

DEPARTMENT OF THE ARMY

Procurement Programs



DTIC QUALITY INSPECTED 2

19980305 067

Committee Staff Procurement Backup Book
FY 1999 Budget Estimates

AIRCRAFT PROCUREMENT, ARMY

DISTRIBUTION STATEMENT A
Approved for public release
Distribution Unlimited

APPROPRIATION

February 1998

Index for AIRCRAFT PROCUREMENT, ARMY

Blin	Nomenclature	SSN	Filename	Page Number
1	P1 EXHIBIT			P1-1
2	P1M EXHIBIT			P1M -1
3	ARL (TIARA)	A11500	19342103.99P	1
4	UC-35 (MEDIUM RANGE) AIRCRAFT	A11300	19440147.99P	6
5	GUARDRAIL COMMON SENSOR (TIARA)	A02005	19662103.99P	9
6	UH-60 BLACKHAWK (MYP)	AA0005	16772147.99P	12
7	UH-60 BLACKHAWK (MYP) (ADV PROC)	AA0005	16773147.99P	18
8	GUARDRAIL MODS (TIARA)	AZ2000	11032103.99P	24
9	AH1F MODS	AA0150	12334147.99P	41
10	AH-64 MODS	AA6605	12706137.99P	45
11	CH-47 CARGO HELICOPTER MODS (MYP)	AA0252	13264137.99P	70
12	C-12 CARGO AIRPLANE MODS	AA0270	14194147.99P	99
13	OH-58 MODS	AA0400	14752147.99P	103
14	C-20 AIRCRAFT MODS	AA0560	15310147.99P	111
15	Longbow	AA6670	15682137.99P	121
16	Longbow (ADV PROC)	AA6670	15683137.99P	133
17	UH-1 MODS	AB0602	16426147.99P	136
18	UH-60 MODS	AA0480	16949147.99P	148
19	KIOWA WARRIOR	AZ2200	17542147.99P	164
20	EH-60 QUICKFIX MODS	AB3000	17728103.99P	184
21	AIRBORNE AVIONICS	AA0700	18472137.99P	192
22	ASE MODS	AA0720	18844137.99P	207
23	MODIFICATIONS < \$2.0M	AA0725	19030147.99P	217
24	INITIAL SPARES AIR	AA0950	10420107.99P	221
	AIRCRAFT SURVIVABILITY EQUIPMENT	AZ3504	13632137.99P	223
	AIRBORNE COMMAND & CONTROL	AA0710	10030137.99P	230

Index for AIRCRAFT PROCUREMENT, ARMY

Blin	Nomenclature	SSN	Filename	Page Number
25	AVIONICS SUPPORT EQUIPMENT	AZ3000	10832103.99P	236
26	TRAINING DEVICES	AZ3700	11344137.99P	244
27	COMMON GROUND EQUIPMENT	AZ3100	15212147.99P	248
28	AIRCREW INTEGRATED SYSTEMS	AZ3110	16380137.99P	266
29	AIR TRAFFIC CONTROL	AA0050	16818147.99P	269
30	INDUSTRIAL FACILITIES	AZ3300	18132144.99P	272
31	AIRBORNE COMMUNICATIONS	AA0705	19161137.99P	274

DEPARTMENT OF THE ARMY
FY 99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1998

Appropriation: **AIRCRAFT**

Activity: 1. **AIRCRAFT**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97		FY 98		FY 99	
				QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	FIXED WING								
1	ARL (TIARA) (A11500)			2	29,736		40,122		13,133
2	UC-35 (MEDIUM RANGE) AIRCRAFT (A11300)			5	21,828	5	22,481		
3	GUARDRAIL COMMON SENSOR (TIARA) (A02005)	A			4,925		12,751		1,931
	SUB-ACTIVITY TOTAL				56,489		75,354		15,064
	ROTARY								
4	UH-60 BLACKHAWK (MYP) (AA0005) LESS: ADVANCE PROCUREMENT (PY)		11,082,727	34	287,838 -73,047	28	330,896 -65,563	22	243,820 -25,000
					214,791		265,333		218,820
5	UH-60 BLACKHAWK (MYP) (AA0005) ADVANCE PROCUREMENT (CY)				65,563		25,000		
	SUB-ACTIVITY TOTAL				280,354		290,333		218,820
	ACTIVITY TOTAL				336,843		365,687		233,884

Appropriation: **AIRCRAFT**

Activity: 2. **MODIFICATION OF AIRCRAFT**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST	(5)	QTY	COST	(10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	MODIFICATIONS OF AIRCRAFT								
6	GUARDRAIL MODS (TIARA) (AZ2000)				30,254		14,608		36,079
7	AH1F MODS (AA0150)				1,085		440		512
8	AH-64 MODS (AA6605)				48,777		40,239		52,902
9	CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)				48,496		62,413		101,176
10	C-12 CARGO AIRPLANE MODS (AA0270)				643		6,463		2,658
11	OH-58 MODS (AA0400)				1,146		732		90
12	C-20 AIRCRAFT MODS (AA0560)				881		834		799
13	Longbow (AA6670) LESS: ADVANCE PROCURMENT (PY)				389,476 -16,818 ----- 372,658		493,215 -30,440 ----- 462,775		607,028 -36,932 ----- 570,096
14	Longbow (AA6670) ADVANCE PROCUREMENT (CY)				30,440		36,932		41,683
15	UH-1 MODS (AB0602)				6,120		2,618		3,789
16	UH-60 MODS (AA0480)				12,350		26,247		21,657
17	Kiowa Warrior (AZ2200)				197,068		57,125		40,446
18	EH-60 QUICKFIX MODS (AB3000)				13,794		43,632		3,015
19	AIRBORNE AVIONICS (AA0700)				58,290		41,893		56,335

DEPARTMENT OF THE ARMY
FY 99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1998

Appropriation: **AIRCRAFT**

Activity: 2. **MODIFICATION OF AIRCRAFT**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST		QTY	COST	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
20	ASE MODS (AA0720)				25,861		18,647		2,743
21	MODIFICATIONS < \$2.0M (AA0725)				1,788		1,696		1,660
	SUB-ACTIVITY TOTAL				849,651		817,294		935,640
	ACTIVITY TOTAL				849,651		817,294		935,640

Appropriation: **AIRCRAFT**

Activity: 3. **SPARES AND REPAIR PARTS**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST	(5)	QTY	COST	(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
22	**SPARES AND REPAIR PARTS**								
	SPARE PARTS (AIR) (AA0950)				38,223		23,195		36,047
	SUB-ACTIVITY TOTAL				38,223		23,195		36,047
	ACTIVITY TOTAL				38,223		23,195		36,047

DEPARTMENT OF THE ARMY
FY 99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1998

Appropriation: **AIRCRAFT**

Activity: 4. **SUPPORT EQUIPMENT AND FACILITIES

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97		FY 98		FY 99	
				QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	GROUND SUPPORT AVIONICS								
23	AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)				284		8,117		5,144
	SUB-ACTIVITY TOTAL				284		8,117		5,144
	OTHER SUPPORT								
24	AIRBORNE COMMAND & CONTROL (AA0710)								24,421
25	AVIONICS SUPPORT EQUIPMENT (AZ3000)				9,877		2,640		2,555
26	TRAINING DEVICES (AZ3700)				7,390		13,000		
27	COMMON GROUND EQUIPMENT (AZ3100)				20,609		27,012		30,107
28	AIRCREW INTEGRATED SYSTEMS (AZ3110)				11,286		12,190		9,050
29	AIR TRAFFIC CONTROL (AA0050)				13,502		5,671		5,691
30	INDUSTRIAL FACILITIES (AZ3300)				2,018		2,002		1,493
31	AIRBORNE COMMUNICATIONS (AA0705)				39,287		46,380		41,911
	SUB-ACTIVITY TOTAL				103,969		108,895		115,228
	ACTIVITY TOTAL				104,253		117,012		120,372
	APPROPRIATION TOTAL				1,328,970		1,323,188		1,325,943

Exhibit P-1M, Procurement Programs - Modification Summary

System/Modification	(TOA, Dollars in Millions)							To Complete	Total Program
	Prior	1997	1998	1999	2000	2001	2002	2003	
GUARDRAIL MODS (TIARA) (AZ2000)									
CHAALS for System 3	0.8								0.8
Interoperability With Air Force	6.7	1.7							8.4
Remote Relay for System 1	6.5	0.7							7.2
AQL Phase III Hardware Upgrade	4.7								4.7
System 2 Block Upgrade	170.6	15.3	13.2	12.9					212.0
ITIBS and TRIXS fir GR/CS	13.1	12.6	1.4						27.1
Conversion of RC-12N's to RC-12P's				23.2					23.2
Total	202.4	30.3	14.6	36.1					283.4
AH1F MODS (AA0150)									
Rewire	12.2	1.1	0.4	0.5	0.4	0.4	0.5	0.5	48.1
M65 Reliability/Maintainability	0.1								0.1
Total	12.3	1.1	0.4	0.5	0.4	0.4	0.5	0.5	48.2
AH-64 MODS (AA6605)									
Backup Control System (BUCS)		7.8	3.8	10.1	7.3	4.7	4.8	4.9	48.5
Fuel Control Warning Panel	6.0	1.8	2.1	1.8	1.3				13.0
Embedded GPS / Inertial Navigation System (EGI)	70.8	7.5	5.5	0.6					84.4
H-11 Bolt Replacement	4.9		0.8	1.0	1.0	1.0	1.3	1.3	12.7
Captive Boresight Harmonization Kit (CBHK) Upgrade	17.2								17.2
Airframe Modifications	2.3	3.7	7.8	12.0	13.8	6.5	6.9	7.2	60.2
Alternate Laser Code	11.8	9.0	11.5	3.4					35.7
TADS/PNVIS I/II upgrades	41.7	10.2	6.4	7.8					66.1
TADS/PNVIS Upgrades	1.4	2.1	1.9	6.9	6.3	7.1	7.2	7.4	48.4
AITP 01							3.1	7.1	18.7
Miscellaneous Mods Less Than 2M	249.2	6.7	0.4		0.6	0.6	1.4	1.9	261.8
Image Intensifier (I2)						4.0	15.9	8.7	40.0
Apache Integrated Training Program Trainer Upgrade				3.4	5.3	5.2	10.3	15.2	55.2

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)

<u>System/Modification</u>	<u>Prior</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>To Complete</u>	<u>Total Program</u>
Cat B Trainer Restoration				5.9	1.9	5.6	6.8	7.2	4.9	32.3
ORT Conversion	14.7									14.7
Second Gen FLIR				52.9	37.5	34.7	50.3	45.2		95.5
Total	420.0	48.8	40.2	52.9	37.5	34.7	108.0	106.1	56.2	904.4
CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)										
Installation of Modification Kits	8.5	1.0	1.3	1.2	0.6					12.6
Work Platform - Aft Pylon	1.2		0.1	0.2						1.5
Improved Cross Shaft Adapters, Couplings, & Bolts				1.1	0.2	0.2				1.5
Improved Rotor Head Shafts & Seals				1.1	0.8	1.6	0.8			4.3
Improved Latch for Aft Pylon Doors	1.0		0.2	0.2						1.4
Install Handholds in Center Cargo Hook Hatch	0.6			0.5						1.1
Install Aft Pylon Fairing Vents			2.5	1.1	0.5	0.5				2.1
Improved Battery					0.1	0.1				2.7
Replace Upper Seal for Swashplate				1.7	0.5	1.8	1.2			5.2
Halon Replacement			5.1	1.7	0.8					7.6
Engine Upgrade to T55-GA-714A Configuration		47.5	49.6	87.3	71.0	176.9	195.9	199.3	420.0	1247.4
Engine Barrier Filter				5.1	4.6	5.1	6.1	7.9	6.8	30.6
Extended Range Fuel System			3.6	5.1	5.8	6.6	7.4	7.6	33.2	69.3
Total	11.3	48.5	62.4	101.2	84.9	192.9	211.4	214.8	460.0	1387.3
C-12 CARGO AIRPLANE MODS (AA0270)										
Color Weather Radar	0.7									0.7
Avionics System Cockpit Upgrade - Group II		0.6	6.5	2.7	6.2	5.5	9.5	10.1	67.5	108.5
Total	0.7	0.6	6.5	2.7	6.2	5.5	9.5	10.1	67.5	109.2
OH-58 MODS (AA0400)										
SINGGARS-V	16.3	0.1	0.6		0.5	0.5	0.5	0.5		19.0
Global Positioning System (GPS)	0.8	0.7	0.1	0.1						1.7
Transmission External Oil Filter	0.7	0.3								1.0

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)										
<u>System/Modification</u>	1996 &									
	Prior	1997	1998	1999	2000	2001	2002	2003	To Complete	Total Program
Total	17.8	1.1	0.7	0.1	0.5	0.5	0.5	0.5		21.7
C-20 AIRCRAFT MODS (AA0560)										
Global Positioning System (GPS)	1.6									1.6
Flight Data Recorder	0.2									0.2
Cockpit Voice Recorder	0.1									0.1
Digital Flight Phone	0.3		0.4							0.7
Traffic Collision Avoidance System		0.9								0.9
Enhanced Ground Proximity Warning System			0.5							0.5
Satellite Communications/Future Air Navigation System				0.8	0.8	0.8	0.8	0.8	0.6	4.6
Total	2.2	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.6	8.6
Longbow (AA6670)										
Longbow Apache Mods	332.9	283.1	368.2	475.0	574.9	553.6	568.0	625.0	2964.8	6745.5
Apache Longbow FCR	85.5	89.6	94.6	95.1	111.9	109.0	105.0			690.7
Total	418.4	372.7	462.8	570.1	686.8	662.6	673.0	625.0	2964.8	7436.2
UH-1 MODS (AB0602)										
UH-1 Radar Altimeter (AN/APN-209)	14.9	0.7	0.2	0.2						16.0
Improved Airborne Direction Finder (AN/ARN-149)	6.0	1.8	1.7	1.7	2.3	3.1	1.0			17.6
Improved VHF OMNI-Range (AN/ARN-123)	9.2	1.8	0.6	1.2	1.0	0.8	1.2	0.3		16.1
Single Channel Ground and Air Radio System (SINCGARS)	4.0	0.4	0.1	0.7	1.2	0.5	1.1	0.3	0.4	8.7
AN/APX-100 Transponder								2.7	22.8	25.5
Upgrade UH-1 Synthetic Flight Simulator System		1.4								1.4
Total	34.1	6.1	2.6	3.8	4.5	4.4	3.3	3.3	23.2	85.3
UH-60 MODS (AA0492)										
Refurbishment/Standardization	95.1	10.9	4.5	1.5						112.0
Single Channel Ground & Airborne Radio Sys (SINCGARS)	46.2		1.3							47.5
Ext Stores Sup Sys (ESSS) Aux Fuel Monitoring Sys (AFMS)	9.3		3.6	9.9	1.7					24.5

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)

<u>System/Modification</u>	<u>1996 & Prior</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>To Complete</u>	<u>Total Program</u>
5/8" Fuel Line	2.8	0.9								3.7
Halon Changeout	0.1		4.6	4.5	3.6					12.8
Battery/Power Light Relocate	0.3			0.8	5.7	7.9	2.8	1.4		18.9
NVG Lighting Lower Console	1.3	0.6		5.0	4.9	2.4	0.6			14.8
Engine Driveshaft Redesign						0.3	10.5	12.4		23.2
Service Life Extension Program						4.8	39.5	100.8		145.1
UH-60Q Medivac			9.3				37.5	58.8		105.6
Fire Hawk			2.9							2.9
Total	155.1	12.4	26.2	21.7	15.9	15.4	90.9	173.4		511.0
KIOWA WARRIOR (AZ2200)										
Kiowa Warrior - Remanufacture	808.7	109.1	9.8	0.1						927.7
Kiowa Warrior - Retrofit	417.0	25.9	9.9							452.8
Halon Fire Extinguisher	1.3		0.5	0.5	0.4					2.7
Crew Station Mission Equipment Trainer (CSMET)			3.2	7.4	4.2	2.6				17.4
R3 Engines - SSEP	52.9	51.0	18.7	21.9	14.5	1.4	23.7	10.3	11.8	206.2
Improved Master Controller Processor Unit - SSEP	50.9	5.2	10.3	7.2	5.2	4.6	26.6	27.0	16.1	153.1
Crew Seats - Sys Safety Enhancement	1.1	5.9	4.7	2.1	3.0	2.7	14.9	1.6		36.0
Supplemental Restraint System - Sys Safety Enhancement	1.0			1.2	2.4	3.4	8.8	2.4		19.2
Total	1332.9	197.1	57.1	40.4	29.7	14.7	74.0	41.3	27.9	1815.1
EH-60 QUICKFIX MODS (AB3000)										
T701C Helicopter Engines	35.1					0.9				36.0
External Storage Support Systems	9.9									9.9
Advanced EH-60 Quickfix Mods	38.1	13.8	43.6	3.0	54.0	65.1	74.9	82.4	615.7	990.6
Total	83.1	13.8	43.6	3.0	54.0	66.0	74.9	82.4	615.7	1036.5
AIRBORNE AVIONICS (AA0700)										
Embedded GPS Inertial Navigation System (EGI)	26.2	6.8	0.9	0.6						34.5
Doppler GPS Navigation System (DGNS) (AN/ASN-128B)	18.0	23.4	16.9	18.4	15.7	2.8				95.2

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)

<u>System/Modification</u>	<u>1996 &</u>	<u>Prior</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>To</u>	<u>Total</u>
										<u>Complete</u>	<u>Program</u>
Global Positioning System (GPS) (AN/ASN-149)	2.1	11.7	13.6	15.4	27.8	16.6	16.1	22.7	17.2	85.1	2.1
Improved Data Modem (IDM)		6.6	14.5	8.7	9.5	9.5	9.1	7.1			226.2
Aviation Mission Planning System						1.7	8.0	14.2	7.5	6.9	65.0
Embedded GPS Inertial Navigation System (EGI) PPI						0.9	8.1	14.7	7.5	3.7	38.3
Doppler GPS Navigation System (DGNS) (AN/ASN-128B) PPI						44.4	44.1	58.7	32.2	95.7	34.9
Total	64.6	58.3	41.9	56.3	44.4	21.8	17.3	14.7	1306.9	4349.7	496.2
ASE MODS (AA0720)											
Laser Detecting Set - AN/AVR-2A(V)/AH-64	2.8	11.5	9.0								23.3
Infrared Countermeasure Set - AN/ALQ-144A/OH-58D	0.2	0.1	0.1								0.4
AN/ALQ-211 Suite of Integrated Radio Frequency CMS	11.1	5.2	2.2	2.7		2.8	8.7	2.9			35.6
Advanced Threat Infrared Countermeasures (ATIRCM)		9.1	7.3			9.9	13.1	14.4	14.7		68.5
Total	14.1	25.9	18.6	2.7	12.7	21.8	17.3	14.7	1306.9	4349.7	127.8
MODIFICATIONS < \$2.0M (AA0725)											
Engine Trend Monitor System	2.4										2.4
Avionics System Cockpit Upgrade - Group I		1.8	1.7	1.7	1.9	1.9	1.9	1.9	1.9	6.0	18.8
Total	2.4	1.8	1.7	1.7	1.9	1.9	1.9	1.9	1.9	6.0	21.2
Grand Total	2771.4	819.4	780.3	893.9	980.2	1065.6	1324.7	14292.1	1306.9	4349.7	14292.1

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 1 / Aircraft												ARL (TIARA) (A11500)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty	2			2								4	
Gross Cost	61.8	0.0	20.3	29.7	40.1	13.1	12.7	11.0	10.9	0.0	0.0	199.7	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	61.8	0.0	20.3	29.7	40.1	13.1	12.7	11.0	10.9	0.0	0.0	199.7	
Initial Spares							2.5	0.5	0.5			3.5	
Total Proc Cost	61.8	0.0	20.3	29.7	40.1	13.1	15.2	11.4	11.4	0.0	0.0	203.2	
Flyaway U/C				12.8									
Wpn Sys Proc U/C				14.9									

DESCRIPTION: The Airborne Reconnaissance Low (ARL) has evolved from two complimentary tactical airborne systems ARL-I (Imagery Intelligence IMINT), an electro-optic reconnaissance and surveillance system, and ARL-C (communications intelligence COMINT), system which provides real-time highly accurate radio intercept and location. The ARL program integrates the capabilities of ARL-I and ARL-C into a single system which satisfies the requirements identified by validated SOUTHCOM Statements of Need (SON). The merger of these programs minimizes the acquisition and operational costs, increases availability, and optimizes flexibility resulting from the integration of the electro-optic and Radio Frequency (RF) sensors into a unified system. The primary sensors will be a Signal Intelligence (SIGINT) with precision Direction Finding (DF) capability and 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 SIGINT and near real time IMINT collection support to Joint Force (JTF) Commanders. ARL is a multi-echelon level, multi-INT (combined SIGINT and IMINT) system, designed for forward deployment/force projection in Operations Other Than War (OOTW) to mid intensity conflict environments. ARL also conducts daily JCS Sensitive Reconnaissance Operations, 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 DEA and FEMA. ARL is currently providing an indications and warnings capability to U.S. Armed Forces in Korea. A November 1995 Department of the Army (DA) Directed Requirement validated the USARPAC/PACOM SON requirement for six ARL-Ms with Electronic Intelligence (ELINT) and MTI/SAR.

JUSTIFICATION: FY99 funds will cover fielding costs associated with the ARL-Ms, installation of Commanders Tactical Terminal (CTT-H3) and provide upgrades to the IMINT payloads of fielded ARL-M systems.

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft			P-1 Line Item Nomenclature: ARL (TIARA) (A11500)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
AIRCRAFT Flyaway Costs														
Airframes / CFE														
Aircraft Mods (Incl M/E)			16374			5200	1	5200						
ARL-M Systems 4&5 Airframes w/Mods						20342	2	10171						
ARL-M Systems 4&5 B-Kits for WKSTS									26480	2	13240			
Modify Airframe to ARL-M Config w/Sensors									4766	1	4766			
Modify ARL-M Systems to incorporate CTT-H3												6320	3	1395
Upgrade to IMINT Suite												4185		
Subtotal Flyaway Costs			16374			25542			31246			10505		
Non-Recurring Costs														
Tooling Equipment														
Other System Test														
Total Flyaway			16374			25542			31246			10505		
Support Cost														
Engineering Support			420			300			831			100		
Program Management (Admin Support)			1008			1022			1756			400		
GFE									341			2128		
Fielding			1761			2372								
Peculiar Training Equipment														
Engineering Change Orders			781			500			2500					
Other (Testing/Spares)			3970			4194			3448			2628		
Subtotal Support Cost									8876			2628		
Gross P-1 End Cost			20344			29736			40122			13133		
Less: Prior Year Adv Proc														
Net P-1 Full Funding Cost			20344			29736			40122			13133		
Plus: P-1 CY Adv Proc														
Other Non P-1 Costs														
Initial Spares														
Mods														
TOTAL			20344			29736			40122			13133		

Exhibit P-5a, Budget Procurement History and Planning										Date:
Appropriation / Budget Activity/Serial No. AIRCRAFT PROCUREMENT / 1 / Aircraft										February 1998
Weapon System Type:										
P-1 Line Item Nomenclature:										
ARL(TIARA)(A11500)										
WBS Cost Elements: Fiscal Years	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 Revisn Avail	RFP Issue Date
FY96 ARL-M Systems 1 & 2 MTI/SAR Mod	California Microwave, Belcamp, MD	C/FP-D	CECOM	Oct-95	Sep-96	2	8187	Yes	No	
FY97 ARL-M System 3 MTI/SAR Mod	California Microwave, Belcamp, MD	C/FP-O	CECOM	Nov-96	Aug-97	1	5200	Yes	No	
ARL-M Systems 4 & 5-Airframes with Mods	California Microwave, Belcamp, MD	C/FP-O	CECOM	Dec-96	Dec-98	2	10171	Yes	No	
FY98 ARL-M Systems 4&5 B-Kits for workstations per aircraft/imagery sensors and high performance multimode radar	California Microwave, Belcamp, MD	C/FP-O	CECOM	Dec-97	Dec-98	2	13240	Yes	No	
Modify Airframe to ARL-M Config w/Sensors	California Microwave, Belcamp, MD	C/FP-O	CECOM	Feb-98	Feb-00	1	4766	Yes	No	
FY99 Upgrade to IMINT Suite	TBS	C/FP	CECOM	Oct-98	Jan-01	3	1395	Yes	No	
REMARKS:										

FY 1998 / FY 1999 BUDGET PRODUCTION SCHEDULE										P-1 Item Nomenclature:		Date:																				
										ARL (TIARA) (A11500)		February 1998																				
MFR	NAME / LOCATION	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96												Fiscal Year 97													
							Calendar Year 96						Calendar Year 97						Calendar Year 96						Calendar Year 97							
							O	N	D	J	F	M	A	P	A	M	J	J	A	S	O	C	O	N	D	J	F	M	A	P	A	M
1	ARL-M Systems 1&2 - Airframes With MTI/SAR	96 & Pr	A	2	0	2																										
1	ARL-M Systems 4 & 5 - Airframes With MTI/SAR	FY97	A	2	0	2																										
TOTAL																																
							REMARKS																									
							ADMIN LEAD TIME												MFR												TOTAL	
							Prior 1 Oct.						After 1 Oct.						Prior 1 Oct.						After 1 Oct.							
							7						7						7						31							
							4						2						22						24							
							INITIAL						REORDER						INITIAL						REORDER							
							REORDER						INITIAL						REORDER						INITIAL							
							INITIAL						REORDER						INITIAL						REORDER							
							REORDER						INITIAL						REORDER						INITIAL							
							INITIAL						REORDER						INITIAL						REORDER							

Exhibit P-40, Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No:										Date:	
AIRCRAFT PROCUREMENT / 1 / Aircraft										February 1998	
P-1 Item Nomenclature:										UC-35 (MEDIUM RANGE) AIRCRAFT (A11300)	
Program Elements for Code B Items:										Other Related Program Elements:	
Code: A											
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	2	5	5	5				3	3		23
Gross Cost	8.6	21.0	21.8	22.5	0.0	0.0	0.0	14.8	14.8	0.0	103.4
Less PY Adv Proc											
Plus CY Adv Proc											
Net Proc (P-1)	0.0	8.6	21.0	22.5	0.0	0.0	0.0	14.8	14.8	0.0	103.4
Initial Spares											
Total Proc Cost	0.0	8.6	21.0	22.5	0.0	0.0	0.0	14.8	14.8	0.0	103.4
Flyaway U/C											
Wpn Sys Proc U/C											

DESCRIPTION:

The UC-35A (Medium Range) aircraft is a fully integrated, two-pilot crew, 6-8 passenger capability, multi-engine system with worldwide self-deployability. It has advanced technology, while being a non-developmental, fixed wing aircraft system. The UC-35A aircraft is being fielded using the concept of Life Cycle Contractor Support.

JUSTIFICATION:

The FY 99 budget provides no funding for the UC-35A procurement.

