

# DEPARTMENT OF THE ARMY

## Procurement Programs



Committee Staff Procurement Backup Book  
Fiscal Year 2011 Budget Estimate

### **AIRCRAFT PROCUREMENT, ARMY**

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APPROPRIATION

February 2010

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APPROPRIATION SUMMARY

DOLLARS IN THOUSANDS

APPROPRIATION

Aircraft Procurement, Army

TOTAL PROCUREMENT PROGRAM

<u>FY2009</u>	<u>FY2010</u>	<u>FY2011</u>	<u>FY2011 OCO</u>	<u>FY2011 Total</u>
6,369,182	6,316,330	5,976,867	1,373,803	7,350,670
<b>6,369,182</b>	<b>6,316,330</b>	<b>5,976,867</b>	<b>1,373,803</b>	<b>7,350,670</b>

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APPROPRIATION Aircraft Procurement, Army ACTIVITY		DOLLARS IN THOUSANDS					PAGE
		FY2009	FY2010	FY2011	FY2011 OCO	FY2011 Total	
01	Aircraft	2,345,251	3,495,173	3,930,784	253,590	4,184,374	4
02	Modification of aircraft	3,091,615	2,215,289	1,619,315	849,041	2,468,356	6
03	Spares and repair parts	6,855	25,220	7,328		7,328	8
04	Support equipment and facilities	925,461	580,648	419,440	271,172	690,612	9
<b>APPROPRIATION TOTALS</b>		<b>6,369,182</b>	<b>6,316,330</b>	<b>5,976,867</b>	<b>1,373,803</b>	<b>7,350,670</b>	

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APPROPRIATION Aircraft Procurement, Army		ACTIVITY 01 Aircraft	DOLLARS IN THOUSANDS									
LINE NO	ITEM NOMENCLATURE	ID	FY 2009		FY 2010		FY 2011		FY 2011 OCO		FY 2011 TOTAL	
			QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
<i>FIXED WING</i>												
1	JOINT CARGO AIRCRAFT (JCA) (A11000)		7	261,681								
2	C-12 CARGO AIRPLANE (A02700)	A							5	78,060	5	78,060
3	AERIAL COMMON SENSOR (ACS) (MIP) (A02005)	A						88,483				88,483
4	MQ-1 UAV (A00005)	A			24	480,170	26	459,310	3	47,000	29	506,310
5	RQ-11 (RAVEN) (A00010)	A			876	79,450	312	20,152		17,430	312	37,582
6	BCT UNMANNED AERIAL VEH (UAVS) INCR 1 (A00015)	A						44,206				44,206
	<i>SUB-ACTIVITY TOTAL</i>			<u>261,681</u>		<u>559,620</u>		<u>612,151</u>		<u>142,490</u>		<u>754,641</u>
<i>ROTARY</i>												
7	HELICOPTER, LIGHT UTILITY (LUH) (A05001)	A	44	276,359	54	325,231	50	305,272			50	305,272
8	AH-64 APACHE BLOCK III (A05111) Less: Advance Procurement (PY)	A			8	(160,736)	16	(390,571)			16	(390,571)
						<u>160,736</u>		<u>(-57,890)</u>				<u>(-57,890)</u>
9	AH-64 APACHE BLOCK III (A05111) Advance Procurement (CY)					57,890		161,150				161,150
10	UH-60 BLACKHAWK (MYP) (AA0005) Less: Advance Procurement (PY)		66	(1,091,504)	81	(1,426,612)	72	(1,352,796)	2	(40,500)	74	(1,393,296)
				<u>(-116,795)</u>		<u>(-134,530)</u>		<u>(-102,230)</u>				<u>(-102,230)</u>
				974,709		1,292,082		1,250,566		40,500		1,291,066
11	UH-60 BLACKHAWK (MYP) (AA0005) Advance Procurement (CY)			136,770		98,740		100,532				100,532
12	CH-47 HELICOPTER (A05101) Less: Advance Procurement (PY)	A	28	(728,417)	37	(950,198)	40	(1,151,969)	2	(70,600)	42	(1,222,569)
				<u>(-32,759)</u>				<u>(-50,676)</u>				<u>(-50,676)</u>
				695,658		950,198		1,101,293		70,600		1,171,893
13	CH-47 HELICOPTER (A05101) Advance Procurement (CY)					50,676		57,756				57,756

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APPROPRIATION Aircraft Procurement, Army

ACTIVITY 01 Aircraft

DOLLARS IN THOUSANDS

LINE NO	ITEM NOMENCLATURE	ID	FY 2009		FY 2010		FY 2011		FY 2011 OCO		FY 2011 TOTAL	
			QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
14	HELICOPTER NEW TRAINING (A06500)			74						9,383		9,383
	<i>SUB-ACTIVITY TOTAL</i>			<u>2,083,570</u>		<u>2,935,553</u>		<u>3,318,633</u>		<u>111,100</u>		<u>3,429,733</u>
	<b>ACTIVITY TOTAL</b>			<u>2,345,251</u>		<u>3,495,173</u>		<u>3,930,784</u>		<u>253,590</u>		<u>4,184,374</u>

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APPROPRIATION Aircraft Procurement, Army

ACTIVITY 02 Modification of aircraft

DOLLARS IN THOUSANDS

LINE NO	ITEM NOMENCLATURE	ID	FY 2009		FY 2010		FY 2011		FY 2011 OCO		FY 2011 TOTAL	
			QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
<i>MODIFICATIONS OF AIRCRAFT</i>												
15	C12 AIRCRAFT MODS (A01234)	A								122,340		122,340
16	MQ-1 PAYLOAD - UAS (A00020)	A				87,207		100,413		3,600		104,013
17	MQ-1 WEAPONIZATION - UAS (A00025)	A				14,795		14,729				14,729
18	GUARDRAIL MODS (MIP) (AZ2000)			147,737		111,450		29,899		30,200		60,099
19	MULTI SENSOR ABN RECON (MIP) (AZ2001)			23,228		75,270		16,981		86,200		103,181
20	AH-64 MODS (AA6605)	A		(1,824,102)		(636,850)		(393,769)		(199,200)		(592,969)
	Less: Advance Procurement (PY)			(-54,980)		(-47,800)						
				<u>1,769,122</u>		<u>589,050</u>		<u>393,769</u>		<u>199,200</u>		<u>592,969</u>
21	AH-64 MODS (AA6605)			47,800								
	Advance Procurement (CY)											
22	CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)			(690,600)		(136,453)		(66,207)		(82,900)		(149,107)
	Less: Advance Procurement (PY)			(-38,917)		(-49,473)						
				<u>651,683</u>		<u>86,980</u>		<u>66,207</u>		<u>82,900</u>		<u>149,107</u>
23	CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)											
	Advance Procurement (CY)			49,473								
24	UTILITY/CARGO AIRPLANE MODS (AA0270)			13,872		41,943		13,716				13,716
25	AIRCRAFT LONG RANGE MODS (AA0560)			1,575		821		814				814
26	UTILITY HELICOPTER MODS (AA0480)			41,011		88,612		63,085		14,530		77,615
27	KIOWA WARRIOR (AZ2200)			120,151		174,669		94,400		187,288		281,688
28	AIRBORNE AVIONICS (AA0700)			146,974		233,706		219,425		24,983		244,408
29	GATM Rollup (AA0711)	A		78,989		102,886		100,862				100,862
30	RQ-7 UAV MODS (A00018)	A				607,900		505,015		97,800		602,815

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APPROPRIATION Aircraft Procurement, Army

ACTIVITY 02 Modification of aircraft

DOLLARS IN THOUSANDS

LINE NO	ITEM NOMENCLATURE	ID	FY 2009		FY 2010		FY 2011		FY 2011 OCO		FY 2011 TOTAL	
			QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
	<i>SUB-ACTIVITY TOTAL</i>			<u>3,091,615</u>		<u>2,215,289</u>		<u>1,619,315</u>		<u>849,041</u>		<u>2,468,356</u>
	<b>ACTIVITY TOTAL</b>			<b>3,091,615</b>		<b>2,215,289</b>		<b>1,619,315</b>		<b>849,041</b>		<b>2,468,356</b>

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APPROPRIATION Aircraft Procurement, Army

ACTIVITY 03 Spares and repair parts

DOLLARS IN THOUSANDS

LINE NO	ITEM NOMENCLATURE	ID	FY 2009		FY 2010		FY 2011		FY 2011 OCO		FY 2011 TOTAL	
			QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
<i>SPARES AND REPAIR PARTS</i>												
31	SPARE PARTS (AIR) (AA0950)			6,855		25,220		7,328				7,328
	<i>SUB-ACTIVITY TOTAL</i>			<u>6,855</u>		<u>25,220</u>		<u>7,328</u>				<u>7,328</u>
	<b>ACTIVITY TOTAL</b>			<b>6,855</b>		<b>25,220</b>		<b>7,328</b>				<b>7,328</b>

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APPROPRIATION Aircraft Procurement, Army

ACTIVITY 04 Support equipment and facilities

DOLLARS IN THOUSANDS

LINE NO	ITEM NOMENCLATURE	ID	FY 2009		FY 2010		FY 2011		FY 2011 OCO		FY 2011 TOTAL	
			QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
<i>GROUND SUPPORT AVIONICS</i>												
32	AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)			59,138		25,911		24,478				24,478
33	ASE INFRARED CM (AZ3507)			565,462		285,007		174,222		197,990		372,212
	<i>SUB-ACTIVITY TOTAL</i>			<u>624,600</u>		<u>310,918</u>		<u>198,700</u>		<u>197,990</u>		<u>396,690</u>
<i>OTHER SUPPORT</i>												
34	AVIONICS SUPPORT EQUIPMENT (AZ3000)			5,013		4,921		4,885				4,885
35	COMMON GROUND EQUIPMENT (AZ3100)			95,726		111,110		76,129		65,627		141,756
36	AIRCREW INTEGRATED SYSTEMS (AZ3110)			48,149		61,572		52,423				52,423
37	AIR TRAFFIC CONTROL (AA0050)			122,413		76,808		82,844		7,555		90,399
38	INDUSTRIAL FACILITIES (AZ3300)			2,529		1,529		1,567				1,567
39	LAUNCHER, 2.75 ROCKET (A50100)			2,435		2,709		2,892				2,892
40	AIRBORNE COMMUNICATIONS (AA0705)			24,596		11,081						
	<i>SUB-ACTIVITY TOTAL</i>			<u>300,861</u>		<u>269,730</u>		<u>220,740</u>		<u>73,182</u>		<u>293,922</u>
	<b>ACTIVITY TOTAL</b>			<u>925,461</u>		<u>580,648</u>		<u>419,440</u>		<u>271,172</u>		<u>690,612</u>
	<b>APPROPRIATION TOTAL</b>			<u>6,369,182</u>		<u>6,316,330</u>		<u>5,976,867</u>		<u>1,373,803</u>		<u>7,350,670</u>

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A00015	6	4	BCT UNMANNED AERIAL VEH (UAVS) INCR 1 (A00015)
A02005	3	4	AERIAL COMMON SENSOR (ACS) (MIP) (A02005)
A05111	8	4	AH-64 APACHE BLOCK III (A05111)
A05111	9	4	AH-64 APACHE BLOCK III (A05111)
AA6605	20	6	AH-64 MODS (AA6605)
AA6605	21	6	AH-64 MODS (AA6605)
AA0050	37	9	AIR TRAFFIC CONTROL (AA0050)
AA0700	28	6	AIRBORNE AVIONICS (AA0700)
AA0705	40	9	AIRBORNE COMMUNICATIONS (AA0705)
AA0560	25	6	AIRCRAFT LONG RANGE MODS (AA0560)
AZ3504	32	9	AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)
AZ3110	36	9	AIRCREW INTEGRATED SYSTEMS (AZ3110)
AZ3507	33	9	ASE INFRARED CM (AZ3507)
AZ3000	34	9	AVIONICS SUPPORT EQUIPMENT (AZ3000)
A02700	2	4	C-12 CARGO AIRPLANE (A02700)
A01234	15	6	C12 AIRCRAFT MODS (A01234)
AA0252	22	6	CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)
AA0252	23	6	CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)
A05101	12	4	CH-47 HELICOPTER (A05101)
A05101	13	4	CH-47 HELICOPTER (A05101)
AZ3100	35	9	COMMON GROUND EQUIPMENT (AZ3100)
AA0711	29	6	GATM Rollup (AA0711)
AZ2000	18	6	GUARDRAIL MODS (MIP) (AZ2000)
A06500	14	4	HELICOPTER NEW TRAINING (A06500)
A05001	7	4	HELICOPTER, LIGHT UTILITY (LUH) (A05001)
AZ3300	38	9	INDUSTRIAL FACILITIES (AZ3300)
A11000	1	4	JOINT CARGO AIRCRAFT (JCA) (A11000)
AZ2200	27	6	KIOWA WARRIOR (AZ2200)
A50100	39	9	LAUNCHER, 2.75 ROCKET (A50100)
A05111	8	4	Less: Advance Procurement (PY)
AA0005	10	4	Less: Advance Procurement (PY)
A05101	12	4	Less: Advance Procurement (PY)
AA6605	20	6	Less: Advance Procurement (PY)
AA0252	22	6	Less: Advance Procurement (PY)
A00020	16	6	MQ-1 PAYLOAD - UAS (A00020)
A00005	4	4	MQ-1 UAV (A00005)
A00025	17	6	MQ-1 WEAPONIZATION - UAS (A00025)
AZ2001	19	6	MULTI SENSOR ABN RECON (MIP) (AZ2001)
A00010	5	4	RQ-11 (RAVEN) (A00010)
A00018	30	6	RQ-7 UAV MODS (A00018)
AA0950	31	8	SPARE PARTS (AIR) (AA0950)
AA0005	10	4	UH-60 BLACKHAWK (MYP) (AA0005)

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AA0480	26	6	UTILITY HELICOPTER MODS (AA0480)
AA0270	24	6	UTILITY/CARGO AIRPLANE MODS (AA0270)

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SSN	LINE	PAGE	NOMENCLATURE
A00005	4	4	MQ-1 UAV (A00005)
A00010	5	4	RQ-11 (RAVEN) (A00010)
A00015	6	4	BCT UNMANNED AERIAL VEH (UAVS) INCR 1 (A00015)
A00018	30	6	RQ-7 UAV MODS (A00018)
A00020	16	6	MQ-1 PAYLOAD - UAS (A00020)
A00025	17	6	MQ-1 WEAPONIZATION - UAS (A00025)
A01234	15	6	C12 AIRCRAFT MODS (A01234)
A02005	3	4	AERIAL COMMON SENSOR (ACS) (MIP) (A02005)
A02700	2	4	C-12 CARGO AIRPLANE (A02700)
A05001	7	4	HELICOPTER, LIGHT UTILITY (LUH) (A05001)
A05101	12	4	CH-47 HELICOPTER (A05101)
A05101	12	4	Less: Advance Procurement (PY)
A05101	13	4	CH-47 HELICOPTER (A05101)
A05111	8	4	AH-64 APACHE BLOCK III (A05111)
A05111	8	4	Less: Advance Procurement (PY)
A05111	9	4	AH-64 APACHE BLOCK III (A05111)
A06500	14	4	HELICOPTER NEW TRAINING (A06500)
A11000	1	4	JOINT CARGO AIRCRAFT (JCA) (A11000)
A50100	39	9	LAUNCHER, 2.75 ROCKET (A50100)
AA0005	10	4	UH-60 BLACKHAWK (MYP) (AA0005)
AA0005	10	4	Less: Advance Procurement (PY)
AA0005	11	4	UH-60 BLACKHAWK (MYP) (AA0005)
AA0050	37	9	AIR TRAFFIC CONTROL (AA0050)
AA0252	22	6	CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)
AA0252	22	6	Less: Advance Procurement (PY)
AA0252	23	6	CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)
AA0270	24	6	UTILITY/CARGO AIRPLANE MODS (AA0270)
AA0480	26	6	UTILITY HELICOPTER MODS (AA0480)
AA0560	25	6	AIRCRAFT LONG RANGE MODS (AA0560)
AA0700	28	6	AIRBORNE AVIONICS (AA0700)
AA0705	40	9	AIRBORNE COMMUNICATIONS (AA0705)
AA0711	29	6	GATM Rollup (AA0711)
AA0950	31	8	SPARE PARTS (AIR) (AA0950)
AA6605	20	6	AH-64 MODS (AA6605)
AA6605	20	6	Less: Advance Procurement (PY)
AA6605	21	6	AH-64 MODS (AA6605)
AZ2000	18	6	GUARDRAIL MODS (MIP) (AZ2000)
AZ2001	19	6	MULTI SENSOR ABN RECON (MIP) (AZ2001)
AZ2200	27	6	KIOWA WARRIOR (AZ2200)
AZ3000	34	9	AVIONICS SUPPORT EQUIPMENT (AZ3000)
AZ3100	35	9	COMMON GROUND EQUIPMENT (AZ3100)
AZ3110	36	9	AIRCREW INTEGRATED SYSTEMS (AZ3110)

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AZ3504	32	9	AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)
AZ3507	33	9	ASE INFRARED CM (AZ3507)

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<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature JOINT CARGO AIRCRAFT (JCA) (A11000)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: 273744/D18
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	6	7								13
Gross Cost	232.7	261.7							2913.8	3408.2
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	232.7	261.7							2913.8	3408.2
Initial Spares										
Total Proc Cost	232.7	261.7							2913.8	3408.2
Flyaway U/C										
Weapon System Proc U/C	38.8	37.4								76.2

P-40 Breakdown										
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015		
Active	Qty	0	0	0	0	0	0	0	0	0
	Gross Cost	3059.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Guard	Qty	7	0	0	0	0	0	0	0	0
	Gross Cost	258622.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reserve	Qty	0	0	0	0	0	0	0	0	0
	Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	7	0	0	0	0	0	0	0	0
	Gross Cost	261681	0	0	0	0	0	0	0	0

**Description:**  
The Joint Cargo Aircraft (JCA) program was established to correct operational shortfalls to cargo mission requirements, provide commonality with other aviation platforms, and replace multiple retiring aircraft systems. This aircraft addresses these shortfalls, and replaces retiring C-23s, and selected C-12s. A cargo aircraft is ideally suited to move time-sensitive, mission-critical supply parts, equipment and personnel over extended distances. The JCA will have a payload interoperability with the C-130 aircraft and the CH-47F. This requires a payload capability of at least 6,000 pounds (lbs) of cargo allowing trans-loading to a CH-47F and fully supporting the Brigade Combat Team (BCT) missions. The aircraft must be capable of transporting, as a minimum, three 463L pallets. The JCA will bypass unsecured lines of communication and deliver routine sustainment items directly to forward supply bases. The JCA will have a robust takeoff and landing capability and be able to operate into and out of unimproved landing areas. The dimensions of the Future Force joint tactical area or the operational area of the ground force commander will severely limit the usefulness of rotary wing aircraft in re-supply missions. The distances are too great for effective use of helicopters. The JCA, with its extended range and speed, will meet time sensitive mission critical needs of the Future Force. The JCA will easily cover these distances and free the rotary-wing fleet for their primary tactical missions. The JCA will provide a multi-mission, multi-functional platform for the commanders use in accomplishing the mission.

**Justification:**

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date:
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February 2010

Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature JOINT CARGO AIRCRAFT (JCA) (A11000)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: 273744/D18
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Beginning in FY 2010, the JCA mission has been transferred to the Air Force. The Army has obligated and will continue to execute the FY 2009 program.

Exhibit P-5, Weapon ACFT Cost Analysis	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature: JOINT CARGO AIRCRAFT (JCA) (A11000)			Weapon System Type:	Date: February 2010				
ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>Joint Cargo Aircraft</b>										
Hardware		220230	7	31461						
Engineering Support		1162								
Support Equipment		171								
Interim Contractor Support & Training		31950								
Program Office Management		8168								
<b>Total:</b>		<b>261681</b>								

<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 1/ Aircraft	Weapon System Type:	P-1 Line Item Nomenclature: JOINT CARGO AIRCRAFT (JCA) (A11000)
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WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Units	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>Hardware</b>										
FY 2008	L-3 Comm Integ Sys Greenville, Texas	C/FFP/REQ	Redstone Arsenal, AL	Apr 08	Jan 10	4	30048	YES		MAR 06
FY 2009	L-3 Comm Integ Sys Greenville, Texas	C/FFP/REQ	Redstone Arsenal, AL	Jan 09	Jan 11	7	31461	YES		MAR 06

REMARKS: Begining in FY 2010, the JCA mission has been transferred to the Air Force.





**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
C-12 CARGO AIRPLANE (A02700)

Program Elements for Code B Items: Code: Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty				5						5
Gross Cost				78.1						78.1
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1				78.1						78.1
Initial Spares										
Total Proc Cost				78.1						78.1
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The C-12 fixed wing aircraft platform hosts a number of Army Intelligence, Surveillance and Reconnaissance/Reconnaissance Surveillance and Target Acquisition (ISR/RSTA) sensor systems that support irregular warfare in Overseas Contingency Operations (OCO). Included in those systems are Red Ridge, Guardrail Common Sensor (GRCS), Aerial Reconnaissance Multi Sensor (ARMS) (Iraq), the Medium Altitude Reconnaissance and Surveillance Systems (MARSS) (Iraq and Afghanistan), and Constant Hawk (Afghanistan). The ARMS system is composed of B-200 (C-12) aircraft equipped with imagery sensors, specialized COMINT sensors, and an array of line of sight and beyond line of sight communications equipment. The aircraft were fielded to Operation Iraqi Freedom (OIF) in FY06 and have been providing daily support to the (Task Force Observe, Detect Identify, Neutralize (TF ODIN) commander. Constant Hawk (CH) in Afghanistan is hosted on a King Air 350 (C-12) aircraft. CH is a persistent surveillance wide field of view airborne intelligence, surveillance and reconnaissance (AISR) system conducting Counter Improvised Explosive Device (IED) surveillance and forensic force protection mission. CH uses high resolution Electro Optic (EO) cameras mounted on manned aircraft to provide persistent surveillance of a designated Named Area of Interest (NAI). The MARRS aircraft are primarily King Air 300's (C-12 variant) equipped with numerous sensors to include imagery and communications intelligence (COMINT) payloads. They also include several line-of-sight and beyond line of sight communications systems and on board (manned) processing of the imagery and COMINT. The Enhanced MARSS (EMARSS) program provides additional MARSS systems based on a King Air 350 Extended Range (ER) aircraft. Laser Detection and Ranging (LIDAR) is a persistent surveillance AISR system.

**Justification:**

FY11 OCO procurement dollars in the amount of \$78.060 million supports aircraft procurement for five (5) aircraft to support ISR task force missions.

The FY10 column above reflects the appropriated amounts for the FY10 base and Overseas Contingency Operations only. It does not include \$45.0 million required to support the build-up of forces in Afghanistan which will be requested in a separate submission.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature: C-12 CARGO AIRPLANE (A02700)					Weapon System Type:	Date: February 2010		
ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>C-12 Aircraft</b> Hardware and Associated Support  <b>Total:</b>								78060	5	15612
								<b>78060</b>		



<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 1/ Aircraft	Weapon System Type:	P-1 Line Item Nomenclature: C-12 CARGO AIRPLANE (A02700)								
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>Hardware and Associated Support</b> FY 2011	Hawker Beech Wichita, KS	SS/FFP	Redstone Arsenal, AL	Feb 11	Aug 12	5	15612	Yes		Nov 10

REMARKS:



**FY 13 / 14 BUDGET PRODUCTION SCHEDULE**

P-1 ITEM NOMENCLATURE  
C-12 CARGO AIRPLANE (A02700)

Date:  
February 2010

COST ELEMENTS						Fiscal Year 13												Fiscal Year 14												Later
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 13												Calendar Year 14												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware and Associated Support																														
1	FY 11	A	5	2	3	1	1	1																				0		
Total						3	1	1	1																					
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	Hawker Beech, Wichita, KS	1	5	18		1	Initial	0	4	19	23	
							Reorder	0	0	0	0	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
AERIAL COMMON SENSOR (ACS) (MIP) (A02005)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost				88.5	204.7	243.4	385.4	362.4		1284.4
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1				88.5	204.7	243.4	385.4	362.4		1284.4
Initial Spares										
Total Proc Cost				88.5	204.7	243.4	385.4	362.4		1284.4
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The Aerial Common Sensor program has been restructured and renamed the Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS). EMARSS is the Army's future force airborne intelligence collection, processing, and targeting support system. EMARSS is a manned multi-INT Airborne Intelligence Surveillance and Reconnaissance (AISR) system that provides a persistent capability to detect, locate, classify/identify, and track surface targets in day/night, near-all-weather conditions with a high degree of timeliness and accuracy. EMARSS aircraft will be located within Aerial Exploitation Battalions (AEB), which are assigned to the U.S. Army Intelligence and Security Command (INSCOM). The EMARSS system will consist of a commercial derivative aircraft equipped with Electro-optic/Infrared (EO/IR) Full Motion Video (FMV) sensor, a COMINT collection system, an aerial precision geolocation system, line-of-site (LOS) tactical and beyond line-of-site (LOS/BLOS) communications suites, two operator workstations and a self-protection suite.

EMARSS will operate as a single platform in support of tactical missions. Mission altitude and flight tracks are chosen to optimize sensor data collection on the target area of interest while avoiding known threats. Flight tracks may be selected to strike a balance among the capabilities of multiple sensors, or to optimize collection from individual sensors based upon the daily collection tasking dictated by the tactical commanders Priority Intelligence Requirements (PIRs). EMARSS will provide efficient response to Combat Forces ISR tasking with centralized Processing, Exploitation & Dissemination (PED) of ISR while simultaneously transmitting critical FMV and intelligence products to engaged tactical forces.

**Justification:**

FY11 Base procurement dollars in the amount of \$88.483 million supports procurement of three (3) EMARSS LRIP systems and spares. These systems are expected to support Global operations. FY11 OCO - No budget request

Exhibit P-5, Weapon ACFT Cost Analysis	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature: AERIAL COMMON SENSOR (ACS) (MIP) (A02005)			Weapon System Type:	Date: February 2010				
ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
EMARSS LRIP Systems								65200	3	21730
Software Licenses								1000		
NRE								4400		
Initial Spares								3300		
ECPs								400		
Support Equipment								1600		
Training Spt/Manuals								700		
Interim Contractor Support								300		
Government Furnished Equipment (GFE)								6100		
Gov't PM								4250		
Other Government Agency Support								1233		
<b>Total:</b>								<b>88483</b>		

<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 1/ Aircraft	Weapon System Type:	P-1 Line Item Nomenclature: AERIAL COMMON SENSOR (ACS) (MIP) (A02005)								
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Units	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>EMARSS LRIP Systems</b> FY 2011	TBD TBD	C/FP	Aberdeen, MD	Sep 11	Oct 12	3	21730	No		Jun 11

REMARKS:

**FY 11 / 12 BUDGET PRODUCTION SCHEDULE**

P-1 ITEM NOMENCLATURE  
AERIAL COMMON SENSOR (ACS) (MIP) (A02005)

Date:  
February 2010

COST ELEMENTS						Fiscal Year 11												Fiscal Year 12												Later																					
MFR	FY	SERV	PROC QTY x1000	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11												Calendar Year 12																																	
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																						
EMARSS LRIP Systems																																																			
1	FY 12	A	3	0	3																							3	0																						
Total																																																			
<table border="0" style="width:100%; text-align:center;"> <tr> <td>OCT</td><td>NOV</td><td>DEC</td><td>JAN</td><td>FEB</td><td>MAR</td><td>APR</td><td>MAY</td><td>JUN</td><td>JUL</td><td>AUG</td><td>SEP</td><td>OCT</td><td>NOV</td><td>DEC</td><td>JAN</td><td>FEB</td><td>MAR</td><td>APR</td><td>MAY</td><td>JUN</td><td>JUL</td><td>AUG</td><td>SEP</td> </tr> </table>																												OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																												

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct			
											FY11 is the first year of Procurement Funding. Contractor Name, Production Rates and Schedules are TBD.
						Initial					
						Reorder					
						Initial					
						Reorder					
						Initial					
						Reorder					
						Initial					
						Reorder					
						Initial					
						Reorder					

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
MQ-1 UAV (A00005)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

357204 RDT&E, 375219 RDT&E, B00305 / B00302- OPA

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty			24	26	27	27	27	27		158
Gross Cost			480.2	506.3	483.5	490.6	510.3	478.1		2948.8
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1			480.2	506.3	483.5	490.6	510.3	478.1		2948.8
Initial Spares										
Total Proc Cost			480.2	506.3	483.5	490.6	510.3	478.1		2948.8
Flyaway U/C			13.8	12.7	13.0	13.5	14.7	14.4		82.1
Weapon System Proc U/C			20.0	19.5	17.9	18.2	18.9	17.7		112.2

**Description:**

The Extended Range Multi-Purpose (ERMP) Unmanned Aircraft System (UAS) will provide a real-time responsive capability to conduct long-dwell, wide area reconnaissance, surveillance, target acquisition, communications relay, and attack missions (up to 4 HELLFIRE Missiles aboard) to the Division Commander. The ERMP addresses an ever increasing demand for greater range, altitude, endurance and payload flexibility which enables dynamic mission changes while in flight. The ERMP program will deliver 14 systems, 12 to support active Army requirements and 2 to support Special Operations requirements. The ERMP will be fielded as a system to a company level organization assigned to each of the 10 active Army Divisions Combat Aviation Brigades (CAB) providing a capability that is responsive to supported units based on the division Commander's priorities. The ERMP system consists of 12 MQ-1C Sky Warrior aircraft with Electro-Optical/Infrared, Synthetic Aperture Radar with Ground Moving Target Indicator (EO/IR/SAR/GMTI), Communications Relay and precision weapons as payloads; Ground equipment includes 5 One System Ground Control Stations (OSGCS), 5 Ground Data Terminals (GDT), 2 Portable Ground Control Stations (PGCS), 2 Portable Ground Data Terminals (PGDT), a Satellite Communication (SATCOM) Ground Data Terminal (SGDT) and other associated ground support equipment. The acquisition strategy capitalizes upon competitive forces, bringing cutting edge improvements at the best cost and value to support the major thrusts of the DoD UAS Roadmap, and the imperatives of Army modernization and Army Aviation Transformation. This includes a heavy fuel engine, 30 mission hours of endurance (24 hours on station at 300 KM range), Tactical Common Data Link technology, network connectivity that reduces information cycle time and enhances overall battle space awareness, teaming with manned platforms, and steps toward integration of UAS into national and international airspace. The ability to operate multiple Sky Warrior aircraft simultaneously from a single One System Ground Control Station (currently mission and Air Data Relay Aircraft), a 3,200 pound gross take off weight (with growth to 3,600 pounds), Fowler flaps which improve take-off and landing performance, Automatic Take-off and Landing and the flexibility to operate with or without SATCOM data links are characteristics which make this system a significant combat multiplier.

The ERMP is currently in the Engineering Manufacturing and Development (EMD) phase with a Milestone C scheduled for February 2010, Initial Operational Test and Evaluation is planned in the fourth quarter of FY 2011, and a Full Rate Production decision planned in the second quarter of FY 2012. A Quick Reaction Capability system was fielded in July 2009, with a second system planned to field in July 2010. The FY 2011 procurement request is for two Low Rate Initial Production lots.

**Justification:**

FY2011 ERMP Base funding of \$459.310 million procures 26 Air Vehicles, associated GFE and other hardware cost, Engineering Change Orders and New Equipment Training

FY2011 ERMP OCO funding of \$47.0 million procures 3 Attrition Air Vehicles, associated GFE and New Equipment Training.



Exhibit P-5, Weapon ACFT Cost Analysis		Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft			P-1 Line Item Nomenclature: MQ-1 UAV (A00005)			Weapon System Type:		Date: February 2010	
ACFT Cost Elements		ID CD	FY 09			FY 10			FY 11		
			Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
			\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
<b>AIRCRAFT Flyaway Costs</b>											
<b>MQ1 (SKY WARRIOR - ERMP)</b>											
Aircraft						160511	26	6173.5	176787	29	6096.1
Ground Control Station (GCS)						41415		41415.0	40501		40501.0
Other Hardware						59777		59777.0	57612		57612.0
Engineering Change Order						25188		25188.0	19602		19602.0
Non-Recurring Production						35497			14666		14666.0
<b>Prime Contractor Cost</b>						<b>322388</b>			<b>309168</b>		
<b>GOVERNMENT</b>											
Government Furnished Equipment (GFE)						13368		13368.0	13595		13595.0
Program Management						13084		13084.0	19958		19958.0
Test and Evaluation						19232		19232.0	19462		19462.0
Transportation									15		
Initial Spares						32085		32085.0	32630		
Training						8916		8916.0	17101		17101.0
Software						8883		8883.0	9744		9744.0
Other Government Agencies						62214		62214.0	84637		84637.0
<b>Subtotal Government Cost</b>						<b>157782</b>			<b>197142</b>		
<b>Total ERMP Cost</b>						<b>480170</b>			<b>506310</b>		
<b>Total:</b>						<b>480170</b>			<b>506310</b>		

<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 1/ Aircraft	Weapon System Type:	P-1 Line Item Nomenclature: MQ-1 UAV (A00005)								
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>MQ1 (SKY WARRIOR - ERMP)</b>										
FY 2010	GENERAL ATOMICS / ASI SAN DIEGO, CA	SS/FPI	AMCOM	Mar 10	Dec 11	26	6174	Y	N/A	N/A
FY 2011	GENERAL ATOMICS / ASI SAN DIEGO, CA	SS/FPI	AMCOM	Mar 11	Dec 12	29	6096	Y	N/A	N/A

REMARKS: FY 10 - Funding includes 2 systems (24 ea) plus 2 attrition acft - correct total is 26 ea.

FY 10 / 11 BUDGET PRODUCTION SCHEDULE						P-1 ITEM NOMENCLATURE MQ-1 UAV (A00005)												Date: February 2010												
COST ELEMENTS						Fiscal Year 10												Fiscal Year 11												
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 10												Calendar Year 11												Later
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Aircraft																														
1	FY 10	A	26	0	26																							26		
1	FY 11	A	29	0	29																							29		
Total					55																							55		
					OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	GENERAL ATOMICS / ASI, SAN DIEGO, CA	12	12	36		1	Initial	8	5	21	26	
							Reorder	8	5	21	26	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

FY 12 / 13 BUDGET PRODUCTION SCHEDULE						P-1 ITEM NOMENCLATURE MQ-1 UAV (A00005)												Date: February 2010												
COST ELEMENTS						Fiscal Year 12												Fiscal Year 13												Later
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 12												Calendar Year 13												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Aircraft																														
1	FY 10	A	26	0	26			2	2	2	2	2	3	2	2	2	2	2	3									0		
1	FY 11	A	29	0	29													2	2	2	2	2	3	2	2	3	3	6		
Total					55			2	2	2	2	2	3	2	2	2	2	2	3	2	2	2	2	2	3	2	2	3	3	6
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	GENERAL ATOMICS / ASI, SAN DIEGO, CA	12	12	36		1	Initial	8	5	21	26	
							Reorder	8	5	21	26	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					



**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
RQ-11 (RAVEN) (A00010)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

375204 RDT&E, 375232 RDT&E, B00303 - OPA

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty			876	312	276	225	369	387		2445
Gross Cost			79.5	37.6	18.7	16.4	24.1	25.5		201.7
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1			79.5	37.6	18.7	16.4	24.1	25.5		201.7
Initial Spares										
Total Proc Cost			79.5	37.6	18.7	16.4	24.1	25.5		201.7
Flyaway U/C			31.1	18.0	16.0	13.6	21.2	22.5		122.3
Weapon System Proc U/C			0.1	0.1	0.1	0.1	0.1	0.1		0.5

**Description:**

The Small Unmanned Aircraft System (SUAS) program provides the ground maneuver battalions and below with situational awareness and enhanced force protection. SUAS is a man portable unmanned aircraft system capable of handling a wide variety of Intelligence, Surveillance & Reconnaissance (ISR) tasks at Battalion and below. The SUAS aircraft has a wingspan of 4.5 feet and weighs 4.2 pounds. It is hand-launched, and provides day or night aerial observation, day or night, at line-of-sight ranges up to 10 kilometers. The aircraft has an endurance rate of 90 minutes and can deliver color or infrared imagery in real time to the ground control and remote viewing stations. SUAS obtained Milestone C approval 6 Oct 05 and successfully completed IOT&E in June 06. The program obtained Full Rate Production authority 5 Oct 06. System performance and operational capability were enhanced through incorporation of Digital Data Link (DDL). This DDL enhancement improved operational capability for the Warfighter by: Increasing the number of channels that can be selected allowing for more air vehicles to be flown in a smaller area; Improvement in operational range through relay capability; Incorporating encryption capability; and Integration of advanced digital payloads. The first DDL systems were fielded in December 2009. FY10 and later will include DDL in the production baseline. Additionally, retrofit kits will be procured to bring all non-DDL equipped systems to the DDL configuration.

**Justification:**

FY 2011 Base funding of \$20.2 million will procure 312 Air Vehicles.

FY 2011 OCO funding of \$17.4 million will procure 248 Digital Data Link (DDL) retrofit kits.

Exhibit P-5, Weapon ACFT Cost Analysis	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature: RQ-11 (RAVEN) (A00010)			Weapon System Type:			Date: February 2010		
ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>RAVEN - RQ-11</b>										
<b>PRIME CONTRACT SUPPORT</b>										
Air Vehicles					10738	618	17	5513	312	18
Initial Spares Package (ISP)					4693		4693	2409		
Other System Hardware					8328		8328	4276		
Digital Data Link Retrofit					42076	628	67	16899	248	68
Operator Training					2674			2719		
<b>Subtotal Prime Contractor Costs</b>					<b>68509</b>			<b>31816</b>		
<b>GOVERNMENT SUPPORT</b>										
Government Furnished Equipment (GFE)					1364		1364	700		
Program Management					7951		7951	3411		
Technical					663			675		
Logistics					963			980		
<b>Subtotal Government Cost</b>					<b>10941</b>			<b>5766</b>		
<b>Total Raven Cost</b>										
<b>Total:</b>					<b>79450</b>			<b>37582</b>		







COST ELEMENTS						Fiscal Year 11												Fiscal Year 12												Later
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11												Calendar Year 12												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Air Vehicles																																	
1	FY 10	A	618	385	233	77	77	79																									0
1	FY 11	A	312	0	312				A					39	39	39	39	39	39	39	39												0
Total																																	
					545	77	77	79						39	39	39	39	39	39	39													
OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP																																	

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS
		MIN	1-8-5	MAX			1	Prior 1 Oct			
1	AERO VIRONMENT, SIMI VALLEY, CA	250	750	1500		1	Initial	0	0	0	0
							Reorder	0	3	4	7
							Initial				
							Reorder				
							Initial				
							Reorder				
							Initial				
							Reorder				

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
BCT UNMANNED AERIAL VEH (UAVS) INCR 1 (A00015)

Program Elements for Code B Items:

Code:

Other Related Program Elements:  
0305204A - RDT&E, BA0330 (OPA)

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost				44.2	40.2	12.8	3.7	1.9	2.5	105.2
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1				44.2	40.2	12.8	3.7	1.9	2.5	105.2
Initial Spares										
Total Proc Cost				44.2	40.2	12.8	3.7	1.9	2.5	105.2
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The XM156 Class I Unmanned Aerial Vehicle (UAV) provides the dismounted soldier Reconnaissance, Surveillance, and Target Acquisition (RSTA) and has the ability to hover and stare for military operations on rural and urban terrain. The Class I UAV provides imagery data in order to recognize personnel and provide targeting information to the Brigade Combat Team (BCT) Modernization network during day and night operations and in adverse weather conditions from as high as 1000 feet above ground level. The Army has incorporated an expedited Class I into Infantry BCT Increment 1 (IBCT INC 1) to provide additional Intelligence, Surveillance and Reconnaissance (ISR) capability to the soldier starting in 2011. The Class I UAV Increment 1 capability will consist of a 25 pound vehicle with a Commercial off the Shelf (COTS) Electro Optical (EO) sensor and a COTS Infra-Red (IR) sensor and a gasoline based propulsion system.

**Justification:**

FY2011 procures the equipment to effectively equip the second and third Increment 1 IBCTs for the fielding in FY2012/2013. It also provides for the Class I UAV unique Systems Engineering / Program Management and fielding efforts. The first Increment 1 IBCT was funded in FY2010 under WTCV procurement budget line (G86200) and the Advance Procurement to support the FY2011 procurement of the Class I UAV was also funded in the aforementioned WTCV budget line.

Exhibit P-5, Weapon ACFT Cost Analysis	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature: BCT UNMANNED AERIAL VEH (UAVS) INCR 1 (A00015)			Weapon System Type:	Date: February 2010				
ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>BCT Unmanned Aerial Vehicles (UAVs)</b>										
Non Recurring Production										
								353		
<b>Recurring Production Costs</b>										
Class I UAS										
Platform										
								30226	119	254
C4ISR										
								936	49	19
Common Controller										
								120		
<b>Recurring Production Support Costs</b>										
Production Support										
								7089		
Fielding Support										
								4114		
Advance Procurement										
								1368		
<b>Total:</b>								<b>44206</b>		





<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature HELICOPTER, LIGHT UTILITY (LUH) (A05001)
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Program Elements for Code B Items:		Code:	Other Related Program Elements:							
	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	84	44	54	50	44	44	20		5	345
Gross Cost	468.1	276.4	325.2	305.3	277.2	274.3	140.7		59.2	2126.4
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	468.1	276.4	325.2	305.3	277.2	274.3	140.7		59.2	2126.4
Initial Spares	0.6									0.6
Total Proc Cost	468.7	276.4	325.2	305.3	277.2	274.3	140.7		59.2	2127.0
Flyaway U/C										
Weapon System Proc U/C	5.6	6.3	6.0	6.1	6.3	6.2	7.0		11.8	55.4

<b>P-40 Breakdown</b>										
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015		
Active	Qty	26	21	16	9	23	7	0		
	Gross Cost	184616.0	138946.0	106103.0	59621.0	130296.0	29403.0	0.0		
National Guard	Qty	18	33	34	35	21	13	0		
	Gross Cost	91743.0	186285.0	199169.0	217539.0	144018.0	111301.0	0.0		
Reserve	Qty	0	0	0	0	0	0	0		
	Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total	Qty	44	54	50	44	44	20	0		
	Gross Cost	276359	325231	305272	277160	274314	140704	0		

**Description:**  
The Light Utility Helicopter, UH-72A LAKOTA will provide general aviation support for Continental United States (CONUS) based Table of Distribution and Allowance (TDA) and Table of Organization and Equipment (TOE) aviation units in the active and reserve components. The UH-72A platform will provide the flexibility to respond to Homeland Security (HLS) requirements, conduct civil search and rescue operations, support damage assessment, support test and training centers, perform generating force missions, augment the HH-60 Medical Evacuation (MEDEVAC) aircraft, and provide support to CONUS counterdrug operations. The UH-72A will conduct general support utility helicopter missions and execute tasks as part of an integrated effort with other joint services, government agencies, and non-governmental organizations. The UH-72A provides time-sensitive transport of supplies or key personnel, air mobility to assist civil authorities through the execution of search and rescue or disaster relief operations, advanced warning/detection of external threats to include threats to our borders, augmentation of air ambulance capabilities, and limited command and control operations in the conduct of HLS. The LUH program is currently in full rate production.

**Justification:**  
FY 2011 Base procurement dollars in the amount of \$305.272 million supports procurement of aircraft, fielding, engineering services, training, program office support, and approved modifications for 50 UH-72A aircraft.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date:
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February 2010

Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature HELICOPTER, LIGHT UTILITY (LUH) (A05001)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Gross Cost	91.74	186.28	199.17	217.54	144.0	111.30
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In accordance with congressional direction, Army has funded modifications for the aircraft added to the FY 2009 program. Revised funding is reflected on subsequent exhibits.



Exhibit P-5, Weapon ACFT Cost Analysis		Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft			P-1 Line Item Nomenclature: HELICOPTER, LIGHT UTILITY (LUH) (A05001)			Weapon System Type:		Date: February 2010	
ACFT Cost Elements		ID CD	FY 09			FY 10			FY 11		
			Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
			\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
<b>Procurement Hardware Costs</b>											
Airframes/Includes non-recurring			219971	44	4999	272604	54	5048	263233	50	5265
B Kits (MEDEVAC & Hoist)			1193	6	199	6587	32	206	2983	14	213
Engineering Changes			34109			22536			12168		
<b>Subtotal Hardware Cost</b>			<b>255273</b>			<b>301727</b>			<b>278384</b>		
<b>Flyaway Support Costs</b>											
System Engineering & Program Management			6800			7111			7427		
System Test & Evaluation											
Engineering Services			2156			2386			2467		
<b>Subtotal Flyaway Support Costs</b>			<b>8956</b>			<b>9497</b>			<b>9894</b>		
<b>Total Flyaway</b>			<b>264229</b>			<b>311224</b>			<b>288278</b>		
<b>Other Weapon System Cost</b>											
Procedural Trainers											
Fielding			12130			14007			16994		
Other Weapon System Requirements											
<b>Subtotal Other Weapon System Cost</b>			<b>12130</b>			<b>14007</b>			<b>16994</b>		
<b>Total Procurement Cost</b>			<b>276359</b>			<b>325231</b>			<b>305272</b>		
Gross P-1 End Cost											
Less: Prior Year Adv Proc											
Net P-1 Full Funding Cost											
Plus: P-1 CY Adv Proc											
Other Non P-1 Costs											
<b>Total:</b>			<b>276359</b>			<b>325231</b>			<b>305272</b>		

<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 1/ Aircraft	Weapon System Type:	P-1 Line Item Nomenclature: HELICOPTER, LIGHT UTILITY (LUH) (A05001)
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WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Units	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>Airframes/Includes non-recurring</b>										
FY 2009	EADS-NA Columbus, MS	FFP	EADS-NA Columbus, MS	Nov 08	Sep 09	44	4999			
FY 2010	EADS-NA Columbus, MS	FFP	EADS-NA Columbus, MS	Dec 09	Sep 10	54	5048			
FY 2011	EADS-NA Columbus, MS	FFP	EADS-NA Columbus, MS	Dec 10	Sep 11	50	5265			

REMARKS:

FY 10 / 11 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE HELICOPTER, LIGHT UTILITY (LUH) (A05001)										Date: February 2010									
COST ELEMENTS					Fiscal Year 10										Fiscal Year 11										Later				
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 10										Calendar Year 11													
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR		MAY	JUN	JUL	AUG
Airframes/Includes non-recurring																													
1	FY 08	A	42	0																								0	
1	FY 09	A	25	0																								0	
1	FY 09	NG	19	0																								0	
1	FY 09	TOT	44	0		3	2	3	3	3	5	5	5	5	5	4	1											0	
1	FY 10	A	21	0																								0	
1	FY 10	NG	33	0																								0	
1	FY 10	TOT	54	0				A								4	5	5	5	4	4	5	5	4	4	5	4	0	
1	FY 11	A	16	0																								0	
1	FY 11	NG	34	0																								0	
1	FY 11	TOT	50	0														A									4	0	
Total						3	2	3	3	3	5	5	5	5	5	4	5	5	5	5	4	4	5	5	4	4	5	4	4
					OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	EADS-NA, Columbus, MS	23	52	60		1	Initial	0	9	5	14	
							Reorder	0	2	9	11	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

COST ELEMENTS						Fiscal Year 12												Fiscal Year 13												Later
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 12												Calendar Year 13												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Airframes/Includes non-recurring																														
1	FY 08	A	42	0																							0			
1	FY 09	A	25	0																							0			
1	FY 09	NG	19	0																							0			
1	FY 09	TOT	44	0																							0			
1	FY 10	A	21	0																							0			
1	FY 10	NG	33	0																							0			
1	FY 10	TOT	54	0																							0			
1	FY 11	A	16	0																							0			
1	FY 11	NG	34	0																							0			
1	FY 11	TOT	50	0		4	4	4	4	4	5	4	5	4	4	4											0			
Total						4	4	4	4	4	5	4	5	4	4	4														
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			1	Initial				Reorder
1	EADS-NA, Columbus, MS	23	52	60		1	Initial	0	9	5	14	
							Reorder	0	2	9	11	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
AH-64 APACHE BLOCK III (A05111)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty			8	16	27	56	58	62	464	691
Gross Cost			160.7	390.6	692.0	1231.7	1649.5	1224.3	5534.6	10883.6
Less PY Adv Proc				57.9	161.2	192.8	165.8	167.0	1512.9	2257.5
Plus CY Adv Proc			57.9	161.2	192.8	165.8	167.0	175.7	1337.1	2257.5
Net Proc P1			218.6	493.8	723.7	1204.7	1650.7	1233.0	5358.9	10883.6
Initial Spares										
Total Proc Cost			218.6	493.8	723.7	1204.7	1650.7	1233.0	5358.9	10883.6
Flyaway U/C										
Weapon System Proc U/C			27.3	30.9	26.8	21.5	28.5	19.9	11.5	166.4

**Description:**

Apache Block III (AB3) is a result of the continuing evolution process to keep the Apache fleet viable on the battlefield. AB3 is the long-term sustainment effort for the fleet while meeting current and future operational capability requirements. The AB3 program is the remanufacture of the aging Apache fleet integrating proven technologies into a mature weapon system platform. AB3 will add significant combat capability while addressing obsolescence issues to ensure the aircraft remains a realistic combat multiplier beyond 2025. AB3 will address current system shortfalls by integrating: Unmanned Aircraft System (UAS) Level III - IV Control Capability, Improved Situational Awareness, an Upgraded Communications Suite, Improved Drive and Propulsion Systems, Improved Targeting Capability, Increased Computer Processing Capability and Speed, Improved Navigation Systems, and Improved Diagnostics and Maintainability. These system improvement requirements were generated by operational short falls identified during real world combat missions. AB3 enters the fleet in 2012.

