction Of Deficiencies) was established to resolve safety and reliability issues, improve required mission capabilities, and increase service life of aircraft components. OSIP 03-03 (Engine Surge) was established to resolve engine surge critical safety issues.
OSIP 010-04 (GPS) was a Congressional requirement that all DoD aircraft be capable of navigating via Global Positioning System Inertial Navigation Assembly (GINA) to support T45TS mission to train the next generation of warfighters in the use of INS, GPS, and GPS/INS hybrid systems by the end of year 2005. A retrofit program will incorporate GPS in the existing Analog aircraft. There are currently 73 aircraft that will be retrofitted. Kits procured in 2010 through 2011 address obsolescence issues for the entire fleet. OSIP 17-04 (Avionics Obsolescence) was established to convert the T-45As (analog) to the digital T-45C configuration (Required Avionics Modernization Program (RAMP)). OSIP (02-06) (Synthetic Radar) was established because the T-2/T-39 divestiture schedule (T-2 divested in 2008 and T-39 in 2015) and the training command requirement to continue Undergraduate Military Flight Officer (UMFO) training. No new Type Model Series will be developed to pick up this requirement, as a result, the T-45 will modify 19 aircraft to incorporate Synthetic Radar Training into curriculum.

The designed service life of the aircraft is 14,400 hours with the average remaining service life of inventory aircraft estimated at 6,092 hours.

The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
008-95	T-45TS CORR OF DEF	156.4	19.4	15.4	21.6		21.6	31.7	51.4	52.1	52.7	184.4	585.1
003-03	ENGINE SURGE	18.6	1.3	5.1	2.2		2.2	8.0	11.2	11.3	11.3	65.2	134.0
010-04	T-45TS GPS	7.9	0.4	0.7	0.8		0.8	0.8					10.7
017-04	AVIONICS OBSOLESC	116.0	24.3	25.5	21.6		21.6	19.7	17.2	22.9	23.6	32.6	303.4
002-06	SYNTHETIC RADAR	34.5	7.3	14.9	11.5		11.5	0.8				28.0	97.0
	INACTIVE OSIPS	18.5											18.5
Total		**351.8**	**52.6**	**61.5**	**57.8**		**57.8**	**61.0**	**79.8**	**86.3**	**87.6**	**310.1**	**1,148.6**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)

MODELS OF SYSTEMS AFFECTED: T-45TS

TYPE MODIFICATION: Safety, Reliability, Increased Service Life, Improved Mission Capabilities

DESCRIPTION/JUSTIFICATION:

This OSIP funds correction of deficiencies discovered during test and evaluation or operational use.
EJECTION SEAT CHANGES: Modifications will enhance aircrew safety. Modifications include pilot tube covers, changes to the ejection sequencer, ejection seat handle modification and rail system.
UNCOMMANDED GEAR EXTENSION: MDA-T45TS-TBDs Modification will increase travel of the landing gear control interconnect cable, increase cable friction, and change the gear selector valve actuation signal to only when the handle is in the full up or fu down position. Installation of this ECP is in response to a T45TS Engineering Investigation that documented a deficiency and proposed recommendations relating to incidents of uncommanded landing gear extensions.
GROUND TRAINING SYSTEMS: Updates to the T-45 aircraft simulator will be made to match evolving aircraft configurations/modifications and flight characteristics/software/academics enhancements to improve training capabilities.
AIRFRAME ECPS are divided into two catagories; Structual and Systems.
STRUCTURAL ECPs: Modifications will incorporate changes to improve structural details to increase aircraft service life to 21,600 flight hours. During Full Scale Development (FSD) testing of the T45 aircraft it was determined that incorporation of redesigne components applicable to the critical load paths will significantly increase the service life of the aircraft. This structural portion of this OSIP effects several structural components to include Wing Dolly, Solid State (SS) 02 Monitor Bracket, Horizontal Stabilators, Frame 24 Crossbeam Lugs, Wing Leading Edge Redesign, Frame 29 Lower Flange, Uplock Beam Forward Attach, Slat Track Rib 5 Downstop Bolt, Frame 28/32 Boundary/Vertical Fin, Frame 33 Structure, Inlet Close-Out Fuel, Airframe Engine Mount, Frame 21 Structure, Main Landing Gear (MLG) Bay Tilted & Fasteners, Longitudial Systems Viscous, Frame 20 Structures, Frame 12 Vertical Splice, Frame 1 Structures and ballast provisions, Nose Landing Gear (NLG) Trunnion Beam, Slat Actuator Fitting Angle, Structure Life Improvement, Speed Brake, Engine Mount Link Option, Stabilizer Back-Up Structures, Fuselage/Frame 10 Door, and Fin Bracket Lever Box Assembly, Over Center Locking Mechansim.
SYSTEMS ECP's: Modifications to the airframe other than structural deficiencies are also required to ensure safety of flight, aero-performance and maintainability to enable satisfactory Pilot Training Requirements (PTR) levels. This Airframe OSIP affects several airframe components and their sub-assemblies including: forward, center and aft fuselage components, landing gear, Nose Wheel Steering (NWS), arresting hook, tail cone, wing, horizontal and vertical control surfaces, flaps, canopy/windscreen, hydraulic system, oxygen system, electrical system, fuel system, throttle, instrumentation systems, environmental controls, communications, navigation, emergency systems, and associated Support Equipment (SE).
AVIONICS: Modifications to the Avionics will be required to update the Display Unit, Heads Up Display, Global Positioning System and Inertial Navigation Assembly to enhance effectiveness of pilot training and avoid obsolescence. The following ECP's are part of the Avionics package of the aircraft and include: Air Data Recorder/Signal Data Computer/Advanced Signal Data Computer, Almanac Loading System, Mission Computer, communication systems, navigation systems, including Radar Altimeter, GPS, inverter, and associated SE.
ENGINE/POWER AND PROPULSION: Modifications under this catagory include modification to the Engine, Gas Turbine Starter, and Electrical System which will increase the reliability, maintainability and safety of these systems. Engine modifications include Engine Mounts, Fuel Pumps, Combustion Chamber, Compressors, Nozzle Guide Vanes, Drive Systems, Oil System, Air Systems, Turbines, Fuel Distribution and Control and modifications to address engine surge/compressor stall. Gas Turbine

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Airframe Structural	1,441	28.5	60	2.3	22	0.2	2	0.5			2	0.5	92	7.5	128	13.2	128	13.1	128	13.5	580	133.7	2581	212.4
Airframe Systems	676	9.0	8	1.4	6	0.1	14	1.5			14	1.5	44	5.6	44	2.3	44	2.3	44	2.3	545	7.8	1425	32.3
Avionics	868	15.5	144	1.9	132	1.0	65	3.2			65	3.2	90	2.2	20	1.3	12	1.5	12	1.5	487	14.1	1830	42.1
Ejection Seat Handle MB-9155	416	0.4																					416	0.4
Engines/Power & Propulsion	1,237	8.3	117	1.1	40	0.6	40	0.6			40	0.6	40	0.6	20	0.3	20	0.3	20	0.3	374	3.6	1908	15.5
Ground Training Systems	49	2.3																					49	2.3
SLEP (wing)		4.7													3	18.6	5	26.6	5	26.9			13	76.8
Uncommanded Gear Extension	35	0.7																					35	0.7
Installation Kits N/R		17.9		2.7		6.6		0.6				0.6		1.4		0.6		0.2		0.1		6.6		36.6
Installation Equipment																								
Airframe Structural	8	0.4			100	2.1	65	1.3			65	1.3	50	0.5									223	4.4
Airframe Systems	2	1.3			100	2.1	100	2.0			100	2.0	50	0.5									252	6.0
Avionics	7	1.4																					7	1.4

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
Ejection Seat Handle MB-9155	1	0.2																					1	0.2
Engines/Power & Propulsion	2	2.0																					2	2.0
Ground Training Systems	5	0.7																					5	0.7
Uncommanded Gear Extension	1	*																					1	*
Installation Equipment N/R		2.0																						2.0
Engineering Change Orders																								
Data		0.8				*		*				*		*		*		*		*				1.0
Training Equipment		7.1																						7.1
Support Equipment		1.4				*		*				*		*		*		*		*				1.7
ILS																								
Other Support		7.7		8.5		2.2		8.7				8.7		9.7		7.3		1.1		1.1		1.5		47.9
Interim Contractor Support																								
Installation Cost	2,680	43.9	783	1.6	494	0.4	149	3.2			149	3.2	194	3.7	204	7.8	176	7.0	216	7.0	1,221	17.2	6,117	91.6
Total Procurement		**156.4**		**19.4**		**15.4**		**21.6**				**21.6**		**31.7**		**51.4**		**52.1**		**52.7**		**184.4**		**585.1**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Note: In FY2010 there are 84 O-level installs out of 329 procured kits.
Note: In FY2011 there are 84 O-level installs out of 200 procured kits.
Note: In FY2012 there are 26 O-level installs out of 121 procured kits.
Note: In FY2013 there are 94 O-level installs out of 266 procured kits.
Note: In FY2014 there are 66 O-level installs out of 215 procured kits.
Note: In FY2015 there are 18 O-level installs out of 209 procured kits.
Note: In FY2016 there are 26 O-level installs out of 209 procured kits.
Note: In To Complete there are 765 O-level installs out of 1986 procured kits.
Note: Total O-Level installs are 2140 kits.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS

MODIFICATION TITLE: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: "I" and "D" Level Installation: Contractor Field Modification Team-Separate Contract

ADMINISTRATIVE LEADTIME: VARIOUS Months

PRODUCTION LEADTIME: VARIOUS Months

CONTRACT DATES: FY 2010: VARIOUS FY 2011: VARIOUS FY 2012: VARIOUS FY 2013: VARIOUS

DELIVERY DATE: FY 2010: VARIOUS FY 2011: VARIOUS FY 2012: VARIOUS FY 2013: VARIOUS

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (3745) kits	2,680	43.9	750	1.5	315	0.2													3,745	45.6
FY 2010 (245) kits			33	0.1	122	0.1	90	2.0											245	2.1
FY 2011 (116) kits					57	0.1	59	1.2											116	1.3
FY 2012 (95) kits									95	1.7									95	1.7
FY 2012 OCO ( ) kits																				
FY 2013 (172) kits									99	2.0	73	2.5							172	4.5
FY 2014 (149) kits											131	5.3	18	0.7					149	6.0
FY 2015 (191) kits													158	6.2	33	1.3			191	7.5
FY 2016 (183) kits															183	5.6			183	5.6
To Complete (1221) kits																	1,221	17.2	1,221	17.2
TOTAL	**2,680**	**43.9**	**783**	**1.6**	**494**	**0.4**	**149**	**3.2**	**194**	**3.7**	**204**	**7.8**	**176**	**7.0**	**216**	**7.0**	**1,221**	**17.2**	**6,117**	**91.6**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2680	195	195	195	198	123	123	123	125	37	37	37	38	48	48	48	50	51	51	51	51
Out	2680	195	195	195	198	123	123	123	125	37	37	37	38	48	48	48	50	51	51	51	51

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	44	44	44	44	54	54	54	54	1221	6117
Out	44	44	44	44	54	54	54	54	1221	6117

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: AVIONICS OBSOLESCENCE (OSIP 017-04)

MODELS OF SYSTEMS AFFECTED: T-45TS A/C — TYPE MODIFICATION: PS Safety

DESCRIPTION/JUSTIFICATION:
T45TS is facing critical obsolescence/performance issues. Components of various avionics boxes will not be supportable as a result of Diminishing Manufacturing Source issues that result in part obsolescence or supplier mortality. RAMP will resolve obsolescence issues with such items as the Global Positioning Inertial Navigation Assembly (GINA) (FPGA and processor), Mission Display Processor (MDP) (Diode), Display Processor (Diode), Airborne Data Recorders (Line in Buffer Amplifier), Display Unit, Signal Data Computer, Azmith Computer and various other avionics components.

The Required Avionics Modernization Program (RAMP) is the Analog to Digital conversion of the T-45A aircraft. The RAMP effort consists of a Glass Cockpit upgrade consisting of two Multi-Function Displays per cockpit, mission display processor, recorder, associated cockpit controls and a 1553 digital, integrating them with the existing head-up display (HUD), the airborne data recorder, and a separately procured Global positioning system inertial navigation assembly.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FY03 provided funding (OSIP 16-96) for 1 Simulator conversion and OSIP 17-04 provided FY04 funding for DMS/obsolescence risk mitigation efforts.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
RAMP	51	38.7	9	6.1	10	9.2																	70	54.0
RAMP/Obsolescence Kits	746	7.2	200	1.2	200	9.6	160	11.6			160	11.6	200	17.3	400	14.4	400	20.4	400	21.9	640	31.6	3346	135.1
Installation Kits N/R		9.4		0.1		0.2		0.5				0.5		0.1										10.3
Installation Equipment																								
AS-3822/URN (GPS ANTENNA (FRPA-3)	51	0.1			10	*																	61	0.1
ASDC/DDS	51	2.0			10	*	13	*			13	*	13	*	12	*	12	*					111	2.0
ATTITUDE INDICATOR	9	0.3			10	0.1																	19	0.4
CP-2092 (P)/A (DDS)	51	0.8	9	0.2																			60	1.0
FFI	51	0.5	9	0.2	10	0.1																	70	0.7
MDP	51	11.4	9	2.0	10	1.6																	70	14.9
MFCD	51	7.6	9	1.6	10	0.9																	70	10.1
MU-1053/A (PROGRAM LOADER)	51	0.2																					51	0.2
PDU	51	1.4	9	0.3	10	0.2																	70	2.0
PYROTECHNIC	51	0.2	9	0.1	10	*																	70	0.3
UAR DDS RECORDER	9	1.6	9	2.2	10	1.2	13	1.2			13	1.2	13	1.2	12	1.1	12	1.1					78	9.6
SADS	51	0.6	9	0.2	10	0.1																	70	0.9
Installation Equipment N/R						*		*				*		*		*		*						*
Engineering Change Orders																								
Data																								
Training Equipment	6	26.8	100	0.3	100	*	100	*			100	*	100	*	100	*	100	*					606	27.1
Support Equipment		0.1																						0.1
ILS		0.2		1.7																				1.8
Other Support		3.5		6.6		1.3		6.8				6.8		0.2		1.2		1.3		1.8		1.0		23.6
Interim Contractor Support																								
Installation Cost	20	3.5	12	1.6	11	1.1	12	1.6			12	1.6	11	1.0	4	0.5							70	9.3
Total Procurement		**116.0**		**24.3**		**25.5**		**21.6**				**21.6**		**19.7**		**17.2**		**22.9**		**23.6**		**32.6**		**303.4**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Attitude indicator is not required in all aircraft.
4. Obsolescence kits will be installed "O" level by the Fleet.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS A/C

MODIFICATION TITLE: AVIONICS OBSOLESCENCE (OSIP 017-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 7 Months

PRODUCTION LEADTIME: 24 Months

CONTRACT DATES: FY 2010: Apr 10 FY 2011: Apr-11 FY 2012: Apr-12 FY 2013:

DELIVERY DATE: FY 2010: Apr 12 FY 2011: Apr-13 FY 2012: Apr-14 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (51) kits	20	3.5	12	1.6	11	1.1	8	1.4											51	7.6
FY 2010 (9) kits							4	0.2	5	0.8									9	0.9
FY 2011 (10) kits									6	0.3	4	0.5							10	0.8
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**20**	**3.5**	**12**	**1.6**	**11**	**1.1**	**12**	**1.6**	**11**	**1.0**	**4**	**0.5**							**70**	**9.3**

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	20	3	3	3	3	3	3	3	2	3	3	3	3	3	2	3	3	3	1		
Out	20	3	3	3	3	3	3	3	2	3	3	3	3	3	2	3	3	3	1		

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										70
Out										70

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: SYNTHETIC RADAR (OSIP 002-06)

MODELS OF SYSTEMS AFFECTED: T-45TS | TYPE MODIFICATION: PS Safety

DESCRIPTION/JUSTIFICATION:

With the T-2 and T-39 divestiture in 2008 and 2012 respectively, the training command cannot complete Uniformed Military Flight Officer (UMFO) training. No new Type Model Series will be developed to pick up this requirement. As a result, the T-45 will modify 19 aircraft to incorporate Virtual Mission Training System into the curriculum. The effort will include two phases of integration to incorporate a commercial off the shelf synthetic radar system into the T-45. Phase I includes determining the integration requirements for the air-to-air (A/A) and minimal air-to-ground (A/G) synthetic radar capabilities and completing the T-45 integration effort. Phase II includes determining the integration requirements for increased A/G fidelity simulation and weapons sensors simulation while also completing the Phase II integration effort. Four kits will be utilized for testing and will initially be delivered to Pensacola for Instructor training and syllabus evaluation.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FY07-08 provided funding for NRE and 2 prototype kits, FY09-11 providesdfunding for NRE and 4 kits to be used for FOT&E. FY12 provides funding for procurement kits.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
VMTS	2	2.0	2	5.2	2	2.0	12	6.8			12	6.8									3	3.2	21	19.2
Installation Kits N/R		14.2				7.4		2.5				2.5										8.9		33.0
Installation Equipment																								
VMTS EQUIPMENT	2	2.0			2	0.7															17	3.0	21	5.7
Installation Equipment N/R		5.4				0.7																		6.1
Engineering Change Orders																						1.6		1.6
Data		1.9																						1.9
Training Equipment	1	1.0																					1	1.0
Support Equipment		5.5																						5.5
ILS						0.5																1.2		1.7
Other Support		2.6		1.5		3.3		1.6				1.6										1.6		10.7
Interim Contractor Support						0.2																		0.2
Installation Cost			2	0.6			4	0.6			4	0.6	12	0.8							3	8.5	21	10.5
Total Procurement		**34.5**		**7.3**		**14.9**		**11.5**				**11.5**		**0.8**								**28.0**		**97.0**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS

MODIFICATION TITLE: SYNTHETIC RADAR (OSIP 002-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2010: Mar-10 FY 2011: Mar-11 FY 2012: Mar-12 FY 2013:

DELIVERY DATE: FY 2010: Jun-11 FY 2011: Jun-12 FY 2012: Jun-13 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (2) kits			2	0.6															2	0.6
FY 2010 (2) kits							2	0.3											2	0.3
FY 2011 (2) kits							2	0.3											2	0.3
FY 2012 (12) kits									12	0.8									12	0.8
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete (3) kits																	3	8.5	3	8.5
TOTAL			**2**	**0.6**			**4**	**0.6**	**12**	**0.8**							**3**	**8.5**	21	10.5

Notes:

1. FY10 contract award delayed due to combination of lengthy negotiations and additional documentation/requirements when the ECP was transitioned to ACAT III Program (i.e. Acq Strategy and APB approved DEC 2009)

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2											4		3	3	3	3				
Out				2								4		3	3	3	3				

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In									3	21
Out									3	21

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
0570, POWER PLANT CHANGES

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	466.6	A	27.9	19.9	21.8		21.8	18.1	20.5	20.9	21.1	19.5	636.4

Description: This line item funds modifications to all in-service aircraft engines. Power Plant Changes (PPC) are required throughout the service life of each aircraft to correct flight deficiencies and improve operational readiness while reducing engine operating costs. This program finances the procurement and installation of retrofit kits for all Navy and Marine Corp aircraft engines and related propulsion hardware such as propellers, starters and transmissions. The overall goal of the modifictations budgeted in FY 2012 is to continue modification efforts previously initiated on the engines for the AV-8B, F/A-18C/D & E/F, S-3, F-16, H-60, H-3, H-46, H-53, EA-6B, T-3, T-38, T-45, P-3, E-2, C-2, C-130, UH-1N/HH-1N, AH-1W and V-22.

The following depicts the current funding levels budgeted and programmed for Power Plant Changes.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
N/A	Power Plant Changes	466.6	27.9	19.9	21.8		21.8	18.1	20.5	20.9	21.1	19.5	636.4
Total		**466.6**	**27.9**	**19.9**	**21.8**		**21.8**	**18.1**	**20.5**	**20.9**	**21.1**	**19.5**	636.4

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Power Plant Changes

MODELS OF SYSTEMS AFFECTED: Power Plant Changes | TYPE MODIFICATION: Approx. 80% Safety, 20% Reliability

DESCRIPTION/JUSTIFICATION: This program corrects aircraft flight safety deficiencies, improves operational fleet readiness and reduces engine cost of ownership by incorporating approved power plant changes. Power plant changes are required throughout the aircraft service life as the engine ages and operationally revealed deficiencies are discovered, researched, and solutions engineered. The Component Improvement Program (CIP) which is funded in RDT&E,N develops and demonstrates engineering solutions to these deficiencies and through the Engineering Change Proposal (ECP) process, initiates power plant change. The power plant change program procures the necessary power plant change retrofit kits, support equipment, kit installation and technical data. This program provides retrofit kits for all Navy and Marine Corp aircraft engines and propulsion related hardware such as propellers starters, generators, and transmissions. Reliability Improvements are designed to increase Mean Time Between Failure and Mean Time Between Engine Removal by 30% on average and are expected to generate savings/cost avoidance in excess of $50M annually. Aircraft engines included in Power Plant Changes include: F100 Engine F-16, F402 Engine A/V8B, F404 Engine F/A-18, F405 Engine, T-45, F414 Engine F/A18-E/F, J52 Engine EA-6B, J85 Engine T38 and T-2, T400 Engine AH-1W and UH-1n, T406 engine V-22, T56 Engine P-3, C-2,E-2 and C-10, T58 Engine H-3 and H-46, T64 Engine H-63, T700 Engine H-60 and AH-1 and TF34 Engine S-3.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		605.3		63.8		75.6		62.4				62.4		83.6		82.3		86.8		90.5				516.8
PROCUREMENT																								
Installation Kits																								
F100 (F16)	22	0.1																					22	0.1
F402 (A/V-8B)	7,496	19.3	408	0.8	400	1.7	373	1.9			373	1.9	295	1.5	295	1.6	295	1.6	295	1.5	300	2.0	10,157	31.9
F404 (F/A-18)	14,708	13.6	1,484	0.6	235	0.6	206	1.9			206	1.9	340	1.0	340	1.0	340	1.3	340	1.0	340	1.0	18,333	21.9
F405 (T-45)	2,359	15.2					40	0.4			40	0.4											2,399	15.6
F414 (F/A18-E/F)	7,889	13.2	776	2.0	50	0.5	50	2.0			50	2.0	100	1.0	100	1.0	100	1.2	100	1.0	100	1.0	9,265	23.0
J52 (EA 6/B)	6,171	14.2	200	0.8	210	1.1																	6,581	16.2
J85 (T-38, T-2)	813	2.4	30	*			50	0.1			50	0.1											893	2.5
T400 (AH1W, UH1N)	1,440	2.9			63	0.3	100	1.0			100	1.0											1,603	4.2
T406 (V22)	22	0.2																					22	0.2
T56 (P-3, C-2, E-2, C-130)	10,095	35.8	1,813	10.4	913	7.0	1,013	3.1			1,013	3.1	1,200	4.5	1,000	5.6	1,200	5.3	1,200	5.4	1,000	7.0	19,434	84.2
T58 (H-3, H-46)	2,443	5.2	8	*																			2,451	5.2
T64 (H-53)	13,982	20.6	80	0.6	1,981	3.6	500	5.7			500	5.7	4,123	4.2	3,950	5.3	4,130	4.4	4,130	4.6	4,000	8.0	36,876	57.0
T700 (H-60, AH-1)	6,975	35.8	809	6.9	100	0.5	100	1.5			100	1.5	100	0.5	100	0.5	100	1.0	100	0.8	100	0.5	8,484	47.9
TF34 (S-3)	346	0.5																					346	0.5
Completed ECPs from Prior Yrs	35,198	200.5																					35,198	200.5
Installation Kits N/R																								
Installation Equipment																								
Installation Equipment N/R		0.2																						0.2
Engineering Change Orders																								
Data		0.6		0.2		0.1		0.1				0.1		0.1		0.1		0.1		0.1				1.1
Training Equipment																								
Support Equipment		0.2		0.2		0.1		0.5				0.5		0.1		0.1		0.1		0.1				1.2
ILS		6.0		0.1		1.2		1.2				1.2		1.2		1.2		1.7		1.9				14.5
Other Support		42.0		4.1		2.0		1.8				1.8		2.0		2.1		2.2		2.9				59.1
Interim Contractor Support																								
Installation Cost	12,243	38.1	675	1.2	740	1.2	143	0.8			143	0.8	500	2.0	500	2.1	500	2.1	400	2.0	6,040		21,741	49.5
Total Procurement		**466.6**		**27.9**		**19.9**		**21.8**				**21.8**		**18.1**		**20.5**		**20.9**		**21.1**		**19.5**		636.4

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **Power Plant Changes** MODIFICATION TITLE: Power Plant Changes

INSTALLATION INFORMATION: **The tables below list the quanities, installation shedules, and costs for those ECPs for which there is an installation cost. Of those ECPs with installation costs, three are not shown as they are labor only modifications and require no kit. The reason they are not shown in these tables is that the procurement quantity and installation quanities would not be equal. Current with engine/module repair (where installation cost is zero), or by forced retrofit (shown below).**

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: Average of 6 Months PRODUCTION LEADTIME: Average of 12 Months

CONTRACT DATES: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

DELIVERY DATE: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (12243) kits	12,243	38.1																	12,243	38.1
FY 2010 (675) kits			675	1.2															675	1.2
FY 2011 (740) kits					740	1.2													740	1.2
FY 2012 (143) kits							143	0.8											143	0.8
FY 2012 OCO ( ) kits																				
FY 2013 (500) kits									500	2.0									500	2.0
FY 2014 (500) kits											500	2.1							500	2.1
FY 2015 (500) kits													500	2.1					500	2.1
FY 2016 (400) kits															400	2.0			400	2.0
To Complete (6040) kits																	6,040		6,040	
TOTAL	**12,243**	**38.1**	**675**	**1.2**	**740**	**1.2**	**143**	**0.8**	**500**	**2.0**	**500**	**2.1**	**500**	**2.1**	**400**	**2.0**	**6,040**		21,741	49.5

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	12243	168	169	169	169	185	185	185	185	35	37	36	35	125	125	125	125	125	125	125	125
Out	12243	168	169	169	169	185	185	185	185	35	37	36	35	125	125	125	125	125	125	125	125

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	125	125	125	125	100	100	100	100	6040	21741
Out	125	125	125	125	100	100	100	100	6040	21741

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: **February 2011**						
APPROPRIATION/BUDGET ACTIVITY **Aircraft Procurement, Navy/APN-5 Aircraft Modifications**							P-1 ITEM NOMENCLATURE **057100, JPATS SERIES**						
Program Element for Code B Items:							Other Related Program Elements						
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY													
COST (In Millions)	**19.4**	A	**3.0**	**1.8**	**1.5**		**1.5**	**1.6**	**1.6**	**1.6**	**1.6**	**86.7**	**118.9**

DESCRIPTION:

This line item funds modifications to the Joint Primary Aircraft Training System (JPATS). JPATS is a joint USN/USAF Acquisition Program designed to replace the aging primary aircraft (T-34/T-37) fleet. Principal JPATS mission is primary training for entry-level Navy/Air Force student pilots, associated instructor pilots, and primary/intermediate training for USN Naval Flight Officers. JPATS includes the T-6 Texan II which is a single-engine turboprop, stepped tandem seat, commercially derived aircraft powered by a Pratt & Whitney PT6A-68 engine. It serves as the aircraft component of the JPATS integrated primary pilot training system which replaces the T-34C primary training aircraft.