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft			P-1 Line Item Nomenclature: UC-35 (MEDIUM RANGE) AIRCRAFT (A11300)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
AIRCRAFT Flyaway Costs														
		Airframes / CFE	19,765	5	3,953	20,380	5	4,076	20,754	5	4,151			
		Avionics	426			490			500					
		Training	287			329			381					
		Contractor Support	357			428			538					
		Engine Repair, Parts, & Material	80			113			242					
		Other Costs	44			88			66					
		Subtotal Flyaway Costs	20,959			21,828			22,481					
		Non-Recurring Costs												
		Tooling Equipment												
		Other System Test												
		Total Flyaway	20,959			21,828			22,481					
		Support Cost												
		Engine (leftover A model)												
		Airframe PGSE												
		Engine PGSE												
		Peculiar Training Equipment												
		Publications Tech / Data												
		Engineering Change Orders												
		Other (specify) Net/ICS/Mtxsupt												
		Subtotal Support Cost												
		Gross P-1 End Cost	20,959			21,828			22,481					
		Less: Prior Year Adv Proc												
		Net P-1 Full Funding Cost	20,959			21,828			22,481					
		Plus: P-1 CY Adv Proc												
		Other Non P-1 Costs												
		Initial Spares												
		Mods												
		TOTAL	20,959			21,828			22,481					

Exhibit P-5a, Budget Procurement History and Planning										Date: February 1998
Appropriation / Budget Activity/Serial No:		Weapon System Type:		P-1 Line Item Nomenclature:						
AIRCRAFT PROCUREMENT / 1 / Aircraft				UC-35 (MEDIUM RANGE) AIRCRAFT (A11300)						
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
Airframes / CFE										
FY 96	Cessna Aircraft Company	C/FP-O	ATCOM	Jun-96	Apr 97	5	3953	Yes	No	
FY 97	Wichita, Kansas	Option	ATCOM	Jun-97	Mar 98	5	4076	Yes	No	
FY 98		Option	AMCOM	Jun-98	Apr 99	5	4151	Yes	No	
REMARKS:										

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:		Date:		February 1998								
AIRCRAFT PROCUREMENT / 1 / Aircraft		P-1 Item Nonnomenclature:		GUARDRAIL COMMON SENSOR (TIARA) (AO2005)								
Program Elements for Code B Items:		Code:		Other Related Program Elements:								
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	704.8	0.0	5.8	4.9	12.8	1.9	14.5	3.4	16.3	5.4	0.0	769.8
Less FY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	704.8	0.0	5.8	4.9	12.8	1.9	14.5	3.4	16.3	5.4	0.0	769.8
Initial Spares	112.9		4.7	11.3	0.8							129.7
Total Proc Cost	817.7	0.0	10.5	16.2	13.6	1.9	14.5	3.4	16.3	5.4	0.0	899.5
Flyaway U/C												
Wpnt Sys Proc U/C												

DESCRIPTION: GUARDRAIL is an Airborne Signal Intercept and emitter location system designed to provide commanders with critical battlefield information via a Commander's Tactical Terminal (CTT) and other DoD tactical and fixed communication systems. The Army's GUARDRAIL/Common Sensor Systems (GRCS) will have a highly flexible architecture to allow deployment to support contingency operations.

The GUARDRAIL/Common Sensor System (GRCS) integrates the improved GUARDRAIL V for communications intelligence (COMINT), the Communications High Accuracy Airborne Location System (CHAALS/CHALS-X) for COMINT and precision emitter location, and the Advanced QUICKLOOK (AQL) for electronics intelligence (ELINT) and precision emitter location into a single signal intelligence (SIGINT) system. The airborne elements are integrated into the RC-12K/N/P aircraft. Ground processing is conducted in the Integrated Processing Facility (IPF). Key performance requirements include a real-time COMINT and ELINT collection and high accuracy target location capability in communications and radar frequencies. The Interoperable Data Link (IDL)/Multi-Role Data Link (MRDL) connects the airborne elements and the ground processing element. Additional funding was provided in FY98 to integrate production CHAALS hardware into GRCS System 3 in Korea and to fund additional embedded training efforts.

JUSTIFICATION:

The FY 99 GUARDRAIL/Common Sensor (AO2005) funds provide for fielding support to the GUARDRAIL/Common Sensor System 2 program.

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No. AIRCRAFT PROCUREMENT / 1 / Aircraft			P-1 Line Item Nomenclature: GUARDRAIL COMMON SENSOR (TIARA) (A02005)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
AIRCRAFT Flyaway Costs														
		Airframes / CFE												
		Avionics												
		A. GFE												
		Other GFE												
		Armament (FCR)												
		ECO (All Flyaway Components)												
		Other Costs (Halon)												
		Subtotal Flyaway Costs												
		Non-Recurring Costs												
		Tooling Equipment												
		Other												
		Total Flyaway												
		Support Cost												
		Government In-House/Program MGMT ADM	1127			209			103					
		Contractor Engineering	2330											
		Test & Integration Facility	595			960			448					
		Fielding/ICS	1775						2786			1931		
		Mini-Information Processing Facility (IPF)												
		Communications & Relay Equipment												
		GFE/Maintenance Equipment												
		CHAALS							2955					
		Publications Tech / Data												
		Engineering Change Orders												
		Embedded Training				3756			6459					
		Subtotal Support Cost	5827			4925			12751			1931		
		Gross P-1 End Cost												
		Less: Prior Year Adv Proc	5827			4925			12751			1931		
		Net P-1 Full Funding Cost												
		Plus: P-1 CY Adv Proc	5827			4925			12751			1931		
		Other Non P-1 Costs												
		Initial Spares	4709			11289			786					
		Mods												
		TOTAL	10536			16214			13537			1931		

Exhibit P-5a, Budget Procurement History and Planning										Date: February 1998
Appropriation / Budget Activity/Serial No. AIRCRAFT PROCUREMENT / 1 / Aircraft		Weapon System Type:			P-1 Line Item Nomenclature: GUARDRAIL COMMON SENSOR (TIARA) (A02005)					
WBS Cost Elements: Fiscal Years	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 Revisn Avail	RFP Issue Date
FY97 Embedded Training	TRW, Sunnyvale, CA.	SS/FP	CECOM	Sep-97	Sep-98			No		
FY98 Embedded Training	TRW, Sunnyvale, CA.	SS/FP	CECOM	Feb-98	Mar-99			No		
Communications High Accuracy Airborne Location System (CHAALS)	Lockheed Martin, Owego, NY	SS/FP	CECOM	Feb-98	Feb-99			No		
REMARKS:										

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
AIRCRAFT PROCUREMENT / 1 / Aircraft												P-1 Item Nomenclature:
Program Elements for Code B Items:												UH-60 BLACKHAWK (MYP) (AA0005)
Code:												Other Related Program Elements:
A												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty	1298	60	34	28	22	10	10	10	10		1542	
Gross Cost	6514.4	414.8	287.8	330.9	243.8	104.4	96.3	96.0	95.6	0.0	8576.8	
Less PY Adv Proc	1924.7	180.6	72.4	65.6	25.0						2341.3	
Plus CY Adv Proc	2138.0	72.4	65.6	25.0							2374.0	
Net Proc (P-1)	6727.7	306.6	280.4	290.3	218.8	104.4	96.3	96.0	95.6	0.0	8609.5	
Initial Spares	392.5	9.2	6.4	2.4	1.9						420.9	
Total Proc Cost	7120.2	315.8	286.8	292.7	220.7	104.4	96.3	96.0	95.6	0.0	9030.4	
Flyaway U/C	4.8	6.3	8.0	10.9	10.2	8.6	7.8	7.7	7.6		5.3	
Wpn Sys Proc U/C	5.3	7.1	8.8	11.8	11.2	10.4	9.6	9.6	9.6		5.8	
DESCRIPTION												
UH-60 BLACK HAWK is a twin engine, single rotor helicopter that is designed to support the Army's airmobility doctrine for employment of land forces into 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. The UH-60 BLACK HAWK is in its twenty-first year of production. Fourteen hundred and eighteen aircraft have been procured by the Army over the period from FY77 thru FY96, which includes 18 aircraft provided to the U.S. Customs Service, 16 aircraft provided to the Air Force, and ten aircraft provided to Israel. In addition, 45 aircraft have been procured with National Guard funding. An additional 124 Army aircraft are budgeted for procurement in FY97 through FY03. This results in 1,543 aircraft for the Army versus a requirement of 2,043 aircraft. The initial 980 aircraft were delivered with the T700-GE-700 Engine and were designated as the UH-60A. With the incorporation of the General Electric T700-GE-701C Engine in the UH-60 in October 1989, the aircraft series designation was changed to the UH-60L. The last UH-60L Black Hawk will be delivered in May 2004. Qualification and integration of the UH-60Q MEDEVAC aircraft continues with funding provided by Congress in FY97 to convert four new production UH-60Ls to the UH-60Q configuration.												
JUSTIFICATION:												
FY99 funds are required for the procurement of aircraft and associated mission kits, continuation of fielding and to provide for PMO operations, matrix support, and contractor engineering support for the procurement of 22 aircraft.												

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No. AIRCRAFT PROCUREMENT / 1 / Aircraft				P-1 Line Item Nomenclature: UH-60 BLACKHAWK (MYP) (AA0005)				Weapon System Type:		Date: February 1998	
Aircraft Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
AIRCRAFT Flyaway Costs														
		Airframes / CFE	290,748	60	4,846	185,435	34	5,454	182,226	28	6,508	153,031	22	6,956
		Engines/Accessories												
		(Eng Model T700-GE-701C) 2 per Acft	36,547	70	522	36,986	70	528	32,740	56	585	21,422	36	595
		Avionics												
		A. CFE	4,872			11,403			7,000			7,910		
		B. GFE	5,642			6,644			7,711			4,431		
		Other GFE												
		Armament												
		ECO (All Flyaway Components)	319			2			7,399			4,555		
		Other Costs (Mission Kits)	24,177			30,687			67,520			32,144		
		Subtotal Flyaway Costs	362,305			271,157			304,596			223,493		
		Non-Recurring Costs												
		Tooling Equipment	5,502											
		Other Nonrecurring	367,807			271,157			304,596			223,493		
		Total Flyaway												
		Support Cost												
		Airframe PGSE	827			1,581						372		
		Engine PGSE												
		Peculiar Training Equipment	1,334						3,600					
		Publications Tech / Data	5,433			3,371			4,487			3,472		
		Engineering Change Orders												
		PM Administration	12,967			13,305			13,342			13,184		
		Fielding	4,357			3,424			4,871			3,299		
		Subtotal Support Cost	24,918			21,681			26,300			20,327		
		Gross P-1 End Cost	392,725			292,838			330,896			243,820		
		Less: Prior Year Adv Proc	72,417			73,047			65,563			25,000		
		Net P-1 Full Funding Cost	320,308			219,791			265,333			218,820		
		Plus: P-1 CY Adv Proc	73,047			65,563			25,000					
		Other Non P-1 Costs												
		Initial Spares	8,462			6,449			2,444			1,944		
		Mods	23,683			12,350			16,962			21,657		
		TOTAL	425,500			304,153			309,739			242,421		

Exhibit P-5a, Budget Procurement History and Planning									
Appropriation / Budget Activity/Serial No:					Date: February 1998				
AIRCRAFT PROCUREMENT / 1 / Aircraft					P-1 Line Item Nomenclature: UH-60 BLACKHAWK (MYP) (AA0005)				
WBS Cost Elements:					Weapon System Type:				
Fiscal Years					P-1 Line Item Nomenclature: UH-60 BLACKHAWK (MYP) (AA0005)				
Airframes					P-1 Line Item Nomenclature: UH-60 BLACKHAWK (MYP) (AA0005)				
FY 96					FY 96				
FY 97					FY 97				
FY 98					FY 98				
FY 99					FY 99				
Engine					Engine				
FY 95 (AP for FY96)					FY 95 (AP for FY96)				
FY 96 (AP for FY97)					FY 96 (AP for FY97)				
FY 97 (AP for FY98)					FY 97 (AP for FY98)				
FY 98 (AP for FY99)					FY 98 (AP for FY99)				
FY 99					FY 99				
REMARKS:					REMARKS:				
Unit costs shown reflect the values shown on the P5. These values include both hardware, as well as contractor system project management. The current FY97-01 airframe contract provided Firm Fixed Prices for 28 Army H-60s in FY97, 18 in FY98, and 12 in FY99. Six aircraft funded with the FY97 appropriation were procured on the previous multiyear contract. Ten of the aircraft funded with the FY98 appropriation are being procured on an option clause. The FY99 portion of the contract will require renegotiation to accommodate the increase in quantity from 18 to 28. Current engine requirements are being procured on a contract with an indefinite quantity.					Unit costs shown reflect the values shown on the P5. These values include both hardware, as well as contractor system project management. The current FY97-01 airframe contract provided Firm Fixed Prices for 28 Army H-60s in FY97, 18 in FY98, and 12 in FY99. Six aircraft funded with the FY97 appropriation were procured on the previous multiyear contract. Ten of the aircraft funded with the FY98 appropriation are being procured on an option clause. The FY99 portion of the contract will require renegotiation to accommodate the increase in quantity from 18 to 28. Current engine requirements are being procured on a contract with an indefinite quantity.				

Exhibit P-40, Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No:		Date:		February 1998							
AIRCRAFT PROCUREMENT / 1 / Aircraft		P-1 Item Nomenclature:		UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)							
Program Elements for Code B Items:		Code:		Other Related Program Elements:							
			A								
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete
Proc Qty	1298	60	60	34	28	22	10	10	10	10	
Gross Cost	2138.0	72.4	73.0	65.6	25.0	0.0	0.0	0.0	0.0	0.0	1542
Less PY Adv Proc											2374.0
Plus CY Adv Proc	2138.0	72.4	73.0	65.6	25.0	0.0	0.0	0.0	0.0	0.0	2374.0
Net Proc (P-1)											
Initial Spares											
Total Proc Cost											
Flyaway U/C											
Wpn Sys Proc U/C											
DESCRIPTION: The Advance Procurement funding for the UH-60 BLACK HAWK contains funding for the airframe and engine contracts and funding for Government Furnished Equipment (GFE) to support the UH-60 production and mission kits. GFE includes such items as avionics equipment, crew seats, Hover Infrared Suppressor Systems and Auxiliary Power Units.											

Advance Procurement Requirements Analysis-Funding (P-10A)														
Appropriation / Budget Activity/Serial No.				First System Award Date:				First System Completion Date:				Date:		
AIRCRAFT PROCUREMENT / 1 / Aircraft				P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA00005)										
(\$ in Millions)														
	PLT (mos)	When Rqd (mos)	Pr Yrs	1995	1996	1997	1998	1999	2000	2001	2002	2003	To Comp	Total
End Item Quantity:														
Airframe	24	7	1349.2	60.0	60.0	34.0	28.0	22.0	10.0	10.0	10.0	10.0		1463.5
Engine	16	4	554.6	30.0	32.0	40.0	12.3							652.5
Avionics(Various)	Various	4	125.2	1.2	2.5	21.0	9.6							128.9
Auxiliary Power Unit(APU)	13	4	38.5	0.0	2.3	1.5	1.4							43.7
Armored Crew Seat	12	4	19.1	0.5	1.2	1.6	0.9							23.3
Hover Infrared Suppressor (HIRSS)	10	4	23.4	3.2	1.4	0.8								28.8
Elastomeric Rod End Bearings	10	4	0.0	0.9	0.4	0.3								1.6
Extended Range Fuel System	13	N/A	15.6		1.0									16.6
Blackout Device Kit	7	N/A	0.0		0.2									.2
Air Transportability Kit	14	N/A	0.0		1.0									1.0
Other	N/A	N/A	12.4		0.3	0.4	0.8							13.9
Total Advance Procurement			2138.0	72.4	73.0	65.6	25.0							2374.0

Advance Procurement Requirements Analysis-Budget Justification (P-10B)									
Appropriation / Budget Activity/Serial No.				Date:			February 1998		
AIRCRAFT PROCUREMENT / 1 / Aircraft				UH-60 BLACKHAWK (MYP) (ADV PROO) (AA0005)					
(\$ in Millions)									
	PLT (mos)	Quantity Per Assembly	Unit Cost	1998			1999		
				Qty	Contract Forecast Date	Total Cost Request	Qty	Contract Forecast Date	Total Cost Request
UH-60L BLACK HAWK									
CFE Airframe (MYC)	24	N/A	1.0(TL)	12	Dec 97	12.3			
Engine	16	2	0.6	16	Dec 97	9.6			
Auxiliary Power Unit	13	1	0.1	16	Feb 98	1.4			
Armored Crew Seat	12	2	0.1	32	Feb 98	0.9			
Other	N/A	N/A	N/A	N/A	Dec 97	0.8			
Total Advance Procurement						25.0			
Description: Airframe requirement is the termination liability requirement from the FY97-01 multiyear, multiservice contract signed in July, 1997. Section H 25 of this contract (DAAJ09-97-C-0005) required EOQ funding for FY98 and FY99 at contract award. Additional funding is required against the FY99 requirement in December 1997 to cover the incremental termination liability incurred during FY98. Engine price reflects the appropriate option price negotiated in the contract signed in September, 1997. Option for engines must be exercised in FY98 in order to ensure delivery to the prime contractor three months prior to end item delivery (April 99). No contractual instrument is currently available for the APU or Crew Seat. Other costs reflect funding of Engine Data and funding no longer available in the program.									

Advance Procurement Requirements Analysis-Present Value Analysis (P-10C)											Date:	February 1998	
Appropriation / Budget Activity/Serial No.											P-1 Line Item Nomenclature / Weapon System:		
AIRCRAFT PROCUREMENT / 1 / Aircraft											UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)		
(\$ in Millions)													
	Pr Yrs	1995	1996	1997	1998	1999	2000	2001	2002	2003	To Comp	Total	
Proposal w/o AP													
Then Year Cost			4	29	77	107	89	48	20	10	3	389	
Constant Year Cost			5	30	77	106	85	46	19	9	3	379	
Present Value			5	28	71	93	73	38	15	7	2	331	
AP Proposal													
Then Year Cost			4	31	78	103	80	44	19	8	3	370	
Constant Year Cost			5	32	78	101	77	41	17	7	3	361	
Present Value			5	30	72	90	66	34	14	6	2	317	
AP Savings (Difference)													
Then Year Cost				2	1	-4	-9	-5	-2	-2		-18	
Constant Year Cost				2	1	-4	-9	-4	-2	-2		-18	
Present Value				2	1	-3	-8	-4	-1	-1		-14	
Remarks: Values above reflect the total Army airframe contract price(outlays) for the FY97-99 requirements utilizing a multiyear contract, versus the price of procuring these aircraft on three single year contracts. Constant dollars shown are FY98. Values above do not include the savings realized from four previous airframe multiyear contracts or from three previous engine multiyear contracts.													

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)														Date: February 1998			
Appropriation / Budget Activity/Serial No:												P-1 Line Item Nomenclature / Weapon System:					
AIRCRAFT PROCUREMENT / 1 / Aircraft												UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)					
(\$ in Millions)																	
	Total Program	FY 97												Total Obl/Exp (Cum)	Ending Balance (Cum)		
		1996					1997										
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep				
FY 96																	
Obl Plan	1.6														1.6		
Actual	7.1														7.1		
Exp Plan																	
Actual																	
FY 97																	
Obl Plan	67.3														67.3		
Actual	65.6						60.5	6.8							65.6		
Exp Plan							.8	1.0									
Actual																	
FY 98																	
Obl Plan	25.0															25.0	
FY 99																	
Obl Plan																	
Narrative: Expenditure plans are not prepared. FY96 data reflects carry over only--total obligations planned and actual obligations for FY96 were 71.4M and 65.9M respectively. Of the 25.0M FY98 budget, 22.7M is planned for award in December, 1997 and the remaining \$2.3M is projected for Feb, 1998.																	

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
P-1 Item Nomenclature:												
GUARDRAIL MODS (TIARA) (AZ2000)												
Program Elements for Code B Items:												
Code:												
Other Related Program Elements:												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty												
Gross Cost	503.2	0.0	56.2	30.3	14.6	0.0	0.0	0.0	0.0	0.0	640.3	
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	503.2	0.0	56.2	30.3	14.6	0.0	0.0	0.0	0.0	0.0	640.3	
Initial Spares			0.4	5.7	3.3	5.9					22.1	
Total Proc Cost	503.2	0.0	56.6	36.0	17.9	5.9	0.0	0.0	0.0	0.0	662.5	
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Guardrail is an airborne signal intercept and emitter location system designed to provide tactical commanders with critical battlefield information via a joint Tactical Terminal (JTT) and other DoD tactical and fixed communications systems. The Army's GUARDRAIL/Common Sensor system (GRCS) will have a highly flexible architecture to allow rapid deployment to support contingency operations.

The GRCS integrates the Improved GUARDRAIL V for communications intelligence (COMINT), the Communications High Accuracy Airborne Location System (CHAALS/CHALS-X) for COMINT and precision emitter location, and the Advanced QUICKLOOK (AQL) for electronics intelligence (ELINT) and precision emitter location into a single signal intelligence (SIGINT) system. The airborne elements are integrated into the RC-12K/N/P/Q aircraft. Ground processing is conducted in the Integrated Processing Facility (IPF). Key performance requirements include a real-time COMINT and ELINT collection and high accuracy target location capability in communications and radar frequencies. The Interoperable Data Link (IDL)/Multi-Role Data Link (MRDL) connects the airborne elements and the ground processing element. A satellite remote relay will provide rapid deployment capability.

Exhibit P-40C Budget Item Justification Sheet				Date
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature		February 1998
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft		GUARDRAIL MODS (TIARA) (AZ2000)		
Program Elements for Code B Items		Code	Other Related Program Elements	
JUSTIFICATION: FY99 funds the installation and fielding of modifications and equipment to systems procured in prior years. The modification requiring FY99 funds are listed below. The GR/CS System 2 Block Upgrade is a modification to the System 2 production contract to provide an advanced tactical SIGINT architecture and direct air to satellite relay (DASR). DASR allows the contingency corps to be deployed on worldwide missions with little to no airlift support and with reduced forwardly deployed personnel. The Interoperability modification gives GR/CS System 2 the ability to be interoperable with Air Force platforms in FY99. Additional FY99 funds have been provided to convert (3) RC-12N model training base aircraft to the RC-12P model configuration to support training of GRCS System 2 pilots. The aircraft will also be modified to accept mission payloads and will be used to replace the older and less capable RC-12H models.				

Exhibit P-40M Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No.			P-1 Item Nomenclature			Date February 1998					
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft			GUARDRAIL MODS (TIARA) (AZ2000)								
Program Elements for Code B Items			Code	Other Related Program Elements							
Description			Fiscal Years & Prior								
OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
CHAALS for System 3											
1-96-111-1111	Operational	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Interoperability With Air Force											
1-96-222-2222	Operational	6.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4
Remote Relay for System 1											
1-96-333-3333	Operational	6.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2
AQL Phase III Hardware Upgrade											
1-96-444-4444	Operational	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7
System 2 Block Upgrade											
1-96-666-6666	Operational	170.6	15.3	13.2	12.9	0.0	0.0	0.0	0.0	0.0	212.0
TIBS and TRIXS for GRCS											
1-96-777-7777	Operational	13.1	12.6	1.4	0.0	0.0	0.0	0.0	0.0	0.0	27.1
Conversion of RC-12N's to RC-12P's											
1-99-111-1111	Operational	0.0	0.0	0.0	23.2	0.0	0.0	0.0	0.0	0.0	23.2
Totals											
		202.4	30.3	14.6	36.1	0.0	0.0	0.0	0.0	0.0	283.4

INDIVIDUAL MODIFICATION																																																																																														
										Date	February 1998																																																																																			
MODIFICATION TITLE: CHAALS for System 3 1-96-111-1111																																																																																														
MODELS OF SYSTEMS AFFECTED: GUARDRAIL/Common Sensor System 3 / RC12H.																																																																																														
DESCRIPTION / JUSTIFICATION: The requirement exists for a Communications High Accuracy Airborne Location System (CHAALS) and precision location capability in System 3 which is currently deployed to Korea. Funds were used to procure commercial processing and peripheral equipment which allows use of residual equipment from the development contract. Installation was performed by government personnel. Funds also provided for training of the unit on the equipment.																																																																																														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Contract Award: Delivery: PLANNED 1QFY96 3QFY96 ACCOMPLISHED 1QFY96 2QFY96.																																																																																														
Installation Schedule:																																																																																														
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>1</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> <tr> <td>Outputs</td> <td>1</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>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	1																				Outputs	1																			
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																													
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																										
Inputs	1																																																																																													
Outputs	1																																																																																													
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>To</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>1</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> <tr> <td>Outputs</td> <td>1</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>												Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To	Inputs	1																		Outputs	1																									
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																													
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																																																																												
Inputs	1																																																																																													
Outputs	1																																																																																													
METHOD OF IMPLEMENTATION:																																																																																														
Contract Dates: FY 1997 FY 1997				ADMINISTRATIVE LEADTIME: FY 1998 FY 1998				PRODUCTION LEADTIME: FY 1999 FY 1999																																																																																						
Delivery Date:																																																																																														

Date

MODIFICATION TITLE:
Interoperability With Air Force 1-96-222-2222

MODELS OF SYSTEMS AFFECTED:	GUARDRAIL/Common SENSOR 3 / RC-12H, Sys 4 / RC-12K, Sys 1 / RC-12N, System 2 / RC-12P
-----------------------------	---

DESCRIPTION / JUSTIFICATION:

The requirement exists for all GUARDRAIL/Common Sensor Systems to be interoperable with Air Force platforms. Interoperability increases the SIGINT data available to the tactical commander by allowing the GUARDRAIL system to control and obtain data from Air Force platforms.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	<u>PLANNED</u>	<u>ACCOMPLISHED</u>
Contract Award:	4QFY96	4QFY96
Software Build #1 I & T	2QFY97	2QFY97
Software Build #2 I & T	3QFY97	3QFY97
Software Build #3 I & T	3QFY97	3QFY97
Integration & Test	4QFY98	
Preliminary Acceptance Test	4QFY98	

Installation Schedule:[illegible][illegible]

METHOD OF IMPLEMENTATION:

Contract Dates:

Delivery Date:

ADMINISTRATIVE LEADTIME:

FY 1998

FY 1998

Months

FY 1999

FY 1999

Months

INDIVIDUAL MODIFICATION																				
Date																				
February 1998																				
Interoperability With Air Force 1-96-222-2222																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring Equipment	3	5.2																	3	5.2
Equipment, Nonrecurring		1.1																		1.1
Engineering Change Orders																				
Data		0.4																		0.4
Training Equipment																				
Support Equipment																				
Other				0.4																0.4
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits			3	1.3															3	1.3
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installation			3	1.3															3	1.3
Total Procurement Cost		6.7		1.7															3	8.4

INDIVIDUAL MODIFICATION													
										Date	February 1998		
MODIFICATION TITLE: Remote Relay for System 1 1-96-333-3333													
MODELS OF SYSTEMS AFFECTED: GUARDRAIL/Common Sensor System 1 / RC-12N													
DESCRIPTION / JUSTIFICATION: The requirement exists for GR/CS System 1 to provide precision location/targeting data while operating in remote mode. Currently, the system can not perform precision location for targeting through the satellite relay while being used in remote operation. The required precision location hardware will be purchased from an ongoing production contract and fabrication will be performed by Tobyhanna Army Depot. Installation will be at the unit with efforts structured around system availability.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: System Requirement Review: 4QFY96 Quarterly Reviews: Quarterly System I & T: 2QFY98. ACCOMPLISHED 3QFY96													
Installation Schedule:													
Inputs Outputs	Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4
Inputs Outputs	Totals	1	2	3	4	1	2	3	4	1	2	3	4
METHOD OF IMPLEMENTATION: Contract Dates: FY 1997 Delivery Date: FY 1997 ADMINISTRATIVE LEADTIME: FY 1998 FY 1998 PRODUCTION LEADTIME: FY 1999 FY 1999 Months													

INDIVIDUAL MODIFICATION													
Date February 1998													
MODIFICATION TITLE (Cont): Remote Relay for System 1 1-96-333-3333													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits													
Installation Kits, Nonrecurring Equipment	1	0.5											1
Equipment, Nonrecurring		5.9											5.9
Engineering Change Orders		0.1											0.1
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits			1	0.7									1
FY 1997 Eqpt -- Kits													0.7
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- Kits													
FY 2001 Eqpt -- Kits													
FY 2002 Eqpt -- Kits													
FY 2003 Eqpt -- Kits													
TC Equip-Kits													
Total Installation			1	0.7									1
Total Procurement Cost		6.5		0.7									7.2