**Justification:**

The AB3 Modernization is an incremental integration of block modifications providing the capabilities for the Longbow Apache to transition to the Future Force (FF), to increase survivability, and reduce the logistics footprint. AB3 satisfies the updated Longbow Apache Capability Development Document (CDD) mandates for modernization.

FY 11 Base funding in the amount of \$493.8 Million will procure Advanced Procurement items, 16 Low Rate Initial Production (LRIP) Longbow Apache Block III aircraft, and associated support.

The NRE will encompass subsystem integration and will utilize existing test aircraft, incorporate the technical insertions, and initiate appropriate qualification and operational flight-testing. The Low Rate Initial Production (LRIP) effort will include a total quantity of 51 aircraft, which will take 39 months for delivery. These 51 LRIP aircraft are to be used for operational testing, First Unit Equipped (FUE), and training base fielding.

Exhibit P-5, Weapon ACFT Cost Analysis	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature: AH-64 APACHE BLOCK III (A05111)			Weapon System Type:			Date: February 2010		
ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>APACHE BLOCK III (AB3) Flyaway Costs</b>										
Airframes					34245	8	4281	64918	16	4057
Engines					6665	16	417	13556	32	424
GFE					9160		9160	19290		19290
Engineering Change Orders (ECO)					651		651	1233		1233
Other Costs					4079		4079	4746		4746
Non-Recurring Costs					81446		81446	98661		98661
<b>Support Cost</b>										
Support Equipment					122		122	231		231
PDSS (Software)								17929		17929
Other Costs					21200		21200	89036		89036
<b>Initial Spares</b>										
Initial Spares					3168		3168	6646		6646
<b>Subtotal Costs</b>					<b>160736</b>			<b>316246</b>		
Advance Procurement					57890		57890	133855		133855
<b>Rotary Wing Pilot Enhancement</b>										
Advance Procurement								27296		27296
Aircraft								16434		16434
<b>Combat Aviation Brigade 48 New Build</b>										
Aircraft										
<b>Subtotal</b>					<b>57890</b>			<b>177585</b>		
<b>Total:</b>					<b>218626</b>			<b>493831</b>		

<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 1/ Aircraft	Weapon System Type:	P-1 Line Item Nomenclature: AH-64 APACHE BLOCK III (A05111)
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WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>Airframes</b>										
FY 2010	The Boeing Company Mesa, AZ	SS/FFP	AMCOM	Aug 10	Oct 11	8	4115	N		Jun 08
FY 2011	The Boeing Company Mesa, AZ	SS/FFP	AMCOM	Mar 11	Mar 12	16	3972	N		Jun 08

REMARKS: FY10 -- LRIP Lot 1 Production (8 aircraft)  
FY11 -- LRIP Lot 2a Production (16 aircraft)

**FY 12 / 13 BUDGET PRODUCTION SCHEDULE**

P-1 ITEM NOMENCLATURE  
AH-64 APACHE BLOCK III (A05111)

Date:  
February 2010

COST ELEMENTS						Fiscal Year 12												Fiscal Year 13												Later
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 12												Calendar Year 13												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Airframes																														
1	FY 10	A	8	0																								0		
1	FY 10	ANG	0	0																								0		
1	FY 10	AR	0	0																								0		
1	FY 10	TOT	8	0		1	1	2	2	2																		0		
1	FY 11	A	16	0																								0		
1	FY 11	ANG	0	0																								0		
1	FY 11	AR	0	0																								0		
1	FY 11	TOT	16	0						2	1	2	2	3	3	3												0		
Total						1	1	2	2	2	1	2	2	3	3	3														
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	The Boeing Company, Mesa, AZ	4	8	12		1	Initial	0	11	13	24	
							Reorder	0	6	12	18	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					



**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
AH-64 APACHE BLOCK III (A05111)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost										
Less PY Adv Proc										
Plus CY Adv Proc			57.9	161.2	192.8	165.8	167.0	175.7	1337.1	2257.5
Net Proc P1			57.9	161.2	192.8	165.8	167.0	175.7	1337.1	2257.5
Initial Spares										
Total Proc Cost			57.9	161.2	192.8	165.8	167.0	175.7	1337.1	2257.5
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

Apache Block III (AB3) is a result of the continuing evolution process to keep the Apache fleet viable on the battlefield. AB3 is the long-term sustainment effort for the fleet while meeting current and future operational capability requirements. The AB3 program is the remanufacture of the aging Apache fleet integrating proven technologies into a mature weapon system platform. AB3 will add significant combat capability while addressing obsolescence issues to ensure the aircraft remains a realistic combat multiplier beyond 2025.

**Justification:**

Advanced Procurement funds long-lead items in support of the Apache Block III program.

<b>Advance Procurement Requirements Analysis-Funding (P-10A)</b>				First System Award Date:		First System Completion Date:			Date: February 2010			
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft						P-1 Line Item Nomenclature / Weapon System: AH-64 APACHE BLOCK III						
(\$ in Millions)												
	<b>PLT (mos)</b>	<b>When Rqd (mos)</b>	<b>Pr Yrs</b>	<b>FY 09</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY 12</b>	<b>FY 13</b>	<b>FY 14</b>	<b>FY 15</b>	<b>To Comp</b>	<b>Total</b>
End Item Quantity												
Apache Block III - Reman	12	12			57.9	133.9	151.9	131.5	167.0	175.7	1337.1	2155.0
Apache Block III - Rotary Wing Pilot Enhancement	12	12				27.3	40.9	34.3				102.5
<b>Total Advance Procurement</b>			<b>0.0</b>	<b>0.0</b>	<b>57.9</b>	<b>161.2</b>	<b>192.8</b>	<b>165.8</b>	<b>167.0</b>	<b>175.7</b>	<b>1337.1</b>	<b>2257.5</b>

Advance Procurement Requirements Analysis-Funding (P-10B)					Date: February 2010	
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft			P-1 Line Item Nomenclature / Weapon System: AH-64 APACHE BLOCK III			
						(\$ in Millions)
				2011		
				Qty	Contract Forecast Date	Total Cost Request
	PLT (mos)	Quantity Per Assembly	Unit Cost			
Apache Block III - Reman	12			18.0	1QFY11	133.9
Apache Block III - Rotary Wing Pilot Enhancement	12			9.0	1QFY11	27.3
<b>Total Advance Procurement</b>						<b>161.2</b>

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
UH-60 BLACKHAWK (MYP) (AA0005)

Program Elements for Code B Items:

Code:

Other Related Program Elements:  
0203744A/Project 504

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	1829	66	81	74	75	78	74	77	531	2885
Gross Cost	13045.1	1091.5	1426.6	1393.3	1452.7	1485.8	1420.2	1457.8	10304.3	33077.1
Less PY Adv Proc	2796.9	116.8	134.5	102.2	100.5	221.3	149.3	173.9	1362.5	5158.0
Plus CY Adv Proc	2915.0	136.8	98.7	100.5	223.8	158.5	168.2	157.9	1198.7	5158.0
Net Proc P1	13163.1	1111.5	1390.8	1391.6	1576.0	1422.9	1439.1	1441.7	10140.5	33077.1
Initial Spares	421.3									421.3
Total Proc Cost	13584.4	1111.5	1390.8	1391.6	1576.0	1422.9	1439.1	1441.7	10140.5	33498.4
Flyaway U/C										
Weapon System Proc U/C	7.2	16.8	17.2	18.8	21.0	18.2	19.4	18.7	19.1	156.5

**Description:**

The UH-60 BLACK HAWK is a twin engine, single rotor helicopter that is designed to support the Army's air mobility doctrine for employment of land forces in the 21st century. The BLACK HAWK is used in the performance of the Air Assault, General Support, and Aeromedical Evacuation missions. It is designed to carry a crew of four and 11 combat-equipped troops, or an external load up to 9,000 pounds. It performs the missions of transporting troops and equipment into combat, resupplying the troops while in combat, and performing the associated functions of aeromedical evacuation, repositioning of reserves, and command and control.

**Justification:**

FY 11 Base funding in the amount of \$1351.1 million will procure 72 aircraft.  
FY 11 OCO funding in the amount of \$40.5 million will procure 2 aircraft (1 UH-60 and 1 HH-60).

The FY10 column above reflects the appropriated amounts for the FY10 base and Overseas Contingency Operations only. It does not include \$42.2 million required to support the build-up of forces in Afghanistan which will be requested in a separate submission.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature UH-60 BLACK HAWK (MYP) (A05002)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: 0203744A/Project 504
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	1826	66	81	74	75	78	74	77	531	2882
Gross Cost	13005.6	1091.5	1426.6	1393.3	1452.7	1485.8	1420.2	1457.8	10304.3	33037.6
Less PY Adv Proc	2796.9	116.8	134.5	102.2	100.5	221.3	149.3	173.9	1362.5	5158.0
Plus CY Adv Proc	2915.0	136.8	98.7	100.5	223.8	158.5	168.2	157.9	1198.7	5158.0
Net Proc Pl	13123.6	1111.5	1390.8	1391.6	1576.0	1422.9	1439.1	1441.7	10140.5	33037.6
Initial Spares	421.3									421.3
Total Proc Cost	13544.9	1111.5	1390.8	1391.6	1576.0	1422.9	1439.1	1441.7	10140.5	33459.0
Flyaway U/C										
Weapon System Proc U/C	7.2	16.8	17.2	18.8	21.0	18.2	19.4	18.7	19.1	156.5

P-40 Breakdown										
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015		
Active	Qty	59	71	72	75	28	74	77		
	Gross Cost	968379.0	1208422.0	1311498.0	1575968.0	495592.0	1439108.0	1441680.0		
National Guard	Qty	2	10	2	0	50	0	0		
	Gross Cost	39600.0	182400.0	39600.0	0.0	927298.0	0.0	0.0		
Reserve	Qty	5	0	0	0	0	0	0		
	Gross Cost	103500.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total	Qty	66	81	74	75	78	74	77		
	Gross Cost	1111479	1390822	1351098	1575968	1422890	1439108	1441680		

**Description:**  
The UH-60 BLACK HAWK is a twin engine, single rotor helicopter that is designed to support the Army's air mobility doctrine for employment of land forces in the 21st century. The BLACK HAWK is used in the performance of the Air Assault, General Support, and Aeromedical Evacuation missions. It is designed to carry a crew of four and 11 combat-equipped troops, or an external load up to 9,000 pounds. It performs the missions of transporting troops and equipment into combat, resupplying the troops while in combat, and performing the associated functions of aeromedical evacuation, repositioning of reserves, and command and control.

**Justification:**  
FY 11 Base funding in the amount of \$1351.1 million will procure 72 aircraft.  
FY 11 OCO funding in the amount of \$40.5 million will procure 2 aircraft. (1 UH-60 and 1 HH-60)

The FY10 column above reflects the appropriated amounts for the FY10 base and Overseas Contingency Operations only. It does not include \$42.2 million required to support the build-up of forces in Afghanistan which will be requested in a separate submission.

Exhibit P-5, Weapon ACFT Cost Analysis	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature: UH-60 BLACK HAWK (MYP) (A05002)			Weapon System Type:	Date: February 2010				
ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
<b>Aircraft Flyaway Costs</b>										
Airframes/CFE		812522	66	12311	982734	81	12133	901712	74	12185
Engines/Accessories		83962	132	636	112475	162	694	104500	148	706
Avionics (GFE)		33701			48308			51929		
Other GFE		25583			37476			40388		
Armament										
ECO (All FLYAWAY Components)		19891			34189			32913		
Other Costs (Mission Equipment)		39433			59744			79874		
Tooling Equipment		8954			3677			1325		
Other Nonrecurring Cost					22207			29855		
<b>Total FLYAWAY</b>		<b>1024046</b>			<b>1300810</b>			<b>1242496</b>		
<b>Support Cost</b>										
Airframe PGSE										
Engine PGSE										
Peculiar Training Equipment		5955			54677			70144		
Publications/Tech Data		2975			3132			3296		
PM Administration		32034			33128			37919		
Fielding		26494			34865			39441		
<b>Subtotal Support Cost</b>		<b>67458</b>			<b>125802</b>			<b>150800</b>		
<b>Gross P-1 End Item Cost</b>		<b>1091504</b>			<b>1426612</b>			<b>1393296</b>		
Less: Prior Year Adv Proc		116795			134530			102230		
<b>Net P-1 Full Funding Cost</b>		<b>974709</b>			<b>1292082</b>			<b>1291066</b>		
Plus: P-1 CY Adv Proc		136770			98740			100532		
Initial Spares										
<b>Total:</b>		<b>1111479</b>			<b>1390822</b>			<b>1391598</b>		

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2010

Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 1/ Aircraft		Weapon System Type:		P-1 Line Item Nomenclature: UH-60 BLACK HAWK (MYP) (A05002)							
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date	
<b>Airframes/CFE</b>											
FY 2009	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Jan 09	Aug 09	51	12311	Yes		May-05	
FY 2009	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Jan 09	Oct 09	12	12311	Yes		May-05	
FY 2009	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Apr 09	Dec 10	3	12311	Yes		May-05	
FY 2010	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Jan 10	Jul 10	49	12133	Yes		May-05	
FY 2010	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Jan 10	Feb 11	21	12133	Yes		May-05	
FY 2010	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Feb 10	Jul 11	11	12133	Yes		May-05	
FY 2011	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Jan 11	Jul 11	24	12185	Yes		May-05	
FY 2011	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Jan 11	Jan 12	23	12185	Yes		May-05	
FY 2011	Sikorsky Aircraft Stratford CT	SSM/FP	AMCOM	Feb 11	Jul 12	27	12185	Yes		May-05	

REMARKS: The FY 2007 contract is the first year of a 5 year multi-year, multi-service contract for the procurement of H-60Ms.

Delivery schedules extend beyond the 12 month period due to:

Yearly procurements consist on UH-60M, HH-60M and supplemental aircraft. Each of the three are awarded on different contract line items. The UH-60M has an 18 month lead time while the HH-60M has a 24 month lead time. The supplemental aircraft do not have advanced procurement dollars associated with them so the lead times stay the same just have a different start point.

COST ELEMENTS						Fiscal Year 09												Fiscal Year 10												Later
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 09												Calendar Year 10												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Airframes/CFE																														
1	FY 07	TOT	72	46	26	2	2	2		2	5	3	2	1	1	1	1	2	1	1								0		
1	FY 08	TOT	77	2	75	3	4	6	2	1	6	2	4	9	5	4					2	4	5	1	1	3	3	2	8	
1	FY 09	A	52	0	52																							52		
1	FY 09	NG	3	0	3																							3		
1	FY 09	AR	11	0	11																							11		
1	FY 09	TOT	66	0	66				A							5	4	7	9	6	7	4	5	3	5	5	3	3		
1	FY 10	A	71	0	71																							71		
1	FY 10	NG	10	0	10																							10		
1	FY 10	TOT	81	0	81																A					2	5	5	69	
1	FY 11	A	72	0	72																							72		
1	FY 11	NG	2	0	2																							2		
1	FY 11	TOT	74	0	74																							74		
2	FY 09	NA	51	0	51													2	2	2	3	2	3	2	2	3	2	3	25	
2	FY 10	NA	42	0	42																					1	2	1	38	
					636	5	6	8	2	3	11	5	6	10	6	10	5	9	12	9	9	9	11	11	8	8	12	12	11	438
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			1	Initial				Reorder
1	Sikorsky Aircraft, Stratford CT	18	96	150		1	8	3	6	9		
2	Sikorsky Aircraft, Stratford CT	18	96	150		2	8	3	6	9		



COST ELEMENTS						Fiscal Year 11												Fiscal Year 12												Later
M F R	FY	S E R V	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11												Calendar Year 12												
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

Airframes/CFE																														
1	FY 07	TOT	72	72																								0		
1	FY 08	TOT	77	69	8	2	1	3	2																			0		
1	FY 09	A	52	0	52																							52		
1	FY 09	NG	3	0	3																							3		
1	FY 09	AR	11	0	11																							11		
1	FY 09	TOT	66	63	3			2	1																			0		
1	FY 10	A	71	0	71																							71		
1	FY 10	NG	10	0	10																							10		
1	FY 10	TOT	81	12	69	5	4	4	4	7	7	6	6	7	3	2	2	3	2	2	3	2						0		
1	FY 11	A	72	0	72																							72		
1	FY 11	NG	2	0	2																							2		
1	FY 11	TOT	74	0	74				A					3	3	3	3	3	3	5	3	5	5	5	5	3	2	2	21	
2	FY 09	NA	51	26	25	3	3	4	3	3	3	3	3															0		
2	FY 10	NA	42	4	38		2	2	1	1	2	1	2	5	4	3	3	3	3	2	2	2						0		
Total					438	10	10	15	11	11	12	10	11	12	10	8	8	9	8	7	10	7	5	5	5	5	3	2	2	242
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

M F R	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS		
		MIN	1-8-5	MAX			1	Initial				8	3
1	Sikorsky Aircraft, Stratford CT	18	96	150		1	Initial	8	3	6	9		
							Reorder	0	3	6	9		
2	Sikorsky Aircraft, Stratford CT	18	96	150		2	Initial	8	3	6	9		
							Reorder	0	3	6	9		
							Initial						
							Reorder						
							Initial						
							Reorder						
							Initial						
							Reorder						

FY 13 / 14 BUDGET PRODUCTION SCHEDULE											P-1 ITEM NOMENCLATURE UH-60 BLACK HAWK (MYP) (A05002)										Date: February 2010											
COST ELEMENTS						Fiscal Year 13													Fiscal Year 14													Later
M F R	FY	S E R V	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 13													Calendar Year 14													Later
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Airframes/CFE																																
1	FY 07	TOT	72	72																											0	
1	FY 08	TOT	77	77																												0
1	FY 09	A	52	0	52																											52
1	FY 09	NG	3	0	3																											3
1	FY 09	AR	11	0	11																											11
1	FY 09	TOT	66	66																												0
1	FY 10	A	71	0	71																											71
1	FY 10	NG	10	0	10																											10
1	FY 10	TOT	81	81																												0
1	FY 11	A	72	0	72																											72
1	FY 11	NG	2	0	2																											2
1	FY 11	TOT	74	53	21	3	3	2	2	2	2	2	3	2																		0
2	FY 09	NA	51	51																												0
2	FY 10	NA	42	42																												0
Total																																221
					242	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
UH-60 BLACKHAWK (MYP) (AA0005)

Program Elements for Code B Items:

Code:

Other Related Program Elements:  
0203744A/ Project 504

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost										
Less PY Adv Proc										
Plus CY Adv Proc	2915.0	136.8	98.7	100.5	223.8	158.5	168.2	157.9	1198.7	5158.0
Net Proc P1	2915.0	136.8	98.7	100.5	223.8	158.5	168.2	157.9	1198.7	5158.0
Initial Spares										
Total Proc Cost	2915.0	136.8	98.7	100.5	223.8	158.5	168.2	157.9	1198.7	5158.0
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The Advance Procurement for the UH-60 BLACK HAWK contains funding for the airframe and engine contracts as well as funding for Government Furnished Equipment(GFE) to support the UH-60 aircraft and mission kit production. GFE (in addition to the engine) currently requiring advance procurement includes the Improved Hover Infrared Suppressor Subsystem (IHIRSS) as well as numerous communication, navigation, and Aircraft Survivability Equipment items procured by the Communications and Electronics Command (CECOM).

**Justification:**

FY 2011 procures long lead and Economic Order Quantities (EOQ) items such as T700-GE-701D engines, IHIRSS and avionics components for the FY07-FY11 multiyear contract.

<b>Advance Procurement Requirements Analysis-Funding (P-10A)</b>				First System Award Date:	First System Completion Date:	Date: February 2010						
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft					P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP)							
(\$ in Millions)												
	PLT (mos)	When Rqd (mos)	Pr Yrs	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	To Comp	Total
End Item Quantity			1832.0	63.0	70.0	47.0	40.0	58.0	74.0	77.0	531.0	2792.0
CFE Airframe	18	6	1774.4	52.3	32.3	42.9	138.9	48.1	51.4	46.6	510.7	2697.6
Engines	13	3	820.4	58.7	48.9	42.4	62.5	81.2	86.0	81.9	486.8	1768.8
Avionics	0	3	151.5	13.0	8.8	7.6	11.3	14.7	15.5	14.8	101.2	338.4
Auxiliary Power Unit	6	3	54.3	3.7	2.5	2.2	3.2	4.2	4.4	4.2	28.7	107.4
Armored Crew Seat	6	3	23.4									23.4
Hover Infrared Suppressor	14	3	47.3	9.1	6.2	5.4	7.9	10.2	10.9	10.4	71.3	178.7
Elastomeric Bearings	10	3	1.5									1.5
Miscellaneous	0	3	42.2									42.2
<b>Total Advance Procurement</b>			<b>2915.0</b>	<b>136.8</b>	<b>98.7</b>	<b>100.5</b>	<b>223.8</b>	<b>158.4</b>	<b>168.2</b>	<b>157.9</b>	<b>1198.7</b>	<b>5158.0</b>

<b>Advance Procurement Requirements Analysis-Funding (P-10B)</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP)
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	(\$ in Millions)					
	PLT (mos)	Quantity Per Assembly	Unit Cost	2011		
				Qty	Contract Forecast Date	Total Cost Request
CFE Airframe	18	1		47.0		42.9
Engines	13	2	706.0	94.0		42.4
Avionics						7.6
Auxiliary Power Unit	6	1	69.0	47.0		2.2
Hover Infrared Suppressor	14	1	121.0	47.0		5.4
<b>Total Advance Procurement</b>						<b>100.5</b>

**Advance Procurement Requirements Analysis-Funding (P-10C)**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System:  
UH-60 BLACKHAWK (MYP)

(\$ in Millions)										
	Pr Yrs	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	To Comp	Total
<b>Proposal w/o AP</b>										
Then Year Cost	326	921	1068	1156	888	315				4674
Constant Year Cost	326	864	981	1040	781	271				4263
Present Value	288	776	855	879	641	216				3655
<b>AP Proposal</b>										
Then Year Cost	318	876	1019	1101	846	300				4460
Constant Year Cost	318	822	935	990	744	258				4067
Present Value	282	739	815	837	610	205				3488
<b>AP Savings (Difference)</b>										
Then Year Cost	-7	-45	-49	-55	-42	-15				-213
Constant Year Cost	-7	-42	-46	-50	-37	-13				-195
Present Value	-6	-37	-40	-42	-31	-11				-167

<b>Advance Procurement Requirements Analysis-Execution (P-10D)</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP)
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		(\$ in Millions)								
	PLT (mos)	2009					2010		2011	
		Qty	Contract Forecast Date	Actual Contract Date	Total Cost Request	Actual Contract Cost	Qty	Contract Forecast Date	Qty	Contract Forecast Date
End Item Quantity		64			63.0		70		47	
CFE Airframe	18	63	Dec 2009		52.3		70	Dec 2010	47	
Engines	13	126	Dec 2008		58.7		140	Dec 2009	94	
Avionics					13.0					
Auxiliary Power Unit	6	63	Dec 2008		3.7		70	Dec 2009	47	
Armored Crew Seat	6									
Hover Infrared Suppressor	14	63	Dec 2008		9.1		70	Dec 2009	47	
Elastomeric Bearings	10									
Miscellaneous										
<b>Total Advance Procurement</b>					<b>136.8</b>					

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
CH-47 HELICOPTER (A05101)

Program Elements for Code B Items:

Code:

Other Related Program Elements:  
SSN A05008, SSN A05105

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	8	28	37	42	47	37	33	36	67	335
Gross Cost	156.8	728.4	950.2	1222.6	1287.3	1099.2	890.8	1008.4	2302.7	9646.5
Less PY Adv Proc		32.8		50.7	57.8	55.0	60.3	76.5	212.9	545.9
Plus CY Adv Proc	32.8		50.7	57.8	55.0	60.3	76.5	73.9	139.0	545.9
Net Proc P1	189.6	695.7	1000.9	1229.6	1284.5	1104.5	907.0	1005.8	2228.8	9646.5
Initial Spares										
Total Proc Cost	189.6	695.7	1000.9	1229.6	1284.5	1104.5	907.0	1005.8	2228.8	9646.5
Flyaway U/C										
Weapon System Proc U/C	23.7	24.8	27.1	29.3	27.3	29.9	27.5	27.9	33.3	250.7

**Description:**

The CH-47 Chinook is a twin-turbine, tandem-rotor, heavy-lift transport helicopter with a useful load of up to 25,000 pounds. As the Army's only heavy lift helicopter, the CH-47F Improved Cargo helicopter is an essential component of the Army Future Force. The mission of the CH-47 is to transport troops (including air assault), supplies, weapons, and other cargo in general support operations. The CH-47 is vital to Overseas Contingency Operations and Homeland Security needs of our nation. Secondary missions include medical evacuation, aircraft recovery, parachute drops, disaster relief, and search and rescue. These aircraft are fielded to heavy helicopter companies and Special Operations Aviation. The CH-47F is expected to remain the Army's heavy lift helicopter until at least the 2038 timeframe. The CH-47F ReNew Program will provide a more reliable, less costly to operate aircraft compatible with Joint digital connectivity requirements in the Future Force. Key product improvements integrate a new-machined airframe, a performance capability, Common Avionics Architecture System, Air Warrior, Common Missile Warning System, enhanced air transportability, Digital Advance Flight Control System (DAFCS) and an Extended Range Fuel System II for self-deployment missions. The CH-47F program extends the Army's Chinook fleets useful life 20 years incorporating reliability and maintainability improvements including airframe tuning for vibration reduction, corrosion protection, digital source collectors, Transportable Flight Proficiency Simulators, Cargo Floor Handling System, Ballistic Protection System, Transformation Sets, Kits and Outfits, Aviation Training Devices, M240 Window/Door Gun Mounts and an automated maintenance program with a 400-hour phase interval. The ReNew program rebuilds and replaces all CH-47Ds and 61 Special Operations Aviation MH-47s to the CH-47F/MH-47G configuration.

Correct Qty: FY11 - 42, FY13 - 37, FY14 - 33

**Justification:**

FY 11 Base funding in the amount of \$1,159 million will procure 29 new build aircraft and 11 renew aircraft.

FY 11 OCO funding in the amount of \$70.6 million will procure 2 new build aircraft.

The FY10 column above reflects the appropriated amounts for the FY10 base and Overseas Contingency Operations only. It does not include \$55.0 million required to support the build-up of forces in Afghanistan which will be requested in a separate submission.



<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature CH-47 NEW BUILD (A05008)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: SSN A05105
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	8	28	23	31	32	13	8	7	4	154
Gross Cost	156.8	728.4	655.8	931.2	859.9	520.3	280.3	257.6	155.0	4545.3
Less PY Adv Proc		32.8								32.8
Plus CY Adv Proc	32.8									32.8
Net Proc Pl	189.6	695.7	655.8	931.2	859.9	520.3	280.3	257.6	155.0	4545.3
Initial Spares										
Total Proc Cost	189.6	695.7	655.8	931.2	859.9	520.3	280.3	257.6	155.0	4545.3
Flyaway U/C										
Weapon System Proc U/C	23.7	24.8	31.6	35.6	26.9	40.0	31.1	36.8	38.8	289.3

P-40 Breakdown									
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Active	Qty	24	23	25	14	13	8	7	
	Gross Cost	545658.0	655793.0	775491.0	344963.0	520303.0	280251.0	257618.0	
National Guard	Qty	4	0	6	18	0	0	0	
	Gross Cost	150000.0	0.0	155750.0	514898.0	0.0	0.0	0.0	
Reserve	Qty	0	0	0	0	0	0	0	
	Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total	Qty	28	23	31	32	13	8	7	
	Gross Cost	695658	655793	931241	859861	520303	280251	257618	

**Description:**  
The CH-47 Chinook is a twin-turbine, tandem-rotor, heavy lift transport helicopter with a useful load of up to 25,000 pounds. As the Army's only heavy lift helicopter, the CH-47F Improved Cargo helicopter is an essential component of the Army Future Force. The mission of the CH-47 is to transport troops (including air assault), supplies, weapons, and other cargo in general support operations. The CH-47 is vital to the Overseas Contingency Operations (OCO) and Homeland Security needs of our nation. Secondary missions include medical evacuation, aircraft recovery, parachute drops, disaster relief, and search and rescue. These aircraft are fielded to heavy helicopter companies and Special Operations Aviation. Key product improvements integrate a new-machined airframe, a performance capability, Common Avionics Architecture System, Air Warrior, Common Missile Warning System, enhanced air transportability, Digital Advance Flight Control System (DAFCS) and an Extended Range Fuel System II for self-deployment missions. The CH-47F is expected to remain the Army's heavy lift helicopter until at least the 2025 timeframe. This program is funded to meet the Army Aviation Transformation Plans full requirement for Chinook aircraft. New Build allows the Army to retain aircraft vice turn in for induction to rebuild. The CH-47F PM will field and train all active Army units using a New Equipment Training (NET) team through FY13. (Prior to FY08, "New Build" aircraft were funded on the CH-47 Cargo Helicopter Mod SSN AA0252).

Correct Qty: FY11 Active - 25, NG - 6 equals 31, FY13 - 13, FY14 - 8

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date:
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February 2010

Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature CH-47 NEW BUILD (A05008)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: SSN A05105
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**Justification:**  
FY 11 Base funding in the amount of \$860.6 million will procure 29 new build aircraft.  
  
FY 11 OCO funding in the amount of \$70.6 million will procure 2 new build aircraft.

Exhibit P-5, Weapon ACFT Cost Analysis		Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 1 / Aircraft			P-1 Line Item Nomenclature: CH-47 NEW BUILD (A05008)			Weapon System Type:		Date: February 2010	
ACFT Cost Elements		ID CD	FY 09			FY 10			FY 11		
			Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>AIRCRAFT Flyaway Costs</b>											
Airframes/CFE			566975	31	18290	461717	23	20075	628152	31	20263
Engine/Accessories			51482	62	830	42920	46	933	58831	62	949
CFE Avionics			27715		27715	25434			30551		
GFE			33243		33243	27715			37989		
ECO (Flyaway)			12316		12316	10112			13697		
Other Costs			20625		20625	21491			27100		
SOA Aircraft											
<b>Support Costs</b>											
PSE			2689		2689	2787			2243		
Peculiar Training Equipment			2784		2784	472			570		
Publications/Tech Data			525		525	544			526		
ECO (Support Items)			580		580	601			484		
NET						30000					
Other Costs			5524		5524	28691			126562		
<b>Initial Spares</b>											
Initial Spares			3970		3970	3309			4536		
<b>Subtotal Support Costs</b>			<b>728428</b>			<b>655793</b>			<b>931241</b>		
Less Advance Procurement PY			32759		32759						
Plus Advance Procurement CY											
<b>Total:</b>			<b>695669</b>			<b>655793</b>			<b>931241</b>		

<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 1/ Aircraft	Weapon System Type:	P-1 Line Item Nomenclature: CH-47 NEW BUILD (A05008)
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WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>Airframes/CFE</b>										
FY 2009	The Boeing Company Ridley Park, PA	SS/FFP	AMCOM	Jan 09	Apr 11	31	18290	YES		Apr 07
FY 2010	The Boeing Company Ridley Park, PA	SS/FFP	AMCOM	Dec 09	Jun 12	23	20075	YES		Apr 07
FY 2011	The Boeing Company Ridley Park, PA	SS/FFP	AMCOM	Dec 10	Jan 13	31	20263	YES		Apr 07

REMARKS:

COST ELEMENTS						Fiscal Year 11												Fiscal Year 12												Later	
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11												Calendar Year 12													
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
Airframes/CFE																															
1	FY 08	A	6	0	6				1	2	2	1																0			
1	FY 09	A	31	0	31															5	4	4	4	4	2			8			
1	FY 10	A	5	0	5																							5			
1	FY 10	NG	18	0	18																							18			
1	FY 10	TOT	23	0	23																			2	4	4	4	9			
1	FY 11	A	23	0	23																							23			
1	FY 11	NG	6	0	6																							6			
1	FY 11	TOT	31	0	31																							31			
Total					143				1	2	2	1									5	4	4	4	4	4	4	4	4	4	100
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			1	Initial				Reorder
1	The Boeing Company, Ridley Park, PA	36	24	72		1	Initial	5	5	35	40	
							Reorder	0	0	0	0	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

FY 13 / 14 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE CH-47 NEW BUILD (A05008)										Date: February 2010									
COST ELEMENTS						Fiscal Year 13										Fiscal Year 14													
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 13										Calendar Year 14										Later			
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG
Airframes/CFE																													
1	FY 08	A	6	6																								0	
1	FY 09	A	31	23	8				1	2	2	2	1															0	
1	FY 10	A	5	0	5																							5	
1	FY 10	NG	18	0	18																							18	
1	FY 10	TOT	23	14	9	3	3	1												1		1						0	
1	FY 11	A	23	0	23																							23	
1	FY 11	NG	6	0	6																							6	
1	FY 11	TOT	31	0	31				2	2	2	2	2	2	2	2	2	2	2	3								6	
Total					100	3	3	1	3	4	4	4	3	2	2	2	2	2	2	3	1		1					58	
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	The Boeing Company, Ridley Park, PA	36	24	72		1	Initial	5	5	35	40	
							Reorder	0	0	0	0	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

**FY 15 / 16 BUDGET PRODUCTION SCHEDULE**

P-1 ITEM NOMENCLATURE  
CH-47 NEW BUILD (A05008)

Date:  
February 2010

COST ELEMENTS						Fiscal Year 15												Fiscal Year 16												Later																					
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 15												Calendar Year 16																																	
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																						
Airframes/CFE																																																			
1	FY 08	A	6	6																								0																							
1	FY 09	A	31	31																								0																							
1	FY 10	A	5	0	5																							5																							
1	FY 10	NG	18	0	18																							18																							
1	FY 10	TOT	23	23																								0																							
1	FY 11	A	23	0	23																							23																							
1	FY 11	NG	6	0	6																							6																							
1	FY 11	TOT	31	25	6				1	1	1	1	1	1	1													0																							
Total					58				1	1	1	1	1	1														52																							
<table border="1"> <tr> <td>OCT</td><td>NOV</td><td>DEC</td><td>JAN</td><td>FEB</td><td>MAR</td><td>APR</td><td>MAY</td><td>JUN</td><td>JUL</td><td>AUG</td><td>SEP</td><td>OCT</td><td>NOV</td><td>DEC</td><td>JAN</td><td>FEB</td><td>MAR</td><td>APR</td><td>MAY</td><td>JUN</td><td>JUL</td><td>AUG</td><td>SEP</td> </tr> </table>																												OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																												

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	The Boeing Company, Ridley Park, PA	36	24	72		1	Initial	5	5	35	40	
							Reorder	0	0	0	0	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature CH-47 SLEP (A05105)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: SSN A05008
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty			14	11	15	24	25	29	68	186
Gross Cost			294.4	291.3	427.5	578.9	610.5	750.8	2147.7	5101.1
Less PY Adv Proc				50.7	57.8	55.0	60.3	76.5	212.9	513.1
Plus CY Adv Proc			50.7	57.8	55.0	60.3	76.5	73.9	139.0	513.1
Net Proc P1			345.1	298.4	424.7	584.2	626.7	748.2	2073.8	5101.1
Initial Spares										
Total Proc Cost			345.1	298.4	424.7	584.2	626.7	748.2	2073.8	5101.1
Flyaway U/C										
Weapon System Proc U/C			24.6	27.1	28.3	24.3	25.1	25.8	30.5	185.8

**Description:**  
The CH-47 Chinook is a twin-turbine, tandem-rotor, heavy lift transport helicopter with a useful load of up to 25,000 pounds. As the Army's only heavy lift helicopter, the mission of the CH-47 is to transport troops (including air assault), supplies, weapons, and other cargo in general support operations. The CH-47 is vital to the Overseas Contingency Operations (OCO) and Homeland Security needs of our nation. Secondary missions include medical evacuation, aircraft recovery, parachute drops, disaster relief, and search and rescue. These aircraft are fielded to heavy helicopter companies and Special Operations Aviation. The CH-47F is expected to remain the Army's heavy lift helicopter until at least the 2025 timeframe. The CH-47F ReNew Program will provide a more reliable, less costly to operate aircraft compatible with Joint digital connectivity requirements in the Future Force. The ReNew Program produces an identical aircraft as the CH-47F New Build Program with the exception of dynamic components including engine, transmission and drive train. During production, the aircraft receives a new airframe, cockpit, wiring and plumbing. All dynamic components are recapitalized by the Original Equipment Manufacturer (OEM) and returned for incorporation during the assembly process. The ReNew Program rebuilds and replaces all CH-47Ds and 61 Special Operations Aviation MH-47s to the CH-47F and MH-47G configuration. This program is funded to meet the Army Aviation Transformation Plans full requirement for Chinook aircraft. (Prior to FY10, this program was funded on the CH-47 Cargo Helicopters Mod SSN AA0252).

**Justification:**  
FY 11 Base procurement dollars in the amount of \$298.4 million supports conversion of 11 CH-47Ds to CH-47Fs.



<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Item Nomenclature CH-47 SLEP (A05105)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements: SSN A05008
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Ch-47 D to F Conversion											
0-00-00-0000	Operational	0.0	0.0	345.1	298.4	424.7	584.2	626.7	748.2	2073.8	5101.1
<b>Totals</b>		0.0	0.0	345.1	298.4	424.7	584.2	626.7	748.2	2073.8	5101.1

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Ch-47 D to F Conversion [MOD 1] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47D/F

**DESCRIPTION / JUSTIFICATION:**

The CH-47F ReNew Program will provide a more reliable, less costly to operate aircraft compatible with Joint digital connectivity requirements in the Future Force. The ReNew Program produces an identical aircraft as the CH-47F New Build Program with the exception of dynamic components including engine, transmission and drive train. During production, the aircraft receives a new airframe, cockpit, wiring and plumbing. All dynamic components are recapitalized by the Original Equipment Manufacturer (OEM) and returned for incorporation during the assembly process. The Renew Program rebuilds and replaces all CH-47Ds and 61 Special Operations Aviation MH-47s to the CH-47F and MH-47G configuration. This program is funded to meet the Army Aviation Transformation Plans full requirement for Chinook aircraft. (Prior to FY10, this program was funded on the CH-47 Cargo Helicopters Mod SSN AA0252).

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

LRIP I Contract Award - Dec 02  
 MS III Production Decision - Nov 04  
 FRP Contract Award - Dec 04

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
					2	3	4	3	3	3	4	3	3	3	4	3	2	4	6	7
											3	5	6	2	3	3	3	3	4	4
	FY 2014				FY 2015				FY 2016				FY 2017				To	Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
	7	5	8	8	4	8	9	8	4	9	9	9	7	8	9	8	4	181		
	4	4	6	7	7	5	8	8	4	8	9	8	4	9	9	9	36	181		

**METHOD OF IMPLEMENTATION:** Contract      **ADMINISTRATIVE LEADTIME:** 5 months      **PRODUCTION LEADTIME:** 25 months  
 Contract Dates: FY 2010 - Dec 09      FY 2011 - Dec 10      FY 2012 - Dec 11  
 Delivery Dates: FY 2010 - Jan 12      FY 2011 - Jan 13      FY 2012 - Jan 14

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Ch-47 D to F Conversion [MOD 1] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RD&amp;E</b>																					
<b>Procurement</b>																					
Recurring Production (Suppl)																					
Recurring Production (Mods)					14	307.6	11	232.0	15	297.5	24	510.1	25	541.3	29	634.0	63	1254.8	181	3777.3	
<b>Build)</b>																					
Recurring (New Build NG)																					
Omnibus																					
Other Flyaway						15.4		19.7		21.6		51.4		57.4		62.8		127.7		356.0	
Other Support						17.5		44.1		102.1		13.4		19.4		41.6		676.9		915.0	
Training						0.9		0.2		0.3		0.5		0.7		0.8		1.6		5.0	
Support Equipment						3.7		2.4		3.2		8.8		7.9		9.0		12.8		47.8	
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		0.0		0.0		345.1		298.4		424.7		584.2		626.7		748.2		2073.8		5101.1	

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
CH-47 HELICOPTER (A05101)

Program Elements for Code B Items:

Code:

Other Related Program Elements:  
SSN A05008, SSN A05105

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost										
Less PY Adv Proc										
Plus CY Adv Proc	32.8		50.7	57.8	55.0	60.3	76.5	73.9	139.0	545.9
Net Proc P1	32.8		50.7	57.8	55.0	60.3	76.5	73.9	139.0	545.9
Initial Spares										
Total Proc Cost	32.8		50.7	57.8	55.0	60.3	76.5	73.9	139.0	545.9
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The CH-47 Chinook is a twin-turbine, tandem-rotor, heavy-lift transport helicopter with a useful load of up to 25,000 pounds. The CH-47F Improved Cargo Helicopter is an essential component of the Army Future Force. The CH-47F program fills the Army's Aviation Transformation Chinook requirement. Key product improvements integrate the CH-47F Common Avionics Architecture System (CAAS) digital cockpit which will provide future growth potential to meet the Net-Ready Key Performance Parameters (KPPs) and also includes a digital data bus that permits installation of enhanced communication and navigation equipment for improved situational awareness, mission performance, and survivability. The new digital cockpit incorporates all new airframe components and modifies the aircraft to reduce vibration. New airframe structural components and modifications will reduce harmful vibrations, improving operation and support (O&S) efficiency and crew endurance. Other airframe modifications reduce by 60 percent the time required for aircraft tear down and build-up after C-5/C-17 deployment. These modifications significantly enhance the Chinook's strategic deployment capability.

**Justification:**

FY11 Base Advance Procurement dollars in the amount of \$57.8 million supports procurement of long lead time parts and materials required to preserve the production delivery schedule.

<b>Advance Procurement Requirements Analysis-Funding (P-10A)</b>				First System Award Date:	First System Completion Date:	Date: February 2010						
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft					P-1 Line Item Nomenclature / Weapon System: CH-47 HELICOPTER							
(\$ in Millions)												
	PLT (mos)	When Rqd (mos)	Pr Yrs	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	To Comp	Total
End Item Quantity												
Avionics	13	14	13.1		20.3	23.1	22.0	24.1	30.6	29.5	55.6	218.3
Airframe	15	16	19.7		30.4	34.7	33.0	36.2	45.9	44.3	83.4	327.6
<b>Total Advance Procurement</b>			<b>32.8</b>	<b>0.0</b>	<b>50.7</b>	<b>57.8</b>	<b>55.0</b>	<b>60.3</b>	<b>76.5</b>	<b>73.8</b>	<b>139.0</b>	<b>545.9</b>

<b>Advance Procurement Requirements Analysis-Funding (P-10B)</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature / Weapon System: CH-47 HELICOPTER
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	(\$ in Millions)					
	PLT (mos)	Quantity Per Assembly	Unit Cost	2011		
				Qty	Contract Forecast Date	Total Cost Request
Avionics	13	1	1.0			23.1
Airframe	15	1	1.0			34.7
<b>Total Advance Procurement</b>						<b>57.8</b>

<b>Advance Procurement Requirements Analysis-Funding (P-10C)</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 1 / Aircraft	P-1 Line Item Nomenclature / Weapon System: CH-47 HELICOPTER
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(\$ in Millions)										
	Pr Yrs	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	To Comp	Total
<b>Proposal w/o AP</b>										
Then Year Cost	308	272	254	199	272	444	473	560	1217	3999
Constant Year Cost	290	252	232	179	240	385	402	469	992	3439
Present Value	304	262	238	182	242	386	400	462	967	3444
<b>AP Proposal</b>										
Then Year Cost	311	282	255	207	269	450	489	558	1143	3963
Constant Year Cost	292	262	233	185	237	390	416	466	933	3413
Present Value	307	272	239	189	240	390	414	460	910	3420
<b>AP Savings (Difference)</b>										
Then Year Cost	3	10	1	7	-3	5	16	-3	-74	-37
Constant Year Cost	2	10	1	6	-2	5	14	-2	-59	-26
Present Value	3	10	1	7	-2	5	14	-2	-58	-24

Constant Year Dollars are Fiscal Year 2005.

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 1 / Aircraft

P-1 Item Nomenclature  
HELICOPTER NEW TRAINING (A06500)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	183									183
Gross Cost	189.7	0.1		9.4						199.1
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	189.7	0.1		9.4						199.1
Initial Spares										
Total Proc Cost	189.7	0.1		9.4						199.1
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The TH-67 Creek is a non-developmental commercial, three-seated, single engine, training helicopter with two main rotor blades. It is a variant of the Bell Helicopter Textron, Incorporated 206B-3 helicopter. It is used exclusively at the U.S. Army Aviation Center, Fort Rucker, AL, for Initial Entry Rotor Wing (IERW) training and is being considered for use by the Combined Training Centers. A mix of aircraft with Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) are used. The VFR version is ideal for early stages of flight school because it is lighter, simpler, and less sensitive to the harsher flight maneuvering generated during the students' primary training. The IFR is equipped for the more advanced instrument phase and is more complex and heavier, but does not undergo the harsher primary flight maneuvering generated in earlier training phases. An enhanced configuration of the VFR is a third design which offers a training environment for the acquisition of basic navigation/night/night vision goggles skills. All versions of the aircraft are designed to provide safe, effective and economical in-flight training when used to demonstrate and practice basic helicopter pilot skills. The enhancements in the latest production models permit training in combat skills.

**Justification:**

FY 11 supports a classified program.



**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 2 / Modification of aircraft

P-1 Item Nomenclature  
C12 AIRCRAFT MODS (A01234)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost				122.3						122.3
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1				122.3						122.3
Initial Spares										
Total Proc Cost				122.3						122.3
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The C-12 fixed wing aircraft platform hosts a number of Army Intelligence, Surveillance and Reconnaissance/Reconnaissance Surveillance and Target Acquisition (ISR/RSTA) sensor systems that support irregular warfare in Overseas Contingency Operations (OCO). Included in those systems are the Guardrail Common Sensor (GRCS), Aerial Reconnaissance Multi Sensor (ARMS) (Iraq), the Medium Altitude Reconnaissance and Surveillance Systems (MARSS) (Iraq and Afghanistan), and Constant Hawk (Afghanistan). The ARMS system is composed of B-200 (C-12) aircraft equipped with imagery sensors, specialized COMINT sensors, and an array of line of sight and beyond line of sight communications equipment. The aircraft were fielded to Operation Iraqi Freedom (OIF) in FY06 and have been providing daily support to the (Task Force Observe, Detect Identify, Neutralize (TF ODIN) commander. Constant Hawk (CH) in Afghanistan is hosted on King Air 350(C-12) aircraft. CH is a persistent surveillance wide field of view airborne intelligence, surveillance and reconnaissance (AISR) system conducting Counter Improvised Explosive Device (IED) surveillance and forensic force protection missions. CH uses high resolution Electro Optic (EO) cameras mounted on manned aircraft to provide persistent surveillance of a designated Named Area of Interest (NAI). The MARSS aircraft are C-12 variant aircraft equipped with numerous sensors to include imagery and communications intelligence (COMINT) payloads. They also include several line-of-sight and beyond line of sight communications systems and on board (manned) processing of the imagery and COMINT. In the past year we lost one aircraft in OEF. The TFO-A as well as United States Forces-Afghanistan (USFOR-A) has placed an emphasis on replacing this asset.