The overall goal of the modifications budgeted in fiscal year 2012 is to correct discrepancies and deficiencies discovered after delivery of the aircraft; and to maintain, where appropriate, joint configuration with Air Force aircraft. The T-6B derivative incorporates major upgrades to the aircraft cockpit, navigation system, and aircrew life support system (ALSS). 114 Aircraft will receive modifications in FY12.

(TOA, $ in Millions)

OSIP No. Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
011-04 JPATS CORRECTION OF DEFI	17.5	3.0	1.8	1.5		1.5	1.6	1.6	1.6	1.6	86.7	117.0
DAWDF Realignment	1.9											1.9
Total	19.4	3.0	1.8	1.5		1.5	1.6	1.6	1.6	1.6	86.7	118.9

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: JPATS CORRECTION OF DEFICIENCIES (OSIP 011-04)

MODELS OF SYSTEMS AFFECTED: T-6A/B | TYPE MODIFICATION: PS Safety

DESCRIPTION/JUSTIFICATION:
Corrections to discrepancies found during testing and evaluation can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Additionally, deficiencies discovered during Fleet operations must be corrected. The unacceptable alternative to retrofitting would be multiple configurations in the Fleet, which creates maintenance and supply problems, and in many cases the mission capability of the aircraft would be adversely affected as well as reduced service life.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Feb 93 received MS 0 and MSI approval, Aug 95 received MSII and LRIP approval, Dec 01 received MSIII approval, and Navy IOC occurred 4th Qtr FY03.

Current Active Modifications:
Oil Pressure Warning - Safety modifications to correct oil pressure cockpit warning indications and associated systems to improving aircrew situational awareness and overall systems operation.
Main Landing Gear (MLG) Doors & Bell crank - Structural fixes to gear doors & bell crank to eliminate cracking. Includes Retrofit of improved durability MLG door tie rod and MLG Side brace Redesign (ECP-059).
Trim System Redesign - Safety modification to reduce trim actuator force limit, decrease activation speed. Results in shorter landing distances.
Braking (anti-skid) - Safety modification to improve the short field abort and stopping distances of the aircraft through the introduction of improved tires and braking system.
NACWS Replacement -Safety modification to replace the obsolete and unsupportable Naval Aircraft Collision Warning System (NACWS) due to FAA changes in the National Airspace System. Modification currently known as Traffic Avoidance System
Ejection Mode Selector -Modifies Interseat Sequencing System (Ejection system) to add two additional modes allowing command ejection authority designated to each seat.
Cockpit Improvements (ECP-058/063) - Safety and Human Factors modification to the cockpit to improve aircrew efficiencies and to eliminate excessive pilot workload and other dangerous situations. Modifications include rearview mirrors, improved cockpit storage, improved night lighting, reducing excessive ambient noise, improved trim relays, open avionic wire bundles, communication audio volume solutions, nose wheel position/positioning systems and flight instrument display issues. Includes modifications for canopy seal valve and auto ignition relay.
OBOGS Low Pressure Switch - Safety modification to improve OBOGS low pressure switch. In-flight failures have caused numerous aborts.
Condenser blower motor-longer life - Replace air conditioning blower with longer life, brushless motor, reducing life cycle costs .
Avionics Obsolescence - Replace various Avionics components due to supplier and/or technical obsolescence. Future avionics upgrades for the T-6A include upgrades to Electronic Flight Instrument (EFIS) displays.
AUP Integrated Avionics Computer Upgrade - Upgrade the two (2) Integrated Avionics Computers (IACs) in each T-6 with both hardware and software to provide a power caret indication in the cockpit for setting engine power.
AUP Spiral I Retrofit - Upgrade the hardware and software in the AUP computer system to provide for increased speed in the Data Transfer System (DTS).
Military Flight Operations Quality Assurance (MFOQA) Program - Improve the flight data recorder, change the data cartridge adapter, and install a larger capacity data storage module Personal Computer Memory Card Interantional Association (PCMCIA) to allow for participation in the MFOQA Program. MFOQA is part of a DoD-wide safety emphasis.
Communications Cord/Oxygen Hose - Replace the current T-6 single Line Replaceable Unit (LRU) Communications Cord and Oxygen Hose with a Communications Cord and Oxygen Hose that consists of two (2)separate LRUs.
Unique Identification (UID) - Per MIL-STD-130M dated 2 Dec 05 and the DoD Unit Identification Guide, each T-6 will be marked with a two-dimensional PDF214 or equivalent machine-readable (UID).
Canopy Fracturing Initiation System (CFIS) - Redesign Safety related modification will replace the current T-6 laser system CFIS with an electro-mechanical CFIS that will improve reliability and reduce life-cycle costs.
Avionics Upgrade Program (AUP) - Upgrade T-6 avionics to include multifunctional displays controlled by two (2) redundant Integrated Avionics Computers (AICs), add a Heads-Up Display (HUD) to the front cockpit, a radar altimeter and additional navigational capability.
Landing Gear Handle - Safety modification to T-6 Landing Gear Handle to reduce the risk of gear up landings. Effort includes redesign of cams and down-lock solenoid, replacing lights with LEDs and changing Programmable Array Logic to improve voltage thresholds.
Landing Gear Shimmy - Modify the T-6 Landing Gear to mitigate excessive vibration (shimmy) that has been experienced during landings and takeoffs. No mishaps have occurred to date, but the potential exists.
Power Control Lever (PCL) Cut-Off - Safety related effort to install a mechanical barrier to PCL to prevent inadvertent engine shutdown (cut-off). Result of Class A safety investigation.
Structural Improvement - Change structural components to strengthen the T-6 Airframe to address cracks and structural fatigue issues. This is both a safety and maintainability issue.
OBOGS Concentrator (-0105 to -0106) - Upgrade current -0105 model Onboard Oxygen Generating System (OBOGS) Concentrator to replace parts that are no longer available due to manufacturing obsolescence. In addition, replace the slide valve to eliminate issues with sticking.

Future Modifications
Voice Recorder - OPNAV mandated installation of a cockpit voice recording system to provide audio playback capability for investigation and reconstruction of incidents and mishaps.
GPS receiver upgrade-Local Area Augmentation System (LAAS)/Wide Area Augmentation System (WAAS)- - Safety of flight issue. OPNAV mandated incorporation of a system that will indicate the proximity of the T-6 aircraft to the ground. Ground Proximity Warning System (GPWS) will reduce the potential of an inadvertent ground strike resulting in the possible loss of aircraft and crew.
Engine PMU upgrade - Operational modification to fix engine power management unit (PMU) software. Mod required to eliminate hot-start abort conditions.
Instrument Training Hood - Cockpit instrument training hoods and head/helmet mounted hoods for the T-6 aircraft. Prevents visually obtaining outside references while flying and landing the aircraft.
AUP Spiral II Retrofit - Upgrade the hardware and software in the AUP computer system to provide solution to conditions that were noted as deficiencies during the T-6B FOT&E.
Ejection Seat Upgrade- Modifications to the safety seat due to obsolescence and safety to include Safe Armed Handle and Pilot Nude Weight accommodations.
Ground Based Training System Modifications (GBTS) - Modifications to the GBTS due to obsolescence and modifications not driven by the aircraft; to include Aircrew Training Device Visual System -Visual system (data projector) change due to parts obsolescence.

ARCHIVE Modifications:
OPAS Signal Conditioning Unit - Upgrade the Oil Pressure Annunciator System (OPAS) Signal Conditioning Unit (SCU). Upgraded OPAS SCU will take readings from a different point in the engine oil system and use upgraded software to eliminate erroneous "Oil Pressure Low" warning indications in the cockpit.
VHF radio ECP (ECP-055)- Provide for the correction of volume and reception level discrepancies. Current volume inequities between the UHF/VHF radios make the radio unintelligible and a safety concern for aircrew.
OBOGS Upgrades (ECP-049) - Safety modifications to improve the normal and emergency aircrew oxygen supply systems. Mods address increased supply, delivery control box and software logic corrections.
Nose Wheel Centering (ECP-052) - Safety modification to provide positive nose wheel centering in flight. Category 1 Deficiency.
ASV Regulator/EL Panel - Safety modification addressing excessive force required to breathe utilizing current Anti-Suffocation Valve (ASV). This Correction will solve unconscious aircrew air supply requirements. In addition, a safety modification will replace the current EL Panel to increase the oxygen regulator blinker visibility at night. Deficiency noted during OPEVAL.
Increase Gross Weight - Structural mods to increase weight capacity. Need driven by weight additions for Anti-Skid, Life Raft, Oil Pressure warning system.
Aft Fuselage Structural Upgrade - Add structural components to strengthen the AFT Fuselage to address minor cracks and rivets coming loose and/or breaking in the area of Frame 9 and the Ventral Fins. This is both a safety and maintainability issue.
Sealed Rudder Position Sensor - Replace the current Rudder Position Sensor which has an excessively high failure rate due to water intrusion into the unit resulting in inaccurate information being provided to the flight data recorder. Erroneous data negatively impacts the structural integrity/FLE monitoring program because rudder position affects tail loading (asymmetric G's) and accident/incident replay and investigation.
Engine Oil Dipstick and Bottle - Enhance the Engine Oil Dipstick and add a Collection Bottle which will allow a higher total engine oil volume to provide an allowable range for safe operation. This effort is a direct response to a Navy Class B engine incident.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Oil Pressure Warning	48	.1																					48	0.1
Main Lndg Gr Doors & Bell crnk (Incl. Tie Rods	150	.8	39	0.3	10	0.1	10	0.1			10	0.1											209	1.3
Trim System Redesign	150	.5																					150	0.5
Braking Improvement (Anti-skid)	25	1.9															20	0.5	21	0.5	264	9.8	330	12.7
NACWS Replacement (Currently TAS)	34	3.7	6	0.6	6	0.6	3	0.1			3	0.1											49	5.0
Ejection Mode Selector	49	.2																					49	0.2
Cockpit Improvements	77	.4	6	0.1	6	0.1	6	0.1			6	0.1	6	0.1	6	0.1	6	0.1	6	0.1			119	0.9
OBOGS Low Pressure Switch	48	.2	3	*	1	*	1	*			1	*	1	*									54	0.2
Condenser Blower Motor - Longer Life	2	*	47	0.4			1	*			1	*	1	*	1	*	1	*	1	*	28	0.2	82	0.6
Avionics Obsolescence							49	*			49	*	49	*	49	*	49	*	49	*	193	3.9	438	4.1
AUP Integrated Avionics Computer Upgrade							1	*			1	*	1	*	1	*	1	*	1	*	92	1.6	97	1.6
AUP Spiral I Retrofit			49	0.5																			49	0.5
MFOQA			28	0.1	21	0.6									1	*	1	*	1	*	63	0.9	115	1.6
Communication Cord/Oxygen Hose					20	*	9	*			9	*											29	0.1
Unique Identification (UID)							3	0.1			3	0.1	1	*	1	*	1	*	1	*	33	0.8	40	0.9
CFIS Redesign							2	0.1			2	0.1	1	*	1	*	1	*	1	*	42	*	48	0.2
Avionics Upgrade Program															1	0.4	1	0.3	1	0.3	40	21.1	43	22.0
LANDING GEAR HANDLE					6	*	5	*			5	*											11	*
LANDING GEAR SHIMMY	5	*					5	*			5	*	5	*	5	*	5	*	5	*	31	0.2	61	0.4
PCL CUT-OFF							5	*			5	*	5	*	5	*	5	*	5	*	41	*	66	*
STRUCTURAL IMPROVEMENT	5	*	5	*	5	*	5	*			5	*	5	*	5	*	5	*	5	*	31	0.1	71	0.3
OBOGS Concentrator (-0105 to -0106)					1	*	1	*			1	*	1	*	1	*	1	*	1	*	41	0.6	47	0.7
Voice Recorder															1	*	1	*	1	*	303	2.8	306	2.8
GPS Receiver Upgrade - LAAS															1	*	1	*	1	*	303	0.1	306	0.1
Ejection Seat Upgrades															1	*	1	*	1	*	303	0.6	306	0.7
GBTS Modifications							1	*			1	*	1	*	1	*	1	*	1	*	302	0.6	307	0.7
Engine PMU Upgrade							3	*			3	*	1	*	1	*	1	*	1	*	299	0.6	306	0.7
Instrument Training Hood							3	*			3	*	1	*	1	*	1	*	1	*	299	*	306	0.1
AUP Spiral II Retrofit															1	*	1	*	1	*	303	1.4	306	1.4
OPAS Signal Conditioning Unit	49	.2					1	*			1	*	1	*	1	*	1	*	1	*	137	3.4	191	3.8
VHF Radio (Audio Volume)	39	.1																					39	0.1
UWARS Addition to Ejection Seat ALSS	7	.1																					7	0.1
Life Raft Addition to Ejection Seat ALSS SEAW	46	.7																					46	0.7
OBOGS upgrades (ECP-049)	40	.3																					40	0.3
Nose Wheel Centering	36	.2																					36	0.2
ASV Regulator/EL Panel	98	.3																					98	0.3
Increase Gross Weight	28	*																					28	*
AFT Fuselage Structural Upgrades	49	*																					49	*
Sealed rudder Position Sensor	46	*																					46	*
Engine Oil Dipstick and Bottle	63	*																					63	*
Supplemental Oxygen System	5	*																					5	*
Emergency Locator Transmitter	49	.1																					49	0.1
NOSE WHEEL ACTUATOR	8	*																					8	*
Anti-G Valve Replacement	3	*																					3	*
Acceptance of Ground Power	43	.1																					43	0.1
Installation Kits N/R		1.1		*		*		*				*		*		*		*		*		2.5		3.7
Installation Equipment																								
Oil Pressure Warning	48	*																					48	*
Main Landing Gear Doors & Bell crank	138	.2	39	*	10	*	10	*			10	*											197	0.2
Trim System Redesign	135	*																					135	*
Braking Improvement (Anti-skid)	25	*															20	*	21	*	264	0.2	330	0.2
NACWS Replacement	34	*	6	*	6	*	3	.1			3	0.1											49	0.2
Ejection Mode Selector	49	*																					49	*
Cockpit Improvements	77	*	6	*	6	*	6	*			6	*	6	*	6	*	6	*	6	*			119	0.2
OBOGS Low Pressure Switch	48	*	3	*	1	*	1	*			1	*	1	*									54	*

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
Condenser Blower Motor - Longer Life	2	*	47	*			1	*			1	*	1	*	1	*	1	*	1	*	28	*	82	0.1
Avionics Obsolescence							49	*			49	*	49	*	49	*	49	*	49	*	193	*	438	0.1
AUP Integrated Avionics Computer Upgrade							1	*			1	*	1	*	1	*	1	*	1	*	92	0.1	97	0.2
AUP Spiral I Retrofit			49	*																			49	*
Communication Cord/Oxygen Hose					20	*	9	*			9	*											29	*
Unique Identification (UID)							3	*			3	*	1	*	1	*	1	*	1	*	33	*	40	*
CFIS Redesign							2	*			2	*	1	*	1	*	1	*	1	*	42	*	48	*
Avionics Upgrade Program															1	*	1	*	1	*	40	0.5	43	0.5
LANDING GEAR HANDLE					6	*	5	*			5	*											11	*
LANDING GEAR SHIMMY	5	*					5	*			5	*	5	*	5	*	5	*	5	*	31	*	61	*
PCL CUT-OFF							5	*			5	*	5	*	5	*	5	*	5	*	41	*	66	*
STRUCTURAL IMPROVEMENT	5	*	5	*	5	*	5	*			5	*	5	*	5	*	5	*	5	*	31	*	71	*
OBOGS Concentrator (-0105 to -0106)					1	*	1	*			1	*	1	*	1	*	1	*	1	*	41	0.1	47	0.1
Voice Recorder															1	*	1	*	1	*	303	0.1	306	0.1
GPS Receiver Upgrade - LAAS															1	*	1	*	1	*	303	*	306	*
Ejection Seat Upgrades															1	*	1	*	1	*	303	*	306	0.1
GBTS Modification							1	*			1	*	1	*	1	*	1	*	1	*	302	*	307	0.1
Engine PMU Upgrade							3	*			3	*	1	*	1	*	1	*	1	*	299	*	306	0.1
Instrument Training Hood															1	*	1	*	1	*	303	0.1	306	0.1
AUP Spiral II Retrofit							1	*			1	*	1	*	1	*	1	*	1	*	137	0.2	142	0.2
OPAS Signal Conditioning Unit	49	*																					49	*
VHF Radio (Audio Volume)	39	.1																					39	0.1
UWARS Addition to Ejection Seat	7	*																					7	*
Life Raft Addition to Ejection Seat	31	*																					31	*
OBOGS upgrades (ECP-049)	40	*																					40	*
Nose Wheel Centering	36	.3																					36	0.3
ASV Regulator/EL Panel	98	.1																					98	0.1
Increase Gross Weight	28	*																					28	*
AFT Fuselage Structural Upgrade	28	*																					28	*
Sealed Rudder Position Sensor	46	*																					46	*
Engine Oil Dipstick and Bottle	12	*																					12	*
Supplemental Oxygen System	5	*																					5	*
Emergency Locator Transmitter	49	*																					49	*
NOSE WHEEL ACTUATOR	8	*																					8	*
Anti-G Valve	3	*																					3	*
Acceptance of Ground Power	43	.1																					43	0.1
Installation Equipment N/R		*		*		*		*				*		*		*		*		*		2.5		2.6
Engineering Change Orders								.4				0.4		0.9		0.3		*		0.1				1.7
Data		*		*				*				*		*		*		*		*		*		0.1
Training Equipment	32	.2	26	.1	7	*	30	*			30	*	30	*	4	*	4	*	4	*	90	0.1	227	0.4
Support Equipment		*		*		*		*				*		*		*		*		*		*		*
ILS		*		*		*		*				*		*		*		*		*		*		0.1
Other Support		*		*		*		*				*		*		*		*		*		0.1		0.2
Interim Contractor Support		*																						*
Installation Cost	1,202	5.3	183	0.8	76	0.3	114	0.3			114	0.3	80	0.2	85	0.3	105	0.3	106	0.3	3,148	31.0	5,099	38.8
Total Procurement		**17.5**		**3.0**		**1.8**		**1.5**				**1.5**		**1.6**		**1.6**		**1.6**		**1.6**		**86.7**		**117.0**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-6A/B

MODIFICATION TITLE: JPATS CORRECTION OF DEFICIENCIES(OSIP 011-04)

INSTALLATION INFORMATION: VHF Radio (Audio Volume)/OBOGS Upgrades (ECP-049)/Oil Pressure Warning/ASV Regulator/EL Panel/Ejection Mode Selector/Cockpit Improvements/NACWS Replacement/ Avionics Obsolescence/Braking Improvement (Antiskid)/Nose Wheel Centering/Trim System Redesign/Landing Gear Doors & Bellcrank/UWARS Addition to Ejection Seat/Acceptance of Ground Power/Life Raft Addition to Ejection Seat/Increase Gross Weight/OBOGS Low Pressure Switch/ Condenser Blower Motor-Longer Life/Supplemental Oxygen System/GPS Receiver Upgrade-LAAS-WAAS/Engine PMU Upgrade/Anti-G Valve/Simulator Mods to Reflect A/C Systems/AFT Fuselage Structural Upgrade/Sealed Rudder Position Sensor/Engine Oil Dipstick and Bottle/MFOQA Landing Gear Handle, Landing Gear Shimmy, PCL Cut-Off, Structural Improvement, Nose Wheel Actuator

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 0 Months

PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY 2010: VARIOUS FY 2011: VARIOUS FY 2012: VARIOUS FY 2013: VARIOUS

DELIVERY DATE: FY 2010: VARIOUS FY 2011: VARIOUS FY 2012: VARIOUS FY 2013: VARIOUS

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (1202) kits	1,202	5.3																	1,202	5.3
FY 2010 (183) kits			183	0.8															183	0.8
FY 2011 (76) kits					76	0.3													76	0.3
FY 2012 (114) kits							114	0.3											114	0.3
FY 2012 OCO ( ) kits																				
FY 2013 (80) kits									80	0.2									80	0.2
FY 2014 (85) kits											85	0.3							85	0.3
FY 2015 (105) kits													105	0.3					105	0.3
FY 2016 (106) kits															106	0.3			106	0.3
To Complete (3148) kits																	3,148	31.0	3,148	31.0
TOTAL	1,202	5.3	183	0.8	76	0.3	114	0.3	80	0.2	85	0.3	105	0.3	106	0.3	3,148	31.0	5,099	38.8

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1202	45	46	46	46	19	19	19	19	28	28	29	29	20	20	20	20	20	21	22	22
Out	1202	45	46	46	46	19	19	19	19	28	28	29	29	20	20	20	20	20	21	22	22

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	26	26	26	27	26	26	27	27	3148	5099
Out	26	26	26	27	26	26	27	27	3148	5099

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
057500, AVIATION LIFE SUPPORT MODS

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	9.0	A	5.6	8.1	1.1		1.1	6.8	12.2	12.4	11.6	69.7	136.5

DESCRIPTION:
The specific modifications budgeted and planned are:

(1) The Common Mobile Aircrew Restraint System (CMARS) to helicopters and fixed wing aircraft. MARS/CMARS will replace existing fixed length tether with a locking retraction system that allows safe movement of the aircrew within the cargo area while affording protection during a mishap or combat. MARS/CMARS will be mounted to the aircraft .
2) Installation of new aircrew endurance modifications in legacy ejection seat equipped aircraft due to extended range missions.
(3) Installation of new aircrew endurance modifications in non-ejection seat equipped aircraft due to extended range missions.
(4) Installation of the Joint Helmet Mounted Cueing System (JHMCS) night mission electronic control unit (ECU) into tactical aircraft. The ECU works with the JHMCS night vision system to provide the ability to cue and display weapons and sensors at night using Night Vision Devices (NVD) that integrate JHMCS cueing, display symbology, and scene viewed through the NVD.
(5) Installation of the crashworthy troop and gunner seats for the fielded MH-60S aircraft.