INDIVIDUAL MODIFICATION																																																																																																																						
MODIFICATION TITLE: AQL Phase III Hardware Upgrade 1-96-444-4444													Date	February 1998																																																																																																								
MODELS OF SYSTEMS AFFECTED: GUARDRAIL/Common Sensor System 4 / RC-K, System 1 / RC-12N																																																																																																																						
DESCRIPTION / JUSTIFICATION: The final phase of the Advanced Quicklook (AQL) modification program improves the sustainment and availability of AQL hardware. It includes enhanced flight line maintenance and system diagnostics to better isolate failed equipment and reduce the time required to perform maintenance. It also updates test procedures and equipment to incorporate changes made and lessons learned. It includes modifications to selected AQL Line Replaceable Units (LRUs) to correct several identified hardware problems arising from environmental conditions during extensive operational testing. Efforts will be done under the current production contract. There are no special installation requirements necessary. Equipment will be provided to the unit for their installation through normal maintenance procedures, at no additional cost.																																																																																																																						
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>PLANNED</u></th> <th style="text-align: center;"><u>ACCOMPLISHED</u></th> </tr> </thead> <tbody> <tr> <td>Contract Award:</td> <td style="text-align: center;">2QFY96</td> <td style="text-align: center;">2QFY96</td> </tr> <tr> <td>Delivery:</td> <td style="text-align: center;">2QFY97</td> <td style="text-align: center;">2QFY97</td> </tr> </tbody> </table>																<u>PLANNED</u>	<u>ACCOMPLISHED</u>	Contract Award:	2QFY96	2QFY96	Delivery:	2QFY97	2QFY97																																																																																															
	<u>PLANNED</u>	<u>ACCOMPLISHED</u>																																																																																																																				
Contract Award:	2QFY96	2QFY96																																																																																																																				
Delivery:	2QFY97	2QFY97																																																																																																																				
Installation Schedule: <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</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> <tr> <td>Outputs</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> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </tbody> </table>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																					Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																		
Inputs																																																																																																																						
Outputs																																																																																																																						
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																		
<table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="4">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th colspan="4"></th> </tr> </thead> <tbody> <tr> <td>Inputs</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> <tr> <td>Outputs</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> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td colspan="4"></td> </tr> </tbody> </table>															Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					Inputs																					Outputs																					Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																						
Inputs																																																																																																																						
Outputs																																																																																																																						
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																						
METHOD OF IMPLEMENTATION: <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th colspan="4">ADMINISTRATIVE LEADTIME:</th> <th colspan="4">PRODUCTION LEADTIME:</th> </tr> <tr> <th colspan="4">Months</th> <th colspan="4">Months</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">FY 1997</td> <td colspan="4" style="text-align: center;">FY 1998</td> </tr> <tr> <td colspan="4" style="text-align: center;">FY 1997</td> <td colspan="4" style="text-align: center;">FY 1998</td> </tr> </tbody> </table>															ADMINISTRATIVE LEADTIME:				PRODUCTION LEADTIME:				Months				Months				FY 1997				FY 1998				FY 1997				FY 1998																																																																											
ADMINISTRATIVE LEADTIME:				PRODUCTION LEADTIME:																																																																																																																		
Months				Months																																																																																																																		
FY 1997				FY 1998																																																																																																																		
FY 1997				FY 1998																																																																																																																		
Contract Dates: <table style="width: 100%; margin-top: 10px;"> <tbody> <tr> <td style="width: 50%; text-align: center;">FY 1997</td> <td style="width: 50%; text-align: center;">FY 1997</td> </tr> </tbody> </table>															FY 1997	FY 1997																																																																																																						
FY 1997	FY 1997																																																																																																																					
Delivery Date: <table style="width: 100%; margin-top: 10px;"> <tbody> <tr> <td style="width: 50%; text-align: center;">FY 1997</td> <td style="width: 50%; text-align: center;">FY 1997</td> </tr> </tbody> </table>															FY 1997	FY 1997																																																																																																						
FY 1997	FY 1997																																																																																																																					

INDIVIDUAL MODIFICATION																			
										Date		February 1998							
MODIFICATION TITLE: System 2 Block Upgrade 1-96-666-6666																			
MODELS OF SYSTEMS AFFECTED: GUARDRAIL/Common Sensor System 2 / RC-12P/Q																			
DESCRIPTION / JUSTIFICATION: The GUARDRAIL/Common Sensor System 2 Block Upgrade is a modification to the System 2 production contract. It provides the required outyear efforts in support of the basic GR/CS System 2 program and major ECPs to include Advanced Tactical SIGINT Architecture (ATSA), Advanced Situations Analysis and Reporting Tools (ASART) and Direct Air to Satellite Relay (DASR). These ECPs were awarded with prior year funds and included installation costs. These funds are the annualized costs required to support these efforts. These annualized costs include contractor and government engineering, interim contractor support, training, testing, fielding, and program management. There are no hardware quantity procurements planned.																			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																			
					<u>PLANNED</u>					<u>ACCOMPLISHED</u>									
IPF Upgrade Award:					1QFY93					1QFY93									
DASR Contract Awards:					2QFY94					4QFY94									
ASART Contract Award:					4QFY94					4QFY94									
System Fielding:					2QFY99														
M - Demo:					4QFY99														
System Hand-Off:					4QFY99														
Installation Schedule:																			
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001									
Totals		1	2	3	4	1	2	3	4	1	2	3	4						
Inputs																			
Outputs																			
Inputs																			
Outputs																			
Totals		FY 2002		FY 2003		FY 2004		FY 2005		To Complete									
1		2	3	4	1	2	3	4	1	2	3	4							
Inputs																			
Outputs																			
METHOD OF IMPLEMENTATION:																			
Contract Dates:					FY 1997					FY 1998					FY 1999				
Delivery Date:					FY 1997					FY 1998					FY 1999				
					ADMINISTRATIVE LEADTIME:					N/A					Months				
					PRODUCTION LEADTIME:					N/A					Months				

INDIVIDUAL MODIFICATION													
MODIFICATION TITLE (Cont):												Date	February 1998
System 2 Block Upgrade 1-96-666-6666													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits													
Installation Kits, Nonrecurring Equipment		99.3											99.3
Equipment, Nonrecurring		46.6											46.6
Engineering Change Orders		2.5											2.5
GFE / Aircraft Support		1.6											1.6
Training / Fielding		0.3		4.8		4.1		2.6					13.1
Support Equipment		0.5		0.5		0.4		1.5					2.7
Other		3.5		1.0		0.4		0.4					2.3
Interim Contractor Support		0.2		0.1		0.4		1.7					3.6
Testing		3.1		0.4		2.8		2.4					2.7
Gov't In-House/Prg Mgmt Adm		6.8		1.1		1.4		1.7					9.4
Contractor Engineering		6.2		3.3		3.7		2.6					13.2
				4.1									16.6
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment													
Total Procurement Cost		170.6		15.3		13.2		12.9					212.0

February 1998

TIBS and TRIXS for GR/CS 1-96-777-7777

MODELS OF SYSTEMS AFFECTED:	GUARDRAIL/Common Sensor System 3 / RC-12H, Sys 4 / RC-12K, Sys 1 / RC12N, Sys 2 / RC-12P
-----------------------------	--

DESCRIPTION / JUSTIFICATION:

This modification provides a Tactical Information Broadcast Service (TIBS) capability for GR/CS Systems 3, 4, and 1 and provides Tactical Reconnaissance Intelligence Exchange System (TRIXS) capability for all GR/CS systems. The TRIXS capability will allow broadcast and receive on both the collateral and SI networks. The TRIXS capability will be accomplished by using CECOM's Intelligence and Information Warfare Directorate (I2WD) as the system integrator. The hardware will be integrated into a shelterized HMMVV which will then be fielded to the existing GRCS Systems.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	<u>PLANNED</u>	<u>ACCOMPLISHED</u>	<u>PLANNED</u>	<u>ACCOMPLISHED</u>
TIBS Contract Award:	3QFY96		TIBS Preliminary Acceptance:	3QFY98
TRIXS Contract Award:	2QFY98		TRIXS Preliminary Acceptance Test:	3QFY99
TIBS System Requirement Review:	1QFY97	1QFY97	TIBS Final Acceptance Test:	4QFY98
TRIXS System Requirement Review:	2QFY98		TRIXS Final Acceptance:	4QFY99
TIBS Quarterly Reviews:	Quarterly			
TRIXS Quarterly Reviews:	Quarterly			

Installation Schedule:

Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals							3													
									2			4								

[illegible]

METHOD OF IMPLEMENTATION:

Contract Dates:	FY 1997	FY 1998	FY 1999
Delivery Date:	FY 1997	FY 1998	FY 1999

INDIVIDUAL MODIFICATION													
Date													
MODIFICATION TITLE (Cont):													
TIBS and TRIXS for GR/CS 1-96-777-7777													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity			4	2.8									4
Installation Kits													
Installation Kits, Nonrecurring				1.3									1.3
Equipment	3	3.6		2.3									3
Equipment, Nonrecurring				3.2									5.9
Engineering Change Orders		9.2											12.4
Data				1.6									1.6
Training Equipment													
Support Equipment													
Other		0.3		0.7									1.0
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits			3	0.7									3
FY 1997 Eqpt -- Kits					4	1.4							4
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installation			3	0.7	4	1.4							7
Total Procurement Cost		13.1		12.6		1.4							27.1

INDIVIDUAL MODIFICATION																																																																																																																																																																																																																	
										Date	February 1998																																																																																																																																																																																																						
MODIFICATION TITLE: Conversion of RC-12N's to RC-12P's 1-99-111-1111																																																																																																																																																																																																																	
MODELS OF SYSTEMS AFFECTED: Guardrail/Common Sensor RC-12N Training Base Aircraft																																																																																																																																																																																																																	
DESCRIPTION / JUSTIFICATION: This modification provides for the conversion of three (3) RC-12N training base aircraft into the RC-12P model aircraft. Provides for airframe modification, cabling, data link equipment and basic electronic rack layout to receive prime mission equipment (PME). The objective of this modification in the short term is to provide RC-12P's to the training base. In the long term replaces the oldest and the least capable GRCS aircraft, RC-12H's in Korea with System 3.																																																																																																																																																																																																																	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Planned Aircraft Modification & Integration Contract Award: 1Q FY99 Datalink Contract Award: 1Q FY99 Datalink Contract Award: 1Q FY99 Accomplished																																																																																																																																																																																																																	
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td>1</td><td>2</td><td></td><td></td> <td></td><td></td><td>1</td><td>2</td> <td></td><td></td><td></td><td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>Months</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td></td><td>18</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs									1	2					1	2					Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Months	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		18	Inputs																			Outputs																		
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																																																																																																
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																													
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																													
Inputs																																																																																																																																																																																																																	
Outputs									1	2					1	2																																																																																																																																																																																																	
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																																																																																																																
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Months																																																																																																																																																																																															
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		18																																																																																																																																																																																															
Inputs																																																																																																																																																																																																																	
Outputs																																																																																																																																																																																																																	
METHOD OF IMPLEMENTATION: <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 33%;">Contract Dates: FY 1997</td> <td style="width: 33%;">ADMINISTRATIVE LEADTIME: 10 Months</td> <td style="width: 33%;">PRODUCTION LEADTIME: 18 Months</td> </tr> <tr> <td>Delivery Date: FY 1997</td> <td>FY 1998</td> <td>FY 1999</td> </tr> <tr> <td></td> <td>FY 1998</td> <td>FY 1999</td> </tr> <tr> <td></td> <td></td> <td>Nov-98</td> </tr> <tr> <td></td> <td></td> <td>May-98</td> </tr> </table>												Contract Dates: FY 1997	ADMINISTRATIVE LEADTIME: 10 Months	PRODUCTION LEADTIME: 18 Months	Delivery Date: FY 1997	FY 1998	FY 1999		FY 1998	FY 1999			Nov-98			May-98																																																																																																																																																																																							
Contract Dates: FY 1997	ADMINISTRATIVE LEADTIME: 10 Months	PRODUCTION LEADTIME: 18 Months																																																																																																																																																																																																															
Delivery Date: FY 1997	FY 1998	FY 1999																																																																																																																																																																																																															
	FY 1998	FY 1999																																																																																																																																																																																																															
		Nov-98																																																																																																																																																																																																															
		May-98																																																																																																																																																																																																															

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												AHIF MODS (AA0150)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	1,307.3	4.5	2.5	1.1	0.4	0.5	0.4	0.4	0.5	0.5	32.1	1,350.2	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	1,307.3	4.5	2.5	1.1	0.4	0.5	0.4	0.4	0.5	0.5	32.1	1,350.2	
Initial Spares	92.3											92.3	
Total Proc Cost	1,399.6	4.5	2.5	1.1	0.4	0.5	0.4	0.4	0.5	0.5	32.1	1,442.5	
Flyaway U/C													
Wpn Sys Proc U/C													
DESCRIPTION: The AH-1 is a single-engine, tandem seated helicopter with a maximum gross weight of 10,000 pounds and a T53L703 1800 SHP engine. The armament system consists of the M65 TOW Missile System, 20mm gun, and Hydra-70 rockets. The programs during FY95-01 provide for Rewire modification. All modifications are complete except Rewire. AH-1F fleet will be 402 aircraft through FY15. Funding is also required for safety and sustainment modifications, in addition to operational improvement modifications required to meet mission requirements through the year 2015. JUSTIFICATION: FY99 funds will be utilized to continue rewire of AH-1 fleet. Rewire improves RAM, lowers O&S cost and enhances safe operation.													

INDIVIDUAL MODIFICATION																																																																																																										
MODIFICATION TITLE: Rewire 1-93-01-0907										Date																																																																																																
February 1998																																																																																																										
MODELS OF SYSTEMS AFFECTED: AH-1 COBRA/TOW																																																																																																										
DESCRIPTION / JUSTIFICATION:																																																																																																										
Wiring of AH1 aircraft in Eighth United States Army (EUSA) began as a maintenance refurbishment program for specific aircraft in need of repair. Rewiring of remaining fleet of AH1 aircraft will replace the Kapton wire (which is deteriorating resulting in an increasing safety hazard and causing increased maintenance fleetwide) with new tefzel (MIL-W-22759) wiring. A class 2 Engineering Change Proposal (ECP) was approved 28 May 1992 for this change. The government of Korea paid for installations in Korea under a cost sharing program.																																																																																																										
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Kit Development is complete.																																																																																																										
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="2">FY 1997</th> <th colspan="2">FY 1998</th> <th colspan="2">FY 1999</th> <th colspan="2">FY 2000</th> <th colspan="2">FY 2001</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>94</td> <td>6</td> <td></td> <td></td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Outputs</td> <td>94</td> <td>6</td> <td></td> <td></td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="2">FY 2002</th> <th colspan="2">FY 2003</th> <th colspan="2">FY 2004</th> <th colspan="2">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>Complete</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>402</td> </tr> <tr> <td>Outputs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>402</td> </tr> </tbody> </table>															Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		1	2	3	4	1	2	3	4	1	2	3	4	Inputs	94	6				3							Outputs	94	6				3					3		Pr Yr	FY 2002		FY 2003		FY 2004		FY 2005		Totals		1	2	3	4	1	2	3	4	Complete	To	Inputs										402	Outputs										402
Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001																																																																																																	
	1	2	3	4	1	2	3	4	1	2	3	4																																																																																														
Inputs	94	6				3																																																																																																				
Outputs	94	6				3					3																																																																																															
Pr Yr	FY 2002		FY 2003		FY 2004		FY 2005		Totals																																																																																																	
	1	2	3	4	1	2	3	4	Complete	To																																																																																																
Inputs										402																																																																																																
Outputs										402																																																																																																
METHOD OF IMPLEMENTATION: Ft. Drum ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 3 Months Contract Dates: FY 1997 FY 1998 Feb 98 FY 1999 Feb 99 Delivery Date: FY 1997 FY 1998 Mar 98 FY 1999 Mar 99																																																																																																										

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												AH-64 MODS (AA6605)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	307.7	50.8	61.5	48.8	40.2	52.9	37.5	34.7	108.0	106.1	56.2	904.4	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	307.7	50.8	61.5	48.8	40.2	52.9	37.5	34.7	108.0	106.1	56.2	904.4	
Initial Spares													
Total Proc Cost	307.7	50.8	61.5	48.8	40.2	52.9	37.5	34.7	108.0	106.1	56.2	904.4	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: The AH-64 is a single main rotor, twin engine, tandem seat attack helicopter armed with HELLFIRE antitank missiles, 2.75 inch rockets, and 30MM gun. The AH-64 is capable of defeating armor in day, night, and adverse weather. The Target Acquisition Designation Sight (TADS) is housed in a turret on the nose of the AH-64 and consists 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.

JUSTIFICATION: As the Army's primary Attack Helicopter, the AH-64 has been integrated in maneuver and fire plans of the combined arms team and will have the primary mission of destroying high value targets. The firepower, speed and agility of the AH-64 will provide a versatility to the combined arms team not otherwise available. Modifications are based on fleetwide reliability, availability, and maintainability (RAM) improvements and limited operational enhancements identified as a result of lessons learned during Operation Desert Storm. Funding for FY99 buys the following modifications:

- a. Backup Control System (BUCS)
- b. Fuel Control Warning Panel
- c. Embedded GPS/Inertial Navigation System (EGI)
- d. H-11 Bolt Replacement
- e. Airframe Modifications
- f. Alternate Laser Code
- g. TADS/PNVIS I/II Upgrades
- h. TADS/PNVIS Upgrades
- i. Apache Integrated Training Program Trainer Upgrade
- j. Cat B Trainer Restoration

Exhibit P-40M Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No.				P-1 Item Nomenclature				Date			
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft				AH-64 MODS (AA6605)				February 1998			
Program Elements for Code B Items		Code		Other Related Program Elements							
Description		Fiscal Years									
OSIP NO.	Classification	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
Backup Control System (BUCS)											
1-86-01-2025	Unclassified	0.0	7.8	3.8	10.1	7.3	4.7	4.8	4.9	5.1	48.5
Fuel Control Warning Panel											
1-89-01-2063	Unclassified	6.0	1.8	2.1	1.8	1.3	0.0	0.0	0.0	0.0	13.0
Embedded GPS / Inertial Navigation System (EGI)											
1-92-01-2072	Operational	70.8	7.5	5.5	0.6	0.0	0.0	0.0	0.0	0.0	84.4
H-11 Bolt Replacement											
1-92-01-2035	Safety	4.9	0.0	0.8	1.0	1.0	1.0	1.3	1.3	1.4	12.7
Captive Boresight Harmonization Kit (CBHK) Upgrade (No P3a Set)											
1-92-01-2034	Op/Log	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2
Airframe Modifications											
1-95-01-2007	Op/Log	2.3	3.7	7.8	12.0	13.8	6.5	6.9	7.2	0.0	60.2
Alternate Laser Code											
1-92-01-2033	Operational	11.8	9.0	11.5	3.4	0.0	0.0	0.0	0.0	0.0	35.7
TADS/PNVIS I/II upgrades											
1-94-01-2004	Unclassified	41.7	10.2	6.4	7.8	0.0	0.0	0.0	0.0	0.0	66.1
TADS/PNVIS Upgrades											
1-94-01-2005	Unclassified	1.4	2.1	1.9	6.9	6.3	7.1	7.2	7.4	8.1	48.4
AITP 01 (No P3a Set)											
NA	Unclassified	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7.1	8.5	18.7
Miscellaneous Mods Less Than 2M (No P3a Set)											
NA	Unclassified	249.2	6.7	0.4	0.0	0.6	0.6	1.4	1.9	1.0	261.8
Image Intensifier (I2)											
1-91-01-2093	Unclassified	0.0	0.0	0.0	0.0	0.0	4.0	15.9	8.7	11.4	40.0

[illegible]

INDIVIDUAL MODIFICATION														Date	February 1998								
MODIFICATION TITLE (Cont):														Fuel Control Warning Panel 1-89-01-2063									
FINANCIAL PLAN: (\$ in Millions)																							
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL				
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
RDT&E																							
PROCUREMENT																							
Kit Quantity	758																		758				
Installation Kits		4.9																		4.9			
Installation Kits Nonrecurring		0.4																		0.4			
Equipment																							
Equipment Nonrecurring																							
Engineering Change Orders																							
Data																							
Training Equipment																							
Support Equipment																							
Other		0.1		0.3		0.4		0.1												0.9			
PM System Support																							
Installation of Hardware																							
FY 1996 & Prior Eqpt -- Kits	71	0.6	169	1.5	200	1.7	185	1.7	133	1.3									758	6.8			
FY 1997 Eqpt -- Kits																							
FY 1998 Eqpt -- Kits																							
FY 1999 Eqpt -- Kits																							
FY 2000 Eqpt -- kits																							
FY 2001 Eqpt -- kits																							
FY 2002 Eqpt -- kits																							
FY 2003 Eqpt -- kits																							
(FY(TC) Eqpt (xx kits)																							
Total Installment	71	0.6	169	1.5	200	1.7	185	1.7	133	1.3									758	6.8			
Total Procurement Cost		6.0		1.8		2.1		1.8		1.3										13.0			

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: Embedded GPS / Inertial Navigation System (EGI) 1-92-01-2072										Date February 1998	
MODELS OF SYSTEMS AFFECTED: AH-64 Apache											
DESCRIPTION / JUSTIFICATION: Operational/Desert Storm. This modification integrates an embedded Global Positioning System in an Inertial Navigation System box (EGI) into the AH-64A Apache. This Joint Service program provides a significant increase in accuracy for the navigation and fire control systems. This EGI is identical to the one being installed on the Longbow.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Planned production contract award was Apr 95, actual was Apr 95. Planned first delivery was May 96, actual was May 96. Planned first installation was Jul 96, actual Apr 96.											
Installation Schedule:											
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Pr Yr											
Totals	1	2	3	4	1	2	3	4	1	2	3
Inputs	42	54	54	54	54	54	54	54	26		
Outputs	42	54	54	54	54	54	54	54	26		
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2	3	4
Complete											
Inputs											500
Outputs											500
METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 24 Months PRODUCTION LEADTIME: 13 Months Contract Dates: FY 1997 FY 1998 FY 1999 Delivery Date: FY 1997 FY 1998 FY 1999											

INDIVIDUAL MODIFICATION										Date	February 1998
MODIFICATION TITLE: H-11 Bolt Replacement 1-92-01-2035											
MODELS OF SYSTEMS AFFECTED: AH-64 Apache											
DESCRIPTION / JUSTIFICATION: Safety improvement. This modification addresses Federal Aviation Administration (FAA) advisory that H-11 hardware is subject to a higher than normal failure rate due to stress corrosion cracking and could potentially result in a safety problem. FAA recommended replacement of the H-11 hardware with acceptable substitutes such as Inconel. Procured 758 kits: 499 to be installed under A model program, 259 to be installed under D model program.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Planned Contract award was May 95, actual was May 95. Planned date of first installation was Aug 96, actual was Aug 96.											
Installation Schedule:											
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Pr Yr											
Totals	1	2	3	4	1	2	3	4	1	2	3
Inputs					20	21	21	21	22	13	15
Outputs					20	21	21	22	14	15	15
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
	1	2	3	4	1	2	3	4	1	2	3
Inputs	17	18	18	18	18	18	18	18			499
Outputs	17	18	18	18	18	18	18	18			499
METHOD OF IMPLEMENTATION: Contractor											
Contract Dates: FY 1997 FY 1998 FY 1999 PRODUCTION LEADTIME: 15 Months											
Delivery Date: FY 1997 FY 1998 FY 1999											

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: Airframe Modifications 1-95-01-2007

MODELS OF SYSTEMS AFFECTED: AH-64 Apache

DESCRIPTION / JUSTIFICATION:

Operational and logistical improvement. This modification provides for strengthening airframe components to withstand higher loading. Funding addresses three primary areas plus several additional areas susceptible to cracking. Specific modifications include strengthening components through application of additional material and replacement of components with different material. Required for AH-64A and extremely important for Longbow due to increase in weight. Installation costs are included in contract and are not broken out separately.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Planned Contract award (MY 1, Lot 1) was Nov 96, actual was Nov 96. Planned date of first delivery (MY 1, Lot 1) was Mar 97, actual was Mar 97, (MY 1, Lot 2) planned delivery is Mar 98. Contract for retrofit was awarded 30 Sep 97.