**Justification:**

FY11 OCO procurement dollars in the amount of \$122.340 million funds the modification of the Red Ridge 1 (RR1) MARSS aircraft replacement, and PME and integration of two Light Detection and Ranging (LIDAR) equiped aircraft and support.

The FY10 column above reflects the appropriated amounts for the FY10 base and Overseas Contingency Operations only. It does not include \$40.0 million required to support the build-up of forces in Afghanistan which will be requested in a separate submission.

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature C12 AIRCRAFT MODS (A01234)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Red Ridge 1 Replacement											
1-11-00-01	U	0.0	0.0	0.0	66.5	0.0	0.0	0.0	0.0	0.0	66.5
Specialized Light Detection & Ranging (LIDAR)											
2-11-00-02	U	0.0	0.0	0.0	55.8	0.0	0.0	0.0	0.0	0.0	55.8
Totals		0.0	0.0	0.0	122.3	0.0	0.0	0.0	0.0	0.0	122.3

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Red Ridge 1 Replacement [MOD 1] 1-11-00-01

MODELS OF SYSTEM AFFECTED: MARSS 1 (RR1)

**DESCRIPTION / JUSTIFICATION:**

This effort will provide a replacement for Red Ridge 1 (RR1) MARSS system battle loss in OEF. This system will contain Signals Intelligence (SIGINT) and Full Motion Video (FMV) sensors as well as the required communications and data links. The RRI aircraft was lost in combat during FY09, and another aircraft is required to maintain OPTEMPO in theater as well as provide COMINT and imagery capabilities in theater. PMFW will procure the replacement aircraft with funding line A02700. PM ACS will fund the integration effort and initial support efforts.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

4QFY12: Begin integration of initial platforms  
 2QFY13: Completion of Integration, Testing, and deployment.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
																			1	
FY 2014				FY 2015				FY 2016				FY 2017				To	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete				
																	1			

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

0 months

**PRODUCTION LEADTIME:**

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Red Ridge 1 Replacement [MOD 1] 1-11-00-01

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
PME/Integration							1	14.0											1	14.0	
Prog Mgt and Test								3.2												3.2	
Init Ctr Spt for RR1 & MARSS 19,20								49.3												49.3	
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		0.0		0.0		0.0		66.5		0.0		0.0		0.0		0.0		0.0		66.5	

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Specialized Light Detection & Ranging (LIDAR) [MOD 2] 2-11-00-02

MODELS OF SYSTEM AFFECTED: LIDAR 1 & 2

DESCRIPTION / JUSTIFICATION:

The LIDAR sensor will be used to collect high resolution, high accuracy elevation data which supports improved battlefield visualization, line of sight and urban warfare planning to combat forces assigned to OEF. This effort funds the PME & integration and initial support for 2 systems on PM Fixed Wing provided aircraft. PM Fixed Wing will procure the aircraft with funding line A02700.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
																	2			
																		2		
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				2
																				2

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME:

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Specialized Light Detection & Ranging (LIDAR) [MOD 2] 2-11-00-02

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
LIDAR PME & Integration							2	20.0											2	20.0
PM & Test								3.8												3.8
Initial Ctr Spt								32.0												32.0
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		0.0		55.8		0.0		0.0		0.0		0.0		0.0		55.8

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 2 / Modification of aircraft

P-1 Item Nomenclature  
MQ-1 PAYLOAD - UAS (A00020)

Program Elements for Code B Items: Code: Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty			56	60	60	95	96	77		444
Gross Cost			87.2	104.0	119.7	189.0	146.1	112.9		758.9
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1			87.2	104.0	119.7	189.0	146.1	112.9		758.9
Initial Spares										
Total Proc Cost			87.2	104.0	119.7	189.0	146.1	112.9		758.9
Flyaway U/C										
Weapon System Proc U/C			1.6	1.7	2.0	2.0	1.5	1.5		10.3

**Description:**  
Advanced Tactical Unmanned Aerial Vehicles (UAVs) Payloads (A00020) budget line supports the procurement of the following payload systems: (1) STARLite - Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI), (2) Electro Optical Infrared w/Laser Designator (EO/IR/LD) Common Sensor Payload (CSP) AN/AAS-53, and (3) Tactical Signals Intelligence (SIGINT) Payload (TSP).

These projects supports the Army's transformation by developing payloads for brigade combat team, division, and corps Unmanned Aircraft Systems (UAS) in accordance with Headquarters Department of the Army (HQDA) and Training and Doctrine Command (TRADOC) UAV priorities. The STARLite Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI) payload will provide a wide-area search capability with a built-in imaging mode that provides essential all-weather surveillance and increased situational awareness. The STARLite payload is a principal payload for the Extended Range/Multi-Purpose (ER/MP) UAV. The Electro Optical Infra Red w/Laser Designator (EO/IR/LD) Common Sensor Payload (CSP) is being developed for the ER/MP system and has potential application to other platforms. CSP will provide a day/night capability to collect and display continuous imagery with the ability to designate targets of interest for attack by laser guided precision weapons.

The Tactical Signals Intelligence (SIGINT) Payload (TSP) is an Unmanned Aircraft System (UAS) mounted SIGINT sensor that detects radio frequency (RF) emitters. TSP, through handoff from the Combat Aviation Brigade (CAB), is capable of providing Tactical Land Commander with an over watch and penetrating SIGINT system capable of detecting, identifying, locating, and providing Geolocation information on RF emitters throughout the Area of Operations (AO). The TSP is scalable and modular, designed to provide maximum flexibility. TSP will provide near real time (NRT) actionable intelligence that can immediately be used in the commander's decision cycle. The TSP electronic emitter information will be correlated with data from other systems (e.g. Prophet and Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS)), at a Distributed Common Ground System-Army (DCGS-A) node to provide precise targeting information for immediate engagement. TSP will also provide Airborne Precision Guidance (APG) against multiple high value targets. TSP sensors are critical to providing coverage Intelligence, Surveillance, and Reconnaissance (ISR)/ Reconnaissance Surveillance, and Target Acquisition (RSTA) information and contributing to the Joint ISR net.

**Justification:**  
FY11 base procurement dollars in the amount of \$100.413 million supports procurement of 24 STARLite, 24 CSP and 12 TSP (purchased by PM ACS). These payloads are in support of the fielding schedule for the ERMP UAV. STARLite and CSP will be in support of the 3rd and 4th Unit Equipped (UE) while TSP is in support of the 4UE. STARLite is currently developing a larger antenna for increased slant range (10 to 20km) and increasing the reliability (750 hours to 1150 hours) for Increment II. Procurement of this upgrade is planned for FY11 with an additional 20 antennas being procured to retrofit the existing STARLite systems.

FY11 OCO procurement dollars in the amount of \$3.600 million supports procurement for the replacement of 3 payloads due to battle damage.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date:
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February 2010

Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature MQ-1 PAYLOAD - UAS (A00020)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Comments:  
- FY09 and Prior were funded with OPA (Other Procurement, Army - PE# B00302).



<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Line Item Nomenclature: MQ-1 PAYLOAD - UAS (A00020)			Weapon System Type:	Date: February 2010				
<b>ACFT Cost Elements</b>	ID	<b>FY 09</b>			<b>FY 10</b>			<b>FY 11</b>		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>CSP (EO/IR/LD)</b>										
CSP Hardware					18450	24	769	18670	24	778
PMO Support					2570			3078		
Program Management/ Eng Support					1512			933		
Engineering Changes					3024			1680		
System Test & Eval					1973			113		
Initial Spares					3998			3579		
Interim Contractor Support					3863			1933		
Other					1966			5799		
<b>STARLite (SAR/GMTI)</b>										
STARLite Hardware					18203	24	758	21983	24	916
Hardware Upgrades								4337	20	217
PMO Support					3683			4031		
Program Management/ Eng Support					357			311		
Engineering Changes					6782			3033		
System Test & Eval					451			2332		
Initial Spares					4854			4759		
Interim Contractor Support								1882		
Other					689			5560		
<b>Tactical SIGINT Payload (TSP)</b>										
TSP Hardware					10780	8	1348	13271	12	1106
Program Management/ Eng Support					3000			1254		
Engineering Changes					400			483		
System Test & Eval					652			1820		
Initial Spares								2472		
Training								210		
Data								490		
Other										
<b>Total:</b>					<b>87207</b>			<b>104013</b>		

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2010

Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 2/ Modification of aircraft		Weapon System Type:	P-1 Line Item Nomenclature: MQ-1 PAYLOAD - UAS (A00020)								
WBS Cost Elements:	Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>CSP Hardware</b>											
FY 2010	Raytheon McKinney, TX		FFP/CPFF	CECOM	Apr 10	Apr 11	24	769	Y		
FY 2011	Raytheon McKinney, TX		FFP/CPFF	CECOM	Dec 10	Dec 11	24	778	Y		
<b>STARLite Hardware</b>											
FY 2010	Northrop Grumman Linthicum, MD		FFP/CPFF	CECOM	Mar 10	Mar 11	24	758	Y		
FY 2011	Northrop Grumman Linthicum, MD		FFP/CPFF	CECOM	Dec 10	Dec 11	24	916	Y		
<b>TSP Hardware</b>											
FY 2010	TBD TBD		FFP	CECOM	Jun 10	Mar 11	8	1348	N		
FY 2011	TBD TBD		FFP	CECOM	Jan 11	Apr 11	12	1106	N		

REMARKS:



FY 12 / 13 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE MQ-1 PAYLOAD - UAS (A00020)										Date: February 2010									
COST ELEMENTS						Fiscal Year 12										Fiscal Year 13										Later			
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 12										Calendar Year 13													
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG
CSP Hardware																													
1	FY 10	A	24	0		2	2	2	2	2	2																0		
1	FY 11	A	24	0				2	2	2	2	2	2	2	2	2	2	2									0		
STARLite Hardware																													
2	FY 10	A	24	0		2	2	2	2	2																	0		
2	FY 11	A	24	0				2	2	2	2	2	2	2	2	2	2	2									0		
TSP Hardware																													
3	FY 10	A	8	0		1																					0		
3	FY 11	A	12	0		1	1	1	1	1	1	1	1	1	1												0		
Total																													
						6	5	9	9	9	7	5	5	5	5	5	4	4	4										
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS																		
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct																					
1	Raytheon, McKinney, TX	1	10	125		1	Initial	0	9	3	12	Reorder	0	0	12	12													
2	Northrop Grumman, Linthicum, MD	12	3	35		2	Initial	0	9	3	12	Reorder	0	0	12	12													
3	TBD, TBD	12	6	72		3	Initial	0	8	0	8	Reorder	0	8	6	14													
							Initial					Reorder																	
							Initial					Reorder																	

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 2 / Modification of aircraft

P-1 Item Nomenclature  
MQ-1 WEAPONIZATION - UAS (A00025)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost			14.8	14.7						29.5
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1			14.8	14.7						29.5
Initial Spares										
Total Proc Cost			14.8	14.7						29.5
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

This budget line funds weaponization capabilities of Unmanned Aircraft Systems (UAS) such as the Extended Range Multi-Purpose (ERMP) UAS. Effort includes procurement of launchers, cables and rails from PM JAMS and all other government support required for full scale integration.

**Justification:**

FY2011 procures hardware for UAS weaponization such as launchers, installation and support kits, and includes all aspects of government and contractor program support required to support unique UAS mission profiles.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Line Item Nomenclature: MQ-1 WEAPONIZATION - UAS (A00025)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>WEAPONIZATION - UAS</b> Weaponization Effort - OGA <b>Total Government</b>  <b>Total:</b>					14795			14729		14729

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature GUARDRAIL MODS (MIP) (AZ2000)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:								
	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	1041.7	147.7	111.5	60.1	34.1	29.4	19.3	19.2		1463.0
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	1041.7	147.7	111.5	60.1	34.1	29.4	19.3	19.2		1463.0
Initial Spares										
Total Proc Cost	1041.7	147.7	111.5	60.1	34.1	29.4	19.3	19.2		1463.0
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

- Guardrail Common Sensor (GRCS) is an Airborne Signal Intercept Location System designed to provide tactical commanders with critical information via Common Data Link (CDL) connectivity with the Guardrail Ground Baseline (GGB) Station, which then provides information in Near Real Time (NRT) via NSA Net connectivity to Intel users such as Distributed Common Ground Station-Army (DCGS-A) and Common Ground Station (CGS). The Army's GR/CS System provides a flexible architecture to allow rapid deployment to support contingency operations, and is designed to support field commanders until Aerial Common Sensor (ACS), renamed to EMARSS, is fielded.

- The GRCS integrates Communications Intelligence (COMINT), the Communications High Accuracy Airborne Location System (CHAALS/CHALS-X) for COMINT precision emitter locations, the Advanced QUICKLOOK (AQL) for Electronics Intelligence (ELINT) precision emitter location, and the Guardian Eagle technical insertion payload into a single signal intelligence (SIGINT) system. The airborne elements are integrated into the RC-12H/K/N/P Aircraft. Ground processing is conducted in the Surveillance Information Processing Center, commonly referred to as the Guardrail Ground Baseline (GGB). Key performance requirements include a real-time COMINT and ELINT collection and high accuracy target location capability in communications and radar frequencies. The Tactical Common Data Link (TCDL) connects the airborne elements and the ground processing element. A satellite remote relay supports rapid deployment, minimum footprint forward, and remote signal processing capability. GR/CS Guardian Eagle (GE) payloads were provided to enhance GR/CS ability to process non-traditional signals, providing intercept of military communication emitters, and modern communication devices. The Guardian Eagle is software upgradeable and has an open architecture that leverages National and Services Military Intelligence Program (MIP) investments for future GR/CS upgrades. This capability supports ongoing Deployments in Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Overseas Contingency Operations (OCO). GR/CS contributes directly to the success of Army Modernization by serving as an operational platform for verification of new or improved technologies.

**Justification:**

FY 2011 Base Procurement dollars in the amount of \$29.899 million will provide the following capabilities for GR/CS: A greatly improved COMINT Infrastructure and Core COMINT Subsystem "Enhanced Situational Awareness (ESA)"; continuation of increased capability for modern signals "High Band COMINT (HBC)" subsystem; production of X-Midas V3 for "Special Signals (SS)" to enhance interception; and continuation of "Electronic Intelligence (ELINT)".

FY 2011 OCO Procurement dollars in the amount of \$30.200 million provide upgrades to outfit additional Aircraft. These funds will provide Special Signals (SS) V3 B-Kits plus a spare; Air-to-Air Data Links, Ground Processing software modifications; and Airborne Precision Geolocation A/B-Kits and NRE/RE support. This capability support Deployments in Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF)

Exhibit P-40M, Budget Item Justification Sheet											Date: February 2010	
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft						P-1 Item Nomenclature GUARDRAIL MODS (MIP) (AZ2000)						
Appropriation / Budget Activity / Serial No:						P-1 Item Nomenclature						
Program Elements for Code B Items:							Code:		Other Related Program Elements:			
Description		Fiscal Years										
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total	
Comm High Accuracy Location Sys-Compact (CHALS-C)												
1-06-111-2006		15.0	4.9	2.9	3.0	1.2	0.0	0.0	0.0	0.0	27.0	
Special Signals (SS) Subsystem												
1-07-333-2007		0.6	8.6	9.4	3.1	3.8	0.3	0.0	0.0	0.0	25.9	
Enhanced Situational Awareness (ESA) Subsystem												
1-06-333-2006		216.3	111.6	69.3	38.9	24.5	17.5	19.3	19.2	0.0	516.6	
Guardrail Ground Base (GGB) Station												
1-07-111-2007		6.8	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	13.3	
High Band COMINT (HBC) Subsystem												
1-07-222-2007		20.4	20.5	19.1	1.4	1.4	2.9	0.0	0.0	0.0	65.7	
Electronic Intelligence (ELINT) Subsystem												
1-07-444-2007		10.1	2.1	3.6	2.8	3.2	8.7	0.0	0.0	0.0	30.5	
Airborne Precision Geolocation (APG)												
1-10-111-2010		0.0	0.0	7.1	4.4	0.0	0.0	0.0	0.0	0.0	11.5	
Totals		269.2	147.6	111.5	60.2	34.1	29.4	19.3	19.2	0.0	690.5	



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Special Signals (SS) Subsystem [MOD 2] 1-07-333-2007

MODELS OF SYSTEM AFFECTED: Systems 1, 2, 3 & 4

**DESCRIPTION / JUSTIFICATION:**

The Special Signals Modernization effort provides capability to intercept special signals through evolution of the current X-Midas capability. Special Signal efforts will include production, integration and testing of X-Midas V3 hardware required to provide capability against unique signals. This also includes modification to ground software to enable sensor control and signal exploitation tools. Design, architecture, and antennas to support Special Signal capability will be included within ESA architecture efforts, as well as fielding in conjunction with ESA. It is anticipated that each aircraft will be equipped with two B-Kits. Funding for SS provides fifty-eight B-Kits for four systems with spares; and four B-Kits for Test Bed/SIL. Installation schedule represents four systems only. SS will not be provided for the four Trainers at Ft Huachuca.

Justification: FY2011 provides Recurring Engr to support hardware purchase for the 3rd system within the ESA Mod. Special signals provides continued relevance against current and emerging threats. PM Support, Fielding and installation costs are captured as part of ESA integration.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

- 3QFY2008 Contract Award
- 2QFY2011 SS Flight Test
- 3QFY2011-1QFY2012 Begin Fielding 1st SS Capabilities with 2nd ESA System
- 2QFY2012-2QFY2013 Begin Fielding 2nd & 4th SS Capabilities with 1st & 3rd ESA System
- 3QFY2013-2QFY2014 Begin Fielding 3rd SS Capabilities with 4th ESA System

NOTE: Systems installation will occur as units become available between deployments.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
							6	6	5	5	5	6	8	2	3	2	6	6	2	1
											8	8	8	6	4	4	4	4	4	4
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
1	2																			66
4	4	4																		66

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 3 months PRODUCTION LEADTIME: 12 months  
 Contract Dates: FY 2010 - FY 2011 - FY 2012 -  
 Delivery Dates: FY 2010 - FY 2011 - FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Special Signals (SS) Subsystem [MOD 2] 1-07-333-2007

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
NRE/Study		0.6		3.4		1.1														5.1
Installation Kits																				
SS V3 B-Kits			16	4.8	27	8.3	10	3.1	12	3.8	1	0.3							66	20.4
Spare SS V3 B-Kits			1	0.4															1	0.4
Data																				
Training Equipment																				
Support Equipment																				
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- Kits																				
<b>Total Installment</b>	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Total Procurement Cost</b>		0.6		8.6		9.4		3.1		3.8		0.3		0.0		0.0		0.0		25.9

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Enhanced Situational Awareness (ESA) Subsystem [MOD 3] 1-06-333-2006

MODELS OF SYSTEM AFFECTED: System 1, 2, 3 & 4

**DESCRIPTION / JUSTIFICATION:**

-The ESA Upgrade provides a Modern Airborne Communication Intelligence (COMINT) Subsystem on 29 GRCS aircraft and infrastructure on 33 GRCS aircraft plus spares; provides a capability against modern commercial targets; & allows GRCS to remain relevant until the Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is fielded. The ESA upgrade replaces the current 1980's vintage Direction Finding (DF) and signal classification subsystems with a Net-Centric Sustainable Architecture capable of mapping the modern signal environment and provides the software on the ground to enable sensor control & signal exploitation tools. Upgrades are needed to keep the system relevant against evolving threat signals. ESA also includes the integration, test and fielding for CHALS-C, High Band COMINT (HBC), Special Signals (SS); integration of X-Midas, & Data Link equipment, & for related aircraft mods to continue to support these capabilities. ESA will provide data link & cockpit upgrades for the first two systems. ESA provides A-Kits to 4 Trainer Aircraft at Ft Huachuca. ESA provides COMINT infrastructure and Core COMINT capability allowing more open architecture & continued relevance against emerging OEF/OIF threats.

Justification: FY2011 provides ESA B Kit for the 34th system and begins A-Kits for the 4th system, (13) Air-to-Air Data Links, Program Management Support, System Assessment & Test, and Training to include ESA, CHALS-C & HBC. Installation of ESA includes contract costs to integrate/test/fielding ESA, CHALS-C, HBC and SS. Systems installation will occur "As Units Become Available" between deployments.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

1QFY2009 Factory Acceptance Test  
 3QFY2010 System Assessment Test  
 3QFY2010-1QFY2011 Field 1st ESA Upgrade  
 3QFY2011-1QFY2012 Field 2nd ESA Upgrade  
 2QFY2012-1QFY2013 Field 3rd ESA Upgrade  
 2QFY2013-2QFY2016 Field 4th ESA Upgrade  
 1-4QFY2014 Fields 4 Trainer Aircraft Systems to Ft Huachuca.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
4			1	1	2	2	2	2	2	3	3	1	2	2	2	1	1	1		
							4	2	2		4	4	2	2	2	2	2	2	1	1

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
					3												33
									3								33

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 3 months PRODUCTION LEADTIME: 12 months  
 Contract Dates: FY 2010 - FY 2011 - FY 2012 -  
 Delivery Dates: FY 2010 - FY 2011 - FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Enhanced Situational Awareness (ESA) Subsystem [MOD 3] 1-06-333-2006

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>PROCUREMENT</b>																					
Non-Recur		94.3		24.4				3.3		2.6						4.6					129.2
Recur ESA B-Kit	7	21.0	7	21.3	10	30.9	2	6.3							3	10.1			29		89.6
Recur A-Kit (Racks/Cable)	9	13.5	8	12.2	5	7.7	3	4.7	3	4.8	3	4.9	4	6.6					35		54.4
Recur A-Kit (Airframe)	10	11.5	5	5.8	5	5.9	3	3.6	3	3.7	3	3.7	4	5.1					33		39.3
Recur Nav/Timing	9	5.2	8	4.7	5	3.0	3	1.8	3	1.8	3	1.9	4	2.5					35		20.9
NRE/Recur Data Link Air	18	11.8	10	9.0			6	2.8											34		23.6
Recur Data Link Ground	4	1.8																	4		1.8
Spare ESA B-Kit	1	3.0	1	3.0	1	3.1			1	3.2									4		12.3
Eng Lab Asset ESA B-Kit	2	4.9																	2		4.9
Aircraft Upgrade Cockpit	13	27.2	3	5.9															16		33.1
System Integration		1.6		5.5		2.0															9.1
Sys Assessment/Test Spt		2.0		1.5		2.0		1.5		1.2		1.3		0.3		0.2					10.0
Training Supt				0.4		0.5		0.5		0.5											1.9
Fielding (CHALS/ESA/HBC)				3.4		3.4		3.5		2.0		1.3		1.6		1.5					16.7
PM Support		18.5		10.2		10.5		10.6		4.3		4.1		3.2		2.8					64.2
Initial Spares Provision				4.0																	4.0
A-Kit Installations:																					
FY 2009 Installation			5	0.3																5	0.3
FY 2010 Installation					5	0.3														5	0.3
FY 2011 Installation							6	0.3												6	0.3
FY 2012 Installation									7	0.4										7	0.4
FY 2013 Installation											6	0.3								6	0.3
<b>Total Installment</b>	<b>0</b>	<b>0.0</b>	<b>5</b>	<b>0.3</b>	<b>5</b>	<b>0.3</b>	<b>6</b>	<b>0.3</b>	<b>7</b>	<b>0.4</b>	<b>6</b>	<b>0.3</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>29</b>	<b>1.6</b>	
<b>Total Procurement Cost</b>		<b>216.3</b>		<b>111.6</b>		<b>69.3</b>		<b>38.9</b>		<b>24.5</b>		<b>17.5</b>		<b>19.3</b>		<b>19.2</b>		<b>0.0</b>		<b>516.6</b>	

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Guardrail Ground Base (GGB) Station [MOD 4] 1-07-111-2007

MODELS OF SYSTEM AFFECTED: System 1, 2, 3 & 4

**DESCRIPTION / JUSTIFICATION:**

Baselines GRCS Ground Processing for all four GRCS Systems; provides Common Hardware and Software Baselines; supports full functionality of existing Integrated Processing Facilities (IPF); minimizes footprint and improves deployability; supports split-based operations; and provides migration path to Distributed Common Ground System-Army (DCGS-A). The ESA Mod is planning integration support for GGB compatibility.

Justification: The FY 2011 OCO funding support modifying ground software necessary to continue to evolve the system to handle next generation threat collection requirements. This baseline would be a field performance upgrade to various ground sites worldwide. Support of these shelters at the Guardrail Units has been funded by customer funds.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

4QFY2006 Field System 3  
 2QFY2007 Field System 4  
 1QFY2008 Field System 1  
 4QFY2008 Field System 2

NOTE: System installation will occur as units become available between deployments.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
4																				
4																				

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
																	4
																	4

**METHOD OF IMPLEMENTATION:**

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME: 0 months

Contract Dates: FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates: FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Guardrail Ground Base (GGB) Station [MOD 4] 1-07-111-2007

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RD&amp;E</b>																					
<b>Procurement</b>																					
Hardware		2.3																			2.3
Integration & Test		2.2																			2.2
Spares		0.4																			0.4
Docs		0.5																			0.5
Licenses/Hardware		0.5																			0.5
Hardware Data Link (Ground)		0.9																			0.9
Hardware/Software Mod							6.5														6.5
<b>Installation of Hardware</b>																					
FY 2007 & Prior Equip -- Kits																					
FY 2008 -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Procurement Cost		6.8		0.0		0.0		6.5		0.0		0.0		0.0		0.0		0.0			13.3



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): High Band COMINT (HBC) Subsystem [MOD 5] 1-07-222-2007

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity																				
Installation Kits																				
Nonrecurring Engr		6.1		7.4																13.5
Recurring HBC B-Kits	7	8.9	1	1.7	3	4.1	1	1.4	1	1.4	2	2.9							15	20.4
QRC-P Support		5.4																		5.4
Initial Spares																				
Data																				
Support Equipment																				
Full B-Kit			8	11.4	11	15.0													19	26.4
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		20.4		20.5		19.1		1.4		1.4		2.9		0.0		0.0		0.0		65.7



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Airborne Precision Geolocation (APG) [MOD 7] 1-10-111-2010

MODELS OF SYSTEM AFFECTED: System 1

**DESCRIPTION / JUSTIFICATION:**

This effort incorporates the Airborne Precision Geolocation (APG) subsystem developed by NSA to eighteen GRCS P/K/N aircraft to support the collection of OCO threat signals.

Justification: The FY 2011 procurement funding provides for the B-Kits, integration, testing and fielding of the Airborne Precision Geo-Location (APG) capability developed by NSA to GRCS. This capability provides a unique capability to collect against modern OCO threat signals.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Contract Award 4thQ FY10  
First Unit Equip (FUE) 1stQ FY12

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
												6	5	7						
													6	5	7					
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				18
																				18

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

3 months

**PRODUCTION LEADTIME:**

12 months

Contract Dates: FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates: FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Airborne Precision Geolocation (APG) [MOD 7] 1-10-111-2010

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
Non-Recurring																				
Recurring																				
A-Kit					11	1.9	8	1.4											19	3.4
APG B-Kit					11	4.0	7	2.6											18	6.7
APG B-Kit Spare					3	1.1	1	0.4											4	1.5
Interim Contract Supt																				
PM Fielding Supt																				
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		7.1		4.4		0.0		0.0		0.0		0.0		0.0		11.5

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No: P-1 Item Nomenclature  
 Aircraft Procurement, Army / 2 / Modification of aircraft MULTI SENSOR ABN RECON (MIP) (AZ2001)

Program Elements for Code B Items: Code: Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost		23.2	75.5	103.2	8.4	8.5	4.9	4.8		228.5
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1		23.2	75.5	103.2	8.4	8.5	4.9	4.8		228.5
Initial Spares										
Total Proc Cost		23.2	75.5	103.2	8.4	8.5	4.9	4.8		228.5
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
 Multi Sensor Airborne Reconnaissance (AZ2001) is a summary budget line including the following programs:  
 (1) Airborne Reconnaissance Low (ARL) Mods (MIP). ARL is a multi-intelligence (MultiINT) airborne sensor providing the Combatant Commander with real-time Communications Intelligence (COMINT), Imagery Intelligence (IMINT) and radar products. These systems are currently supporting forces in Central Command (CENTCOM), Operation Iraqi Freedom (OIF), SOUTHCOM, and Republic of Korea (ROK).  
 (2) ARMS/MARSS Mods (MIP). Aerial Reconnaissance Multi Sensor (ARMS) and Medium Altitude Reconnaissance and Surveillance System (MARSS) are quick reaction capability (QRC) systems which support real-time surveillance and target acquisition missions in Iraq and Afghanistan. These systems can be configured with imagery, COMINT or other sensors, depending on the emerging requirements. MARSS is a Government Owned/Contractor Operated (GOCO) system; ARMS is an Army system.  
 (3) Constant Hawk (MIP). Constant Hawk is a persistent surveillance wide field of view Airborne Intelligence, Surveillance and Reconnaissance (AISR) system conducting Counter Improvised Explosive Device (IED) surveillance force protection missions in Iraq.  
 (4) Airborne Intelligence, Surveillance and Reconnaissance (ISR) Mods (MIP). AISR Mods support the Global War on Terrorism (GWOT) mission by providing real-time data links and a wide range of product exploitation/dissemination capability. This allows receivers of real-time video with METAdata and enables secondary exploitation tools to produce products for dissemination to maneuver elements. Video is also routed to multiple users in theater. The configuration also supports capture and dissemination of other sensors/capabilities (radars, et al).

**Justification:**  
 FY11 Base procurement dollars in the amount of \$16.981 million supports the continued standardization and modernization of the ARL fleet resulting in RADAR, COMINT, and IMINT upgrades. Specifically, conversion of the final ARL-C to ARL-M configuration and upgrades to the COMINT and Imagery payloads. These upgrades also result in greater standardization across the fleet which not only maintains relevancy, but reduces operational and sustainment costs.  
 FY11 OCO procurement dollars in the amount of \$86.200 million supports the following critical capabilities: Two MARSS systems for use in Overseas Contingency Operations; Upgraded InfraRed sensors for eight Constant Hawk systems; Imagery Processing and dissemination capability at two new Aerial Reconnaissance Support Team (ARST) locations; and upgraded imagery processing capability at the remaining ARST locations.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature ARL MODS (MIP) (AZ2050)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	452.2	23.2	33.8	17.0	8.4	8.5	4.8	4.8		552.6
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	452.2	23.2	33.8	17.0	8.4	8.5	4.8	4.8		552.6
Initial Spares										
Total Proc Cost	452.2	23.2	33.8	17.0	8.4	8.5	4.8	4.8		552.6
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
 Airborne Reconnaissance Low Multifunctional (ARL-M) evolved from two complementary tactical airborne systems ARL-I Imagery Intelligence (IMINT), an electro-optic reconnaissance and surveillance system, and ARL-C (communications intelligence (COMINT)) which provides real-time highly accurate radio intercept and location. The ARL-M program integrates the capabilities of ARL-I and ARL-C into a single system to satisfy requirements identified by validated Combatant Commanders' Statements of Need (SON). The primary sensors are COMINT with precision Direction Finding (DF) capability, IMINT electro-optics for target identification, and classification and multimode capability including wide area search Moving Target Indicator (MTI) and Synthetic Aperture Radar (SAR). ARL provides near real-time tactical airborne COMINT and IMINT collection support to Joint Task Force (JTF) Commanders. ARL is a multi-INT (combined COMINT and IMINT) system, designed for forward deployment/force projection in Operations Other Than War (OOTW) and Overseas Contingency Operations (OCO). Additionally, ARL currently supports Central Command (CENTCOM) Operation Iraqi Freedom (OIF) missions and also conducts daily Joint Chiefs of Staff (JCS) Sensitive Reconnaissance Operations. ARL is rapidly self-deployable to support contingency operations, and is the airborne Reconnaissance Surveillance Target Acquisition (RSTA) platform of choice for various non-DOD government agencies such as Drug Enforcement Administration (DEA) and Federal Emergency Management Agency (FEMA). ARL is configured to allow interoperability with other Army and DOD Intel nodes such as Common Ground Station (CGS) and Tactical Exploitation System (TES). ARL uses UHF and wideband Tactical Common Data Links (TCDL), L-Band, and S-Band for Line of Sight (LOS) datalink communication, and uses UHF SATCOM and Direct Air-to-Satellite (DASR) for Over-The-Horizon (OTH) reporting. ARL contributes directly to the success of Army Transformation by serving as an operational platform for verification of new or improved technologies. ARL will continue to support current operations until a future system is fielded.

**Justification:**  
 FY11 Base procurement dollars in the amount of \$16.981 million supports the continued standardization and modernization of the ARL fleet resulting in Radar, COMINT, and IMINT upgrades. Specifically, conversion of the final ARL-C to ARL-M configuration and upgrades to the COMINT and Imagery payloads. These upgrades also result in greater standardization across the fleet which not only maintains relevancy but reduces operational and sustainment costs.

Exhibit P-40M, Budget Item Justification Sheet											Date: February 2010			
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft						P-1 Item Nomenclature ARL MODS (MIP) (AZ2050)								
Appropriation / Budget Activity / Serial No:						P-1 Item Nomenclature								
Program Elements for Code B Items:								Code:		Other Related Program Elements:				
Description		Fiscal Years												
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total			
Comint Upgrades														
6-66-66-0000	Operational	36.8	5.5	4.7	3.1	1.6	1.9	1.0	1.0	0.0	55.6			
System Interoperability														
0-00-08-8888	Operational	16.6	0.3	4.5	4.4	3.5	3.6	1.5	1.6	0.0	36.0			
Radar														
0-00-05-2222	Operational	30.5	2.0	1.0	1.5	1.6	1.5	1.2	1.1	0.0	40.4			
Workstation Architecture														
1-08-11-0000	Operational	9.2	2.9	0.5	3.1	1.4	1.5	1.1	1.1	0.0	20.8			
Imagery														
0-00-05-3333	Operational	23.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.4			
ARL-C to ARL-M Conversion														
0-00-07-7777	Operational	7.1	10.1	10.6	4.9	0.3	0.0	0.0	0.0	0.0	33.0			
High Definition (HD) Sensors														
0-00-09-9999	Operational	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5			
Totals		123.2	23.2	33.8	17.0	8.4	8.5	4.8	4.8	0.0	223.7			

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Comint Upgrades [MOD 1] 6-66-66-0000

MODELS OF SYSTEM AFFECTED: ARL-M4, M5, M7 and C1

**DESCRIPTION / JUSTIFICATION:**

FY2011 procurement funding provides COMINT installation on ARL-M7 fielding and frequency extension antennas and software upgrades. The Communications Intelligence (COMINT) upgrade modification adds a COMINT subsystem to M4, M5, M7, and C1. This upgrade also provides two spare COMINT subsystems. The COMINT system includes a complete acquisition and Direction Finding (DF) antenna manifold, Tactical Signals Intelligence (SIGINT) payload system, navigation interfaces, and Man Machine Interface (MMI). This upgrade standardizes the ARLs with a COMINT capability that can support operations in support of Operation Iraqi Freedom (OIF) and the Overseas Contingency Operations (OCO). The system will also include a frequency extension and architectural modifications for federated acquisition boxes (to allow rapid threat response). The system will be configured for remote operations and multi-level security operation. FY11-FY15 provides software module drops to support the exploitation of additional high priority target waveforms. The COMINT installation for Airborne Reconnaissance Low (ARL-C1) and (ARL-C2) will be part of the ARL communications intelligence (C) to multifunctional (M) conversion; hence installation fielding is protracted as part of the larger aircraft modification cycle. Fielding schedules are dependent on aircraft availability due to the unit supporting current Operation Iraqi Freedom (OIF) and Overseas Contingency Operations (OCO). The installation of the final COMINT is accomplished under the final ARL-C to ARL-M conversion modification.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

- 1QFY09 First System Fielded
- 1QFY10 Second System Fielded
- 2QFY10 Third System Fielded (concurrently with first ARL-C to ARL-M conversion)
- 3QFY12 Fourth System Fielded, (concurrently with second ARL-C to ARL-M conversion)

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
2				1			1													
	1				1	1									1					
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				4
																				4

**METHOD OF IMPLEMENTATION:**

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME:

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Comint Upgrades [MOD 1] 6-66-66-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Diamondback NRE		4.5																		4.5
Diamondback B Kits	3	9.5	1	1.6															4	11.1
Calibration & Test		4.5				0.1		0.1												4.7
Contractor & Govt Mgt		1.8		0.2		0.1		0.1												2.2
Signal Processing SW						2.4		1.0		1.6		1.9		1.0		1.0				8.9
Spares		1.6		1.6																3.2
Sunk Costs		13.2																		13.2
Frequency Extension Antenna				0.4		0.4		1.9												2.7
ECO																				
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits	1	1.7	1	1.7	1	1.7													3	5.1
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	1	1.7	1	1.7	1	1.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	5.1
Total Procurement Cost		36.8		5.5		4.7		3.1		1.6		1.9		1.0		1.0		0.0		55.6

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: ARL-C to ARL-M Conversion [MOD 6] 0-00-07-7777

MODELS OF SYSTEM AFFECTED: ARL C1, C2 to ARL M7, M8

**DESCRIPTION / JUSTIFICATION:**

FY2011 procurement funding procures the fielding costs for the final of two ARL-C to ARL-M conversion. The Airborne Reconnaissance Low Communications Intelligence (ARL C) to Multifunctional (M) conversion consists of a Triport (three sensor ports) modification to allow for the installation of Electro Optical/Infrared (EO/IR), digital camera, or RADAR payloads (the RADAR payload will be purchased under the RADAR modification); aircraft navigation modification; Air Survivability Equipment (ASE) modification; aircraft power modification; and Communications Intelligence (COMINT) antenna modification. The current COMINT infrastructure will be replaced (COMINT payload will be purchased under COMINT upgrade modification). This modification will also provide an imagery capability (EO/IR and digital pan camera); upgrade the communications suite; and modify the mission analysts' workstations. This upgrade will support capability requirement in Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Overseas Contingency Operations (OCO).

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

3QFY07 Award Contract and begin Non-Recurring Engineering (NRE)  
 2QFY10 Field C1 to M7 Conversion  
 3QFY12 Field C2 to M8 Conversion

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1						1														
						1									1					
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				2
																				2

**METHOD OF IMPLEMENTATION:**

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME: 0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): ARL-C to ARL-M Conversion [MOD 6] 0-00-07-7777

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
Airframe Modification and Integration		6.5		8.7		9.2															24.4
Air Worthiness Release				0.4		0.2		0.1		0.3											1.0
Test & Fielding				0.5		0.8		4.0													5.3
PMO		0.6		0.5		0.4		0.8													2.3
<b>Installation of Hardware</b>																					
FY 2007 & Prior Equip -- Kits																					
FY 2008 -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		7.1		10.1		10.6		4.9		0.3		0.0		0.0		0.0		0.0			33.0



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): High Definition (HD) Sensors [MOD 7] 0-00-09-9999

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
(NRE)						0.4														0.4
Cables					4	5.9													4	5.9
					2	2.5													2	2.5
					2	0.5													2	0.5
Hardware					2	0.9													2	0.9
Procedure						0.7														0.7
						0.7														0.7
<b>Installation of Hardware</b>																				
						0.9														0.9
Total Installment	0	0.0	0	0.0	0	0.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.9
Total Procurement Cost		0.0		0.0		12.5		0.0		0.0		0.0		0.0		0.0		0.0		12.5

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature ARMS MARSS MODS (MIP) (AZ2052)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	0.0		23.2	41.7						64.9
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	0.0		23.2	41.7						64.9
Initial Spares										
Total Proc Cost	0.0		23.2	41.7						64.9
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
 ARMS/MARSS Mods (MIP). Aerial Reconnaissance Multi Sensor (ARMS) and Medium Altitude Reconnaissance and Surveillance System (MARSS) are two quick reaction capability (QRC) systems which support real-time surveillance and target acquisition missions in Iraq and Afghanistan. They provide manned airborne reconnaissance platforms to provide commanders with real time intelligence and support to their battlefield operations. These systems can be configured with various sensors and communications equipment to include imagery, COMINT or other specialized sensors, depending on the emerging requirements.

ARMS: There are ten ARMS aircraft fielded to Iraq in support of Task Force Observe, Detect, Identify and Neutralize (TF ODIN). The ARMS system is composed of B-200 (C-12) aircraft equipped with imagery sensors, specialized COMINT sensors, and an array of line of sight and beyond line of sight communications equipment. The aircraft were fielded to Operation Iraqi Freedom (OIF) in FY06 and have been providing daily support to the TF ODIN commander. They are manned with Army reserve personnel and maintained and supported by contractors. A major enabler for this equipment is real-time data links and a wide range of product exploitation/dissemination capability. This allows users to receive real-time video with Metadata and enables secondary exploitation tools to produce products for dissemination to maneuver elements. Imagery is also routed to multiple users in theater. The configuration also supports capture and dissemination of other sensors/capabilities. Prior to establishment of this line, FY07 and FY08 Supplemental funds were placed in the Airborne Reconnaissance Low (ARL) Mods line (AZ2050) to support the integration and fielding of the ARMS systems.

MARSS: The MARSS aircraft are primarily King Air 300's (C-12 variant) equipped with numerous sensors to include imagery and communications intelligence (COMINT) payloads. They also include several line-of-sight and beyond line-of-sight communications systems and on board (manned) processing of the imagery and COMINT. There is one Army operated MARSS aircraft in Iraq and currently five in Overseas Enduring Freedom (OEF) with a planned and funded growth to seven total aircraft in OEF. These systems are and will be under the command of the TF ODIN-Iraq and Afghanistan (TFO-I & TFO-A) commanders.

**Justification:**  
 FY11 OCO procurement dollars in the amount of \$41.700 million procures the Prime Mission Equipment (PME), integration, and support to provide 2 MARSS systems in OEF. These systems will include Imagery and Communications Intelligence (COMINT) sensors as well as line of sight and beyond line of sight communications equipment. They will allow for two backseat operators performing COMINT and imagery analysis and real time dissemination of the data from the aircraft. PM Fixed Wing will be procuring two platform aircraft via Funding line A02700.

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature ARMS MARSS MODS (MIP) (AZ2052)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
ARMS Data Links and Data Dissemination											
1-07-01-OCO	U	0.0	0.0	18.7	0.0	0.0	0.0	0.0	0.0	0.0	18.7
MARSS Beyond Line of Sight in OEF											
01-08-003-OCO	U	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	4.5
MARSS 19 & 20 Integration & Spt											
03-11-003-OCO	U	0.0	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	41.7
<b>Totals</b>		0.0	0.0	23.2	41.7	0.0	0.0	0.0	0.0	0.0	64.9

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: ARMS Data Links and Data Dissemination [MOD 1] 1-07-01-OCO

MODELS OF SYSTEM AFFECTED: ARMS 1 through 10

**DESCRIPTION / JUSTIFICATION:**

The ARMS aircraft require upgrades to allow for realtime/encrypted data links to support real time dissemination of imagery from the aircraft to warfighters on the ground. The aircraft will be equipped with Tactical Common Data Links (TCDLs), Blue Force Tracker (BFT) and beyond line of sight communications equipment. We will also provide additional communications equipment to provide improved data dissemination. The associated ground equipment will be upgraded to allow for improved processing of data from the aircraft as well as improved data dissemination. It is not expected that any aircraft will come out of service to support the integration of the equipment.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

- 1QFY10: Procurement of airborne communications terminals for all aircraft (10 plus 2 spares)
- 3QFY10: Receipt of airborne communications equipment
- 4QFY10: Testing on surrogate aircraft
- 1-2QFY11: Fielding/integration in theater
  
- 1QFY10: Contract for upgrades to OIF aircraft/ground processing
- 3-4QFY10: Integration of upgraded air/ground processing

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
									4	6										
									4	6										
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				10
																				10

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

0 months

**PRODUCTION LEADTIME:**

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): ARMS Data Links and Data Dissemination [MOD 1] 1-07-01-OCO

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>						18.7														18.7
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		18.7		0.0		0.0		0.0		0.0		0.0		0.0		18.7

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: MARSS 19 & 20 Integration & Spt [MOD 3] 03-11-003-OCO

MODELS OF SYSTEM AFFECTED: MARSS 19 & 20

**DESCRIPTION / JUSTIFICATION:**

Medium Altitude Reconnaissance and Surveillance Systems (MARSS) 19 and 20 are airborne systems that consist of aircraft and Prime Mission Equipment (PME) and will perform ISR operations. These systems will be integrated onto PM Fixed-Wing provided aircraft and include Imagery and Communications Intelligence (COMINT) sensors as well as line of sight and beyond line of sight communications equipment. It will allow for two backseat operators performing COMINT and imagery analysis and real time dissemination of the data from the aircraft. This effort will provide PME, integration, test and the deployment and initial sustainment of the systems in theater. PM Fixed Wing will be procuring two platform aircraft via Funding line A02700.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

2QFY11: Contract award for prime mission equipment  
 3QFY12: Begin integration of initial platforms  
 2QFY13: Completion of integration, testing, and deployment of Aircraft

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
																1	1			
																		2		
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				2
																				2

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

0 months

**PRODUCTION LEADTIME:**

0 months

Contract Dates: FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates: FY 2010 -

FY 2011 -

FY 2012 -



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): MARSS 19 & 20 Integration & Spt [MOD 3] 03-11-003-OCO

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
PME and Integration							2	28.0											2	28.0
Program Mgt & Test								2.2												2.2
Deployment and 4 mos ICS								11.5												11.5
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		0.0		41.7		0.0		0.0		0.0		0.0		0.0		41.7

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date:  February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature CONSTANT HAWK (MIP) (AZ2054)
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Program Elements for Code B Items:		Code:	Other Related Program Elements:							
	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	0.0		18.3	12.4						30.7
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	0.0		18.3	12.4						30.7
Initial Spares										
Total Proc Cost	0.0		18.3	12.4						30.7
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

Constant Hawk (MIP). Constant Hawk (CH) is a persistent surveillance wide field of view Airborne Intelligence, Surveillance and Reconnaissance (AISR) system conducting Counter Improvised Explosive Device (IED) surveillance and forensic force protection missions in Iraq and Afghanistan. CH uses high resolution Electro Optic (EO) cameras mounted on manned aircraft to provide persistent surveillance of a designated Named Area of Interest (NAI). The aircraft loiters over a NAI for five to six hours collecting and storing imagery data. At the completion of the mission this data is processed on the ground and personnel perform forensic analysis of the data. The resulting intelligence related to IED attacks and other critical information is pushed out to commanders within hours of completion of the mission. The system currently only operates in daytime conditions. Several near term upgrades are planned for the system to include the addition of a real time data link (already working in Iraq), an Infra-Red (IR) sensor to allow for day and night operations, a geosteered high resolution spotter camera, imagery analyst forensic tools, ground processing capability improvements, and integrated secure dissemination.

Constant Hawk Iraq (CH-I): There are five CH aircraft in Iraq. The CH-I system is under the operational control of the Task Force Observe, Detect, Identify, and Neutralize (TF ODIN). CH-I is a unique capability from other assets within TF ODIN, and is the only asset performing forensic analysis. The five CH-I aircraft perform on average thirty-one (31) sorties per week. The CH-I system uses a Shorts SD3-60 non-pressurized aircraft. The CH-I system is contractor owned and operated. The government funds the contractor for full operations and support of the system in theater to include pilots, analysts, backseat operators, and maintenance personnel. \*\*\* The development of CH-I was primarily funded through Joint IED Defeat Organization (JIEDDO).

Constant Hawk-Afghanistan (CH-A): In FY08 the ISR Task Force funded the production and fielding of three CH aircraft to support TF ODIN Afghanistan operations. In January 2009 the Army awarded a contract to produce and field these aircraft which will be fielded in FY10. This system will be identical to the CH-I equipment except it will be integrated on a pressurized, King Air 350 (C-12) aircraft. The system will also include a single CONUS based aircraft to support training and upgrades. The TFO-A system will also be contractor owned and operated and fall under the command and control of TF-ODIN Afghanistan.

**Justification:**

FY11 OCO Funding in the amount of \$12.400 million provides key user-requested upgrades for both CH-I and CH-A systems including near real-time exploitation of wide area surveillance day and night with refined high resolution spotter imagery available immediately. Improvements will include data link ground stations for CH-A, geo-steered high-resolution spotter cameras refining the current practice of sensor operators taking snap shots, and analyst forensic tools with automated vehicle tracking. Other upgrades include on-board processing to make stitched, conditioned, geo-rectified imagery available for immediate forensic analysis, and further tech refresh of ground processing for more responsive analysis and secure digital dissemination of CH products and imagery.