(TOA, $ in Millions)

OSIP No. Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
001-07 MARS/CMARS	2.0	0.7	5.1				4.1	5.6	5.3	4.6	69.7	97.2
001-08 EJECTION SEAT ENDURANCE	3.8	1.4										5.2
004-09 NON-EJECTION SEAT ENDURANCE	0.3	2.0	1.5									3.8
007-10 JOINT HELMET MOUNTED QUEING SYSTEM		1.5	1.5									3.0
030-12 CRASHWORTHY TROOP SEATS				1.1		1.1	2.7	6.6	7.1	7.0		24.5
INACTIVE OSIPs	2.9											2.9
Total	**9.0**	**5.6**	**8.1**	**1.1**		**1.1**	**6.8**	**12.2**	**12.4**	**11.6**	**69.7**	**136.5**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: MARS/CMARS (OSIP 001-07)

MODELS OF SYSTEMS AFFECTED: C-130, CH-53D/E, H-60R/S, MH-53E, MV-22B, UH-1Y, HH-60H | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: Safety initiative to replace the existing mobile crewmember safety belt with the Common Mobile Aircrew Restraint System (CMARS). The new CMARS design increases crash survivability by providing improved aircrew restraint with the cabin through the use of acceleration force and velocity sensitive locking mechanism and crewmember harness. The MARS retractor systems and associated aircraft installation modifications will be procured and provided to NAVAIRSYSCOM by the PMA 202 office. Capability Development Document (CDD) Serial No. 780-88-09 dated 11 Feb 2009 documents the requirement.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
C-130T Install (A-kits)																					20	1.1	20	1.1
MH-60R Install (A-kits)															8	0.1	5	0.1			87	1.1	100	1.3
CH-53E Install (A-kits)													8	0.4	6	0.4	4	0.2	6	0.2	126	8.4	150	9.6
MH-53E Install (A-kits)													4	0.2	7	0.5	4	0.3	9	0.4			24	1.3
CH-53D Install (A-kits)																					32	1.8	32	1.8
MH-60S Install (A-kits)													8	0.1	8	0.1	5	0.1			189	2.4	210	2.7
HH-60H Install (A-kits)																			8	0.5	25	1.4	33	1.9
MV-22B Install (A-kits)																	6	0.2			300	7.0	306	7.2
UH-1Y Install (A-kits)															8	0.1	5	0.1	8	0.1	98	2.4	119	2.7
Installation Kits N/R						2.5								1.2		1.4		1.3		0.4				6.8
FOT&E						0.1								0.1		0.1		0.1						0.5
Installation Equipment																								
C-130T Equip (5 per a/c)																					20	0.4	20	0.4
MH-60R Equip (2 per a/c)															8	0.1	5	*			87	0.7	100	0.8
CH-53E Equip (10 per a/c)													8	0.3	6	0.2	4	0.2	6	0.3	126	5.2	150	6.2
MH-53E Equip (11 per a/c)													4	0.2	7	0.3	4	0.2	9	0.4			24	1.1
CH-53D Equip (10 per a/c)																					32	1.3	32	1.3
MH-60S Equip (2 per a/c)													8	0.1	8	0.1	5	*			189	1.6	210	1.8
HH-60H Install (2 per a/c)																			8	0.2	25	1.0	33	1.2
MV-22B Equip (5 per a/c)																	6	0.1			300	3.7	306	3.9
UH-1Y Equip (3 per a/c)															8	0.1	5	0.1	8	0.2	98	0.6	119	1.0
Installation Equipment N/R						1.1								0.1										1.2
Engineering Change Orders		0.7				0.2								0.3		0.7		0.5		0.3		7.2		9.9
Data						0.2								0.2		0.2		0.2		0.2				0.9
Training Equipment						*								*		*		*						*
Support Equipment																								
ILS						0.1																1.6		1.7
Other Support		1.3		0.7		0.9								0.8		0.7		0.7		0.7		2.8		8.7
Interim Contractor Support																								
Installation Cost															20	0.7	37	1.0	29	0.7	908	17.8	994	20.1
Total Procurement		**2.0**		**0.7**		**5.1**								**4.1**		**5.6**		**5.3**		**4.6**		**69.7**		**97.2**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. FY12 decrease due to N88 technical adjustment realigning funds to higher priority requirements.
4. Sundown of aircraft will be monitored and quantity adjusted in future budgets as required.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-130, CH-53D/E, H-60R/S, MH-53E, MV-22B, UH-1Y, HH-60H MODIFICATION TITLE: MARS/CMARS (OSIP 001-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **DEPOT CONTRACTOR**

ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013: Jun-13

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013: Oct-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 (20) kits											20	0.7							20	0.7
FY 2014 (37) kits													37	1.0					37	1.0
FY 2015 (29) kits															29	0.7			29	0.7
FY 2016 (31) kits																	31	0.6	31	0.6
To Complete (877) kits																	877	17.2	877	17.2
TOTAL											**20**	**0.7**	**37**	**1.0**	**29**	**0.7**	**908**	**17.8**	**994**	**20.1**

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1.0	2	3	4
In																		5	5	5	5
Out																		5	5	5	5

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	9	9	9	10	7	7	7	8	908	994
Out	9	9	9	10	7	7	7	8	908	994

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: EJECTION SEAT ENDURANCE (OSIP 001-08)

MODELS OF SYSTEMS AFFECTED: AV-8B, EA-6B, F/A-18A/C/E, F/A-18B/D/F/G, T-45 | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: New cushion system in front line ejection system equipped aircraft. Incorporates new materials to reduce significant aircrew fatigue being experienced during long duration flights. New cushions will be integrated into complex ejection seat designs to eliminate interference. There are no installation costs, the seat cushions are being replaced by O-Level during scheduled inspections. CNO, N883 Letter Serial N883/6U876755 dated 3 Aug 06 documents the ESE/NESE requirement.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Milestone C occurred 2nd QTR FY08. IOC for each T/M/S ejection seat is planned separately: SJU-4/13/14 IOC 1st Qtr FY11, GRU-EA7 IOC 2nd Qtr FY11, SJU-5/6 IOC 4th Qtr FY11, and NACES IOC was 2nd Qtr FY09.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
AV-8B Equip (1 per a/c)	121	0.1																					121	0.1
TAV-8B Equip (2 per a/c)	32	0.2																					32	0.2
EA-6B Equip (4 per a/c)	352	0.7																					352	0.7
F/A-18A/C/E Equip(1 per a/c)	646	0.7																					646	0.7
F/A-18B/D/F/G Equip (2 per a/c)	808	0.7																					808	0.7
T-45 Equip (2 per a/c)	404	0.4																					404	0.4
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment		*																						*
Support Equipment																								
ILS		0.4		0.4																				0.8
Other Support		0.5		1.0																				1.5
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**3.8**		**1.4**																				**5.2**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Due to a reduction in unit costs, planned FY10 seat cushion procurements were procured with FY08 and FY09 funding in FY10. The remaining FY10 funding is being used for production support in FY10 and FY11 to complete delivery and contract close-out.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: NON-EJECTION SEAT ENDURANCE (OSIP 004-09)

MODELS OF SYSTEMS AFFECTED: H-53, UH-1, AH-1, H-60B/F/R/S, MV-22, E-2, TH-57, C-2A

TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: Introduce new cushion systems into "non-ejection" aircraft with phase changing textiles to reduce-eliminate significant aircrew fatigue due to longer mission requirements. There are no installation costs, the seat cushions are being replaced by O-Level during scheduled inspections. CNO, N883 Letter Serial N883/6U876755 dated 3 Aug 06 documents the ESE/NESE requirement.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Milestone C occured 1st quater FY11.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
H-53 Equip (2 per a/c)			430	0.8																			430	0.8
UH-1 Equip (2 per a/c)			104	0.1																			104	0.1
AH-1 Equip (2 per a/c)			38	0.1	260	0.3																	298	0.4
H-60 Equip (2 per a/c)			440	0.6	124	0.2																	564	0.8
MV-22 Equip (2 per a/c)					326	0.4																	326	0.4
E-2 Equip (5 per a/c)					355	0.2																	355	0.2
TH-57 Equip (2 per a/c)																								
C-2A Equip (2 per a/c)					70	0.1																	70	0.1
Installation Equipment N/R		0.3																						0.3
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS				0.1		0.1																		0.1
Other Support				0.3		0.2																		0.5
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**0.3**		**2.0**		**1.5**																		**3.8**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: JOINT HELMET MOUNTED CUEING SYSTEM (OSIP 007-10)

MODELS OF SYSTEMS AFFECTED: F/A-18 A+, C, D, E, F, EA-18G | TYPE MODIFICATION: OPERATIONAL CAPABILITY IMPROVEMENT

DESCRIPTION/JUSTIFICATION:
JHMCS night mission system compatible electronics packages for tactical aircraft. This product group results in the integration of night vision and cueing capability. The result allows rapid off-bore sight target acquisition during night operations and reduces warfighter/platform risk exposure in a threat environment. Capability Production Document (CPD) for Night Vision Cueing and Display (NVCD), Version 1.0, Increment I dated 17 Sep 2009 documents the requiremen

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
JHMCS night mission system NVCD Milestone C was completed on 15 Apr 2010. Engineering Change Proposal (ECP) plan, ECP-MDC-F/A-18-06348, was completed 4th QTR FY09.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
F/A-18 Equip			17	1.5	19	1.5																	36	3.0
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support																								
Interim Contractor Support																								
Installation Cost																								
Total Procurement				**1.5**		**1.5**																		**3.0**

Notes:

1. Funding provided to upgrade legacy electronics boxes in the F/A-18 aircraft that are not compatible with the JHMCS System.
2. Totals may not add due to rounding
3. Asterisk indicates amount less than $51K

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Crashworthy Troop Seats (OSIP 030-12)

MODELS OF SYSTEMS AFFECTED: MH-60S | TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION:
The currently fielded MH-60S Crashworthy Troop and Gunner Seats were not designed to provide protection (crash force attenuation) for average combat loaded personnel weight. Fielded seats were only designed and tested for the narrow anthropometric range of a 50% male at 175 lbs. and require a maintenance surveillance program to intermittently replace metal wire energy attenuators which experience internal cracks due to metal fatigue over service and shelf lifetime. The replacement of the troop seat and gunner seat with a non-developmental military qualified, crashworthy, in-production seat is low risk and will eliminate the need for lengthy nonrecurring engineering and testing. The replacement seats will improve crashworthy performance by upgrading the current energy attenuator design which is susceptible to metal fatigue failure and will improve survivability of aircrew and passengers during survivable crashes.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: A competitively awarded contract for completion of Non Recurring Engineering (NRE), and production options is anticipated in May 2012. NRE, prototype validation and verification will be performed in FY 2013-2014 and production installs will commence in FY2013. Planned procurement quantities are (135) Troop Seats in FY13, (170) Gunner Seats in FY14, (190) Gunner Seats in FY15, and (164) Gunner Seats in FY16.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
MH-60S Gunner's Seat Kit															85	1.9	95	2.1	92	2.0			272	6.0
MH-60S Troop Seat Kit													15	0.2									15	0.2
Installation Kits N/R																								
Installation Equipment																								
MH-60S Gunner's Seat Equip															170	3.7	190	4.4	184	4.4			544	12.5
MH-60S Troop Seat Equip													135	0.5									135	0.5
Installation Equipment N/R								0.5				0.5		0.6										1.1
Engineering Change Orders														0.4										0.4
Data								*				*		0.1										0.1
Training Equipment																								
Support Equipment																								
ILS								0.1				0.1		0.1		0.2		0.1		0.1				0.7
Other Support								0.4				0.4		0.8		0.8		0.5		0.5				3.0
Interim Contractor Support																								
Installation Cost																								
Total Procurement								**1.1**				**1.1**		**2.7**		**6.6**		**7.1**		**7.0**				**24.5**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. Kits are O Level Installs.

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
057600, Common ECM Equipment

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)	**1,072.7**	A	**296.4**	**60.6**	**92.1**	**27.2**	**119.3**	**109.1**	**138.6**	**148.0**	**171.7**	**1,204.2**	**3,320.6**

Description:
This line item funds common Electronic Countermeasures (ECM) equipment (B kits) for multiple aircraft types. The overall goal is to procure and provide modifications to reprogrammable radar and missile warning systems, which provide attacking missile declaration and sector direction finding, laser detection, and self protection capability devices to applicable user aircraft.

72-88 AAR-47: FY09 Overseas Contingency Operations (OCO) supplemental and FY10 OCO supplemental will fund procurement of 950 AAR-47 B(V)2 retrofit kits. FY12 OCO will provide funding for the Class 1 Engineering Change Proposal (ECP) to the Computer Processor Unit (CPU), to address obsolescence and provide sensor reprogramming ability.

14-90 AN/APR-39(V)2: Complete the Class I Engineering Change Proposal (ECP) and cover deferred tasks, APR-39 / AAR-47 software refinement, follow on test and evaluation (FOT&E) to validate solutions and platform test and integration to support all current Radar Warning Receiver (RWR) and Assault platforms using Aircraft Survivability Equipment (ASE).

06-00 ALE-39 to 47 Retrofit: Funds requested to modify F/A-18 C/D lots 18-21 to provide more reliable countermeasures dispensing and ensure accurate onboard inventory reporting.

07-03 IDECM: The Integrated Defensive Electronic Countermeasure (IDECM) Radio Frequency Countermeasure (RFCM) consists of an Onboard Electronic Countermeasure Set (ALQ-214), an Electronic Frequency Converter (EFC), an Improved Multi Platform Launch Controller (IMPLC) and Fiber Optic Towed Decoy (FOTD) that improves the survivability of aircraft against modern Radio Frequency (RF) threats. This OSIP procures the ALQ-214 and the EFC.

05-08 DIRCM: This OSIP will provide currently available technology improvements to survivability to USMC aircraft operating in support of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). FY2009 through FY2011 OCO funding will b used to procure A-Kits and B-kits, along with program support.

11-11 UC-35D ASE "A" kits is an Southwest Asia Marine Expeditionary Force (MEF) Commanders lack light Operational Support Aircraft (OSA) lift assets capable of operating in threat Surface To Air Missile (SAM) environments of Southwest Asia (i.e. Iraq, Afghanistan).

04-12 Common On-Board Jammer: IDECM Block 4 is an Engineering Change Proposal (ECP) to the ALQ-214 intended to render it suitable for operation on the F/A-18C/D aircraft, while retaining all IDECM suite functionality when installed on F/A-18E/F aircraft. The Electronic Frequency Converter (EFC) enables dataflow via the fiber optic cable to the Fiber Optic Towed Decoy (FOTD) and is part of the IB-4 configuration when installed on the F/A-18E/F aircraft. This OSIP procures the ALQ-214 andthe EFC.

17-12 Correction of Discrepancies: This OSIP will provide the required correction to multiple sub components that are obsolete.

06-14 Joint Allied Threat and Awareness System (JATAS): JATAS provides missile, laser, and hostile fire warning capability that can improve aircrew situational awareness and cue a Directed Infrared Countermeasure (DIRCM) and/or flares to counter evolving infrared (IR) guided missile threats. It will be installed on the MV-22B (lead platform), AH-1Z, UH-1Y, MH-60R/S, and CH-53K aircraft. Funding for this OSIP will start in FY14.

(TOA $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	Complete	Total
72-88	AN/AAR-47 Detection	374.5	49.4			27.2	27.2						451.1
14-90	AN/APR-39(V)2	203.4	8.3		10.9		10.9	20.3	21.3	11.2			275.4
06-00	ALE-39 to ALE47 Retrofit	127.3	30.0	3.0	5.9		5.9	5.6	5.5	5.8	5.6		188.7
07-03	IDECM	207.6	41.9	18.9									268.5
05-08	DIRCM	154.6	166.8	35.0	9.3		9.3	8.9	3.4	3.3	3.3	45.5	430.1
11-11	UC-35D ASE "A" Kits			3.7									3.7
04-12	Common On-Board Jammer				65.8		65.8	74.0	89.4	96.1	141.5	54.6	521.4
17-12	ALR-67(V)2 Improvements				0.2		0.2	0.3	0.3	0.3	0.5	0.5	2.2
06-14	JATAS								18.7	31.2	20.8	1,103.6	1,174.3
INACTIVE OSIPS		5.3											5.3
Total		**1,072.7**	**296.4**	**60.6**	**92.1**	**27.2**	**119.3**	**109.1**	**138.6**	**148.0**	**171.7**	**1,204.2**	**3,320.6**

Note:
Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: AN/AAR-47 DETECTION (OSIP 072-88)

MODELS OF SYSTEMS AFFECTED: AH-1W/Z, UH-1N/Y, CH-53D/E, HH-60H, SH-60B, MH-60R/S, P-3/P-3AIP KC-130F/R/T/J, CH-46E, MV-22 | TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION: The AN/AAR-47 warns of approaching missiles by detecting radiation associated with rocket motors and automatically initiates flare ejection. Detection algorithms are used to discriminate against non-approaching radiation sources. The AN/AAR-47 is a passive missile approach warning system consisting of four sensor assemblies housed in two or more sensor domes, a central processor unit and a control indicator. The AN/AAR-47 provides attacking missile declaration and sector direction finding as will be interfaced directly to the ALE-39/47 countermeasures dispenser. Without the AAR-47, helicopters and fixed wing aircraft have no capability to detect an infrared missile attack. Supplemental funds were received in FY 07 to provide AAR-47B(V)2 Probability of Detection Improvement Engineering Change Proposal (ECP) Retrofit Program. Current deployed system has performance limitations in certain OCO operating environments; the ECP supports USMC Urgent Need Statement (UNS) #03606UC. FY 09 and FY10 OCO supplemental funded a Class I ECP and improved Missile Warning capabilities in support of Urgent Needs Statement USN #03606UC for USN/USMC Assault Aircraft. Fielded Missile Warning System (MWS) has performance limitations in certain OCO operational environments. USN/USMC assault aircraft will continue to be susceptible to the Man-portable Air Defense (MANPAD) threat in certain operating environments.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Milestone II was passed in 1982. OPEVAL (on the CH-53E) was passed in October 1986. Milestone III was passed in May 1987 for full production with extension of application to all other platforms. Production of 709 systems and preparation of a Level III data package followed, with deliveries completed in early 1992. Under full and open competition, a contract for up to 1200 systems was awarded to Hercules (now Alliant) in December 1991. Actual orders were for 1122 systems with deliveries completed in January 1997. Under full and open competition, a contract for up to 1077 systems was awarded to Lockheed Martin in September 1995. Deliveries began in January 1997 and were completed in July 1999. There are two upgrade programs: The Computer Processor (CP) Microprocessor upgrade program FY97-FY99 replaced the 8086 MP board with an MP 80486 Board with new software to enhance threat declaration and to better control false alarms. The second Upgrade; AAR-47(V)2 Sensor upgrade, contained two phases; Phase one upgraded the UV sensors with a solid state spectral filter assembly with embedded Laser warning capability. Phase two incorporated a Class I Sensor ECP (Dynamic Blanking) which upgraded the AAR-47(V)2 Sensors to the AAR-47A(V)2 sensor design. Due to the current operational environment a third Sensor Class I ECP is required which improves probability of detection in the current theaters of operation. The FY07 Supplemental funded the procurement of 5 First Article Test units for USMC/USN/USAF Operational Assessment and the accelerated development of a Class I ECP for AAR-47B(V)2 for multiple T/M/S and delivery of 300 PDX upgrade kits consisting of four sensors and one CP unit. This is an O-level replacement with the existing sensors being sent to the contractor, upgraded and then sent back to the fleet. The AAR-47B(V)2 reached IOC status in October 2008. Congressional Add funds provided in FY08 funded the Operational Flight Software for the Hostile Fire Indication (HFI) Capability. FY08 supplemental funds are a payback for utilization of AAR-47 baseline budget for OCO requirements. FY09 and FY10 OCO supplemental funds procured 950 AAR-47 B(V)2 retrofit kits. Congressional Add funds provided in FY09 and FY10 funded the AAR47 Operator Interface and the continued HFI Capability effort. FY-12 OCO request provides funding for a Class I ECP to provide sensor reprogramming ability, Computer Processor (CP) upgrade, and address obsolescence issues in the AAR-47

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
RDT&E	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PROCUREMENT																								
Installation Kits																								
AAR-47B(V)2 Retrofit Kits (OCO)	530	19.5	630	37.7																			1,160	57.2
Installation Kits N/R																								
Installation Equipment																								
Sensor Upgrade Equip	1,836	53.8																					1,836	53.8
Sensor Upgrade Equip (OCO)		2.3								10.4		10.4												12.8
FY05 SUP (CP Upgrade Equip)	1	0.3																					1	0.3
FY05 SUP (Sensor Upgrade Equip)	98	3.7																					98	3.7
FY06 Title 9 Sup (Dynamic Blk)	4	8.1																					4	8.1
FY07 Title 9 Sup (PDX)		30.2																						30.2
AAR-47 INSTALL EQUIP	1,250	90.2																					1,250	90.2
Title 9 Sup (Sensor Upgrade)	151	11.3																					151	11.3
FY10 Cong Add (CP Upgrade Equip)				2.0																				2.0
Installation Equipment N/R		24.6																						24.6
Engineering Change Orders																								
CP UPGRADE EQUIP ECO		7.7																						7.7
CP UPGRADE EQUIP ECO (OCO)										4.5		4.5												4.5
Dynamic Blanking ECO		1.9																						1.9
FY05 Sup Dynamic Blanking ECO		8.9																						8.9
Title 9 Sup Dynamic Blanking		0.6																						0.6
FY07 Sup PDX Upgrade Kit	300	18.8																					300	18.8
CDP Phase 2		2.4																						2.4
CDP Phase 3 (OCO)		1.0																						1.0
FY08 Cong Add Hostile Fire Operational Flight SW		4.0																						4.0
FY09 Cong Add Hostile Fire Operational Flight SW																								
Modular Non-volatile Selectable Storage Recorder (OCO)		2.6																						2.6
UMP Rehosting (OCO)		2.0		3.0																				5.0
FY10 Cong Add Hostile Fire Indicator				2.0																				2.0
Data		1.8																						1.8
Training Equipment		0.6																						0.6
Support Equipment		8.6																						8.6
Support Equipment (OCO)																								
Background Data Recording Card (OCO)		2.5																						2.5
ILS		5.7																						5.7
ILS (OCO)		1.2								0.2		0.2												1.4
Other Support		51.0																						51.0
Other Support (OCO)		5.1		1.5						6.2		6.2												12.8
Other Support (CONG ADD)		4.0																						4.0
Smart Dispense Live Fire Support (OCO)				3.2						5.9		5.9												9.1
Installation Cost																								
Total Procurement		**374.5**		**49.4**						**27.2**		**27.2**												**451.1**

Notes:
1. Totals may not add due to roundin

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: AN/APR-39(V)2 RWR (OSIP 014-90)