Installation Schedule:

Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals	14	6	6	6	13	17	18	18	28	28	29	31	39	39	42	43	50	49	42	36
Inputs																				
Outputs																				

Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
Inputs	17	18	19	19	20	20	18	18	20	21	10						758			
Outputs	30	25	17	18	18	19	20	20	21	23	20	4					758			

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

Contract Dates: FY 1997 Nov 96 FY 1998 Dec 97

Delivery Date: FY 1997 Mar 98 FY 1998 Nov 98

INDIVIDUAL MODIFICATION														Date		February 1998		
MODIFICATION TITLE (Cont):																		
Airframe Modifications 1-95-01-2007																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
RDT&E																		
PROCUREMENT																		
Kit Quantity (ECP 1315)			31	1.7	40	3.4	98	7.3	127	9.5	53	4.8	58	4.8	67	5.8	474	37.3
Installation Kits																		
Installation Kits Nonrecurring																		
Equipment (Multi-year)	24	1.3	24	1.4	44	3.2	66	3.9	74	4.0	17	1.7	21	2.1	14	1.4	284	19.0
Equipment Nonrecurring		0.8																0.8
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
PM System Support		0.2		0.6		1.2		0.8		0.3								3.1
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits			12		12		3										24	
FY 1997 Eqpt -- Kits					52		84										55	
FY 1998 Eqpt -- Kits							20										84	
FY 1999 Eqpt -- Kits									144		187		5				164	
FY 2000 Eqpt -- kits									9				70				201	
FY 2001 Eqpt -- kits													15				70	
FY 2002 Eqpt -- kits															64		79	
FY 2003 Eqpt -- kits															13	68	81	
(FY)(TC) Eqpt																		
Total Installation			12		64		107		153		187		90		77		758	
Total Procurement Cost		2.3		3.7		7.8		12.0		13.8		6.5		6.9		7.2		60.2

INDIVIDUAL MODIFICATION													
MODIFICATION TITLE: Alternate Laser Code 1-92-01-2033										Date			
MODELS OF SYSTEMS AFFECTED: AH-64 Apache										February 1998			
DESCRIPTION / JUSTIFICATION:													
Operational improvement. This modification provides optimum laser targeting capability for the Hellfire Missile System under adverse countermeasure conditions and allows maximum use of planned Electro-Optic Counter Measures (EOCM) missile changes. Requires hardware/software modifications to the Laser Electronics Unit. Eliminates Remote Hellfire Electronics unit and four pylon Multiplex Remote Terminal Units (MRTU). Modification provides for compatibility with MIL-STD-1760. Provides modification to the Hellfire Launchers for use on the Longbow aircraft. There is no installation requirement for the launchers.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:													
Planned Contract award was Feb 96, actual was Oct 96. Planned date of first delivery is Feb 98													
Installation Schedule:													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Totals		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs</													

INDIVIDUAL MODIFICATION																		Date	February 1998		
MODIFICATION TITLE (Cont):																		Alternate Laser Code 1-92-01-2033			
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E		6.0																		6.0	
PROCUREMENT																					
Kit Quantity																					
Installation Kits																					
Installation Kits Nonrecurring																					
Equipment	30	1.8	76	3.5	132	7.1	17	1.7											255	14.1	
Equipment Nonrecurring		3.0																		3.0	
Engineering Change Orders		3.6		0.3		0.3														4.2	
Data																					
Training Equipment		0.1		0.2		0.3														0.6	
Support Equipment																					
Other		1.6		1.5		0.5														3.6	
Engr Services (PM AGMS)				1.9		1.5		1.5												4.9	
PM System Support		1.7		1.6		1.8		0.2												5.3	
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits																					
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
(FY)(TC) Eqpt																					
Total Installment		11.8		9.0		11.5		3.4												35.7	
Total Procurement Cost																					

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: TADS/PNVS I/II upgrades 1-94-01-2004										Date February 1998	
MODELS OF SYSTEMS AFFECTED: AH-64 Apache											
DESCRIPTION / JUSTIFICATION:											
Safety and logistical improvement. Provides for system upgrade through new/updated hardware integration into Lots I&II TADS/PNVS systems. This configuration baseline upgrade will make the systems compatible with the rest of the Apache (TADS/PNVS) fleet. This effort will incorporate all ECP changes that were previously not required to be installed due to incompatibility of the systems. Additionally, this effort will eliminate anomalies associated with aging trainer aircraft that may cause them to be potentially unsafe to operate as a result of degraded fidelity. Also provides for offsite contractor support for the upgrade/integration of hardware in the TADS/PNVS. Installation costs are included in contract and are not broken out separately.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
Planned Contract award was May 95, actual May 95. Planned date of first delivery was Aug 95, actual was Aug 95.											
Installation Schedule:											
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Pr Yr											
Totals	1	2	3	4	1	2	3	4	1	2	3
Inputs	11	4	4	4	4	4	4	4	5		
Outputs	11	4	4	4	4	4	4	4	4		
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2	3	4
Inputs											63
Outputs											63
METHOD OF IMPLEMENTATION:											
Contract Dates:		Contractor		ADMINISTRATIVE LEADTIME:		2 Months		PRODUCTION LEADTIME:		8 Months	
FY 1997		Oct 96		FY 1998		Oct 97		FY 1999		Oct 98	
Delivery Date:		FY 1997		May 97		FY 1998		May 98		FY 1999	
										May 99	

INDIVIDUAL MODIFICATION																	
Date													February 1998				
MODIFICATION TITLE: TADS/PNVs Upgrades 1-94-01-2005																	
MODELS OF SYSTEMS AFFECTED: AH-64 Apache																	
DESCRIPTION / JUSTIFICATION: Operational, and logistical improvement. Provide for system upgrade through new/updated hardware integration into Lots III thru XII TADS/PNVs systems. Facilitate maintainers access to TADS/PNVs systems thereby allowing for accelerated application of outstanding ECPs. Additionally, satisfies program growth and the life extension requirements and provides for offsite contractor support for upgrades/integration of hardware in the TADS/PNVs. This will also provide a single configuration TADS/PNVs to the Longbow. Critical AH-64D element. Installation costs are included in contract and are not broken out separately.																	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Planned Contract award was Dec 95, actual was Dec 95. Planned date of first delivery was Jun 96, actual was Jun 96.																	
Installation Schedule:																	
Inputs Outputs	Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	14	6	6	6	6	9	9	9	10	13	12	11	13	16	15	13	18
Inputs Outputs	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	501	501	501	501	501	501	501	501	501	501	501	501	501	501	501	501	501
METHOD OF IMPLEMENTATION:																	
Contract Dates: FY 1997 Apr 97 FY 1998 Mar 98 FY 1999 Dec 98																	
Delivery Date: FY 1997 Nov 97 FY 1998 Oct 98 FY 1999 Jul 99																	
PRODUCTION LEADTIME: 2 Months 8 Months																	

INDIVIDUAL MODIFICATION																			February 1998	
Image Intensifier (I2) 1-91-01-2093																			Date	
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
RDT&E PROCUREMENT Kit Quantity Installation Kits Installation Kits Nonrecurring Equipment Equipment Nonrecurring Engineering Change Orders Data Training Equipment Support Equipment Other Interim Contractor Support PM System Support	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$

INDIVIDUAL MODIFICATION														
MODIFICATION TITLE: Cat B Trainer Restoration NA										Date: February 1998				
MODELS OF SYSTEMS AFFECTED: AH-64 Apache														
DESCRIPTION / JUSTIFICATION:														
Operational requirement. Modify Cat B Trainers to meet induction criteria for Longbow Apache (AH64D) re-manufacture line at contractor plant.														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:														
Planned induction at Corpus Christi Depot is May 98. Planned induction to re-manufacture line is Sep 99.														
Installation Schedule:														
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001				
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals		1												

INDIVIDUAL MODIFICATION														
Cat B Trainer Restoration NA														
MODIFICATION TITLE (Cont):														
FINANCIAL PLAN: (\$ in Millions)														
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E														
PROCUREMENT														
Kit Quantity														
Installation Kits														
Installation Kits, Nonrecurring Equipment							3	5.5	1	1.8	3	5.6	3	6.8
Equipment, Nonrecurring														
Engineering Change Orders														
Data														
Training Equipment														
Support Equipment														
Other														
Interim Contractor Support														
PM System Support														
								0.4		0.1				0.5
Installation of Hardware														
FY 1996 & Prior Eqpt -- Kits														
FY 1997 Eqpt -- Kits														
FY 1998 Eqpt -- Kits														
FY 1999 Eqpt -- Kits							3							
FY 2000 Eqpt -- kits									2					
FY 2001 Eqpt -- kits											3			
FY 2002 Eqpt -- kits													3	
FY 2003 Eqpt -- kits														
TC Equip-2 Kits													1	
Total Installation							3		2	1.9	3	5.6	3	
Total Procurement Cost								5.9						4.9
														32.3

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												P-1 Item Nomenclature:
Program Elements for Code B Items:												CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	3630.8	9.2	11.3	48.5	62.4	101.2	84.9	192.9	211.5	214.8	460.0	5027.4
Less PY Adv Proc	940.0											940.0
Plus CY Adv Proc	940.0											940.0
Net Proc (P-1)	3630.8	9.2	11.3	48.5	62.4	101.2	84.9	192.9	211.5	214.8	460.0	5027.4
Initial Spares	260.4											260.4
Total Proc Cost	3891.2	9.2	11.3	48.5	62.4	101.2	84.9	192.9	211.5	214.8	460.0	5287.8
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The CH-47 heavy lift helicopter is a day/night tandem rotor helicopter powered by two T-55 turbine engines. The CH-47 is the Army's only active heavy cargo helicopter and is a key element in the Contingency CORPS. The CHINOOK provides invaluable battlefield mobility for tactical vehicles, artillery and engineer equipment, personnel and logistical support equipment. Cargo Helicopters provide the logistical base for Air-Land operations. The CHINOOK also provides support of operations other than war.

JUSTIFICATION: FY 99 funding procures safety and operational modifications to the CH-47D fleet plus trainers to maintain the latest configuration. Modifications are planned to fielded aircraft to incorporate safety and operational modifications to the CH-47D aircraft. These changes contribute to the effectiveness of heavy lift capability, maintainability, reliability, and aircraft/crew safety. The major modifications occurring during FY 99 are procurement of kits for Improved Rotor Head Shafts & Seals, Install Aft Pylon Firing Vents, Replace Upper Seal for Swashplate, Halon Replacement, Conversion of the T55-L-712 to T55-GA-714A Engines, Engine Barrier Filter, and Extended Range Fuel System.

Exhibit P-40M Budget Item Justification Sheet										
Appropriation / Budget Activity/Serial No.				P-1 Item Nomenclature		Date				
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft				CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)					February 1998	
Program Elements for Code B Items		Code		Other Related Program Elements						
Description		Fiscal Years								
OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total
Installation of Modification Kits										
Various	Operational/Safety	8.5	1.0	1.3	1.2	0.6	0.0	0.0	0.0	12.6
Work Platform - Aft Pylon										
1-95-01-0816	Safety	1.2	0.0	0.1	0.2	0.0	0.0	0.0	0.0	1.5
Improved Cross Shaft Adapters, Couplings, & Bolts										
1-95-01-0817	Safety	0.0	0.0	0.0	1.1	0.2	0.2	0.0	0.0	1.5
Improved Rotor Head Shafts & Seals										
1-95-01-0818	Operational	0.0	0.0	0.0	1.1	0.8	1.6	0.8	0.0	4.3
Improved Latch for Aft Pylon Doors										
1-95-01-0814	Safety	1.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	1.4
Install Handholds in Center Cargo Hook Hatch										
1-95-01-0819	Safety	0.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.1
Install Aft Pylon Fairing Vents										
1-95-01-0820	Safety	0.0	0.0	0.0	1.1	0.5	0.5	0.0	0.0	2.1
Improved Battery										
1-96-01-0822	Operational	0.0	0.0	2.5	0.0	0.1	0.1	0.0	0.0	2.7
Replace Upper Seal for Swashplate										
1-96-01-0823	Operational	0.0	0.0	0.0	1.7	0.5	1.8	1.2	0.0	5.2
Halon Replacement										
1-95-01-0813	Legislative	0.0	0.0	5.1	1.7	0.8	0.0	0.0	0.0	7.6
Engine Upgrade to T55-GA-714A Configuration										
1-96-01-0828	Operational	0.0	47.5	49.6	87.3	71.0	176.9	195.9	199.3	1,247.4
Engine Barrier Filter										
1-93-01-0807	Operational	0.0	0.0	0.0	0.0	4.6	5.1	6.1	7.9	30.6

Exhibit P-40M Budget Item Justification Sheet

Date _____

February 1998

Appropriation / Budget Activity/Serial No.

P-1 Item Nomenclature

AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)

Program Elements for Code B Items

Code

Other Related Program Elements

Extended Range Fuel System

1-97-01-822
Operational

69.3

33.2

7.6

7.4

6.6

5.8

5.1

3.6

0.0

0.0

Totals	11.3	48.5	62.4	101.2	84.9	192.9	211.4	214.8	460.0	1 387.3
--------	------	------	------	-------	------	-------	-------	-------	-------	---------

INDIVIDUAL MODIFICATION																																																																																																																																											
MODIFICATION TITLE: Installation of Modification Kits Various														Date																																																																																																																													
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and MH-47E																																																																																																																																											
DESCRIPTION / JUSTIFICATION:																																																																																																																																											
Modification kits procured with FY 94 and prior funding remain uninstalled due to deliveries, scheduling, and funding. This funding will install these modification kits in the CH-47D aircraft and the MH-47E aircraft where appropriate. Installing all kits in all aircraft will result in more efficient maintenance, increased operational capability, and safety improvements.																																																																																																																																											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Installations are ongoing.																																																																																																																																											
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td></td><td>315</td><td>315</td><td>320</td> <td></td><td>280</td><td>280</td><td>289</td> <td></td><td>310</td><td>310</td><td>314</td> <td></td><td>150</td><td>150</td><td>100</td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td>2675</td> <td>315</td> <td>315</td> <td>320</td> <td>280</td> <td>280</td> <td>280</td> <td>289</td> <td>310</td> <td>310</td> <td>310</td> <td>314</td> <td>150</td> <td>150</td> <td>100</td> <td>100</td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Inputs</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td colspan="4">Totals</td> </tr> <tr> <td>Outputs</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>5808</td><td>5808</td><td></td><td></td> </tr> </tbody> </table>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs		315	315	320		280	280	289		310	310	314		150	150	100					Outputs	2675	315	315	320	280	280	280	289	310	310	310	314	150	150	100	100					Inputs	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals				Outputs																	5808	5808		
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																										
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																							
Inputs		315	315	320		280	280	289		310	310	314		150	150	100																																																																																																																											
Outputs	2675	315	315	320	280	280	280	289	310	310	310	314	150	150	100	100																																																																																																																											
Inputs	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals																																																																																																																										
Outputs																	5808	5808																																																																																																																									
METHOD OF IMPLEMENTATION: Contract Contract Dates: FY 1997 FY 1998 FY 1999 FY 1999 Delivery Date: FY 1997 FY 1998 FY 1999 FY 1999 PRODUCTION LEADTIME: Months																																																																																																																																											

INDIVIDUAL MODIFICATION														February 1998						
Date																				
MODIFICATION TITLE (Cont): Installation of Modification Kits Various																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	1465	5.0																	1465	5.0
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	2675	3.5	950	1.0	849	1.3	934	1.2	400	0.6									5808	7.6
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation	2675	3.5	950	1.0	849	1.3	934	1.2	400	0.6									5808	7.6
Total Procurement Cost		8.5		1.0		1.3		1.2		0.6										12.6

INDIVIDUAL MODIFICATION																																																																																																																						
MODIFICATION TITLE: Work Platform - Aft Pylon 1-95-01-0816														Date																																																																																																								
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK, MH-47E																																																																																																																						
DESCRIPTION / JUSTIFICATION:																																																																																																																						
Type of Improvement - Safety. During normal maintenance of the CH-47D aircraft, cracks have been noticed in the pin area of the platform. The pin area secures the work platform. This Engineering Change will eliminate these cracks by redesigning the work platform to eliminate the cracks. Continued cracking could result in the platform releasing from the aircraft causing safety concerns.																																																																																																																						
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Planned May 97 First Production Hardware Delivery Field Retrofit Initiated Accomplished Apr 97																																																																																																																						
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</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> <tr> <td>Inputs</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> <tr> <td>Outputs</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>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals																					Inputs																					Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																		
Totals																																																																																																																						
Inputs																																																																																																																						
Outputs																																																																																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>Months</th> </tr> </thead> <tbody> <tr> <td>Totals</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> <tr> <td>Inputs</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> <tr> <td>Outputs</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>															Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Months	Totals																			Inputs																			Outputs																												
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Months																																																																																																				
Totals																																																																																																																						
Inputs																																																																																																																						
Outputs																																																																																																																						
METHOD OF IMPLEMENTATION: Contractor Contract Dates: FY 1997 Delivery Date: FY 1997 ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 12 Months FY 1999 FY 1999																																																																																																																						

INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																								
MODIFICATION TITLE: Improved Cross Shaft Adapters, Couplings, & Bolts 1-95-01-0817																																																																																																																					
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK, MH47E, and Trainers																																																																																																																					
DESCRIPTION / JUSTIFICATION:																																																																																																																					
Type of Improvement - Safety. This modification is to improve Cross Shaft Adapters, Couplings, and Bolts. Field reports have identified failure of the steel cross shaft adapters. Corrosion pitting inside the bolt holes have served as stress risers for fatigue failures. Correction of this deficiency will reduce maintenance, resolve safety concerns, and increase reliability and maintainability.																																																																																																																					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																																																																																																																					
<u>Planned</u> Dec 98 Nov 99 Feb 99 <u>Accomplished</u>																																																																																																																					
Production Contract Award																																																																																																																					
First Production Hardware Delivery																																																																																																																					
Field Retrofit Initiated																																																																																																																					
Installation Schedule:																																																																																																																					
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> <tr> <td>Totals</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> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>														Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals																					Inputs																					Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																	
Totals																																																																																																																					
Inputs																																																																																																																					
Outputs																																																																																																																					
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>To</th> </tr> <tr> <td>Totals</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> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>														Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To	Totals																			Inputs																			Outputs																												
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																																																																																																			
Totals																																																																																																																					
Inputs																																																																																																																					
Outputs																																																																																																																					
METHOD OF IMPLEMENTATION: Contractor																																																																																																																					
Contract Dates: FY 1997																																																																																																																					
Delivery Date: FY 1997																																																																																																																					
ADMINISTRATIVE LEADTIME: 9 Months																																																																																																																					
PRODUCTION LEADTIME: 12 Months																																																																																																																					
FY 1998																																																																																																																					
FY 1999																																																																																																																					
Dec 98																																																																																																																					
Nov 99																																																																																																																					

INDIVIDUAL MODIFICATION																																																																																																																			
										Date	February 1998																																																																																																								
MODIFICATION TITLE: Improved Rotor Head Shafts & Seals 1-95-01-0818																																																																																																																			
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK, MH-47E, and Trainers																																																																																																																			
DESCRIPTION / JUSTIFICATION: Type of Improvement - Improved Operational Capability. The CH-47D field units have reported multiple instances of leaking rotorhead seals. This Engineering Change will eliminate rotorhead leakage problems by incorporating seals with improved materials and configuration in addition to incorporating speedy seals on the inboard and outboard sealing surfaces of the pitch shaft. This will cause the rotorheads to operate more efficiently and maintenance requirements will decrease.																																																																																																																			
<u>Planned</u> <u>Accomplished</u>																																																																																																																			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Production Contract Award First Production Hardware Delivery Field Retrofit Initiated Dec 98 Nov 99 Jan 00																																																																																																																			
Installation Schedule:																																																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>1</td><td>2</td><td>3</td><td>4</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> <tr> <td>Outputs</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> <tr> <td>Totals</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>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	1	2	3	4																	Outputs																					Totals																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																															
Inputs	1	2	3	4																																																																																																															
Outputs																																																																																																																			
Totals																																																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>To Complete</th><th></th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>1</td><td>2</td><td>3</td><td>4</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> <tr> <td>Outputs</td> <td>40</td><td>40</td><td>31</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> <tr> <td>Totals</td> <td>40</td><td>40</td><td>31</td><td>31</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>471</td><td>471</td> </tr> </tbody> </table>													FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	To Complete		Inputs	1	2	3	4															Outputs	40	40	31																Totals	40	40	31	31													471	471										
	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	To Complete																																																																																																		
Inputs	1	2	3	4																																																																																																															
Outputs	40	40	31																																																																																																																
Totals	40	40	31	31													471	471																																																																																																	
METHOD OF IMPLEMENTATION: Contractor Contract Dates: FY 1997 Delivery Date: FY 1997																																																																																																																			
ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 12 Months FY 1998 Dec 98 FY 1999 Nov 99																																																																																																																			

INDIVIDUAL MODIFICATION																		
Improved Rotor Head Shafts & Seals 1-95-01-0818																		
MODIFICATION TITLE (Cont):																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																		
PROCUREMENT																		
Kit Quantity																		
Installation Kits					471	1.1											471	1.1
Installation Kits Nonrecurring																		
Equipment																		
Equipment Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits																		
FY 1999 Eqpt -- Kits																		
FY 2000 Eqpt -- kits							120	0.8		240	1.6	111	0.8				471	3.2
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
(FY(TC) Eqpt (xx kits)																		
Total Installation							120	0.8		240	1.6	111	0.8				471	3.2
Total Procurement Cost								0.8		1.6			0.8					4.3

INDIVIDUAL MODIFICATION																					
Date February 1998																					
MODIFICATION TITLE: Improved Latch for Aft Pylon Doors 1-95-01-0814																					
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and MH-47E																					
DESCRIPTION / JUSTIFICATION:																					
Type of Improvement - Safety. Present design of the Aft Pylon Door Latches is inadequate due to vibrations which cause latches to open in flight. This improvement will incorporate design changes that will prevent these failures. Correction is required because continued degradation could cause the doors to come off in flight.																					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																					
PlannedAccomplished																					
Production Contract AwardApr 97Mar 97																					
First Production Hardware DeliveryFeb 98																					
Field Retrofit InitiatedApr 98																					
Installation Schedule:																					
Inputs Outputs	Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Inputs Outputs																					
Inputs Outputs																					
METHOD OF IMPLEMENTATION: Contractor																					
Contract Dates: FY 1997																					
Delivery Date: FY 1997																					
ADMINISTRATIVE LEADTIME: 9 Months																					
PRODUCTION LEADTIME: 12 Months																					
Totals																					
468																					
468																					

INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont): Improved Latch for Aft Pylon Doors 1-95-01-0814																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	468	1.0																	468	1.0
Installation Kits																				
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation																			468	0.4
Total Procurement Cost		1.0																		1.4

INDIVIDUAL MODIFICATION																		Date	February 1998	
MODIFICATION TITLE (Cont):																		Install Handholds in Center Cargo Hook Hatch 1-95-01-0819		
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	467	0.6																	467	0.6
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation								467	0.5										467	0.5
Total Procurement Cost		0.6						0.5												1.1

INDIVIDUAL MODIFICATION														
MODIFICATION TITLE: Install Aft Pylon Fairing Vents 1-95-01-0820										Date				
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK, MH-47E, and Trainers														
DESCRIPTION / JUSTIFICATION:														
Type of Improvement - Safety. The CH-47D Aft Pylon allows air intake to cool the combining transmission and surrounding components. This causes extreme air pressures to be created in the Aft Pylon resulting in a visible distortion of the Aft Pylon in flight and a deterioration in the clamshell doors and work platforms. This pressure has caused work platforms to open in flight and the clamshell doors to open and separate in flight. This engineering change proposal will improve safety to helicopter and crew by incorporating louvered air vents in the aft Pylon to alleviate the excess air pressure while the clamshell door and work platform stress/wear and alleviate these components flexing, opening, and separating in flight.														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:														
<u>Planned</u> Dec 98 Nov 99 Jan 00										<u>Accomplished</u>				
Production Contract Award														
First Production Hardware Delivery														
Field Retrofit Initiated														
Installation Schedule:														
Inputs Outputs		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		Totals		
		1	2	3	4	1	2	3	4	1	2			
Totals														
Inputs														
Outputs														
Totals														
Inputs														
Outputs														
Totals														
METHOD OF IMPLEMENTATION: Contractor														
Contract Dates: FY 1997														
Delivery Date: FY 1997														
ADMINISTRATIVE LEADTIME: 12 Months														
PRODUCTION LEADTIME: 12 Months														
FY 1998														
FY 1999														
Dec 98														
Nov 99														

INDIVIDUAL MODIFICATION																		Date	February 1998		
MODIFICATION TITLE (Cont):																		Install Aft Pylon Fairing Vents 1-95-01-0820			
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Kit Quantity																					
Installation Kits							471	1.1											471	1.1	
Installation Kits Nonrecurring Equipment																					
Equipment Nonrecurring Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits																					
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits									241	0.5		230	0.5						471	1.0	
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
(FY(TC) Eqpt (xx kits)																					
Total Installation								1.1	241	0.5	230	0.5							471	1.0	
Total Procurement Cost									0.5	0.5		0.5								2.1	

INDIVIDUAL MODIFICATION																																																																																																																						
														Date																																																																																																								
														February 1998																																																																																																								
MODIFICATION TITLE: Improved Battery 1-96-01-0822																																																																																																																						
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and Trainers																																																																																																																						
DESCRIPTION / JUSTIFICATION: Type of Improvement - Improved Operational Capability. Incorporation of a New Lead Acid Battery will reduce the frequent battery failure. Currently the aircraft battery has a frequent failure rate. This has been a major maintenance concern for the users.																																																																																																																						
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Production Contract Award First Production Hardware Delivery Field Retrofit Initiated Planned Jul 98 Feb 99 Jan 00 Accomplished																																																																																																																						
Installation Schedule:																																																																																																																						
<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</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> <tr> <td>Inputs</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> <tr> <td>Outputs</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>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals																					Inputs																					Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																		
Totals																																																																																																																						
Inputs																																																																																																																						
Outputs																																																																																																																						
<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th rowspan="2">To Complete</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</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> <tr> <td>Inputs</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> <tr> <td>Outputs</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>															Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				To Complete	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals																		Inputs																		Outputs																																	
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				To Complete																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																						
Totals																																																																																																																						
Inputs																																																																																																																						
Outputs																																																																																																																						
METHOD OF IMPLEMENTATION: Contractor Contract Dates: FY 1997 Delivery Date: FY 1997																																																																																																																						
ADMINISTRATIVE LEADTIME: 9 Months FY 1998 Jul 98 FY 1998 Feb 99																																																																																																																						
PRODUCTION LEADTIME: 8 Months FY 1999 FY 1999																																																																																																																						

INDIVIDUAL MODIFICATION																		Date	February 1998		
MODIFICATION TITLE: Replace Upper Seal for Swashplate 1-96-01-0823																					
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and Trainers																					
DESCRIPTION / JUSTIFICATION:																					
Type of Improvement - Improved Operational Capability. This improvement will incorporate a new seal to reduce/eliminate dust particles from getting into the rotating swashplate components. Dust is causing erosion of the swashplate. Replacement of the seal will improve bearing life of the swashplate.																					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																					
PlannedAccomplished																					
Production Contract AwardDec 98																					
First Production Hardware DeliveryFeb 00																					
Field Retrofit InitiatedApr 00																					
Installation Schedule:																					
Inputs Outputs	Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Inputs Outputs																					
Inputs Outputs																					
METHOD OF IMPLEMENTATION: Contractor																					
Contract Dates: FY 1997 FY 1998 FY 1999 DEC 98																					
Delivery Date: FY 1997 FY 1998 FY 1999 FEB 00																					

INDIVIDUAL MODIFICATION																				
Date February 1998																				
Replace Upper Seal for Swashplate 1-96-01-0823																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits							446	1.7											446	1.7
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits									65	0.5		230	1.8		151	1.2			446	3.5
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment									65	0.5		230	1.8		151	1.2			446	3.5
Total Procurement Cost								1.7		0.5		1.8			1.2					5.2

INDIVIDUAL MODIFICATION														
MODIFICATION TITLE: Halon Replacement 1-95-01-0813										Date				
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and MH-47														
DESCRIPTION / JUSTIFICATION:														
Type of Improvement - Legislative Compliance. Use of Halon violates the Montreal Protocol and violates the Clean Air Act. This modification will retrofit hand held aircraft fire extinguishers and the onboard fire extinguishing system in the engine nacelle. The current halon extinguishers and systems deplete the ozone level and will be replaced with a new chemical agent.														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:														
<u>Planned</u> Mar 98 Feb 99 Apr 99										<u>Accomplished</u>				
Production Contract Award First Production Hardware Delivery Field Retrofit Initiated														
Installation Schedule:														
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001				
Totals		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4				
Inputs														
Outputs														
Totals														
Inputs														
Outputs														
Totals														
Inputs														
Outputs														
Totals														
METHOD OF IMPLEMENTATION: Contractor Contract Dates: FY 1997 Delivery Date: FY 1997														
ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 12 Months														
FY 1998 Mar 98 FY 1999 Dec 98 FY 1998 Feb 99 FY 1999 Nov 99														

INDIVIDUAL MODIFICATION																		Date	February 1998	
MODIFICATION TITLE (Cont): Halon Replacement 1-95-01-0813																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RD&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits			393	5.1	74	0.9													467	6.0
Installation Kits Nonrecurring Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits					233	0.8			160	0.5									393	1.3
FY 2001 Eqpt -- kits									74	0.3									74	0.3
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installment					233	0.8			234	0.8									467	1.6
Total Procurement Cost					5.1	1.7			0.8	0.8									7.6	

INDIVIDUAL MODIFICATION												Date	February 1998
MODIFICATION TITLE: Engine Upgrade to T55-GA-714A Configuration 1-96-01-0828													
MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and Trainers													
DESCRIPTION / JUSTIFICATION: Type of Improvement - Improved Operational Capability. This modification will upgrade the T55-L-712 engine to T55-GA-714A configuration increasing power to allow the aircraft to carry its primary payloads under high altitude/temperatures. The CH-47D as configured does not meet its existing 1975 Required Operational Capability (ROC), i.e. 15,000 lbs. payload for 30 Nautical Miles radius at 4,000 feet/95 degrees Fahrenheit. The addition of numerous engineering changes to provide safety, the latest in operational technology, and improved communications has increased the empty weight of the aircraft. Upgrade of the T55-L-712 engine to T55-GA-714A configuration will provide the capability to meet the required operational capability.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Planned Feb 97 Sep 97 Feb 99 Mar 99 Accomplished Feb 97 Dec 97													
Production Decision Low Rate Initial Production Contract Award First Production Hardware Delivery Engine Fielding Initiated													
Installation Schedule:													
Inputs Outputs	Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4
Inputs Outputs	Totals	1	2	3	4	1	2	3	4	1	2	3	4

		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2	3	4

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2

FY	
----	--

INDIVIDUAL MODIFICATION																			
Date February 1998																			
Engine Upgrade to T55-GA-714A Configuration 1-96-01-0828																			
MODIFICATION TITLE (Cont):																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$

INDIVIDUAL MODIFICATION														Date		February 1998			
MODIFICATION TITLE (Cont): Engine Barrier Filter 1-93-01-0807																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$

INDIVIDUAL MODIFICATION																																																																																																																																																																																																																																																									
MODIFICATION TITLE: Extended Range Fuel System 1-97-01-822										Date	February 1998																																																																																																																																																																																																																																														
MODELS OF SYSTEMS AFFECTED: CH-47D Chinook																																																																																																																																																																																																																																																									
DESCRIPTION / JUSTIFICATION: Type of Improvement - Improved Operational Capability. This funding provides the capability to rapidly refuel other weapon systems during war and/or conflict and self-deploy worldwide when a contingency force is anticipated, imminent, or in progress. This configuration will consist of crashworthy self-sealing (20 nautical miles) tactical tanks with a total capacity of 2,400 gallons. There is a requirement for a CH-47 internal fuel system to be used to supply fuel in forward areas either to keep aircraft in the battle or return them to a safe area to rearm and refuel.																																																																																																																																																																																																																																																									
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Planned Jul 98 Jan 99 Apr 99 Accomplished Production Contract Award First Hardware Delivery Field Installation Initiated																																																																																																																																																																																																																																																									
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</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> <tr> <td>Outputs</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> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <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> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>To</th> </tr> </thead> <tbody> <tr> <td>Inputs</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> <tr> <td>Outputs</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> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>151</td><td>151</td> </tr> <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> </tr> </tbody> </table>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																					Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																							FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To	Inputs																			Outputs																			Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	151	151																			
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																																																																																																																																								
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																																																																					
Inputs																																																																																																																																																																																																																																																									
Outputs																																																																																																																																																																																																																																																									
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																																																																					
	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																																																																																																																																																								
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																																																																																																																																																																																																																																							
Inputs																																																																																																																																																																																																																																																									
Outputs																																																																																																																																																																																																																																																									
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	151	151																																																																																																																																																																																																																																							
METHOD OF IMPLEMENTATION: Contract Dates: FY 1997 FY 1998 FY 1999 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 Delivery Date: Jul 98 Jan 99 May 99 Dec 98 May 99 ADMINISTRATIVE LEADTIME: 10 Months PRODUCTION LEADTIME: 6 Months																																																																																																																																																																																																																																																									

INDIVIDUAL MODIFICATION																			February 1998	
Extended Range Fuel System 1-97-01-822																			Date	
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RD&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
CWERFS Kits			5	2.5	7	3.6	8	4.2	9	4.8	10	5.5	10	5.6			41	23.9	90	50.1
Installation Kits			15	0.5	21	0.7	24	0.8	27	0.9	30	1.1	30	1.1			123	4.7	270	9.8
Airframe Mod Kits			40	0.6	40	0.6	40	0.6	40	0.6	40	0.6	40	0.7			191	3.2	431	6.9
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																			40	0.2
FY 1999 Eqpt -- Kits																			40	0.2
FY 2000 Eqpt -- kits																			40	0.2
FY 2001 Eqpt -- kits																			40	0.2
FY 2002 Eqpt -- kits																			40	0.2
FY 2003 Eqpt -- kits																			40	0.2
TC Equip- 151 Kits																			40	0.2
Total Installment																			191	1.2
Total Procurement Cost																			431	2.4
																			69.3	

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												C-12 CARGO AIRPLANE MODS (AA0270)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	0.0	0.0	0.7	0.6	6.5	2.7	6.2	5.5	9.5	10.1	67.5	109.1	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	0.0	0.0	0.7	0.6	6.5	2.7	6.2	5.5	9.5	10.1	67.5	109.1	
Initial Spares													
Total Proc Cost	0.0	0.0	0.7	0.6	6.5	2.7	6.2	5.5	9.5	10.1	67.5	109.1	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: This modification updates and modernizes the C-12 aircraft communication, navigation and flight management equipment to current international standards in order to standardize the fleet, allow worldwide deployments, and upgrade capability for continued safe operations into the 21st Century.