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature CONSTANT HAWK (MIP) (AZ2054)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Constant Hawk - Iraq IR Sensors Upgrade											
1-09-01-OCO	U	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Constant Hawk - Afghanistan											
2-10-00-OCO	U	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	10.3
Constant Hawk - Afghanistan IR Sensors Upgrade											
1-11-00-OCO		0.0	0.0	0.0	12.4	0.0	0.0	0.0	0.0	0.0	12.4
<b>Totals</b>		0.0	0.0	18.3	12.4	0.0	0.0	0.0	0.0	0.0	30.7

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Constant Hawk - Iraq IR Sensors Upgrade [MOD 1] 1-09-01-OCO

MODELS OF SYSTEM AFFECTED: Constant Hawk-I Sys 1-4

DESCRIPTION / JUSTIFICATION:

This funding will provide the integration of 2 additional day/night CH sensors (AWAPSS) plus 1 spare and the testing and integration of those sensor on CH aircraft in theater. Two will be integrated on aircraft in theater and the third will be used as a spare. This effort will also support upgrades to the CH ground processing sensors on facilities to allow for processing, analysis and dissemination of data to commanders.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

2QFY08: Contract award of the AWAPSS (CH IR sensor)

4QFY08: CDR for AWAPSS

3-4QFY09: Flight testing of AWAPSS on surrogate aircraft

2QFY10: Flight testing on CH-I test-bed aircraft

2QFY10: Procure three additional AWAPSS sensors

3-4QFY10: Field two AWAPSS to CH-I

1-2QFY11: Integrate two AWAPSS sensors on CH-I in theater with one spare

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
							1	1												
									1	1										
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				2
																				2

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME: 0 months

Contract Dates: FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates: FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Constant Hawk - Iraq IR Sensors Upgrade [MOD 1] 1-09-01-OCO

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
AWAPSS HW					2	3.0													2	3.0	
Nonrecurring Engineering						3.0															3.0
Training/Spare Equipment					1	1.5													1	1.5	
Support Equipment						0.5															0.5
CH-I Integration																					
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		0.0		0.0		8.0		0.0		0.0		0.0		0.0		0.0		0.0		8.0	

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Constant Hawk - Afghanistan [MOD 2] 2-10-00-OCO

MODELS OF SYSTEM AFFECTED: Constant Hawk-A Systems 1-3

**DESCRIPTION / JUSTIFICATION:**

This funding will provide the integration of 4 day/night CH sensors (AWAPSS) including 1 trainer/spare in Conus and the testing and integration of those sensors on CH aircraft in theater. Currently CH-A has no night capability although it is capable of accepting AWAPSS sensor with some non-recurring engineering and integration effort. It will also support upgrades to the CH ground processing facilities to allow for processing, analysis and dissemination of data to commanders.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

2QFY08: Contract award of the AWAPSS (CH IR sensor)

4QFY08: CDR for AWAPSS

3-4QFY09: Flight testing of AWAPSS on surrogate aircraft

2QFY10: Flight testing on CH-A test-bed aircraft

2QFY10: Procure four additional AWAPSS sensors

3-4QFY10: Field two AWAPSS to CH-A

1-2QFY11: Integrate three AWAPSS sensors on CH-A in theater and one trainer/spare in Conus

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
							2	2												
									2	2										
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				4
																				4

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

0 months

**PRODUCTION LEADTIME:**

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Constant Hawk - Afghanistan [MOD 2] 2-10-00-OCO

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RD&amp;E</b>																					
<b>Procurement</b>																					
AWAPSS HW					3	4.5													3	4.5	
Nonrecurring Engineering						3.5														3.5	
Training Equipment					1	1.5													1	1.5	
Support Equipment						0.8														0.8	
CH-A System Integration																					
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		0.0		0.0		10.3		0.0		0.0		0.0		0.0		0.0		0.0		10.3	





**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Constant Hawk - Afghanistan IR Sensors Upgrade [MOD 3] 1-11-00-OCO

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
Sensor Procurement							3	5.1											3	5.1
Nonrecurring Engineering								2.2												2.2
Recurring Engineering/Testing								2.5												2.5
Integration								1.2												1.2
Spares								1.4												1.4
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		0.0		12.4		0.0		0.0		0.0		0.0		0.0		12.4

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature ABN ISR MODS (MIP) (AZ2056)
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Program Elements for Code B Items: Populate these P40's from other samples and the funding prof	Code:	Other Related Program Elements:
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	0.0			32.1						32.1
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	0.0			32.1						32.1
Initial Spares										
Total Proc Cost	0.0			32.1						32.1
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
 Airborne Intelligence, Surveillance and Reconnaissance (ISR) Mods support Overseas Contingency Operations (OCO) by providing a wide range of information exploitation and data dissemination capabilities to both deployed and non-deployed Airborne ISR systems. These system mods typically provide ground and other training support efforts that cross the spectrum of the ISR systems in use. Currently, this fleet of systems includes: Constant Hawk, a Quick Reaction Capability (QRC) Persistent Surveillance Counter Improvised Explosive Device (IED) system used in forensic force protection missions in both Operation Iraqi and Enduring Freedom (OIF/OEF); Aerial Reconnaissance Multi-Sensor System (ARMS) and Medium Altitude Reconnaissance and Surveillance systems (MARSS), which are two QRC systems employed in both OIF and OEF. ARMS and MARSS provide imagery sensors, Communications Intelligence (COMINT), and beyond line of sight(BLOS)communications equipment; Highlighter, a system currently operational in OIF, which provides high definition imagery for change detection. This mods line also supports the Aerial Reconnaissance Support Teams (ARST) in theater, which provide ground station support to Collect, Process, Exploit, Disseminate, and Archive Imagery Data.

**Justification:**  
 FY11 OCO procurement dollars in the amount of \$32.100 million provides upgraded imagery processing and dissemination equipment and integrates DCGS-A interoperability for Aerial Reconnaissance Support Team ground stations in OIF and OEF. The ARSTs provide exploitation and dissemination of imagery data for TF ODIN in Iraq (OIF) and Afghanistan (OEF). They utilize COTS equipment to collect, process, exploit and disseminate imagery data. This funding also provides for 2 additional ARSTs to support surge operations in Afghanistan. This will bring the total number of ARST ground sites in theater to six and provide a more robust coverage of the Area of Interest (AOI).

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature ABN ISR MODS (MIP) (AZ2056)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items: Populate these P40's from other samples and the funding prof	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
ARST - Iraq Upgrades											
01-11-001-OCO	U	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	2.5
ARST- Afghanistan Upgrades											
02-11-002-OCO	U	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	4.6
ARST - Additional Systems											
03-11-003-OCO	U	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	25.0
Totals		0.0	0.0	0.0	32.1	0.0	0.0	0.0	0.0	0.0	32.1



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): ARST - Additional Systems [MOD 3] 03-11-003-OCO

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
ARST Sys H/W & S/W							2	10.0											2	10.0	
Int & Test								12.0													12.0
Program Mgt								3.0													3.0
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		0.0		0.0		0.0		25.0		0.0		0.0		0.0		0.0		0.0			25.0

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2010

Appropriation / Budget Activity / Serial No:  
/ /

P-1 Item Nomenclature  
AH-64 APACHE MODS (AA6605)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

AA6670, AA0951, PE23744 D12 & D17

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost		1824.1	636.9	593.0	314.7	194.5	72.0	75.1	590.1	4300.4
Less PY Adv Proc		55.0	47.8							102.8
Plus CY Adv Proc		47.8								47.8
Net Proc P1		1816.9	589.1	593.0	314.7	194.5	72.0	75.1	590.1	4245.4
Initial Spares										
Total Proc Cost		1816.9	589.1	593.0	314.7	194.5	72.0	75.1	590.1	4245.4
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

Program provides for an Apache Attack Helicopter fleet to meet the AAO of 634 of AH-64D tandem cockpit, twin engine, single main rotor Apache attack helicopters. Principal aircraft components include the Target Acquisition Designation Sight (TADS) housed in a turret on the nose of the AH-64 and consisting of a TV, Forward Looking Infrared (FLIR), Direct View Optics, Laser Designator/ Rangefinder and Spot Tracker. The Pilot Night Vision Sensor (PNVS) is a FLIR which allows Nap-of-Earth operations at night by the pilot independent of the co-pilot/gunner's FLIR. Apache aircraft are armed with the Hellfire Antitank Missile, 2.75 inch rockets, and a 30mm gun capable of defeating armor.

The AH-64D Longbow Apache (LBA) aircraft incorporates the Longbow weapon system and provides the U.S. Army with a significant improvement in target acquisition and firepower effectiveness, increasing the survivability, lethality, and adverse weather fighting capabilities of the Apache. The AH-64D Longbow model is equipped with a modified AH-64 airframe, a Fire Control Radar (FCR)/ Radar Frequency Interferometer (RFI) mission kit, and "Fire and Forget" Longbow HELLFIRE missiles. Longbow War Replacement Aircraft (WRA), replenishments for combat attrition, were added to the Apache budget line in supplemental appropriations as follows: 13 in FY05, 14 in FY06, 20 in FY07, 5 in FY08 and 12 in FY09.

Modernization provides near term improvements to the Apache fleet, focusing on reliability and safety (R&S) upgrades and correction of operational limitations. The Modernized TADS/PNVS (M-TADS/PNVS) program provides a second generation FLIR (SGF) sensor suite to the Apache fleet. The Internal Auxiliary Fuel System (IAFS)/Combo-Pak provides additional 100 gallon fuel tank for extended range plus a 30 MM 246 round ammo pack. Modifications specifically for the AH-64D include Selected Component Recapitalization, FCR Obsolescence, Trainer Upgrades, Light Weight Missile Launcher (LWML) and the Apache Block III (AB3). Modifications also include the remanufacture of an additional 117 AH-64A to the AH-64D Extended Block II Upgrade configuration via a single year contract, with options. In addition, funding also buys the remanufacture of 70 AH-64A to AH-64 Block II configuration aircraft for the National Guard (NG), FY09-FY11.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature AH-64 APACHE MODS (AA6606)
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Program Elements for Code B Items:		Code:	Other Related Program Elements:							
	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	4198.7	1824.1	636.9	593.0	314.7	194.5	72.0	75.1	590.1	8499.1
Less PY Adv Proc	77.7	55.0	47.8							180.4
Plus CY Adv Proc	132.6	47.8								180.4
Net Proc Pl	4253.7	1816.9	589.1	593.0	314.7	194.5	72.0	75.1	590.1	8499.1
Initial Spares	900.0									900.0
Total Proc Cost	5153.6	1816.9	589.1	593.0	314.7	194.5	72.0	75.1	590.1	9399.1
Flyaway U/C										
Weapon System Proc U/C										

<b>P-40 Breakdown</b>									
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Active	Qty	0	0	0	0	0	0	0	0
	Gross Cost	1384222.0	589050.0	592969.0	314719.0	194549.0	72039.0	75056.0	
National Guard	Qty	0	0	0	0	0	0	0	0
	Gross Cost	432700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reserve	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0	0
	Gross Cost	1816922	589050	592969	314719	194549	72039	75056	

**Description:**  
 Program provides for an Apache Attack Helicopter fleet to meet the AAO of 634 of AH-64D tandem cockpit, twin engine, single main rotor Apache attack helicopters. Principal aircraft components include the Target Acquisition Designation Sight (TADS) housed in a turret on the nose of the AH-64 and consisting of a TV, Forward Looking Infrared (FLIR), Direct View Optics, Laser Designator/ Rangefinder and Spot Tracker. The Pilot Night Vision Sensor (PNVS) is a FLIR which allows Nap-of-Earth operations at night by the pilot independent of the co-pilot/gunner's FLIR. Apache aircraft are armed with the Hellfire Antitank Missile, 2.75 inch rockets, and a 30mm gun capable of defeating armor.

The AH-64D Longbow Apache (LBA) aircraft incorporates the Longbow weapon system and provides the U.S. Army with a significant improvement in target acquisition and firepower effectiveness, increasing the survivability, lethality, and adverse weather fighting capabilities of the Apache. The AH-64D Longbow model is equipped with a modified AH-64 airframe, a Fire Control Radar (FCR)/ Radar Frequency Interferometer (RFI) mission kit, and "Fire and Forget" Longbow HELLFIRE missiles. Longbow War Replacement Aircraft (WRA), replenishments for combat attrition, were added to the Apache budget line in supplemental appropriations as follows: 13 in FY05, 14 in FY06, 20 in FY07, 5 in FY08, 12 in FY09, and 2 in FY10.

Modernization provides near term improvements to the Apache fleet, focusing on reliability and safety (R&S) upgrades and correction of operational limitations. The Modernized TADS/PNVS (M-TADS/PNVS) program provides a second generation FLIR (SGF) sensor suite to the Apache fleet. The Internal Auxiliary Fuel System (IAFS)/Combo-Pak provides additional 100 gallon fuel

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature AH-64 APACHE MODS (AA6606)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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tank for extended range plus a 30 MM 246 round ammo pack. Modifications specifically for the AH-64D include Selected Component Recapitalization, FCR Obsolescence, Trainer Upgrades, Light Weight Missile Launcher (LWML) and the Apache Block III (AB3). Modifications also include the remanufacture of an additional 117 AH-64A to the AH-64D Extended Block II Upgrade configuration via a single year contract, with options. In addition, funding also buys the remanufacture of 70 AH-64A to AH-64 Block II configuration aircraft for the National Guard (NG), FY09-FY11.

**Justification:**  
 FY 11 Base funding, in the amount of \$393.8 Million, will procure Apache Sensors Life Extension and Upgrades, MISC Mods (\$5 Million or less), Apache Product Improvements, Modernized TADS/PNVS, Apache Upgrades and Remanufacture, Apache Training Aids, Devices, Simulators, and Simulation (TADSS), and Modernized Day Side Assembly.  
 FY 11 OCO funding, in the amount of \$199.2 Million, will procure the Visible Near Sight (V/N Sight) sensor and the Video from UAS Interoperability Teaming (VUIT-2) modification.  
 P-40 Breakdown: Active Breakdown includes Remanufactured Aircraft, New Build Aircraft, Training Devices and all remaining project costs. National Guard Breakdown includes Remanufactured Aircraft and Training Devices.



Exhibit P-40M, Budget Item Justification Sheet											Date: February 2010	
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft						P-1 Item Nomenclature AH-64 APACHE MODS (AA6606)						
Appropriation / Budget Activity / Serial No:						P-1 Item Nomenclature						
Program Elements for Code B Items:						Code:		Other Related Program Elements:				
Description		Fiscal Years										
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total	
Apache Sensors Life Extension & Upgrade												
1-94-01-2005		137.2	10.6	8.6	37.4	10.6	11.5	12.9	13.2	181.3	423.3	
AH-64A MISC Mods \$5M or less (no P3a set)												
OSIP		728.0	8.2	0.0	6.4	9.6	6.3	7.3	7.4	73.8	847.0	
Apache Transformation												
OSIP		46.2	4.9	0.0	0.0	4.0	0.0	0.0	0.0	0.0	55.1	
Modernized TADS/PNVS (M-TADS)												
1-01-01-0022		709.0	184.2	24.6	25.1	50.8	0.0	0.0	0.0	0.0	993.7	
Video from UAS Interoperability Teaming (VUIT-2)												
0-00-00-0000		0.0	0.0	91.9	170.6	0.0	0.0	0.0	0.0	0.0	262.5	
Apache Product Improvements												
OSIP		197.9	63.4	16.0	16.4	37.2	7.2	27.8	11.5	81.2	458.6	
AH-64D Longbow War Replacement Aircraft (WRA)												
0-00-00-0000		0.0	343.6	69.2	0.0	0.0	0.0	0.0	0.0	0.0	412.8	
Lightweight Missile Launcher (LWML)												
0-00-00-0000		0.0	0.0	0.0	14.9	10.6	22.1	14.8	15.1	0.0	77.5	
Apache Upgrades and Remanufacture												
OSIP		977.8	1050.3	333.5	200.6	60.9	55.7	9.2	27.9	161.7	2877.6	
Modernized Day Side Assembly (M-DSA), Phase1												
0-00-00-0000		0.0	0.0	0.0	18.5	102.4	74.7	0.0	0.0	0.0	195.6	
Fire Control Radar (FCR)												
0-00-00-0000		0.0	63.8	27.7	14.1	28.6	0.0	0.0	0.0	0.0	134.2	
Internal Auxiliary Fuel System (IAFS)												
OSIP		69.2	39.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	118.2	
Apache Block III												
OSIP		0.0	11.1	0.0	29.3	0.0	0.0	0.0	0.0	0.0	40.4	
Apache Training Aids, Devices, Simulators & Simul												
0-00-00-0000		0.0	31.6	0.0	59.7	0.0	17.0	0.0	0.0	92.1	200.4	
Apache Post Production Organic Support												
OSIP		4.5	6.2	7.6	0.0	0.0	0.0	0.0	0.0	0.0	18.3	

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature AH-64 APACHE MODS (AA6606)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Totals		2869.8	1816.9	589.1	593.0	314.7	194.5	72.0	75.1	590.1	7115.2

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Apache Sensors Life Extension & Upgrade [MOD 1] 1-94-01-2005

MODELS OF SYSTEM AFFECTED: AH-64 Apache

**DESCRIPTION / JUSTIFICATION:**

Operational and logistical improvement. This is a critical stage in the Longbow remanufacturing effort as it produces a single configuration Modernized Target Acquisition Designation Sight (M-TADS) for AH-64 Extended Block II Upgrade (117 aircraft) and Longbow Apache Block III (AB3). This mod facilitates maintainers' access to Target Acquisition Designation Sight/Pilot Night Vision Sensor/MTADS (TADS/PNVs/MTADS) systems thereby allowing for accelerated application of outstanding Engineering Change Proposals (ECPs). Additionally, satisfies program growth and life extension requirements and provides for offsite contractor support for upgrade/integration of hardware in the TADS/PNVs/MTADS. Funding is required throughout the AB3 program to overhaul sensors/ TADS Electronic Display and Controls (TEDACs), etc., through the Arizona Support Center (ASC) facility to the proper configuration for the AB3 aircraft. The funding for Visible Near Sight (V/N Sight) will provide accelerated capability to the field for blending near/visible infrared with the FLIR. Funding will satisfy emerging requirements for zero timing all Apache Sensors to include TADS/PNVs, MTADS, Fire Control Radar (FCR), Radar Frequency Interferometer (RFI), and TEDAC.

Installation costs are included in contract and are not broken out separately.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Initial contract award was Dec 95. Date of first delivery was Jun 96.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
579	6	6	6	9	9	9	9	9	9	9	9	9	12	11	11	11	12	11	8	7
561	6	6	6	6	9	9	9	9	9	9	9	9	15	14	14	14	12	11	11	11
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
12	12	12	12	12	12	12	10													855
12	12	12	12	12	12	12	12													855

METHOD OF IMPLEMENTATION: Contract      ADMINISTRATIVE LEADTIME: 2 months      PRODUCTION LEADTIME: 1 months  
 Contract Dates: FY 2010 - Dec 09      FY 2011 - Nov 10      FY 2012 - Nov 11  
 Delivery Dates: FY 2010 - Jan 10      FY 2011 - Dec 10      FY 2012 - Dec 11

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Apache Sensors Life Extension & Upgrade [MOD 1] 1-94-01-2005

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity	561		36		36		36		45		45		48		48				855	
T/P FFP/T&M/CFE/O&A		93.0		6.2		6.8		8.0		10.6		11.5		12.9		13.2		181.3		343.5
Equipment (GFE)		40.3		3.6		1.0														44.9
Visible Near Infrared (V/NIR)								28.6												28.6
Other		3.9		0.8		0.8		0.8												6.3
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits	537																			537
FY 2008 -- Kits	24																			24
FY 2009 Equip -- 36 Kits			24		12															36
FY 2010 Equip -- 36 Kits					24		12													36
FY 2011 Equip -- 36 Kits							24		12											36
FY 2012 Equip -- 45 Kits									45											45
FY 2013 Equip -- 45 Kits											45									45
FY 2014 Equip -- 48 Kits													48							48
FY 2015 Equip -- 48 Kits															48					48
Total Installment	561	0.0	24	0.0	36	0.0	36	0.0	57	0.0	45	0.0	48	0.0	48	0.0	0	0.0	855	0.0
Total Procurement Cost		137.2		10.6		8.6		37.4		10.6		11.5		12.9		13.2		181.3		423.3

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Modernized TADS/PNVs (M-TADS) [MOD 4] 1-01-01-0022

MODELS OF SYSTEM AFFECTED: AH-64D Apache Helicopter

**DESCRIPTION / JUSTIFICATION:**

The Modernized Target Acquisition & Designation Sight/Pilot Night Vision Sensor (M-TADS/PNVs) modification program is the Army initiative to provide 2nd Generation Forward Looking Infrared (SGF)(FLIR) sensors for the Apache fleet. Suite modifications encompass: M-TADS/PNVs Line Replaceable Units (LRUs), TADS Electronic Display and Control (TEDAC) assemblies, and the Integrated Helmet Display Sight System (IHDSS) assemblies. The SGF system improves overall pilotage and enhances the pilot's ability to engage targets during night and bad weather. Several specific improvements include, increased detection range, enhanced recognition and target identification, higher resolution and sensitivity for safety and pilotage performance (especially in adverse weather), better identifying of friend/foe during hostilities, and increased reliability and reduction in O&S costs. The complementary TEDAC and IHDSS upgrade reduces operating costs, increases cockpit space, and exploits the expanded capability of the M-TADS/PNVs. This exhibit identifies funding for 565 of a total of 706 M-TADS production units and associated displays (including 95 units for the NG).

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Jan 01 -- Preliminary Design Review (PDR); Aug 01 -- Critical Design Review (CDR)  
 May 02 -- Qualification testing; Dec 03 -- M-TADS/PNVs Production Contract Award; June 05 -- M-TADS/PNVs FUE  
 Feb 08 -- MTADS/PNVs Lot 5 Production Contract Award (Price Agreement reached Dec 07)  
 Feb 09 -- MTADS/PNVs Lot 6 Production Contract Award  
 Feb 10 -- Projected MTADS/PNVs Lot 7 Production Contract Award  
 Dec 09 -- Contract Option for NG3a  
 Dec 10 -- Contract Option for NG3b  
 Dec 11 -- Contract Option for NG4

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
158	36	36	36	36	36	36	36	36	27	6	7	13	11	10	10		6	9	6	6
158	36	36	36	36	36	36	36	36	27	6	7	13	11	10	10		6	9	6	6
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
6	2																			565
6	2																			565

**METHOD OF IMPLEMENTATION:** Contract      **ADMINISTRATIVE LEADTIME:** 2 months      **PRODUCTION LEADTIME:** 24 months  
**Contract Dates:** FY 2010 - Feb10      FY 2011 - Dec 10      FY 2012 - Dec 11  
**Delivery Dates:** FY 2010 - Dec 11      FY 2011 - Oct 12      FY 2012 - Oct 13

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Modernized TADS/PNVS (M-TADS) [MOD 4] 1-01-01-0022

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity																				
Installation Kits																				
SDU				1.4																1.4
Equipment	415	588.3	103	172.8	12	24.6	12	25.1	23	50.8									565	861.6
Equipment, Nonrecurring		21.3																		21.3
TEDAC/IHDSS		62.2		5.0																67.2
Other Support		37.2		5.0																42.2
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits	158		144		19															321
FY 2008 -- 94 Kits					94															94
FY 2009 Equip -- 103 Kits					31		53		19											103
FY 2010 Equip -- 12 Kits									12											12
FY 2011 Equip -- 12 Kits											12									12
FY 2012 Equip -- 23 Kits											15		8							23
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- 0 Kits																				
Total Installment	158	0.0	144	0.0	144	0.0	53	0.0	31	0.0	27	0.0	8	0.0	0	0.0	0	0.0	565	0.0
Total Procurement Cost		709.0		184.2		24.6		25.1		50.8		0.0		0.0		0.0		0.0		993.7

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Video from UAS Interoperability Teaming (VUIT-2) [MOD 5] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: AH-64 Apache

**DESCRIPTION / JUSTIFICATION:**

Funding total includes \$91.9 Million FY10 supplemental funding and \$170.6 Million FY 11 funding to procure 8 BN sets of 24 each plus spares of Apache Video Unmanned Aircraft System (UAS) Interoperability Teaming - Level II (Apache VUIT-2) capability to support Overseas Contingency Operations (OCO). VUIT-2 gives Apache pilots the capability to receive off platform sensor video in the cockpit and transmit sensor data to the ground or other similarly equipped air platforms. This capability will improve situational awareness and enable real-time intelligence sharing. The complete modification includes UAS Level II interoperability and Apache sensor video transmission to the ground capabilities.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Proposed contract award -- February 2010

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
												24	24			36	36	36	36	
												24	24			36	36	36	36	
	FY 2014				FY 2015				FY 2016				FY 2017				To	Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
																		192		
																		192		

**METHOD OF IMPLEMENTATION:**

Contract

**ADMINISTRATIVE LEADTIME:**

1 months

**PRODUCTION LEADTIME:**

17 months

Contract Dates:

FY 2010 - Feb 10

FY 2011 - Feb 11

FY 2012 -

Delivery Dates:

FY 2010 - Jul 11

FY 2011 - Jul 12

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Video from UAS Interoperability Teaming (VUIT-2) [MOD 5] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
VUIT-2 -- FY10 OCO					48	91.9														48	91.9
VUIT-2 -- FY11 OCO							144	170.6												144	170.6
Equipment																					
Data																					
Training Equipment																					
Support Equipment																					
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- 48 Kits							24		24											48	
FY 2011 Equip -- 144 Kits									36		108									144	
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	24	0.0	60	0.0	108	0.0	0	0.0	0	0.0	0	0.0	192	0.0	
Total Procurement Cost		0.0		0.0		91.9		170.6		0.0		0.0		0.0		0.0		0.0		262.5	



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Apache Product Improvements [MOD 6] OSIP

MODELS OF SYSTEM AFFECTED: AH-64 Apache Helicopter

**DESCRIPTION / JUSTIFICATION:**

Apache Mods and Recap provides near term improvements to the Apache fleet and focuses on reliability & safety (R&S) upgrades and operational deficiencies. The R&S mods and selected component recapitalization are being accomplished by the reman line, field retrofits, and through spares. Improvements focus on main transmission, rotor blades, gear boxes, and hydraulic systems. Also, funding provides for selected component recap and insertion of R&S mods for the Apache fleet. The program includes select Task Force Hawk initiatives (i.e., HF Radio and New Digital Video Recorder). The selected component recap fixes were identified through a Sandia National Lab analysis of components coupled with the results of a nonrecurring engineering analysis of components. These assessments ensure that the recap resources are focused on the highest payoff components. The goal of this program is to improve safety, maximize marginal return on recapped components, enhance aircraft performance by increasing unscheduled mean time between removal (MTBR) for selected components, and reduce the average fleet age. Funding in FY10 & FY11 for NG Support will procure the delta component overhauls to convert AH-64A model Recap kits to AH-64D model Recap kits. Extended year funding provides for continued reliability and safety improvements, gains synergy from future programs and bridges the gap to Block III future requirements. Condition Based Maintenance (CBM) and expansion of the Modernized Signal Processing Unit (MSPU) capabilities will continue to evolve reducing ownership costs and improving the maintenance posture and burden on the warfighter.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Jan 07 - FFP Contract Option,  
 Jul 07 - FFP Contract restructure to support the 96 additional aircraft  
 Dec 07 - CBM contract  
 Jul 09 - CBM contract option (OCO)

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
611	36	36	37	37	53	54	54	54									27	27	27	27
611	36	36	37	37	53	54	54	54									27	27	27	27
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				1080
																				1080

**METHOD OF IMPLEMENTATION:** Contract - CBM      **ADMINISTRATIVE LEADTIME:** 2 months      **PRODUCTION LEADTIME:** 12 months  
**Contract Dates:** FY 2010 -      FY 2011 -      FY 2012 - Nov 11  
**Delivery Dates:** FY 2010 -      FY 2011 -      FY 2012 - Dec 12

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Apache Product Improvements [MOD 6] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																		81.2		81.2
CBM Hardware/VMEP	296	11.1	72	2.0					60	4.5			24.3		10.4				428	52.3
VMEP (Jt Conf Add)						3.0														3.0
Other Recap		12.9		24.7				2.2		8.3		2.4								50.5
NG Recap Support				18.3		10.2		10.4		20.2										59.1
R&S Equipment (Kits)	655	108.2																	655	108.2
CBM Services		35.6		3.9		2.1		3.8		4.2		3.5	3.5		1.1					57.7
Non-recurring engineering		11.0																		11.0
CBM Kits -- FY09 OCO			143	10.8															143	10.8
Composite Tail Rotor																				
ASPI NRE																				
ASPI Kits																				
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits	411	14.8	50	2.0															461	16.8
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits	100	1.8																	100	1.8
FY 2012 Equip -- Kits	100	2.5																	100	2.5
FY 2013 Equip -- Kits											48								48	
FY 2014 Equip -- Kits																				
FY 2008 Equip -- 96 CBM Kits			96	1.7															96	1.7
FY 2010 Equip -- 0 CBM Kits																				
FY 2009 Equip -- 32 CBM Kits					72	0.7													72	0.7
FY 2009 OCO Equip -- 143					143														143	
<b>CBM Kits</b>																				
FY 2011 Equip -- 0 CBM																				
FY 2012 Equip -- 60 CBM											60	1.3							60	1.3
TC Equip -- Kits																				
<b>Total Installment</b>	611	19.1	146	3.7	215	0.7	0	0.0	0	0.0	108	1.3	0	0.0	0	0.0	0	0.0	1080	24.8
<b>Total Procurement Cost</b>		197.9		63.4		16.0		16.4		37.2		7.2		27.8		11.5		81.2		458.6

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: AH-64D Longbow War Replacement Aircraft (WRA) [MOD 7] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: Longbow Apache

DESCRIPTION / JUSTIFICATION:

These replacement aircraft will be the same configuration as those produced under the remanufacturing contract, but they will be fitted with a new fuselage and materials as opposed to being remanufactured. FY09 supplemental OCO funding (\$343.6M) procured twelve (12) Longbow WRA (with Modernized TADS/PNVS and Aircraft Survivability Equipment) to replace those aircraft attrited during OIF/OEF. FY10 funding (\$69.2 Million) will procure 2 Longbow WRA.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

FY09 OCO 12 WRA Proposed Contract Award, Mar 10  
 FY10 OCO 2 WRA Contract Award, Mar 10

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: Contract      ADMINISTRATIVE LEADTIME: 6 months      PRODUCTION LEADTIME: 34 months  
 Contract Dates: FY 2010 - Mar 10      FY 2011 - Dec 10      FY 2012 -  
 Delivery Dates: FY 2010 - Dec 12      FY 2011 - Jan 14      FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): AH-64D Longbow War Replacement Aircraft (WRA) [MOD 7] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
FY09 OCO WRA			12	343.6															12	343.6
Kit Quantity																				
FY10 OCO WRA					2	69.2													2	69.2
FY11 OCO WRA																				
Data																				
Training Equipment																				
Support Equipment																				
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		343.6		69.2		0.0		0.0		0.0		0.0		0.0		0.0		412.8

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Lightweight Missile Launcher (LWML) [MOD 8] 0-00-00-0000

MODELS OF SYSTEM AFFECTED:

DESCRIPTION / JUSTIFICATION:

The LWML is an upgrade to the M229 configuration launcher used on the AH-64D. The enhanced M299A1 LWML provides significant enhancements to the Apache weapons' launch and control. The LWML is more reliable, less costly to procure, and provides important weight reduction for the aircraft, a 45 lbs decrease per launcher. The new LWML design will also alleviate critical obsolescence issues associated with the current M299 launcher. FY11 funding will procure 230 Lightweight Missile Launchers for the Apache program. Per Basis of Issue Plan, 4 Launchers are required per helicopter (4 LWML = 1 ship set/aircraft).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Contract Award (managed by PM JAMS) Dec 2010

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
									57	57	58	58	40	40	40	40	81	81	82	82
													57	57	58	58	40	40	40	40

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
54	54	54	54	54	54	54	54										1148
81	81	82	82	54	54	54	54	54	54	54	54						1148

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: 3 months PRODUCTION LEADTIME: 10 months  
 Contract Dates: FY 2010 - FY 2011 - Dec 10 FY 2012 -  
 Delivery Dates: FY 2010 - FY 2011 - Oct 11 FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Lightweight Missile Launcher (LWML) [MOD 8] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
LWML Procurement							230	14.9	160	10.6	326	22.1	216	14.8	216	15.1			1148	77.5	
Installation Kits																					
Installation Kits, Nonrecurring																					
Equipment																					
Equipment, Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- 96 Kits								230												230	
FY 2012 Equip -- 47 Kits										160										160	
FY 2013 Equip -- 42 Kits												326								326	
FY 2014 Equip -- 45 Kits														216						216	
FY 2015 Equip -- 45 Kits																	216			216	
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	230	0.0	160	0.0	326	0.0	216	0.0	216	0.0	1148	0.0	
Total Procurement Cost		0.0		0.0		0.0		14.9		10.6		22.1		14.8		15.1		0.0			77.5

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Apache Upgrades and Remanufacture [MOD 9] OSIP

MODELS OF SYSTEM AFFECTED: AH-64 Apache

**DESCRIPTION / JUSTIFICATION:**

Funding for the AH-64 Extended Block II Upgrade supports the remanufacture of additional AH-64A aircraft to the AH-64D configuration. The schedule generates greater attack helicopter combat power for the warfight sooner and accelerates Reserve Component modernization by cascading Longbow Block I aircraft directly to United States Army Reserve and Army National Guard Apache battalions. By modernizing additional AH-64As, the Army is addressing concerns of OSD and Congress by mapping out a strategy for the entire Apache fleet. Funding the obsolescence requirement promotes increased readiness and decreases total ownership cost of the existing Apache fleet. Critical software enhancements supporting OCO will now be available to Apache commanders and aircrew. These improvements are vital to conducting the attack helicopter mission, provide critical safety improvements to protect the aircrew from harm, and reduce loss of aircraft.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Contract Award Dec 2006 (FY 07)  
 Contract Options (FY 08-10) -- Extended Block 2 (EBII)  
 Contract Awards, Dec 09  
 NG Contract Award, Mar 10

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
74	14	14	14	13	12	12	12	11	2	9	2									
38	9	9	9	9	14	14	14	13	12	12	12	11	2	9	2					
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																				189
																				189

**METHOD OF IMPLEMENTATION:** Firm Fixed Price      **ADMINISTRATIVE LEADTIME:** 3 months      **PRODUCTION LEADTIME:** 12 months  
 Contract  
 Contract Dates:                      FY 2010 - Mar 10                      FY 2011 - Dec 10                      FY 2012 -  
 Delivery Dates:                      FY 2010 - Dec 10                      FY 2011 - Jan 13                      FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Apache Upgrades and Remanufacture [MOD 9] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>Procurement</b>																				
Kit Quantity/Equipment	72	754.1	32	372.0	12	150.3	1	16.9											117	1293.3
NG Aircraft Procurement	2	30.8	46	535.6	12	142.7	12	145.5	13.4	20.5									72	888.5
Long Lead		118.3		18.2																136.5
NG Launchers				16.1		4.3														20.4
NG MEP				57.0		14.9		15.2	5.9	24.1										117.1
Other Support		74.6		51.4		21.3		23.0												170.3
Software Upgrades									23.3						24.3		106.2			153.8
Obsolescence									18.3	11.1	9.2				3.6		55.5			97.7
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits	38		36																	74
FY 2009 Equip -- 32 a/c					32															32
FY 2009 NG Equip -- 46 a/c					23		23													46
FY 2010 Equip -- 12 a/c							12													12
FY 2010 NG Equip -- 12 Kits							12													12
FY 2011 NG Equip -- 12 a/c									12											12
FY2011 Equip -- 1 a/c									1											1
Total Installment	38	0.0	36	0.0	55	0.0	47	0.0	13	0.0	0	0.0	0	0.0	0	0.0	0	0.0	189	0.0
Total Procurement Cost		977.8		1050.3		333.5		200.6		60.9		55.7		9.2		27.9		161.7		2877.6



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Modernized Day Side Assembly (M-DSA), Phase1 [MOD 10] 0-00-00-0000

MODELS OF SYSTEM AFFECTED:

DESCRIPTION / JUSTIFICATION:

Funding totals include \$195.5 Million in FY 11 to FY 13 to procure 288 Laser Rangefinder/Designator (M-LRFD) with spares to support the Apache AH-64 fleet. The M-LRFD unit will replace the obsolete Laser Transceiver Unit (LTU) to mitigate ongoing risks, improve reliability and maintainability, and reduce O&S costs associated with the LTU and the Laser Electronics Unit (LEU) which contain 30 year old technology. The M-LRFD provides laser ranging, designation and target tracking capable by holding a laser beam on a stationary or moving point target for handoff. In addition, the M-LRFD will enable the Block III to be ready to meet technology insertion production timelines which the current 1970s technology does not.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Proposed contract award - September 2011

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
																		1	6	10
																				17

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
26	45	52	58	60	30												288
26	45	52	58	60	30												288

METHOD OF IMPLEMENTATION:

Contract

ADMINISTRATIVE LEADTIME:

6 months

PRODUCTION LEADTIME:

30 months

Contract Dates:

FY 2010 - Sep 11

FY 2011 - Jan 12

FY 2012 - Jan 13

Delivery Dates:

FY 2010 - Mar 13

FY 2011 - Aug 13

FY 2012 - Aug 14

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Modernized Day Side Assembly (M-DSA), Phase1 [MOD 10] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>							11	18.5	147	102.4	130	74.7								288	195.6
Kit Quantity																					
Installation Kits																					
Installation Kits, Nonrecurring																					
Equipment																					
Equipment, Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- 11 Kits											11									11	
FY 2012 Equip -- 147 Kits										6			141							147	
FY 2013 Equip -- 130 Kits												40		90						130	
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	17	0.0	181	0.0	90	0.0	0	0.0	288	0.0	
Total Procurement Cost		0.0		0.0		0.0		18.5		102.4		74.7		0.0		0.0		0.0			195.6

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Fire Control Radar (FCR) [MOD 11] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: AH-64 Apache

**DESCRIPTION / JUSTIFICATION:**

The FCR is a monopulse, coherent Doppler radar system. It is a multimode system capable of acquiring moving and stationary targets in ground and air environments. It also provides navigational and piloting information on the surrounding terrain. The FCR, in combination with the Radio Frequency (RF) missile, provides the Longbow Apache with fire-and-forget capability. The FCR includes a MMA, LPRF, PSP, and RFI LRU. This provides the aircrew with the capability to detect and locate moving and stationary ground targets, helicopters, and fixed wing aircraft, even when operating in limited adverse weather or minimum visibility conditions. The mast-mounted Radar Frequency Interferometer (RFI) provides threat emitter warning and azimuth direction finding/cueing. Target information is sent to the Weapons Processor (WP). Target coordinates are sorted and sent to the Display Processor (DP) for target symbology presentation on the FCR page or Tactical Situation Display (TSD) page. Target and threat information can also be selected for FCR symbology overlay on TADS/PNVIS video. This exhibit identifies funding for 36 FCRs with RFI for the National Guard Bureau aircraft in FY 09-12.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Oct 09 - Projected FCR/RFI Production Contract Award, with Options to follow.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
									9			9		6				3		
									9			9		6				3		
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
	9																			36
	9																			36

**METHOD OF IMPLEMENTATION:** Contract      **ADMINISTRATIVE LEADTIME:** 4 months      **PRODUCTION LEADTIME:** 24 months  
**Contract Dates:** FY 2010 - Oct 09      FY 2011 - Mar 11      FY 2012 - Mar 12  
**Delivery Dates:** FY 2010 - Oct 11      FY 2011 - Jan 13      FY 2012 - Jan 14

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Fire Control Radar (FCR) [MOD 11] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity																				
Installation Kits			18	63.8	6	27.7	3	14.1	9	28.6									36	134.2
Equipment																				
Other																				
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- 18 Kits							18												18	
FY 2010 Equip -- 6 Kits									6										6	
FY 2011 Equip -- 3 Kits											3								3	
FY 2012 Equip -- 9 Kits													9						9	
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	18	0.0	6	0.0	3	0.0	9	0.0	0	0.0	0	0.0	36	0.0
Total Procurement Cost		0.0		63.8		27.7		14.1		28.6		0.0		0.0		0.0		0.0		134.2

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Internal Auxiliary Fuel System (IAFS) [MOD 12] OSIP

MODELS OF SYSTEM AFFECTED: AH-64 Apache

**DESCRIPTION / JUSTIFICATION:**

This program meets the requirements established by Task Force Hawk, as approved for incorporation by the VCSA. The IAFS is ballistically tolerant, crashworthy, self sealing and increases aircraft mission endurance by increasing fuel capacity by 100 gallons. During ongoing OIF/OEF missions the AH-64, in the Quick Reaction Force (QRF) and in support of Close Combat operations, the AH-64 is required to remain on station longer to protect ground troops with immediate suppression by the 30mm weapon. The additional capacity provided by IAFS increases mission time by 30-45 minutes and enables the Apache aircraft to remain in fight longer and reduce Forward Area Refuel Point (FARP) iterations. The Combo-pak also has a 246 round 30mm capacity which meets critical operational needs associated with current operations in OIF/OEF as well as future contingencies. IAFS is designated as a threshold Mission Equipment Package (MEP) requirement in support of OEF/OIF. FY09-10 procured B-kits will be installed by operating units.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

FFP Contract will be used for all IAFS procurements, FY 08 - FY 10

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
303																				
303																				

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
																	303
																	303

**METHOD OF IMPLEMENTATION:** Contract      **ADMINISTRATIVE LEADTIME:** 1 months      **PRODUCTION LEADTIME:** 9 months  
**Contract Dates:** FY 2010 - Nov 09      FY 2011 -      FY 2012 -  
**Delivery Dates:** FY 2010 - Jul 10      FY 2011 -      FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Internal Auxiliary Fuel System (IAFS) [MOD 12] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity																				
A Kits	93	2.0																	93	2.0
B Kits	253	59.4	148	37.0	32	8.0													433	104.4
Other Support & Equipment		5.8		2.0		2.0														9.8
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits	303	2.0																	303	2.0
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	303	2.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	303	2.0
Total Procurement Cost		69.2		39.0		10.0		0.0		0.0		0.0		0.0		0.0		0.0		118.2

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Apache Block III [MOD 13] OSIP

MODELS OF SYSTEM AFFECTED: AH-64D Longbow Apache

DESCRIPTION / JUSTIFICATION:  
 AH-64A to Block III (NRE): The evolutionary system improvement process that has kept the Apache AH-64 attack helicopter a viable combat multiplier for over 20 years has moved from the original AH-64A through two block improvement programs of the AH-64D Longbow (Block I and Block II). The most significant modification and technological change was from the AH-64A to the AH-64D Block I configuration. The plan to remanufacture AH-64A aircraft directly into the AB3 configuration will require design work and the associated drawing changes not originally planned.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):  
 Advance Procurement (LRIP) Lot 1 Contract Award Production - 4th QTR FY09

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 0 months PRODUCTION LEADTIME: 0 months  
 Contract Dates: FY 2010 - FY 2011 - FY 2012 -  
 Delivery Dates: FY 2010 - FY 2011 - FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Apache Block III [MOD 13] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
Long Lead Items				11.1																	11.1
A to Block III (NRE)							29.3														29.3
A to Block III																					
<b>Installation of Hardware</b>																					
FY 2007 & Prior Equip -- Kits																					
FY 2008 -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
TC Equip -- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Procurement Cost		0.0		11.1		0.0		29.3		0.0		0.0		0.0		0.0		0.0		0.0	40.4



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Apache Training Aids, Devices, Simulators & Simul [MOD 14] 0-00-00-0000

MODELS OF SYSTEM AFFECTED:

DESCRIPTION / JUSTIFICATION:

AH-64D aircrew TADSS are the Longbow Crew Trainer (LCT) for individual/team training tasks, and the AH-64D manned modules within the Aviation Combined Arms Tactical Trainer (AVCATT) for collective training. Maintenance Training Devices (MTD) for institutional training of AH-64D Military Operational Specialties (MOS) 15R and 15Y at US Army Aviation Logistics School, Ft. Eustis comprise a range of thirteen (13) different devices, including the Multiplex, Avionics, Visionics, Weapons & Electrical Systems Trainer (MAVWEST-L7), Airframe, Engine, and Drivetrain Systems Trainer (AEDST-L6), and eleven (11) different subsystem Part Task Trainers (PTT).

Funding in FY11 will procure: two (2) additional LCTs for the US Army Aviation Center of Excellence (USAACE) and Western Area Aviation Training Site (WAATS); additional M-TADS/PNVS upgrades to AEDST-L6 and MAVWEST-L7; software upgrade supporting LCT air-to-ground virtual interoperability via Synthetic Environment Core; and other aircraft concurrency and obsolescence upgrades to system TADSS.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

- Jul 09 -- Acceptance testing completed, first IPASPTT and first Wing PTT
- Jul 09 -- Contract award, LCT #31 (NG2 LCT)
- Aug 09 -- Acceptance testing completed, LCT #26 (25th USG LCT)
- Feb 10 -- Projected fielding, first Gun PTT
- Jun 10 -- LCT #31 Firm Fixed Price (FFP) Award
- Jun 10 -- Projected fielding, first Multiplex PTT
- Jan 11 -- Contract Award, LCT #32-#33

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			2						13	21	18						1			
												1		5	6	13	20	9		
	FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
																	110			165
							1										110			165

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: 3 months PRODUCTION LEADTIME: 24 months  
 Contract Dates: FY 2010 - FY 2011 - Dec 10 FY 2012 -  
 Delivery Dates: FY 2010 - FY 2011 - Mar 12 FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Apache Training Aids, Devices, Simulators & Simul [MOD 14] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
LCT (NG/USAACE/WAATS)			2	31.6			2	35.3			1	17.0							5	83.9	
Maintenance PTT																					
Systems TADSS							50	22.8									110	92.1	160	114.9	
Concurrence'Obsolescence																					
AVCATT Concurrence																					
Air-Ground Interop LCT								1.6													1.6
<b>Installation of Hardware</b>																					
LCT (NG/USAACE/WAATS)									2		2				1					5	
Maintenance PTT																					
Systems TADSS							1		22		27						110			160	
Concurrence'Obsolescence																					
AVCATT Concurrence																					
Air-Ground Interop LCT																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	1	0.0	24	0.0	29	0.0	0	0.0	1	0.0	110	0.0	165	0.0	
Total Procurement Cost		0.0		31.6		0.0		59.7		0.0		17.0		0.0		0.0		92.1		200.4	

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Apache Post Production Organic Support [MOD 15] OSIP

MODELS OF SYSTEM AFFECTED: AH-64 Apache

**DESCRIPTION / JUSTIFICATION:**

Funds will be used to establish a pilot program (initially at Corpus Christi Army Depot (CAD)) to support transitioning repair/overhaul of selected AH-64D Longbow unique airframe components, currently supported by the contractor/Original Equipment Manufacturer (OEM), to organic depot facilities (Corpus Christi Army Depot and Tobyhanna Army Depot). The transitioning is occurring in phases from the least to the most complex Transition Package.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

FY08 funds -- Contract with Boeing, July 08  
 FY09 funds -- Contract with Boeing, Jan 09  
 FY10 funds -- Contract with Boeing, Jan 10

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

**METHOD OF IMPLEMENTATION:** Organic      **ADMINISTRATIVE LEADTIME:** 3 months      **PRODUCTION LEADTIME:** 0 months  
 Contract Dates: FY 2010 -      FY 2011 -      FY 2012 -  
 Delivery Dates: FY 2010 -      FY 2011 -      FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Apache Post Production Organic Support [MOD 15] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>Procurement</b>																				
Other - Transition Packages		4.5		6.2		7.6														18.3
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
Other Support																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		4.5		6.2		7.6		0.0		0.0		0.0		0.0		0.0		0.0		18.3

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: RDTE PE 0203744A
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	9570.2	690.6	136.5	149.1	158.1	268.2	286.4	312.3	6612.2	18183.5
Less PY Adv Proc	1080.5	38.9	49.5							1168.9
Plus CY Adv Proc	1119.4	49.5								1168.9
Net Proc P1	9609.1	701.2	87.0	149.1	158.1	268.2	286.4	312.3	6612.2	18183.5
Initial Spares	9692.0	2.0							947523.0	957217.0
Total Proc Cost	19301.1	703.2	87.0	149.1	158.1	268.2	286.4	312.3	954135.2	975400.5
Flyaway U/C										
Weapon System Proc U/C										

P-40 Breakdown									
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Active	Qty	0	0	0	0	0	0	0	0
	Gross Cost	695396.0	86980.0	149107.0	158056.0	268233.0	286430.0	312250.0	
National Guard	Qty	0	0	0	0	0	0	0	0
	Gross Cost	5760.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reserve	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0	0
	Gross Cost	701156	86980	149107	158056	268233	286430	312250	

**Description:**  
The CH-47 Chinook is a twin-turbine, tandem-rotor, heavy lift transport helicopter with a useful load of up to 25,000 pounds. As the Army's only heavy lift helicopter, the mission of the CH-47 is to transport troops (including air assault), supplies, weapons, and other cargo in general support operations. The CH-47 is vital to the Overseas Contingency Operations (OCO) and Homeland Security needs of our nation. Secondary missions include medical evacuation, aircraft recovery, parachute drops, disaster relief, and search and rescue. These aircraft are fielded to heavy helicopter companies and Special Operations Aviation. The major modifications are Engine Filtration System, Engine Improvement to include 1553 Data Bus Integration, Maintenance Training Devices (MTD), Transformation Sets, Kits and Outfits, M24A1 Window/Door Gun Mount, Adjustable Pitch Change Link, Crashworthy Seats, Combined Transmission Fan Drive Shaft, Electric Pump Utility System Hydraulic Accumulator (EPUSHA), Aft Pylon Work Platform, Swashplate Bearing, Cargo Hook and 1553 Integration, Parts Interchangability Obsolescence, Cargo On/Off Loading System (COOLS), Aircraft Component Parts-marking, Ballistic Protection Systems (BPS), Rotor Blades, and Performance Enhancements to equip new Chinook units forming under the Army's Aviation Transformation Plan.