MODELS OF SYSTEMS AFFECTED: AN/APR-39A/B/C(V)2, UH-1N/Y, AH-1W/Z, MV-22, KC-130T, CH-53K, MH-60S | TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION / JUSTIFICATION: The AN/APR-39A/B/C(V)2 Radar Signal Detecting Set (RSDS) is designed for use on US Marine Corps, US Navy, and US Army Assault Support aircraft to provide onboard situational awareness and warning of radar threats. The AN/APR-39A/B/C(V)2 also provides control and display of the AAR-47A(V)2 Missile Warning System and Chaff dispense commands to the ALE-47 Counter Measure Dispensing System (CMDS). The APR-39A/B/C(V)2 consists of five antennas, one Cockpit Control unit, one or two Display Indicators, two or four receivers, and one processor. FY10 Supplemental Funding supported a Class I Computer Processor (CP) ECP upgrade program. FY12 thru FY15 funding will support a class I Engineering Change Proposal (ECP), APR-39D(V)X, that will correct part I deficiencies against the Radar Warning Receiver (RWR) noted in AH-1W, MV-22 and KC-130T OpEval reports. The current RWR provides inaccurate direction of arrival information, time delayed detection and identification of threat emitters causing loss of situational awareness to combat aircrews. 8 (eight) validation/verification systems will be procured to support platform integration and suitability testing on the MV-22B, AH-1Z, UH-1Y and MH-60S aircraft System Integration Labs (SILs) and verification of correction of deficiency (VCD) Flights. Upgraded Kits will be procured in FY14 and FY15.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The AN/APR-39A(V)2 is in the APN-1 Post Production and sustainment phase (MSIII3Q/96). The U.S. Navy is the lead service of this joint service program. The U.S. Army awarded the production contract 3Q/96, and continues to administer the contract. U.S. Navy delivery of production systems commenced June 1999. Procurement of an /APR-39A/B(V)2 for the additional requiring platforms will be by extension of application with the required follow-on test and evaluation conducted on each platform. The AN/APR-39B(V)2 is a glass cockpit compatible for H-1 upgrades. FY08 OCO supplemental funded the development of the Computer Processor Unit (CPU) ECP upgrade (BVX program). This included incorporation of the Army APR-39A(V)X CPU and Memory Circuit Card Assemblies. FY10 supplemental funding will complete the class I ECP and cover deferred tasks, which includes (8) first-article ship sets for testing, APR-39 / AAR-47 software refinement, FOT&E to validate solutions and platform test and integration to support all current RWR and Assault platforms using ASE. The MV-22, AH-1Z, UH-1Y, CH-53K and MH-60S platforms have planned APN-1 procurement of APR-39 systems in FY2010 and beyond. FY09 supplemental funded the combined Operator Interface effort with the AAR-47. FY10 OCO funded the Class I ECP computer processor upgrade to the APR-39C(V)2. FY12 - FY15 funds will fund the Class I ECP for the APR-39D(V)X to correct part I deficiencies noted during OpEval testing of the APR-39 system.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
RDT&E	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PROCUREMENT																								
Installation Kits																								
Install Kits	7	0.2																					7	0.2
Installation Kits N/R																								
Installation Equipment																								
OCO FY05 Supp (Install Equip) APR39A	24	5.0																					24	5.0
Install Equip (AVR-2)	254	32.2																					254	32.2
Install Equip AN/APR-39A/D(V)X															7	4.5	10	5.0					17	9.6
Install Equip AN/APR-39A/B(V)2	463	73.4		3.4																			463	76.8
Title IX Supplemental (Install Equip) 39a	4	5.1																					4	5.1
Installation Equipment N/R		16.7																						16.7
Engineering Change Orders																								
ECO		20.9																						20.9
ECO (OCO)		3.8																						3.8
ECO B(V)X Computer Processor ECP (OCO)				1.5																				1.5
ECO D(V)X System ECP								8.3				8.3		15.7		11.3		2.4						37.7
Data		1.0																						1.0
Training Equipment		1.0																						1.0
Support Equipment		2.1																						2.1
Support Equipment (OCO)		0.3		0.8																				1.1
ILS		6.3																						6.3
ILS (OCO)				0.4																				0.4
Other Support		31.5		0.2				2.6				2.6		4.6		5.4		3.8						48.2
Other Support (OCO)		3.9		2.1																				6.0
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**203.4**		**8.3**				**10.9**				**10.9**		**20.3**		**21.3**		**11.2**						**275.4**

Notes:

1. Totals may not add due to rounding

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: ALE-39 TO ALE-47 RETROFIT (OSIP 006-00)

MODELS OF SYSTEMS AFFECTED: CH-53E, EA-6B, AH-1W, CH-46E, UH-1N, CH-53D, MH-53D, F/A-18C/D, AV8B, MV-22, KC-130FRT, HH60, P-3

TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION The replacement of the AN/ALE-39 Dispenser System with the AN/ALE-47 will correct serious safety problems and greatly improve aircraft survivability. As a joint program, USD (AT&L) memo of November 1986 directed U.S. Navy and U.S. Army to participate in the USAF Engineering Manufacturing Development (EMD) phase. Requirements were established by USAF Statement of Operational Requirements Document (SORD) number 341.88-II-D of 8 July 92. OSIP 006-00 was initially established for the retrofit of multiple Type/Model/Series (TMS), but operational requirements in support of Overseas Contingency Operations (OCO) resulted in accelerated installs and additional aircraft being identified for retrofit incorporation with FY-04/05 OCO Supplemental funds. FY-07/08 OCO Supplemental funds added a PowerPC processor upgrade and additional dispenser pods for increased capacity and forward firing capability on assault platforms. FY-09 provides funding for retrofit installation of AN/ALE-47 on F/A-18/C/D aircraft lots 12-17. FY-09 OCO funds were also provided to procure AN/ALE-47 breech plates for CH-46, MV-22 and F/A-18 C/D lots 18-21 to provide more reliable countermeasures dispensing and ensure accurate onboard inventory reporting. FY-10 OCO funding is provided for additional dispensers/pods to increase mission duration and survivability for CH-53D/E, the procurement of additional production Dual Dispenser Pods and the NRE/installation to increase the expendables capacity from 120 to 240.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The AN/ALE-47 system is in production and being installed in multiple U.S. Navy, USMC and USAF aircraft. MS III decision awarded March 1993. Production system components are being procured under Air Force contract FA8540-06-D-0002 awarded November 2006. The urgent requirement contract for the dual dispenser pod prototype was awarded February 2009. The contract for the AH-1W dual dispenser pods was awarded February 2009. An Undefinitized Contract Action (UCA) for CH-53D/E dual dispenser pod production was awarded July 2009, August 2009 and December 2009, with the definitization awarded June 2010. PowerPC Processor Upgrade contract was awarded March 2010. The F/A-18C/D retrofit kits were increased to accommodate production capability/aircraft availability.

FINANCIAL PLAN: (TOA, $ in Millions

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AV8 Kit	48	0.9																					48	0.9
EA6B Kit	35	0.3																					35	0.3
CH-53 "A" Kit OCO			372	7.1																			372	7.1
F/A-18 "A" Kit	39	1.6			9	0.4	42	1.8			42	1.8	38	1.7	33	1.5	38	1.8	37	1.8			236	10.5
"A" Kit	1850	12.7																					1850	12.7
Installation Kits N/R	10	5.3																					10	5.3
CH-53D/E Val/Ver A Kits OCO			4	0.2																			4	0.2
CH-53D/E Val/Ver B Kits OCO			4	0.2																			4	0.2
F/A-18 Val/Ver	4	0.3																					4	0.3
Installation Equipment																								
GWOT FY05 Spp (Install Equip)	266	3.0																					266	3.0
Install Equip (39 Sequencer Swit	1	2.0																					1	2.0
CH-53 "B"Kit OCO			372	14.8																			372	14.8
F/A-18 "B"Kit	36	1.4		0.2	9	0.4	42	1.7			42	1.7	38	1.6	33	1.4	38	1.7	37	1.7			233	10.1
Breech Plates (OCO)	2774	2.4																					2774	2.4
TACAIR/HELOS Equip	2770	50.9																					2770	50.9
Title 9 Supplemental (Install Equ	7	5.6																					7	5.6
Installation Equipment N/R																								
Engineering Change Orders																								
Equip ECO		0.8																						0.8
Data		0.1																						0.1
Training Equipment		3.2																						3.2
Support Equipment		5.7																						5.7
F/A-18 ALM-290	20	0.3			5	0.1	13	0.2			13	0.2	12	0.2	13	0.3	12	0.3					75	1.5
F/A-18 ALM-290 OCO																								
ILS		1.3		0.7																				2.0
Other Support		25.5		0.3		0.8		0.7				0.7		0.6		0.4		0.4		0.5				29.2
Other Support (OCO)				4.0																				4.0
Interim Contractor Support																								
Installation Cost	864	3.9	17	0.8	31	1.3	30	1.5			30	1.5	38	1.6	45	1.9	38	1.6	37	1.6			1100	14.3
Installation Cost (OCO				1.9	114		74				74												188	1.9
Total Procurement		127.3		30.0		3.0		5.9				5.9		5.6		5.5		5.8		5.6				188.7

Notes:
1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D Lots 12-17; CH-53D/E

MODIFICATION TITLE: ALE-39 TO ALE-47 RETROFIT (OSIP 006-00)

INSTALLATION INFORMATION: F/A-18C/D Lots 12-17 retrofit kits installed in conjunction with PMI and CH-53D/E are depot installs.

METHOD OF IMPLEMENTATION: Depot Level Installation

F/A-18C/D INSTALLATIONS
ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2010: FY 2011: Nov-10 FY 2012: Nov-11 FY 2013: Nov-12

DELIVERY DATE: FY 2010: FY 2011: Feb-11 FY 2012: Feb-12 FY 2013: Feb-13

CH-53D/E INSTALLATIONS
ADMINISTRATIVE LEADTIME: 11 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: Aug-10 FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: Feb-11 FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (1982) kits	864	3.9	17	0.8	22	0.9													903	5.6
FY 2010 (188) kits				1.9	114		74												188	1.9
FY 2011 (9) kits					9	0.4													9	0.4
FY 2012 (42) kits							30	1.5	12	0.5									42	2.0
FY 2012 OCO (0) kits																				
FY 2013 (38) kits									26	1.1	12	0.5							38	1.6
FY 2014 (33) kits											33	1.4							33	1.4
FY 2015 (38) kits													38	1.6					38	1.6
FY 2016 (37) kits															37	1.6			37	1.6
To Complete (0) kits																				
TOTAL	864	3.9	17	2.6	145	1.3	104	1.5	38	1.6	45	1.9	38	1.6	37	1.6			1288	16.1

Note: Kit purchases include A Kits; AV8 Kits, EA6B Kits, CH-53 and N/R (Val/Ver) Kits. Of the total kits purchased in PY, only 864 installs were funded by this program; the remaining kit installs were funded by individual platforms.
FY10 OCO funds the kits and installation costs to be awarded in FY10 for installs occuring FY11, FY12. The FY10 kits are (188) CH-53D/E shipset installs from the (376) A-kits (188 left side A-kits, 188 right side A-kits).

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	864			9	8	37	36	36	36	26	26	26	26	10	10	9	9	12	11	11	11
Out	864				9	8	37	36	36	36	26	26	26	26	10	10	9	9	12	11	11

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In	10	10	10	8	10	9	9	9		1288
Out	11	10	10	10	8	10	9	9	9	1288

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM (OSIP 005-08)

MODELS OF SYSTEMS AFFECTE: CH-53E,CH46E , C-20, C-40 | TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION: Urgent Overseas Contingency Operations (OCO) requirement to provide aircraft survivability against Infrared Surface-to-Air Missile (IR SAM) threats for USN/USMC rotary wing aircraft in support of Operation Iraqi Freedom and Operation Enduring Freedom. The funding from FY2008-2011 is for the A kit and B kit procurement of a Directed Infrared Countermeasure (DIRCM) capability until the next generation DIRCM is produced. Current USMC operations require improved IRCM capability against the Man-portable Air Defense Systems (MANPADs) threat. This upgrade will provide improved Missile Warning System (MWS) and IRCM performance in current theaters of operation. The upgrade incorporates improved detection capability and increased countermeasure response in a multi-target and high clutter environments. The Department of the Navy, Large Aircraft Infrared Countermeasures (DoN LAIRCM) System (B-KIT) consists of 5 Components: Missile Warning Sensor (5 ea), Processor (1 ea), Guardian Laser Transmitter Assembly (GLTA) (2 ea), Controller Interface Unit (CIU)(1 ea), and Viper Laser (2 ea).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The MS C/ Full Rate Production decision for DoN LAIRCM was scheduled for 1st QTR FY10. Don LAIRCM provides a cost effective solution to the Infra-Red (IR) threat with limited ability to distinguish non-threat from threat energy in high clutter environments. FY 2005 Supplemental funds enabled an analysis of a current Generation I MWS with current countermeasure dispense techniques as compared to Generation II MWS. Directed IR Countermeasures (DIRCM) system CH-53 Technology Assessment Program (TAP) used FY 2007 Supplemental funds to develop and purchase the Airframe Changes (AFC) A-Kit and B-Kit test articles. The Analysis of Alternatives (AOA) for the Assault DIRCM program was completed in July 2007. This program demonstrated the improved capability and mitigated deficiencies using the next generation system incorporating improved MWS with advanced DIRCM solution. The DoN LAIRCM effort is a pre-milestone C program with an Initial Operational Capability date of May 2009. This OSIP will provide currently available technology improvements to survivability to USMC aircraft operating in support of OIF and OEF. FY2009 through FY2011 OCO funding will be used to procure A-Kits and B-kits, along with program support. Engineering Change Order efforts for OCO will increased in FY10 to support the Quantum Cascade Laser Demonstration (QCLD), the Quantum laser replacement for Viper laser. Efforts will also encompass software upgrades in which the Navy includes Software Trouble Report (STR) fixes and Smart Dispense Phase I,. Also included are processor upgrades, which add Hostile Fire Indicator capabilities.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
RDT&E	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PROCUREMENT																								
Installation Kits																								
Installation Kits (A) Kits							8	2.8			8	2.8											8	2.8
Installation Kits (A Kits) OCO					13	11.1																	13	11.1
Installation Equipment																								
DIRCM CH-53	7	20.3																			10	12.5	17	32.8
Install Equipment OCO	45	94.3	52	59.8																			97	154.1
Install Equipment N/R OCO						13.5																		13.5
Engineering Change Orders		0.9						0.3				0.3										31.3		32.5
Engineering Change Orders OCO		0.4		73.3										5.7										79.4
Data		0.5		0.1																		0.2		0.8
Training Equipment		*																				0.2		0.2
Support Equipment		0.9																				0.3		1.2
Support Equipment OCO				1.2																				1.2
ILS		4.5		0.1																		0.8		5.4
ILS OCO		0.3		2.3																				2.6
Other Support		22.5		2.5				6.1				6.1		3.2		3.4		3.3		3.3		0.2		44.6
Other Support OCO		10.2		27.4		4.5																		42.1
Interim Contractor Support																								
Installation Cost																								
Installation Cost OCO						6.0	4				4		9										13	6.0
Total Procurement		**154.6**		**166.8**		**35.0**		**9.3**				**9.3**		**8.9**		**3.4**		**3.3**		**3.3**		**45.5**		**430.1**

Notes:

1. Totals may not add due to rounding.
2. FY2010 OCO was transferred to H-46 and H-53 to procure 1 A-Kit, and install 41 A-Kits.
3. FY2011 OCO will support procurement and installation of C20/C-40 A Kits. FY11 - Procurement -qty 13. Installs will occur in FY12 & FY13.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-20/C-40

MODIFICATION TITLE: DIRECTED INFRARED COUNTERMEASURE(OSIP 005-08)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Mod Teams/Fleet Readiness Center East

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 13 Months

CONTRACT DATES: FY 2010: _____ FY 2011: Aug-11 FY 2012: _____ FY 2013: _____

DELIVERY DATE: FY 2010: _____ FY 2011: _____ FY 2012: Sep-12 FY 2013: _____

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY () kits																				
FY 2010 ( ) kits																				
FY 2011 (13) kits						6.0	4		9										13	6.0
FY 2012 ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL			**0**	**0.0**	**0**	**6.0**	**4**	**0.0**	**9**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**13**	**6.0**

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	0												4	3	3	3	
Out	0													4	3	3	3

	FY 2014				FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
In														12
Out														12

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: COMMON ON-BOARD JAMMER (OBJ)(OSIP 004-12)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F | TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION: IDECM Block 4 is an Engineering Change Proposal (ECP) to the ALQ-214 intended to render it suitable for operation on the F/A-18C/D aircraft, while retaining all IDECM suite functionality when installed on F/A-18E/F aircraft. This ECP will result in a Common On-Board Jammer (OBJ) system that must meet the requirements of the OBJ Block 2 Operational Requirements Document (ORD) #624-78-03 and be compatible with the ALE-55 Fiber Optic Towed Decoy (FOTD). The Electronic Frequency Converter (EFC) enables dataflow via the fiber optic cable to the FOTD and is part of the IB-4 configuration when installed on the F/A-18E/F aircraft. This Operational Safety Improvement Program (OSIP) is for the onboard portion of the IDECM Block 4 configuration.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The ALQ-214 received MS III approval in January 2004 and is still in Full Rate Production (FRP). FRP Lots 1-8 are covered by OSIP 07-03. FRP 9 is the first ALQ-214 production lot in the IB-4 configuration and is planned for FY 2012. FRP 10 will be the second production transition contract which is planned in FY 2013. Production line transition to the IB-4 configuration will be complete in FY 2014. Annual production contract awards are expected to continue through FY 2017. Additional ALQ-214 systems are being procured in FY14-FY16 to reflect the service life extension of the F/A-18C/D aircraft and procurement of additional F/A-18E/F aircraft. A total of 190 IB-4 ALQ-214s are planned for procurement.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
RDT&E	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
ALQ-214							19	51.0			19	51.0	23	55.2	30	69.1	35	77.3	60	124.4	23	46.4	190	423.4
EFC							38	7.5			38	7.5	46	9.2	52	10.3	39	8.6	19	4.8			194	40.4
IMPLC Retrofit Kits																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support								7.3				7.3		9.5		10.1		10.2		12.3		8.2		57.5
Interim Contractor Support																								
Installation Cost																								
Total Procurement								**65.8**				**65.8**		**74.0**		**89.4**		**96.1**		**141.5**		**54.6**		**521.4**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Corrections of Discrepancies (OSIP 017-12)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F | TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION/JUSTIFICATION: This Operational Safety Improvement Program (OSIP) is for the correction of discrepancies and to effect changes to ALR-67(V) 2 system and ECM equipment in aircraft that have been delivered for fleet operations. This system requires various upgrade initiative and logistic support to keep the F/A-18 a capable aircraft with a robust defensive system that improves its survivability. This OSIP will provide funding for the upgarde of the ALR-67(V)2 computer, Low Band Antenna, Special Receiver and Quandrant Receiver weapons replaceable assemblies.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The contractor will develop Preliminary Design Review (PDR) for Program Control Unit (PCU) 1 drawing package and prototype CCA's, perform Critical Design Review (CDR). Contractor to conduct system testing, evaluations, environmental and qualification testnig. The contractor to modify SRA's with DMS issues and develop ATP's and ECP, verify testing and evaluations of new designs. The U.S. Navy FST will provide system engineering qualification on aircraft, support equipment, develope Technical Directive (TD) and any additional ILS support requirements. Software support activity (SSA) U.S. Navy and contractor to develop software integrations.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
RDT&E	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PROCUREMENT																								
Installation Kits																								
RR-2055 Special Receiver (SRA)							3	0.2			3	0.2											3.0	0.2
CP-1293 PCU-1														0.3		0.3		0.3		0.5		0.5		2.0
Installation Kits N/R																								
Installation Equipment																								
Installation Equipment N/R																								
Engineering Change Orders																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support																								
Interim Contractor Support																								
Installation Cost																								
Total Procurement								**0.2**				**0.2**		**0.3**		**0.3**		**0.3**		**0.5**		**0.5**		**2.2**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-40, BUDGET ITEM JUSTIFICATION | DATE: February 2011

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

P-1 ITEM NOMENCLATURE: 057700 Common Avionics

Program Element for Code B Items: Other Related Program Elements

	Prior Years	ID Code	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
QTY		A											
COST (In Millions)	**1,850.9**	A	145.8	115.2	147.1	13.5	160.6	78.0	120.1	140.0	169.0	1,677.0	4,456.5

DESCRIPTION:
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 Global Positioning System (GPS) program is designed to provide a highly accurate position 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 V/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 Ground Proximity Warning System (GPWS) provides visual and aural warnings to the pilot when the aircraft is in a condition that could result in a controlled flight into terrain accident. (4) 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. (5) 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. (6) The Advanced Mission Computer and Display (AMC&D) capabilities including common modules and common Core System Software, will replace existing obsolete AV8B Mission Systems Computer and aging/obsolete AN/AYK-14(V) Mission Computer and Contractor Furnished Equipment Displays. (7) Attitude Gyro Upgrade replaces obsolete gyros in naval aviation aircraft with a more reliable and maintainable gyro. (8) Aircrew Wireless Internal Communications System (AWICS) is a safety generated program that provides a wireless ICS capability to prevent aircrew/passenger entanglement with ICS long cords in the event of mishap and allows unimpeded movement throughout the aircraft. (9) Avionics Component Improvement Program (AVCIP) provides resources to address critical readiness and reliability deficiencies, obsolescence, loss of sustainability and top Fleet repair cost drivers in Naval avionics systems. (10) Commercial Of the Shelf (COTS) Safety Systems program procures off the shelf safety enhancements to Naval aircraft to enhance aircrew and aircraft survivability. (11) Blue Force Situational Awareness (BFSA) actively or passively identify and track US, allied, or coalition forces for the purpose of providing enhanced battle space situational awareness and reducing fratricide. (12) Military Flight Operations Quality Assurance (MFOQA) provides the war fighter with timely and quantitative information regarding aircrew and system performance for improving safety, operational efficiency, and readiness.