JUSTIFICATION: FY 99 and FY 00 will provide funding for the C-12 avionics upgrade. The majority of the Army C-12 aircraft were purchased between 1971 and 1989 and were equipped with then current avionics and navigation equipment. Current Army modernization plans will retain the C-12 fleet in active service beyond 2017. Worldwide deployments using modern navigation and air traffic control facilities beyond the year 2000 are required. During deployments in support of Desert Storm/Desert Shield/Provide Comfort, only selected aircraft with non-standard modifications were capable of being deployed to and within the theater. Elimination of obsolete communication and navigation systems will enhance reliability and maintainability by employing current commercial systems thereby improving C-12 availability and cockpit standardization.

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: Avionics System Cockpit Upgrade - Group II 1-96-01-0612

MODELS OF SYSTEMS AFFECTED:	C-12C, D, F, L and R
-----------------------------	----------------------

DESCRIPTION / JUSTIFICATION:

This effort will update and modernize C-12 communications, navigation, and flight direction equipment to current international standards to standardize the fleet, allow worldwide deployments and upgrade capability for continued safe operations into the 21st Century. As currently equipped, the aircraft are not suitable for worldwide deployment nor capable of using modern navigation and air traffic control facilities. The following equipment is included in this upgrade: Passenger Noise Abatement Systems I and II, Flight Management System Data Loaders and Cartridges, Army Engine Trend Monitor System ARINC 429, Satellite Communications (SATCOM) Upgrade, Flight Display System 255, Flight Management System 800, ARC 210 w/Satellite Communications, Traffic Collision Avoidance System II, and Engine Instruments. 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 unit cost will vary significantly from year to year.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Development is not required for Avionics System Cockpit Upgrade.

Installation Schedule:

Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals																
Inputs	60	60	6		30	50	22	25	40	60	25	20	30	20	40	25
Outputs	60	60	6		30	50	22	25	40	60	25	20	30	20	40	25

	FY 2002				FY 2003				FY 2004				FY 2005				To Complete	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Inputs		30	50	40		40	60	36	14	17	20	12	13	13	12	239	1124	
Outputs		30	50	40		40	60	36	14	17	20	12	13	13	12	239	1124	

METHOD OF IMPLEMENTATION:

Contract Dates:

Delivery Date:

1 Month

	FY 1999	Jan 99
Operating Expenses	\$10,678,000	\$10,678,000
Capital Expenditures	\$1,000,000	\$1,000,000
Total Available Funds	\$11,678,000	\$11,678,000
Actual Revenue	\$11,678,000	\$11,678,000
Actual Expenses	\$10,678,000	\$10,678,000
Surplus/Deficit	\$1,000,000	\$1,000,000

FY 1999	Jan 99
---------	--------

Mar 98

Mar 98

FY 1998

FY 1998

Jan 97

Jan 97

FY 1997

FY 1997

ct Dates:

Expiry Date:

INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont): Avionics System Cockpit Upgrade - Group II 1-96-01-0612																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits	126	0.5	102	6.3	125	2.5	78	5.6	85	4.8	120	8.9	136	9.0	352	55.2	1124	92.8		
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data										0.1				0.1						0.2
Training Equipment										0.1				0.1						0.3
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt --Kits																				
FY 1997 Eqpt -- 126 Kits	126	0.1	102	0.2															126	0.1
FY 1998 Eqpt --102 Kits																			102	0.2
FY 1999 Eqpt --125 Kits				0.2	125	0.2	78	0.5											125	0.2
FY 2000 Eqpt -- 78 Kits									85	0.5									78	0.5
FY 2001 Eqpt -- 85 Kits																			85	0.5
FY 2002 Eqpt --120 Kits												120	0.6						120	0.6
FY 2003 Eqpt --136 Kits													136	0.9					136	0.9
TC Equip- 352 Kits														352	12.3				352	12.3
Total Installment	126	0.1	102	0.2	125	0.2	78	0.5	85	0.5	120	0.6	136	0.9	352	12.3	1124	15.2		
Total Procurement Cost		0.6		6.5		2.7		6.2		5.5		9.5		10.1		67.5		108.5		

Exhibit P-40, Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No:				Date:				February 1998			
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft				P-1 Item Nomenclature:				OH-58 MODS (AA0400)			
Program Elements for Code B Items:				Other Related Program Elements:							
				Code:				A			
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete
Proc Qty											Total Prog
Gross Cost	318.6	0.8	2.4	1.1	0.7	0.1	0.5	0.5	0.5	0.5	325.6
Less PY Adv Proc											
Plus CY Adv Proc											
Net Proc (P-1)	318.6	0.8	2.4	1.1	0.7	0.1	0.5	0.5	0.5	0.5	325.6
Initial Spares	1.2										1.2
Total Proc Cost	319.8	0.8	2.4	1.1	0.7	0.1	0.5	0.5	0.5	0.5	326.8
Flyaway U/C											
Wpn Sys Proc U/C											

DESCRIPTION:

a. The OH-58A&C model helicopters are low silhouette, single rotor helicopters powered by a single gas turbine engine (T63-A-700/720) used for observation, scout, and command and control. This is a single pilot aircraft with provisions for a second pilot and the capability to carry two passengers or cargo in the rear cargo area. The OH-58C is an upgraded OH-58A model with a more powerful engine, transmission, navigational upgrade, and instrumentation. The OH-58A/C programs consist of incorporating the SINGARS-VHF-FM radio, Combat Lighting for Night Vision, an External 3 Micron Engine Oil Filter, and Global Positioning Systems. Funding is also required for safety modifications, in addition to operational improvement modifications required to meet mission requirements throughout the year 2015.

b. There are no plans to procure additional OH-58A&C's for the Army. Although the OH-58A/C fleet is being gradually downsized, approximately 363 aircraft will remain in the inventory until 2015. This includes approximately 71 "float" aircraft.

JUSTIFICATION: FY99 funding will be used to install modification kits procured in prior years.

Exhibit P-40M Budget Item Justification Sheet		Date
		February 1998

AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft
OH-58 MODS (AA0400)

1

QSP NO	Classification	EV 1006	EV 1007	EV 1008	EV 1009	EV 2000	EV 2001	EV 2002	EV 2003	EV 2004	EV 2005	EV 2006	EV 2007	EV 2008	EV 2009	EV 2010	EV 2011	EV 2012	EV 2013	EV 2014	EV 2015	EV 2016	EV 2017	EV 2018	EV 2019	EV 2020	EV 2021	EV 2022	EV 2023	EV 2024	EV 2025	EV 2026	EV 2027	EV 2028	EV 2029	EV 2030	EV 2031	EV 2032	EV 2033	EV 2034	EV 2035	EV 2036	EV 2037	EV 2038	EV 2039	EV 2040	EV 2041	EV 2042	EV 2043	EV 2044	EV 2045	EV 2046	EV 2047	EV 2048	EV 2049	EV 2050	EV 2051	EV 2052	EV 2053	EV 2054	EV 2055	EV 2056	EV 2057	EV 2058	EV 2059	EV 2060	EV 2061	EV 2062	EV 2063	EV 2064	EV 2065	EV 2066	EV 2067	EV 2068	EV 2069	EV 2070	EV 2071	EV 2072	EV 2073	EV 2074	EV 2075	EV 2076	EV 2077	EV 2078	EV 2079	EV 2080	EV 2081	EV 2082	EV 2083	EV 2084	EV 2085	EV 2086	EV 2087	EV 2088	EV 2089	EV 2090	EV 2091	EV 2092	EV 2093	EV 2094	EV 2095	EV 2096	EV 2097	EV 2098	EV 2099	EV 2100	EV 2101	EV 2102	EV 2103	EV 2104	EV 2105	EV 2106	EV 2107	EV 2108	EV 2109	EV 2110	EV 2111	EV 2112	EV 2113	EV 2114	EV 2115	EV 2116	EV 2117	EV 2118	EV 2119	EV 2120	EV 2121	EV 2122	EV 2123	EV 2124	EV 2125	EV 2126	EV 2127	EV 2128	EV 2129	EV 2130	EV 2131	EV 2132	EV 2133	EV 2134	EV 2135	EV 2136	EV 2137	EV 2138	EV 2139	EV 2140	EV 2141	EV 2142	EV 2143	EV 2144	EV 2145	EV 2146	EV 2147	EV 2148	EV 2149	EV 2150	EV 2151	EV 2152	EV 2153	EV 2154	EV 2155	EV 2156	EV 2157	EV 2158	EV 2159	EV 2160	EV 2161	EV 2162	EV 2163	EV 2164	EV 2165	EV 2166	EV 2167	EV 2168	EV 2169	EV 2170	EV 2171	EV 2172	EV 2173	EV 2174	EV 2175	EV 2176	EV 2177	EV 2178	EV 2179	EV 2180	EV 2181	EV 2182	EV 2183	EV 2184	EV 2185	EV 2186	EV 2187	EV 2188	EV 2189	EV 2190	EV 2191	EV 2192	EV 2193	EV 2194	EV 2195	EV 2196	EV 2197	EV 2198	EV 2199	EV 2200	EV 2201	EV 2202	EV 2203	EV 2204	EV 2205	EV 2206	EV 2207	EV 2208	EV 2209	EV 2210	EV 2211	EV 2212	EV 2213	EV 2214	EV 2215	EV 2216	EV 2217	EV 2218	EV 2219	EV 2220	EV 2221	EV 2222	EV 2223	EV 2224	EV 2225	EV 2226	EV 2227	EV 2228	EV 2229	EV 2230	EV 2231	EV 2232	EV 2233	EV 2234	EV 2235	EV 2236	EV 2237	EV 2238	EV 2239	EV 2240	EV 2241	EV 2242	EV 2243	EV 2244	EV 2245	EV 2246	EV 2247	EV 2248	EV 2249	EV 2250	EV 2251	EV 2252	EV 2253	EV 2254	EV 2255	EV 2256	EV 2257	EV 2258	EV 2259	EV 2260	EV 2261	EV 2262	EV 2263	EV 2264	EV 2265	EV 2266	EV 2267	EV 2268	EV 2269	EV 2270	EV 2271	EV 2272	EV 2273	EV 2274	EV 2275	EV 2276	EV 2277	EV 2278	EV 2279	EV 2280	EV 2281	EV 2282	EV 2283	EV 2284	EV 2285	EV 2286	EV 2287	EV 2288	EV 2289	EV 2290	EV 2291	EV 2292	EV 2293	EV 2294	EV 2295	EV 2296	EV 2297	EV 2298	EV 2299	EV 2300	EV 2301	EV 2302	EV 2303	EV 2304	EV 2305	EV 2306	EV 2307	EV 2308	EV 2309	EV 2310	EV 2311	EV 2312	EV 2313	EV 2314	EV 2315	EV 2316	EV 2317	EV 2318	EV 2319	EV 2320	EV 2321	EV 2322	EV 2323	EV 2324	EV 2325	EV 2326	EV 2327	EV 2328	EV 2329	EV 2330	EV 2331	EV 2332	EV 2333	EV 2334
--------	----------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

[illegible]

Global Positioning System (GPS)

Transmission External Oil Filter

1. The first part of the paper discusses the importance of the study and the objectives of the research. It highlights the need for a comprehensive understanding of the subject matter and the role of the research in advancing knowledge in the field.

2. The second part of the paper provides a detailed overview of the methodology used in the study. It describes the data collection process, the sample size, and the statistical techniques employed to analyze the data.

3. The third part of the paper presents the results of the study. It includes a series of tables and figures that illustrate the findings of the research. The results are discussed in the context of the research objectives and the existing literature.

4. The fourth part of the paper discusses the implications of the study. It explores the potential applications of the findings and the limitations of the research. It also provides suggestions for future research in the field.

5. The fifth part of the paper is a conclusion that summarizes the main findings of the study and reiterates the importance of the research. It also provides a final statement on the role of the research in advancing knowledge in the field.

[illegible]

Totals	17.8	1.1	0.7	0.1	0.5	0.5	0.5	21.7
--------	------	-----	-----	-----	-----	-----	-----	------

1. The first part of the document is a title page. It contains the title "The Role of the State in the Development of the Economy" and the author's name "John Doe".

1

INDIVIDUAL MODIFICATION												Date	February 1998						
MODIFICATION TITLE: SINGGARS-V 1-85-01-0286																			
MODELS OF SYSTEMS AFFECTED: OH-58C																			
DESCRIPTION / JUSTIFICATION:																			
This system provides VHF-FM radio communications of voice and data in secure or plain text. It replaces the AN/ARC-114 radio which is not secure and does not have frequency hopping capability.																			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																			
All kits have been delivered.																			
Installation of "A" kits is dependent upon "B" kits from PM SINGGARS. Difference between procurement quantity and installation quantity is initial spares.																			
Installation Schedule:																			
		FY 1997		FY 1998			FY 1999			FY 2000			FY 2001						
Pr Yr																			
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2					
Inputs	331	3	3	3	1	10	10	10	10				9	9					
Outputs	331	3	3	3	1	10	10	10	10				9	9					
		FY 2002		FY 2003			FY 2004			FY 2005			Totals						
													Complete						
Inputs	9	9	9	8	9	9	9	8	1	2	3	4		521					
Outputs	9	9	9	8	9	9	9	8						521					
METHOD OF IMPLEMENTATION: Contractor Teams														ADMINISTRATIVE LEADTIME:		PRODUCTION LEADTIME:		Months	
Contract Dates:														FY 1997		FY 1998		FY 1999	
Delivery Date:														FY 1997		FY 1998		FY 1999	

INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont): SINGARS-V 1-85-01-0286																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	617	11.0																	617	11.0
Installation Kits																				
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt --331	331	5.3	10	0.1	40	0.6			35	0.5	35	0.5	35	0.5	35	0.5			521	8.0
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	331	5.3	10	0.1	40	0.6			35	0.5	35	0.5	35	0.5	35	0.5			521	8.0
Total Procurement Cost		16.3		0.1		0.6				0.5		0.5		0.5		0.5				19.0

INDIVIDUAL MODIFICATION											
										Date	February 1998
MODIFICATION TITLE: Global Positioning System (GPS) 1-96-01-0210											
MODELS OF SYSTEMS AFFECTED: OH-58 A/C											
DESCRIPTION / JUSTIFICATION:											
Modification to install standard GPS provisions will improve navigational capabilities in all aircraft.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
PLANNED						ACCOMPLISHED					
Contract Award						Mar 96					
Date of First Delivery						Jul 96					
PM GPS is responsible for "B" kit procurement and fielding. Difference between procurement quantity and installation quantity is initial spares.											
Installation Schedule:											
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Pr Yr											
Totals	1	2	3	4	1	2	3	4	1	2	3
Inputs	5	5	5	5	130						
Outputs	5	5	5	5	130						
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
	1	2	3	4	1	2	3	4	1	2	3
Inputs											
Outputs											
METHOD OF IMPLEMENTATION: Contractor Teams											
ADMINISTRATIVE LEADTIME: 5 Months											
PRODUCTION LEADTIME: 5 Months											
Contract Dates: FY 1997											
Delivery Date: FY 1997											

INDIVIDUAL MODIFICATION																																																																																																																			
										Date	February 1998																																																																																																								
MODIFICATION TITLE: Transmission External Oil Filter 1-90-01-0292																																																																																																																			
MODELS OF SYSTEMS AFFECTED: OH-58A/C																																																																																																																			
DESCRIPTION / JUSTIFICATION: This modification provides a 3 micron filter to reduce transmission maintenance cost and reduces risks of contaminants adversely affecting internal components. Installation will be stopped at 363 aircraft due to ARI retirements.																																																																																																																			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: PLANNED Jun 95 Jul 95 Feb 96 ACCOMPLISHED Jun 95 Jul 95 Feb 96																																																																																																																			
Difference between the procurement quantity and the installation quantity are initial spares.																																																																																																																			
Installation Schedule:																																																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>187</td><td>50</td><td>50</td><td>26</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> <tr> <td>Inputs</td> <td>187</td><td>50</td><td>50</td><td>26</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> <tr> <td>Outputs</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>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	187	50	50	26																	Inputs	187	50	50	26																	Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																															
Totals	187	50	50	26																																																																																																															
Inputs	187	50	50	26																																																																																																															
Outputs																																																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">To</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th rowspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</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>363</td> </tr> <tr> <td>Outputs</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>363</td> </tr> </tbody> </table>												To	FY 2002				FY 2003				FY 2004				FY 2005				Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																	363	Outputs																	363																																		
To	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																			
Inputs																	363																																																																																																		
Outputs																	363																																																																																																		
METHOD OF IMPLEMENTATION: OLR Contractor																																																																																																																			
Contract Dates: FY 1997																																																																																																																			
Delivery Date: FY 1997																																																																																																																			
ADMINISTRATIVE LEADTIME: 8 Months																																																																																																																			
PRODUCTION LEADTIME: 8 Months																																																																																																																			
FY 1999																																																																																																																			
FY 1999																																																																																																																			

INDIVIDUAL MODIFICATION																		Date	February 1998		
MODIFICATION TITLE (Cont):																		Transmission External Oil Filter 1-90-01-0292			
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Kit Quantity	375	0.4																	375	0.4	
Installation Kits																					
Installation Kits, Nonrecurring Equipment																					
Equipment, Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- 363	187	0.3	176	0.3															363	0.6	
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
Total Installation	187	0.3	176	0.3															363	0.6	
Total Procurement Cost		0.7		0.3																1.0	

Exhibit P-40, Budget Item Justification Sheet											Date:	
Appropriation / Budget Activity/Serial No:											February 1998	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft											P-1 Item Nomenclature:	
C-20 AIRCRAFT MODS (AA0560)												
Program Elements for Code B Items:											Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	2.9	2.9	2.2	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.0	13.8
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	2.9	2.9	2.2	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.0	13.8
Initial Spares												
Total Proc Cost	2.9	2.9	2.2	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.0	13.8
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:

a. The C-20 is a long-range, pressurized, passenger/cargo type jet aircraft equipped with two turbofan engines. The aircraft is capable of operating under day and night Instrument Flight Rules (IFR) conditions, in high density air traffic zones, and in icing weather conditions.

b. The Army C-20 and C-21 jet fleet consists of seven aircraft as follows: Two C-20E models procured with FY 87 funds and one C-20F model procured with FY 91 funds. One VC-11 aircraft was transferred to the Army from the Corps of Engineers in FY 90. This aircraft completed an upgrade in FY 93 and has been redesignated a C-20J. One C-21 (Lear jet 35) was seized/confiscated in the FY 81 timeframe. It was refurbished in FY 89. Two C-21 aircraft that were excessed by the Air Force were added to the fleet in FY 96.

JUSTIFICATION: FY 99 funds will be used to install the Satellite Communications/Future Air Navigation System into the C-20E and F aircraft. FY 00 - FY 06 funds will be used to meet future avionics requirements resulting from worldwide navigation transition to Global Positioning System (GPS) enroute and approach systems, Global Air Traffic Management (GATM), and Chairman of the Joint Chief of Staff Master Navigation Plan requirements.

Exhibit P-40M Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No.				Date		February 1998					
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft				P-1 Item Nomenclature		C-20 AIRCRAFT MODS (AA0560)					
Program Elements for Code B Items				Code		Other Related Program Elements					
Description		Fiscal Years									
OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
Global Positioning System (GPS) (No P3a Set)											
1-93-01-0501	Operational	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Flight Data Recorder (No P3a Set)											
1-94-01-0503	Safety	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Cockpit Voice Recorder (No P3a Set)											
1-94-01-0505	Operational	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Digital Flight Phone											
1-94-01-0505	Operational	0.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Traffic Collision Avoidance System											
1-94-01-0503	Safety	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Enhanced Ground Proximity Warning System											
1-94-01-0503	Safety	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Satellite Communications/Future Air Navigation System											
1-94-01-0505	Operational	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.6	4.6
Totals											
		2.2	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.6	8.6

INDIVIDUAL MODIFICATION												Date	February 1998
MODIFICATION TITLE: Digital Flight Phone 1-94-01-0505													
MODELS OF SYSTEMS AFFECTED: C-21 & C-20E, F and J													
DESCRIPTION / JUSTIFICATION:													
This upgrade to the current analog flight phone would allow for increased clarity, voice security, and seamless transition of calls from one cell zone to the next cell zone. Present system drops calls as it loses reception of ground stations. At the speeds these aircraft fly, this is a common occurrence. Digital flight phone, fax and data communications are possible, with service rates much lower than satellite communication rates. Addition of digital phone would allow passengers inexpensive and reliable phone rates over the Continental US, augmenting the INMARSAT satellite communication, which is essential outside of CONUS. The C-21 installation in FY 96 was \$.008K and the C-20E, F, & J installation in FY 98 will be \$.046K.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:													
Production Contract Award: Planned - 4Q96 Accomplished - 4Q96 Production Delivery Starts : Planned - 4Q96 Accomplished - 4Q96 Kit Application Starts: Planned - 4Q96 Accomplished - 4Q96 Kit Application Complete: Planned - 4Q98													
Installation Schedule:													
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Pr Yr		1	2	3	4	1	2	3	4	1	2	3	4
Totals		1	2	3	4	1	2	3	4	1	2	3	4
Inputs		3											
Outputs		3											
		FY 2002		FY 2003		FY 2004		FY 2005		FY 2006			
To		1	2	3	4	1	2	3	4	1	2	3	4
Totals		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													
Outputs													
METHOD OF IMPLEMENTATION: Life Cycle Contract ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 1 Month													
Contract Dates: FY 1997 Jul 98 FY 1998 Jul 98													
Delivery Date: FY 1997 Jul 98 FY 1998 Jul 98													

INDIVIDUAL MODIFICATION																		Date	February 1998		
MODIFICATION TITLE (Cont):																		Digital Flight Phone 1-94-01-0505			
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Kit Quantity	3	0.3			4	0.4													7	0.7	
Installation Kits																					
Installation Kits, Nonrecurring Equipment																					
Equipment, Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- 3 Kits	3																		3		
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- 4 Kits					4														4		
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
Total Installment	3	0.3			4	0.4													7	0.7	
Total Procurement Cost																					

INDIVIDUAL MODIFICATION																																																																																																																																																																																																																				
MODIFICATION TITLE: Traffic Collision Avoidance System 1-94-01-0503										Date																																																																																																																																																																																																										
MODELS OF SYSTEMS AFFECTED: C-20E and F																																																																																																																																																																																																																				
DESCRIPTION / JUSTIFICATION:																																																																																																																																																																																																																				
This modification will install the Traffic Collision Avoidance System into the C-20E and F aircraft. This capability is mandatory for all major commercial air carriers and almost standard in most Gulfstream size corporate jets. The Traffic Collision Avoidance System can significantly reduce the possibility of a mid-air collision.																																																																																																																																																																																																																				
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Production Contract Award: Planned - 2Q97 Accomplished - 2Q97 Production Delivery Starts: Planned - 2Q97 Accomplished - 2Q97 Kit Application Starts: Planned - 2Q97 Accomplished - 2Q97 Kit Application Complete: Planned - 2Q97 Accomplished - 2Q97																																																																																																																																																																																																																				
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>Month</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td></td><td></td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																					Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Month	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			Inputs																			Outputs																		
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																																																																																																			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																																
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																																
Inputs																																																																																																																																																																																																																				
Outputs																																																																																																																																																																																																																				
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																																																																																																																			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Month																																																																																																																																																																																																		
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																																				
Inputs																																																																																																																																																																																																																				
Outputs																																																																																																																																																																																																																				
METHOD OF IMPLEMENTATION: Life Cycle Contract ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 1 Month Contract Dates: FY 1997 Feb 97 FY 1998 FY 1999 Delivery Date: FY 1997 Feb 97 FY 1998 FY 1999																																																																																																																																																																																																																				

INDIVIDUAL MODIFICATION													
MODIFICATION TITLE (Cont): Traffic Collision Avoidance System 1-94-01-0503													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits													
Installation Kits, Nonrecurring Equipment			3	0.8									3
Equipment, Nonrecurring													0.8
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- 3 Kits			3	0.1									3
FY 1998 Eqpt -- Kits													0.1
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installation			3	0.1									3
Total Procurement Cost				0.9									0.9