**Justification:**  
FY 11 Base procurement dollars in the amount of \$57.6 million supports safety and operation modifications to the CH-47D fleet and trainers to maintain the latest configuration. These changes

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date:
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February 2010

Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: RDTE PE 0203744A
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contribute to the effectiveness of heavy lift capability, maintainability, reliability, and aircraft/crew safety. The major modifications are Engine Filtration System, Engine Improvement, Maintenance Training Devices (MTD), Transformation Sets, Kits and Outfits, M24A1 Window/Door Gun Mount, Adjustable Pitch Change Link, Crashworthy Seats, Combined Transmission Fan Drive Shaft, Swashplate Bearing, Cargo Hook and 1553 Integration, Cargo On/Off Loading System (COOLS), and Ballistic Protection Systems (BPS) to equip new Chinook units forming under the Army's Aviation Transformation Plan.

FY 11 OCO procurement dollars in the amount \$82.9 million supports New Equipment Training (\$30.8 million), 93 Ballistic Protection Systems (\$16.8 million), and 98 Cargo on/off loading systems (\$35.3 million).

Exhibit P-40M, Budget Item Justification Sheet										Date: February 2010	
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft					P-1 Item Nomenclature CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)						
Appropriation / Budget Activity / Serial No:					P-1 Item Nomenclature						
Program Elements for Code B Items:						Code:		Other Related Program Elements: RDTE PE 0203744A			
Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Engine Filtration System											
1-93-01-0807	Operational	43.0	0.3	0.2	0.3	0.0	0.0	0.0	0.0	0.0	43.8
Engine Improvement											
1-96-01-0828	Operational	2554.6	30.3	18.4	23.0	30.3	24.5	17.6	6.7	10.3	2715.7
CH-47 D to F Conversion											
0-00-00-0000	Operational	3534.0	621.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4155.1
Maintenance Training Devices (MTD)											
0-00-00-0000		13.2	8.3	9.7	7.0	6.4	7.1	0.7	0.0	0.0	52.4
Transformation Sets, Kits and Outfits											
0-00-00-0000	Safety	43.2	10.3	11.8	12.3	12.7	8.6	3.2	0.0	0.0	102.1
M24A1 Window/Door Gun Mount											
0-00-00-0000	Operational	3.4	5.8	5.1	0.0	0.0	0.0	0.0	0.0	0.0	14.3
Adjustable Pitch Change Link											
0-00-00-0000		0.0	0.0	3.3	1.6	4.4	4.3	12.2	11.3	15.8	52.9
Crashworthy Seats											
0-00-00-0000		0.0	0.0	3.2	1.4	5.5	3.0	4.4	6.5	39.3	63.3
AVCATT											
0-00-00-0000		9.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9
CH-47 MISC Mods \$5M or Less											
0-00-00-0000	Operational	26.0	18.9	11.7	3.8	1.0	4.3	8.4	11.0	43.3	128.4
Cargo On/Off Loading System											
0-00-00-0000		0.0	24.0	9.3	40.3	14.0	14.0	20.0	30.0	93.6	245.2
Aircraft Component Parts-Marking											
0-00-00-0000		10.1	7.4	3.5	0.0	0.0	0.0	0.0	0.0	0.0	21.0
Ballistic Protection System (BPS)											
0-00-00-0000		4.3	1.7	4.7	19.7	5.6	4.8	9.5	9.3	30.5	90.1
New Equipment Training (NET)											
0-00-00-0000		0.0	0.0	6.1	30.8	0.0	0.0	0.0	0.0	0.0	36.9
Rotor Blades and Performance Enhancements											
0-00-00-0000		0.0	0.0	0.0	0.0	0.0	123.5	210.4	237.5	0.0	571.4

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements: RDTE PE 0203744A
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
SOA Commonality											
0-00-00-0000		0.0	0.0	0.0	8.9	78.2	74.2	0.0	0.0	0.0	161.3
<b>Totals</b>		6241.5	728.3	87.0	149.1	158.1	268.3	286.4	312.3	232.8	8463.8





**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Engine Improvement [MOD 2] 1-96-01-0828

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
New Engines	1250	2495.0																		1250	2495.0
T55 Engine Control Unit Prog (ECU)	56	6.1	131	7.9	240	15.5	240	15.5	240	15.8	240	16.1	103	7.1						1250	84.0
P3 Check Value	139	2.4	234	2.5																373	4.9
Digital ECU Remote Readout			68	9.4	33	2.0	23	0.7	216	6.7	75	2.4								415	21.2
Improved Torque Meter			260	9.1			144	5.4	170	6.5	126	4.9	229	9.1	155	6.2	426	10.3		1510	51.5
Logistics		50.6																			50.6
PM Admin Support		0.5		1.4		0.9		1.4		1.3		1.1		1.4		0.5					8.5
--																					
<b>Installation of Hardware</b>																					
FY 2007 & Prior Equip -- Kits																					
FY 2008 -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Total Procurement Cost		2554.6		30.3		18.4		23.0		30.3		24.5		17.6		6.7		10.3			2715.7

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: CH-47 D to F Conversion [MOD 3] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47D/F

**DESCRIPTION / JUSTIFICATION:**

The CH-47 Chinook is a twin-turbine, tandem-rotor, heavy-lift transport helicopter with a useful load of up to 25,000 pounds. The CH-47F Improved Cargo Helicopters mission is to transport troops (including air assault), supplies, weapons, and other cargo in general support operations and is an essential component of the Army Future Force and is vital to the Overseas Contingency Operations and the Homeland Security needs of our nation. This budget line for the CH-47F program procures 465 aircraft out of the Armys Aviation Transformation Chinook total requirement of 513 aircraft. Three MH-47G aircraft were procured previously with unique Special Operations/Congressional funding outside of this budget line item. The total aircraft requirement consists of 61 special operations MH-47Gs (which includes the three unique Special Operations/Congressionally funded helicopters mentioned above) and 262 remanufactured CH-47Fs. The CH-47F program installs a new digital cockpit, incorporates all new airframe components, and modifies the aircraft to reduce vibration. The CH-47F Common Avionics Architecture System (CAAS) digital cockpit will provide future growth potential to meet the Net-Ready Key Performance requirements and include a digital data bus that permits installation of enhanced communications and navigation equipment for improved situational awareness, mission performance, and survivability. New airframe structural components and modifications will reduce harmful vibrations, improving operation and support (O&S) efficiency and crew endurance. Other airframe modifications reduce by 60 percent the time required for aircraft tear down and build-up after C-5/C-17 deployment. These modifications significantly enhance the Chinook's strategic deployment capability. All CH-47F funding starting in FY10 was moved to CH-47 SLEP (A05105) and CH-47 New Build (A05008).

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

MS III Production Decision - Nov 04  
FRP Contract Award - Dec 04

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: Contract      ADMINISTRATIVE LEADTIME: 0 months      PRODUCTION LEADTIME: 0 months  
 Contract Dates: FY 2010 -      FY 2011 -      FY 2012 -  
 Delivery Dates: FY 2010 -      FY 2011 -      FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): CH-47 D to F Conversion [MOD 3] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
Recurring Production (Suppl)	28	845.6																	28	845.6
Recurring Production (Mods)	125	1674.3	23	545.6															148	2219.9
Recurring Production (New Build)	6	177.5																	6	177.5
Recurring (New Build NG)	4	120.0																	4	120.0
Omnibus	1	30.0																	1	30.0
Other Flyaway		351.0		41.5																392.5
Other Support		189.0		10.2																199.2
Training		128.1		21.0																149.1
Support Equipment		18.5		2.8																21.3
--																				
--																				
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		3534.0		621.1		0.0		0.0		0.0		0.0		0.0		0.0		0.0		4155.1

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Maintenance Training Devices (MTD) [MOD 4] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47F

**DESCRIPTION / JUSTIFICATION:**

The Maintenance Training Devices (MTD) to be upgraded include the Electrical Trainer, Hardware Maintenance Trainer, Automatic Flight Control System Classroom Trainer, Single Point Pressure Refueling Systems Trainer, Composite Maintenance Trainer, Landing Gear, Cargo Hook, Hydraulics Maintenance Trainers, and Flight Controls Trainers. Since almost all dynamic components will remain the same between the D and F models, many of these trainers will be required for CH-47F as it transitions.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: Contract      ADMINISTRATIVE LEADTIME: 3 months      PRODUCTION LEADTIME: 12 months  
 Contract Dates: FY 2010 - Jan 10      FY 2011 - Dec 11      FY 2012 - Jan 12  
 Delivery Dates: FY 2010 - Jan 11      FY 2011 - Jan 12      FY 2012 - Jan 13

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Maintenance Training Devices (MTD) [MOD 4] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
MTD Upgrades	2	5.4	4	7.2	5	8.2	3	5.4	4	4.7	4	5.4							22	36.3
Engineering Support		7.4		0.9		1.2		1.3		1.4		1.4								13.6
Logistics		0.4		0.2		0.3		0.3		0.3		0.3	0.7							2.5
Other																				
Interim Contractor Support																				
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		13.2		8.3		9.7		7.0		6.4		7.1		0.7		0.0		0.0		52.4

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Transformation Sets, Kits and Outfits [MOD 5] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47D/F CHINOOK

DESCRIPTION / JUSTIFICATION:  
 Type of Improvements - Improved Operational and Safety Capability. Sets, Kits and Outfits. This funding procures initial start-up tooling and equipment to facilitate unit reorganizations as part of the Army Aviation Transformation. Procurement of these kits are through requisition in the supply system.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME:

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Transformation Sets, Kits and Outfits [MOD 5] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
SKOs	17	42.8	4	10.0	4	11.8	4	12.3	4	12.7	3	8.6	1	3.2					37	101.4
PM Support		0.4		0.3																0.7
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		43.2		10.3		11.8		12.3		12.7		8.6		3.2		0.0		0.0		102.1



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: M24A1 Window/Door Gun Mount [MOD 6] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47D and F

**DESCRIPTION / JUSTIFICATION:**

Type of Improvement. The M24A1 Window/Door Mount will replace the legacy gun mount to improve operational capability. The current M240H machine gun is adapted to the legacy M24 mount by means of a mount and pintle assembly with a 200 round capacity ammunition can and a collection system. The M240H machine gun Operational Requirement Document (ORD) requires the system to be stowable and increase the number of rounds available for firing without the need to change ammunition cans. The current M24 gun mount will not support a 400 ammunition can nor provide the needed egressibility/stowability requirement without modification. These are user installed.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Contract Award - Jan 10  
 First Production Hardware Delivery - Aug 10

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

**METHOD OF IMPLEMENTATION:** Contract      **ADMINISTRATIVE LEADTIME:** 11 months      **PRODUCTION LEADTIME:** 8 months  
 Contract Dates:      FY 2010 - Jan 10      FY 2011 - Oct 10      FY 2012 -  
 Delivery Dates:      FY 2010 - Mar 11      FY 2011 - Mar 12      FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): M24A1 Window/Door Gun Mount [MOD 6] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
Door Gunner Mount B Kits	70	3.4	80	5.8	390	4.9														540	14.1
PM Support						0.2															0.2
<b>Installation of Hardware</b>																					
FY 2007 & Prior Equip -- Kits																					
FY 2008 -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0.0
Total Procurement Cost		3.4		5.8		5.1		0.0		0.0		0.0		0.0		0.0		0.0			14.3

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Cargo On/Off Loading System [MOD 11] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47D & F

**DESCRIPTION / JUSTIFICATION:**

The Cargo On/Off Loading (COOL) System will replace the current system, Helicopter Internal Cargo Handling System (HICHS), which is cumbersome and not flexible enough to meet mission diversity currently faced in OEF and OIF. The system would be integrated into the aircraft. This would allow for units to perform cargo missions and pax missions without stopping to reconfigure the helicopter. The current system is a bolt on system that is maintenance intensive to install and remove. The cargo handling floor would allow a cargo handling system to be installed on the aircraft all the time allowing for in-flight mission changes as needed and reducing mission prep time while eliminating man-hours needed to install.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

NRE Contract Award Sep 08  
Production Contract Award Mar 10

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
								45				65				55				30
								35	5	5		22	21	21		19	18	19		15
	FY 2014				FY 2015				FY 2016				FY 2017				To	Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
				29				41				60				60	200	585		
	5	5	5	5	5	9	10	11	10	10	10	10	15	15	15	15	250	585		

**METHOD OF IMPLEMENTATION:** Contract      **ADMINISTRATIVE LEADTIME:** 5 months      **PRODUCTION LEADTIME:** 6 months  
**Contract Dates:** FY 2010 - Mar 10      FY 2011 - Mar 11      FY 2012 - Mar 12  
**Delivery Dates:** FY 2010 - Sep 10      FY 2011 - Sep 11      FY 2012 - Sep 12

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Cargo On/Off Loading System [MOD 11] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
			106	24.0	20	5.7	11	3.4	22	9.4	30	11.8	41	16.9	60	25.6	169	76.2	459	173.0
						0.4		0.2		0.6		0.6		0.9		1.5				4.2
							98	30.4											98	30.4
								1.7												1.7
<b>Installation of Hardware</b>																				
						45	3.2													45 3.2
								20	1.4											20 1.4
									3.2	55	4.0									55 7.2
											22	1.6								22 1.6
													30	2.2						30 2.2
															41	2.9				41 2.9
																	238	17.4	238	17.4
Total Installment	0	0.0	0	0.0	45	3.2	20	4.6	55	4.0	22	1.6	30	2.2	41	2.9	238	17.4	451	35.9
Total Procurement Cost		0.0		24.0		9.3		40.3		14.0		14.0		20.0		30.0		93.6		245.2

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Aircraft Component Parts-Marking [MOD 12] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47D Chinook, MH-47E, CH-47F

DESCRIPTION / JUSTIFICATION:

The CH-47 Cargo program will adopt an automatic information system (AIS). This will include automatic identification technology (AIT) which will provide error free documentation of aircraft and components across the fleet. This project will locate mobile partsmarking facilities to allow the Cargo Helicopter PMO to effectively manage the CH-47 fleet.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME: 0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Aircraft Component Parts-Marking [MOD 12] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
Component Markings		10.1		7.4		3.5															21.0
<b>Installation of Hardware</b>																					
FY 2007 & Prior Equip -- Kits																					
FY 2008 -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		10.1		7.4		3.5		0.0		0.0		0.0		0.0		0.0		0.0		21.0	

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Ballistic Protection System (BPS) [MOD 13] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47D&F

**DESCRIPTION / JUSTIFICATION:**

The Ballistic Protection System (BPS) will be used to protect aircrews, passengers, cargo and critical aircraft components from hostile fire while in flight and on the ground. The current BPS system is extremely heavy, maintenance intensive to install and does not allow for easy configuration of the aircraft during missions. It also does not allow for the installation of any Cargo Handling System, COOLS. This BPS will be lighter than the current system and will increase the CH-47 availability to the war fighter while also increasing its single day mission diversity and reducing the man-hours required for installing and removing for each mission. This is replacement items and is user installed.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

NRE Contract Award: Sep 08  
Production Contract Award: Dec 09

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

**METHOD OF IMPLEMENTATION:** Contract      **ADMINISTRATIVE LEADTIME:** 4 months      **PRODUCTION LEADTIME:** 4 months  
 Contract Dates:      FY 2010 - Aug 08      FY 2011 - Aug 09      FY 2012 - Aug 10  
 Delivery Dates:      FY 2010 - Dec 08      FY 2011 - Dec 08      FY 2012 - Dec 08

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Ballistic Protection System (BPS) [MOD 13] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
BPS NRE	15	4.3																	15	4.3	
BPS Kits			18	1.7	16	3.4	15	2.8	29	5.3	25	4.6	50	9.0	48	8.8	161	29.0	362	64.6	
A Kits					25	1.3													25	1.3	
PM Support								0.1		0.3		0.2		0.5		0.5		1.5		3.1	
OCO																					
BPS Kits							88	15.9											88	15.9	
PM Support								0.9												0.9	
<b>Installation of Hardware</b>																					
FY 2007 & Prior Equip -- Kits																					
FY 2008 -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		4.3		1.7		4.7		19.7		5.6		4.8		9.5		9.3		30.5		90.1	



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: New Equipment Training (NET) [MOD 14] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: Ch-47F

**DESCRIPTION / JUSTIFICATION:**

The CH-47 Program Management Office (PMO) was scheduled to complete New Equipment Training (NET) with the fourth Unit Equipped (UE). Department of the Army (DA) tasked the PMO with NET for fifth through thirteenth UE. Preparation and training for future tasked NET operations is currently not funded within current CH-47 Budget lines and could delay training and fielding of active Army units preparing for deployment to theater and in turn could negatively impact operational readiness.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

0 months

**PRODUCTION LEADTIME:**

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): New Equipment Training (NET) [MOD 14] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement Base</b>																					
NET Operations						6.1															6.1
OCO																					
NET Operations									7.8												7.8
Interim Contractor Support								23.0													23.0
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Procurement Cost		0.0		0.0		6.1		30.8		0.0		0.0		0.0		0.0		0.0			36.9

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: SOA Commonality [MOD 16] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: CH-47F & MH-47G

DESCRIPTION / JUSTIFICATION:  
This funding will cover the hardware costs and installation costs for the common items between the CH-47F and the MH-47G Special Operations Aircraft (SOA).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME:

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): SOA Commonality [MOD 16] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Equipment								8.9	78.2		74.2									161.3
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		0.0		8.9		78.2		74.2		0.0		0.0		0.0		161.3

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature UTILITY/CARGO AIRPLANE MODS (AA0270)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:								
	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	145.3	13.9	41.9	13.7	13.4	9.9	19.8	20.4		278.3
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	145.3	13.9	41.9	13.7	13.4	9.9	19.8	20.4		278.3
Initial Spares										
Total Proc Cost	145.3	13.9	41.9	13.7	13.4	9.9	19.8	20.4		278.3
Flyaway U/C										
Weapon System Proc U/C										

<b>P-40 Breakdown</b>									
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Active	Qty	0	0	0	0	0	0	0	0
	Gross Cost	5372.0	33233.0	4820.0	13377.0	9935.0	19772.0	20379.0	
National Guard	Qty	0	0	0	0	0	0	0	0
	Gross Cost	8500.0	8710.0	3818.0	0.0	0.0	0.0	0.0	0.0
Reserve	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	0.0	5078.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0	0
	Gross Cost	13872	41943	13716	13377	9935	19772	20379	

**Description:**  
The budget line updates and modernizes Army fixed wing aircraft such as C-31A, UV-18, C-12, RC-12, UC-35, C-23, C-26, and EO-5 aircraft communication, navigation, surveillance, engines and Department of Defense (DoD) mandated safety equipment to current and evolving international standards. In addition, it provides for the procurement of commercial, military, and test equipment and other support equipment. These modifications ensure continued worldwide deployment capability and safe operations.

**Justification:**  
FY11 Base procurement dollars in the amount of \$13.716 million supports communications, navigation, and surveillance equipment that meets current and future air traffic management requirements. In addition, equipment included in the modifications will enhance the safety of passengers and crew. The upgrades will also permit the Army fixed wing aircraft to operate in compliance with other existing and emerging regulations. As requirements for new avionics equipment continue, aircraft delays and airspace exclusion are likely for aircraft not properly equipped. Upgrade of communication and navigation systems will enhance reliability and maintainability, thereby improving aircraft availability for mission requirements. The associated aircraft modifications will assure worldwide deployability.

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature UTILITY/CARGO AIRPLANE MODS (AA0270)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Avionics System Cockpit Upgrade											
1-96-01-0612	UNCLASSIFIED	145.3	13.9	41.9	13.7	13.4	9.9	19.8	20.4	0.0	278.3
<b>Totals</b>		145.3	13.9	41.9	13.7	13.4	9.9	19.8	20.4	0.0	278.3

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Avionics System Cockpit Upgrade [MOD 1] 1-96-01-0612

MODELS OF SYSTEM AFFECTED: All series Army fixed wing aircraft:C-31, 12, 23, 26, 37, 20, 208, UV-18, RC-12, UC-35, EO-5,CE-182

**DESCRIPTION / JUSTIFICATION:**

This effort will modernize Fixed Wing aircraft communications, navigation, surveillance (CNS), safety equipment, and engines to current and future international requirements, enhance fleet standardization, allow worldwide deployments and continued safe operations in the 21st Century. As currently equipped, the aircraft will not be suitable for worldwide deployment nor capable of using modern navigation and air traffic control facilities. The following equipment is included in this upgrade: Flight Management System, Displays, Terrain Awareness Warning System, 8.33kHz radios, APX 119, Mode S/5 upgrade, Satellite Communications (SATCOM), Traffic Alert Collision Avoidance System II, Flight Data Recorder, Cockpit Voice Recorder, Aux Fuel System, High Frequency Radios, Weather Radars, Data Link Capability, Communications Management Unit, and other commercial and military CNS equipment. The preceding components reflect critically needed items. However, air traffic management and DOD navigation warfare requirements are evolving and will require additional systems in the near future. The kit quantities reflected on the next page represent a wide variety of avionics kits with different mixes each fiscal year. Additionally, kit configurations vary based on the aircraft that they will be installed on. Consequently, kit and installation unit cost will vary significantly from year to year.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Development is not required for Avionics System Cockpit Upgrade.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
133		2	2			2	12	18	38	45	44	39	18	32	29	25	10	10	10	9
129	4		2	2			2	12	18	38	45	44	39	18	32	29	25	10	10	10
FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
16	20	21	25		4	4														568
9	16	20	21	25		4	4													568

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: 2 months PRODUCTION LEADTIME: 6 months  
 Contract Dates: FY 2010 - Dec 09 FY 2011 - Dec 10 FY 2012 - Dec 11  
 Delivery Dates: FY 2010 - May 10 FY 2011 - May 11 FY 2012 - May 12

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Avionics System Cockpit Upgrade [MOD 1] 1-96-01-0612

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity																				
Installation Kits	133	102.0	4	9.6	32	29.2	166	9.5	104	9.3	39	6.8	82	13.8	8	14.2			568	194.4
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data		0.8		0.1		0.1		0.1		0.1		0.1		0.1		0.1				1.5
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits	133	42.5																	133	42.5
FY 2009 -- Kits			4	4.2															4	4.2
FY 2010 Equip -- Kits					32	12.6													32	12.6
FY 2011 Equip -- Kits							166	4.1											166	4.1
FY 2012 Equip -- Kits									104	4.0									104	4.0
FY 2013 Equip -- Kits											39	3.0							39	3.0
FY 2014 Equip -- Kits													82	5.9					82	5.9
FY 2015 Equip -- Kits															8	6.1			8	6.1
TC Equip-Kits																				
<b>Total Installment</b>	133	42.5	4	4.2	32	12.6	166	4.1	104	4.0	39	3.0	82	5.9	8	6.1	0	0.0	568	82.4
<b>Total Procurement Cost</b>		145.3		13.9		41.9		13.7		13.4		9.9		19.8		20.4		0.0		278.3



**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 2 / Modification of aircraft

P-1 Item Nomenclature  
AIRCRAFT LONG RANGE MODS (AA0560)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	18.6	1.6	0.8	0.8	0.8	0.8	1.7	1.7		26.8
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	18.6	1.6	0.8	0.8	0.8	0.8	1.7	1.7		26.8
Initial Spares										
Total Proc Cost	18.6	1.6	0.8	0.8	0.8	0.8	1.7	1.7		26.8
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The budget line updates and modernizes the C-20F, C-20E, C-37A and C-37B fixed wing aircraft, including communications and navigation equipment, enhancing the aircraft's capability for worldwide deployments. These aircraft support the Army's executive flight detachment at the three star and above level with required communications equipment.

**Justification:**

FY11 Base procurement dollars in the amount of \$.814 million supports new C-20/C-37 Communication, Navigation, and Surveillance equipment as well as interior/exterior aircraft upgrades needed to support the crew in meeting the demands of the future air navigation system and the customer. Funds will be used to meet evolving avionics requirements resulting from a worldwide transition to a new air traffic management/control structure.

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 2 / Modification of aircraft

P-1 Item Nomenclature  
UTILITY HELICOPTER MODS (AA0480)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	952.6	41.0	88.6	77.6	68.6	68.2	67.2	67.2		1431.0
Less PY Adv Proc	13.5									13.5
Plus CY Adv Proc	13.5									13.5
Net Proc P1	952.6	41.0	88.6	77.6	68.6	68.2	67.2	67.2		1431.0
Initial Spares										
Total Proc Cost	952.6	41.0	88.6	77.6	68.6	68.2	67.2	67.2		1431.0
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

Utility Helicopter Mods include modifications to the UH-60 BLACKHAWK helicopter and the Light Utility Helicopter (UH-72A LAKOTA). The UH-60 BLACKHAWK helicopter is the Army's utility helicopter in the future force. The UH-72A LAKOTA will provide general aviation support for CONUS based Table of Distribution and Allowance (TDA) and Table of Organization and Equipment (TOE) aviation units in the active and reserve components.

**Justification:**

FY 11 Base procurement dollars in the amount of \$63.1 million will procure Crashworthy External Fuel Systems (CEFS)/ Conformal Auxilliary Fuel Systems (CAFS) and UH-60 A to L Conversions. CEFS/CAFS is a safety modification that reduces the risk of a post-crash fire. The UH-60 A to L Conversion program expands the current UH-60 A to A recapitalization/rebuild program to a UH-60 A to L recapitalization/upgrade program.

FY 11 OCO funding in the amount of \$14.6 million will procure 72 Ballistic Protection System (BAPS), and 30 A kit/7 B kit UH-60 Sponson FLIRs for MEDEVAC aircraft.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature UTILITY HELICOPTER MODS (AA0492)
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Program Elements for Code B Items:		Code:	Other Related Program Elements:							
	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	943.5	41.0	88.6	77.6	68.6	68.2	67.2	67.2		1421.9
Less PY Adv Proc	13.5									13.5
Plus CY Adv Proc	13.5									13.5
Net Proc P1	943.5	41.0	88.6	77.6	68.6	68.2	67.2	67.2		1421.9
Initial Spares										
Total Proc Cost	943.5	41.0	88.6	77.6	68.6	68.2	67.2	67.2		1421.9
Flyaway U/C										
Weapon System Proc U/C										

<b>P-40 Breakdown</b>									
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Active	Qty	0	0	0	0	0	0	0	0
	Gross Cost	41011.0	31612.0	6085.0	11566.0	11219.0	10163.0	10223.0	
National Guard	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	45000.0	45000.0	57000.0	57000.0	57000.0	57000.0	
Reserve	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	12000.0	12000.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0	0
	Gross Cost	41011	88612	63085	68566	68219	67163	67223	

**Description:**  
Utility Helicopter Mods include modifications to the UH-60 BLACKHAWK helicopter and the Light Utility Helicopter (UH-72A LAKOTA). The UH-60 BLACKHAWK helicopter is the Army's utility helicopter in the future force. It is a twin engine, single rotor, four bladed utility helicopter used for air assault, air cavalry, troop and equipment transport, command & control, and medical evacuations (MEDEVAC) in active and reserve component theater, corps, division and Table of Distribution and Allowances (TDA) units. The UH-60 is joint force capable, provides 24 hour/day support including operations at night in adverse weather conditions. The UH-60 is designed to carry a crew of four plus eleven combat equipped troops or an external load up to 9,000 pounds. The UH-60 BLACK HAWK fleet consists of the UH-60A, first fielded in FY 1978, the newer UH-60L which was fielded in FY 1989 and the UH-60M which began low rate initial production in FY 2005 and full rate production FY 2007. The oldest UH-60As are now over 30 years old, and the average age of the UH-60A fleet is 23 years. The UH-72A LAKOTA will provide general aviation support for CONUS based TDA and Table of Organization and Equipment (TOE) aviation units in the active and reserve components. The UH-72A platform provides the flexibility to respond to Homeland Security (HLS) requirements, conducts civil search and rescue operations, supports damage assessment, supports test and training centers, performs generating force missions, augments the HH-60 MEDEVAC aircraft and provides support to the Continental United States (CONUS) counterdrug operations. The UH-72A provides time-sensitive transport of supplies or key personnel, air mobility to assist civil authorities through the execution of search and rescue or disaster relief operations, advance warning/detection of external threats to include threats to our borders, augmentation of air ambulance capabilities and limited command & control operations in the conduct of HLS.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date:
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February 2010

Appropriation / Budget Activity / Serial No: <small>Aircraft Procurement, Army / 2 / Modification of aircraft</small>	P-1 Item Nomenclature <small>UTILITY HELICOPTER MODS (AA0492)</small>
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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**Justification:**

FY 11 Base procurement dollars in the amount of \$63.1 million will procure Crashworthy External Fuel Systems (CEFS)/ Conformal Auxilliary Fuel Systems (CAFS) and UH-60 A to L Conversions. CEFS/CAFS is a safety modification that reduces the risk of a post-crash fire. The UH-60 A to L Conversion program expands the current UH-60 A to A recapitalization/rebuild program to a UH-60 A to L recapitalization/upgrade program.

FY 11 OCO funding in the amount of \$14.6 million will procure 72 Ballistic Protection System (BAPS), and 15 A kit/ 15 B kit UH-60 Sponson FLIRs for MEDEVAC aircraft.

Exhibit P-40M, Budget Item Justification Sheet										Date: February 2010	
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft					P-1 Item Nomenclature UTILITY HELICOPTER MODS (AA0492)						
Appropriation / Budget Activity / Serial No:					P-1 Item Nomenclature						
Program Elements for Code B Items:						Code:		Other Related Program Elements:			
Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Crashworthy External Fuel System (CEFS)											
OSIP	Safety	131.0	7.7	6.9	6.1	11.6	11.2	10.2	10.2	0.0	194.9
UH-60A to UH-60L Conversion											
OSIP	Operational	9.9	0.0	57.0	57.0	57.0	57.0	57.0	57.0	0.0	351.9
Brigade Sets											
OSIP	Operational	32.4	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.5
UH-60A Rewiring											
OSIP	Operational	0.0	5.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0
UH-60 Improved Communications (ARC 220)											
OSIP	Operational	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
HH-60A to HH-60L Upgrade											
OSIP	Operational	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
UH-60 MEDEVAC Thermal Imaging Upgrades											
OSIP	Operational	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Ballistic Protection Systems (BAPS)											
OSIP	Safety	0.0	0.0	2.5	2.5	0.0	0.0	0.0	0.0	0.0	5.0
UH-60 SPONSON FLIR											
OSIP	Operational	0.0	10.1	0.0	12.0	0.0	0.0	0.0	0.0	0.0	22.1
Forward Looking Infrared Sensors											
OSIP	Operational	0.0	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	2.4
IVHMS Demo on the UH-72A Lakota											
OSIP	Operational	0.0	2.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	3.9
Internal Auxiliary Fuel Tank System											
OSIP	Safety	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Civil Support Communications Systems											
OSIP	Operational	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Program Increase											
OSIP	Operational	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8
Air Filtration Systems											
OSIP	Operational	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature UTILITY HELICOPTER MODS (AA0492)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
UH-60 Fire-Fighting Tank System											
OSIP	Safety	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	3.2
<b>Totals</b>		173.3	41.0	88.6	77.6	68.6	68.2	67.2	67.2	0.0	651.6

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Crashworthy External Fuel System (CEFS) [MOD 1] OSIP

MODELS OF SYSTEM AFFECTED: UH-60A/L/Q/M

**DESCRIPTION / JUSTIFICATION:**

The Crashworthy External Fuel System (CEFS)/Conformal Auxilliary Fuel System (CAFS) is a safety modification that reduces the risk of a post-crash fire. The existing external fuel tanks were designed for self-deployment missions and do not meet current battlefield doctrine that requires these helicopters to fly long-range missions into hostile environments. CEFS/CAFS is critical to the safety and survivability of UH-60 helicopters. The Army Aviation Safety Center assessed the risk associated with continued routine flight operations using the current non-crashworthy tanks as high.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Development is complete.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
693	10	10	10	10	9	9	9	8	10	10	10	9	19	19	19	19	16	16	16	17
672	21	10	10	10	10	9	9	9	8	10	10	10	9	19	19	19	19	16	16	16

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
16	16	16	17	32	32	32	34										1143
17	16	16	16	17	32	32	32	34									1143

**METHOD OF IMPLEMENTATION:**

Contract Teams

**ADMINISTRATIVE LEADTIME:**

2 months

**PRODUCTION LEADTIME:**

9 months

Contract Dates:

FY 2010 - Nov 09

FY 2011 - Nov 10

FY 2012 -

Delivery Dates:

FY 2010 - Aug 10

FY 2011 - Aug 11

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Crashworthy External Fuel System (CEFS) [MOD 1] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
A-Kits (A/L)	733	40.6	35	2.4	35	2.4	39	2.7	76	5.4	65	4.7	65	4.8	65	4.9			1113	67.9
A-Kits (GFE to Production)	32	2.7																	32	2.7
A-Kits (GFE to SAR Acft)	10	0.6																	10	0.6
B-kits	398	53.8	20	3.0	15	2.3	9	1.4	26	4.0	21	3.2	22	3.4	18	2.8			529	73.9
Support Equipment/Other		27.9		1.9		1.8		1.6		1.8		2.5		1.3		1.1				39.9
<b>Installation of A-Kits</b>																				
Kits																				
FY2006 & Prior Equip -- 349	609	4.5																	609	4.5
FY2007 Equip -- 84 Kits	84	0.9																	84	0.9
FY2008 Equip --40 Kits			40	0.4															40	0.4
FY2009 Equip-- 35 Kits					35	0.4													35	0.4
FY2010 Equip -- 72 Kits							35	0.4											35	0.4
FY2011 Equip -- 70 Kits									39	0.4									39	0.4
FY2012 Equip-- 70 Kits											76	0.8							76	0.8
FY2013 Equip-- 70 Kits													65	0.7					65	0.7
FY2014 Equip-- 70 Kits															65	0.7			65	0.7
FY2015 Equip-- 70 Kits															65	0.7			65	0.7
TC Equip																				
Total Installment	693	5.4	40	0.4	35	0.4	35	0.4	39	0.4	76	0.8	65	0.7	130	1.4	0	0.0	1113	9.9
Total Procurement Cost		131.0		7.7		6.9		6.1		11.6		11.2		10.2		10.2		0.0		194.9



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: UH-60A to UH-60L Conversion [MOD 2] OSIP

MODELS OF SYSTEM AFFECTED: UH-60A

DESCRIPTION / JUSTIFICATION:

Expands the current UH-60 A to A recapitalization/rebuild program to a UH-60 A to L recapitalization/upgrade program. Leverages ongoing UH-60 A to A recapitalization to further bridge the gap to UH-60M fielding and further reduces the overall O&S cost and logistics footprint of the fleet. Also provides an enhanced warfighting capability through aircraft performance improvements, to include installation of the T700-701D engine, improved durability gearbox, upgraded flight controls, and 9,000 lb cargo hook. Effort will also be leveraged to define future UH-60 L to L sustainment.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
					9	9	10	10	9	9	10	10	9	9	10	10	9	9	10	10
							9	9	10	10	9	9	10	10	9	9	10	10	9	9
	FY 2014				FY 2015				FY 2016				FY 2017				To	Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
	9	9	10	10	9	9	10	10										228		
	10	10	9	9	10	10	9	9	10	10								228		

METHOD OF IMPLEMENTATION:

Conversion at Depot

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME:

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): UH-60A to UH-60L Conversion [MOD 2] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>		9.9			38	57.0	38	57.0	38	57.0	38	57.0	38	57.0	38	57.0	190		418	351.9	
Kit Quantity																					
Installation Kits																					
Installation Kits, Nonrecurring																					
Equipment																					
Equipment, Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
<b>Installation of Hardware</b>																					
FY 2007 & Prior Equip -- Kits																					
FY 2008 -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		9.9		0.0		57.0		57.0		57.0		57.0		57.0		57.0		0.0		351.9	

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: HH-60A to HH-60L Upgrade [MOD 6] OSIP

MODELS OF SYSTEM AFFECTED: HH-60A

DESCRIPTION / JUSTIFICATION:  
 Provides funding for Non-Recurring Engineering analysis to define airframe/component configuration changes required to Recap/upgrade HH-60A to HH-60L aircraft. Document changes via Engineering Change Proposal(ECP), define draft work instruction/installation procedures through identification of existing Modification Work Orders (MWOs) and development of new Special Service Instructions (SSIs) as required.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 0 months PRODUCTION LEADTIME: 0 months  
 Contract Dates: FY 2010 - FY 2011 - FY 2012 -  
 Delivery Dates: FY 2010 - FY 2011 - FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): HH-60A to HH-60L Upgrade [MOD 6] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>				8.0																8.0
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		8.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		8.0

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: UH-60 SPONSON FLIR [MOD 9] OSIP

MODELS OF SYSTEM AFFECTED: UH-60A/L/M

DESCRIPTION / JUSTIFICATION:  
Procures FLIR Thermal Imaging for UH-60 MEDEVAC aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: Contract Team ADMINISTRATIVE LEADTIME: 6 months PRODUCTION LEADTIME: 6 months  
 Contract Dates: FY 2010 - MAR 2010 FY 2011 - MAR 2011 FY 2012 -  
 Delivery Dates: FY 2010 - SEP 2010 FY 2011 - SEP 2011 FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): UH-60 SPONSON FLIR [MOD 9] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
A Kit							15	1.9											15	1.9
B Kit			20	8.3			15	9.0											35	17.3
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment				1.8																1.8
Other																				
Interim Contractor Support								1.1												1.1
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		10.1		0.0		12.0		0.0		0.0		0.0		0.0		0.0		22.1

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature KIOWA WARRIOR (AZ2200)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:								
	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	3346.7	120.2	174.7	281.7	233.6	254.0	228.5	119.1	13.2	4771.6
Less PY Adv Proc	223.3									223.3
Plus CY Adv Proc	223.3									223.3
Net Proc P1	3346.7	120.2	174.7	281.7	233.6	254.0	228.5	119.1	13.2	4771.6
Initial Spares										
Total Proc Cost	3346.7	120.2	174.7	281.7	233.6	254.0	228.5	119.1	13.2	4771.6
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
The OH-58D Kiowa Warrior is a two-seat, single-engine, observation, scout/attack helicopter with four main rotor blades. It utilizes a thermal-imaging system and a laser rangefinder/designator in a mast-mounted sight situated above the main rotor system. The aircraft is equipped with a variety of weapon systems including: HELLFIRE, 2.75-inch rockets, and a .50-caliber machine gun. The aircraft operates autonomously at standoff ranges providing armed reconnaissance, command and control, and target acquisition/designation for Apache helicopters and other airborne weapons platforms in day, night, and adverse-weather conditions. The Active Army and the National Guard fly Kiowa Warriors.

To be both safe and operationally compatible with the digitized battlefield, an ongoing Safety Enhancement Program (SEP) incorporates upgraded engines and engine barrier filters, crashworthy crew seats, cockpit airbags, enhanced digitization capabilities, and improved weapons interface. The SEP reduces pilot workload during emergency maneuvers and significantly improves the crashworthiness of the aircraft thus enhancing crew survivability. Partial SEP improvements had previously been incorporated into the later lots of Bell Helicopter's Kiowa Warrior remanufacture/retrofit lines; those aircraft will receive missing portions of the SEP modifications through field retrofit activities. Other fielded Kiowa Warrior aircraft are being SEP modified via a combination of efforts on the contractor's SEP modification line and through field retrofit. The SEP modifications convert the Kiowa Warrior from the OH-58D(I) to the OH-58D(R) configuration.

The Fielded Fleet Upgrades and Weight Reduction initiative will further increase safety by reducing aircraft weight, thus improving operational and autorotational performance of the fielded fleet of OH-58D(R) aircraft. The initiative will also increase system reliability and lower support costs. Efforts include removing obsolete and extraneous hardware, replacing armor panels with lighter versions, fielding lightweight floor armor, improving reliability of the engine's current Full Authority Digital Electronic Controller (FADEC), replacing the legacy multifunction displays (MFDs) with lightweight versions, providing a lighter weight and better positioned common transponder, improved .50 cal gun, video data transfer system, reduced weight HELLFIRE launchers, the AN/AAR-57 Common Missile Warning System (CMWS), a lightweight composite Universal Weapons Pylon, and a Condition Based Maintenance (CBM) System.

The Cockpit And Sensor Upgrade Program (CASUP) will address additional capabilities, safety enhancements and obsolescence issues to allow the aircraft to safely serve as the Army's night, armed-reconnaissance, aviation platform until replaced/retired. Efforts include upgrading to Control Display Subsystem version 5 (CDS 5), adding a second AN/ARC231 SATCOM radio, third MFD, Dual Channel Full Authority Digital Electronic Control (FADEC), armament enhancements, replace the mast mounted site with an advanced nose-mounted sensor, and other weight and obsolescence reduction upgrades. Trainers will be upgraded to maintain concurrency.

To replace aircraft lost during Overseas Contingency Operations and to return the fleet to the Authorized Acquisition Objective (AAO) of 368 the Army will build Wartime Replacement Aircraft. These new Kiowa Warriors will be delivered in the OH-58D(R) configuration, including upgrades that are being installed on the fielded fleet. The Army will use divested OH-58A/C model airframes as donors to create the Kiowa Warrior aircraft.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature KIOWA WARRIOR (AZ2200)
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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The Intelligence Surveillance Reconnaissance (ISR) Task Force added funds for a level II Manned-Unmanned (MUM) teaming capability for the fielded Kiowa Warrior fleet. This system will integrate a lightweight, second-generation full motion video system which can receive off-board video, transmit own-ship video, and also re-transmit off-board video. The KW MUM system is comparable to the Apache VUIT2 system and will be fully interoperable with Apache, Raven, Shadow, Sky Warrior, Predator, and many other DoD manned and unmanned platforms.

**Justification:**

FY 2011 Base Funding in the amount of \$94.4 Million will procure the continuation of SEP, Weight Reduction, and CASUP efforts. It procures modifications which allow the Kiowa Warrior to safely serve as the Army's, armed-reconnaissance, aviation platform until replaced/retired.

FY 2011 OCO Funding in the amount of \$187.288 Million will continue to procure a level II Manned-Unmanned (MUM) teaming capability for the current fleet and modify OH-58A/C model aircraft to the OH-58D(R) Kiowa Warrior configuration to include weight reduction and CASUP modifications.