The overall goal of the modifications budgeted in FY 2012 is to procure the common equipment required for the individual aircraft platforms. FY 2012 OCO request is for Blue Force Situational Awareness to deconflict friendly forces during OEF missions. The specific modifications budgeted and programmed are:

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY2010	FY2011	Base FY2012	OCO FY2012	Total FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
71-88	NAVSTAR GPS (Hardware)	336.5	7.4	11.0	8.4		8.4	8.6	9.0	9.0	9.4	148.0	547.1
04-94	AN/ARC-210 (Hardware)	298.5	4.3	0.5	0.6		0.6	0.6					304.6
14-97	GPWS (CAT I) Fixed Wing	95.9	6.1	0.4									102.3
21-01	CNS/ATM	326.0	83.8	70.8	110.2		110.2	50.1	98.9	112.2	113.4	941.6	1907.1
02-02	Tactical Air Moving Map Capability (TAMMAC)	103.2	14.9	8.5	3.7		3.7	2.5					132.7
01-02	AMC&D/MPCD	300.7	16.7	4.5	18.2		18.2	8.4	2.5				351.1
07-04	Attitude Gyro Upgrade	56.2	2.9	0.7	0.7		0.7						60.5
09-04	Aircrew Wireless Internal Communications Syste	17.1	4.3	2.7	2.1		2.1	2.6	3.6	2.8	2.9	48.3	86.4
11-09	Avionics Component Improvement Program (AVCIP)	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.1	114.6	130.7
020-10	COTS Safety Systems		3.4										3.4
10-11	Blue Force Situational Awareness (BFSA)			14.1		13.5	13.5						27.6
011-12	Military Flight Operations Quality Assurance (MFOQA)				1.1		1.1	3.2	4.1	12.0	12.0	203.5	235.9
001-15	Advance Digital Data Set (ADDS)									2.0	29.2	221.0	252.2
	Inactive Years	314.8											314.8
Total		**1850.9**	**145.8**	**115.2**	**147.1**	**13.5**	**160.6**	**78.0**	**120.1**	**140.0**	**169.0**	**1677.0**	**4456.5**

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 position 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.). The program procures and modifies GPS equipment such as receivers, antennas, amplifiers, and protection technologies as required for naval aviation platforms. NAVWAR protection technologies protect a platform's GPS capability from GPS jamming and unintentional interference. Hardware configurations vary with each T/M/S aircraft. 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 (NAVWAR) 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. The NAVWAR full rate production approval was received in June 2002. Research, Development, Test and Evaluation, Navy (RDT&E,N) is funded under program element #0604777N.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY2014		FY2015		FY2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
NAVWAR	399	5.5	10	0.2	33	1.9	24	2.5			24	2.5	21	2.6	23	2.9	23	3.0	23	3.1	316	42.8	872	64.5
Installation Kits N/R	1	4.0				0.9		0.4				0.4		0.3		0.3		0.3		0.3		1.2	1	7.7
Installation Equipment																								
GPS	2,047	173.8																					2047	173.8
NAVWAR	461	23.3	10	0.2	33	2.5	24	1.8			24	1.8	21	1.7	23	1.9	23	1.9	23	2.0	316	26.8	934	62.0
Installation Equipment N/R		24.3		2.3		0.9		0.4				0.4		0.4		0.3		0.3		0.4		1.8		31.1
Engineering Change Orders																								
NAVWAR Kit ECO		1.4		0.7		0.5		0.1				0.1		0.4		0.4		0.4		0.5		2.3		6.6
Data		7.9				0.4																		8.3
Training Equipment																								
GPS	114	7.8																					114	7.8
NAVWAR	2	0.2																					2	0.2
Support Equipment		0.4																						0.4
ILS		0.7		0.2		0.2		0.2				0.2		0.2		0.2		0.2		0.2		0.3		2.3
Other Support		84.3		3.3		2.9		2.2				2.2		2.0		2.1		2.2		2.2		59.9		161.0
Interim Contractor Support																								
Installation Cost	231	2.8	44	0.6	50	0.8	43	0.8			43	0.8	41	1.0	21	0.8	23	0.8	23	0.8	339	12.9	815	21.3
Total Procurement		**336.5**		**7.4**		**11.0**		**8.4**				**8.4**		**8.6**		**9.0**		**9.0**		**9.4**		**148.0**		**547.1**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.
3. Installation Kit, Installation Equipment and Installation unit costs vary by platform due to different equipment configurations.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All Aircraft (Excluding AV-8B) MODIFICATION TITLE: Global Positioning System (GPS) (OSIP 71-88)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Equipment is provided to the platform PMA and installed as per airframe ECP/AFC.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2010: Dec-09 FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: Oct-10 FY 2011: Oct-11 FY 2012: Oct-12 FY 2013: Oct-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2009 & PY (234) kits	185	2.2	25	0.4	24	0.4													234	2.9
FY 2010 (10) kits					10	0.1													10	0.1
FY 2011 (20) kits					1	*	19	0.5											20	0.5
FY 2012 (24) kits							1	0.0	23	0.7									24	0.8
FY 2012 OCO ( ) kits																				
FY 2013 (21) kits											21	0.8							21	0.8
FY 2014 (23) kits													23	0.8					23	0.8
FY 2015 (23) kits															23	0.8			23	0.8
FY 2016 (23) kits																	23	0.9	23	0.9
To Complete (316) kits																	316	12.1	316	12.1
TOTAL	**185**	**2.2**	**25**	**0.4**	**35**	**0.5**	**20**	**0.5**	**23**	**0.7**	**21**	**0.8**	**23**	**0.8**	**23**	**0.8**	**339**	**12.9**	**694**	**19.7**

*Asterisk indicates amount less than $51K

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	185	6	6	6	7	8	9	9	9	5	5	5	5	5	6	6	6	5	5	5	6
Out	185	6	6	6	7	8	9	9	9	5	5	5	5	5	6	6	6	5	5	5	6

	FY 2015				FY 2016				To	Total
	1	2	3	4					Complete	
In	5	6	6	6	5	6	6	6	339	694
Out	5	6	6	6	5	6	6	6	339	694

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B

MODIFICATION TITLE: Global Positioning System (GPS) (OSIP 71-88)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Equipment is provided to the platform PMA and installed as per airframe ECP/AFC.

ADMINISTRATIVE LEADTIME: 11 Months

PRODUCTION LEADTIME: 13 Months

CONTRACT DATES: FY 2010: FY 2011: Sep-11 FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: Oct-12 FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2009 & PY (108) kits	46	0.6	19	0.2	15	0.2	23	0.3	5	0.1									108	1.4
FY 2010 ( ) kits																				
FY 2011 (13) kits									13	0.2									13	0.2
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**46**	**0.6**	**19**	**0.2**	**15**	**0.2**	**23**	**0.3**	**18**	**0.3**									**121**	**1.6**

*Asterisk indicates amount less than $51K

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In	46	4	5	5	5	3	4	4	4	5	6	6	6	4	4	5	5				
Out	46	4	5	5	5	3	4	4	4	5	6	6	6	4	4	5	5				

	FY 2015				FY 2016				To Complete	Total
In										121
Out										121

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, KC-130J, C/KC-130T, 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, T-45, and other A/C as directed by OPNAV

TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:

CNS/ATM provides new and enhanced hardware and software solutions to comply with national and worldwide civil and military airspace requirements. Solutions include communication, navigation, surveillance and supporting technologies that facilitate air traffic management, and other civil and military operational capabilities. Impacts of non-compliance with airspace standards will include operational delays, circuitously rerouting, or access denial to controlled airspace.

Prioritization of platform type and quantity is based on mission and anticipated operation in affected airspace. Examples of required functionality include Mode S datalink, 8.33 kHz VHF communications, Required Navigation Performance (RNP RNAV), Automatic Dependent Surveillance - Broadcast (ADS-B), Mission Planning integration, Protected Instrument Landing System, cockpit processing and display capability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Capability IOCs: **P-3C** 8.33 FY11, Mode S FY07, RNP RNAV FY08, RVSM N/A; **E-P3** 8.33 FY10, Mode S FY09, RNP RNAV FY10, RVSM N/A; **C-2A** 8.33 FY09, Mode S FY09, RNP RNAV FY10, RVSM N/A; **E-2C** 8.33 FY10, Mode S FY10, RNP RNAV FY10, RVSM N/A; **EA-6B** 8.33 FY09, Mode S FY10, RNP RNAV N/A, RVSM N/A; **K/C-130J** 8.33 FY10, Mode S FY10, RNP RNAV TBD, RVSM FY09; **VH-60N** 8.33 FY10, Mode S FY14, RNP RNAV FY14, RVSM N/A; **MH-53E** 8.33 FY13, Mode S FY13, RNP RNAV FY13, RVSM N/A, ADS-B FY13; **MH-60R/S** 8.33 FY10, Mode S FY10, RNP RNAV FY18, RVSM N/A; **F-18E/F** 8.33 FY10, Mode S FY09, RNP RNAV FY12, RVSM FY09; **MV-22B** 8.33 FY10, Mode S FY10, RNP RNAV FY18, RVSM N/A; **AH-1Z/UH-1Y** 8.33 FY10, Mode S FY10, RNP RNAV FY17, RVSM N/A; **AV-8B** 8.33 FY09, Mode S N/A, RNP RNAV N/A, RVSM FY11; **F-18C/D** 8.33 FY10, Mode S FY13, RNP RNAV FY13, RVSM N/A; **F-18A+** 8.33 FY10, Mode S FY13, RNP RNAV FY13, RVSM N/A; **C-130T** 8.33 FY11, Mode S FY11, RNP RNAV FY15, RVSM N/A; **T-45** 8.33 N/A, Mode S N/A, RNP RNAV FY16, RVSM N/A; **CH-46E** 8.33 N/A, Mode S N/A, RNP RNAV N/A, RVSM N/A.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
CNS/ATM Kit	201	14.3	20	2.6	40	2.2	42	3.2			42	3.2	25	1.1	6	4.0	10	6.8	10	6.7	159	136.5	513	177.4
Installation Kits N/R		8.8		11.0		1.1		13.5				13.5		3.7		9.3		0.6						47.9
Installation Equipment																								
CNS/ATM Equip	490	47.5	84	8.3	143	26.2	293	32.3			293	32.3	200	10.8	43	13.6	133	29.8	109	25.6	617	363.6	2112	557.7
CNS/ATM P-ILS	713	2.7																					713	2.7
Installation Equipment N/R	12	88.5		12.9		7.4	5	14.3			5	14.3		5.3		21.0	1	23.2		27.6		18.5	18	218.7
Engineering Change Orders		0.5		0.1		0.1		0.2				0.2		0.2		0.2		1.0		0.8		2.1		5.1
Data		7.1		2.0		0.4		1.7				1.7		0.8		0.4		0.5		0.3		1.5		14.7
Training Equipment	15	11.7	3	6.0	2	1.6		2.5				2.5		0.1	2	23.6	1	11.6	1	7.5	3	29.9	27	94.6
Support Equipment		0.1		0.6		0.5		0.3				0.3		0.2		0.1		0.1		0.1		1.2		3.1
ILS		5.9		0.7		0.8		0.9				0.9		0.3		0.2		1.0		1.1		2.8		13.7
Other Support		128.2		33.7		22.2		35.6				35.6		17.7		22.5		28.4		28.6		197.0		514.1
Interim Contractor Support																								
Installation Cost	159	10.7	49	5.8	68	8.1	68	5.8			68	5.8	234	10.1	194	4.1	33	9.2	76	15.1	285	188.7	1166	257.6
Total Procurement		**326.0**		**83.8**		**70.8**		**110.2**				**110.2**		**50.1**		**98.9**		**112.2**		**113.4**		**941.6**		**1907.2**

Notes:

1. Totals may not add due to rounding.
2. A-Kits, B-Kits, and Installation cost varies due to multiple & different functionalities/systems on each aircraft T/M/S.
3. B-Kits quantities differ from A-Kits where B-Kits consists of a card or module that will be integrated without A-Kit requirement.
4. Installation Kit/Installation Equipment quantities reflect number of units procured, installation quantity reflects number of aircraft.
5. Cost per quantity variation is due to variation in platforms, platform quantities, associated equipment per platform, and cost per equipment.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C, EP-3E, C-2A, EA-6B, KC-130J, C/KC-130T, 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, T-45, and other A/C as directed by OPNAV

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 2010: Jan-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: Dec-10 FY 2011: Dec-11 FY 2012: Dec-12 FY 2013: Dec-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2009 & PY (214) kits	159	10.7	49	5.8	6	0.7													214	17.3
FY 2010 (60) kits					60	7.2													60	7.2
FY 2011 (70) kits					2	0.2	68	5.8											70	6.0
FY 2012 (234) kits									234	10.1									234	10.1
FY 2012 OCO( ) kits																				
FY 2013 (194) kits											194	4.1							194	4.1
FY 2014 (33) kits													33	9.2					33	9.2
FY 2015 (76) kits															76	15.1			76	15.1
FY 2016 (119) kits																	119	78.4	119	78.4
To Complete (166) kits																	166	110.2	166	110.2
TOTAL	**159**	**10.7**	**49**	**5.8**	**68**	**8.1**	**68**	**5.8**	**234**	**10.1**	**194**	**4.1**	**33**	**9.2**	**76**	**15.1**	**285**	**188.7**	**1,166**	**257.6**

Notes:

E-2C GNS-530 COTS item; no production lead time.

Difference in A-kits and Installations are as follows: MH-60S (117) No A-kits needed (FY10-15), MH-60R (17) No A-Kits needed (FY09 & FY13), P-3C (24) installed paid by PMA 290 (FY05 & FY08)
F/A-18A+ (72) No A-kits needed (FY15 & To Complete) and F/A-18 C/D (378) No A-kits needed (FY 13 - To Complete), F/A-18 E/F (62) No A-kits needed (FY12).
Decrease of MH-53E (-2), CH-53E (-8) and EA-6B 89A (-1), C/KC-130T (-6) installed by platform OSIP.

***Asterisk indicates amount less than $51K

****Cost per quantity variation is due to variation in platforms, platform quantities, associated equipment per platform, and cost per equipment.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	159	12	12	12	13	17	17	17	17	17	17	17	17	58	58	59	59	48	48	49	49
Out	159	12	12	12	13	17	17	17	17	17	17	17	17	58	58	59	59	48	48	49	49

	FY 2015				FY 2016				To	Total
	1	2	3	4					Complete	
In	8	8	8	9	19	19	19	19	285	1166
Out	8	8	8	9	19	19	19	19	285	1166

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 and other aircraft as directed by OPNAV TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:

Advanced Mission Computer and Displays (AMC&D) program modifies/replaces existing obsolete and performance limited AN/AYK-14(V) Mission Computers (MC) and Contractor Furnished Equipment and Displays in naval aviation platforms. The program system consists of an Advanced Mission Computer (AMC) technologies which includes areas such as Mission Processing and Display Processing, Display Heads (DH), High-Speed Data Bus interfaces with Fiber Channel Network Switches (FCNS), Core system software, and multi-functional 8x10 Multipurpose Color Displays (MPCD). AMC&D system will have modular components integrated on an Open Systems Architecture so that it can be tailored and configured for multiple applications implementing common core system software and hardware modules. The capabilities address new performance requirements and technologies while minimizing the investment cost so that it can be tailored and configured for each application, and can address new performance requirements and technologies with minimum cost. AMC&D will provide improved mission computers and displays to handle increased requirement for flight, mission, and imagery data. Due to obsolescence problems with the current Multipurpose Color Display (MPCD), the AMC&D program is leveraging the 5x5 DH to provide a form, fit, function and interface replacement (no install funding required). The program conducts analysis on parts obsolescence and its associated resolutions which will be required to maintain current AMC&D configuration and to determine life of type procurements as required for platform installations. AMC&D MNS - M061-88 94 of 2 December 1994. AMC&D ORD Ser. No. 549-88-00 Approved 21 March 2000.

MPCD production buys begin in FY02 (no installation required) and AMC&D LRIP production buys began in FY01 with FRP buys beginning in FY04. The F/A-18E/F Retrofit Program (begins in FY06) goal is to achieve a 2-block configuration. Block 1 aircraft include Lots 23-25 and Block 2 includes Lots 26 and above. Block 1 will consist of replacing the AN/AYK-14 computers in Lots 23-24 and replacing the AMC with 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 FY06 procurement for Lots 26 consisted of FCNS, displays and digital video mapping card. The FY06 procurement for Lot 27 consisted of displays, DVMC, and upgrade to a card in the AMC. To maintain the common block configuration, new AMCs are procured for both Lots in the out years. The AMCs removed from Lots 26 and 27 will be part of the reuse to the Block 1 configuration. The AMCs procured for Lot 28 and 29 do not require installation costs since they are a form fit function replacement for as-delivered AMCs. The systems removed from Lots 28 and 29 will be part of the reuse process. AMC&D MNS - M061-88-94 of 2 December 1994. AMC&D ORD Ser. No. 549-88-00 Approved 21 March 2000. The FY08, 09 and 10 procurements include B-kits to provide digital output for the 8x10 AMPD High Resolution Recorder Interface (HRRI) to address a COMOPTEVFOR finding of poor ready room playback quality of the current analog video signal.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

AMC and 5x5 display CDR - 2nd Qtr FY01. FCNS CDR - 4th Qtr FY01, 8x10 CDR - 2nd Qtr FY02.
F/A-18E/F: OPEVAL - 2nd Qtr FY03, Milestone III - 4th Qtr FY04, OA - 3rd Qtr FY02, FOT&E 3rd Qtr FY04.
AV-8B DT-IIB-2 - 4th Qtr FY01, OPEVAL - 4th Qtr FY02, Milestone III - 2nd Qtr FY03.
8x10 Displays MS III 2nd Qtr FY06.
Due to variation in lead times, B-kits are procured in year 1, A-kits in year 2 and Installs in year 3. B-kit lead time 19 months, A-kit lead time 8 months.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AMC&D Kit	186	1.9	75	0.5	30	0.3	50	0.3			50	0.3	25	0.1	8	*							374	3.1
Installation Kits N/R																								
Installation Equipment																								
AMC&D / MPCD Equip	887	171.8	51	10.5			409	4.7			409	4.7											1,347	187.1
Installation Equipment N/R		81.9		0.6		0.1		3.5				3.5		1.1										87.3
Engineering Change Orders		3.9						0.2				0.2		0.3										4.4
Data		1.4						0.5				0.5												1.9
Training Equipment		1.9																						1.9
Support Equipment		2.4		0.4																				2.7
ILS		9.4		0.6		0.6		0.8				0.8		0.6										11.8
Other Support		25.9		3.9		3.4		8.1				8.1		3.9		*								45.4
Interim Contractor Support																								
Installation Cost	54	0.1	155	0.3	52	0.1	30	0.1			30	0.1	255	2.5	237	2.5							783	5.5
Total Procurement		**300.7**		**16.7**		**4.5**		**18.2**				**18.2**		**8.4**		**2.5**								**351.1**

Notes:

1. Totals may not add due to rounding.
2. MPCD is a drop-in-replacement. No A-kit required.
3. B-Kit (WRA) procured in outyears are necessary to meet common block configuration.
4. See Install footnotes for further clarification.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, T-45 and other aircraft as directed by OPNAV MODIFICATION TITLE: Advanced Mission Computer & Displays (AMC&D)/ Multipurpose Color Display (MPCD) (OSIP 01-02)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Prime Contractor

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 14 Months

CONTRACT DATES: FY 2010: Jan-10 FY 2011: Jan-11 FY 2012: Jan-12 FY 2013: Jan-13

DELIVERY DATE: FY 2010: Mar-11 FY 2011: Mar-12 FY 2012: Mar-13 FY 2013: Mar-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2009 & PY (186) kits	54	0.1	132	0.3															186	0.4
FY 2010 (75) kits			23	*	52	0.1													75	0.2
FY 2011 (30) kits							30	0.1											30	0.1
FY 2012 (459) kits									255	2.5	204	2.1							459	4.6
FY 2012 OCO ( ) kits																				
FY 2013 (25) kits											25	0.3							25	0.3
FY 2014 (8) kits											8	0.1							8	0.1
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL	**54**	**0.1**	**155**	**0.3**	**52**	**0.1**	**30**	**0.1**	**255**	**2.5**	**237**	**2.5**							**783**	**5.5**

Note: Lots 30-35 (109) B-kits with associated installation cost included in schedule, no A-kit required.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	54	38	39	39	39	13	13	13	13		10	10	10		85	85	85	30	69	69	69
Out	54	38	39	39	39	13	13	13	13		10	10	10		85	85	85	30	69	69	69

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										783
Out										783

A-Kits, B-Kits and Installs do not align. A or B-Kits which require installation are shown.
F/A-18's longest lead time component is 19 months.

Note 1: AMC&D sub-systems may be installed at different times. Aircraft quantity is counted in year of first installation.
Note 2: Kit detail by Lot

Lot	**Description**
Lot 22-24	A-Kit (a/c mod kit), B-kit (5x5)
Lot 25	A-Kit (a/c mod kit)
Lot 26	B-Kits (AMC, FCNS, 8x10)
Lot 27	A-Kit (8x10 HRRI kit), B-Kit (AMC, FCNS, 8x10)
Lot 28	A-Kit (8x10 HRRI kit), B-Kit (AMC)
Lot 29	A-Kit (8x10 HRRI kit), B-Kit (AMC)
Lot 30	A-Kit (8x10 HRRI kit)

Note 3: Lots 26-29 AMC retrofits are O-Level mods with no install cost. Lots 26-29 8x10 and 8x10 HRRI do have install costs.
Note 4: Due to variation in lead times, B-kits are procurred in year 1, A-kits in year 2 and Installs in year 3. B-kit lead time 19 months, A-kit lead time 8 months.
Note 5: Lot 25 B-Kits show no-cost due to the reuse of computers from other aircraft.
Note 6: Lots 30-35 HRRI Kits are per aircraft, and not related to Lots buys per year.
Note 7: No A Kit required for AV8B WRA install. Procured in year one, Delivered and Installed in year two and three

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Avionics Component Improvement Program (AVCIP) (OSIP 11-09)

MODELS OF SYSTEMS AFFECTED: All Aircraft | TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:

Avionics Component Improvement Program (AVCIP) provides resources to address critical readiness, reliability deficiencies, obsolescence, demonstrations, loss of sustainability, and top Fleet repair cost drivers in naval avionics systems. In the year prior to execution, candidate projects from all T/M/S are collected, reviewed, competed and selected based upon proposal solution maturity and executability, mission criticality and urgency, degree of readiness impact or Fleet maintenance or repair cost burden, return on investment, and Fleet advocacy. AvCIP is considered a better business practice to address cost-wise readiness in support of NAE efficiency objectives. AvCIP is funded by both RDT&EN and APN accounts to cover non-recurring engineering for design/development or re-design/modification, demonstrations, integration testing, prototype/lab asset development, qualification testing and engineering and logistics documentation and support services. APN funds will cover NRE to insert modern technology to address poor performance or obsolescence, and support project procurements, as required. Follow-on procurement tails will be coordinated with Program Offices and their OSIPs, as required.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

AvCIP project selection criteria includes proposed solution maturity and executability. Target project length to start of fielding of the solution is 12-18 months. Procurements below are representative of initial project lab asset purchases for qualification and productionization validation. Units may be transferred to Fleet platforms as operational assets. Future year specific development profiles/milestones will be dependent upon projects competed and selected. Multiple projects may be selected each year.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$					Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AVCIP Kit																								
Installation Kits N/R																								
Installation Equipment																								
AVCIP Equip			302	0.2	4	0.1	4	0.4			4	0.4	4	0.4	4	0.4	4	0.4	4	0.4	156	23.1	482	25.4
Installation Equipment N/R		0.9		0.9		0.9		1.0				1.0		1.0		1.0		1.0		1.0		64.4		72.1
Engineering Change Orders																								
Data		0.2																						0.2
Training Equipment																								
Support Equipment																								
ILS						0.2		0.1				0.1		0.1		0.1		0.1		0.1		5.2		5.9
Other Support		0.9		0.9		0.6		0.4				0.4		0.4		0.4		0.4		0.5		13.0		17.6
Interim Contractor Support																								
Installation Cost					302	0.2	4	0.1			4	0.1	4	0.1	4	0.1	4	0.1	4	0.1	160	9.0	482	9.6
Total Procurement		**2.0**		**2.0**		**2.0**		**2.0**				**2.0**		**2.0**		**2.0**		**2.0**		**2.1**		**114.6**		**130.7**

Notes:

1. Totals may not add due to rounding.
2. AVICP program is a continuing effort; To complete includes project requirements through FY2035.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All Aircraft

MODIFICATION TITLE: Avionics Component Improvement Program (AVCIP) (OSIP 11-09)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Component is provided to the platform PMA and installed as per airframe ECP/AFC.

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2010: Nov-09 FY 2011: Nov-10 FY 2012: Nov-11 FY 2013: Nov-12

DELIVERY DATE: FY 2010: Feb-11 FY 2011: Feb-12 FY 2012: Feb-13 FY 2013: Feb-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2009 & PY ( ) kits																				
FY 2010 (302) kits					302	0.2													302	0.2
FY 2011 (4) kits							4	0.1											4	0.1
FY 2012 (4) kits									4	0.1									4	0.1
FY 2012 OCO ( ) kits																				
FY 2013 (4) kits											4	0.1							4	0.1
FY 2014 (4) kits													4	0.1					4	0.1
FY 2015 (4) kits															4	0.1			4	0.1
FY 2016 (4) kits																	4	0.2	4	0.2
To Complete (156) kits																	156	8.7	156	8.7
TOTAL					**302**	**0.2**	**4**	**0.1**	**4**	**0.1**	**4**	**0.1**	**4**	**0.1**	**4**	**0.1**	**160**	**9.0**	**482**	**9.6**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							100	101	101		2	1	1		2	1	1		2	1	1
Out							100	101	101		2	1	1		2	1	1		2	1	1

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In		2	1	1		2	1	1	160	482
Out		2	1	1		2	1	1	160	482

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: Blue Force Situational Awareness (OSIP 10-11)

MODELS OF SYSTEMS AFFECTED: CH-53D/E, MV-22B, H-1 and other aircraft as directed by OPNAV

TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:

Blue Force Situational Awareness employs techniques to actively or passively identify and track US, allied, or coalition forces for the purpose of providing the decision-maker enhanced battlespace situational awareness and reducing fratricide. The program, led by the Army with joint participation, upgrades legacy Force XXI Battle Command Brigade and Below (FBCB2) Blue Force Tracking systems to the configuration required to meet the Joint Battle Command -Platform CDD, providing Joint, interoperable, secure, beyond line of sight, near real time, battle command networking and blue force situational awareness in the cockpit and the command centers.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$					Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
BFSA Kit					48	1.9			12	0.4	12	0.4											60	2.3
Installation Kits N/R						1.1																		1.1
Installation Equipment																								
BFSA Equip					98	3.9			70	1.8	70	1.8											168	5.7
Installation Equipment N/R										3.2		3.2												3.2
Engineering Change Orders						0.1																		0.1
Data																								
Training Equipment																								
Support Equipment																								
ILS						0.3				0.3		0.3												0.6
Other Support						4.4				6.4		6.4												10.7
Interim Contractor Support																								
Installation Cost					98	2.4			70	1.4	70	1.4											168	3.9
Total Procurement						**14.1**				**13.5**		**13.5**												**27.6**

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than $51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D/E, MV-22B, H-1 and other aircraft as directed by OPNAV

MODIFICATION TITLE: Blue Force Situational Awareness (OSIP 10-11)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor or USN Field Modification Team

ADMINISTRATIVE LEADTIME: 2 Months

PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: FY 2011: Nov-10 FY 2012: Nov-11 FY 2013:

DELIVERY DATE: FY 2010: FY 2011: May-11 FY 2012: May-12 FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	**$**
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (98) kits					98	2.4													98	2.4
FY 2012 ( ) kits																				
FY 2012 OCO (70) kits							70	1.4											70	1.4
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 ( ) kits																				
FY 2016 ( ) kits																				
To Complete ( ) kits																				
TOTAL					**98**	**2.4**	**70**	**1.4**											**168**	**3.9**

*(50) A-Kits are being procured by PMA261

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								49	49			35	35								
Out								49	49			35	35								

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										168
Out										168

Exhibit P-40, BUDGET ITEM JUSTIFICATION		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications	P-1 ITEM NOMENCLATURE 058100, COMMON DEFENSIVE WEAPON SYSTEM	
Program Element for Code B Items:	Other Related Program Elements	

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY													
COST (In Millions)	49.0	A	5.5	10.5		3.3	3.3					3.5	71.8

DESCRIPTION: The Common Defensive Weapon System (CDWS) consists of a GAU-21 .50 cal machine gun, common cradle, ammo box, feed/link chutes and either a right-hand or a left-hand Medium Window Pintle Connector and a Defensive Armament System (DAS) for UH-1Y. The CDWS for UH-1Y is being procured to replace the current WWII era GAU-16/XM-218 .50 cal machine guns. The GAU-16/XM-218 machine guns can no longer be procured, and the gun depot is experiencing a 29% rejection rate. Based on current usage rates and depot maintenance rejection rates, the inventory of GAU-16/XM-218 guns will be below requirement in 7 years. There will also be a substantial increase in maintenance funding required to sustain the inventory of usable guns. The CDWS will give the Fleet enhanced reliability, safety and increased operational effectiveness. CDWS enhances the warfighters overall capability by providing a safer, more reliable and accurate weapon system with a higher rate of fire.