INDIVIDUAL MODIFICATION												Date	February 1998
MODIFICATION TITLE: Enhanced Ground Proximity Warning System 1-94-01-0503													
MODELS OF SYSTEMS AFFECTED: C-20E and F													
DESCRIPTION / JUSTIFICATION:													
The Enhanced Ground Proximity Warning System utilizes aircraft position information provided by on board navigation equipment combined with a world-wide terrain database to provide aircrew with real time video/CRT display of approaching terrain. This technology will greatly enhance situational awareness with regard to surrounding terrain during air operations in airport terminal areas and when flying near the surface in unfamiliar areas. Installation in FY 98 will be \$.046K.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:													
Production Contract Award: Planned - 3Q98 Production Delivery Starts: Planned - 3Q98 Kit Application Starts: Planned - 3Q98 Kit Application Complete: Planned - 3Q98													
Installation Schedule:													
Inputs Outputs	Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		
	1	2	3	4	1	2	3	4	1	2	3	4	
	Totals												
Inputs Outputs	FY 2002		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		Totals
	1	2	3	4	1	2	3	4	1	2	3	4	Complete
METHOD OF IMPLEMENTATION: Life Cycle Contract ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 1 Month													
Contract Dates: FY 1997 Jun 98 FY 1998 Jun 98 FY 1999 Jun 98 FY 1999													
Delivery Date: FY 1997 Jun 98 FY 1998 Jun 98 FY 1999 Jun 98 FY 1999													

INDIVIDUAL MODIFICATION																
Enhanced Ground Proximity Warning System 1-94-01-0503																
MODIFICATION TITLE (Cont):																
FINANCIAL PLAN: (\$ in Millions)																
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																
PROCUREMENT																
Kit Quantity																
Installation Kits			3	0.5											3	0.5
Installation Kits, Nonrecurring																
Equipment																
Equipment, Nonrecurring																
Engineering Change Orders																
Data																
Training Equipment																
Support Equipment																
Other																
Interim Contractor Support																
Installation of Hardware																
FY 1996 & Prior Eqpt -- Kits																
FY 1997 Eqpt -- Kits																
FY 1998 Eqpt -- 3 Kits			3												3	
FY 1999 Eqpt -- Kits																
FY 2000 Eqpt -- kits																
FY 2001 Eqpt -- kits																
FY 2002 Eqpt -- kits																
FY 2003 Eqpt -- kits																
TC Equip-Kits																
Total Installment			3	0.5											3	0.5
Total Procurement Cost																

INDIVIDUAL MODIFICATION																
Date														February 1998		
MODIFICATION TITLE: Satellite Communications/Future Air Navigation System 1-94-01-0505																
MODELS OF SYSTEMS AFFECTED: C-20E, F and J																
DESCRIPTION / JUSTIFICATION: Future Air Navigation Systems (FANS) is part of the satellite technology established by the International Civil Aviation Organization (ICAO). It is navigation equipment for over ocean and large areas of continental land mass transmitted via Satellite Communications (SATCOM). Automatic Dependent Surveillance, which will be used to accurately determine and verify aircraft position, will also use both Satellite Navigation and SATCOM. The present C-20 SATCOM system does not address the requirements of FANS, however, it could be modified to do so, once the ICAO standard is in place.																
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Production Contract Award: Planned - 1Q99 Production Delivery Starts: Planned - 1Q99 Kit Application Starts: Planned - 1Q99 Kit Application Complete: Planned - 2Q99																
Installation Schedule:																
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001						
Pr Yr	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals																
Inputs																
Outputs																
		FY 2002		FY 2003		FY 2004		FY 2005		FY 2006						
Pr Yr	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals																
Inputs																
Outputs																
METHOD OF IMPLEMENTATION: Life Cycle Contract ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 1 Month																
Contract Dates: FY 1997 FY 1998 FY 1999 Dec 98																
Delivery Date: FY 1997 FY 1998 FY 1999 Dec 98																

INDIVIDUAL MODIFICATION																			Date		February 1998						
MODIFICATION TITLE (Cont):																			Satellite Communications/Future Air Navigation System 1-94-01-0505								
FINANCIAL PLAN: (\$ in Millions)																											
FY 1996 and Prior	Qty	\$	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL								
			Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$							
RDT&E																											
PROCUREMENT																											
Kit Quantity																											
Installation Kits																											
Installation Kits, Nonrecurring																											
Equipment																											
Equipment, Nonrecurring																											
Engineering Change Orders																											
Data																											
Training Equipment																											
Support Equipment																											
Other																											
Interim Contractor Support																											
Installation of Hardware																											
FY 1996 & Prior Eqpt -- Kits																											
FY 1997 Eqpt -- Kits																											
FY 1998 Eqpt -- Kits																											
FY 1999 Eqpt -- 4 Kits																											
FY 2000 Eqpt --4 kits																											
FY 2001 Eqpt --4 kits																											
FY 2002 Eqpt --4 kits																											
FY 2003 Eqpt --4 kits																											
TC Equip-Kits																											
Total Installation																											
Total Procurement Cost																											

Exhibit P-40, Budget Item Justification Sheet													Date: February 1998
Appropriation / Budget Activity/Serial No:			P-1 Item Nomenclature: LONGBOW (AA6670)										
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft			Other Related Program Elements:										
Program Elements for Code B Items:			Code:	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog		
Proc Qty													
Gross Cost	0.0	0.0	535.3	389.5	493.2	607.0	728.5	702.4	709.9	654.3	3094.0	7914.1	
Less PY Adv Proc			116.9	16.8	30.4	36.9	41.7	39.8	36.9	29.3	128.9	477.6	
Plus CY Adv Proc		116.9	16.8	30.4	36.9	41.7	39.8	36.9	29.3	29.5	99.4	477.6	
Net Proc (P-1)	0.0	116.9	435.2	403.1	499.7	611.7	726.6	699.5	702.3	654.5	3064.5	7914.0	
Initial Spares				7.4	13.2	21.9	12.3	12.8	13.2	15.2		96.0	
Total Proc Cost	0.0	116.9	435.2	410.5	512.9	633.6	738.9	712.3	715.5	669.7	3064.5	8010.0	
Flyaway U/C													
Wpn Sys Proc U/C													
DESCRIPTION: The Longbow Weapon System (AH-64D) consists of a modified AH-64 airframe, a Fire Control Radar (FCR) mission kit and a Longbow HELLFIRE missile. Two hundred twenty seven AH-64Ds will incorporate the General Electric T700-GE-701C engines for improved performance when carrying the FCR mission kits. Those AH-64D aircraft fielded without the FCR mission kits will have the T700-GE-701 engines, but can accept the FCR mission kit with T700-GE-701C engines. The Longbow Weapon System will provide the AH-64 with automatic target detection, classification, prioritization and a true fire-and-forget engagement capability, greatly increasing weapon system effectiveness and aircraft survivability. The weapon system will be employable day or night, in adverse weather and in obscuration. The weapon system will effectively engage and destroy advanced threat armor on the Airland Battlefield of the late 1990s and into the next century. To be effective and survive on this future battlefield, the attack helicopter team will rapidly engage multiple targets with minimum exposure time, and deploy a system that is inherently resistant to threat countermeasures (CMs).													
JUSTIFICATION:													
FY 99 funds buy 66 aircraft/40 FCRs, including associated support equipment, tooling, GFE, and training devices. Funding contains digitization requirements. The 18 October 95 Acquisition Decision Memorandum authorized Longbow Apache to proceed into production and award of single year contract not to exceed quantity of 18 aircraft in FY96. A multi-year contract was signed on 16 August 96. Airframe quantities and funding reflect a multi-year (MY) scenario. Multiyear contracts for the FCR mission kit were signed in Nov 97. Quantities and funding reflect this multiyear scenario. Under the Army Modernization Master Plan, all Apaches will be remanufactured to the common AH-64D configuration with 227 being equipped with the FCR kits and 701C engines.													
Initial spares includes FCR components													
*Unit costs for airframe and FCRs are on detailed P-40Rs.													

DESCRIPTION: The Longbow Weapon System (AH-64D) consists of a modified AH-64 airframe, a Fire Control Radar (FCR) mission kit and a Longbow HELLFIRE missile. Two hundred twenty seven AH-64Ds will incorporate the General Electric T700-GE-701C engines for improved performance when carrying the FCR mission kits. Those AH-64D aircraft fielded without the FCR mission kits will have the T700-GE-701 engines, but can accept the FCR mission kit with T700-GE-701C engines. The Longbow Weapon System will provide the AH-64 with automatic target detection, classification, prioritization and a true fire-and-forget engagement capability, greatly increasing weapon system effectiveness and aircraft survivability. The weapon system will be employable day or night, in adverse weather and in obscuration. The weapon system will effectively engage and destroy advanced threat armor on the AirLand Battlefield of the late 1990s and into the next century. To be effective and survive on this future battlefield, the attack helicopter team will rapidly engage multiple targets with minimum exposure time, and deploy a system that is inherently resistant to threat countermeasures (CMs).

JUSTIFICATION: FY 99 funds buy 66 aircraft/40 FCRs, including associated support equipment, tooling, GFE, and training devices. Funding contains digitization requirements. The 18 October 95 Acquisition Decision Memorandum authorized Longbow Apache to proceed into production and award of single year contract not to exceed quantity of 18 aircraft in FY96. A multi-year contract was signed on 16 August 96. Airframe quantities and funding reflect a multi-year (MY) scenario. Multiyear contracts for the FCR mission kit were signed in Nov 97. Quantities and funding reflect this multiyear scenario. Under the Army Modernization Master Plan, all Apaches will be remanufactured to the common AH-64D configuration with 227 being equipped with the FCR kits and 701C engines.

Initial spares includes FCR components

*Unit costs for airframe and FCRs are on detailed P-40Rs.

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:		P-1 Item Nomenclature:											
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft		LONGBOW APACHE MODS (AA6607)											
Program Elements for Code B Items:		Other Related Program Elements:											
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty			24	24	44	66	74	72	72	72	310	758	
Gross Cost	0.0	0.0	332.9	283.1	368.2	475.0	574.9	553.6	568.0	625.0	2964.8	6745.5	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	0.0	0.0	332.9	283.1	368.2	475.0	574.9	553.6	568.0	625.0	2964.8	6745.5	
Initial Spares													
Total Proc Cost	0.0	0.0	332.9	283.1	368.2	475.0	574.9	553.6	568.0	625.0	2964.8	6745.5	
Flyaway U/C			15.3	9.6	6.5	6.6	6.5	6.9	6.8	8.0	7.5	7.5	
Wpn Sys Proc U/C			17.0	12.3	9.0	7.6	8.2	8.1	8.3	9.2	9.9	9.5	

DESCRIPTION:
The Longbow Weapon System (AH-64D) consists of a modified AH-64 airframe, a Fire Control Radar (FCR) mission kit and a Longbow HELLFIRE missile. Two hundred twenty seven AH-64Ds will incorporate the General Electric T700-GE-701C engines for improved performance when carrying the FCR mission kits. Those AH 64D aircraft fielded without the FCR mission kits will have the T700-GE-701 engines, but can accept the FCR mission kit with T700-GE-701C engines. The Longbow Weapon System will provide the AH-64 with automatic target detection, classification, prioritization and a true fire-and-forget engagement capability, greatly increasing weapon system effectiveness and aircraft survivability. The weapon system will be employable day or night, in adverse weather and in obscuration. The weapon system will effectively engage and destroy advanced threat armor on the AirLand Battlefield of the late 1990s and into the next century. To be effective and survive on this future battlefield, the attack helicopter team will rapidly engage multiple targets with minimum exposure time, and deploy a system that is inherently resistant to threat countermeasures (CMs).

JUSTIFICATION:
FY 99 funds buy 66 aircraft, including associated support equipment, tooling, GFE, and training. Under the Army Modernization Master Plan, all Apaches will be remanufactured to the common AH-64D configuration with 227 being equipped with the FCR kits and 701C engines.

* Unit costs are annual procurement unit costs including advanced procurement.

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: Longbow Apache Mods TBD1										Date February 1998	
MODELS OF SYSTEMS AFFECTED: AH-64 Attack Helicopter (Apache)											
DESCRIPTION / JUSTIFICATION:											
The Longbow Weapon System (AH-64D) consists of a modified AH-64A airframe, a Fire Control Radar (FCR) mission kit and a Longbow Hellfire missile. The AH-64 aircraft will be modified with those changes necessary to effectively and efficiently integrate the Fire Control Radar. These changes consist of increased electrical power, expanded forward avionics bays, increased cooling, upgraded processors, MANPRINT crew station and 701C engines. These upgrades will significantly enhance warfighting capability and battlefield survivability by providing for advanced digitized avionics and the employment of true fire and forget engagement capability.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
Milestone 1B (DAB) Jul 89, Milestone II (DAB) Dec 90, Milestone III (DAB) Oct 95, Multiyear Lot 1 contract award Aug 96, First Production Delivery Mar 97, First Unit Equipped Planned Jul 98, IOC Planned Oct 98											
Installation Schedule:											
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Totals		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4	
Inputs											
Outputs											
Totals											
Inputs											
Outputs											
Totals											
METHOD OF IMPLEMENTATION:											
Contract Dates:		FY 1997 Nov 96		FY 1998 Dec 97		FY 1999 Dec 98		FY 1999 Dec 98		FY 1999 Nov 99	
Delivery Date:		FY 1997 Mar 98		FY 1998 Nov 98		FY 1998 Nov 98		FY 1999 Nov 98		FY 1999 Nov 98	
Production Leadtime:		6 Months		6 Months		6 Months		6 Months		22 Months	

INDIVIDUAL MODIFICATION																			Date	February 1998	
MODIFICATION TITLE (Cont): Longbow Apache Mods TBD1																					
FINANCIAL PLAN: (\$ in Millions)																					
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL			
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
24		24	143.7	44		66		74		72		72		72		310		758			
	158.1		81.9		241.8		391.7		435.1		439.5		428.9		461.5		2003.5		4703.8		
	133.4		25.5		21.1		16.9		15.5		28.7		35.2		86.8		186.2		605.7		
	5.1		32.0		67.6		33.5		70.6		26.2		53.8		35.1		416.2		733.6		
	36.3				35.3		29.9		49.6		54.7		45.8		41.6		358.9		684.1		
					2.4		3.0		4.1		4.5		4.3						18.3		
RDT&E																					
PROCUREMENT																					
Aircraft Quantity																					
Recurring Hardware																					
Other Flyaway																					
Training Devices																					
Other Support																					
FCR Multiyear Contract																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits																					
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
Total Installation																					
Total Procurement Cost																					

Exhibit P-43, Simulator and Training Device Justification												
Appropriation / Budget Activity/Serial No.			P-1 Item Nomenclature			Other Related Program Elements:			IOC Date:			
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft			LONGBOW/APACHE MODS (AA6607)						February 1998			
Training Device by Type	Site	Delivery Date	Ready for Training Date	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
LCT	Ft. Hood	Sep-99	Oct-00	5100	6572	20753	21296	20795	6857	6901	7007	
LCTS	Ft. Hood	Feb-99	Mar-99							4400	7044	
MAVWEST	Ft. Eustis	Sep-99	Oct-00		13068	25507		23177		22715		
AEDST	Ft. Eustis	Sep-99	Oct-00		5860	17883	8591	15100	3743			
TESS	CTC/Home stations	Jul-99	Aug-99			3435	3599	8000	8000		8000	
ECO/CLS								3526	7636	11789	13079	
Total				5100	25500	67578	33486	70598	26236	53805	35130	

TRAINING SYSTEM DESCRIPTION:

The Longbow Training Device Suite (TDS) includes the following:
 Longbow Crew Trainer (LCT), FY 96 start year (16 total)
 Longbow Collective Training System (LCTS), FY 02 start year (12 total)
 Tactical Engagement Simulation System (TESS) "A" and "B" Kit, FY 98 start year (1/aircraft)
 Multiplex Avionics, Visionics, Weapons and Electrical Systems Trainer (MAVWEST), FY 97 start year (10 total)
 The cornerstone of the TDS is the LCT which is a dual-seat, pilot and co-pilot gunner (CPG) sustainer training device. It will also be used for individual qualification training at the USA Aviation Center (USAAVNC). The basis of issue is one to two devices at selected MACOM locations (based upon Longbow Apache unit density), one at the Combat Aviation Training Brigade (CATB), three at USAAVNC, and one at the Western Area Aviation Training Site (WAATS). Development and production of the LCT will precede development of the maintainer devices and will establish the technical baseline for the LCTS and MAVWEST. Issued similarly to the LCT, the LCTS will provide a transportable collective and combined arms training capability to the field. The LCT and the LCTS will be networkable through Distributed Interactive Simulation (DIS) protocols and interfaces and will be interoperable with the Combined Arms Tactical Trainer (CATT) systems.
 Each Longbow Apache aircraft will have an embedded TESS "A" Kit to provide cockpit interface with a strap-on "B" Kit. The "B" Kit will simulate all on-board weapons for real-time casualty assessment for force-on force collective training at the Combat Training Centers and at home stations.
 The MAVWEST and AEDST are maintainer training devices for the US Aviation Logistics School (USAAALS).

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												APACHE LONGBOW FCR (AA6608)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty			10	10	21	40	45	44	57			227	
Gross Cost	0.0	0.0	85.5	89.6	94.6	95.1	111.9	109.0	105.0	0.0	0.0	690.7	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	0.0	0.0	85.5	89.6	94.6	95.1	111.9	109.0	105.0	0.0	0.0	690.7	
Initial Spares													
Total Proc Cost	0.0	0.0	85.5	89.6	94.6	95.1	111.9	109.0	105.0	0.0	0.0	690.7	
Flyaway U/C			12.7	10.0	4.9	2.7	2.8	2.8	2.1				
Wpn Sys Proc U/C			12.7	10.0	4.9	2.7	2.8	2.8	2.1				

DESCRIPTION:
The Longbow Weapon System (AH-64D) consists of a modified AH-64 airframe, a Fire Control Radar (FCR) mission kit and a Longbow HELFIRE missile. Two hundred twenty seven AH-64Ds will incorporate the General Electric T700-GE-701C engines for improved performance when carrying the FCR mission kits. Those AH 64D aircraft fielded without the FCR mission kits will have the T700-GE-701 engines installed, but can accept the FCR mission kit with T700-GE-701C engines. The Longbow Weapon System will provide the AH-64 with automatic target detection, classification, prioritization and a true fire-and-forget engagement capability, greatly increasing weapon system effectiveness and aircraft survivability. The weapon system will be employable day or night, in adverse weather and in obscuration. The weapon system will effectively engage and destroy advanced threat armor on the AirLand Battlefield of the late 1990s and into the next century. To be effective and survive on this future battlefield, the attack helicopter team will rapidly engage multiple targets with minimum exposure time, and deploy a system that is inherently resistant to threat countermeasures (CMs).

JUSTIFICATION:
FY 99 funds buy 40 FCRs. FCR quantities & funding reflect proposed multiyear procurements for FY 98-02. FY 95 Advance Procurement is included in AA6607. Under the Army Modernization Master Plan, all Apaches will be remanufactured to the common AH-64D configuration with 227 being equipped with the FCR kits and 701C engines. Balance of FCR contract funding is contained in AA6607.

*Unit costs are annual procurement unit costs including advanced procurement.

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: Apache Longbow FCR TBD2										Date	February 1998
MODELS OF SYSTEMS AFFECTED: AH-64 Attack Helicopter (Apache)											
DESCRIPTION / JUSTIFICATION:											
The Longbow Fire Control Radar (FCR) is a millimeter wave target acquisition system developed for integration on the Apache Attack Helicopter. The FCR provides three tactical modes of operation. They are the Ground Targeting Mode (GTM), the Air Targeting Mode (ATM), and the Terrain Profile Mode (TPM). In the GTM, the FCR provides the capability to rapidly scan up to approximately 50 square kilometers of the battlefield. It uses selectable scan widths which are directionally controllable by the crew. In this mode, the FCR detects, locates, classifies, and prioritizes moving and stationary targets. The targets are classified as air defense units, track vehicles, wheel vehicles, helicopters, fixed wing aircraft, or unknown. It has the capability to detect stationary targets out to a range of six kilometers and moving targets out to eight kilometers. In the ATM the FCR detects, classifies and prioritizes airborne targets. The TPM provides terrain avoidance information to the crew for navigation during periods of reduced visibility. The FCR does all the above day or night and during periods of reduced visibility caused by atmospheric conditions and/or battlefield obscuration. In both targeting modes, the FCR provides rapid target acquisition and engagement while reducing exposure and providing multiple target engagement capability when coupled with the fire-and-forget Longbow Hellfire Missile. The FCR is a fully integrated system on the AH-64D which provides enhanced situational awareness, survivability, and lethality.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
		<u>Plan</u>		<u>Actual</u>							
Milestone 1B (DAB)		Jul 89		Jul 89							
Milestone II (DAB)		Dec 90		Dec 90							
Milestone III (DAB)		Oct 95		Oct 95							
Lot 1 contract award		Mar 96		Mar 96							
First Production Delivery		Mar 97		Mar 97							
Installation Schedule:											
FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Totals		Totals		Totals		Totals		Totals			
1		1		1		1		1		1	
2		2		2		2		2		2	
3		3		3		3		3		3	
4		4		4		4		4		4	
5		5		5		5		5		5	
6		6		6		6		6		6	
7		7		7		7		7		7	
8		8		8		8		8		8	
9		9		9		9		9		9	
10		10		10		10		10		10	
11		11		11		11		11		11	
12		12		12		12		12		12	
13		13		13		13		13		13	
14		14		14		14		14		14	
15		15		15		15		15		15	
16		16		16		16		16		16	
17		17		17		17		17		17	
18		18		18		18		18		18	
19		19		19		19		19		19	
20		20		20		20		20		20	
21		21		21		21		21		21	
22		22		22		22		22		22	
23		23		23		23		23		23	
24		24		24		24		24		24	
25		25		25		25		25		25	
26		26		26		26		26		26	
27		27		27		27		27		27	
28		28		28		28		28		28	
29		29		29		29		29		29	
30		30		30		30		30		30	
31		31		31		31		31		31	
32		32		32		32		32		32	
33		33		33		33		33		33	
34		34		34		34		34		34	
35		35		35		35		35		35	
36		36		36		36		36		36	
37		37		37		37		37		37	
38		38		38		38		38		38	
39		39		39		39		39		39	
40		40		40		40		40		40	
41		41		41		41		41		41	
42		42		42		42		42		42	
43		43		43		43		43		43	
44		44		44		44		44		44	
45		45		45		45		45		45	
46		46		46		46		46		46	
47		47		47		47		47		47	
48		48		48		48		48		48	
49		49		49		49		49		49	
50		50		50		50		50		50	
51		51		51		51		51		51	
52		52		52		52		52		52	
53		53		53		53		53		53	
54		54		54		54		54		54	
55		55		55		55		55		55	
56		56		56		56		56		56	
57		57		57		57		57		57	
58		58		58		58		58		58	
59		59		59		59		59		59	
60		60		60		60		60		60	
61		61		61		61		61		61	
62		62		62		62		62		62	
63		63		63		63		63		63	
64		64		64		64		64		64	
65		65		65		65		65		65	
66		66		66		66		66		66	
67		67		67		67		67		67	
68		68		68		68		68		68	
69		69		69		69		69		69	
70		70		70		70		70		70	
71		71		71		71		71		71	
72		72		72		72		72		72	
73		73		73		73		73		73	
74		74		74		74		74		74	
75		75		75		75		75		75	
76		76		76		76		76		76	
77		77		77		77		77		77	
78		78		78		78		78		78	
79		79		79		79		79		79	
80		80		80		80		80		80	
81		81		81		81		81		81	
82		82		82		82		82		82	
83		83		83		83		83		83	
84		84		84		84		84		84	
85		85		85		85		85		85	
86		86		86		86		86		86	
87		87		87		87		87		87	
88		88		88		88		88		88	
89		89		89		89		89		89	
90		90		90		90		90		90	
91		91		91		91		91		91	
92		92		92		92		92		92	
93		93		93		93		93		93	
94		94		94		94		94		94	
95		95		95		95		95		95	
96		96		96		96		96		96	
97		97		97		97		97		97	
98											

INDIVIDUAL MODIFICATION																			Date	February 1998	
MODIFICATION TITLE (Cont): Apache Longbow FCR TBD2																					
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E	10		10		21		40		45		44		57						227		
PROCUREMENT																					
FCR Quantity		80.1		59.6		94.6		95.1		111.9		109.0		105.0					655.3		
Recurring Hardware																			20.4		
Other Flyaway		5.4		15.0																	
Training Device																					
Other Support				15.0															15.0		
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits																					
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
Total Installment		85.5		89.6		94.6		95.1		111.9		109.0		105.0						690.7	
Total Procurement Cost																					

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												LONGBOW (ADV PROC) (AA6670)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Less PY Adv Proc													
Plus CY Adv Proc		116.9	16.8	30.4	36.9	41.7	39.8	36.9	29.3	29.5	99.4	477.6	
Net Proc (P-1)	0.0	116.9	16.8	30.4	36.9	41.7	39.8	36.9	29.3	29.5	99.4	477.6	
Initial Spares													
Total Proc Cost	0.0	116.9	16.8	30.4	36.9	41.7	39.8	36.9	29.3	29.5	99.4	477.6	
Flyaway U/C													
Wpnt Sys Proc U/C													

DESCRIPTION:
The Longbow program encompasses modifications to the AH-64 Apache as well as upgrades to the aircraft systems for the AH-64D series to efficiently and effectively integrate the Fire Control Radar (FCR) and radar frequency (RF) missile. It provides an adverse weather fire-and-forget missile capability that increases the lethality and survivability. The Longbow Apache also retains the capability to fire the Semi-Active Laser Hellfire. The design enhancements increase operational capability of the crew and provide increased survivability and lethality while complying with Congressional direction to standardize the fleet to a common configuration.

JUSTIFICATION:
Under the Army Modernization Master Plan, all Apaches will be remanufactured to the common AH-64D configuration with 227 being equipped with the FCR kits and 701C engines. FY 99 funds Advance Procurement to support deliveries of airframes and FCRs. Long Lead funding is required to provide funding for those parts, tooling, test equipment, and materials which are lead time critical to the end item. Long lead funding is required to preserve the planned helicopter delivery schedule.

Advance Procurement Requirements Analysis-Funding (P-10A)										First System Award Date:		First System Completion Date:		Date:	
Appropriation / Budget Activity/Serial No:										P-1 Line Item Nomenclature / Weapon System:					
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft										LONGBOW (ADV PROC) (AA6670)					
										(\$ in Millions)					
	PLT (mos)	When Rqd (mos)	Pr Yrs	1995	1996	1997	1998	1999	2000	2001	2002	2003	To Comp	Total	
End Item Quantity:															
Aircraft					24	24	44	66	74	72	72	72	310	758	
FCR					10	10	21	40	45	44	57			227	
Airframe															
GFE - FCR Kit	30	N/A		75.6	6.0	25.0	26.4	30.7	28.7	28.3	29.3	29.5	99.4	378.9	
	30	29		41.3	10.8	5.4	10.5	11.0	11.1	8.6				98.7	
Total Advance Procurement				116.9	16.8	30.4	36.9	41.7	39.8	36.9	29.3	29.5	99.4	477.6	
Description:															

Advance Procurement Requirements Analysis-Budget Justification (P-10B)									
Appropriation / Budget Activity/Serial No.					Date:		February 1998		
P-1 Line Item Nomenclature / Weapon System:					LONGBOW (ADV PROC) (AA6670)				
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft					(\$ in Millions)				
End Item	PLT (mos)	Quantity Per Assembly	Unit Cost	1999			2000		
				Qty	Contract Forecast Date	Total Cost Request	Qty	Contract Forecast Date	Total Cost Request
Airframe	30	Various Components	N/A	74	Dec 98	30.7	72	Dec 99	28.7
GFE - FCR Kit	30	Various Components	N/A	45	Nov 98	11.0	44	Nov 99	11.1
Total Advance Procurement						41.7			39.8

Description: Multi-year airframe contract awarded Aug 96. Above "Contract Forecast Date" for airframe represents "Funding action" dates for Lots IV and V. Miltiyear FCR contract awarded Nov 97. Above "contract forecast dates" represents funding action dates for Lots V and VI.