<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature KIOWA WARRIOR (AZ2200)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Safety Enhancement Program (SEP)											
2-97-01-0115	Safety	380.6	95.4	6.7	1.7	0.3	0.0	0.0	0.0	0.0	484.7
Fielded Fleet Upgrades and Weight Reduction											
2-02-01-0116	Safety	75.2	24.8	73.7	30.6	38.2	15.7	7.6	0.0	0.0	265.8
Cockpit And Sensor Upgrade Program (CASUP)											
2-08-01-0117	Operational	0.0	0.0	0.0	62.1	195.1	238.3	220.9	119.1	240.5	1076.0
Wartime Replacement Aircraft											
2-10-01-0118	Operational	0.0	0.0	70.2	142.5	0.0	0.0	0.0	0.0	0.0	212.7
Level II Manned-Unmanned (MUM) Teaming											
2-10-01-0119	Operational	0.0	0.0	24.1	44.8	0.0	0.0	0.0	0.0	0.0	68.9
<b>Totals</b>		455.8	120.2	174.7	281.7	233.6	254.0	228.5	119.1	240.5	2108.1

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Safety Enhancement Program (SEP) [MOD 1] 2-97-01-0115

MODELS OF SYSTEM AFFECTED: OH-58D Kiowa Warrior

**DESCRIPTION / JUSTIFICATION:**

The Safety Enhancement Program (SEP) addresses safety issues and enables Kiowa Warrior performance as a digitized platform capable of integrated combat engagement via the Tactical Internet. Rolls Royce M250-C30R/3 Engines with Full Authority Digital Electronic Control increase reliability, control responsiveness, and overcome a rotor droop anomaly by providing faster response time to power demands. Engine barrier filters improve engine reliability by reducing damage from sand/dust ingestion and by increasing engine meantime between overhaul. The Improved Master Controller Processor Unit (IMCPU) increases memory and throughput and reduces both aircraft empty weight and Operating and Support (O&S) costs. The IMCPU accommodates upgraded software required for digital communications and provides the Variable Message Format (VMF). Energy attenuating seats provide crew safety in case of vertical and horizontal impacts. Cockpit airbags increase crew protection. The SEP modification converts the OH-58D(I) aircraft with Control and Display Subsystem version 2 (CDS2) aircraft into OH-58(R) aircraft equipped with CDS version 4 (CDS4). Of the current fleet of 333 Kiowa Warriors, only 32 aircraft still require SEP modification. Thirty-eight of the SEP-modified aircraft have been attrited. Equipment not installed at the contractor's facility (i.e. seats, airbags, and engine barrier filters) will be applied via field retrofit.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Multiple installations will be done on individual aircraft. The majority of aircraft will be block-modified on the Bell Helicopter Textron, Inc. line via annual contractual orders and will be delivered over a 12-month period; however, the final SEP lot (lot 13) may be delivered over a 18 month period. Some aircraft will receive the complete complement of modifications at that facility. Others will receive portions of the modification efforts via field retrofit. Hardware installation dollars fund a variety of field retrofit modifications. The block-modification installations on the contractor's modification line are not separately priced and therefore the dollars are embedded in the Recurring line for each year.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
300	8	6	9	9	9	9	9	9	3												
290	8	9	9	5	8	8	7	7	6	6	6	2									
	FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
																					371
																					371

**METHOD OF IMPLEMENTATION:** Kr line & fld retrofit    **ADMINISTRATIVE LEADTIME:** 0 months    **PRODUCTION LEADTIME:** 0 months  
**Contract Dates:** FY 2010 - Apr 2009    FY 2011 - Jan 2010    FY 2012 -  
**Delivery Dates:** FY 2010 -    FY 2011 -    FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Safety Enhancement Program (SEP) [MOD 1] 2-97-01-0115

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Aircraft Modified - Bell Helicopter	314		57																371	
Nonrecurring		40.7		9.4		4.1														54.2
Recurring - Bell Helicopter		147.2		56.7																203.9
Government-Furnished		128.8		25.8		0.4		0.3												155.3
<b>Equipment</b>																				
Engineering Change Orders		0.2		1.2		0.4														1.8
Aircraft Preparation		16.3																		16.3
Fielding		5.3		1.0		0.7		0.8												7.8
Training/Training Devices		9.0																		9.0
Other		22.5		0.1		0.5														23.1
Technical Support		5.5		0.5		0.6		0.6		0.3										7.5
<b>Installation of Hardware - Field</b>																				
FY 2002 & Prior Equip -- Kits		0.8																		0.8
FY 2003 -- Kits		0.6																		0.6
FY 2004 Equip -- Kits		0.7																		0.7
FY 2005 Equip -- Kits		0.6																		0.6
FY 2006 Equip -- Kits		0.5																		0.5
FY 2007 Equip -- Kits		0.9																		0.9
FY 2008 Equip -- Kits		1.0																		1.0
FY 2009 Equip -- Kits				0.7																0.7
FY 2010 Equip -- Kits																				
<b>Total Installment</b>	0	5.1	0	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	5.8
<b>Total Procurement Cost</b>		380.6		95.4		6.7		1.7		0.3		0.0		0.0		0.0		0.0		484.7

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Fielded Fleet Upgrades and Weight Reduction [MOD 2] 2-02-01-0116

MODELS OF SYSTEM AFFECTED: OH-58D Kiowa Warrior

**DESCRIPTION / JUSTIFICATION:**

The Fielded Fleet Upgrades and Weight Reduction initiative addresses safety and mission effectiveness of the OH-58D(R) fleet. The safety of the crew depends to a large extent on the maneuverability and performance of the aircraft. Due to its overweight condition, the Kiowa Warrior has an existing operational safety deficiency for autorotational capability. The Weight Reduction modifications will improve the margin of safety, provide increased power margins, and include the following initiatives: lightweight multi-function displays, a lighter weight and better positioned common transponder, reduced weight HELLFIRE launchers, a lightweight composite Universal Weapons Pylon and improved armor panels. Mission effectiveness and other safety upgrades include: fielding lightweight floor armor, improving reliability of the engine's current Full Authority Digital Electronic Controller (FADEC), improved .50 cal machine gun, video data transfer system, the AN/AAR-57 Common Missile Warning System (CMWS), and a Condition Based Maintenance (CBM) System. Of the current fleet of 333 aircraft, all will receive these modernization items. Modifications will be made on an as-available basis and completed at a combination of government depot and field sites by both government and contractor workforces.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Aircraft will be equipped/modified via field retrofits, no block modification planned.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: Field Retrofit      ADMINISTRATIVE LEADTIME: 0 months      PRODUCTION LEADTIME: 0 months  
 Contract Dates: FY 2010 -      FY 2011 -      FY 2012 -  
 Delivery Dates: FY 2010 -      FY 2011 -      FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Fielded Fleet Upgrades and Weight Reduction [MOD 2] 2-02-01-0116

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
Kit Quantity																					
Nonrecurring		1.2																			1.2
Recurring Labor		2.9																			2.9
Hardware		59.9	10.7		55.7		28.4		36.4		14.4		6.8								212.3
Data/Pubs/Manuals		1.0	1.0																		2.0
Support Equipment			2.8		7.5						0.1		0.1								10.5
Other		7.4	2.4		7.5		1.9		1.2		0.5		0.2								21.1
Fielding		0.8	0.9																		1.7
Training/Training Devices		0.3	6.2		1.3																7.8
<b>Installation of Hardware (Retrofit)</b>																					
FY 2003 & Prior Equip -- Kits																					
FY 2004 Equip -- Kits																					
FY 2005 Equip -- Kits																					
FY 2006 Equip -- Kits		0.1																			0.1
FY 2007 Equip -- Kits		0.6																			0.6
FY 2008 Equip -- Kits		1.0																			1.0
FY 2009 Equip -- Kits			0.8																		0.8
FY 2010 Equip -- Kits					1.7		0.3		0.6		0.7		0.5								3.8
FY2011 Equip -- Kits																					
TC Equip -- Kits																					
Total Installment	0	1.7	0	0.8	0	1.7	0	0.3	0	0.6	0	0.7	0	0.5	0	0.0	0	0.0	0	0	6.3
Total Procurement Cost		75.2		24.8		73.7		30.6		38.2		15.7		7.6		0.0		0.0			265.8

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Cockpit And Sensor Upgrade Program (CASUP) [MOD 3] 2-08-01-0117

MODELS OF SYSTEM AFFECTED: OH-58D Kiowa Warrior

**DESCRIPTION / JUSTIFICATION:**

The Cockpit And Sensor Upgrade Program (CASUP) addresses additional capabilities, safety enhancements and obsolescence issues to allow the Kiowa Warrior to serve as the Army's armed reconnaissance, aviation platform until replaced/retired. Efforts include upgrading to Control and Display Subsystem, version 5 (CDS5), installing a second AN/ARC-231 SATCOM radio, 3rd multi-function display (MFD), Dual Channel Full Authority Digital Electronic Control (FADEC), integrated infrared, laser, and pulse radar warning systems, armament enhancements, replacing the Mast Mounted Site (MMS) system with a nose-mounted sensor, and other weight and obsolescence reduction upgrades. The current fleet of 333 aircraft is planned to be modified as well as all aircraft built to replace wartime losses, for a total modification run of 368 aircraft. Trainers will be upgraded to maintain concurrency.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

The government is serving as lead system integrator for CASUP. Pre-Milestone B Acquisition Strategy Report was delivered to the Milestone Decision Authority in August 2009.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
																6	6	6	7	8
																	6	6	6	7
	FY 2014				FY 2015				FY 2016				FY 2017				To	Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
	12	12	15	18	19	19	18	19	18	19	18	18	19	19	18	18	56	368		
	8	12	12	15	18	19	19	18	19	18	19	18	18	19	19	18	74	368		

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

0 months

**PRODUCTION LEADTIME:** 0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Cockpit And Sensor Upgrade Program (CASUP) [MOD 3] 2-08-01-0117

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
Kit Quantity																					
Hardware								46.9	158.0		177.0		170.0		62.1		174.6			788.6	
Training/Devices							6.7	16.9		4.4		4.9		5.9		5.4			44.2		
Tech Pubs							1.1	0.9		0.5		0.2		0.2		0.2			3.1		
Tooling/SPT Equipment							1.5	1.8		1.8		1.5		0.6		7.2					
Other							5.7	5.9		6.9		8.9		8.0		11.9			47.3		
Fielding							0.2	3.1		6.3		8.1		9.5		11.8			39.0		
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 Equip -- Kits																					
FY 2010 Equip -- Kits																					
FY 2011 Equip -- Kits																					
FY 2012 Equip -- Kits									8.5											8.5	
FY 2013 Equip -- Kits										41.4										41.4	
FY 2014 Equip -- Kits												27.3								27.3	
FY 2015 Equip -- Kits														32.8						32.8	
TC Equip- Kits																36.6				36.6	
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	8.5	0	41.4	0	27.3	0	32.8	0	36.6	0	146.6	
Total Procurement Cost		0.0		0.0		0.0		62.1		195.1		238.3		220.9		119.1		240.5		1076.0	

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Wartime Replacement Aircraft [MOD 4] 2-10-01-0118

MODELS OF SYSTEM AFFECTED: OH-58D Kiowa Warrior

**DESCRIPTION / JUSTIFICATION:**

FY 2010 & 2011 OCO funding will procure wartime replacement aircraft for those lost during Overseas Contingency Operations. These aircraft will be built using the "cabin" method and not procured as a complete aircraft from the original equipment manufacturer (Bell Helicopter). The Army will use divested OH-58A/C aircraft as donors to create the OH-58D. Specifically, the donor OH-58A/C aircraft will be de-populated and their center sections (cabins) will be modified at Bell Helicopter / Textron Industries (BHTI) into CDS4 configured Kiowa Warrior cabins. With the complete CDS4 cabin, Corpus Christi Army Depot (CCAD) will mount all remaining structure, equipment, and modifications which have been applied to the current fleet. CCAD will then conduct ground/flight test and acceptance of the aircraft.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Funding for production tooling released to CCAD. Cabin modification expected to be on contract with Bell Helicopter by 4th quarter 2010.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
						2	2	2		3	4	4	4							
												2	2	2		3	4	4	4	
	FY 2014				FY 2015				FY 2016				FY 2017				To	Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
																		21		
																		21		

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

4 months

**PRODUCTION LEADTIME:**

18 months

Contract Dates:

FY 2010 - Feb 2010

FY 2011 - Feb 2011

FY 2012 -

Delivery Dates:

FY 2010 - Aug 2011

FY 2011 - Aug 2012

FY 2012 -



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Wartime Replacement Aircraft [MOD 4] 2-10-01-0118

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
AC Modification Quantity					6		15												21	
BHTI Airframe Mod						22.6		50.4												73.0
BHTI Rep at CCAD						0.4		0.4												0.8
GFE/Hardware						13.5		18.8												32.3
CCAD Labor						9.8		18.6												28.4
CCAD Material						20.2		50.4												70.6
Program Support - Govt						3.7		3.9												7.6
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits																				
FY 2009 -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
FY 2015 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		70.2		142.5		0.0		0.0		0.0		0.0		0.0		212.7

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Level II Manned-Unmanned (MUM) Teaming [MOD 5] 2-10-01-0119

MODELS OF SYSTEM AFFECTED: OH-58D Kiowa Warrior

**DESCRIPTION / JUSTIFICATION:**

FY 2010 & 2011 OCO funding will procure level II Manned-Unmanned (MUM) teaming capability for the Kiowa Warrior. An Urgent Operational Needs Statement was approved on 5 Oct 09 with approval to equip 180 aircraft with the MUM2 capability. System is divided into an A/B-kit configuration. Funding requested includes B-kits for 180 aircraft, A kits for the entire Kiowa Warrior fleet and initial spares. The system will initially be fielded to the OH-58D(R) fleet, and further integrated into the KW CASUP aircraft once that modification is complete. The KW MUM2 system provides an advanced video networking capability that will significantly reduce sensor to shooter timelines by enabling both pilots and soldiers on the ground to see and share Kiowa Warrior Mast-Mounted Sight (MMS) video, Apache sensor video, and Unmanned Aerial System (UAS) video in near-real-time. The KW MUM2 system is comparable to the Apache VUIT2 system and will be fully interoperable with Apache, Raven, Shadow, Sky Warrior, Predator, and many other DoD manned and unmanned platforms.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Successful prototype of Kiowa Warrior level II MUM teaming demonstrated in July 2009. Urgent Operational Needs Statement received 5 Oct 09 - targeting first unit equipped in 1Q11.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
								6	24	50	50	50								
								3	12	50	50	50	15							
	FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
																				180
																				180

**METHOD OF IMPLEMENTATION:**

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME:

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Level II Manned-Unmanned (MUM) Teaming [MOD 5] 2-10-01-0119

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RD&amp;E</b>																					
<b>Procurement</b>																					
B-Kit Quantity					72		108												180		
B-Kits						22.0		33.8													55.8
A-Kit Quantity					91		286												377		
A-Kits						1.5		5.1													6.6
Fielding								2.5													2.5
Program Management						0.5		0.5													1.0
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits																					
FY 2009 -- Kits																					
FY 2010 Equip -- Kits					6	0.1													6	0.1	
FY 2011 Equip -- Kits							174	2.9											174	2.9	
FY 2012 Equip -- Kits																					
FY 2013 Equip -- Kits																					
FY 2014 Equip -- Kits																					
FY 2015 Equip -- Kits																					
TC Equip- Kits																					
Total Installment	0	0.0	0	0.0	6	0.1	174	2.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	180	3.0	
Total Procurement Cost		0.0		0.0		24.1		44.8		0.0		0.0		0.0		0.0		0.0			68.9

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature AIRBORNE AVIONICS (AA0700)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: PE 0604201A, SSN AA0704
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	1112.2	147.0	233.7	244.4	267.8	275.1	330.6	349.4		2960.2
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	1112.2	147.0	233.7	244.4	267.8	275.1	330.6	349.4		2960.2
Initial Spares	77.4	4.8	25.2	7.3	4.3	4.4	4.5	4.6		132.6
Total Proc Cost	1189.6	151.8	258.9	251.7	272.2	279.5	335.1	354.0		3092.8
Flyaway U/C										
Weapon System Proc U/C										

P-40 Breakdown									
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Active	Qty	0	0	0	0	0	0	0	0
	Gross Cost	146974.0	233694.0	244408.0	267846.0	275095.0	330597.0	349355.0	
National Guard	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
Reserve	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0	0
	Gross Cost	146974	233706	244408	267846	275095	330597	349355	

**Description:**  
The Airborne Avionics budget line includes the Global Positioning System (GPS), the Aviation Mission Planning System (AMPS), the Improved Data Modem (IDM), Aviation Tactical Communications Systems (ATCS), Military Flight Operations Quality Assurance (MFOQA), and Apache Interoperability. The GPS, IDM, AMPS, and ATCS are four of the aviation systems required to support the digitization of the battlefield.

The GPS provides Army Aviation with extremely accurate and secure navigation and timing, assists in situational awareness, and aids in prevention of fratricide. GPS is installed in two configurations based upon mission profile, operational requirements, and avionics architecture of the aircraft. The Doppler GPS Navigation System (DGNS) is used for the Non-bussed Utility and Cargo helicopters. The Embedded GPS Inertial Navigation System (EGI) is integrated into the Modernized Cargo, Utility, Attack, Kiowa Warrior, and Special Operations fleets of helicopters. A Pre-Planned Product Improvement (P3I) to the DGNS and EGI began in FY01 to integrate a Selective Availability Anti-Spoofing Module (SAASM) and Instrument Flight Rule (IFR) navigation capability. The P3I DGNS (AN/ASN-128D) is being installed on the Blackhawk (UH-60A/L and HH-60A/L) and Chinook (CH-47D) aircraft. The P3I EGI is being installed on UH/HH-60M, CH-47F, Longbow Apache (AH-64D), and Special Operations Aircraft (SOA). M-code is a new GPS security architecture and signal in space, mandated to support navigation warfare (NAVWAR) requirements in accordance with the Assistant Secretary of Defense (ASD) Memorandum Subject: Global Positioning System User Equipment Development and Procurement Policy, dated 7 August 2006. In order to minimize aircraft integration and testing requirements, introduction of M-Code capable GPS receivers is planned to coincide with the JPALS program.

<b>Exhibit P-40, Budget Item Justification Sheet</b>		Date: February 2010
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft		P-1 Item Nomenclature AIRBORNE AVIONICS (AA0700)
Program Elements for Code B Items:	Code:	Other Related Program Elements: PE 0604201A, SSN AA0704
<p>The AMPS is a mission planning/battle synchronization tool that automates aviation mission planning tasks, including tactical command and control, mission planning, and flight planning. It interfaces with Army Battle Command Systems (ABCS) and associated networks which furnish the aviation commander with continuous situational awareness, allowing the commander to rapidly adjust mission plans. AMPS generates mission data in either hard copy or electronic formats. The electronic formats are loaded onto the aircraft platforms, initializing the communication, navigation, situational awareness, and weapons systems on modernized fleet aircraft including the AH-64A/D, CH-47D/F, Kiowa Warrior (OH-58D), UH-60A/L/M/Q, HH-60L/M, and Unmanned Aerial Systems (UAS). The AMPS program includes management of the Commander's Aviation Risk Tool (CART) and the Centralized Automated Flight Record System (CAFRS). To accommodate rapid commercial technology changes, the overall system hardware is replaced after five years of use.</p> <p>The IDM is the common solution for digitizing Army Aviation. It performs as an internet controller and gateway to Tactical Internet (TI) and Fire Support (FS) internet for Army aircraft. With interfaces supporting a 6 channel transmit/receive terminal, the IDM provides radio connectivity to the ARC-201D/231, ARC-186, ARC-164, and the Blue Force Tracker's (BFT) MT-2011 Transceiver, as well as providing 1553 and Ethernet portals for rapid data transfer. This hardware/software solution also provides a flexible, software-driven digital messaging system that is interoperable with existing Army and Joint forces battlefield operating systems. The IDM provides Situational Awareness and Joint Variable Message Format messages capability to the cockpit. The IDM is currently utilized by the AH-64D, OH-58D, CH-47F, and UH/HH-60M.</p> <p>The ATCS is an Army Aviation Program to procure Alternative Communications (Alt Comms) A&amp;B Kits to meet minimum acceptable near term communication requirements due to delays in the Joint Tactical Radio System (JTRS) program. Alt Comms B-Kits include the ARC-201D and the ARC-231 radio sets along with associated power amplifiers and mounts. A-Kit hardware and software is planned to be procured through the prime contractor for each platform.</p> <p>Military Flight Operations Quality Assurance (MFOQA) is the systematic collection and automated analysis of operational data from aircraft for use in continuous improvement of combat readiness in the areas of operation, training, maintenance and safety. MFOQA builds on a commercial aviation initiative which uses operational trend analyses of flight data to better identify hazards, increase operational efficiency and provide more effective risk management.</p> <p>Apache Interoperability - As a result of new Unified Battle Command (UBC)/Modernized Brigade Combat Team (MBCT) requirements and capabilities, software modification efforts are required to incorporate the new UBC/MBCT capabilities and functionality into the Apache Block 3 (AB3).</p> <p><b>Justification:</b>  FY11 base procurement dollars in the amount of \$20.099 million will procure DGNS AN/ASN-128D B-Kits, A-Kits, and installations for the UH-60A/L and CH-47D. The ASN-128D is required to meet directed SAASM security requirements and to provide a box-level IFR navigation capability. DGNS, Global Air Traffic Management (GATM) and JPALS programs are closely linked and have joint perspective/participation.</p> <p>FY11 base procurement dollars in the amount of \$20.510 million will procure AMPS upgrades to system software to support aviation fleet modernization programs and implementation of CAFRS Phase II. AMPS hardware (B-Kits) is being replaced on a 5-year cycle to maintain pace with technology. The start of the next cycle is in FY12.</p> <p>FY11 base procurement dollars in the amount of \$1.037 million will procure programmatic, engineering and logistics support for EGI aircraft integration efforts. GPS P3I, GATM, and JPALS programs are closely linked and have joint perspective/participation.</p> <p>FY11 base procurement dollars in the amount of \$73.825 million will procure IDM Redesign B Kits to mitigate parts obsolescence concerns and to provide a technology refresh to the IDM hardware. These B Kits support production line programs for the AH-64D, CH-47F, HH/UH-60M helicopters and OH-58D Safety Enhancement Program. FY11 funds are also required to complete IDM Capability Set (CS) 13-14 and begin CS 15-16 modifications and integrate those modifications into AH-64D, CH-47F, OH-58D, and UH-60M. The IDM enhances Army Aviation's interoperability, lethality, and operational tempo by providing a common solution for fast and accurate data-burst communications via the TI and FS internet networks. The IDM provides a capability to communicate across the digital battlefield while also providing the flexibility to adapt to technology change.</p>		

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date:
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February 2010

Appropriation / Budget Activity / Serial No: <small>Aircraft Procurement, Army / 2 / Modification of aircraft</small>	P-1 Item Nomenclature <small>AIRBORNE AVIONICS (AA0700)</small>
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Program Elements for Code B Items:	Code:	Other Related Program Elements: <small>PE 0604201A, SSN AA0704</small>
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FY11 base procurement dollars in the amount of \$89.416 million will procure Alt Comms A-Kits and B-Kits for AH-64D, CH-47F, UH/HH-60M, LUH, UAS, and SOA. An Alt Comms suite of aviation radios comprises a standard configuration of non-developmental and commercially available off-the-shelf equipment. The standard configuration consists of 2 ARC-201D radios, an Improved Frequency Modulation (IFM) Power Amplifier (two IFM's for CH-47F), and a suite of ARC-231 sets. This funding initiates non-recurring integration of the Airborne Maritime Fixed (AMF) radios onto the UH-60M and CH-47F platforms. Additionally this funding initiates AMF software integration into the Common Avionics Architecture Systems (CAAS).

FY11 base procurement dollars in the amount of \$14.538 million will procure and install MFOQA automated analysis system for Army rotary wing units. This program is intended to provide users at all levels of the Army with the required information to conduct analyses and make decisions in the areas of operations, training, maintenance, and safety to ensure efficient fleet management, to reduce operations and support (O&S) costs and to improve operational readiness.

FY11 OCO procurement dollars in the amount of \$24.983 million will procure ARC-231 and PRC-117 radios for the 25th Combat Aviation Brigade and the 159th Combat Aviation Brigade.

Exhibit P-40M, Budget Item Justification Sheet							Date: February 2010				
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft				P-1 Item Nomenclature AIRBORNE AVIONICS (AA0700)							
Appropriation / Budget Activity / Serial No:				P-1 Item Nomenclature							
Program Elements for Code B Items:						Code:		Other Related Program Elements: PE 0604201A, SSN AA0704			
Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
DGNS (AN/ASN-128D) P3I											
OSIP	Oper/Log	79.9	23.8	28.8	20.1	23.1	9.4	8.8	4.0	0.0	197.9
Embedded GPS Inertial Navigation System (EGI) P3I											
OSIP	Legislative	26.5	1.7	1.9	1.0	1.3	13.9	15.0	21.9	0.0	83.2
Aviation Tactical Communication Systems (ATCS)											
OSIP	Operational	159.0	53.3	97.6	114.4	108.7	98.8	143.4	157.8	0.0	933.0
Mil Flight Operation Quality Assurance (MFOQA)											
OSIP		16.9	14.8	14.2	14.5	0.0	0.0	0.0	0.0	0.0	60.4
Improved Data Modem (IDM)											
OSIP	Oper/Log	433.1	32.3	71.0	73.8	101.5	114.6	128.2	130.7	0.0	1085.2
Aviation Mission Planning System (AMPS)											
1-95-01-2185	Oper/Log	198.7	21.1	20.2	20.5	33.2	33.4	24.2	25.3	0.0	376.6
Apache Interoperability											
0-00-00-0000		0.0	0.0	0.0	0.0	0.0	5.0	11.0	9.7	0.0	25.7
Totals		914.1	147.0	233.7	244.3	267.8	275.1	330.6	349.4	0.0	2762.0

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: DGNS (AN/ASN-128D) P3I [MOD 1] OSIP

MODELS OF SYSTEM AFFECTED: UH-60A/L, CH-47D, HH-60A/L

**DESCRIPTION / JUSTIFICATION:**

The Doppler GPS Navigation System (DGNS) is one of the aviation systems required for Digitization of the Battlefield. The ASN-128D is required to meet directed Selective Availability Anti-Spoofing Module (SAASM) security requirements and to provide a box-level Instrument Flight Rules (IFR) navigation capability. A P3I for the current ASN-128B/DGNS for the UH-60A/L, HH-60A/L, and CH-47D aircraft is updating to an ASN-128D. The AN/ASN-128D/DGNS will meet the regulatory requirements of civil airspace for the UH-60A/L, HH-60A/L, and CH-47D aircraft. A-Kit unit procurement and installation costs vary by platform.

FY11 base funding in the amount of \$20.1 million will procure DGNS AN/ASN-128D B-Kits, A-Kits, and installations for the UH-60A/L and CH-47D. DGNS, Global Air Traffic Management (GATM) and JPALS programs are closely linked and have joint perspective/participation.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Full Rate Production (FRP) contract awarded August 2005 for B-Kits. The B-Kit production leadtime is 12 months. The A-Kits have been developed and tested for the UH-60A/L and CH-47D. DGNS will be integrated onto the HH-60A/L in FY10.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
692	75	75	75	75	34	32	32	30	35	33	32	30	30	29	29	30	29	28	28	29	
617	75	75	75	75	75	34	32	32	30	35	33	32	30	30	29	29	30	29	28	28	
	FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4						
																					1482
29																					1482

METHOD OF IMPLEMENTATION: On Site Log/Repair ADMINISTRATIVE LEADTIME: 6 months PRODUCTION LEADTIME: 6 months  
 Team  
 Contract Dates: FY 2010 - Apr 10 FY 2011 - Apr 2011 FY 2012 - Apr 2012  
 Delivery Dates: FY 2010 - Oct 10 FY 2011 - Oct 2011 FY 2012 - Oct 2012



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): DGNS (AN/ASN-128D) P3I [MOD 1] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity - B-Kit	524	26.6	235	12.6	266	16.4	192	10.4	265	14.2									1482	80.2
B-Kit Nonrecurring		14.3																		14.3
Kit Quantity A-Kit	992	12.9	128	2.4	130	2.5	118	2.2	114	2.2									1482	22.2
Aircraft Integration - Nonrecurring		4.3				1.3														5.6
ECPs		1.3		1.0		1.0		1.0		1.0		1.4		2.4		0.5				9.6
Data		1.3		0.9		0.7		0.7		0.6		1.2		1.3		0.5				7.2
Training Equipment		0.7		0.5		0.7		0.7		0.3		1.2		2.1		0.7				6.9
Systems Engineering		8.5		2.4		2.3		1.7		1.7		2.0		1.6		1.2				21.4
Other - PM Admin		3.7		2.0		2.1		1.6		1.5		2.0		1.4		1.1				15.4
Other																				
<b>Installation of Hardware</b>																				
FY 2008 & Prior Equip -- Kits.	692	6.3	300	2.0															992	8.3
FY 2009 Equip -- Kits					128	1.8													128	1.8
FY 2010 Equip -- Kits							130	1.8											130	1.8
FY 2011 Equip -- Kits									118	1.6									118	1.6
FY 2012 Equip -- Kits											114	1.6							114	1.6
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
Total Installment	692	6.3	300	2.0	128	1.8	130	1.8	118	1.6	114	1.6	0	0.0	0	0.0	0	0.0	1482	15.1
Total Procurement Cost		79.9		23.8		28.8		20.1		23.1		9.4		8.8		4.0		0.0		197.9

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Embedded GPS Inertial Navigation System (EGI) P3I [MOD 2] OSIP

MODELS OF SYSTEM AFFECTED: SOA, UH/HH-60M, CH-47F, AH-64D Block III, OH-58D

**DESCRIPTION / JUSTIFICATION:**

Embedded GPS/INS (Global Positioning/Inertial Navigation Systems) (EGI) is one of the aviation systems required for Digitization of the Battlefield. Fielding of the GPS EGI P3I continues. This P3I modification provides enhanced security with the directed Selective Availability Anti-Spoofing Module (SAASM) and GPS Instrument Flight Rules (IFR) navigation capability, in accordance with civil airspace regulatory requirements. Since the EGI P3I configuration will be applied to UH/HH-60M, CH-47F, AH-64D block III and OH-58D during RECAP, the platforms funded integration non-recurring and recurring costs and this budget line funded Special Operations Aviation (SOA). The next modification to the EGI will be to include M-Code security requirements into the currently fielded equipment. The additional B-kits beginning in FY14 are to incorporate the M-code changes.

FY11 base funding in the amount of \$1.0 million will procure the system engineering, program management, and other non-recurring costs required to support platform requirements funded in those aircraft procurement lines. GPS P3I, GATM, and JPALS programs are closely linked and have joint perspective/participation.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

The EGI B-kits being procured in FY14 and out are to incorporate M-code into the EGI.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

0 months

**PRODUCTION LEADTIME:** 0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Embedded GPS Inertial Navigation System (EGI) P3I [MOD 2] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity - B-Kit	142	11.1																	142	11.1
M Code Upgrade B-Kit													65	6.5	155	14.1			220	20.6
B-Kit Nonrecurring		4.8									8.1		3.5		2.5					18.9
Aircraft Integration (NonRecurring)		2.8									3.6		1.5		1.4					9.3
ECPs		1.1		0.4		0.3		0.1		0.1		0.7		0.5		0.5				3.7
Data		0.9		0.2		0.1		0.1		0.1		0.1		0.7		0.9				3.1
Training Equipment		1.7		0.2		0.3		0.3		0.2		0.3		1.0		1.0				5.0
Systems Engineering		2.5		0.6		0.7		0.3		0.5		0.5		0.6		0.7				6.4
Other - PM Admin		1.6		0.3		0.5		0.2		0.4		0.6		0.7		0.8				5.1
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		26.5		1.7		1.9		1.0		1.3		13.9		15.0		21.9		0.0		83.2

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Aviation Tactical Communication Systems (ATCS) [MOD 3] OSIP

MODELS OF SYSTEM AFFECTED: AH-64D, CH-47F, UH/HH-60M, Special Operations Aircraft (SOA), LUH-72A, UAS

**DESCRIPTION / JUSTIFICATION:**

Aviation Tactical Communication Systems (ATCS) is comprised of Alternate Communications (Alt Comms) and installation of Joint Tactical Radio System (JTRS). Alt Comms procures A-Kits and B-Kits to meet minimum acceptable near-term communication requirements as defined by the U.S. Army Aviation Center of Excellence (USAACE) due to delays in the JTRS program. Alt Comms B-Kits include the ARC-201D and the ARC-231 radio sets along with associated power amplifiers and mounts. B-Kit hardware is procured through existing Communications Electronics Command (CECOM) contracts. A-Kit hardware and software is planned to be procured through the prime contractor for each platform using funds in this budget line and installed on the production line. B-kits are procured prior to A-kits due to platform and radio lead times. A-Kit configuration and radio suite varies by platform. B-Kit unit costs vary based on platform configuration. No installation schedule due to A and B-Kits being installed on the production line.

FY11 base funding in the amount of \$89.416 million will procure Alt Comms A-Kits and B-Kits for AH-64D, CH-47F, UH/HH-60M, LUH, Unmanned Aerial Systems (UAS) and SOA. An Alt Comms suite of aviation radios comprises a standard configuration of non-developmental and commercially available off-the-shelf equipment. The standard configuration consists of 2 ARC-201D radios, an Improved Frequency Modulation (IFM) Power Amplifier (two IFM's for CH-47F), and a suite of ARC-231 sets. Additionally, FY11 base funding provides for ARC-231 modifications to crypto and satellite communications through ECPs. This funding initiates non-recurring integration of the Airborne Maritime Fixed (AMF) radios onto the UH-60M and CH-47F platforms. Additionally this funding initiates AMF software integration into the Common Avionics Architecture Systems (CAAS).

FY11 OCO procurement dollars in the amount of \$24.983 million will procure ARC-231 and PRC-117 radios.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Alt Comms is a non-developmental program in the production and deployment phase. JTRS A-Kit development, integration, and test on Apache Block III will be completed in FY12. JTRS A-Kit procurement begins in FY13 for production incorporation in Apache Block III Lot 4 aircraft.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

**METHOD OF IMPLEMENTATION:**

**ADMINISTRATIVE LEADTIME:**

0 months

**PRODUCTION LEADTIME:**

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Aviation Tactical Communication Systems (ATCS) [MOD 3] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity - B-Kit (ARC-231)	515	47.5	149	15.8	241	20.9	532	46.0	235	20.6	235	20.0	165	16.3	181	18.2			2253	205.3
Kit Quantity - B-Kit (ARC-201D)	751	24.5	198	1.7	168	6.2	186	7.0	194	7.4	210	8.2	210	8.3	266	10.8			2183	74.1
Kit Quantity - B-Kit (IFM)	470	8.9	101	2.3	122	2.9	126	3.0	131	3.2	144	3.6	144	3.7	169	4.4			1407	32.0
Kit Quantity - A-Kit	137	18.7	338	11.2	115	13.1	129	12.1	145	10.1	209	18.9	378	45.5	406	47.1			1857	176.7
ECP/Non-Recurring		33.8		11.3		40.5		33.0		53.2		29.1		49.7		58.2				308.8
System Engineering		12.4		3.3		3.3		3.4		3.5		6.2		3.6		3.7				39.4
System Test & Evaluation		3.5		1.8		2.0		2.0		2.0		2.7		2.9		2.9				19.8
Fielding/Training		1.0		2.4		3.4		3.5		3.5		4.7		3.7		3.9				26.1
Other - PM Admin		8.7		3.5		5.3		4.4		5.2		5.4		9.7		8.6				50.8
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		159.0		53.3		97.6		114.4		108.7		98.8		143.4		157.8		0.0		933.0

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Mil Flight Operation Quality Assurance (MFOQA) [MOD 4] OSIP

MODELS OF SYSTEM AFFECTED: AH-64D, CH-47F, UH-60A/L, LUH, HH-60A

DESCRIPTION / JUSTIFICATION:

Military Flight Operations Quality Assurance (MFOQA) is the systematic collection and automated analysis of operational data from aircraft for use in continuous improvement of combat readiness in the areas of operation, training, maintenance and safety. MFOQA builds on a commercial aviation initiative which uses operational trend analyses of flight data to better identify hazards, increase operational efficiency and provide more effective risk management. Unit costs vary by aircraft platform.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

MFOQA is an Office of the Secretary of Defense directed program to implement an industry best practice to reduce human error type accidents.

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: OLR Team      ADMINISTRATIVE LEADTIME: 0 months      PRODUCTION LEADTIME: 0 months  
 Contract Dates: FY 2010 -      FY 2011 -      FY 2012 -  
 Delivery Dates: FY 2010 -      FY 2011 -      FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Mil Flight Operation Quality Assurance (MFOQA) [MOD 4] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity B-Kits	80	6.5																	80	6.5
Kit Quantity A-Kits	80	4.3																	80	4.3
Other-PM Admin		3.7		3.6		3.0		3.2												13.5
System Engineering				11.2		11.2		11.3												33.7
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits	80	2.4																	80	2.4
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
TC Equip- Kits																				
Total Installment	80	2.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	80	2.4
Total Procurement Cost		16.9		14.8		14.2		14.5		0.0		0.0		0.0		0.0		0.0		60.4

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Improved Data Modem (IDM) [MOD 5] OSIP

MODELS OF SYSTEM AFFECTED: AH-64D, OH-58D, CH-47F, UH/HH-60M

**DESCRIPTION / JUSTIFICATION:**

The IDM is the common solution for digitizing Army Aviation. It performs as an internet controller and gateway to Tactical Internet (TI) and Fire Support (FS) internet for Army aircraft. This hardware/software solution also provides a flexible, software driven digital messaging system that is interoperable with existing Army and Joint forces battlefield operating systems. The IDM provides Situational Awareness and Joint Variable Message Format messages capability to the cockpit. The IDM is currently utilized by the AH-64D, OH-58D, CH-47F, and UH/HH-60M.

FY11 base procurement dollars in the amount of \$73.825 million will procure IDM Redesign B Kits to mitigate parts obsolescence concerns and to provide a technology refresh to the IDM hardware. These B Kits support production line incorporation for the AH-64D, CH-47F, HH/UH-60M helicopters and the OH-58D Safety Enhancement Program. FY11 funds are also required to complete IDM Capability Set (CS) 13-14 and begin CS 15-16 modifications and integrate those modifications into AH-64D, CH-47F, OH-58D, and UH-60M. The IDM enhances Army Aviation's interoperability, lethality, and operational tempo by providing a common solution for fast and accurate data-burst communications via the TI and FS internet networks. The IDM provides a capability to communicate across the digital battlefield while also providing the flexibility to adapt to technology change.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

A hardware upgrade of the IDM to mitigate parts obsolescence issues and to refresh technology will be completed in FY10 to support B-kit procurements in FY10 and out.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	

  

FY 2014				FY 2015				FY 2016				FY 2017				To	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	

**METHOD OF IMPLEMENTATION:**

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME: 0 months

Contract Dates: FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates: FY 2010 -

FY 2011 -

FY 2012 -



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Improved Data Modem (IDM) [MOD 5] OSIP

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
<b>RDT&amp;E</b>																						
<b>Procurement</b>																						
Kit Quantity - B -Kits(IDM)	1416	42.5			106	4.2	116	4.5	259	10.3	245	9.8	155	6.4	155	6.5					2452	84.2
Kit Quantity - B -Kits (IDM Mods)	206	4.5			100	3.8	90	3.5	21	0.8	102	4.1	10	0.4	263	11.0					792	28.1
Kit Quantity - B -Kits(IDM OSA)																						
B-Kit NonRecurring		99.6		5.5		3.4		6.8		5.3		15.3		22.6		21.3						179.8
Kit Quantity- A-Kits	240	11.9																			240	11.9
Aircraft Integration		212.3		16.3		23.1		32.4		56.6		65.7		82.5		75.9						564.8
ECP (B-Kit HW)		2.4		0.4		3.0																5.8
ECP (B-Kit SW)		13.7		3.5		23.3		15.9		17.3		8.1		4.3		3.7						89.8
Data		4.4																				4.4
Systems Engineering		10.4		3.3		4.9		5.1		5.2		5.4		5.6		5.7						45.6
Systems Test and Evaluation		4.0		0.5		1.3		1.4		1.7		1.8		1.9		2.0						14.6
Fielding/Training		8.3		1.3		1.6		1.7		1.8		1.9		2.0		2.1						20.7
Other-PM Admin		19.1		1.5		2.4		2.5		2.5		2.5		2.5		2.5						35.5
<b>Installation of Hardware</b>																						
FY 2007 & Prior Equip -- Kits																						
FY 2008 -- Kits																						
FY 2009 Equip -- Kits																						
FY 2010 Equip -- Kits																						
FY 2011 Equip -- Kits																						
FY 2012 Equip -- Kits																						
FY 2013 Equip -- Kits																						
FY 2014 Equip -- Kits																						
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		433.1		32.3		71.0		73.8		101.5		114.6		128.2		130.7		0.0				1085.2

INDIVIDUAL MODIFICATION

Date: February 2010

MODIFICATION TITLE: Aviation Mission Planning System (AMPS) [MOD 6] 1-95-01-2185

MODELS OF SYSTEM AFFECTED: AH-64A/D, CH-47D/F, OH-58D, UH-60A/L/M/Q, HH-60L/M, and UASs

DESCRIPTION / JUSTIFICATION:
The AMPS is used to automate Aviation mission planning tasks. The AMPS supports tactical command and control, mission planning, and mission management. It interfaces with the ABCS components, which furnish the aviation commander with continuous situational awareness, allowing the commander to rapidly adjust mission plans. This system generates mission data in either hard copy or electronic formats. The electronic formats are loaded onto the aircraft platforms, initializing the communication, navigation, and situational awareness systems on the modernized fleet aircraft. Since the airframes have the responsibility for the data receptacles/busses required to interface with AMPS, there is no installation cost/schedule. The system functionality is upgraded through the application of Engineering Change Proposals (ECPs) (primarily software) in a spiral acquisition program. AMPS is fielded from the Army through Aviation Company, centered in the Combat Aviation Brigade.

FY11 base procurement dollars in the amount of \$20.510 million will procure AMPS upgrades to system software to support aviation fleet modernization programs and implementation of CAFRS Phase II. AMPS hardware (B-Kits) is being replaced on a 5-year cycle to maintain pace with technology. The start of the next cycle is in FY12.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):
Operational Requirements Document Change 1 was approved in April 1998. The AMPS was approved to enter into production through a Milestone III decision in July 2000. The AMPS initial hardware has been fielded and will begin the next hardware technology refresh in FY12. Software is being modified concurrently with Aviation fleet modernization programs. The AMPS software will be upgraded to include Joint Mission Planning Software (JMPS) improved components. This upgrade is funded with RDTE and will complete in FY12.

Installation Schedule

Table with columns for fiscal years (FY 2009-2017) and sub-columns for quarters (1-4). Includes a 'To Complete' column and a 'Totals' column. The table is mostly empty, indicating no scheduled installations.

METHOD OF IMPLEMENTATION: N/A ADMINISTRATIVE LEADTIME: 0 months PRODUCTION LEADTIME: 0 months
Contract Dates: FY 2010 - FY 2011 - FY 2012 -
Delivery Dates: FY 2010 - FY 2011 - FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Aviation Mission Planning System (AMPS) [MOD 6] 1-95-01-2185

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
Kit Quantity-B Kit (Computer)	2411	31.3	133	1.1	30	0.4	30	0.4	1067	10.1	972	9.4			30	0.3			4673	53.0
Kit Quantity- B Kit (Upgrades)		6.1														2.9				9.0
Kit Quantity -B Kit (Peripherals)		17.2							0.6		0.2									18.0
B Kit (Nonrecurring)		10.3						0.4					0.4							11.1
ECPs		92.6		11.5		10.0		9.2		11.6		13.1		13.0		12.1				173.1
Systems Engineering		4.6		1.7		1.1		1.1		1.1		1.1		1.1		1.2				13.0
System Test & Eval		4.1		0.7		1.2		0.9		1.2		1.2		1.3		1.3				11.9
Fielding/Training		22.5		5.1		6.0		7.0		7.1		6.7		6.8		5.8				67.0
Other - PM Admin		10.0		1.0		1.5		1.5		1.5		1.7		1.6		1.7				20.5
<b>Installation of Hardware</b>																				
FY 2007 & Prior Equip -- Kits																				
FY 2008 -- Kits																				
FY 2009 Equip -- Kits																				
FY 2010 Equip -- Kits																				
FY 2011 Equip -- Kits																				
FY 2012 Equip -- Kits																				
FY 2013 Equip -- Kits																				
FY 2014 Equip -- Kits																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		198.7		21.1		20.2		20.5		33.2		33.4		24.2		25.3		0.0		376.6

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 2 / Modification of aircraft

P-1 Item Nomenclature  
GATM Rollup (AA0711)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	307.3	79.0	102.9	100.9	105.7	85.2	73.2	62.7		916.9
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	307.3	79.0	102.9	100.9	105.7	85.2	73.2	62.7		916.9
Initial Spares										
Total Proc Cost	307.3	79.0	102.9	100.9	105.7	85.2	73.2	62.7		916.9
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

This budget line supports procurement of Global Air Traffic Management equipment for both Fixed Wing (FW) and Rotary Wing (RW) aircraft.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Line Item Nomenclature: GATM Rollup (AA0711)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
Fixed Wing Aircraft (AA0703)		8567			13163			14051		
Rotary Wing Aircraft (AA0704)		70422			89723			86811		
<b>Total:</b>		<b>78989</b>			<b>102886</b>			<b>100862</b>		

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature GATM - Fixed Wing Aircraft (AA0703)
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Program Elements for Code B Items:		Code:	Other Related Program Elements:							
	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	128.0	8.6	13.2	14.1	14.4	13.4	14.4	14.7		220.7
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	128.0	8.6	13.2	14.1	14.4	13.4	14.4	14.7		220.7
Initial Spares										
Total Proc Cost	128.0	8.6	13.2	14.1	14.4	13.4	14.4	14.7		220.7
Flyaway U/C										
Weapon System Proc U/C										

<b>P-40 Breakdown</b>									
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Active	Qty	0	0	0	0	0	0	0	0
	Gross Cost	8567.0	4848.0	5413.0	14422.0	13410.0	14448.0	14696.0	
National Guard	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	3808.0	6418.0	0.0	0.0	0.0	0.0	0.0
Reserve	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	4507.0	2220.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0	0
	Gross Cost	8567	13163	14051	14422	13410	14448	14696	

**Description:**  
Global Air Traffic Management (GATM) is the military equivalent of the International Civil Aviation architecture known as Communications, Navigation Surveillance and Air Traffic Management (CNS/ATM) programs. Current ground based navigation aids will be phased out of service as the world transitions to digital, data (non-voice), and space based navigation systems. Military aircraft will face some level (altitude and location dependent) of flight restrictions if not GATM equipped. GATM requirements cannot be met with a single piece of avionics equipment. Meeting worldwide GATM requirements will entail the upgrading of some existing avionics and the procurement of new systems for the fixed wing fleet.

**Justification:**  
FY11 Base procurement dollars in the amount of \$14.051 million supports GATM equipment for Fixed Wing aircraft. Fixed Wing aircraft were purchased with avionics available at the time of production. However, for the Army's Fixed Wing aircraft to remain current and have unrestricted access to the rapidly changing Air Traffic Management airspace, new communication, navigation and surveillance equipment will be needed to meet GATM requirements. Unless equipped, the Army's senior leadership will be limited in conducting their worldwide command and control missions because of potential airspace exclusion or routing delays. In addition, new communication and navigation systems will enhance reliability and maintainability by employing commercial systems thereby improving aircraft availability for mission requirements.

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature GATM - Fixed Wing Aircraft (AA0703)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Global Air Traffic Management - FW											
GATM-FW	Operational	128.0	8.6	13.2	14.1	14.4	13.4	14.4	14.7	0.0	220.8
<b>Totals</b>		128.0	8.6	13.2	14.1	14.4	13.4	14.4	14.7	0.0	220.8

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Global Air Traffic Management - FW [MOD 1] GATM-FW

MODELS OF SYSTEM AFFECTED: All series Army fixed wing aircraft:C-31, 12, 23, 26, 37, 20, 208, UV-18, RC-12, UC-35, EO-5,CE-182

**DESCRIPTION / JUSTIFICATION:**

This effort will update and modernize communication, navigation, and surveillance equipment to current international requirements, allow worldwide deployments and continued safe operations. Failure to modify the Fixed Wing fleet will prevent worldwide deployability.

As currently equipped, the aircraft are not suitable for worldwide deployment nor capable of using modern navigation and air traffic control capabilities. A variety of equipment is required by GATM including: datalink technology, satellite communication (SATCOM), communication management units, Electronic Flight Information System, surveillance equipment, radios, navigation equipment and multi-mode receivers. GATM requirements are evolving and require additional systems in the near future. The kit quantities reflected on the next page represent a wide variety of avionics kits with different mixes each fiscal year. Kit configuration varies by aircraft. Consequently, kit unit and installation costs vary significantly from year to year.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

Development is not required for avionics system cockpit upgrades.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
166				2	1	1	4	4	5	5	5	6	4	4	2	1	4	9	11	8	
147	19				2	1	1	4	4	5	5	5	6	4	4	2	1	4	9	11	
	FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
	4	14	14	5	3	13	13	10													318
	8	4	14	14	5	3	12	13	10	1											318

**METHOD OF IMPLEMENTATION:** Contract      **ADMINISTRATIVE LEADTIME:** 2 months      **PRODUCTION LEADTIME:** 6 months  
**Contract Dates:** FY 2010 - Dec 09      FY 2011 - Dec 10      FY 2012 - Dec 11  
**Delivery Dates:** FY 2010 - May 10      FY 2011 - May 11      FY 2012 - May 12



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Global Air Traffic Management - FW [MOD 1] GATM-FW

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
<b>RD&amp;E</b>																						
<b>Procurement</b>																						
Installation Kits	166	83.6	2	6.0	10	9.1	21	9.8	11	10.0	32	9.3	37	10.1	39	10.3					318	148.2
Kit Quantity																						
Installation Kits, Nonrecurring																						
Equipment																						
Equipment, Nonrecurring																						
Engineering Change Orders																						
Data		0.6		0.1		0.1		0.1		0.1		0.1		0.1		0.1						1.3
Training Equipment																						
Support Equipment																						
Other																						
Interim Contractor Support																						
<b>Installation of Hardware</b>																						
FY 2008 & Prior Equip -- Kits	166	43.8																			166	43.8
FY 2009 -- Kits			2	2.5																	2	2.5
FY 2010 Equip -- Kits					10	4.0															10	4.0
FY 2011 Equip -- Kits							21	4.2													21	4.2
FY 2012 Equip -- Kits									11	4.3											11	4.3
FY 2013 Equip -- Kits											32	4.0									32	4.0
FY 2014 Equip -- Kits													37	4.2							37	4.2
FY 2015 Equip -- Kits															39	4.3					39	4.3
TC Equip- Kits																						
<b>Total Installment</b>	166	43.8	2	2.5	10	4.0	21	4.2	11	4.3	32	4.0	37	4.2	39	4.3	0	0.0			318	71.3
<b>Total Procurement Cost</b>		128.0		8.6		13.2		14.1		14.4		13.4		14.4		14.7		0.0				220.8

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature GATM - Rotary Wing Aircraft (AA0704)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: SSN AA0703, SSN AA0711
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	179.3	70.4	89.7	86.8	91.3	71.8	58.8	48.0		696.1
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	179.3	70.4	89.7	86.8	91.3	71.8	58.8	48.0		696.1
Initial Spares										
Total Proc Cost	179.3	70.4	89.7	86.8	91.3	71.8	58.8	48.0		696.1
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

Global Air Traffic Management (GATM) is the military equivalent of the International Civil Aviation architecture known as Communications, Navigation, Surveillance and Air Traffic Management (CNS/ATM) programs. GATM is a DoD term that describes the equipment, training, and procedures mandated by Civilian Air Traffic Control (ATC) authorities in order to operate within 21st century airspace. Most ground based navigation aids will be phased out of service as the world transitions to a modernized air traffic management system. The modernization is designed to meet the current and future service demands posed by aviation growth. The advanced architecture will provide improved safety, accessibility, flexibility, predictability, reliability, capacity, efficiency, and security. Military aircraft will face significant flight restrictions if not GATM equipped. GATM requirements are driven by civil aviation authorities and are not under DoD control. Meeting worldwide GATM requirements will entail the upgrading of some existing avionics and the procurement of new systems for rotary wing and UAS fleets. Included in the GATM Program is an upgrade to the Mode S Identification Friend or Foe (IFF) transponder (APX-118), an upgrade to Mode 5 capability (APX-123), automatic dependent surveillance broadcast (ADS-B) and upgrades to meet requirements for 8.33KHz channel spacing.