Crew Served Weapons (CSW) Laser provides a common laser solution to the fleet and establishes the program of record for the system. CSW provides laser aiming devices for crew served weapons being used in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). There are currently five different types of lasers manufactured by three vendors. This funding will allow the standardization of all DON Crew Served Weapons lasers through attrition and replacement.

Medium Caliber Guns System modifies hardware to enhance system reliability and safety to support continued Overseas Contingency Operations (OCO) commitments. This requirement will prevent degradation of the gun system enabling the warfighter to accomplish their tasks safely and accurately.

FY 2011 OCO funding will procure an additional 40 UH-1Y installation kits and 1,731 laser aiming devices.
FY 2012 OCO funding will be used to procure 160 laser aiming devices and improve 20 current medium caliber gun systems.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
003-06	CDWS	47.6	4.5	3.5								2.0	57.6
019-10	CSW Laser		1.0	7.0		3.0	3.0						11.0
033-12	Medium Caliber Guns Systems					0.3	0.3					1.5	1.8
	Inactive OSIP	1.3											1.3
	DAWDF Realignment	*											*
Total		**49.0**	**5.5**	**10.5**		**3.3**	**3.3**					**3.5**	**71.8**

Notes: Totals may not add due to rounding. Asterisk indicates amount less than $51K.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06)

MODELS OF SYSTEMS AFFECTED: CH-53D/E, CH-46, UH-1Y | TYPE MODIFICATION: MISSION/MISSION ENHANCEMENT

DESCRIPTION/JUSTIFICATION: The CDWS consists of a GAU-21 .50 cal machine gun, common cradle, ammo box, feed/link chutes and either a right-hand or a left-hand Medium Window Pintle Connector and Defensive Armament System (DAS) for UH-1Y. The CDWS for the UH-1Y is being procured to replace the current WWII era GAU-16/XM-218 .50 cal machine gun. The GAU-16/XM-218 machine gun can no longer be procured, and the gun depot is experiencing a 29% rejection rate. Based on current usage rates and depot maintenance rejection rates, the inventory of GAU-16/XM-218 guns will be below requirement in 7 years. There will also be a substantial increase in maintenance funding required to sustain the inventory of usable guns. The CDWS will give the Fleet enhanced reliability, safety, and increased operational effectiveness.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The GAU-21 .50 Caliber Machine Gun is a Commercial Off-the-Shelf (COTS) item deployed on Marine Corps assault support aircraft (CH-46, CH-53 and UH-1Y). The Medium Pintle Head and aircraft integration kit base designs are also COTS though kit modifications for each T/M/S aircraft are required. CDWS is also being integrated on USN platform MH-60R/S through their own budget lines, thus enhancing the common configurations between USN and USMC.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
CH-46E	100	6.5																					100	6.5
CH-53D/E	399	19.7																					399	19.7
UH-1Y	141	9.3	40	4.5	40	3.5															25	1.7	246	19.0
Installation Equipment																								
CH-46E																								
CH-53 D/E	399	6.0																					399	6.0
UH-1Y																								
Data		0.4																						0.4
Training Equipment																								
Support Equipment		1.7																						1.7
ILS		2.0																				0.3		2.3
Other Support		2.0																						2.0
Interim Contractor Support																								
Installation Cost																								
Total Procurement		**47.6**		**4.5**		**3.5**																**2.0**		**57.6**

Note:

1. Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: CREW SERVED WEAPONS LASER (OSIP 019-10)

MODELS OF SYSTEMS AFFECTED: CH-53D/E, CH-46, UH-1Y, MV-22 , AH-1W/Z | TYPE MODIFICATION: MISSION/MISSION ENHANCEMENT

DESCRIPTION/JUSTIFICATION: Provides laser aiming devices for crew served weapons being used in OIF and OEF. There are currently five different types of lasers manufactured by three vendors. This funding will allow the standardization of all DON CSW lasers through attrition and replacement as assets are expended.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Laser Aiming Devices are COTS items already deployed on Marine Corps assault support aircraft (CH-46, CH-53,and UH-1Y, MV-22, AH-1W/Z). Lasers will support this functionality to improve performance in a night environment while using night vision goggles.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Installation Equipment																								
Engineering Change Orders																								
Data																								
Training Equipment										0.5		0.5												0.5
Support Equipment																								
IZLID 200P			186	0.7	1,629	6.0																	1,815	6.7
IZLID 1000PW									160	0.9	160	0.9											160	0.9
IZLID 1000 PW Power supply					102	0.6																	102	0.6
Universal Boresight Kit			445	0.3																			445	0.3
ILS						0.4				0.8		0.8												1.2
Other Support										0.8		0.8												0.8
Interim Contractor Support																								
Installation Cost																								
Total Procurement				**1.0**		**7.0**				**3.0**		**3.0**												**11.0**

Note:

1. Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: Medium Caliber Gun Systems (OSIP 033-12)

MODELS OF SYSTEMS AFFECTED: AH-1W/Z | TYPE MODIFICATION: Mission Enhancement

DESCRIPTION/JUSTIFICATION:
Increased usage of medium caliber gun systems in OEF has caused significant increases in component failure and reduced reliability and life cycle which was not previously budgeted. Replacement feeders are required to improve the service life and reliability of fielded systems. This requirement will prevent degradation of the gun system enabling the warfighter to fight safely and accurately.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The M197 Medium Caliber Gun and M89E1 Feeder are both post Full Operational Capability (FOC). The replacement feeder being looked at is currently FOC for the Italian Air Force.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
AH-1W/Z									20	0.3	20	0.3									80	1.5	100	1.8
Installation Equipment																								
Engineering Change Orders																								
AH-1W/Z																								
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support																								
Interim Contractor Support																								
Installation Cost																								
Total Procurement										**0.3**		**0.3**										**1.5**		**1.8**

Note:

1. Totals may not add due to rounding.

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: **February 2011**						
APPROPRIATION/BUDGET ACTIVITY **Aircraft Procurement, Navy/APN-5 Aircraft Modifications**							P-1 ITEM NOMENCLATURE **058200, ID SYSTEMS**						
Program Element for Code B Items:							Other Related Program Elements						
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY													
COST (In Millions)	43.1	B	24.1	20.4	37.3		37.3	38.4	40.9	46.0	54.9	119.6	424.6

Description:

MK XIIA Mode 5 provides improved secure cooperative combat identification via Identification Friend or Foe (IFF). MODE 5 is a product improvement which is designed to be installed through engineering changes to digital MK XII interrogators and transponders including, but not limited to the APX-118/123, UPX-37/41C, APX-111, and APX-119. Mode 5 is designed to be installed in all Navy T/M/S aircraft which are currently Mode 4 IFF capable. Mode 5 is developed in cooperation with NATO and is governed by STANAG 4193.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
015-03	MARK XIIA MODE 5 IFF	43.1	24.1	20.4	37.3		37.3	38.4	40.9	46.0	54.9	119.6	424.6
Total		**43.1**	**24.1**	**20.4**	**37.3**		**37.3**	**38.4**	**40.9**	**46.0**	**54.9**	**119.6**	**424.6**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: MARK XIIA MODE 5 IFF (OSIP 015-03)

MODELS OF SYSTEMS AFFECTED: VARIOUS (49 SEPARATE T/M/S) | TYPE MODIFICATION: CAPABILITY IMPROVEMENT

DESCRIPTION/JUSTIFICATION: MK XIIA Mode 5 provides improved secure cooperative combat identification via Identification Friend or Foe (IFF). Mode 5 upgrades existing Mode 4 IFF equipment, including cryptography, support equipment, and associated hardware and software changes. Mode 5 is designed to be installed through engineering changes to digital MK XII interrogators and transponders including, but not limited to the APX-118/123, UPX-37/41C, APX-111, and APX-119. Mode 5 is designed to be installed in all Navy T/M/S aircraft which are currently Mode 4 IFF capable. Mode 5 is developed in cooperation with NATO and is governed by STANAG 4193. (ORD # 577-06-01).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: MODE 5 completed a brassboard development in December 1997. Modeling and simulation to demonstrate interoperability was completed in February of 1998 to support NATO STANAG development. Proof of concept flight testing completed in December 1999. A Preliminary Design Review (PDR) for the proposed Engineering Change Proposal (ECP) to incorporate MODE 5 in the APX-118 was completed in Ju 2001. Contracts for prototype Cryptographic Module and ECP kit are presently executed. Milestone B was completed in 3QFY03. Operational Assessment (OA) completed 2QFY06. Milestone C and Low Rate Initial procurement (LRIP) was approved in July 2006. In March 2007, Joint Requirements Oversight Council Memorandum (JROCM 047-07) endorsed a Mode 5 Joint Initial Operational Capability (IOC) in FY14 and Joint Full Operational Capability (FOC) in 2020. A Program Deviation Report was submitted in July 2009 reporting a schedule breach to the Operational Evaluation (OPEVAL) and IOC due to joint asset participation and on-going resolution of DT deficiencies. The IOT&E is replanned for FY2011. Additio DT events occurred in FY10 that addressed system-of-system OA deficiencies. Full Rate Production (FRP) is scheduled for 2QFY12.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E	32	81.6	24	29.3		36.5	11	22.3			11	22.3		17.1		14.1	1	9.3		13.2		Cont		Cont
PROCUREMENT																								
Installation Kits																								
MODE 5 IFF A-KIT	4	*			2	*	75	1.0			75	1.0	70	1.0	68	0.9	52	0.6	41	0.4	137	2.8	449	6.9
Installation Kits N/R																								
Installation Equipment																								
MODE 5 IFF Equip	143	3.4	227	11.6	9	1.4	199	7.2			199	7.2	211	10.6	215	13.6	224	14.8	286	23.8	652	58.7	2166	145.2
Installation Equipment N/R		16.9		5.9		8.7		11.0				11.0		10.1		10.6		13.2		11.7		12.5		100.7
Engineering Change Orders																								
MODE 5 IFF KIT ECO		0.3				0.4		0.6				0.6		1.0		0.9		1.0		1.5		3.6		9.4
Data		0.3		0.1		0.4		0.3				0.3		0.4		0.2		0.3		0.7		1.5		4.2
Training Equipment		0.6		0.1		0.4		1.5				1.5		1.0		0.6		1.3		0.5		4.5		10.5
Support Equipment		10.3		1.0		1.8		2.7				2.7		3.6		1.1		0.5		0.5		1.5		22.9
ILS		1.7		0.4		1.0		1.6				1.6		1.8		2.0		2.2		2.8		5.2		18.6
Other Support		9.6		4.8		6.1		11.0				11.0		7.8		8.5		9.5		9.7		24.2		91.2
Interim Contractor Support																								
Installation Cost	22	0.1	115	0.1	81	0.1	105	0.3			105	0.3	289	1.2	281	2.3	293	2.4	189	3.4	1240	5.2	2615	15.1
Total Procurement		**43.1**		**24.1**		**20.4**		**37.3**				**37.3**		**38.4**		**40.9**		**46.0**		**54.9**		**119.6**		**424.6**

Notes:

1. Totals may not add due to rounding. Asterisk indicates amount less than $51K.
2. Mode 5 IFF "A" Kits will be required for installation on the F/A-18C/D, C-130T, C-20, C-40, E-6B, and UC-35 platforms along with the "B" kits. The other platforms will only require "B" kits. A-Kit realignment due to changes in platform schedules.
3. Inventory objective increase and cost changes due to Resource Sponsor direction to add F/A-18C+/E/F and EA-18G (AN/APX-111).
4. Installation of 52 B-Kits procured in FY07 delayed to FY10 due to program delays (Amendment to Mark XIIA Mode 5 Identification Friend or Foe Milestone C/Low Rate Initial Production Acquisition Decision Memorandum, 14 November 2007).
5. Mode 5 Inventory Objective has increased due to requirement to procure kits for the F/A-18C+/E/F and EA-18G (AN/APX-111).

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **VARIOUS (49 SEPARATE T/M/S)** MODIFICATION TITLE: MARK XIIA MODE 5 IFF (OSIP 015-03)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **FIELD INSTALL KITS AND VENDOR DEPOT ECP INSTALLATION**

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2010: Dec-09 FY 2011: Dec-10 FY 2012: Dec-11 FY 2013: Dec-12

DELIVERY DATE: FY 2010: Dec-10 FY 2011: Dec-11 FY 2012: Dec-12 FY 2013: Dec-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (147) kits	22	0.1	115	0.1	10	*													147	0.2
FY 2010 (227) kits					71	0.1	105	0.3	51	0.2									227	0.7
FY 2011 (11) kits									11	*									11	*
FY 2012 (274) kits									227	0.9	47	*							274	0.9
FY 2012 OCO ( ) kits																				
FY 2013 (281) kits											234	2.3	47	*					281	2.3
FY 2014 (283) kits													246	2.4	37	0.1			283	2.5
FY 2015 (276) kits															152	3.2	124	0.1	276	3.4
FY 2016 (327) kits																	327	1.2	327	1.2
To Complete (789) kits																	789	3.8	789	3.8
TOTAL	**22**	**0.1**	**115**	**0.1**	**81**	**0.1**	**105**	**0.3**	**289**	**1.2**	**281**	**2.3**	**293**	**2.4**	**189**	**3.4**	**1,240**	**5.2**	**2,615**	**15.1**

1. Asterisk indicates amount less than $51K.
2. Department has increased inventory objective and installs to account for F/A-18C+/E/F and EA-18G (AN/APX-111).

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	22	10	35	35	35	20	20	20	21	26	26	26	27	70	73	73	73	82	70	65	64
Out	22	10	35	35	35	20	20	20	21	26	26	26	27	70	73	73	73	82	70	65	64

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	68	75	75	75	46	48	48	47	1240	2615
Out	68	75	75	75	46	48	48	47	1240	2615

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
058600, P-8 Series

Program Element for Code B Items:

Other Related Program Elements
0605500N

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)		A			**2.9**		**2.9**	**5.3**	**7.2**	**21.6**	**22.0**	**3,965.0**	**4,024.1**

DESCRIPTION:

The P-8A is a commercial 737 derivative that provides Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance to support fleet requirements. The P-8A Multi-mission Maritime Aircraft (MMA) will replace the aging P-3 aircraft. This line item funds correction of deficiencies, modernization to the P-8 aircraft and the retrofit of future P-8 mission system/avionics as developed under P-8A sequential increment programs. Increment 2 includes upgrades to the Automatic Identification System, Multi-Static Active Coherent, and Acoustic Processor Tech Refresh. Increment 3 includes upgrades to IBS, Net-Ready, Net-Enabled Weapon, Wide Band SATCOM and Architecture Upgrade. **This is an FY 2012 new start.**

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
026-12	P-8A Correction of Deficiences and Modernization				2.9		2.9	5.3	7.2	21.6	22.0	3,965.0	4,024.1
Total					**2.9**		**2.9**	**5.3**	**7.2**	**21.6**	**22.0**	**3,965.0**	**4,024.1**

Note: Totals may not add due to rounding.

Exhibit P-3a — Individual Modification

MODIFICATION TITLE: P-8A Correction of Deficiences and Modernization (OSIP 026-12)

MODELS OF SYSTEMS AFFECTED: P-8A MMA — TYPE MODIFICATION: Mission Capabilities

DESCRIPTION/JUSTIFICATION:

The P-8A is a commercial 737 derivative that provides Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance to support fleet requirements. The P-8A Multi-mission Maritime Aircraft (MMA) will replace the P-3 aircraft. This line item funds correction of deficiencies, modernization to the P-8 aircraft and the retrofit of future P-8A mission system/avionics as developed under P-8A sequential increment programs. Increment 2 includes upgrades to the Automatic Identification System, Multi-Static Active Coherent, and Acoustic Processor Tech Refresh. Increment 3 includes upgrades to IBS, Net-Ready, Net-Enabled Weapon, Wide Band SATCOM and Architecture Upgrade.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The P-8 Baseline program achieved MS-C in FY10. The Increment 2 program is scheduled to achieve MS-C in FY14. The Increment 3 program is scheduled to achieve MS-C in FY17.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Increment 2 Kit																	22	17.0					22	17.0
Increment 3 IBS																					117	31.5	117	31.5
Increment 3 Net-Ready																					117	62.9	117	62.9
Increment 3 Net Enabled Weapon																					117	31.5	117	31.5
Increment 3 Wide Band SATCOM																					117	440.5	117	440.5
Increment 3 Architecture Upgrade																					117	1,258.5	117	1,258.5
Installation Kits N/R																1.6				7.5				9.1
Installation Equipment																								
Correction of Deficiency							6	1.5			6	1.5											6	1.5
Acoustics Tech Refresh/Insertion															6	2.4							6	2.4
Installation Equipment N/R								0.3				0.3		3.1										3.4
Engineering Change Orders																								
Data																0.3		0.5		0.3		24.0		25.0
Training Equipment																0.8	1	0.5		0.5	101	96.6	102	98.4
Support Equipment																								
ILS								0.1				0.1		0.1		0.1		0.1		0.3		13.3		14.0
Other Support								1.0				1.0		2.2		2.0		3.5		4.4		175.1		188.2
Interim Contractor Support																								
Installation Cost																			23	9.1	686	1,831.2	709	1,840.3
Total Procurement								**2.9**				**2.9**		**5.3**		**7.2**		**21.6**		**22.0**		**3,965.0**		**4,024.1**

Notes:

1. Totals may not add due to rounding.
2. FY 2012 corrections will be installed at no cost to government.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-8A MMA

MODIFICATION TITLE: P-8A Correction of Deficiences and Modernization (OSIP 026-12) - Increment 2 Kits

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013:

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013:

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 ( ) kits																				
FY 2014 ( ) kits																				
FY 2015 (23) kits *															23	9.1			23	9.1
FY 2016 ( ) kits																				
To Complete (686) kits *																	686	1,831.2	686	1,831.2
TOTAL															**23**	**9.1**	**686**	**1,831.2**	**709**	**1,840.3**

* Includes trainers

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																					
Out																					

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In					6	6	6	5	686	709
Out					6	6	6	5	686	709

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: February 2011						
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 058700, MAGTF EW						
Program Element for Code B Items:							Other Related Program Elements						
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)		A			0.5		0.5	2.1	4.4	8.9	3.0	22.1	41.0

DESCRIPTION:

This new line item funds modification efforts for the System of Systems (SOS) that support the Marine Air Ground Task Force Electronic Warfare (MAGTF EW) mission. These SOS, including the Software Reprogrammable Payload (SRP) and Collaborative On-Line Reconnaissance Provider of Operational Responsive Attack Link (CORPORAL), support improved capabilities to close MAGTF EW sufficiency and integration gaps in the electronic warfare arena, with multiple systems designed for carriage on a variety of organic air and ground MAGTF assets. **This is an FY 2012 new start.**

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
034-12	S/W Reprogrammable Payloa				0.5		0.5	2.1	4.4	8.9	3.0	22.1	41.0
Total					**0.5**		**0.5**	**2.1**	**4.4**	**8.9**	**3.0**	**22.1**	**41.0**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: SOFTWARE REPROGRAMMABLE PAYLOAD (OSIP 034-12)

MODELS OF SYSTEMS AFFECTED: SHADOW UNMANNED AIRCRAFT SYSTEM | TYPE MODIFICATION: RELIABILITY/MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

Procures Software Reprogrammable Payload (SRP) multi-function kits for 48 USMC Shadow 200's. Costs include hardware, software production, associated communications gear, and the installation necessary to transition this capability with science and technology onto an exisiting deployed system. The integration of SRP onto an exisiting platform provides advanced communication and data relay for fleet assets.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
SRP Kit													2	0.8	6	2.5	11	4.7	2	0.9	27	11.9	48	20.7
Installation Kits N/R																								
Installation Equipment																								
Installation Equipment N/R														0.4		1.1		2.1		0.4		5.3		9.3
Engineering Change Orders																0.1		0.5						0.6
Data																								
Training Equipment														0.4										0.4
Support Equipment								0.3				0.3		0.3		0.2		0.2						1.0
ILS																								
Other Support								0.2				0.2		0.2		0.2		0.4		0.1		0.3		1.3
Interim Contractor Support																								
Installation Cost															2	0.3	6	0.9	11	1.7	29	4.7	48	7.6
Total Procurement								**0.5**				**0.5**		**2.1**		**4.4**		**8.9**		**3.0**		**22.1**		**41.0**

Notes:

1. Totals may not add due to rounding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **Shadow Unmanned Aircraft System** MODIFICATION TITLE: SOFTWARE REPROGRAMMABLE PAYLOAD (OSIP 034-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Commerical**

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2010: FY 2011: FY 2012: FY 2013: Mar-13

DELIVERY DATE: FY 2010: FY 2011: FY 2012: FY 2013: Sep-13

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 ( ) kits																				
FY 2012 OCO ( ) kits																				
FY 2013 (2) kits											2	0.3							2	0.3
FY 2014 (6) kits													6	0.9					6	0.9
FY 2015 (11) kits															11	1.7			11	1.7
FY 2016 (2) kits																	2	0.3	2	0.3
To Complete (27) kits																	27	4.4	27	4.4
TOTAL											**2**	**0.3**	**6**	**0.9**	**11**	**1.7**	**29**	**4.7**	**48**	**7.6**

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																		1		1	
Out																		1		1	

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In	1	2	2	1	2	3	3	3	29	48
Out	1	2	2	1	2	3	3	3	29	48

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: **February 2011**						
APPROPRIATION/BUDGET ACTIVITY **Aircraft Procurement, Navy/APN-5 Aircraft Modifications**							P-1 ITEM NOMENCLATURE **058900, RQ-7 Series**						
Program Element for Code B Items:							Other Related Program Elements **0305233N**						
	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY													
COST (In Millions)		A		**26.1**	**11.4**		**11.4**	**11.6**	**11.8**				**60.9**

DESCRIPTION:

This line funds modifications to the RQ-7 UAV and associated support systems. The RQ-7B Shadow UAV system provides dedicated Reconnaissance, Surveillance and Target Acquisition (RSTA), Intelligence, Battle Damage Assessment and Force Protection to the Marine Air-Ground Task Force (MAGTF). The RQ-7B Shadow UAV system provides the Marine Expeditionary Force (MEF) with critical battlefield intelligence and targeting information in the rapid cycle time required for success at the tactical level.