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												UH-1 MODS (AB0602)	
Program Elements for Code B Items:												Other Related Program Elements:	
Code:												A	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	348.5	8.8	4.9	6.1	2.6	3.8	4.5	4.4	3.3	3.3	0.0	390.2	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	348.5	8.8	4.9	6.1	2.6	3.8	4.5	4.4	3.3	3.3	0.0	390.2	
Initial Spares													
Total Proc Cost	348.5	8.8	4.9	6.1	2.6	3.8	4.5	4.4	3.3	3.3	0.0	390.2	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: The UH-1 helicopter is used for transportation of personnel, equipment and supplies, command & control, and medical evacuation. The UH-1 requires modification upgrades to ensure that it can operate on the modern battlefield and be logistically supportable through the year 2017. There are two models, the UH-1H and the UH-1V (MEDEVAC), most of which are located in National Guard units.

JUSTIFICATION: FY 99 funding will be used to procure and install navigation and communication avionics which are required because the currently installed avionics are quickly becoming logistically nonsupportable. Installation of modification kits is limited to those aircraft that will remain in the force structure through the year 2017.

Exhibit P-40M Budget Item Justification Sheet												Date	February 1998
Appropriation / Budget Activity/Serial No.			P-1 Item Nomenclature										
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft			UH-1 MODS (AB0602)										
Program Elements for Code B Items			Other Related Program Elements										
			Code										
			Fiscal Years										
Description	OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total	
UH-1 Radar Altimeter (AN/APN-209)													
1-76-01-0802		Safety	14.9	0.7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	16.0	
Improved Airborne Direction Finder (AN/ARN-149)													
1-84-01-1389		RAM	6.0	1.8	1.7	1.7	2.3	3.1	1.0	0.0	0.0	17.6	
Improved VHF OMNI-Range (AN/ARN-123)													
1-84-01-1390		RAM	9.2	1.8	0.6	1.2	1.0	0.8	1.2	0.3	0.0	16.1	
Single Channel Ground and Air Radio System (SINGARS)													
1-81-01-1393		RAM	4.0	0.4	0.1	0.7	1.2	0.5	1.1	0.3	0.4	8.7	
AN/APX-100 Transponder													
1-81-01-1394		RAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	22.8	25.5	
Upgrade UH-1 Synthetic Flight Simulator System (No P3a Set)													
1-82-01-1420		RAM	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	
Totals													
			34.1	6.1	2.6	3.8	4.5	4.4	3.3	3.3	23.2	85.3	

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: UH-1 Radar Altimeter (AN/APN-209) 1-76-01-0802

MODELS OF SYSTEMS AFFECTED: UH-1HV Helicopters

DESCRIPTION / JUSTIFICATION:

The altimeter provides a lighted warning to the crew when the aircraft descends below or climbs above the desired altitude settings. Required for missions that use Night Vision Goggles or when flying over blowing snow, water, or featureless terrain.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Development of the Radar Altimeter System is complete.

Installation Schedule:

Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals																				
760	10	20	20	9	10	10	10	15	12	12	12	12								
760	10	20	20	9	10	10	10	15	12	12	12	12								

[illegible]

METHOD OF IMPLEMENTATION:

Contract Dates:

Delivery Date:

ADMINISTRATIVE LEADTIME:

FY 1998

FY 1998

PRODUCTION LEADTIME	9 Months

FY 1999

FY 1999

INDIVIDUAL MODIFICATION

February 1998

Date

MODIFICATION TITLE: Improved Airborne Direction Finder (AN/ARN-149) 1-84-01-1389

MODELS OF SYSTEMS AFFECTED: UH-1H/V Helicopter

DESCRIPTION / JUSTIFICATION:

FAA regulations require that all aircraft flying in the vicinity of commercial airports be equipped with an ADF. The AN/ARN-149 is being procured to replace the old AN/ARN-83 which is still being used in the UH-1 but not other Army helicopters. The AN/ARN-83 is being phased out throughout the Army and has been declared non-supportable by CECOM, the Army's communication command that manages the system. An ADF is required in all military aircraft for utilization of tactical non-directional beacons on the battlefield.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Development of the AN/ARN-149 system for the UH-1 is complete.

Installation Schedule:

Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
Inputs	80	25	60	50	35	40	40	40	38	10	10	15	20	25	25
Outputs	80	25	60	50	35	40	40	40	38	10	10	15	20	25	25
Totals	80	25	60	50	35	40	40	40	38	10	10	15	20	25	25

Pr Yr	FY 2002			FY 2003			FY 2004			FY 2005			Totals		
	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To	Complete
Inputs	30	30	30	48											783
Outputs	30	30	30	48											783

METHOD OF IMPLEMENTATION:

Contract Team

Contract Dates:

Delivery Date:

FY 1997 Jan 97

FY 1997 Sep 97

FY 1998 Feb 98

FY 1998 Sep 98

ADMINISTRATIVE LEADTIME:

3 Months

PRODUCTION LEADTIME:

FY 1999 Jan 99

FY 1999 Sep 99

9 Months

INDIVIDUAL MODIFICATION														
														Date
February 1998														
MODIFICATION TITLE: Improved VHF OMNI-Range (AN/ARN-123) 1-84-01-1390														
MODELS OF SYSTEMS AFFECTED: UH-1H/V Helicopter														
DESCRIPTION / JUSTIFICATION: The AN/ARN-123 is the Army's standard VOR receiver and will replace the old AN/ARN-82 which is still being used in the UH-1. The AN/ARN-82 is being phased out throughout the Army and has been declared non-supportable by CECOM, the Army's communication command that manages the system. The VOR is the primary navigational aid used for in-route navigation and is also required by the FAA for flights around commercial airports (most UH-1s are operated by the National Guard located around commercial airports).														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Development of the AN/ARN-123 system for the UH-1 is complete.														
Installation Schedule:														
FY 1997		FY 1998		FY 1999		FY 2000		FY 2001						
Pr	Yr	1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		270	31	41	48	50	25	25	25	26	20	20	24	
Outputs		270	31	41	48	50	25	25	25	26	20	20	24	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs		8	8	8	6	12	12	12	14	1	2	3	4	
Outputs		8	8	8	6	12	12	12	14	1	2	3	4	
		1	2	3	4	1	2	3	4	1	2	3	4	
Totals		1	2											

INDIVIDUAL MODIFICATION																			
Date																			
February 1998																			
MODIFICATION TITLE (Cont): Improved VHF OMNI-Range (AN/ARN-123) 1-84-01-1390																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$

INDIVIDUAL MODIFICATION										Date	February 1998
MODIFICATION TITLE: Single Channel Ground and Air Radio System (SINGGARS) 1-81-01-1393											
MODELS OF SYSTEMS AFFECTED: UH-1HV Helicopter											
DESCRIPTION / JUSTIFICATION: The AN/ARC-201 SINGGARS radio will replace the nonsupportable AN/ARC-114, AN/ARC-131 or AN/ARC-54 VHF radios currently installed. The old receivers are being phased out throughout the Army and have been declared nonsupportable by CECOM, the Army's communication command that manages these systems. The SINGGARS will also provide anti-jam, frequency hopping capability which the old radios are unable to provide.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Development of the SINGGARS system for the UH-1 is complete.											
Installation Schedule:											
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Totals		1	2	3	4	1	2	3	4	1	2
Inputs	407	10	10	5	7	4	3	3	3	10	10
Outputs	407	10	10	5	7	4	3	3	3	10	10
Totals		1	2	3	4	1	2	3	4	1	2
Inputs	30	30	30	30	10	10	10	10	10	15	8
Outputs	30	30	30	30	10	10	10	10	10	15	8
Totals		FY 2002		FY 2003		FY 2004		FY 2005		To	
Totals		1	2	3	4	1	2	3	4	Complete	
Inputs	783	30	30	30	30	10	10	10	15	18	18
Outputs	783	30	30	30	30	10	10	10	15	18	18
METHOD OF IMPLEMENTATION: Contract Date											
Contract Dates: FY 1997 Jan 97 FY 1998 Jan 99											
Delivery Date: FY 1997 Dec 97 FY 1998 Dec 99											
ADMINISTRATIVE LEADTIME: 3 Months											
PRODUCTION LEADTIME: 12 Months											

INDIVIDUAL MODIFICATION																				February 1998	
Single Channel Ground and Air Radio System (SINGARS) 1-81-01-1393																					
MODIFICATION TITLE (Cont):																					
FINANCIAL PLAN: (\$ in Millions)																					
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL			
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
RDT&E																					
PROCUREMENT																					
Kit Quantity																					
480	2.2	30	0.2			60	0.4	120	0.9	40	0.3	53	0.4					783	4.4		
Installation Kits																					
Installation Kits, Nonrecurring Equipment																					
Equipment, Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
407	1.8	32	0.2	13	0.1													452	2.1		
FY 1996 & Prior Eqpt -- 480																					
FY 1997 Eqpt -- 30 Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- 60 Kits																					
FY 2000 Eqpt -- 120 Kits																					
FY 2001 Eqpt -- 40 Kits																					
FY 2002 Eqpt -- 53 Kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
407	1.8	32	0.2	13	0.1	43	0.3	45	0.3	30	0.2	120	0.7	40	0.3	53	0.4	783	4.3		
Total Installment																					
Total Procurement Cost																					

INDIVIDUAL MODIFICATION											
										Date	February 1998
MODIFICATION TITLE: AN/APX-100 Transponder 1-81-01-1394											
MODELS OF SYSTEMS AFFECTED: UH-1H/V Helicopter											
DESCRIPTION / JUSTIFICATION:											
The AN/APX-100 is the Army's standard transponder and is used in most Army aircraft. The UH-1 is equipped with the old AN/APX-72 which CECOM, the Army's communication command that manages the system, has declared logistically nonsupportable past the year 2001. The APX-100 is used during military operations for identification friend/foe (IFF) and is also required by the FAA for flights around commercial airports so the control tower can identify the aircraft.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
Development of the APX-100 system for the UH-1 is complete.											
Installation Schedule:											
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Pr Yr											
Totals	1	2	3	4	1	2	3	4	1	2	3
Inputs											
Outputs											
		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
1	2	3	4	1	2	3	4	1	2	3	4
Inputs											
Outputs											
										783	
										783	
METHOD OF IMPLEMENTATION: Contract Team											
Contract Dates: FY 1997											
Delivery Date: FY 1997											
ADMINISTRATIVE LEADTIME: 3 Months											
PRODUCTION LEADTIME: 12 Months											
FY 1999											
FY 1999											

INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont): AN/APX-100 Transponder 1-81-01-1394																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- Kits																				
FY 2003 Eqpt -- 95 Kits																				
TC Equip- 688Kits																				
Total Installation																				
Total Procurement Cost																				

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												UH-60 MODS (AA0492)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	383.8	35.4	23.7	12.4	26.2	21.7	15.9	15.4	90.9	173.4	0.0	798.8	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	383.8	35.4	23.7	12.4	26.2	21.7	15.9	15.4	90.9	173.4	0.0	798.8	
Initial Spares													
Total Proc Cost	383.8	35.4	23.7	12.4	26.2	21.7	15.9	15.4	90.9	173.4	0.0	798.8	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION:

The UH-60A/L is a twin engine, single rotor helicopter that is used in the performance of the air assault, air cavalry and aeromedical evacuation missions. It is designed to carry a crew of four plus eleven combat-equipped troops or an external load up to 9,000 pounds. It performs the mission of transporting troops and equipment into combat, resupplying the troops while in combat and performing aeromedical evacuation, repositioning of reserves, and command and control. The UH-60A/L/Q is a major contributor across the continuum of military operations, i.e., civil disaster relief, drug intervention, national and humanitarian assistance.

JUSTIFICATION:

The modifications that will occur during FY99 are the UH-60A Refurbishment/Standardization modification, procurement and installation of the External Stores Support System (ESSS) Auxiliary Fuel Monitoring System (AFMS), procurement of the Battery/Power Light Relocate and the Night Vision Goggles (NVG) Lighting Lower Console. Additionally, funding also provides for common fleet modifications to be applied to the EH-60A QUICK FIX and MH-60K SOA aircraft. These modifications provide a more capable aircraft to support the combat mission requirements and provide for enhanced aircraft safety and more efficient and less expensive operation and support.

Exhibit P-40M Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No.			Date									
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft			February 1998									
P-1 Item Nomenclature			UH-60 MODS (AA0492)									
Program Elements for Code B Items			Other Related Program Elements									
Code												
Description			Fiscal Years									
OSIP NO.	Classification		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
Refurbishment/Standardization												
1-92-01-1942	Op/Log		95.1	10.9	4.5	1.5	0.0	0.0	0.0	0.0	0.0	112.0
Single Channel Ground & Airborne Radio Sys (SINGARS)												
1-84-01-1977	Operational		46.2	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	47.5
Ext Stores Sup Sys (ESSS) Aux Fuel Monitoring Sys (AFMS)												
1-94-01-1948	Safety		9.3	0.0	3.6	9.9	1.7	0.0	0.0	0.0	0.0	24.5
5/8" Fuel Line												
1-94-01-1950	Safety		2.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
Halon Changeout												
1-92-01-1945	Legislative		0.1	0.0	4.6	4.5	3.6	0.0	0.0	0.0	0.0	12.8
Battery/Power Light Relocate												
1-94-01-1953	RM		0.3	0.0	0.0	0.8	5.7	7.9	2.8	1.4	0.0	18.9
NVG Lighting Lower Console												
1-90-01-1933	Operational		1.3	0.6	0.0	5.0	4.9	2.4	0.6	0.0	0.0	14.8
Engine Driveshaft Redesign (No P3a Set)												
1-95-01-1957	Safety		0.0	0.0	0.0	0.0	0.0	0.3	10.5	12.4	0.0	23.2
Service Life Extension Program (No P3a Set)												
TBD	Operational		0.0	0.0	0.0	0.0	0.0	4.8	39.5	100.8	0.0	145.1
UH-60Q Medivac (No P3a Set)												
TBD1	Operational		0.0	0.0	9.3	0.0	0.0	0.0	37.5	58.8	0.0	105.6
Fire Hawk (No P3a Set)												
TBD2	Operational		0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Totals												
			155.1	12.4	26.2	21.7	15.9	15.4	90.9	173.4	0.0	511.0

INDIVIDUAL MODIFICATION														Date		February 1998					
MODIFICATION TITLE (Cont):																		Refurbishment/Standardization 1-92-01-1942			
FINANCIAL PLAN: (\$ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Kit Quantity	300	24.0																	300	24.0	
Installation Kits																					
Installation Kits, Nonrecurring Equipment		8.5																		8.5	
Equipment, Nonrecurring Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1996 & Prior Eqpt -300	236	62.6	42	10.9	17	4.5	5	1.5											300	79.5	
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
Total Installation	236	62.6	42	10.9	17	4.5	5	1.5											300	79.5	
Total Procurement Cost		95.1		10.9		4.5		1.5												112.0	

INDIVIDUAL MODIFICATION										Date	February 1998		
MODIFICATION TITLE: Single Channel Ground & Airborne Radio Sys (SINGGARS) 1-84-01-1977													
MODELS OF SYSTEMS AFFECTED: UH-60A Black Hawk													
DESCRIPTION / JUSTIFICATION: Provides for installation of the Single Channel Ground and Airborne Radio System (SINGGARS) radio which allows the aircraft to communicate with the remainder of the Army in the secure anti-jam frequency hopping FM mode. Provides for incorporation of physical and electrical interfaces required to accommodate the installation of either the AN/ARC-201(V) or AN/ARC-186(V) radio system separately or in any combination with one another. SINGGARS fieldings are in process in Korea, USA Pacific, 18th Airborne Corps and III Corps. OLR teams will modify 1055 aircraft at 400 hours each for a total of 422,000 hours. 300 additional aircraft are being modified with SINGGARS under the Refurbishment/Standardization program at Corpus Christi Army Depot and AVCRADS located in Connecticut and California.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:										PLANNED		ACCOMPLISHED	
FY96 Installation Contract Awarded Last Kit Applied										Feb 96 Sep 98		Feb 96	
Installation Schedule:													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Totals		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													

INDIVIDUAL MODIFICATION																			February 1998	
Date																				
Single Channel Ground & Airborne Radio Sys (SINGARS) 1-84-01-1977																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	1055	19.4																	1055	19.4
Installation Kits																				
Installation Kits, Nonrecurring		3.5																		3.5
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -1055	995	23.3			60	1.3													1055	24.6
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	995	23.3			60	1.3													1055	24.6
Total Procurement Cost		46.2				1.3														47.5

INDIVIDUAL MODIFICATION																																																																																																			
MODIFICATION TITLE: Ext Stores Sup Sys (ESSS) Aux Fuel Monitoring Sys (AFMS) 1-94-01-1948								Date February 1998																																																																																											
MODELS OF SYSTEMS AFFECTED: UH-60A Black Hawk																																																																																																			
DESCRIPTION / JUSTIFICATION:																																																																																																			
The Auxiliary Fuel Monitoring System shall provide the pilots with a fuel quantity display for each installed auxiliary fuel tank. Each tank will have its own fuel probe. The system will monitor external fuel for imbalance conditions that result in aircraft lateral center-of-gravity changes that exceed a certain designated value. If an imbalance is detected, the system will activate a light on the AFMS panel, the aux fuel segment light on the caution/advisory panel, and the master warning panel. Aircrews will have the capability to directly read the weight of all the auxiliary fuel that may be in each of the External Stores Support System (ESSS)/Extended Range Fuel System (ERFS) and store locations. This safety modification will continue to assure that a fully capable aircraft is available to support the combat mission requirement. Gauging will improve aircraft management of auxiliary fuel for everyday mission use of the system.																																																																																																			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: PLANNED ACCOMPLISHED																																																																																																			
Project Initiated Production Contract Awarded First Kit Applied Last Kit Applied Mar 94 Nov 95 Feb 98 Sep 00																																																																																																			
Quantity procured includes 1 kit for ATCOM New Equipment Training Team (NETT).																																																																																																			
Installation Schedule:																																																																																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>										Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																										
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																		
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																															
Inputs																																																																																																			
Outputs																																																																																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>Complete</td><td></td> </tr> <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> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>										FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete																				Inputs																		Outputs																	
FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete																																																																																			
Inputs																																																																																																			
Outputs																																																																																																			
METHOD OF IMPLEMENTATION: OLR Teams ADMINISTRATIVE LEADTIME: 8 PRODUCTION LEADTIME: 6 Contract Dates: FY 1997 FY 1998 May 98 FY 1999 May 99 Delivery Date: FY 1997 FY 1998 Nov 98 FY 1999 Nov 99																																																																																																			

INDIVIDUAL MODIFICATION																																																																																																																																																																																																																																																																						
MODIFICATION TITLE: 5/8" Fuel Line 1-94-01-1950								Date	February 1998																																																																																																																																																																																																																																																													
MODELS OF SYSTEMS AFFECTED: UH-60A Black Hawk																																																																																																																																																																																																																																																																						
DESCRIPTION / JUSTIFICATION:																																																																																																																																																																																																																																																																						
The UH-60 has bubble traps in an existing 1" fuel line. Outgassing of aircraft fuel can occur at all temperatures and the bubbles generated subsequently collect in the bubble traps. Under certain conditions, the bubble can get large enough to cause the aircraft low fuel pressure lights to activate, and the engine to flame out due to fuel starvation. This change will replace the existing horizontal 1" inner diameter (ID) self-sealing fuel hose with a 5/8" ID self-sealing fuel hose.																																																																																																																																																																																																																																																																						
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:					ACCOMPLISHED																																																																																																																																																																																																																																																																	
Project Initiated Contract Awarded First Kit Installed Last Kit Installed					Apr 94 Mar 95 Jun 96 Sep 97																																																																																																																																																																																																																																																																	
Installation Schedule:																																																																																																																																																																																																																																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>564</td><td>196</td><td>197</td><td>197</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> <tr> <td>Outputs</td> <td>564</td><td>196</td><td>196</td><td>197</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> <tr> <td colspan="20" style="text-align: center;">Totals</td> </tr> <tr> <td colspan="20"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="12">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th colspan="2">Complete</th> </tr> </thead> <tbody> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td colspan="2"></td> </tr> <tr> <td colspan="20" style="text-align: center;">Totals</td> </tr> <tr> <td colspan="20">1350</td> </tr> <tr> <td colspan="20">1350</td> </tr> </tbody> </table> </td> </tr> </tbody> </table>										Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	564	196	197	197																	Outputs	564	196	196	197																	Totals																				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="12">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th colspan="2">Complete</th> </tr> </thead> <tbody> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td colspan="2"></td> </tr> <tr> <td colspan="20" style="text-align: center;">Totals</td> </tr> <tr> <td colspan="20">1350</td> </tr> <tr> <td colspan="20">1350</td> </tr> </tbody> </table>																				FY 2002												FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			Totals																				1350																				1350																			
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																																																																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																																																																																		
Inputs	564	196	197	197																																																																																																																																																																																																																																																																		
Outputs	564	196	196	197																																																																																																																																																																																																																																																																		
Totals																																																																																																																																																																																																																																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="12">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th colspan="2">Complete</th> </tr> </thead> <tbody> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td colspan="2"></td> </tr> <tr> <td colspan="20" style="text-align: center;">Totals</td> </tr> <tr> <td colspan="20">1350</td> </tr> <tr> <td colspan="20">1350</td> </tr> </tbody> </table>																				FY 2002												FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			Totals																				1350																				1350																																																																																																																																				
FY 2002												FY 2003				FY 2004				FY 2005				Totals																																																																																																																																																																																																																																														
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete																																																																																																																																																																																																																																																		
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																																																																																			
Totals																																																																																																																																																																																																																																																																						
1350																																																																																																																																																																																																																																																																						
1350																																																																																																																																																																																																																																																																						
METHOD OF IMPLEMENTATION: OLR Teams										PRODUCTION LEADTIME:																																																																																																																																																																																																																																																												
Contract Dates: FY 1997										FY 1999																																																																																																																																																																																																																																																												
Delivery Date: FY 1997										FY 1999																																																																																																																																																																																																																																																												

INDIVIDUAL MODIFICATION															February 1998					
MODIFICATION TITLE (Cont):															Date					
5/8" Fuel Line 1-94-01-1950																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	1350	2.1																	1350	2.1
Installation Kits																				
Installation Kits, Nonrecurring		0.1																		0.1
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -1350																				
FY 1997 Eqpt -- Kits	564	0.6	786	0.9															1350	1.5
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	564	0.6	786	0.9															1350	1.5
Total Procurement Cost		2.8		0.9																3.7

INDIVIDUAL MODIFICATION																																																																																																																			
MODIFICATION TITLE: Halon Changeout 1-92-01-1945										Date February 1998																																																																																																									
MODELS OF SYSTEMS AFFECTED: UH-60L Black Hawk																																																																																																																			
DESCRIPTION / JUSTIFICATION:																																																																																																																			
Procurement of halon violates the Montreal Protocol and violates the Clean Air Act. This modification will retrofit hand held aircraft fire extinguishers and the on board engine fire extinguishing system. The current halon extinguishers and systems deplete the ozone level and halon will be replaced with a new chemical agent. This mod will be applied to UH-60Ls.																																																																																																																			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: PLANNED ACCOMPLISHED																																																																																																																			
Project Initiated First Kit Applied Last Kit Applied Sep 92 May 98 Sep 00 Sep 92																																																																																																																			
Installation Schedule:																																																																																																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> <tr> <td>Totals</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> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals																					Inputs																					Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																															
Totals																																																																																																																			
Inputs																																																																																																																			
Outputs																																																																																																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>To</th> </tr> <tr> <td>Totals</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> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>												Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To	Totals																			Inputs																			Outputs																												
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																																																																																																	
Totals																																																																																																																			
Inputs																																																																																																																			
Outputs																																																																																																																			
METHOD OF IMPLEMENTATION: OLR Teams ADMINISTRATIVE LEADTIME: 5 PRODUCTION LEADTIME: 3 Contract Dates: FY 1997 Feb 98 FY 1999 Feb 99 Delivery Date: FY 1997 May 98 FY 1999 May 99																																																																																																																			

INDIVIDUAL MODIFICATION																																																																																																																			
Date										February 1998																																																																																																									
MODIFICATION TITLE: Battery/Power Light Relocate 1-94-01-1953																																																																																																																			
MODELS OF SYSTEMS AFFECTED: UH-60 A/L Black Hawk																																																																																																																			
DESCRIPTION / JUSTIFICATION: Provide the fleet with a low cost, low maintenance, longer life, battery, which would replace the existing maintenance intensive Nickel Cadmium battery. Maintenance cost will be reduced and disposal cost minimized by providing a recyclable battery. The new battery will meet the EPA environmental health hazard restrictions.																																																																																																																			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																																																																																																																			
Contract Awarded First Kit Installed Last Kit Installed				Dec 98 Apr 00 Mar 03				PLANNED				ACCOMPLISHED																																																																																																							
Quantity procured includes 5 kits to be installed in maintenance trainers by field personnel.																																																																																																																			
Installation Schedule:																																																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</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> <tr> <td>Outputs</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> <tr> <td>Totals</td> <td>150</td><td>150</td><td>150</td><td>150</td> <td>150</td><td>150</td><td>150</td><td>150</td> <td>150</td><td>150</td><td>150</td><td>150</td> <td>150</td><td>150</td><td>150</td><td>150</td> <td>150</td><td>150</td><td>150</td><td>150</td> </tr> </tbody> </table>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																					Totals	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																															
Inputs																																																																																																																			
Outputs																																																																																																																			
Totals	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150																																																																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="4">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th colspan="4">Complete</th> </tr> </thead> <tbody> <tr> <td>Inputs</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 colspan="4"></td> </tr> <tr> <td>Outputs</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 colspan="4"></td> </tr> <tr> <td>Totals</td> <td>150</td><td>150</td><td>150</td><td>150</td> <td>150</td><td>150</td><td>150</td><td>150</td> <td>150</td><td>150</td><td>150</td><td>150</td> <td>150</td><td>150</td><td>150</td><td>150</td> <td colspan="4">1448</td> </tr> </tbody> </table>												Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete				Inputs																					Outputs																					Totals	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	1448			
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete																																																																																																		
Inputs																																																																																																																			
Outputs																																																																																																																			
Totals	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	1448																																																																																																		
METHOD OF IMPLEMENTATION: OLR Teams																																																																																																																			
Contract Dates: FY 1997				ADMINISTRATIVE LEADTIME: 10				PRODUCTION LEADTIME: 6																																																																																																											
Delivery Date: FY 1997				FY 1998 FY 1998				FY 1999 FY 1999 Jan 00																																																																																																											

INDIVIDUAL MODIFICATION																			
Date																			
February 1998																			
MODIFICATION TITLE (Cont):																			
Battery/Power Light Relocate 1-94-01-1953																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$

INDIVIDUAL MODIFICATION										Date	February 1998		
MODIFICATION TITLE: NVG Lighting Lower Console 1-90-01-1933													
MODELS OF SYSTEMS AFFECTED: UH-60 A/L Black Hawk													
DESCRIPTION / JUSTIFICATION:													
This is a safety related requirement resulting from incident report findings stipulating the lack of the lower console lighting as a present factor in the incident. This safety related improvement will improve cockpit lighting which will increase the capability of the night vision goggles and eliminate the pilot's/co-pilot's need to transition from goggles to no-goggles (heads down) in order to see and operate the radio control heads. Until this is accomplished, the radios and equipment in the lower console must remain unlighted. Existing cockpit lighting and relighted radio control panels will be upgraded to be in conformance with DOD Spec MIL-L-85762 and compatible with ANVIS-6 goggles. The proposed cockpit lighting upgrade will improve night operations capability.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:										PLANNED		ACCOMPLISHED	
Project Initiated Contract Awarded First Kit Applied Last Kit Applied Jan 90 Mar 97 Jun 97 Feb 02 Jan 97 Mar 97 Aug 97													
Installation Schedule:													
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Pr Yr	1	2	3	4	1	2	3	4	1	2	3		
Totals	50	50	50	50					115	115	115		
Inputs	50	50	50	50					115	115	115		
Outputs	50	50	50	50					115	115	115		
		FY 2002		FY 2003		FY 2004		FY 2005		Totals			
1	2	3	4	1	2	3	4	1	2	3	4		
75	75												
75	75												
Inputs													
Outputs													
METHOD OF IMPLEMENTATION:		OLR Teams		ADMINISTRATIVE LEADTIME:		2		PRODUCTION LEADTIME:		3			
Contract Dates:		FY 1997		FY 1998		FY 1999		Nov 98					
Delivery Date:		FY 1997		FY 1998		FY 1999		Feb 99					