GATM provides Army aircraft improved deployment capabilities and allows them to operate in civil airspace without the threat of exclusion. IFF Mode 5 provides enhanced security and greatly improved performance over Mode 4. It also maintains compatibility with civil ATC with less interference. Europe mandates a Mode S transponder for all flights after March 2009 and plans expansion of 8.33KHz VHF-AM controlled airspace to the ground in high volume traffic areas. The FAA plans to release a notice of proposed rule making in 2010 to mandate the use of ADS-B by 2020. Army aircraft will not be allowed to transit through or operate in European airspace affected by these mandates unless the necessary Mode S upgrades are made. The Mode S transponder impacts European based aircraft as well as those deploying to Europe. The recurring procurement of Mode S kits started in FY02 and procurement and installations continue. Benefits of GATM include direct routing through civil airspace resulting in significant savings in both time and money. It allows unrestricted operations in worldwide civil controlled airspace and improves safety and operational efficiency while meeting the new worldwide frequency spectrum requirements.

**Justification:**

FY11 base funding in the amount of \$86.8 Million will procure and install APX-123 B-kits and A-Kits for the AH-64D, CH-47D/F, UH-60A/L/M, Unmanned Aircraft Systems (UAS), OH-58D and Special Operations Aircraft (SOA) to provide these aircraft with enhanced IFF Mode 5 capabilities. Procures and installs Mode 5 upgrade kits which convert previously fielded APX-118 transponders to APX-123 transponders. FY 11 funding also installs the remaining APX-118s for the UH-60A/L and CH-47D aircraft. It will also fund NRE to implement ADS-B. Procurement and installation of ARC-231 B-kits and A-kits to meet the 8.33 kHz channel spacing requirements for the UH-60A/L and CH-47D are also funded in FY11.

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature GATM - Rotary Wing Aircraft (AA0704)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements: SSN AA0703, SSN AA0711
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
Global Air Traffic Management - RW											
GATM-RW	Unclassified	179.3	70.4	89.7	86.8	91.3	71.8	58.8	48.0	0.0	696.1
<b>Totals</b>		179.3	70.4	89.7	86.8	91.3	71.8	58.8	48.0	0.0	696.1

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Global Air Traffic Management - RW [MOD 1] GATM-RW

MODELS OF SYSTEM AFFECTED: CH-47D/F, UH-60A/L/M, MH-47D/E/G, MH-60L/K/M, A/MH-6, AH-64A/D, HH60L/M, OH-58D, UAS

**DESCRIPTION / JUSTIFICATION:**

Global Air Traffic Management (GATM) is the military equivalent of the International Civil Aviation architecture known as Communications, Navigation, Surveillance and Air Traffic Management (CNS/ATM) programs. GATM provides the equipment, training, and procedures mandated by Civilian Air Traffic Control (ATC) authorities. Current ground based navigation aids will be phased out of service as the world transitions to a modernized air traffic management system. The modernization is designed to meet the current and future service demands posed by aviation growth. The advanced architecture will provide improved safety, accessibility, flexibility, predictability, reliability, capacity, efficiency, and security. Military aircraft will face significant flight restrictions if not GATM equipped. GATM requirements are driven by civil aviation authorities and are not under DoD control. Meeting worldwide GATM requirements will entail the upgrading of some existing avionics and the procurement of new systems for rotary wing fleets. Included in the GATM Program are upgrades to the Mode S Identification Friend or Foe (IFF) (APX-118), ADS-B and Mode 5 (APX-123).

FY11 base funding in the amount of \$86.8 million will procure and install APX-123 B-kits and A-Kits for the AH-64D, CH-47D/F, UH-60A/L/M, Unmanned Aircraft Systems (UAS), OH-58D and Special Operations Aircraft (SOA) to provide these aircraft with enhanced IFF Mode 5 capabilities. Procures and installs Mode 5 upgrade kits which convert previously fielded APX-118 transponders to APX-123 transponders. FY11 funding also installs the remaining APX-118s for the UH-60A/L and CH-47D aircraft. It will also fund NRE to implement ADS-B. Procurement and installation of ARC-231 B-kits and A-kits to meet the 8.33 kHz channel spacing requirements for the UH-60A/L and CH-47D are also funded in FY11.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

The APX-123 reached Milestone C on 27 Jul 2006. Integration of the ARC-231 8.33 kHz channel spacing for UH-60A/L and CH-47D will be completed in FY10. Common Transponder (CXP) B-Kit quantities exceed A-Kit and install quantities because some B-Kits are installed on the aircraft production line. CXP B-Kits will also be installed in trainers that will be provided to TRADOC. A-Kit install costs are governed by complexity of platform and number of install hours. B-Kit unit costs vary due to difference in aircraft configuration, where some aircraft require Receiver Transmitter (RT) only and others require both RT and Remote Control Unit (RCU). Lead-times reflected below are for transponders (APX-118/123).

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
686	34	34	35	34	283	283	283	285	100	100	98	98	79	78	78	78	190	190	189	189
686	34	35	34	34	283	283	283	285	100	100	98	98	79	78	78	78	190	190	189	189

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
279	279	279	279	301	301	301	301	168	168	168	168	110	111	112	113		6862
278	278	280	280	300	301	301	302	166	167	168	171	110	111	112	113		6862

**METHOD OF IMPLEMENTATION:** OLR Team      **ADMINISTRATIVE LEADTIME:** 6 months      **PRODUCTION LEADTIME:** 11 months  
**Contract Dates:** FY 2010 - Mar 10      FY 2011 - Mar 11      FY 2012 - Mar 12  
**Delivery Dates:** FY 2010 - Feb 11      FY 2011 - Feb 12      FY 2012 - Feb 13

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Global Air Traffic Management - RW [MOD 1] GATM-RW

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
Kit Quantity - B Kits	2600	92.2	736	32.4	1287	50.9	963	45.3	1365	53.2	1184	44.3	846	35.6	771	26.4				9752	380.3
B-Kits, Nonrecurring		5.7		4.8		5.7		6.3		4.2											26.7
Kit Quantity - A Kits	1534	7.3	423	15.1	545	10.8	328	14.8	1228	17.2	1027	12.4	847	6.2	930	5.7				6862	89.5
Aircraft Integration - Nonrecurring		21.3		6.3		6.1		5.8		2.4		1.8		1.7		1.2					46.6
ECP		2.5		0.5		1.3		1.3		0.7		0.7		0.9		1.0					8.9
Data		3.8		0.9		0.6		0.8		0.4		0.4		0.5		0.9					8.3
Training Equipment		1.6		0.8		0.8		0.8		0.3		0.3		0.4		0.5					5.5
Fielding		2.6		1.5		1.5		1.7		0.3		0.5		0.9		1.0					10.0
Systems Engineering		9.5		2.1		2.1		2.3		2.2		2.2		2.4		2.5					25.3
System Test & Evaluation		1.2		1.1		1.1		1.2		1.3		0.6		0.8		0.8					8.1
Other PM Admin		6.1		2.5		2.6		2.6		2.6		2.6		2.7		2.1					23.8
Other		18.9																			18.9
<b>Installation of Hardware</b>																					
FY 2008 & Prior Equip -- Kits	686	6.6	137	2.4	711	3.2														1534	12.2
FY 2009 Equip -- Kits					423	3.0														423	3.0
FY 2010 Equip -- Kits							396	3.9	149	1.9										545	5.8
FY 2011 Equip -- Kits									164	4.6	164	2.2								328	6.8
FY 2012 Equip -- Kits											594	3.8	634	3.5						1228	7.3
FY 2013 Equip -- Kits													482	3.2	545	2.5				1027	5.7
FY 2014 Equip -- Kits															659	3.4	188			847	3.4
FY 2015 Equip -- Kits																	930			930	
To Complete																					
Total Installment	686	6.6	137	2.4	1134	6.2	396	3.9	313	6.5	758	6.0	1116	6.7	1204	5.9	1118	0.0		6862	44.2
Total Procurement Cost		179.3		70.4		89.7		86.8		91.3		71.8		58.8		48.0		0.0			696.1

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 2 / Modification of aircraft

P-1 Item Nomenclature  
RQ-7 UAV MODS (A00018)

Program Elements for Code B Items: Code: Other Related Program Elements:  
0305204A-RDT&E, 0305233A, BA0330 (OPA)

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost			607.9	602.8	37.5	40.4	87.0	148.6		1524.2
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1			607.9	602.8	37.5	40.4	87.0	148.6		1524.2
Initial Spares										
Total Proc Cost			607.9	602.8	37.5	40.4	87.0	148.6		1524.2
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The Tactical Unmanned Aerial Systems (TUAS) Shadow 200 provides the Army Brigade Commander with dedicated Reconnaissance, Surveillance and Target Acquisition (RSTA), Intelligence, Battle Damage Assessment (BDA) and Force Protection. The Shadow provides the Brigade Commander with critical battlefield intelligence and targeting information in the rapid cycle time required for success at the tactical level. The TUAS Shadow system air vehicle meets the required operating range of 50 kilometers and remains on station for up to five hours. The TUAS Shadow system consists of four air vehicles, (each configured with an EO/IR sensor payload), launcher and ground control and support equipment including: power generation, communications equipment, automated recovery equipment, one system remote video terminals (OSRVT), vehicle mounted shelters, and High Mobility Multipurpose Wheeled Vehicles with trailer(s). Each system is equipped with one Maintenance Section Multifunctional (MSM) Vehicle and is supported at the division level by a Mobile Maintenance Facility (MMF). The baseline fielded payload is electro-optic infrared (EO/IR) with a Laser Designator payload (EO/IR/LD) retrofit beginning in FY 2008. Congressionally mandated Tactical Common Data Links retrofit begins in FY 2010. The TUAS Shadow has logged over 469,632 flight hours since June FY 2001 most of which were flown in support of Operation Iraqi Freedom and Operation Enduring Freedom.

**Justification:**

FY2011 Base funding of \$505.0 million will procure Laser Designator (LD) and TCDL retrofits. The TCDL retrofit includes: Universal Ground Control Station (GCS), Universal Ground Data Terminal (UGDT), Production Acceptance Test, New Equipment Training, and Training Equipment.

FY2011 OCO funding of \$97.8 million will procure TCDL retrofits and OSRVT upgrades.

<b>Exhibit P-40M, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 2 / Modification of aircraft	P-1 Item Nomenclature RQ-7 UAV MODS (A00018)
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Appropriation / Budget Activity / Serial No:	P-1 Item Nomenclature
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Program Elements for Code B Items:	Code:	Other Related Program Elements: 0305204A-RDT&E, 0305233A, BA0330 (OPA)
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Description		Fiscal Years									
OSIP No.	Classification	Prior Yrs.	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TC	Total
SHADOW TACTICAL COMMON DATA LINK (TCDL)											
0-00-00-0000		0.0	0.0	345.6	497.5	30.6	40.4	87.0	148.6	0.0	1149.7
SHADOW LASER DESIGNATOR (LD)											
0-00-00-0000		0.0	0.0	66.8	65.3	6.9	0.0	0.0	0.0	0.0	139.0
Encryption and OSRVT Modifications											
0-00-00-0000		0.0	0.0	195.5	40.0	0.0	0.0	0.0	0.0	0.0	235.5
<b>Totals</b>		0.0	0.0	607.9	602.8	37.5	40.4	87.0	148.6	0.0	1524.2

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: SHADOW TACTICAL COMMON DATA LINK (TCDL) [MOD 1] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: Shadow RQ-7B

DESCRIPTION / JUSTIFICATION:

DESCRIPTION / JUSTIFICATION:

Shadow Tactical Common Data Link (TCDL) retrofit effort will be applied to the current Shadow systems. This retrofit implements the Congressionally mandated STANAG 4586 capability, meets the Shadow ORD requirement, and provides a secure data link. Implementation of the TCDL retrofit also includes: extended wings for the Shadow air vehicles to accommodate the added weight of the TCDL data link and procurement of the Universal Ground Control Station (UGCS) and Universal Ground Data Terminal, which are required for interoperability with ER/MP.

FY 2011 Base procurement funds in the amount of \$505.0 million procures TCDL retrofit kits for 41 Shadow systems, associated GFE, training and training equipment, and government support costs. The installation costs are captured as part of the retrofit kit cost since the acquisition strategy is to contract for the installation of the kits from the prime contractor as part of the retrofit kit procurement contract and install the extended wings and TCDL air vehicle change at the contractor facility. Twenty additional Shadow system will be upgraded with UGCS and forty two (42) launchers will be procured.

FY 2011 OCO procurement funds of \$57.8 million procures TCDL retrofit kits for five (5) Shadow systems, associated GFE, and training.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):

2Q FY 2011 - Delivery of Shadow system with TCDL

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME:

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -



**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): SHADOW TACTICAL COMMON DATA LINK (TCDL) [MOD 1] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
<b>RDT&amp;E</b>																					
<b>Procurement</b>																					
TCDL System Retrofit Kits					21	262.8	46	377.3			1	10.4	7	62.4	13	117.5			88	830.4	
UGCS Only System Retrofit					13	35.7	20	55.9											33	91.6	
Launchers							42	14.7											42	14.7	
GFE						16.0		13.2				0.6		4.6		8.6				43.0	
Training Equipment						5.8		11.2				0.2		1.1		2.1				20.4	
Training						8.1		6.9		16.2		10.8		0.2		1.3				43.5	
Program Management						7.8		8.3		6.5		8.4		8.5		8.7				48.2	
Engineering						3.1		3.3		2.6		3.3		3.4		3.4				19.1	
Logistics						6.3		6.7		5.3		6.7		6.8		7.0				38.8	
<b>TCDL System Installation of Hardware</b>																					
FY 2010 Installation																					
FY 2011 Installation																					
FY 2012 Installation																					
FY 2013 Installation																					
FY 2014 Installation																					
FY 2015 Installation																					
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Total Procurement Cost		0.0		0.0		345.6		497.5		30.6		40.4		87.0		148.6		0.0		1149.7	

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: SHADOW LASER DESIGNATOR (LD) [MOD 2] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: Shadow RQ-7B

DESCRIPTION / JUSTIFICATION:  
Shadow Laser Designator (LD) retrofit effort procures two (2) LD payloads for each Shadow system. A Laser Designator payload is an ORD requirement and urgent need for theater operations.

FY 2011 Base procurement dollars in the amount of \$65.3 million procures LD retrofits for Shadow systems. Funding also procures New Equipment Training, trainer software and PM support.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):  
1Q FY 2010 - Shadow with Laser Designator Acceptance

Installation Schedule

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 0 months PRODUCTION LEADTIME: 0 months  
 Contract Dates: FY 2010 - FY 2011 - FY 2012 -  
 Delivery Dates: FY 2010 - FY 2011 - FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): SHADOW LASER DESIGNATOR (LD) [MOD 2] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RD&amp;E</b>																				
<b>Procurement</b>																				
Laser Designator					60.9		59.6													120.5
Training					2.6		3.1		3.2											8.9
Program Management					1.5		1.2		1.6											4.3
Engineering					0.6		0.5		0.7											1.8
Logistics					1.2		0.9		1.4											3.5
<b>Installation of Hardware</b>																				
FY 2010 Installation																				
FY 2011 Installation																				
FY 2012 Installation																				
FY 2013 Installation																				
FY 2014 Installation																				
FY 2015 Installation																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		66.8		65.3		6.9		0.0		0.0		0.0		0.0		139.0

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE: Encryption and OSRVT Modifications [MOD 3] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: Shadow

**DESCRIPTION / JUSTIFICATION:**

The Type 2 Interim Encryption System (TIES) provides Shadow with encryption of UAS full motion video downlink based on an Operational Needs Statement. TIES provides an interim encryption solution for Shadow until full TCDL and OSRVT upgrades can be fielded. Funding for this requirement is provided in the FY 2010 OCO appropriation. In addition to the Army request of \$56.9 million, the FY 2010 OCO appropriation included \$58.6 million for Marine Corps equipment. The Army and Marine Corps is in the process of allocating the USMC to the correct budget line.

The current One System Remote Video Terminal (OSRVT) fielded in Shadow systems requires an upgrade to an Increment II OSRVT. The Increment II OSRVT provides Soldiers enhanced situational awareness with Full Motion Time Video and Telemetry Data from multiple manned and unmanned platforms. The OSRVT Increment II consists of a receiver, toughbook computer, antenna, UHF Modem, Type 1 encryption, and an optional extended range antenna. Software supports decoding Telemetry Data from multiple UAS's, links data onto FalconView maps, provides for EO/IR payload control, and supports Off Target Calculations. This funding request procures the OSRVT receiver upgrade from the current ROVER 4 to a (receiver hardware) a ROVER 6 multiband receiver approved for Type 1 TCDL operations and Avanced Encryption System (AES) capability. Incorporation of the Rover 6 is accomplished at the unit level.

FY 2011 OCO procurement dollars in the amount of \$40.0 million procures 580 ROVER 6 retrofit kits and PM support.

**DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE(S):**

OSRVT procurement with Rover 6 started in fiscal year 09 with OCO OPA. The procurement of Rover 6 leverages sufficient SOCOM development.

**Installation Schedule**

Pr Yr Totals	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  

FY 2014				FY 2015				FY 2016				FY 2017				To Complete	Totals
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

**METHOD OF IMPLEMENTATION:**

ADMINISTRATIVE LEADTIME:

0 months

PRODUCTION LEADTIME:

0 months

Contract Dates:

FY 2010 -

FY 2011 -

FY 2012 -

Delivery Dates:

FY 2010 -

FY 2011 -

FY 2012 -

**INDIVIDUAL MODIFICATION**

Date: February 2010

MODIFICATION TITLE (cont): Encryption and OSRVT Modifications [MOD 3] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

	Prior Yrs.		2009		2010		2011		2012		2013		2014		2015		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
<b>RDT&amp;E</b>																				
<b>Procurement</b>																				
OSRVT Retrofit Kits					1181	75.2	580	37.1											1761	112.3
Army TIES Retrofit Kits					470	56.9													470	56.9
USMC TIES Retrofit Kits						58.6														58.6
Program Management						4.8		2.9												7.7
<b>OSRVT Installation of Hardware</b>																				
FY 2010 Rover 6 Installations																				
FY 2011 Rover 6 Installations																				
FY 2012 Rover 6 Installation																				
Total Installment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Procurement Cost		0.0		0.0		195.5		40.0		0.0		0.0		0.0		0.0		0.0		235.5

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 3 / Spares and repair parts

P-1 Item Nomenclature  
SPARE PARTS (AIR) (AA0950)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	1243.2	6.9	25.2	7.3	4.3	4.4	4.5	4.6	10.0	1310.5
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	1243.2	6.9	25.2	7.3	4.3	4.4	4.5	4.6	10.0	1310.5
Initial Spares										
Total Proc Cost	1243.2	6.9	25.2	7.3	4.3	4.4	4.5	4.6	10.0	1310.5
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

Provides for the procurement of spares to support initial fielding of end items.

**Justification:**

FY 11 Budget Request funds depot level repairables (DLR) secondary items from the Supply Management, Army activity of the Army Working Capital Fund.

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities  
 P-1 Item Nomenclature AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)

Program Elements for Code B Items: Code: Other Related Program Elements:  
 SSN AA0720; PE/Project 0604270A/665

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	595.6	59.1	25.9	24.5	36.1	37.1	56.6	71.5	607.7	1514.1
Less PY Adv Proc	11.6									11.6
Plus CY Adv Proc	11.6									11.6
Net Proc P1	595.6	59.1	25.9	24.5	36.1	37.1	56.6	71.5	607.7	1514.1
Initial Spares										
Total Proc Cost	595.6	59.1	25.9	24.5	36.1	37.1	56.6	71.5	607.7	1514.1
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
 The Aircraft Survivability Equipment (ASE) budget line includes ASE Laser Countermeasures, ASE Trainers, and ASE Radio Frequency Countermeasures (RFCM).

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)	Weapon System Type:	Date: February 2010
---	--	--	---------------------	------------------------

ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
ASE Trainers		1977		1977	2045		2045	2133		2133
ASE Laser CM		18014		18014	21347		21347	22345		22345
Radio Frequency CM		39147		39147	2519		2519			
<b>Total:</b>		<b>59138</b>			<b>25911</b>			<b>24478</b>		



<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Item Nomenclature ASE Trainers (AZ3506)
---	--

Program Elements for Code B Items:	Code:	Other Related Program Elements:
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	356.0	2.0	2.0	2.1	3.8	4.8	11.6	13.4	30.6	426.4
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	356.0	2.0	2.0	2.1	3.8	4.8	11.6	13.4	30.6	426.4
Initial Spares										
Total Proc Cost	356.0	2.0	2.0	2.1	3.8	4.8	11.6	13.4	30.6	426.4
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
The Aircraft Survivability Equipment Trainers are the Man-portable Aircraft Survivability Training (MAST) device and later the Full-scale Mobile Aircraft Survivability Equipment (ASE) Tactical Training System (F-MATTS). These systems simulate surface-to-air (SAM) weapons. The MAST & F-MATTS provides force-on-force training by stimulating the onboard Missile Warning Systems (MWS) such as the Common Missile Warning System (CMWS) and AN/APR-39 at the maneuver Combat Training Centers (MCTC) and home stations. The aircraft training against the MAST & F-MATTS include the Apache, Chinook, Kiowa Warrior, Blackhawk, and Fixed Wing platforms.

**Justification:**  
FY 2011 Base procurement dollars in the amount of \$2.144 million procures man portable CMWS stimulators for aviation Maneuver Combat Training Centers (MCTC) and home stations.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Item Nomenclature ASE Laser CM (AZ3508)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: SSN AA0720: PE/Project 0604270A/665
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	182.7	18.0	21.3	22.3	32.2	32.3	45.0	50.3	577.1	981.3
Less PY Adv Proc	11.6									11.6
Plus CY Adv Proc	11.6									11.6
Net Proc P1	182.7	18.0	21.3	22.3	32.2	32.3	45.0	50.3	577.1	981.3
Initial Spares										
Total Proc Cost	182.7	18.0	21.3	22.3	32.2	32.3	45.0	50.3	577.1	981.3
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
The AN/AVR-2B is a passive threat laser warning system that alerts the aircrew that they are being targeted by threat forces allowing the aircrew to engage the target or maneuver to break the targeting. The system detects aircraft illumination by laser rangefinders, laser designators, and laser beam rider surface to air missiles. The system provides the aircrew visual and audio warnings according to threat lethality using 360 degree azimuth and 90 degree elevation field of view coverage.

**Justification:**  
FY 2011 Base procurement dollars in the amount of \$22.5 million procures AN/AVR-2B A-Kits, B-Kits and installation for selected aircraft platforms in support of required operational capabilities.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: ASE Laser CM (AZ3508)					Weapon System Type:	Date: February 2010			
<b>ACFT Cost Elements</b>		ID	<b>FY 09</b>			<b>FY 10</b>			<b>FY 11</b>		
		CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
			\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
<b>AN/AVR-2B Laser Warning</b>											
Non Recurring Production											
Recurring Production											
Manufacturing											
A-Kit Procurement											
A-Kit Installation											
B-Kit Procurement (includes install)											
Other Recurring Production											
Engineering Changes											
Systems Engineering/Program Mgt											
Systems Test and Evaluation											
Training											
Data											
Support Equipment											
Fielding											
Modification Efforts											
<b>Total:</b>			<b>18014</b>			<b>21347</b>			<b>22345</b>		

<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 4/ Support equipment and facilities	Weapon System Type:	P-1 Line Item Nomenclature: ASE Laser CM (AZ3508)								
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>B-Kit Procurement (includes install)</b>										
FY 2009	Goodrich Danbury, CT	C/FFP	CECOM, Ft. Monmouth NJ	Mar 09	Dec 09	138	102			
FY 2010	Goodrich Danbury, CT	C/FFP	CECOM, Ft. Monmouth NJ							
FY 2011	Goodrich Danbury, CT	C/FFP	CECOM, Ft. Monmouth NJ	Jan 11	Oct 11	124	124			

REMARKS: No B-Kits, only A-Kits were purchased in FY 10, this does not result in a production break for the AN/AVR-2B. Supplemental and FMS funding used for production deliveries to optimize procurement price and prevent production breaks.

**FY 09 / 10 BUDGET PRODUCTION SCHEDULE**

P-1 ITEM NOMENCLATURE  
ASE Laser CM (AZ3508)

Date:  
February 2010

COST ELEMENTS						Fiscal Year 09												Fiscal Year 10												Later																					
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 09												Calendar Year 10																																	
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																						
B-Kit Procurement (includes install)																																																			
1	FY 09	A	138	0	138							A															13	10	10	10	10	10	10	10	10	15	10	30													
1	FY 10	A	0	0																																		0													
1	FY 11	A	124	0	124																																124														
Total					262																						13	10	10	10	10	10	10	10	10	15	10	154													
<table border="1"> <tr> <td>OCT</td><td>NOV</td><td>DEC</td><td>JAN</td><td>FEB</td><td>MAR</td><td>APR</td><td>MAY</td><td>JUN</td><td>JUL</td><td>AUG</td><td>SEP</td><td>OCT</td><td>NOV</td><td>DEC</td><td>JAN</td><td>FEB</td><td>MAR</td><td>APR</td><td>MAY</td><td>JUN</td><td>JUL</td><td>AUG</td><td>SEP</td> </tr> </table>																												OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																												

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct			
1	Goodrich, Danbury, CT	60	120	240		1	0	1	9	10	
							0	1	9	10	
							Initial				
							Reorder				
							Initial				
							Reorder				
							Initial				
							Reorder				

FY 11 / 12 BUDGET PRODUCTION SCHEDULE						P-1 ITEM NOMENCLATURE ASE Laser CM (AZ3508)														Date: February 2010									
COST ELEMENTS						Fiscal Year 11														Fiscal Year 12									
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11														Calendar Year 12					Later				
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR		MAY	JUN	JUL	AUG
B-Kit Procurement (includes install)																													
1	FY 09	A	138	108	30	15	15																					0	
1	FY 10	A	0	0																								0	
1	FY 11	A	124	0	124				A								10	10	10	10	10	10	10	10	10	10	10	0	
Total						154	15	15									10	10	10	10	10	10	10	10	10	10	10	14	
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS																		
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct																					
1	Goodrich, Danbury, CT	60	120	240		1	Initial	0	1	9	10																		
							Reorder	0	1	9	10																		
							Initial																						
							Reorder																						
							Initial																						
							Reorder																						
							Initial																						
							Reorder																						

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Item Nomenclature Radio Frequency CM (AZ3511)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: 0604270A.665 A/C Surv Equip Dev
------------------------------------	-------	--

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	56.9	39.1	2.5					7.8		106.4
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	56.9	39.1	2.5					7.8		106.4
Initial Spares										
Total Proc Cost	56.9	39.1	2.5					7.8		106.4
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
The objective of the Aircraft Survivability Equipment (ASE) project is to improve radio frequency (RF) ASE for Army aviation. Phase 1 upgrades the Processor Line Replaceable Unit (LRU) of the AN/APR-39A(V)1 Radar Signal Detecting Set through modernization and reduced parts count. Along with improved maintainability and reliability, performance will be enhanced via increased processing speed and expanded memory. These improvements will result in faster response time, better dense environment capability and improved parameter measurement. Phase 1 serves to make the currently fielded system viable until affordable improved RF ASE capability can be pursued in Phases 2 and 3. Phase 2 initiates an improved digital Radar Warning Receiver (RWR) and Phase 3 adds active Electronic Countermeasures (ECM) for selected aircraft.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: Radio Frequency CM (AZ3511)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID CD	FY 09			FY 10			FY 11		
		Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
<b>APR-39A(V)X Radio Frequency CM</b>										
Non Recurring Production		3300		3300	922		922			
Recurring Production										
Manufacturing										
A-Kit Procurement										
A-Kit Installation										
B-Kit Procurement (Includes Install)		29704	565	53						
Other Recurring Production (Software)										
Engineering Changes										
Systems Engineering/Program Mgt					250					
Systems Test and Evaluation										
Training		1500								
Data		3118		3118						
Support Equipment										
Fielding		1525			1347		1347			
Modification Efforts										
<b>Total:</b>		<b>39147</b>			<b>2519</b>					



<b>Exhibit P-5a, Budget Procurement History and Planning</b>	Date: February 2010
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Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 4/ Support equipment and facilities	Weapon System Type:	P-1 Line Item Nomenclature: Radio Frequency CM (AZ3511)
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WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Units	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>B-Kit Procurement (Includes Install)</b> FY 2009	Northrup Grumman Rolling Meadows, IL	TBD	CECOM, Ft. Monmouth NJ	Mar 10	Mar 12	565	53			

REMARKS: Audit reconciliation has added six months to schedule. No resultant cost increase is anticipated.

Current plan is to field via attrition with OMA funding in FY12-15. Acceleration is possible with additional resources.

**FY 09 / 10 BUDGET PRODUCTION SCHEDULE**

P-1 ITEM NOMENCLATURE  
Radio Frequency CM (AZ3511)

Date:  
February 2010

COST ELEMENTS						Fiscal Year 09												Fiscal Year 10												Later																																																	
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 09												Calendar Year 10																																																													
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																																																		
B-Kit Procurement (Includes Install)																																																																															
1	FY 09	A	0	0																								0																																																			
1	FY 10	A	565	0	565																						A	565																																																			
1	FY 11	A	0	0																								0																																																			
1	FY 12	A	0	0																								0																																																			
1	FY 13	A	0	0																								0																																																			
1	FY 14	A	0	0																								0																																																			
Total					565																							565																																																			
<table border="1"> <thead> <tr> <th>OCT</th><th>NOV</th><th>DEC</th><th>JAN</th><th>FEB</th><th>MAR</th><th>APR</th><th>MAY</th><th>JUN</th><th>JUL</th><th>AUG</th><th>SEP</th><th>OCT</th><th>NOV</th><th>DEC</th><th>JAN</th><th>FEB</th><th>MAR</th><th>APR</th><th>MAY</th><th>JUN</th><th>JUL</th><th>AUG</th><th>SEP</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>																												OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																												
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																																																								

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct			
1	Northrup Grumman, Rolling Meadows, IL	120	600	1200		1	0	1	23	24	
							0	0	0	0	
							Initial				
							Reorder				
							Initial				
							Reorder				
							Initial				
							Reorder				
							Initial				
							Reorder				

FY 11 / 12 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE Radio Frequency CM (AZ3511)										Date: February 2010																																																															
COST ELEMENTS						Fiscal Year 11										Fiscal Year 12																																																																			
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11										Calendar Year 12										Later																																																									
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP																																																					
B-Kit Procurement (Includes Install)																																																																																			
1	FY 09	A	0	0																							0																																																								
1	FY 10	A	565	0	565																					20	45	50	50	50	50	50	250																																																		
1	FY 11	A	0	0																												0																																																			
1	FY 12	A	0	0																												0																																																			
1	FY 13	A	0	0																												0																																																			
1	FY 14	A	0	0																												0																																																			
Total					565																					20	45	50	50	50	50	50	250																																																		
<table border="1"> <thead> <tr> <th>OCT</th><th>NOV</th><th>DEC</th><th>JAN</th><th>FEB</th><th>MAR</th><th>APR</th><th>MAY</th><th>JUN</th><th>JUL</th><th>AUG</th><th>SEP</th><th>OCT</th><th>NOV</th><th>DEC</th><th>JAN</th><th>FEB</th><th>MAR</th><th>APR</th><th>MAY</th><th>JUN</th><th>JUL</th><th>AUG</th><th>SEP</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>																												OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																																
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																																																												
MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS																																																																								
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct																																																																											
1	Northrup Grumman, Rolling Meadows, IL	120	600	1200		1	Initial	0	1	23	24																																																																								
							Reorder	0	0	0	0																																																																								
							Initial																																																																												
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							Reorder																																																																												

**FY 13 / 14 BUDGET PRODUCTION SCHEDULE**

P-1 ITEM NOMENCLATURE  
Radio Frequency CM (AZ3511)

Date:  
February 2010

COST ELEMENTS						Fiscal Year 13												Fiscal Year 14												Later
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 13												Calendar Year 14												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
B-Kit Procurement (Includes Install)																														
1	FY 09	A	0	0																								0		
1	FY 10	A	565	315	250	50	50	50	50	50																		0		
1	FY 11	A	0	0																								0		
1	FY 12	A	0	0																								0		
1	FY 13	A	0	0																								0		
1	FY 14	A	0	0																								0		
Total					250	50	50	50	50	50																				
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	Northrup Grumman, Rolling Meadows, IL	120	600	1200		1	Initial	0	1	23	24	
							Reorder	0	0	0	0	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 4 / Support equipment and facilities

P-1 Item Nomenclature  
ASE INFRARED CM (AZ3507)

Program Elements for Code B Items: Code: Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	2243.7	565.5	285.0	372.2	227.5	258.5	242.9	221.4	528.0	4944.8
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	2243.7	565.5	285.0	372.2	227.5	258.5	242.9	221.4	528.0	4944.8
Initial Spares										
Total Proc Cost	2243.7	565.5	285.0	372.2	227.5	258.5	242.9	221.4	528.0	4944.8
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The US Army operational requirements concept for Infrared (IR) countermeasure systems is known as the Suite of Integrated Infrared Countermeasures (SIIRCM). It is an integrated warning and countermeasure system to enhance aircraft survivability against IR guided threat missile systems. The core element of the SIIRCM concept is the Advanced Threat Infrared Countermeasure/Common Missile Warning System (ATIRCM/CMWS) Program.

ATIRCM is a U.S. Army program that develops, tests, and integrates defensive infrared (IRCM) countermeasures capabilities into existing, current generation host platforms for more effective protection against a greater number of IR- guided missile threats than afforded by currently fielded IR countermeasures. The CMWS also functions as a stand-alone system with the capability to detect missiles and provide audible and visual warnings to the pilot(s); and, when installed with the ICMD, activates expendables to provide a degree of protection. ATIRCM/CMWS is the key IR survivability system for Future Force Army aircraft. The ATIRCM/CMWS, a subsystem to a host aircraft, is an integrated ultraviolet (UV) missile warning system and an IR Laser Jamming and Improved Countermeasure Dispenser (ICMD).

The ATIRCM/CMWS program was restructured per an Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)) Acquisition Decision Memorandum (ADM) dated April 15, 2009. USD (AT&L) designated the ATIRCM/CMWS program as an Acquisition Category (ACAT) 1D special interest program, and directed the establishment of the CMWS, ATIRCM QRC and CIRCM subprograms.

The ATIRCM Quick Reaction Capability (QRC) subprogram is an ATIRCM program transition in response to Operational Needs Statement (ONS) Number 08-5661 dated June 10, 2008. To address this requirement, an ATIRCM QRC for seventy (70) CH-47 helicopters was authorized by an Acquisition Decision Memorandum (ADM) signed September 15, 2008 by the Army Acquisition Executive (AAE). This ONS outlines the urgent requirement to equip seventy (70) CH-47 helicopters being used in South West Asia (SWA) in support of Operation Iraqi Freedom (OIF) Operation Enduring Freedom (OEF) with an improved IRCM capability to counter threats from advanced MANPADS. This urgent requirement was recently increased to equip a total of eighty-three (83) CH-47 helicopters by an Acquisition Decision Memorandum (ADM) signed on April 15, 2009 by the Defense Acquisition Executive (DAE).

Common Infrared Countermeasure (CIRCM) is an infrared countermeasure system that interfaces with a Missile Warning System (MWS) to provide near spherical coverage of the host platform in order to defeat all IR threats (classified appendix of Spec). Increment 1 weight will be 120lb (T), 700 hrs MTBF reliability. The CIRCM system is installed on the following Army platforms (T): UH-60L, UH-60M, HH-60L, HH-60M, CH-47F, AH-64D, MH-60M, MH-47G, C/RC-12, C-23B,(O): UH-60A, CH-47D, OH-58D, MH-6, AH-6, C-20, C-26, EO-5, UC-35, Navy platforms (T): MH-60R, MH-60S, UH-1Y, AH-1Z, MV-22,(O): CH-53K, CH-46, UH-1N, AH-1W and Air Force platforms: (T): HH-60G, (O): JCA.

The CMWS Gen 3 meets Tier 1 requirements. Threat upgrade is needed to fulfill CMWS threat requirements.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: <p style="text-align: center;">February 2010</p>
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Appropriation / Budget Activity / Serial No: <small>Aircraft Procurement, Army / 4 / Support equipment and facilities</small>	P-1 Item Nomenclature <small>ASE INFRARED CM (AZ3507)</small>
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Program Elements for Code B Items:	Code:	Other Related Program Elements:
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The A-kit is the modification hardware, wiring harness, cable, etc., necessary to install and interface the ATIRCM/CMWS Mission Kit to each platform. The A-kit ensures the Mission Kit is functionally and physically operational with the host platform.

The Mission Kit consists of the ATIRCM/CMWS which performs the missile detection, false alarm rejection, and missile declaration functions of the system. The Electronic Control Unit (ECU) of the CMWS sends a missile alert signal to on-board avionics and other Aircraft Survivability Equipment (ASE) such as expendable flare dispensers. Threat missiles detected by the CMWS are handed over to the ATIRCM.

**Justification:**

FY 2011 Base procurement dollars in the amount of \$174.222 million procures recurring production of the CMWS A-kits and associated installation and integration, and the Generation 3 (GEN 3) Electronic Control Unit (ECU) effort.

FY 2011 OCO procurement dollars in the amount of \$197.990 million procures support for Hostile Fire Detection (Ballistic Threat Detection), CMWS (OH-58 platform), and the ATIRCM Quick Reaction Capability (QRC) subprogram.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: ASE INFRARED CM (AZ3507)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID CD	FY 09			FY 10			FY 11		
		Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
<b>ATIRCM/CMWS PROGRAM</b>										
<b>CMWS Subprogram</b>										
Nonrecurring Production		12486			10088					
CMWS A-kit		48803	156	313	6793	31	219	40510	149	272
CMWS A-kit Installation		27011			27126			14370		
CMWS B-kit		104730	292	359						
Government Furnished Equipment (GFE)					863					
Other Recurring Production		22218			41983			43326		
Engineering Changes										
Systems Engineering/Program Management		8667			13836			21100		
Systems Test and Evaluation		8757			22595			2180		
Training		11929			10539			3670		
Data		4089			91			70		
Support Equipment		1383			1380					
Fielding		19567			12924			2410		
CMWS GEN 3 ECU Hardware		12500			14122	60	235	35820	240	149
Other Modifications		12833			11067			10766		
IR Suppressor Kits		111200						197990		
Reset										
Total CMWS Subprogram										
<b>ATIRCM QRC Subprogram</b>										
Non-Recurring Prod		20254								
ATIRCM QRC A-kit										
ATIRCM QRC A-kit Installation		13723								
ATIRCM QRC B-kit										
Other Recurring Production (Software)		3828								
Engineering Changes										
Systems Engineering/Program Management		2124								
Systems Test and Evaluation		16071								
Training		4160								

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: ASE INFRARED CM (AZ3507)			Weapon System Type:	Date: February 2010				
<b>ACFT Cost Elements</b>	ID	<b>FY 09</b>			<b>FY 10</b>			<b>FY 11</b>		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
Data										
Support Equipment										
Fielding		47818								
Modification Effort										
<b>ATIRCM QRC Subprogram - OCO Supplemental</b>										
ATIRCM QRC A-kit					31536	138	229			
ATIRCM QRC A-kit Installation					2514					
Other Recurring Production (Software)					9447					
System Engineering/Program Management					7664					
System Test and Evaluation					12640					
Training					10335					
Fielding					37464					
Total ATIRCM QRC Subprogram										
<b>Miscellaneous</b>										
Other Procurement										
Other Miscellaneous Support		51311								
<b>Total:</b>		<b>565462</b>			<b>285007</b>			<b>372212</b>		



# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2010

Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 4/ Support equipment and facilities		Weapon System Type:	P-1 Line Item Nomenclature: ASE INFRARED CM (AZ3507)							
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>CMWS A-kit</b>										
FY 2009	Various	SS/FFP	CECOM,Ft. Monmouth, NJ	Dec 08	May 09	156	313	Yes		
FY 2010	Various	SS/FFP	CECOM,Ft. Monmouth, NJ	Dec 09	May 10	31	219	Yes		
FY 2011	Various	SS/FFP	CECOM,Ft. Monmouth, NJ	Dec 10	May 11	149	272	Yes		
<b>CMWS B-kit</b>										
FY 2009	BAE Systems Nashua, NH	SS/FFP	CECOM,Ft. Monmouth, NJ	Dec 08	Aug 09	292	359	Yes		
<b>CMWS GEN 3 ECU Hardware</b>										
FY 2010		SS/FFP	CECOM,Ft. Monmouth, NJ	Dec 08	Oct 09	60	235	Yes		
FY 2011		SS/FFP	CECOM,Ft. Monmouth, NJ	Dec 09	Oct 10	240	149	Yes		
<b>ATIRCM QRC A-kit</b>										
FY 2010	BAE Systems Nashua, NH	SS/FFP	CECOM,Ft. Monmouth, NJ	Jan 10	Jun 10	138	229	Yes		

REMARKS: ATIRCM QRC A-kits will be procured with OCO Supplemental dollars.

FY 09 / 10 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE ASE INFRARED CM (AZ3507)										Date: February 2010																															
COST ELEMENTS						Fiscal Year 09										Fiscal Year 10										Later																									
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 09										Calendar Year 10																																			
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP																					
CMWS A-kit																																																			
1	FY 09	A	156	0	156			A						13	13	13	13	13	13	13	13	13	13	13	13	13	13	0																							
1	FY 10	A	31	0	31																						3	3	16																						
1	FY 11	A	149	0	149																							149																							
CMWS B-kit																																																			
3	FY 09	A	292	0	292			A								24	26	24	24	26	24	24	24	24	24	24	24	0																							
CMWS GEN 3 ECU Hardware																																																			
5	FY 10	A	60	0	60																						A	60																							
5	FY 11	A	240	0	240																							240																							
ATIRCM QRC A-kit																																																			
2	FY 10	A	138	0	138																						11	11	94																						
Total																																																			
					1066									13	13	13	37	39	37	37	39	37	37	37	37	27	38	38	14	14	559																				
<table border="1"> <tr> <td>OCT</td><td>NOV</td><td>DEC</td><td>JAN</td><td>FEB</td><td>MAR</td><td>APR</td><td>MAY</td><td>JUN</td><td>JUL</td><td>AUG</td><td>SEP</td><td>OCT</td><td>NOV</td><td>DEC</td><td>JAN</td><td>FEB</td><td>MAR</td><td>APR</td><td>MAY</td><td>JUN</td><td>JUL</td><td>AUG</td><td>SEP</td> </tr> </table>																												OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																												

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct			
		1	Various, Various	18			200	800			
						Reorder	3	3	3	6	
2	BAE Systems, Nashua, NH	24	120	300	2	Initial	3	3	5	8	
						Reorder	3	3	5	8	
4	BAE Systems, Nashua, NH	12	480	1200	3	Initial	4	4	10	14	
						Reorder	1	1	12	13	
					4	Initial	6	6	12	18	
						Reorder	3	3	12	15	
						Initial					
						Reorder					

FY 11 / 12 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE ASE INFRARED CM (AZ3507)

Date: February 2010

COST ELEMENTS						Fiscal Year 11												Fiscal Year 12												Later
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11												Calendar Year 12												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
CMWS A-kit																														
1	FY 09	A	156	156																									0	
1	FY 10	A	31	15	16	3	3	2	2	2	2	2																	0	
1	FY 11	A	149	0	149			A					13	13	12	12	13	12	12	13	12	12	13	12					0	
CMWS B-kit																														
3	FY 09	A	292	292																									0	
CMWS GEN 3 ECU Hardware																														
5	FY 10	A	60	0	60					5	5	5	5	5	5	5	5	5	5	5	5	5	5						0	
5	FY 11	A	240	0	240			A						20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0	
ATTIRCM QRC A-kit																														
2	FY 10	A	138	44	94	11	11	12	12	12	12	12	12																0	
Total						559	14	14	14	14	14	19	19	30	18	37	37	38	37	37	38	37	37	33	32	20	20			
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
		1	Initial	3			3	3	6			
1	Various, Various	18	200	800		1	Initial	3	3	3	6	
						1	Reorder	3	3	3	6	
2	BAE Systems, Nashua, NH	24	120	300		2	Initial	3	3	5	8	
3	BAE Systems, Nashua, NH	12	480	1200		2	Reorder	3	3	5	8	
4	BAE Systems, Nashua, NH	12	48	120		3	Initial	4	4	10	14	
						3	Reorder	1	1	12	13	
						4	Initial	6	6	12	18	
						4	Reorder	3	3	12	15	
							Initial					
							Reorder					

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities  
 P-1 Item Nomenclature AVIONICS SUPPORT EQUIPMENT (AZ3000)

Program Elements for Code B Items: Code: Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	2925									2925
Gross Cost	480.9	5.0	4.9	4.9	4.8	4.8	4.8	4.8		515.0
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	480.9	5.0	4.9	4.9	4.8	4.8	4.8	4.8		515.0
Initial Spares										
Total Proc Cost	480.9	5.0	4.9	4.9	4.8	4.8	4.8	4.8		515.0
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
 Consists of a family of avionics support equipment. Current program consists of the Aviators' Night Vision Imaging System (ANVIS).

**Justification:**  
 FY11 Base procurement dollars in the amount of \$4.9 million supports the procurement of 416 AN/AVS-6(V)3 systems for fielding to Active Units. The increased capability of the AN/AVS-6(V)3 yields enhanced mission performance and improved safety of flight, compared to what is now possible using previous AN/AVS-6 systems. The AN/AVS-6(V)3 enhances the survivability, lethality, and tactical mobility for aviators.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Item Nomenclature ANVIS (K35601)
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Program Elements for Code B Items:	Code: A	Other Related Program Elements:
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty	2925	431	345	329	313	300	287	274		5204
Gross Cost	480.9	5.0	4.9	4.9	4.8	4.8	4.8	4.8		515.0
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	480.9	5.0	4.9	4.9	4.8	4.8	4.8	4.8		515.0
Initial Spares										
Total Proc Cost	480.9	5.0	4.9	4.9	4.8	4.8	4.8	4.8		515.0
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
The AN/AVS-6, Aviator's Night Vision Imaging System (ANVIS), supports the Army's objectives by permitting superior tactical mobility of rotary wing aircraft during darkness and low light conditions. The AN/AVS-6 also supports Fixed Wing Lift permitting loading/unloading and flight during darkness and low light conditions. The AN/AVS-6 is a binocular, helmet-mounted system for Aviation crew members. The AN/AVS-6(V)3 is a night vision goggle that significantly expands the input dynamic range to support operations in conditions that vary from below starlight illumination levels through strong urban lighting situations.