The RQ-7B Shadow UAV system consists of four air vehicles (each configured with an Electro-Optical/Infra-Red (EO/IR) sensor payload), launcher, ground control stations, attrition engine, vehicle mounted shelters, support equipment, and government furnished equipment which includes: power generation; communications equipment; automated recovery equipment; remote video terminals; vehicle mounted shelters; and high mobility multipurpose wheeled vehicles with trailer(s). Each system is equipped with one maintenance section multifunctional vehicle and is supported by a mobile maintenance facility (MMF). The RQ-7B Shadow UAV system has logged over 13,000 flight hours since May 2007. Most hours were flown in support of Operation Ira Freedom (OIF) and Operation Enduring Freedom (OEF).

The RQ-7B Shadow UAV system is procured through the Army on the Army's Shadow Tactical Unmanned Aircraft System (TUAS) production contract and is identical to the Army's system. The Marine Corps configuration matches the Army's to ensure combat units have maximum interoperability, maintainability, and combat effectiveness.

Funding will support the continuation of Congressionally mandated Tactical Common Data Links (TCDL) retrofit which includes Universal Ground Control Station (GCS), Universal Ground Data Terminal (UGT) and Re-Wing. TCDL upgrade will significantly reduce radio spectrum bandwidth requirements and provide more secure and robust communications. Laser Designator upgrade will provide the capability to provide target designation. System has completed Operational Test and Evaluation (OT&E).

Funding will also support the Type-II Incremental Encryption System (TIES) retrofits for RQ-7B Shadow units which includes the air vehicles and all ancillary systems and equipment. TCDL/TIES upgrades will significantly reduce radio spectrum bandwidth requirements and provide more secure and robust communications.

Requested funding will also support Pre-Planned Product Improvement (P3I) for Shadow which includes any number of improvements including, but not limited to, technology insertion upgrades to improve reliability, safety and performance, weaponization, communications, target designation, and other upgrades to be determined based on operational requirements and user needs. Additionally, Common Systems Integration is required to ensure interoperability with other weapons systems, both manned and unmanned. Included in this category is Universal Ground Control Station (UGCS), Trainer upgrades and One System Remote Video Transceiver (OSRVT), Weaponization and Advanced Payloads. Small Sense and Avoid System (SSAASy) is required to meet the requirement for a traffic alert and collision avoidance system and to allow for operations in the National Airspace (NAS). FY 2011 funding includes $8M of Overseas Contingency Operations (OCO) to upgrade deploying RQ-7B Shadow systems to TCDL standard to maintain interoperability with Army in OEF.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
006-11	RQ-7B Shadow UAV Retrofits			26.1	11.4		11.4	11.6	11.8				60.9
Total				**26.1**	**11.4**		**11.4**	**11.6**	**11.8**				**60.9**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: RQ-7 UAV Retrofits (OSIP 006-11)

MODELS OF SYSTEMS AFFECTED: RQ-7B Shadow UAV | TYPE MODIFICATION: Added Capability

DESCRIPTION/JUSTIFICATION:

This OSIP support s the continuation of Congressionally mandated Tactical Common Data Links (TCDL) retrofit which includes Universal Ground Control Station (GCS), Universal Ground Data Terminal (UGT) and Re-Wing. TCDL upgrade will significantly reduce radio spectrum bandwidth requirements and provide more secure and robust communications. Laser Designator upgrade will provide the capability to provide target designation. System has completed OT&E.

This OSIP also supports the Type-II Incremental Encryption System (TIES) retrofits for RQ-7B Shadow units which includes the air vehicles and all ancillary systems and equipment. TCDL/TIES upgrades will significantly reduce radio spectrum bandwidth requirements and provide more secure and robust communications.

This OSIP also supports Pre-Planned Product Improvement (P3I) for Shadow which includes any number of improvements including, but not limited to, technology insertion upgrades to improve reliability, safety and performance, weaponization, communications, target designation, and other upgrades to be determined based on operational requirements and user needs. Additionally, Common Systems Integration is required to ensure interoperability with other weapons systems, both manned and unmanned. Included in this category is Universal Ground Control Station (UGCS), Trainer upgrades and One System Remote Video Transceiver (OSRVT), Weaponization, and Advanced Payloads. Small Sense and Avoid System (SSAASy) is required to meet the requirement for a traffic alert and collision avoidance system and to allow for operations in the National Airspace (NAS). FY 2011 funding includes $8M of OCO to upgrade deploying RQ-7B Shadow systems to TCDL standard to maintain interoperability with Army in OEF.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Shadow Laser Designator has completed OT&E and is in use with the Army. TCDL is in development with the Army, planned Initial Operational Capability in FY 2010.

FINANCIAL PLAN: (TOA, $ in Millions)

	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E				1.0		0.9		0.9				0.9		0.9		0.9		0.9		0.9				6.3
PROCUREMENT																								
Installation Kits																								
Installation Kits N/R																								
Installation Equipment																								
P31 Upgrades/Retrofits					2	17.4	1	10.2			1	10.2	1	11.1	1	11.3							5	50.1
P31 Upgrades/Retrofits (OCO)						8.0																		8.0
Installation Equipment N/R						0.7																		0.7
Data																								
Training Equipment																								
Support Equipment																								
ILS																								
Other Support								1.2				1.2		0.5		0.5								2.2
Interim Contractor Support																								
Installation Cost																								
Total Procurement						**26.1**		**11.4**				**11.4**		**11.6**		**11.8**								**60.9**

Notes:

1. Totals may not add due to rounding.
2. FY11 base and OCO funding combined will procure 2 TCDL upgrade kits.
3. Total Cost includes installation dollars that are contracted via turn-key.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **RQ-7B Shadow UAV** MODIFICATION TITLE: RQ-7 UAV Retrofits (OSIP 006-11)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Commercial (turn-key)**

ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2010: FY 2011: Jun-11 FY 2012: Jun-12 FY 2013: Jun-13

DELIVERY DATE: FY 2010: FY 2011: Sep-12 FY 2012: Sep-13 FY 2013: Sep-14

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 (2) kits							2												2	
FY 2012 (1) kits									1										1	
FY 2012 OCO ( ) kits																				
FY 2013 (1) kits											1								1	
FY 2014 (1) kits													1						1	
FY 2015 ( ) kits																				
To Complete ( ) kits																				
TOTAL							**2**		**1**		**1**		**1**						**5**	

Note: Dollars not shown due to turn-key contract method but quantities shown in the year that they will install.

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In													2				1				1
Out													2				1				1

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In				1						5
Out				1						5

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION

DATE: **February 2011**

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

P-1 ITEM NOMENCLATURE
059000, V-22 SERIES

Program Element for Code B Items:

Other Related Program Elements

	Prior Years	ID Code	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
QTY		A											
COST (In Millions)	**436.4**	A	**94.2**	**58.4**	**60.3**	**30.0**	**90.3**	**93.9**	**130.2**	**113.2**	**98.8**	**531.5**	**1646.9**

This line item funds modifications to the Navy's V-22 aircraft. The V-22 is a tilt rotor, Vertical/Short Takeoff and Landing (V/STOL) aircraft for Joint Service application. The Navy acts as the lead service with support from the United States Air Force (USAF) co-located in the V-22 Program Office. The V-22 Program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the United States Marine Corps (USMC), the strike rescue needs of the Navy, and the special operations needs of the USAF and United States Special Operations Command (USSOCOM). The MV-22 variant is replacing the CH-46E in the Marine Corps and will supplement the H-60 in the Navy. The CV-22 variant replaced the MH-53J, and will provide a new capability and augment the MC-130 in the USAF/USSOCOM inventory for special operations infiltration, exfiltration, and resupply missions. The V-22 is capable of flying over 2,100 nautical miles (NM) with a single refueling, giving the Services the advantage of a V/STOL aircraft able to rapidly self-deploy to any location in the world.

The overall goal of the modifications budgeted in FY 2012 is to maintain commonality, implement structural safety and reliability improvements, and improve capability. These modifications will also improve readiness, increase aircraft availability, and decrease operating costs. FY 2012 focus will be on reducing flight hour costs as reflected in the new Readiness OSIP.

(TOA, $ in Millions)

OSIP No.	Description	Prior Years	FY 2010	FY 2011	Base FY 2012	OCO FY 2012	Total FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	To Complete	Total
22-01	Correction of Deficien	436.4	94.2	58.4	28.3	15.0	43.3	41.2	50.1	22.6	23.2	417.9	1187.3
28-12	Readiness				32.0	15.0	47.0	52.7	80.1	90.6	75.5	113.5	459.5
Total		**436.4**	**94.2**	**58.4**	**60.3**	**30.0**	**90.3**	**93.9**	**130.2**	**113.2**	**98.8**	**531.5**	**1646.9**

Note: Totals may not add due to rounding.

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: MV-22 CORRECTION OF DEFIENCIES AND PRE BLOCK A THROUGH C (OSIP 022-01)

MODELS OF SYSTEMS AFFECTED: V-22 Series | TYPE MODIFICATION: Safety, Reliability, Increased Service Life, Improved Mission Capability

MV-22 Correction of Deficiencies provides near and long term improvements to the fleet, focusing on documented deficiencies related to safety, maintainability, and aircraft systems. These modifications and selected component changes are being accomplished by field retrofit. In order to meet emerging deficiencies the airframe and integrated systems must be modified as critical corrections/changes are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals (ECP) and implement those changes to sustain and improve MV-22 system operations. ECPs are implemented to coincide with resources and aircraft availability. These changes provide more robust performance in navigation, weapons, avionics, survivability, maneuverability, maintainability, and mission deployment of the MV-22 platform. This modification program may be required to provide timely remedial action for any aircraft system, component or structure. Starting in FY12, ECPs addressing readiness degraders impacting MV-22 reliability, maintainability, availability, and cost per flight hour are captured under OSIP 28-12.

Future ECPs:
PRE BLOCK A, BLOCK A, BLOCK B, and BLOCK C: Major configuration changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, Structure/Airframe, Fuel, Software, and Environmental Control System (ECS). Specifically included are Nacelle changes, Avionics, Blade Fold Harness, Fuel Probe, Active Vibration Suppression System, Constant Frequency Generator and Variable Frequency Generator. Additional configuration changes include Effectiveness and Suitability and Enhanced Capability. ECPs for (R&M changes, Ice Protection and Clam Shell Doors) are configuration items associated with production Block A, Block B, and Block C changes. Aircraft Retrofits are implemented to coincide with resources and aircraft availability , stand-alone retrofit ECPs are generated. These Retrofit ECPs are the implementation of the approved production Block Configuration changes.ECP-344: REGULATED CONVERTER: Incorporates fixes to alleviate concerns associated with spec compliance and eliminate nuisance failures for fleet aircraft.

SHAFT DRIVEN COMPRESSOR SCREEN: Incorporates a new shaft drive compressor screen with one piece inner and outer frames to reduce the number of parts and larger holes to increase air flow.
RAMP ACTUATOR: Incorporates fixes for reliability and life limit deficiencies. There are two ramp actuators per aircraft.
CARGO RESTRAINT SYSTEM: Changes the cargo restraint factors from a dynamic to a static tie down system to improve Fleet suitability.
FUEL ISOLATION TUBES: Incorporates the productionized final design for resistive tubes on hoses for lightning strike protection.
AVIONICS: Avionics modifications to the V-22 will improve display reliability, eliminate communication security issues and alleviate parts obsolescence/vendor problems. Changes to the V-22 avionics will include: Display System upgrade, Cockpit Inter Communication System modification, upgraded Mission Computer, updated Data Transfer Module, Control Display Unit/Engine Instrument Caution Advisory System upgrade, Control Display Unit Keyboard upgrade, and Avionics Interface Units upgrades. As well as Mission System Upgrade (MSU) and Midwing Processing Unit (MPU) obsolescence replacement.
POWER TRANSMISSION AND CONTROL: Changes to the V-22 Power Transmission and Control System will improve reliability and maintainability. Changes to the V-22 Power Transmission and Control System will include: swashplate reliability upgrades, engine gimbal ring/spherical bearing installation revision, updated refuel/defuel valve, bull gear shroud and engine gimbal ring.
COCKPIT: Changes to the V-22 cockpit will improve crew safety, mission suitability and overall reliability. Changes to the V-22 cockpit include: night vision goggle compatible hardware, upgraded inertial reels, upgraded pilot and co-pilot restraint system, throttle control lever soft stop modification, and improved rain removal.
STRUCTURAL: Structural changes to the V-22 will increase survivability, improve maintainability and aircraft availability, eliminate component interferences, improve suitability and correct safety related issues. Structural changes include: forward sponson fuel bladder access redesign/install powder panels, environmental control unit Ram air barrier filter, avionics left hand mounting tray, aft upper door strut, add manual drive decal, fold blades in high winds and modified trunnion fitting.
PRODUCTION ROTOR LIGHTING PROTECTION: Improves rotor system lighting protection by adding improved bonding harness and grounding strap bracket.
BRACKET HYDRAULIC LINE CLAMPING: Relocate clamping provisions from the removable conversion actuator fairing to the frame and improve the tube installation.
SWASHPLATE DRAG TUBE: Redesign Swashplate Drag Tube to increase part life.
WASHER: Washer to now be included with attach hardware to ensure adequate tying of the assembly.
RELIABILITY & MAINTAINABILITY FIXES: Includes Corrective Action Plans to make the aircraft compliant with Operation Requirements Document requirements.

ECP-400: AIRCRAFT MAINTENANCE TRAINER: Improves training and pilot proficiency by incorporating modifications to the AMT #1 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.

ECP-397: FULL FIDELITY SIMULATOR (FFS) UPGRADES: Improves training and pilot proficiency by incorporating modifications to the FFS #1 & #2 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.

ECP-TBD: FLIGHT TRAINING DEVICE (FTD) UPGRADES: Improves training and pilot proficiency by incorporating modifications to the FTD #1 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.

ECP-427R1: MECHANICAL PART TASK TRAINER: Improves maintainer and aircrew proficiency by incorporating Block 'A' configuration changes.

ECP-451: INTERACTIVE MULTIMEDIA INSTRUCTION: Improves maintainer and aircrew proficiency by incorporating Block 'A' configuration changes.

ECP-511: AIRFRAME PART TASK TRAINER , Incorporate Block 'B' configuration changes.

ECP-TBD: Block B safety configuration changes required to meet mission requirements. Changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, and Structure/Airframe.

ECP-TBD: Block B safety, reliability and maintainability changes required to meet mission requirements. Changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, and Structure/Airframe.

ECP-722: Shaft Driven Compressor Inlet Barrier Filter, provides an inlet barrier filter to prevent particles from reaching and damaging the Shaft Driven Compressor.

ECP-592: Wing Stow System, Incorporate hydraulic system isolation valve normally closed to inhibit Wing Stow System Forward 2 Lock Pin actuator from extending when performing wing maintenance.

ECP-TBD: Refuel/Defuel Valve, redesign of the refuel/defuel valve.

ECP-565: Rotor Harness Redesign, Change the moldings area, extending them to the clamp locations on each side of the strap and squaring off the molded area.

ECP-591: Rotor Harness Redesign, prevent deformation of the harness, the change will extend molded areas of the harness to the clamp locations on each side of the strap and other corrections to eliminate water intrusion

ECP-669: MLG Door Hinge Redesign, new-thicker machined hinge replacement designed to meet current loading requirements.

ECP-505: ECU Water Spray Redesign, redesigned the water spray inlet assembly (U-tube) and the heat exchangercrossover tube assembly so the system tolerance can be increased to sand and dust ingestion.

ECP-559: AMT #2, Improves training and pilot proficiency by incorporating modifications to the AMT #2 to reflect most current Block A and Block B aircraft configuration.

ECP-513R1: Forward Engine Air Bleed, Redesigned Air tube will improve reliability and increase aircraft safety.

ECP-539: Plugs & Covers, Redesigned plugs and covers to meet durability and operational suitability.

ECP-TBD: Lightweight Paint, improves aircraft suitability and reduces IR Vulnerability.

ECP-652R1: Cargo Hook Door Actuator, new design improves cargo hook door reliability and operational suitability.

ECP-573: NLG Shock Struts, Nose Landing Gear shock struts are a life limited part, redesigned struts will eliminate safety of flight issue.

ECP-493: Wheel & Brake, Redesign to improve reliability on the wheel, brake and components.

ECP-470: Lateral Mass Balance, design change that will increase lateral mass balance by 9 lbs and add new pads, tungsten plates and bellcrank.

ECP-471: Life Raft, designed for 20-man raft with overflow capacity to 30-man.

ECP-478: SDC Duct Leak Switch Set Point, Reliability change to SDC duct leak switches to reduce false alarm pilot nuisance alarms.

ECP-479: Suction Lift Pump Bypass Valve, Redesigned valve to prevent the diaphram inverting due to pressure spike.

ECP-568R1: Swashplate Actuator Hose, Redesign Hose end fittings of the swashplate Actuator ports by adding tabs so hoses can be oriented one way.

ECP-510: Climb Dive Valve, provides for redesign of the valve to decrease cracking pressure to 1.0-1.5ps.

ECP-684: Ice Protection System and Fairings, provides automatic anti-ice protection in aircraft icing conditions.

ECP-721: Ramp Mounted Weapon System (RMWS), Provide an all quadrant Defensive Weapon System for the V-22.

ECP-716: Infra-Red Suppressor (IRS) Redesign, Provide a more reliable configuration to items that have contributed to poor system reliability and identify a repair kit for the aircraft Infra-Red Suppressor system.

ECP-783: Cabin Upper Crew Door, Provides redesign to the cabin upper crew door and the proper use of the new door.

ECP-761: Engine Air Particle Seperator (EAPS), Provides a more efficient and reliable system by incorporating an upgraded EAPS Blower case drain hose, an upgraded EAPS Blower outlet hose, and the elimination of restrictors in the case drain circuit.

ECP-621: Full Authority Digital Electronic Control (FADEC), Provides modification of the FADEC mount brackets to allow proper seating of FADEC into mounting bracket.

ECP-695R2: Improved Troop Seats, Provides for the redesign of the seat and the supporting airframe seat mount points.

ECP-557: Additional Force & Drive Rate for TCL, Provides an increased maximum drive rate to meet current design specification requirements.

ECP-544: Slip Ring Commonality, Provides a revised routing of the power feeder lines in the right and left hand Engine Nacelles.

ECP-515: Improved Nacelle Blower, Provides a change to correct current nacelle blower bearing failures.

ECP-685: Incorporation of Miscellaneous ECPs, Implements the following ECPs on Lot 4 aircraft: 2nd source Refuel/Defuel Valve, Block B Cargo Door Actuator Redesign and Cargo Tie Down.

ECP-720: Improved Electrical Contactors & Material Torque Valve, Changes material of nuts for electrical contactors and revises the torque values for fastening wiring to contactors.

ECP-613: Purge Check Valve Cracking Pressure Change, Provides a modified purge valve to increase the cracking pressure range.

ECP-746: Air Cycle Machine Filtration, Modifies the bearing cooling flow path and adds a barrier filter.

ECP-741: Fuel System Changes, Provides redesigned Rupture Disks and Sponson Boost Pumps to decrease fatigue failure and eliminate potential fuel run back.

ECP-649: O2N2 Concentrator, Modifies the O2N2 Concentrator to eliminate false failures at low end of tolerance band for input air pressure.

ECP-647: Landing Gear Isolation Valve, Provides a new Landing Gear Isolation Valve to eliminate single failures in the normal control system which can cause retraction or extension in flight at unsafe airspeed.

ECP-693: Fuel Surge Valve: Provides a regulator in the V-22 refueling system to limit the surge pressures associated with aerial refueling.

ECP-717: Tilt Axis Gear Box Mounting Hardware Change, Provides upgraded hardware for mounting in the tilt axis gear box.

ECP-751: Blade Deice Distributor (BDD) Chassis Redesign, Provides upgraded BDD and mounting bracket to alleviate fretting and cracking associated with original BDD.

ECP-763: Nose Landing Gear (NLG) Door Mechanism Improvements, Provides modified bellcrank stop and clamp-up bushings to prevent damage to NLG doors.

ECP-TBD: Retractable Refueling Probes, Provides Retractable Refueling Probe installation kits for 4 retrofit aircraft.

ECP-TBD: Troop Commander Situational Awareness provides independent communication, flight progress and GPS updates to embarked troops

ECP-772: FLIR Firmware Improvements, Provides the FLIR System Electronics Unit Video Signal Processor firmware version 2.38.

ECP-681R1: Aerojet Fire Suppressors Revision, Provides redesigned mounting hardware for fire suppressor cannisters to reduce potential for galling threads during installation.

ECP-782: ALE-47 Forward Firing Bucket, Provides for the ALE-47 Dispenser with Cabin Dispense Switch. Modifications will increase survivability of aircraft operating in OCO environment. SUPPLEMENTAL.

ECP-806: EMI Hardened Proximity Sensors, revealed bladefold proximity sensor is susceptible to certain frequencies. Blade folding resulted in repeated shear pin failures (at B band frequency). Blade folding resulted in proximity sensor toggling between far/near indications (at C band frequency).

ECP-775: ClamShell Doors: To incorporate two inspection/maintenance clam shell doors and their supporting substructure.

ECP-825: Nacelle Clamshell Door Hinge Halfs: The Nacelle Clanshell doors utilize aluminum hinge halfs have been found to be cracked/fretted. Steal hinge halfs are to replace the aluminum hingel halfs.

OCO ECP-844: Interim Defense Weapon System (IDWS): Provides responsive and suppressive fire with its maximun sustained rate of fire to provide maximum protection from threats in the vacinity of the landing zone.

ECP-803: AMT #3, Improves training and pilot proficiency by incorporating modifications to the AMT #3 to reflect most current Block A and Block B aircraft configuration.

ECP-806: KVADR replaces the GFE Flight Incident Recorder (FIR) due to obsolescence issues and diminishing manufacturing sources for parts.

ECP-845: To incorporate the improved material composition of the Engine Air Particle Separator (EAPS) blower shaft and durability of the blower bearing to reduce wear and failure of components.

ECP TBD: Ice Protection Provides new heater blankets without the associated fairings as a stand alone number to lessen the damage to the fairings associated with blades

OCO 08: GPS Repeater for Troop Commander Block B : Porvides procurement and installation of GPS Repeater for the embarked assault units for Block B aircraft. This modification provides embarked troops the ability to update thier GPS location data while still in the aircraft, precluding hazardous delays in the zone while waiting for the GPS update.

OCO 08: FBCB2 Compliant Blue Force Tracker (BFT) with moving map: funding provides 44 off-shelf Blue Force Tracker systems for the MV-22 to retrofit the Block B aircraft deploying in support of OCO.

OCO 08: Defensive Weapon System: The Block B CPD requires V22 aircarft have a mission configurable, crew-served, Night Vision Device (NVD) compatible DWS. This funding will field the retrofit of an interim solution ramp mounted weapons system (RMWS) to support OCO until the forward fit becomes effective starting in lot 11.

OCO 08: Ice Protection: CDD/MIPC/NIPCU Block B CPD states the V22 is required to be able to operate in moderate icing conditions without adaptive kits. Funding will field kits and installation of the ice protection systems in 3 aircraft. This modification is necessary to ensure that training squadrons have the icing system functionality to support training requirements for squadron deployment in support of OCO.

OCO 08: Air Cycle Machine Modification: Funding will provide 44 Block B aircraft with the improved Air Cycle Machine modification. This modification provides needed design changes to combat erosion due to elevated levels of snad and dust in environments encountered while supporting OCO.

OCO: 5-Way Coupled Hover Switch will provide aircrew the ability to quickly and safely engage coupled hover when encountering severe visibility conditions during the terminal phase of approach to landing.

ECP-744: Cargo nets and pulleys mission kits: to correct deficiencies.

ECP-TBD: Cargo Winch System Redesign

ECP-TBD: SLIM MFD or flight displays in cockpit, thirty lb. weight savings, less cooling and power requirements, significant obsolescence avoided, greater pilot display capabilities

ECP-TBD: JATAS will replace the existing Missile Warning System on MV-22, upgrading the Sensors from UV only detection, and including Laser Warning and Hostile Fire Indication.