**Justification:**  
FY11 Base procurement dollars, in the amount of \$4.885 million, supports the procurement of 329 AN/AVS-6(V)3 systems for fielding to Active Units. The increased capability of the AN/AVS-6(V)3 yields enhanced mission performance and improved safety of flight, compared to what is now possible using previous AN/AVS-6 systems. The AN/AVS-6(V)3 enhances the survivability, lethality, and tactical mobility for aviators.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: ANVIS (K35601)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
K35601 ANVIS/HUD										
ANVIS		4674	431	10.845	3853	345	11.168	3785	329	11.505
Engineering Support		115			375			386		
Project Management Admin		115			430			443		
Engineering Change Orders		20			60			62		
Fielding		89			203			209		
<b>Total:</b>		<b>5013</b>			<b>4921</b>			<b>4885</b>		

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2010

Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 4/ Support equipment and facilities		Weapon System Type:	P-1 Line Item Nomenclature: ANVIS (K35601)							
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>K35601 ANVIS/HUD</b>										
FY 2009	ITT Night Vision Roanoke, VA	C/IDIQ	RDECOM	Sep 09	Jan 12	431	10.844	Yes		
FY 2010	TBS TBD	C/IDIQ	RDECOM	Jun 10	Sep 12	345	11.169	Yes		
FY 2011	TBS TBD	C/IDIQ	RDECOM	Jan 11	Sep 12	329	11.504	Yes		

REMARKS:

**FY 09 / 10 BUDGET PRODUCTION SCHEDULE**

P-1 ITEM NOMENCLATURE  
ANVIS (K35601)

Date:  
February 2010

COST ELEMENTS						Fiscal Year 09												Fiscal Year 10												Later
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 09												Calendar Year 10												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
K35601 ANVIS/HUD																														
1	FY 09	A	431	0																								0		
1	FY 09	ANG	0	0																								0		
1	FY 09	AR	0	0																								0		
1	FY 09	TOT	431	0																								0		
2	FY 10	A	384	0																								0		
2	FY 10	ANG	0	0																								0		
2	FY 10	AR	0	0																								0		
2	FY 10	TOT	384	0																								0		
2	FY 11	A	368	0																								0		
2	FY 11	ANG	0	0																								0		
2	FY 11	AR	0	0																								0		
2	FY 11	TOT	368	0																								0		
Total																														
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	Name - Location	PRODUCTION RATES				Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS
		MIN	1-8-5	MAX	1			Initial	After 1 Oct			
1	ITT Night Vision, Roanoke, VA	25	125	250	120	1	Initial	6	11	28	39	
							Reorder	1	8	27	35	
2	TBS, TBD	25	125	250	120	2	Initial	6	8	27	35	
							Reorder	1	3	20	23	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					



FY 11 / 12 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE ANVIS (K35601)										Date: February 2010									
COST ELEMENTS					Fiscal Year 11										Fiscal Year 12										Later				
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11										Calendar Year 12													
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR		MAY	JUN	JUL	AUG
K35601 ANVIS/HUD																													
1	FY 09	A	431	0																								0	
1	FY 09	ANG	0	0																								0	
1	FY 09	AR	0	0																								0	
1	FY 09	TOT	431	0																	35	35	35	35	36	36	36	36	0
2	FY 10	A	384	0																								0	
2	FY 10	ANG	0	0																								0	
2	FY 10	AR	0	0																								0	
2	FY 10	TOT	384	0																								0	
2	FY 11	A	368	0																								0	
2	FY 11	ANG	0	0																								0	
2	FY 11	AR	0	0																								0	
2	FY 11	TOT	368	0					A																			0	
Total																													
																					35	35	35	35	36	36	36	36	92

FY 13 / 14 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE ANVIS (K35601)										Date: February 2010									
COST ELEMENTS						Fiscal Year 13										Fiscal Year 14										Later			
MFR	FY	SERV	PROC QTY Each	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 13										Calendar Year 14													
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG
K35601 ANVIS/HUD																													
1	FY 09	A	431	0		37	37	37																			0		
1	FY 09	ANG	0	0																							0		
1	FY 09	AR	0	0																							0		
1	FY 09	TOT	431	0																							0		
2	FY 10	A	384	0																							0		
2	FY 10	ANG	0	0																							0		
2	FY 10	AR	0	0																							0		
2	FY 10	TOT	384	0		28	28	28	28	28	29	29	29	30	30	30											0		
2	FY 11	A	368	0																							0		
2	FY 11	ANG	0	0																							0		
2	FY 11	AR	0	0																							0		
2	FY 11	TOT	368	0		27	27	27	27	27	27	28	28	28	28	28											0		
Total						92	92	92	55	55	56	57	57	58	58	58													
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct				
1	ITT Night Vision, Roanoke, VA	25	125	250	120	1	Initial	6	11	28	39	
							Reorder	1	8	27	35	
2	TBS, TBD	25	125	250	120	2	Initial	6	8	27	35	
							Reorder	1	3	20	23	
							Initial					
							Reorder					
							Initial					
							Reorder					
							Initial					
							Reorder					

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 4 / Support equipment and facilities

P-1 Item Nomenclature  
COMMON GROUND EQUIPMENT (AZ3100)

Program Elements for Code B Items:

Code:

Other Related Program Elements:  
63801/B32

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	1085.5	95.7	111.1	141.8	176.5	117.6	99.6	101.3		1929.1
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	1085.5	95.7	111.1	141.8	176.5	117.6	99.6	101.3		1929.1
Initial Spares										
Total Proc Cost	1085.5	95.7	111.1	141.8	176.5	117.6	99.6	101.3		1929.1
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

FY 2011 procurement dollars in the amount of \$141.756 million supports and provides various types of ground support equipment.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Item Nomenclature AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: 63801/B32, SSN AZ3510
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	523.4	95.7	111.1	141.8	176.5	117.6	99.6	101.3		1367.0
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	523.4	95.7	111.1	141.8	176.5	117.6	99.6	101.3		1367.0
Initial Spares										
Total Proc Cost	523.4	95.7	111.1	141.8	176.5	117.6	99.6	101.3		1367.0
Flyaway U/C										
Weapon System Proc U/C										

P-40 Breakdown									
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Active	Qty	0	0	0	0	0	0	0	0
	Gross Cost	74153.0	92755.0	127947.0	162035.0	97346.0	99565.0	101261.0	
National Guard	Qty	0	0	0	0	0	0	0	0
	Gross Cost	21573.0	18355.0	13809.0	14490.0	20272.0	0.0	0.0	
Reserve	Qty	0	0	0	0	0	0	0	0
	Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0	0
	Gross Cost	95726	111110	141756	176525	117618	99565	101261	

**Description:**  
 Aviation Ground Support Equipment (AGSE) develops, acquires, fields, and sustains aviation equipment within cost, schedule, and performance parameters, allowing the Joint Warfighter to carry out peacetime and wartime missions. Systems managed by AGSE through its Life Cycle include Aviation Vibration Analyzer, Aviation Intermediate Maintenance Shop Set, Battle Damage Assessment and Repair Block II, Aviation Ground Power Unit, Generic Aircraft Nitrogen Generator, Standard Aircraft Towing System, Aviation Shop Equipment Contact Maintenance, Non-Destructive Test Equipment, Digital Aircraft Weighing Scales, Unit Maintenance Aerial Recovery Kit, Aviation - Sets, Kits, Outfits and Tools, (Aviation Unit Maintenance Shop Set, Aviation Foot Locker and Tool Kits), (support items of equipment Fuel Quantity Tester, Pitot Static Test Sets, Jacks, Rail Trailer, Swaging Tool Kits), Aviation Light Utility Mobile Maintenance Cart and Flexible Engine Diagnostic System. AGSE is critical to the operational readiness of Army Aviation Units. AGSE products provide the finest materiel and support solutions to Army Aviation.

**Justification:**  
 FY 2011 Base procurement dollars in the amount of \$76.129 million supports and procures ground support equipment which supports the operational readiness of all Army aviation field units which are operating AH-64, UH-60, CH-47, OH-58D and other Army aircraft. AGSE also provides a means to correct safety-of-flight discrepancies which endanger both life and property. Various pieces of AGSE equipment are being procured in FY 2011. The Modification Work Orders (MWOs) for the Unit Maintenance Aerial Recovery Kit provides Aviation Support Company and Aviation

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Item Nomenclature AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: 63801/B32, SSN AZ3510
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Maintenance Company units the ability to quickly rig battle/crash-damaged non-flyable modernized aircraft or aircraft undergoing maintenance for evacuation. The Aviation Ground Power Units Service Life Extension Program provides the capability of meeting Army helicopter servicing requirements into the next decade. The Battle Damage Assessment Repair Block II provides damage assessment and rapid repair to aviation aircraft. The Standard Aircraft Towing System fills the need for a standard aircraft towing system that has the capability to reposition all U.S. Army rotary wing aircraft. Aviation - Sets, Kits, Outfits and Tools provides standardized tools, kits and outfits which meet transformation modularity, flexibility and mobility requirements for repair of rotary wing aircraft during combat, contingency and training operations. The Aviation Light Utility Mobile Maintenance Cart will enhance mission performance of current forces by reducing an intensive manpower and logistics burden imposed on Army Aviation Units. The Flexible Engine Diagnostic System is a Turboshaft Engine Test Stand to verify flight readiness/safety of engines removed from aircraft for maintenance. The Flexible Engine Diagnostic System supports the CH-47, OH-58, AH-64, and UH-60.

FY 2011 OCO procurement dollars in the amount of \$65.627 million supports and procures the Aviation Ground Power Unit.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID CD	FY 09			FY 10			FY 11		
		Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
Non-Destructive Test Equipment (NDTE)		5602								
Unit Maint Aerial Recovery Kit (UMARK)		457			776		877			
Aviation Vibration Analyzer (AVA) Kits		114			60					
Aviation Ground Power Unit (AGPU) SLEP		41014			42181		14116			
Aviation Ground Power Unit							65627			
Battle Damage Assess Repair (BDAR) II							4221			
Standard Aircraft Towing System (SATS)		2895			9239		5240			
Avn-Sets, Kits, Outfits, Tools (A-SKOT)		31051			25774		35602			
Avn Intermediate Maint (AVIM) Shop Sets		9406			12534					
Flexible Engine Diagnostics Sys (FEDS)					15592		7566			
Generic Aircraft Nitro Generator (GANG)		2217								
Avn Light Utility Mobile Maint (ALUMMC)							3379			
Program Management Support		2970			4954		5128			
<b>Subtotal</b>		<b>95726</b>			<b>111110</b>		<b>141756</b>			
<b>Total:</b>		<b>95726</b>			<b>111110</b>		<b>141756</b>			

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 4 / Support equipment and facilities

P-1 Item Nomenclature  
AIRCREW INTEGRATED SYSTEMS (AZ3110)

Program Elements for Code B Items: Code: Other Related Program Elements:  
RDTE 0603801(DB45), 0604801(DC45), 0603827(S51), 0604601(S61)

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	342.0	48.1	61.6	52.4	85.0	81.0	88.3	62.9		821.4
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	342.0	48.1	61.6	52.4	85.0	81.0	88.3	62.9		821.4
Initial Spares										
Total Proc Cost	342.0	48.1	61.6	52.4	85.0	81.0	88.3	62.9		821.4
Flyaway U/C										
Weapon System Proc U/C										

**Description:**  
The Air Warrior (AW) system is a modular systems solution to aviation crewmember life support equipment, integrating survival and mission equipment into an aircrew ensemble that improves the combat effectiveness of the Army aircrew member. AW leverages joint-service technologies to increase situational awareness, enhance mobility to safely operate aircraft systems, reduce physiological stress and injuries, and provide survival gear in the event of a downed aircraft over land or water. Block 1 components include integrated Aviation Clothing and Individual Equipment, a Microclimate Cooling System (MCS) that significantly reduces heat stress and injuries, the Aircrew Integrated Helmet System with laser eye protection, chemical-biological (CB) protection, tailored body armor, overwater survival gear, and survival, escape, and evasion tools. Block 2, plus new capabilities required in the Air Warrior Increment III Capability Production Document (CPD) dated Aug 07, include the Electronic Data Manager (EDM), a lightweight touch screen computer that provides mission planning, digital moving map w/tactical overlays, and interface to Blue Force Tracking capabilities in the form of a digital kneeboard. The Aircraft Wireless Intercom System (AWIS) eliminates the mobility problems and snag hazards inherent to the current tethered cord systems. The Portable Helicopter Oxygen Delivery System (PHODS) is a lightweight system worn by the crewmember that automatically delivers oxygen to the crew member to safely conduct high altitude missions. The Survival Kit, Ready Access, Modular (SKRAM) is an individual crewmember supplemental survival equipment Go Bag with integrated on-the-go Hydration capability. The Helmet Hear Through system provides an external audio capability without the need to remove the flight helmet. Cockpit Air Bags (CABS) is a crash-activated, inflatable protection system designed to supplement the current restraint systems on OH-58D helicopters. The Personnel Recovery Support Equipment (PRSE) program includes the modification, integration, procurement, and fielding of systems to provide a significantly enhanced ability to respond to occurrences of isolated, missing, detained or captured Soldiers. The Flat Panel Display is an enhanced helmet-mounted Heads Up Display system that projects critical flight data symbology through night vision goggles for UH-60 Blackhawk and CH-47 Chinook pilots flying low level night missions to significantly increase their situational awareness and safety.

**Justification:**  
FY2011 Base procurement dollars in the amount of \$52.4 million supports production and fielding the Air Warrior Block 1 System, including A Kit and B Kit production and installations, the Increment III Electronic Data Manager (EDM) for deploying units, and procurement of encrypted Aircraft Wireless Intercom System (AWIS). These funds also procure PRSE platforms interoperability hardware and software improvements.

Exhibit P-5, Weapon ACFT Cost Analysis	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: AIRCREW INTEGRATED SYSTEMS (AZ3110)			Weapon System Type:			Date: February 2010			
ACFT Cost Elements		ID	FY 09			FY 10			FY 11		
		CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
			\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
<b>Hardware</b>											
-											
Air Warrior Block 1											
Air Warrior Block 1 Ensembles											
			5217	2745	1.9	5700	3000	1.9	1908	1004	1.9
Air Warrior A Kits											
			4831	366	13.2						
A Kit Installs											
			2092								
Air Warrior Microclimate Cooling Garment											
			750	2501	0.3	276	920	0.3	150	500	0.3
Air Warrior Microclimate Cooling Units											
			9840	1278	7.7	14483	1880	7.7	4366	567	7.7
-											
Air Warrior Block 2/Increment III											
Electronic Data Mgr (EDM)											
			4400	500	8.8	4409	500	8.8	5289	601	8.8
EDM A Kits											
			1900	500	3.8						
Acft Wireless Intercom Sys (AWIS)											
			23	12	1.9	2723	72	37.8	9331	246	37.9
AWIS A Kits											
			118	15	7.9						
EDM/AWIS Installs											
			1499								
Airframe Kits											
						7322	904	8.1	8579	1059	8.1
Airframe Kit Installs											
						6824			8595		
-											
Cockpit Air Bags (CABS) System & Install											
CABS A Kits											
			90	15	6.0						
CABS B Kits											
			375	15	25.0						
CABS Installs											
			135								
CABS B-Kit Retrofit											
			1000	312	3.2						
-											
Personel Recovery Sup Equipment(PRSE)											
Platform Modifications											
			1585	2	792.5						
-											
<b>Total Hardware Costs</b>			<b>33855</b>			<b>41737</b>			<b>38218</b>		
<b>Other Costs</b>											
Manuals											
			117			119			203		
New Equipment Training											
			215			218			211		
Initial Spares and Repair Parts											
			537			601			604		
Support Equipment											
			216			219			223		
Systems Test and Evaluation											
			807			811			814		



<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: AIRCREW INTEGRATED SYSTEMS (AZ3110)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID CD	FY 09			FY 10			FY 11		
		Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Units	\$000	\$000	Units	\$000	\$000	Units	\$000
<b>Total Other Costs</b>		<b>1892</b>			<b>1968</b>			<b>2055</b>		
<b>Nonrecurring Costs</b>										
Nonrecurring Engineering		909			918			924		
PRSE Interoperability Engineering					3990			4191		
<b>Total Nonrecurring Costs</b>		<b>909</b>			<b>4908</b>			<b>5115</b>		
Air Warrior ECP		608			611			614		
Systems Integration Engineering		2314			717			725		
Project Management Admin		3130			4067			4076		
<b>Total ECP, Sys Int, &amp; Admin Costs</b>		<b>6052</b>			<b>5395</b>			<b>5415</b>		
<b>Support Costs</b>										
Fielding		833			837			876		
Contract Logistics Support		1024			727			744		
<b>Total Support Costs</b>		<b>1857</b>			<b>1564</b>			<b>1620</b>		
<b>FY 2009 OCO</b>										
Portable Helicopter Oxygen Del System		1556	116	13.4						
Hydration System		322	2740	0.1						
Survival Kit, Ready Access, Modular		537	2742	0.2						
Helmet Hear Through System		1169	7700	0.2						
<b>Total FY 2009 OCO</b>		<b>3584</b>								
<b>FY 2010 OCO</b>										
Flat Panel Display					6000	300	20.0			
<b>Total FY 2010 OCO</b>					<b>6000</b>					
<b>Total:</b>		<b>48149</b>			<b>61572</b>			<b>52423</b>		

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2010

Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 4/ Support equipment and facilities		Weapon System Type:	P-1 Line Item Nomenclature: AIRCREW INTEGRATED SYSTEMS (AZ3110)							
WBS Cost Elements:	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
<b>Air Warrior Block 1 Ensembles</b>										
FY 2009	Aerial Machine & Tool Corp Vesta, VA	C/FFP	Redstone Arsenal, AL	Dec 08	Feb 09	2745	1.9	Yes		Dec 07
FY 2010	Aerial Machine & Tool Corp Vesta, VA	C/FFP	Redstone Arsenal, AL	Mar 10	May 10	3000	1.9	Yes		
FY 2011	CONAX St. Petersburg, FL	C/FFP	Redstone Arsenal, AL	Dec 10	Feb 11	1004	1.9	Yes		
<b>Air Warrior A Kits</b>										
FY 2009	Westwind Corporation Huntsville, AL	C/FFP	Redstone Arsenal, AL	Dec 08	Mar 09	366	13.2	Yes		Nov 07
<b>Air Warrior Microclimate Cooling Units</b>										
FY 2009	Carleton Technologies, Inc. Orchard Park, NY	C/FFP	Redstone Arsenal, AL	Jun 09	Oct 09	1278	7.7	Yes		Dec 08
FY 2010	Carleton Technologies, Inc. Orchard Park, NY	C/FFP	Redstone Arsenal, AL	Dec 09	Mar 10	1880	7.7	Yes		
FY 2011	Carleton Technologies, Inc. Orchard Park, NY	C/FFP	Redstone Arsenal, AL	Dec 10	Mar 11	567	7.7	Yes		
<b>Electronic Data Mgr (EDM)</b>										
FY 2009	Raytheon Indianapolis, IN	C/FFP	Redstone Arsenal, AL	Dec 08	Apr 09	500	8.8	Yes		Jan 08
FY 2010	Raytheon Indianapolis, IN	C/FFP	Redstone Arsenal, AL	Dec 09	Apr 10	500	8.8	Yes		
FY 2011	Raytheon Indianapolis, IN	C/FFP	Redstone Arsenal, AL	Dec 10	Apr 11	601	8.8	Yes		
<b>EDM A Kits</b>										
FY 2009	Westwind Corporation Huntsville, AL	C/FFP	Redstone Arsenal, AL	Dec 08	Mar 09	500	3.8	Yes		Nov 07
<b>Acft Wireless Intercom Sys (AWIS)</b>										
FY 2009	Telephonics Farmingdale, NY	S/FFP	Redstone Arsenal, AL	Jul 09	Oct 09	12	1.9	Yes		
FY 2010	Telephonics Farmingdale, NY	S/FFP	Redstone Arsenal, AL	Jul 10	Oct 10	72	37.8	Yes		
FY 2011	Telephonics Farmingdale, NY	S/FFP	Redstone Arsenal, AL	Jul 11	Oct 11	246	37.9	Yes		
<b>AWIS A Kits</b>										
FY 2009	Westwind Corporation Huntsville, AL	C/FFP	Redstone Arsenal, AL	Dec 08	Mar 09	15	7.9	Yes		Nov 07
<b>Airframe Kits</b>										

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2010

Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army/ 4/ Support equipment and facilities		Weapon System Type:	P-1 Line Item Nomenclature: AIRCREW INTEGRATED SYSTEMS (AZ3110)								
WBS Cost Elements:	Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
FY 2010	Westwind Corporation Huntsville, AL		C/FFP	Redstone Arsenal, AL	Dec 09	Mar 10	904	8.1	Yes		Nov 07
FY 2011	Westwind Corporation Huntsville, AL		C/FFP	Redstone Arsenal, AL	Dec 10	Mar 11	1059	8.1	Yes		
<b>CABS A Kits</b>											
FY 2009	Westwind Corporation Huntsville, AL		C/FFP	Redstone Arsenal, AL	Jun 09	Oct 09	15	6.0	Yes		
<b>CABS B Kits</b>											
FY 2009	BAE Phoenix, AZ		C/FFP	Redstone Arsenal, AL	Aug 09	Dec 09	15	25.0	Yes		
<b>CABS B-Kit Retrofit</b>											
FY 2009	BAE Phoenix, AZ		C/FFP	Redstone Arsenal, AL	May 09	Jun 09	312	3.2	Yes		
<b>Portable Helicopter Oxygen Del System</b>											
FY 2009	U.S. Divers Co Inc Vista, CA		C/FFP	Aberdeen Proving Grd	Sep 09	Jun 10	116	13.4	Yes		Jun 08
<b>Hydration System</b>											
FY 2009	TBS TBS		C/FFP	Redstone Arsenal, AL	Jun 10	Mar 11	2740	0.1	Yes		Feb 10
<b>Survival Kit, Ready Access, Modular</b>											
FY 2009	TBS TBS		C/FFP	Redstone Arsenal, AL	Jun 10	Mar 11	2742	0.2	Yes		Feb 10
<b>Helmet Hear Through System</b>											
FY 2009	CEP Inc. Enterprise, AL		C/FFP	Lakehurst, NJ	May 10	Nov 10	7700	0.2	Yes		Feb 10
<b>Flat Panel Display</b>											
FY 2010	EFW Inc. Ft. Worth, TX		S/FFP	Redstone Arsenal, AL	Mar 10	Dec 10	300	20.0	Yes		Jun 05

REMARKS: The unit cost of Aircraft Wireless Intercom System (AWIS) in FY2009 is for unencrypted systems. In FY2010, quantity and unit costs are for Low Rate Initial Production (LRIP) encrypted AWIS. Full Production of the encrypted AWIS begins FY2011.

FY 09 / 10 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE AIRCREW INTEGRATED SYSTEMS (AZ3110)										Date: February 2010														
COST ELEMENTS						Fiscal Year 09										Fiscal Year 10																		
MFR	FY	S E R V	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 09										Calendar Year 10										Later								
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y		J U N	J U L	A U G	S E P				
Air Warrior Block 1 Ensembles																																		
13	FY 09	A	2745	0	2745				A			228	228	228	229	229	229	229	229	229									0					
13	FY 10	A	3000	0	3000																					A		250	250	250	250	250	1750	
4	FY 11	A	1004	0	1004																										1004			
Air Warrior A Kits																																		
1	FY 09	A	366	0	366				A			30	30	30	30	30	30	31	31	31	31	31	31								0			
Air Warrior Microclimate Cooling Units																																		
2	FY 09	A	1278	0	1278																106	106	106	106	106	106	107	107	107	107	107	107	0	
2	FY 10	A	1880	0	1880																						156	156	156	156	157	157	157	785
2	FY 11	A	567	0	567																											567		
Electronic Data Mgr (EDM)																																		
5	FY 09	A	500	0	500				A					41	41	41	41	42	42	42	42	42	42	42	42	42	42					0		
5	FY 10	A	500	0	500																											252		
5	FY 11	A	601	0	601																											601		
EDM A Kits																																		
1	FY 09	A	500	0	500				A			41	41	41	41	42	42	42	42	42	42	42	42	42	42							0		
Aaft Wireless Intercom Sys (AWIS)																																		
3	FY 09	A	12	0	12																											0		
3	FY 10	A	72	0	72																											72		
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct			
1	Westwind Corporation, Huntsville, AL	50	400	1500		1	5	9	3	12	
							0	2	3	5	
2	Carleton Technologies, Inc., Orchard Park, NY	84	500	800		2	4	8	4	12	
							0	2	3	5	
3	Telephonics, Farmingdale, NY	6	250	500							
4	CONAX, St. Petersburg, FL	83	300	1000		3	5	9	3	12	
							0	9	3	12	
5	Raytheon, Indianapolis, IN	41	300	500							
6	BAE, Phoenix, AZ	10	60	250		4	6	4	4	8	
							0	2	2	4	
7	U.S. Divers Co Inc, Vista, CA	30	100	150							
8	EFW Inc., Ft. Worth, TX	50	104	120		5	5	4	4	8	
							0	2	4	6	
9	CEP Inc., Enterprise, AL	400	700	1000							

FY 09 / 10 BUDGET PRODUCTION SCHEDULE						P-1 ITEM NOMENCLATURE AIRCREW INTEGRATED SYSTEMS (AZ3110)														Date: February 2010								
COST ELEMENTS						Fiscal Year 09														Fiscal Year 10					Later			
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 09														Calendar Year 10								
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR		MAY	JUN	JUL
Acft Wireless Intercom Sys (AWIS)																												
3	FY 11	A	246	0	246																							246
AWIS A Kits																												
1	FY 09	A	15	0	15			A			15																	0
Airframe Kits																												
1	FY 10	A	904	0	904																							0
1	FY 11	A	1059	0	1059																							1059
CABS A Kits																												
1	FY 09	A	15	0	15																							0
CABS B Kits																												
6	FY 09	A	15	0	15																							0
CABS B-Kit Retrofit																												
6	FY 09	A	312	0	312																							0
Portable Helicopter Oxygen Del System																												
7	FY 09	A	116	0	116																							0
Hydration System																												
10	FY 09	A	2740	0	2740																							2740
Survival Kit, Ready Access, Modular																												
10	FY 09	A	2742	0	2742																							2742

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS		
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct					
		1	Initial	Reorder			5	9				3	12
1	Westwind Corporation, Huntsville, AL	50	400	1500		1	Initial	Reorder	5	9	3	12	
2	Carleton Technologies, Inc., Orchard Park, NY	84	500	800		2	Initial	Reorder	4	8	4	12	
3	Telephonics, Farmingdale, NY	6	250	500			Initial	Reorder	0	2	3	5	
4	CONAX, St. Petersburg, FL	83	300	1000		3	Initial	Reorder	5	9	3	12	
5	Raytheon, Indianapolis, IN	41	300	500			Initial	Reorder	0	9	3	12	
6	BAE, Phoenix, AZ	10	60	250		4	Initial	Reorder	6	4	4	8	
7	U.S. Divers Co Inc, Vista, CA	30	100	150			Initial	Reorder	0	2	2	4	
8	EFW Inc., Ft. Worth, TX	50	104	120		5	Initial	Reorder	5	4	4	8	
9	CEP Inc., Enterprise, AL	400	700	1000			Initial	Reorder	0	2	4	6	

COST ELEMENTS						Fiscal Year 09												Fiscal Year 10												Later
M F R	FY	S E R V	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 09												Calendar Year 10												
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

Helmet Hear Through System																														
9	FY 09	A	7700	0	7700																								A	7700

Flat Panel Display																																
8	FY 10	A	300	0	300																								A	300		
Total					29189																											

						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		

M F R	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS		
		MIN	1-8-5	MAX			1	Initial				5	9
1	Westwind Corporation, Huntsville, AL	50	400	1500		1	Initial	5	9	3	12		
							Reorder	0	2	3	5		
2	Carleton Technologies, Inc., Orchard Park, NY	84	500	800		2	Initial	4	8	4	12		
							Reorder	0	2	3	5		
3	Telephonics, Farmingdale, NY	6	250	500			Initial	5	9	3	12		
							Reorder	0	9	3	12		
4	CONAX, St. Petersburg, FL	83	300	1000		3	Initial	5	9	3	12		
							Reorder	0	9	3	12		
5	Raytheon, Indianapolis, IN	41	300	500			Initial	6	4	4	8		
							Reorder	0	2	2	4		
6	BAE, Phoenix, AZ	30	100	150			Initial	5	4	4	8		
							Reorder	0	2	4	6		
7	U.S. Divers Co Inc, Vista, CA	50	104	120		5	Initial	5	4	4	8		
							Reorder	0	2	4	6		
8	EFW Inc., Ft. Worth, TX	400	700	1000			Initial	5	4	4	8		
							Reorder	0	2	4	6		

FY 11 / 12 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE AIRCREW INTEGRATED SYSTEMS (AZ3110)										Date: February 2010									
COST ELEMENTS					Fiscal Year 11										Fiscal Year 12										Later				
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11										Calendar Year 12													
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR		MAY	JUN	JUL	AUG
Air Warrior Block 1 Ensembles																													
13	FY 09	A	2745	2745																								0	
13	FY 10	A	3000	1250	1750	250	250	250	250	250	250																	0	
4	FY 11	A	1004	0	1004			A		83	83	83	83	84	84	84	84	84	84	84	84	84						0	
Air Warrior A Kits																													
1	FY 09	A	366	366																								0	
Air Warrior Microclimate Cooling Units																													
2	FY 09	A	1278	1278																								0	
2	FY 10	A	1880	1095	785	157	157	157	157	157																		0	
2	FY 11	A	567	0	567			A			47	47	47	47	47	47	47	47	47	47	47	48	48	48				0	
Electronic Data Mgr (EDM)																													
5	FY 09	A	500	500																								0	
5	FY 10	A	500	248	252	252																						0	
5	FY 11	A	601	0	601			A			50	50	50	50	50	50	50	50	50	50	50	50	50	51				0	
EDM A Kits																													
1	FY 09	A	500	500																								0	
Acft Wireless Intercom Sys (AWIS)																													
3	FY 09	A	12	12																								0	
3	FY 10	A	72	0	72	12	12	12	12	12	12																	0	
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS	
		MIN	1-8-5	MAX			1	Initial				After 1 Oct
1	Westwind Corporation, Huntsville, AL	50	400	1500		1	Initial	5	9	3	12	
							Reorder	0	2	3	5	
2	Carleton Technologies, Inc., Orchard Park, NY	84	500	800		2	Initial	4	8	4	12	
							Reorder	0	2	3	5	
3	Telephonics, Farmingdale, NY	6	250	500			Initial					
							Reorder	0	2	3	5	
4	CONAX, St. Petersburg, FL	83	300	1000		3	Initial	5	9	3	12	
							Reorder	0	9	3	12	
5	Raytheon, Indianapolis, IN	41	300	500			Initial					
							Reorder	0	9	3	12	
6	BAE, Phoenix, AZ	10	60	250		4	Initial	6	4	4	8	
							Reorder	0	2	2	4	
7	U.S. Divers Co Inc, Vista, CA	30	100	150			Initial					
							Reorder	0	2	2	4	
8	EFW Inc., Ft. Worth, TX	50	104	120		5	Initial	5	4	4	8	
							Reorder	0	2	4	6	

FY 11 / 12 BUDGET PRODUCTION SCHEDULE										P-1 ITEM NOMENCLATURE AIRCREW INTEGRATED SYSTEMS (AZ3110)										Date: February 2010														
COST ELEMENTS						Fiscal Year 11										Fiscal Year 12										Later								
MFR	FY	SERV	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11										Calendar Year 12																		
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP				
Acft Wireless Intercom Sys (AWIS)																																		
3	FY 11	A	246	0	246														A			20	20	20	20	20	20	21	21	21	21	21	21	0
AWIS A Kits																																		
1	FY 09	A	15	15																														0
Airframe Kits																																		
1	FY 10	A	904	525	379	75	76	76	76	76																							0	
1	FY 11	A	1059	0	1059			A			88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	89	89	89				0	
CABS A Kits																																		
1	FY 09	A	15	15																													0	
CABS B Kits																																		
6	FY 09	A	15	15																													0	
CABS B-Kit Retrofit																																		
6	FY 09	A	312	312																													0	
Portable Helicopter Oxygen Del System																																		
7	FY 09	A	116	116																													0	
Hydration System																																		
10	FY 09	A	2740	0	2740							228	228	228	228	228	228	228	228	228	228	228	228	228	228	229	229	229	229			0		
Survival Kit, Ready Access, Modular																																		
10	FY 09	A	2742	0	2742							228	228	228	228	228	228	228	228	228	228	228	228	228	228	229	229	229	229	230			0	
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

  

MFR	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS
		MIN	1-8-5	MAX			Prior 1 Oct	After 1 Oct			
1	Westwind Corporation, Huntsville, AL	50	400	1500		1	5	9	3	12	
							0	2	3	5	
2	Carleton Technologies, Inc., Orchard Park, NY	84	500	800		2	4	8	4	12	
							0	2	3	5	
3	Telephonics, Farmingdale, NY	6	250	500		3	5	9	3	12	
							0	9	3	12	
4	CONAX, St. Petersburg, FL	83	300	1000		4	6	4	4	8	
							0	2	2	4	
5	Raytheon, Indianapolis, IN	41	300	500		5	5	4	4	8	
							0	2	4	6	
6	BAE, Phoenix, AZ	10	60	250							
7	U.S. Divers Co Inc, Vista, CA	30	100	150							
8	EFW Inc., Ft. Worth, TX	50	104	120							
9	CEP Inc., Enterprise, AL	400	700	1000							



COST ELEMENTS						Fiscal Year 11										Fiscal Year 12										Later
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M F R	FY	S E R V	PROC QTY Units	ACCEP PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Calendar Year 11										Calendar Year 12									
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y

Helmet Hear Through System																																	
9	FY 09	A	7700	0	7700		641	641	641	641	642	642	642	642	642	642	642																0

Flat Panel Display																																	
8	FY 10	A	300	0	300			27	27	27	27	27	27	27	27	27	28	28	28														0

Total																																
					20197	746	1136	1163	1163	1246	1605	1643	1393	1394	1394	1395	1395	1416	747	749	749	666	71	21	21	21	21	21	21	21		
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

M F R	Name - Location	PRODUCTION RATES			Reached D+	MFR	ADMIN LEAD TIME		MFR After 1 Oct	TOTAL After 1 Oct	REMARKS		
		MIN	1-8-5	MAX			1	Initial				5	9
1	Westwind Corporation, Huntsville, AL	50	400	1500		1	Initial	5	9	3	12		
							Reorder	0	2	3	5		
2	Carleton Technologies, Inc., Orchard Park, NY	84	500	800		2	Initial	4	8	4	12		
							Reorder	0	2	3	5		
3	Telephonics, Farmingdale, NY	6	250	500			Initial	5	9	3	12		
							Reorder	0	9	3	12		
4	CONAX, St. Petersburg, FL	83	300	1000		3	Initial	5	9	3	12		
							Reorder	0	9	3	12		
5	Raytheon, Indianapolis, IN	41	300	500			Initial	6	4	4	8		
							Reorder	0	2	2	4		
6	BAE, Phoenix, AZ	10	60	250		4	Initial	5	4	4	8		
							Reorder	0	2	2	4		
7	U.S. Divers Co Inc, Vista, CA	30	100	150			Initial	5	4	4	8		
							Reorder	0	2	4	6		
8	EFW Inc., Ft. Worth, TX	50	104	120		5	Initial	5	4	4	8		
							Reorder	0	2	4	6		
9	CEP Inc., Enterprise, AL	400	700	1000			Initial	5	4	4	8		
							Reorder	0	2	4	6		

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Item Nomenclature AIR TRAFFIC CONTROL (AA0050)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: 0604633A/586 Air Traffic Control
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	702.1	122.4	76.8	90.4	111.7	84.9	84.5	85.7		1358.6
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	702.1	122.4	76.8	90.4	111.7	84.9	84.5	85.7		1358.6
Initial Spares										
Total Proc Cost	702.1	122.4	76.8	90.4	111.7	84.9	84.5	85.7		1358.6
Flyaway U/C										
Weapon System Proc U/C										

**P-40 Breakdown**

Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Active	Qty	0	0	0	0	0	0	0
	Gross Cost	79319.0	76714.0	90399.0	111739.0	84916.0	84487.0	85693.0
National Guard	Qty	0	0	0	0	0	0	0
	Gross Cost	37094.0	94.0	0.0	0.0	0.0	0.0	0.0
Reserve	Qty	0	0	0	0	0	0	0
	Gross Cost	6000.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0
	Gross Cost	122413	76808	90399	111739	84916	84487	85693

**Description:**  
Tactical Air Traffic Control (ATC) equipment includes Air Traffic Navigation Integration and Coordination System (ATNAVICs), Tactical Airspace Integration System (TAIS), TAIS Airspace Workstation (AWS), Tactical Terminal Control System (TTCS), Mobile Tower System (MOTS), and AN/TRN-30 Non-Directional Beacon (NDB). ATNAVICs provides all weather instrument flight capabilities to include enroute, terminal, radar precision approach and landing services to all Army, Joint, and allied aircraft. ATNAVICs preplanned product improvements (P3I) include Mode 5/S (friend/foe identification), improved radio communications, ATNAVICs/TAIS Air Picture Integration to improve commander situational awareness, Information Assurance and computer upgrades. TAIS, a digitized battlefield automated system of the Army Battle Command System (ABCS), performs enroute Air Traffic Services (ATS) and Airspace Command and Control (AC2) at brigade to theater commands. TAIS P3I includes Dynamic Airspace Collaboration Tool (DACT), Advanced Fusion Tracking System (AFTS), Small Tactical Terminal (STT) radio, Force XXI Battle Command, Brigade-and-Below (FBCB2), comms/computer, and overall configuration upgrades for reliability. AFTS provides a fused air picture from multiple sources. STT and FBCB2 enhances TAIS ability to receive air tracks for improved situational awareness through Link 16/TADIL-J and Blue Force Tracker. DACT provides cross-platform collaboration capability for users without TAIS through a web-service interface with TAIS. TAIS AWS provides for AC2 planning and execution at the Brigade Combat Team (BCT) and above. It is the Army's link to the Theater Battle Management Core System for Joint Airspace Management. TAIS and TAIS AWS provide an automated AC2 and ATS capability for current requirements and Battle Command interfaces. TTCS provides enhanced ATS communications support to aviation assets conducting reconnaissance, maneuver, medical evacuation, logistics, and intelligence operations across the battlefield. TTCS P3I includes uparmor retrofit. MOTs provides positive air traffic control and aircraft separation for both air and ground operations at tactical or remote landing sites. Its capabilities include

<b>Exhibit P-40, Budget Item Justification Sheet</b>		Date: February 2010
Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities		P-1 Item Nomenclature AIR TRAFFIC CONTROL (AA0050)
Program Elements for Code B Items:	Code:	Other Related Program Elements: 0604633A/586 Air Traffic Control
<p>weather information, secure and anti-jam communications across all required frequency bands and ranges, and precision location. ATNAVICS, TAIS, and MOTS serve as effective air traffic risk management tools for aviation safety during night, inclement weather, and combat operations. The NDB is a tactical, enroute, and terminal radio navigation aide used for aircraft navigation and recovery in adverse weather situations. Fixed Base ATC requirements will be met through a vast array of high technology solutions resulting in highly reliable and safe ATC systems in accordance with the Joint DoD/Federal Aviation Administration (FAA) program to modernize the National Airspace System (NAS). This includes upgrading and automating the complete infrastructure, systematically replacing antiquated analog systems with installation of state of the art digital technology. These systems include Department of Defense (DoD) Advanced Automation System (DAAS), Digital Airport Surveillance Radar (DASR), and navigational control aids which consist of Voice Recorder Replacement Program (VRRP), Instrument Landing System (ILS) and Radio and Antenna replacement program. Fixed Base Precision Approach Radar (FBPAR) is the Army's primary ground controlled precision approach capability to provide recovery operations for aircraft to fixed base airfields during adverse weather conditions. FBPAR P3I includes upgrading the computer capabilities, installing coolant upgrades and resolving obsolescence issues.</p> <p><b>Justification:</b>  FY 2011 Base Funding in the amount of \$82.844 million procures tactical and fixed base ATC systems and P3I modifications to these systems. Funds for tactical ATC systems provide for upgrades and modifications to TAIS, TAIS AWS, ATNAVICS, TTCS, NDB and procurement of the MOTS system. ATNAVICS upgrades will address joint interoperability and networking capabilities, as well as Information Assurance requirements, integrating the Air Defense Interrogator to interrogate Mode 5/S equipped aircraft. These enhancements will allow the ATNAVICS to transmit critical air picture information to TAIS and DOD Command and Control network/systems. TAIS airspace management functions will be modified as web services that will be available throughout the tactical network via a common server to properly credentialed users. TAIS airspace management web services will also support Army Battle Command, ATS, and Airspace Integration Improvements Initiatives (AI3). Current chat messaging capability will be modified to a real time, cross-echelon collaboration capability. TTCS modifications will integrate the TTCS onto an uparmored vehicle in accordance with DA direction for force protection. These modifications to tactical ATC systems ensure Army ATC and Army airspace command and control systems are capable of supporting the path ahead to the Future Force. Obsolescence upgrades to the NDB will improve the systems current marginal availability rate by replacing unrepairable components with modern, reliable electronics. Fixed base ATC systems (DAAS, DASR, Navigational Control Aids, FBPAR) provide the Army a joint service capability required for the DoD/FAA modernization and upgrade of the NAS via the Next Gen program. These systems will save significant Operational and Support costs by replacing old, obsolete, and antiquated analog radars, and automation systems with new, state of the art, highly reliable ATC systems in towers and approach control facilities. Radios will meet current and emerging spectrum management requirements. Equipment quantity and configuration is tailored to meet specific site requirements, resulting in varying unit costs. Funding ensures compliance and interoperability between the Army and FAA systems.</p>		

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: AIR TRAFFIC CONTROL (AA0050)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID CD	FY 09			FY 10			FY 11		
		Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Fixed Base Precision Approach Radar		8467			3021			760		
DoD Advanced Automation System (DAAS)		9612			2459			3829		
Digital Airport Surveillance Radar(DASR)		18755			16902			2117		
Tactical Airspace Integration Sys (TAIS)		31364			18195			23097		
Air Traffic Navigation and Integration		42931			23596			18849		
TAIS Airspace Workstation (AWS)		145			1798			200		
Navigational Control Aids		9887			5882			6986		
Tactical Terminal Control System (TTCS)		1252			4955			9866		
Mobile Tower System (MOTS)								22111		
Non-Directional Beacon (NDB)								2584		
<b>Total:</b>		<b>122413</b>			<b>76808</b>			<b>90399</b>		

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2010

Appropriation / Budget Activity / Serial No:  
Aircraft Procurement, Army / 4 / Support equipment and facilities

P-1 Item Nomenclature  
INDUSTRIAL FACILITIES (AZ3300)

Program Elements for Code B Items: Code: Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	173.4	2.5	1.5	1.6	1.6	1.6	1.6	1.6		185.4
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	173.4	2.5	1.5	1.6	1.6	1.6	1.6	1.6		185.4
Initial Spares										
Total Proc Cost	173.4	2.5	1.5	1.6	1.6	1.6	1.6	1.6		185.4
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

This program provides funding to the Army Test and Evaluation Command (ATEC), Developmental Test Command (DTC) to establish, modernize, expand or replace test facilities used in production testing of Aircraft and Aircraft components. It sustains Army production test capabilities through upgrade and replacement of instrumentation and equipment that is technologically and/or economically obsolete. Modernization of test instrumentation and equipment provides increased automation and efficiencies, improved data quality and quantity and cost avoidances to Army Program Managers. Programmed funding will be used to upgrade or replace production test instrumentation and equipment at the Redstone Test Center (RTC), Huntsville, AL and Yuma Proving Ground (YPG), Yuma, AZ. Note: Previous years funding supported sustainment of production test capabilities at the Aviation Technical Test Center (ATTC), Fort Rucker, AL. Base Realignment and Closure (BRAC) decisions move the ATTC from Fort Rucker, to RTC in Huntsville, AL. All of the instrumentation and equipment procured for ATTC will be moved with the Test Center to Huntsville and will be used for Aircraft Testing in the relocation of this mission.

**Justification:**

ATEC: At RTC, FY 2011 procures various types of airborne instrumentation including analog and inertial sensors, Global Positioning System (GPS) receivers, signal conditioning units, data acquisition equipment and cockpit display components used to obtain aircraft performance data; calibration and support equipment for flight test instrumentation and servers, storage systems and life cycle replacement/upgrade of LAN network components used for data transmission, that will allow test directors to more easily access, store, plot, and analyze test data. It also procures instrumentation to stimulate and collect message traffic and message data for aircraft communications testing within actual flight environments. At YPG, FY 2011 procures an acoustic/seismic sensor system that will allow the YPG test team to accurately determine impact locations for high rate aerial fired weapon systems (at short and long ranges), during aircraft weapons performance tests. It also procures a laser spot position measurement system and test specific software to accurately test laser targeting munitions (these systems will be mobile and ruggedized and will be used in test hangars, field testing, environmental chambers, and at offsite test locations). The majority of the instrumentation being upgraded or replaced is obsolete and has met or exceeded its economic life. This instrumentation is required to ensure complete and accurate test data is collected and safety and environmental hazards are minimized. Benefits of this project include increased test efficiencies and decreased costs and risks to Army Program Managers.

**Exhibit P-40, Budget Item Justification Sheet**

Date: February 2010

Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities  
 P-1 Item Nomenclature LAUNCHER, 2.75 ROCKET (A50100)

Program Elements for Code B Items: Code: Other Related Program Elements:

	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	71.1	2.4	2.7	2.9	2.9	3.2	2.9	2.9		90.9
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	71.1	2.4	2.7	2.9	2.9	3.2	2.9	2.9		90.9
Initial Spares										
Total Proc Cost	71.1	2.4	2.7	2.9	2.9	3.2	2.9	2.9		90.9
Flyaway U/C										
Weapon System Proc U/C										

**Description:**

The M261 19-tube and M260 7-tube rocket launchers are used to fire 2.75 Inch HYDRA 70 rockets from the following platforms: AH-64 Apache, OH-58D Kiowa Warrior, MH-60L Blackhawk, and AH-6J helicopters. The launchers are non-repairable yet durable enough to withstand at least 16 rocket firings per tube before being discarded. The empty weight of the M260 launcher is approximately 35 pounds, and the empty weight of the M261 launcher is approximately 82 pounds. The launcher permits fuze-timing selection from the cockpit and will launch rockets using either the MK 40 or the MK 66 motors.

**Justification:**

FY2011 procurement dollars in the amount of \$2.892 million support both the M260 7-tube rocket launcher for OH-58D Kiowa Warrior and AH-6J helicopters and the M261 19-tube launcher for the AH-64 Apache, MH-60L Blackhawk, and AH-6J helicopters. Procurement replaces launchers expended as a result of annual rocket firings for training and replenishes the limited issuable stockage that has been depleted below levels acceptable to support training and war reserve requirements of Active Army, Special Operations Forces and Reserve Component usage.

<b>Exhibit P-40, Budget Item Justification Sheet</b>	Date: February 2010
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Appropriation / Budget Activity / Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Item Nomenclature AIRBORNE COMMUNICATIONS (AA0705)
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Program Elements for Code B Items:	Code:	Other Related Program Elements: AA0700
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	Prior Years	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total Prog
Proc Qty										
Gross Cost	325.2	24.6	11.1							360.9
Less PY Adv Proc										
Plus CY Adv Proc										
Net Proc P1	325.2	24.6	11.1							360.9
Initial Spares										
Total Proc Cost	325.2	24.6	11.1							360.9
Flyaway U/C										
Weapon System Proc U/C										

P-40 Breakdown										
Area		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015		
Active	Qty	0	0	0	0	0	0	0	0	0
	Gross Cost	24541.0	11026.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Guard	Qty	0	0	0	0	0	0	0	0	0
	Gross Cost	55.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reserve	Qty	0	0	0	0	0	0	0	0	0
	Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	Qty	0	0	0	0	0	0	0	0	0
	Gross Cost	24596	11081	0	0	0	0	0	0	0

**Description:**  
The AN/ARC-220/VRC-100 High Frequency (HF) Radio Program answers Army Aviation's critical long-standing requirement for a Non-Line of Sight (NLOS) communications capability. The HF radio system allows continuous and reliable secure/non-secure communication between Army aircraft flying Nap-of-the-Earth (NOE) maneuvers and at NLOS distances with Aviation Tactical Operations Centers (TOC) and other Army aircraft. The radio incorporates Automatic Link Establishment (ALE) to eliminate manual searches for workable frequencies reducing pilot workload and enhancing communication connectivity. The AN/ARC-220/VRC-100 also provides a frequency hopping capability and is night vision compatible. The AN/ARC-220 provides a position reporting and data capability enhancing situational awareness and command and control.

**Justification:**  
FY11 base funding - no budget request.

<b>Exhibit P-5, Weapon ACFT Cost Analysis</b>	Appropriation/Budget Activity/Serial No: Aircraft Procurement, Army / 4 / Support equipment and facilities	P-1 Line Item Nomenclature: AIRBORNE COMMUNICATIONS (AA0705)	Weapon System Type:	Date: February 2010
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ACFT Cost Elements	ID	FY 09			FY 10			FY 11		
	CD	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
<b>RECURRING COSTS</b>										
A. AN/ARC-220 NOE HF Airborne Radio					3601	44	82			
B. AN/VRC-100 Ground Radio		138	2	69	4645	66	70			
C. Misc Non-LOS Equipment (OCO)		24458	167	146						
D. A-Kits					616	44	14			
E. A-Kit Installation					1414	44	32			
<b>    SUBTOTAL</b>		<b>24596</b>			<b>10276</b>					
<b>SUPPORT COST</b>										
A. Fielding Support					571					
B. Program Management					234					
<b>    SUBTOTAL</b>					<b>805</b>					
<b>Total:</b>		<b>24596</b>			<b>11081</b>					