ECP-TBD: Gen 5 Radio addresses obsolescence non-availability of previous ARC-210 radio with current version of ARC-210 radio. New radio version maintains physical mounting and incorporates next generation cryptographic security capability to maintain compatibility with current networks and address next generation Satellite Communication network compatibility.

ECP-888: IGV & Upstream Regulation provides for proper engine air and Hydraulic System 3 flow to operate the EAPS Scavenge Blowers. This will eliminate blower overspeeds and hydraulic system pressure spikes that have led to hydraulic system fires. It will also provide greater EAPS system availability and scavenge flow resulting in improved engine time-on-wing and blower reliability

BFT II Block C Retrofit Kits Provides capability to communicate via established Blue Force Tracking (BFT) network; providing aircraft current position and status to network subscribers (Joint Force Members) and to view other subscribers position and current status on graphic display. Incorporation will reduce fratricide risk and improve operational coordination

OCO BFT II Block B Retrofit Kits Provides capability to communicate via established Blue Force Tracking (BFT) network; providing aircraft current position and status to network subscribers (Joint Force Members) and to view other subscribers position and current status on graphic display. Incorporation will reduce fratricide risk and improve operational coordination

OCO 12: Capability improvements to Interim Defensive Weapon System (IDWS). Employment of IDWS has resulted in identification of necessary modifications to improve effectiveness, lethality, and interoperability of the system. This modification provides necessary capability improvements identified during operational use.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

OSIP: 22-01	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
Additional Force & Drive Rate Output for TCL	39	1.7																					39	1.7
Aerojet Fire Suppressors Revision	48	0.1																					48	0.1
Air Cycle Machine Filtration	66	1.7																					66	1.7
Air Cycle Machine Filtration GWOT	46	1.1																					46	1.1
ALE-47 for Forward Firing Buckets	79	3.2																					79	3.2
ALE-47 improvements baseline							5	*			5	*											5	*
AVSS mounting plate	45	0.1	1	*																			46	0.1
BDD Chassis Redesign	101	2.4																					101	2.4
Block A to B	9	47.9																					9	47.9
Block A to B GFE	15	2.1																					15	2.1
Cargo Nets and Pulleys mission kit	88	1.1																					88	1.1
Cargo Winch System Redesign kits							41	3.7			41	3.7	14	1.3	7	0.6	6	0.5					68	6.2
CCP Items	192	24.9																					192	24.9
Clam Shell Doors Blk "B"													9	7.8	17	14.1							26	21.9
Climb Dive Valve	28	0.4																					28	0.4
DDMS/DEU	9	0.5																					9	0.5
ECU Water Spray Design	57	*																					57	*
Electrical Contactors Material and Torque Value Change																								
EMI Hardened Proximity Sensors	69	1.5	20	0.4																			89	2.0
Engine Air Particle Separator (EAPS)	70	8.0																					70	8.0
Engine Air Particle Separator (EAPS) Blower Bearing Shaft	426	8.9	132	2.4																			558	11.3
Engine Air Particle Separator (EAPS) Upgrade Start Valve																								
FBCB2 Compliant Blue Force Tracker BLK B GWOT	45	3.7	719	10.0																			764	13.7
BFT II Block C Retrofit Kits							18	1.4			18	1.4											18	1.4
BFT II Block B Retrofit Kits															58	0.9	58	0.9					116	1.7
FLIR Firmware Improvements	26	2.4																					26	2.4
Fuel System Changes	79	0.9	3	*																			82	0.9
Full Authority Digital Engine Controller (FADEC) - AB428	20	0.1																					20	0.1
FWD Engine Air Bleed	27	0.4																					27	0.4
Gen 5 Radio													27	4.9	31	5.7							58	10.6
GPS Repeater for Troop Commander BLK B GWOT	24	1.2																					24	1.2
ICDS			130	0.1																			130	0.1
Ice Protection Blk "B" Heater Blades baseline	143	12.4																					143	12.4
Ice Protection Blk "B" Heater Blades GWOT with option	85	32.8																					85	32.8
Ice Protection blk B - AB344	16	0.3																			12	27.8	28	28.2
IGV&Hyd Flow Reg	18	0.3	48	0.7	35	0.5	36	0.5			36	0.5											137	2.0
Incorporation of Misc ECPs	25	0.8																					25	0.8
Interim Defense Weapon System (IDWS) OCO	8	4.8	12	15.5	12	13.9																	32	34.3
Interim Defense Weapon System (IDWS) cap improvement kits OCO									32	12.5	32	12.5											32	12.5
Interior handholds	66	*																					66	*
Interim CDD	109	0.9			8	*	22	0.1			22	0.1	47	0.2									186	1.3
IR Suppressor	68	5.1																					68	5.1
JATAS																			12	12.5	187	187.5	199	200.0
KVADR BB kits	27	0.3	27	0.3	31	0.4																	85	1.0
KVADR GFE			27	0.4	31	0.6																	58	1.0

OSIP: 22-01 PROCUREMENT	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
Installation Kits	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
Landing Gear Isolation Valve	106	4.3	8	0.3																			114	4.7
Life Raft	3	*																					3	*
Readiness LRSV Pressure Switch					50	0.4																	50	0.4
Main Landing Fire Suppression					210	1.9	60	0.5			60	0.5	60	0.5									330	3.0
MV Troop Cmdr Station	60	3.0																					60	3.0
Nacelle Clamshell Door Hinge Halfs			46	0.6	47	0.6	47	0.6			47	0.6											140	1.8
Nacelle STA 400 Air Baffle Cracking / Hydraulic System 3 line Chafe 32																								
Nose Landing Gear Door Mech Improvements	49	*																					49	*
Nose Landing Gear	15	*	101	0.3	56	0.2																	172	0.5
O2N2 Concentrator - AB445	43	0.6																					43	0.6
Plugs & Covers - AB349	21	0.5																					21	0.5
Change - AB335	37	0.1																					37	0.1
Ramp Mounted Weapon System	112	2.0																			49	2.0	161	3.9
Ramp Mounted Weapon System Amo Storage Rack Assembly					20	0.6																	20	0.6
Ramp Mounted Weapon System Swing Arm Bolt					20	0.6																	20	0.6
Rapid Ground Refueling (RGR)	47	0.1	48	0.1	22	*	31	*			31	*											148	0.2
Readiness Kits	55	13.1	10	1.8																			65	14.9
OCO Readiness Kits			40	12.6	25	2.8																	65	15.4
OCO Readiness Seven Wiring Harness			44	1.4	43	1.4																	87	2.8
OCO Readiness Thirteen Wiring Harness					51	2.0																	51	2.0
OCO Readiness IRS Block A Removal																								
OCO Readiness IRS Centerbodies			56	0.7																			56	0.7
OCO Readiness IPS CDD					44	7.3																	44	7.3
OCO Readiness IPS MIPC			8	1.6	36	5.4																	44	7.1
OCO Readiness Prop Rotor Coating					220	0.2																	220	0.2
Retractable Refueling Probes	4	1.7																					4	1.7
Rotor Harness Redesign	52	0.7																					52	0.7
Rotor Harness Redesign	29	0.5																					29	0.5
SDC Duct Leak Switch Set Point	19	*																					19	*
Filter	67	3.8																					67	3.8
Slim MFD							27	3.2			27	3.2	43	4.6	25	3.0							95	10.7
Slip Ring Commonality																								
Suction Lift Pump	20	*																					20	*
Swashplate Actuator Hose	53	1.8																					53	1.8
Swashplate Improvements	180	0.1																					180	0.1
TAGB Mounting Hardware	54	0.4																					54	0.4
Trailing Edge Gussets	552	*																					552	*
Troop Seats	44	4.8																					44	4.8
Upper Main Cabin Door	37	2.8																					37	2.8
Wiring Harnesses	63	6.3																					63	6.3
Installation Kits N/R		61.3		26.5		5.3																		93.1
Installation Equipment		0.6																						0.6
Installation Equipment N/R																								
Engineering Change Orders																								
Data		0.6		0.3		0.4		*				*		*		*		*						1.4
Training Equipment		127.3				4.1		4.5				4.5		8.0		11.8		13.8		7.2		167.0		343.6
Support Equipment		0.9		0.3		*		*				*		1.2		2.0		2.0						6.4
ILS		4.9		5.4																				10.3
Other Support		5.5		2.1		2.1		4.8		2.5		7.3		8.6		9.2		5.3		3.5		1.9		45.4
Interim Contractor Support																								
Installation Cost	471	16.4	348	10.5	341	7.5	706	8.9			706	8.9	318	4.1	109	2.8	14	0.1	1	*	12	31.8	2320	82.1
Total Procurement		**436.4**		**94.2**		**58.4**		**28.3**		**15.0**		**43.3**		**41.2**		**50.1**		**22.6**		**23.2**		**417.9**		**1187.3**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K
3. 7 installation costs quantities are for installations of Trainers

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: V-22 Series MODIFICATION TITLE: MV-22 CORRECTION OF DEFIENCIES AND PRE BLOCK A THROUGH C (OSIP 022-01)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: VARIOUS Months PRODUCTION LEADTIME: VARIOUS Months

CONTRACT DATES:

FY 2010: VARIOUS FY 2011: VARIOUS FY 2012: VARIOUS FY 2013: VARIOUS

DELIVERY DATE:

FY 2010: VARIOUS FY 2011: VARIOUS FY 2012: VARIOUS FY 2013: VARIOUS

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY (1130) kits	471	16.4	218	6.1	237	5.5	179	3.9	8	0.1	8	0.1	8	0.1	1	*			1130	32.1
FY 2010 (451) kits			130	4.4	38	0.8	231	1.8	52	0.6									451	7.6
FY 2011 (566) kits					66	1.2	292	3.2	169	1.2	39	0.4							566	5.9
FY 2012 (108) kits							4	*	73	0.6	31	0.4							108	1.0
FY 2012 OCO ( ) kits																				
FY 2013 (23) kits									16	1.8	7	*							23	1.8
FY 2014 (24) kits											24	2.0							24	2.0
FY 2015 (6) kits													6	*					6	*
FY 2016 ( ) kits																				
To Complete (12) kits																	12	31.8	12	31.8
TOTAL	**471**	**16.4**	**348**	**10.5**	**341**	**7.5**	**706**	**8.9**	**318**	**4.1**	**109**	**2.8**	**14**	**0.1**	**1**	*	**12**	**31.8**	2320	82.1

Note: 7 installation costs quantities are for installations of Trainers

Installation Schedule

	FY 2009	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	471	87	87	87	87	85	86	85	85	176	177	177	176	79	80	80	79	27	28	27	27
Out	471		87	87	87	87	85	86	85	85	176	177	177	176	79	80	80	79	27	28	27

	FY 2015				FY 2016				To	Total
	1	2	3	4	1	2	3	4	Complete	
In	3	4	4	3				1	12	2320
Out	27	3	4	4	3				13	2320

Exhibit P-3a | Individual Modification

MODIFICATION TITLE: MV-22 Readiness (OSIP 028-12)

MODELS OF SYSTEMS AFFECTED: V-22 Series | TYPE MODIFICATION: Reliability, Cost-per-flight hour, Reduction in Total Ownership cost

DESCRIPTION/JUSTIFICATION:

This OSIP is established for the correction of readiness degraders impacting MV-22 cost per flight hour, reliability maintainability and availability (RM&A), obsolescence, and reduction of life-cycle costs. These modifications will be accomplished by field retrofit and implemented to coincide with resources and aircraft availability. In order to meet the goal of increasing readiness, the airframe and integrated systems must be modified as critical RM&A issues are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals .

13 Wiring Harness: Improve harness reliability by reducing higher than expected failures due to chafing in the backshells and external environmental effects
7 Wiring Harness: Improve proposed harnesses reliability by two times. This Change will create Retrofit Kits to implement changes that were made by PCAs 901P0872 and 901P0875
Swash plate actuator: To improve cup seal leakage issues
Flaperon actuator: To correct the failure mode of seal leakage due to piston rod corrosion
Swash plate actuator: To improve cup seal leakage issues
Pylon Conversion actuator Upgrade: To reduce corrosion of the ball screw assembly and mechanical damage to the ball screw soft-stop assemblies
Flaperon actuator: To correct the failure mode of seal leakage due to piston rod corrosion
Drive Tube: This effort will redesign drive tube which will eliminate an O level recurring inspection as it will decrease stresses at the lower end without affecting the interface with the mast
Pylon Conversion actuator Upgrade: To reduce corrosion of the ball screw assembly and mechanical damage to the ball screw soft-stop assemblies
Local and Remote Shutoff Valve (LRSV) Pressure Switch: Will correct the following failure modes: microswitch plunger overtravel, and various qual test anomalies
Drive Tube: This effort will redesign drive tube which will eliminate an O level recurring inspection as it will decrease stresses at the lower end without affecting the interface with the mast
Infra-red Suppressor (IRS) Block A Removal: Eliminate some IRS components while maintaining structural support, coanda mounting points and vibration requirements
Local and Remote Shutoff Valve (LRSV) Pressure Switch: Will correct the following failure modes: microswitch plunger overtravel, and various qual test anomalies
Vibration Structural Live Engine Diagnostic/ Drive System Interface Unit/ Fuel Management Unit (VSLED/DSIU/FMU) Reliability Improvements: Implements changes to internal component parts that address parts obsolescence issues and improves
Ice Protection System: Physically strengthens component parts which have been prone to stress failures or fraying; Electrically strengthens component parts which have shorted out, physically changes NIPCU design to eliminate
Prop Rotor Coating: To better protect the rotor blade aiding in its longer use before needing replacement
KVADR: Voice Recorder Addresses obsolescence of current flight incident recorder
Auxillary Pow the components reliability and maintainability. Modern software architecture will improve software maintainability
Engine Air Particle Separator (EAPS): Start Valve Block A/B/10 Improvements to the Start Circuit side of the EAPS Start Valve Module, will provide for increase reliability
IRS Centerb left/right configuration for Master Icing Protection Control/ Nacelle Icing Protection Control (MIPC, NIPC), and CDD
Lower Nacelle System/ Integrated Engine Airflow Systerm (LNS/IEAS) Common Inlet Common inlets that would be retrofitted for the fleet. Components with greatest impact to time on wing for engine, via improved particulate separation and removal
LNS/IEAS EAPS Scroll EAPS scroll that would be retrofitted for the fleet. Components with greatest impact to time on wing for engine, via improved particulate separation and removal
Nacelle Airflow Particle Separator Provide particulate separation and greatly reduce particulate contamination of heat exchanger
Coanda Deflector Tubes Cost Reduction Initiative developed by Bell Boeing. This would change the angle of exhaust deflector tubes by 30 degrees to better deflect the exhaust away from the aircraft. Expected positive impacts include reduced fuselage damage, deck heating and grass fire issues
Drive System Improvement Input Quill Wavespring: To eliminate resident issues with Input Quill Wave Spring and to Purge Fleet of Thin Densed Chrome (TDC)
Constant Frequency Generator (CFG) RHTAGB Adapter : Modify the CFG-TAGB adapter to allow a modified CFG, with LOLP incorporated, to utilize the TAGB internal oil/air mixture to increase CFG scavenge pump efficiency. This mod would reduce the likelihood of an overheat from starting
Avionics Bay Interface Unit (ABIU/PSIU) Retrofit (Blk B&C) Upgrade in capability allows real time monitoring of electrical loading on various generators and electrical power busses. This will allow improved mission system management in high workload or degraded electrical capacity situations avoiding critical systems failures due to lack of electrical power
CFG Redesign Redesign of the constant frequency generator to significantly improve the reliability and maintainability while reducing the overall A/C cost.
Nacelle Blower Redesign Effort will address permanent solution to current failure modes: tip rub issue, increase stall margin, increase sand tolerance, increase corrosion resistance in bearings
ECP-TBD: Nacelle Upper Improvements Correct deficiencies related to component cooling, environmental protection, equipment accessibility, gearbox assemblies, power plant conversion to the proprotor, and shaft systems
ECP-TBD: Improved Lower Nacelle takes advantage of improvements in 3-D computer modeling developed over last 3 decades. Reduced ingestions and FODs.
IEAS (E-Blowers/ESG/IRS) Increase particle separation efficiency, improve airflow, incorporate electric blower subsystem to increase blower scavenge flow and remove hydraulic lines from lower nacelle
VFG 115 Blk A Plan This effort would update the installation drawing to reflect that the -115 VFG is a suitable substitute for the -117 on Block A A/C
Input quill/clutch assembly Modification of the Prop Rotor Gear Box (PRGB) Gear Train Mast, Input Quill Housing, Clutch, and Engine to improve reliability and eliminate over-torque failures
Fire Detection Loop drawings Upgrade of drawings to Fire Detection Loop for kits put in at attrition
Drive System Improvement Input Quill Wavespring: To eliminate resident issues with Input Quill Wave Spring and to Purge Fleet of Thin Densed Chrome (TDC)
Pressure Shut Off Valve: Mod to prevent valve from becoming unstable or closing resulting in tank not giving fuel up for defuel operation or tansfer.
AC Bus Tie Circuit Reliability Improvement to provide the ability to power all buses with a battery start of the Auxiliary Power Unit (APU) in the presence of a failed Regulated Converter
Sponson refuel-defuel valve: Decreased air ingestion by improving internal components to resist vibration during engine operaton
Cargo Nets: litter stanchion, air drop, rescue hoists, Snatch Block Pulleys, s/s of cargo nets resulting in ineffective Readiness, requiring improvement
Nacelle Door Hook Latch Increase Nacelle door panel access and reliability, enabling improved maintainability, modification will improve R&M of work platforms and access panels to the Nacelle assembly by fleet and depot maintainers
Wing Aux Tank refuel-defuel valve: Mod to valve to decrease air ingestion
Landing Gear Control Unit: improvement to circuit cards to better control electricity to control unit
Primary Lighting Control Unit: increase resister control to primary lighting to prevent burn outs to control unit
Rescue Hoist Hook: improved hook units for hoisting abilities
Nacelle STA 400 Air Baffle Cracking: upgrading baffle to ensure correct air flow at 400 station in Nacelle
Rudder Attachment Reliability Improvement: upgrade to bearings associated with the rear rudder

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, $ in Millions)

OSIP: 28-12	Prior Years		FY 2010		FY 2011		BASE FY 2012		OCO FY 2012		TOTAL FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																								
PROCUREMENT																								
Installation Kits																								
(13) Wiring Harness							51	2.0			51	2.0	47	1.9	49	2.0							147	5.9
(7) Wiring Harness							41	1.3			41	1.3											41	1.3
Swashplate Actuator							25	2.1			25	2.1	6	0.5	6	0.5							37	3.1
Flaperon Actuator							25	0.5			25	0.5	69	1.4									94	1.9
Lower Nacelle Improvements															72	18.0	24	6.0					96	24.0
Nacelle Wiring OCO									20	13.0	20	13.0											20	13.0
Nacelle Upper Improvements															33	25.5	7	5.3					40	30.9
Pylon Conversion Actuator													9	2.2	43	10.3	45	10.8	16	3.8	58	14.6	171	41.8
Drive tube													22	5.4	30	7.2	42	10.1	46	11.0	52	12.2	192	45.9
Prop Rotor Coating							220	0.2			220	0.2	220	0.2	60	0.1							500	0.5
LRSV Pressure Switch							50	0.4			50	0.4	40	0.3									90	0.7
IRS Block A Removal																								
APU-105																								
IRS Centerbodies																								
VSLED/DSIU/FMU Reliability Improvements retrofit													4	1.7	9	3.8	10	4.2	12	5.3	31	13.0	66	27.9
IPS (CDD)							39	7.9			39	7.9	51	10.4									90	18.3
IPS (MIPC/NIPCU)							39	5.9			39	5.9	33	5.0									72	10.9
Pressure Shut Off Valve							135	1.4			135	1.4	225	2.3	225	2.3	225	2.3	203	2.0			1,013	10.1
Sponson refuel-defuel valve							40	1.3			40	1.3											40	1.3
Wing Aux Tank refuel-defuel valve																	70	0.7	70	0.7	140	1.4	280	2.8
Clam Shell Door (1B, ECP 775R1)																	7	6.3	7	6.3	17	15.3	31	27.9
Nacelle Vertical Pin																								
Cargo Nets litter stanchion kits																	29	0.3	28	0.3			57	0.7
Cargo Nets air drop kits																	29	0.3	28	0.3			57	0.6
Cargo Nets rescue hoists																	29	10.9	28	10.5			57	21.4
Cargo Nets Snatch Block Pulleys																	34	0.1	34	0.1			68	0.2
Cargo Nets s/s of cargo nets																	75	0.2	76	0.2			151	0.3
Landing Gear Control Unit																	65	2.0	65	2.0			130	3.9
Primary Lighting Control Unit																	65	0.2	65	0.2			130	0.4
Nacelle Door Hook Latch																	63	0.6	62	0.6			125	1.3
Rescue Hoist Hook																	75	*	75	*			150	0.1
Nacelle STA 400 Air Baffle Cracking																	60	4.3	60	4.3			120	8.6
Rudder Attachment Reliability Improvement																	63	0.5	62	0.5			125	1.1
CFG Redesign																	6	0.9	6	0.9	12	1.8	24	3.6
CFG RHTAGB Adapter Mod																	35	0.9	35	0.9	70	1.8	140	3.5
COANDA Deflector Tubes																	99	1.0	99	1.0	198	2.0	396	4.0
Drive System Imp Input Quill Wavespring							19	0.1			19	0.1	19	0.1	19	0.1	99	0.5	99	0.5	198	1.0	453	2.4
EAPS IGV & Upstream Regulation 22-01																	31	0.9	31	0.9	62	1.8	124	3.6
EAPS Start Valve Block A/B/10																	70	0.2	70	0.2			140	0.4
LNS/IEAS Common Inlet																					135	7.8	135	7.8
LNS/IEAS EAPS Scroll																			45	2.1	135	6.3	180	8.4
Input quill/clutch ass'y																			99	1.5	198	3.0	297	4.5
Nacelle Airflow Particle Separator																			49	2.1	98	4.1	147	6.2
Nacelle Blower Redesign																			49	1.7	98	3.4	147	5.1
KVADR Voice Recorder																	140	2.4					140	2.4
Installation Kits N/R								2.9				2.9		13.9		1.8		6.0		2.6				27.1
Installation Equipment																								
XXX Equip																								
Installation Equipment N/R																								
Engineering Change Orders																								
XXX Kit ECO XXX																								
XXX Equip ECO XXX																								
Data								0.3				0.3		0.4		0.3		0.3		0.7		0.6		2.5
Training Equipment								0.2				0.2												0.2
Support Equipment																								
ILS																								
Other Support								5.5		2.0		7.5		3.9		3.7		6.9		6.9		5.2		34.1
Interim Contractor Support																								
Installation Cost													427	3.3	656	4.7	575	5.5	533	5.5	1,483	18.1	3,674	37.1
Total Procurement								**32.0**		**15.0**		**47.0**		**52.7**		**80.1**		**90.6**		**75.5**		**113.5**		**459.5**

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than $51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: V-22 Series

MODIFICATION TITLE: MV-22 Readiness (OSIP 028-12)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: Various Months

PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

DELIVERY DATE: FY 2010: Various FY 2011: Various FY 2012: Various FY 2013: Various

($ in Millions)

Cost:	Prior Years		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		To Complete		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
FY 2009 & PY ( ) kits																				
FY 2010 ( ) kits																				
FY 2011 ( ) kits																				
FY 2012 (525) kits									409	3.2	116	0.6							525	3.8
FY 2012 OCO ( ) kits																				
FY 2013 (602) kits									18	0.1	522	4.0	62	0.3					602	4.4
FY 2014 (373) kits											18	0.1	306	2.1	49	0.2			373	2.5
FY 2015 (498) kits													207	3	291	2.2			498	5.3
FY 2016 (731) kits															193	3.0	538	5.6	731	8.6
To Complete (945) kits																	945	12.5	945	12.5
TOTAL									**427**	**3.3**	**656**	**4.7**	**575**	**5.5**	**533**	**5.5**	**1,483**	**18.1**	3,674	37.1

Installation Schedule

	FY 2009 & Prior	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1.0	2	3	4
In														106	107	107	107	164	164	164	164
Out															106	107	107	107	164	164	164

	FY 2015				FY 2016				To Complete	Total
	1	2	3	4	1	2	3	4		
In	143	144	144	144	133	133	134	133	1483	3674
Out	164	143	144	144	144	133	133	134	1616	3674

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