INDIVIDUAL MODIFICATION																			
Date February 1998																			
NVG Lighting Lower Console 1-90-01-1933																			
MODIFICATION TITLE (Cont):																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
200	1.3					550	4.0	500	3.6	200	1.5							1450	10.4
RDT&E																			
PROCUREMENT																			
Kit Quantity																			
Installation Kits																			
Installation Kits, Nonrecurring Equipment																			
Equipment, Nonrecurring																			
Engineering Change Orders																			
Data																			
Training Equipment																			
Support Equipment																			
Other																			
Interim Contractor Support																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits																			
FY 1997 Eqpt -- Kits																			
FY 1998 Eqpt -- Kits																			
FY 1999 Eqpt -- Kits																			
FY 2000 Eqpt -- Kits																			
FY 2001 Eqpt -- Kits																			
FY 2002 Eqpt -- kits																			
FY 2003 Eqpt -- kits																			
TC Equip-Kits																			
Total Installation																			
Total Procurement Cost																			

Exhibit P-40, Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No:		Date: February 1998									
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft		P-1 Item Nomenclature: KIOWA WARRIOR (A22200)									
Program Elements for Code B Items:		Other Related Program Elements:									
		Code:									
		A									
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty											
Gross Cost	867.6	221.6	205.3	197.1	40.4	29.7	14.7	74.0	41.3	262.8	2011.6
Less PY Adv Proc											
Plus CY Adv Proc											
Net Proc (P-1)	867.6	221.6	205.3	197.1	40.4	29.7	14.7	74.0	41.3	262.8	2011.6
Initial Spares											
Total Proc Cost	867.6	221.6	205.3	197.1	40.4	29.7	14.7	74.0	41.3	262.8	2011.6
Flyaway U/C											
Wpn Sys Proc U/C											

DESCRIPTION: The OH-58D Kiowa Warrior is a two-seat, single-engine, light helicopter with four main rotor blades and a low-light television thermal imaging system and laser range finder/designator incorporated into a Mast Mounted Sight situated above the main rotor system. The aircraft is designed to operate autonomously at standoff ranges providing armed reconnaissance, command and control, and target acquisition and designation under day, night, and adverse weather conditions. The Kiowa Warrior can laser designate for precision guided munitions, Apache helicopters, and other airborne weapons platforms. Using an airborne target handover system, the Kiowa Warrior is capable of providing adjustment of conventional artillery as well as handing over targets to the Apache and other weapons platforms. Efforts commenced in FY 91 to retrofit fielded aircraft with numerous improvements to include incorporation of both Air-to-Air Stinger and Air-to-Ground weapons. Provisions for in-line production incorporation began with the last six aircraft of the FY 89 procurement. In addition, Multi-Purpose Light Helicopter (MPLH) kits have been developed to provide a rapid deployment capability (15 minute flyaway from C-130 offload), 2000-pound external cargo hook capability, limited troop transport (six personnel), and emergency casualty evacuation (two litters). The upgraded Control Display System processor modification replaces three processors with two Joint Integrated Avionics Working Group standard 80960 processors. Hand-held Halon fire extinguishers are being replaced in accordance with the Clean Air Act of 1990, which prohibits the use of ozone-depleting chemicals. The System Safety Enhancement Program (SSEP) was initiated in FY 96 to incorporate R3 engines, crashworthy crew seats, a supplemental restraint system, digitization, and improved weapons interface. The SSEP will improve recognition and identification of emergency situations, reduce pilot workload during emergency maneuvers, provide significant improvements to the crashworthiness of the airframe thus improving crew survivability, improve engine reliability with the intent to reduce the probability of engine failure and exposure to emergency autorotations and add digitization capabilities. SSEP efforts, to include the R3 Engine, have been incorporated into the later lots under the Remanufacture and the Retrofit lines; and fielded aircraft will be modified via both contractor mod line and field modification.

Exhibit P-40C Budget Item Justification Sheet			Date	February 1998
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature		
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft		KIOWA WARRIOR (AZ2200)		
Program Elements for Code B Items	Code	Other Related Program Elements		
JUSTIFICATION: The FY 99 program continues the SSEP efforts, funds the fielding of Kiowa Warrior aircraft procured with previous years' funding, procures additional quantities of Crew Station Mission Equipment Trainers (CSMET), and installs replacement fire extinguishers. The Army's most critical aviation deficiency is the lack of a night, armed reconnaissance capability. The FY 99 acquisition efforts are required in order to allow the Kiowa Warrior to serve as the Army's night, armed reconnaissance aviation capability until RAH-66 fielding begins. Kiowa Warrior will continue to complement the Comanche throughout its projected 20-year life span, with gradual displacement to lower-priority, active and reserve component units as Comanches are fielded in quantities. The FY 00 program continues System Safety Enhancement Program, CSMET, and Halon Fire Extinguisher efforts.				

Exhibit P-40M Budget Item Justification Sheet										
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature		Date						
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft		KIOWA WARRIOR (A22200)		February 1999						
Program Elements for Code B Items		Code		Other Related Program Elements						
Description		Fiscal Years								
OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC
Kiowa Warrior - Remanufacture										
TBD 1	Operational	808.7	109.1	9.8	0.1	0.0	0.0	0.0	0.0	927.7
Kiowa Warrior - Retrofit										
1-88-01-2103	Operational	417.0	25.9	9.9	0.0	0.0	0.0	0.0	0.0	452.8
Halon Fire Extinguisher										
TBD 2	Congressional	1.3	0.0	0.5	0.5	0.4	0.0	0.0	0.0	2.7
Crew Station Mission Equipment Trainer (CSMET)										
TBD 3	Training	0.0	0.0	3.2	7.4	4.2	2.6	0.0	0.0	17.4
R3 Engines - SSEP										
1-91-01-2113	Safety	52.9	51.0	18.7	21.9	14.5	1.4	23.7	10.3	206.2
Improved Master Controller Processor Unit - SSEP										
1-93-01-2100	Operational	50.9	5.2	10.3	7.2	5.2	4.6	26.6	27.0	153.1
Crew Seats - Sys Safety Enhancement										
TBD 4	Safety	1.1	5.9	4.7	2.1	3.0	2.7	14.9	1.6	36.0
Supplemental Restraint System - Sys Safety Enhancement										
TBD 5	Safety	1.0	0.0	0.0	1.2	2.4	3.4	8.8	2.4	19.2
Totals										
		1,332.9	197.1	57.1	40.4	29.7	14.7	74.0	41.3	1,815.1

INDIVIDUAL MODIFICATION												Date	February 1998					
MODIFICATION TITLE: Kiowa Warrior - Remanufacture TBD 1																		
MODELS OF SYSTEMS AFFECTED: OH-58A																		
DESCRIPTION / JUSTIFICATION: The OH-58D Kiowa Warrior is a versatile, lethal, deployable aircraft capable of seeing, fighting and surviving in all types of terrain and battlefield environments, day or night, with adverse visibility. An OH-58A airframe is modified to accept an improved rotor-and-drive system, a fully integrated night-vision-compatible cockpit, a complete airborne target handover system, a precision navigation capability, and an above-the-rotor Mast Mounted Sight. Included are Air-to-Air Stinger, Air-to-Ground weapons and Multi Purpose Light Helicopter (MPLH) kits. This fully armed scout aircraft will be used in armed air cavalry reconnaissance and light attack helicopter units. Some System Safety Enhancement equipment, to include R3 Engines, is incorporated in later production lots.																		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: All development milestones complete.																		
*Installation Data not applicable. Modification of the OH-58D aircraft to the OH-58D Kiowa Warrior will be accomplished by Bell Helicopter Textron at their facilities.																		
Installation Schedule:																		
Inputs Outputs	Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001				
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Inputs Outputs	Totals																	
Inputs Outputs	Totals	FY 2002			FY 2003			FY 2004			FY 2005			To				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs Outputs	Totals																	
METHOD OF IMPLEMENTATION: Production Line																		
Contract Dates: FY 1997 May 97 FY 1998 FY 1999																		
Delivery Date: FY 1997 Nov 98 FY 1998 FY 1999																		
ADMINISTRATIVE LEADTIME: 8 Months																		
PRODUCTION LEADTIME: 18 Months																		

INDIVIDUAL MODIFICATION																				
MODIFICATION TITLE (Cont):												Date								
Kiowa Warrior - Remanufacture TBD 1																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	119	572.9	13	73.4															132	646.3
Hardware Recurring		71.0		3.4		0.8														75.2
ECO's		17.8		1.1																18.9
Data		7.9		0.6																8.5
PGSE		102.0		22.6		4.2														128.8
Other		24.9		5.6		3.1														33.6
Project Mgt/Administration				1.2		1.6		0.1												2.9
Fielding		12.2		1.2		0.1														13.5
MPLH																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment		808.7		109.1		9.8		0.1												927.7
Total Procurement Cost																				

INDIVIDUAL MODIFICATION																																																																																															
										Date	February 1998																																																																																				
MODIFICATION TITLE: Kiowa Warrior - Retrofit 1-88-01-2103																																																																																															
MODELS OF SYSTEMS AFFECTED: OH-58D AHIP																																																																																															
DESCRIPTION / JUSTIFICATION: Fielded OH-58D aircraft are retrofitted to the current production configuration of the fully armed Kiowa Warrior. That configuration includes Air-to-Air Stinger (ATAS), Air-to-Ground (ATG) weapons (Hellfire, 2.75 inch rockets, and .50 caliber machine gun), and Multi-Purpose Light Helicopter (MPLH) kits. The ATAS provides a mid-range defensive and offensive air-to-air capability against threat aircraft. The ATG weapons provide defensive and suppressive fire and service high-priority targets. The MPLH kits (designed to alleviate a major deficiency in XVIII Airborne Corps) provide rapid deployment capability, a 2000-pound external cargo hook, limited troop transport, and emergency casualty evacuation. The OH-58D Kiowa Warrior will be fielded in air cavalry reconnaissance and light attack units. This aircraft provides the Army with a versatile, lethal, deployable aircraft capable of seeing, fighting, and surviving in all types of terrain and battlefield environments, day or night, with adverse visibility. Some System Safety Enhancement equipment, to include R3 Engines, is incorporated into the later retrofit lots.																																																																																															
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <table style="width:100%; border: none;"> <tr> <td style="width:50%; vertical-align: top;"> PLANNED Aug 89 Apr 91 May 91 May 93 Jun 93 </td> <td style="width:50%; vertical-align: top;"> ACCOMPLISHED Aug 89 Apr 91 May 91 May 93 Jun 93 </td> </tr> </table>												PLANNED Aug 89 Apr 91 May 91 May 93 Jun 93	ACCOMPLISHED Aug 89 Apr 91 May 91 May 93 Jun 93																																																																																		
PLANNED Aug 89 Apr 91 May 91 May 93 Jun 93	ACCOMPLISHED Aug 89 Apr 91 May 91 May 93 Jun 93																																																																																														
*Installation Data not applicable. Modification of the OH-58D aircraft to the Kiowa Warrior Armed will be accomplished by Bell Helicopter Textron at their facilities.																																																																																															
Installation Schedule: <table style="width:100%; border: none;"> <tr> <th style="text-align: left;">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																														
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																											
Inputs																																																																																															
Outputs																																																																																															
<table style="width:100%; border: none;"> <tr> <th style="text-align: left;">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="4">Totals</th> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td colspan="4">Complete</td> </tr> <tr> <td>Inputs</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 colspan="4"></td> </tr> <tr> <td>Outputs</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 colspan="4"></td> </tr> </table>												Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals				Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete				Inputs																					Outputs																				
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																														
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete																																																																														
Inputs																																																																																															
Outputs																																																																																															
METHOD OF IMPLEMENTATION: Production Line ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 12 Months Contract Dates: FY 1997 May 97 FY 1998 FY 1999 Delivery Date: FY 1997 May 98 FY 1998 FY 1999																																																																																															

INDIVIDUAL MODIFICATION																				
Date																				
February 1998																				
MODIFICATION TITLE (Cont):																				
Kiowa Warrior - Retrofit 1-88-01-2103																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	175		10																185	
Hardware Recurring		320.5		19.7		0.2														340.2
ECO's		14.7																		14.9
Data		0.5																		0.5
PGSE		4.9		0.2																5.1
Other		47.1		3.0		4.0														54.1
Project Mgt/Administration		21.8		1.8		3.3														26.9
Fielding		7.5		1.2		2.4														11.1
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installation																				
Total Procurement Cost		417.0		25.9		9.9														452.8

INDIVIDUAL MODIFICATION																				
Date February 1998																				
Halon Fire Extinguisher TBD 2																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	390																		390	
Installation Kits																				
Installation Kits, Nonrecurring Equipment			26	0.1	187	0.4	177	0.3											390	0.8
Equipment, Nonrecurring Engineering Change Orders																				1.3
Data																				0.3
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- 26 Kits			26	0.1															26	0.1
FY 1999 Eqpt -- 187 Kits					187	0.1	177	0.1											187	0.1
FY 2000 Eqpt -- 177 kits																			177	0.1
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment			26	0.1	187	0.1	177	0.1											390	0.3
Total Procurement Cost				0.5		0.5		0.4												2.7

INDIVIDUAL MODIFICATION																																																																																																																						
													Date	February 1998																																																																																																								
MODIFICATION TITLE: Crew Station Mission Equipment Trainer (CSMET) TBD 3																																																																																																																						
MODELS OF SYSTEMS AFFECTED: OH-58D Kiowa Warrior																																																																																																																						
DESCRIPTION / JUSTIFICATION: The Crew Station Mission Equipment Trainer (CSMET) is a unit-level training device that supports training for the OH-58D Kiowa Warrior flight crews. The CSMET shall support refresher and sustainment training of those skills required to initialize, operate, and employ the weapon system, aircraft survivability equipment, Automatic Target Handover System, communication and navigation equipment, Mast Mounted Sight cockpit controls, data transfer system, Aviator Night Vision Imaging System (ANVIS) display, and airborne video tape recorder. The CSMET will network with other devices for collective training. Currently, there are no Training Devices, Simulators or Simulations (TDSS) available to fielded Kiowa Warrior units. Therefore, the aircraft itself provides the only primary sustainment training device.																																																																																																																						
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: PLANNED May 96 Sep 96 Apr 97 ACCOMPLISHED May 96 Sep 96 Nov 96																																																																																																																						
CSMET is a training device; installation is not applicable.																																																																																																																						
Installation Schedule:																																																																																																																						
<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																		
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																		
Inputs																																																																																																																						
Outputs																																																																																																																						
<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>To</th><th>Complete</th> </tr> <tr> <td>1</td> <td>2</td><td>3</td><td>4</td><td>1</td> <td>2</td><td>3</td><td>4</td><td>1</td> <td>2</td><td>3</td><td>4</td><td>1</td> <td>2</td><td>3</td><td>4</td><td>1</td> <td></td><td></td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>															Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	To	Complete	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1			Inputs																			Outputs																												
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	To	Complete																																																																																																				
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1																																																																																																						
Inputs																																																																																																																						
Outputs																																																																																																																						
METHOD OF IMPLEMENTATION: Stand Alone Device ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months																																																																																																																						
Contract Dates: FY 1997 FY 1998 Feb 98 FY 1999 Jan 99																																																																																																																						
Delivery Date: FY 1997 FY 1998 Feb 99 FY 1999 Jan 00																																																																																																																						

INDIVIDUAL MODIFICATION														Date		February 1998			
MODIFICATION TITLE (Cont):														Crew Station Mission Equipment Trainer (CSMET) TBD 3					
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
	0.7	1	1.1			8		18		10		6						1	1.8
RDT&E																			
PROCUREMENT																			
Kit Quantity																			
Installation Kits																			
Installation Kits, Nonrecurring Equipment																			
Equipment, Nonrecurring Engineering Change Orders																			
Data																			
Training Equipment																			
Support Equipment																			
Other																			
Interim Contractor Support																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits																			
FY 1997 Eqpt -- Kits																			
FY 1998 Eqpt -- Kits																			
FY 1999 Eqpt -- Kits																			
FY 2000 Eqpt -- kits																			
FY 2001 Eqpt -- kits																			
FY 2002 Eqpt -- kits																			
FY 2003 Eqpt -- kits																			
TC Equip-Kits																			
Total Installment																			
Total Procurement Cost																			

INDIVIDUAL MODIFICATION										Date	February 1998																																																																																																							
MODIFICATION TITLE: R3 Engines - SSEP 1-91-01-2113																																																																																																																		
MODELS OF SYSTEMS AFFECTED: OH-58D Kiowa Warrior																																																																																																																		
DESCRIPTION / JUSTIFICATION: As part of the System Safety Enhancement Program (SSEP), the T-703 engine is improved to provide increased reliability, control responsiveness and life. This R3 engine will overcome the present rotor droop anomaly by providing faster response time to power demands and will increase the overall engine efficiency and reliability. This effort will provide reduced autorotational touchdown speed and will trim rotor speed to 100% in autorotation. With Full Authority Digital Electronic Control (FADEC), the engine will anticipate power needs and limit temperature spikes. New gas path components are more efficient and run cooler, thus delivering 18% more power in hot-day conditions. Additional R3 major improvements are increased surge margin, increased transient performance, surge avoidance capability, hot-start protection, and flame-out detection/relight capability. This upgrade increases time-between-overhaul (TBO) from 1000 hours to 2500 hours with very high reliability and reduced maintenance cost. This effort is a safety portion of the overall System Safety Enhancement Program (SSEP).																																																																																																																		
<table border="0" style="width:100%;"> <tr> <td colspan="5" style="text-align: center;">DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</td> <td colspan="3" style="text-align: center;">PLANNED</td> <td colspan="3" style="text-align: center;">ACCOMPLISHED</td> </tr> <tr> <td colspan="5" style="text-align: center;">RAMEP (R2) Contract Award - NRE</td> <td colspan="3" style="text-align: center;">Apr 95</td> <td colspan="3" style="text-align: center;">Apr 95</td> </tr> <tr> <td colspan="5" style="text-align: center;">Modification Revised:</td> <td colspan="3"></td> <td colspan="3"></td> </tr> <tr> <td colspan="5" style="text-align: center;">RAMEP (R3) with FADEC Development Contract Definition</td> <td colspan="3" style="text-align: center;">Jun 96</td> <td colspan="3" style="text-align: center;">Jun 96</td> </tr> </table>											DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:					PLANNED			ACCOMPLISHED			RAMEP (R2) Contract Award - NRE					Apr 95			Apr 95			Modification Revised:											RAMEP (R3) with FADEC Development Contract Definition					Jun 96			Jun 96																																																														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:					PLANNED			ACCOMPLISHED																																																																																																										
RAMEP (R2) Contract Award - NRE					Apr 95			Apr 95																																																																																																										
Modification Revised:																																																																																																																		
RAMEP (R3) with FADEC Development Contract Definition					Jun 96			Jun 96																																																																																																										
NOTE: Prior Year quantities installed in Remanufacture and Retrofit modification lines and in Task Force XXI aircraft.																																																																																																																		
Installation Schedule:																																																																																																																		
<table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td>86</td><td></td><td></td><td></td> <td>39</td><td>39</td><td>52</td><td>51</td> <td>13</td><td>12</td><td>15</td><td>15</td> <td>15</td><td>9</td><td>9</td><td>9</td> <td>9</td><td>9</td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td>86</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td>7</td><td>7</td><td>12</td><td>12</td> <td>5</td><td>4</td><td>5</td><td>5</td> <td>4</td><td>3</td><td>3</td><td>3</td> </tr> </table>											Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	86				39	39	52	51	13	12	15	15	15	9	9	9	9	9			Outputs	86								7	7	12	12	5	4	5	5	4	3	3	3
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																														
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																														
Inputs	86				39	39	52	51	13	12	15	15	15	9	9	9	9	9																																																																																																
Outputs	86								7	7	12	12	5	4	5	5	4	3	3	3																																																																																														
<table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th></th> </tr> <tr> <td>Inputs</td> <td>9</td><td>9</td><td>9</td><td>9</td> <td>9</td><td>9</td><td>9</td><td>9</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td>424</td> </tr> <tr> <td>Outputs</td> <td>3</td><td>9</td><td>9</td><td>9</td> <td>18</td><td>18</td><td>18</td><td>18</td> <td>18</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td>39</td><td>311</td> </tr> </table>											Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete		Inputs	9	9	9	9	9	9	9	9										424	Outputs	3	9	9	9	18	18	18	18	18								39	311																													
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete																																																																																																	
Inputs	9	9	9	9	9	9	9	9										424																																																																																																
Outputs	3	9	9	9	18	18	18	18	18								39	311																																																																																																
METHOD OF IMPLEMENTATION: Contractor Line																																																																																																																		
Contract Dates: FY 1997 Sep 97 FY 1998 Mar 98 FY 1999 Mar 99 FY 2000 Mar 00																																																																																																																		
Delivery Date:																																																																																																																		

INDIVIDUAL MODIFICATION																																																																				
										Date	February 1998																																																									
MODIFICATION TITLE: Improved Master Controller Processor Unit - SSEP 1-93-01-2100																																																																				
MODELS OF SYSTEMS AFFECTED: OH-58D																																																																				
DESCRIPTION / JUSTIFICATION: The existing Master Controller Processor Unit (MCPU), which serves as mission computer and buss controller, is limited in memory, throughput, and avionics buss message traffic capability. The design is based on 1970's technology and parts obsolescence is an increasing problem. As part of SSEP, the upgraded CDS MCU provides the basic building block for integration of the existing Mission Equipment Package and future growth capability for horizontal integration and digitization of the battlefield to aid situational awareness for the battle commander. This effort will replace three existing processors with two state-of-the-art processors providing a 100% growth capability for memory and throughput while reducing the aircraft empty weight and operating and support costs. Growth capability is necessary for technical insertions such as Improved Data Modem, Battlefield Combat Identification System, Radio Frequency Interferometer (RFI), Improved Navigation System/Global Positioning System, Digital Map, etc. Task Force XXI software changes will be incorporated in the improved MCU.																																																																				
<table border="0" style="width: 100%;"> <tr> <td colspan="4">DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</td> <td colspan="4">PLANNED</td> <td colspan="4">ACCOMPLISHED</td> </tr> <tr> <td colspan="4">B Kit Development Contract Award</td> <td colspan="4">Nov 93</td> <td colspan="4">Nov 93</td> </tr> <tr> <td colspan="4">A Kit Development Contract Award</td> <td colspan="4">Sep 94</td> <td colspan="4">Sep 94</td> </tr> <tr> <td colspan="4">IMCPU Qualification Contract Award</td> <td colspan="4">Sep 97</td> <td colspan="4">Sep 97</td> </tr> </table>												DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:				PLANNED				ACCOMPLISHED				B Kit Development Contract Award				Nov 93				Nov 93				A Kit Development Contract Award				Sep 94				Sep 94				IMCPU Qualification Contract Award				Sep 97				Sep 97												
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:				PLANNED				ACCOMPLISHED																																																												
B Kit Development Contract Award				Nov 93				Nov 93																																																												
A Kit Development Contract Award				Sep 94				Sep 94																																																												
IMCPU Qualification Contract Award				Sep 97				Sep 97																																																												
77 kits installed on Remanufacture/Retrofit production lines; installation quantities and dollars reflected on those respective P-3a forms.																																																																				
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">FY Yr</th> <th colspan="2">FY 1997</th> <th colspan="2">FY 1998</th> <th colspan="2">FY 1999</th> <th colspan="2">FY 2000</th> <th colspan="2">FY 2001</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>125</td> <td>4</td> <td>6</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> </tr> <tr> <td>Inputs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Outputs</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>												FY Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		1	2	3	4	1	2	3	4	1	2	Totals	125	4	6	3	4	1	2	3	4	1	2	Inputs												Outputs											
FY Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001																																																											
	1	2	3	4	1	2	3	4	1	2																																																										
Totals	125	4	6	3	4	1	2	3	4	1	2																																																									
Inputs																																																																				
Outputs																																																																				
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">FY Yr</th> <th colspan="2">FY 2002</th> <th colspan="2">FY 2003</th> <th colspan="2">FY 2004</th> <th colspan="2">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>To</th> <th>Complete</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>20</td> <td>20</td> <td>20</td> <td>18</td> <td>18</td> <td>18</td> <td>18</td> <td>18</td> <td>31</td> <td>388</td> </tr> <tr> <td>Outputs</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>18</td> <td>18</td> <td>18</td> <td>18</td> <td>89</td> <td>311</td> </tr> </tbody> </table>												FY Yr	FY 2002		FY 2003		FY 2004		FY 2005		Totals		1	2	3	4	1	2	3	4	To	Complete	Inputs	20	20	20	18	18	18	18	18	31	388	Outputs	4	3	3	3	18	18	18	18	89	311														
FY Yr	FY 2002		FY 2003		FY 2004		FY 2005		Totals																																																											
	1	2	3	4	1	2	3	4	To	Complete																																																										
Inputs	20	20	20	18	18	18	18	18	31	388																																																										
Outputs	4	3	3	3	18	18	18	18	89	311																																																										
METHOD OF IMPLEMENTATION: <table border="0" style="width: 100%;"> <tr> <td>FY 1997</td> <td>May 97</td> <td>FY 1998</td> <td>Mar 98</td> <td>FY 1999</td> <td>Jan 99</td> <td>PRODUCTION LEADTIME:</td> <td>12 Months</td> </tr> <tr> <td>FY 1997</td> <td>May 98</td> <td>FY 1998</td> <td>Mar 99</td> <td>FY 1999</td> <td>Jan 00</td> <td></td> <td></td> </tr> </table>												FY 1997	May 97	FY 1998	Mar 98	FY 1999	Jan 99	PRODUCTION LEADTIME:	12 Months	FY 1997	May 98	FY 1998	Mar 99	FY 1999	Jan 00																																											
FY 1997	May 97	FY 1998	Mar 98	FY 1999	Jan 99	PRODUCTION LEADTIME:	12 Months																																																													
FY 1997	May 98	FY 1998	Mar 99	FY 1999	Jan 00																																																															
Contract Dates:																																																																				
Delivery Date:																																																																				

INDIVIDUAL MODIFICATION																			
Date February 1998																			
Improved Master Controller Processor Unit - SSEP 1-93-01-2100																			
MODIFICATION TITLE (Cont):																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
119	13	1.2	13	0.7	24	0.5	15	0.5	15	0.3	80	2.0	78	2.1	31	2.6	388	9.9	
PROCUREMENT																			
Kit Quantity																			
Installation Kits																			
Installation Kits, Nonrecurring																			
Equipment																			
Equipment, Nonrecurring																			
Engineering Change Orders																			
Data																			
Training Equipment																			
Support Equipment																			
Other - Transportation																			
Interim Contractor Support																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits																			
FY 1997 Eqpt -- Kits																			
FY 1998 Eqpt -- 28 Kits			28	1.6	20	1.2		18	1.2								28	1.6	
FY 1999 Eqpt -- 20 Kits																	20	1.2	
FY 2000 Eqpt -- 18 kits																	18	1.2	
FY 2001 Eqpt -- 12 Kits										12	0.7						12	0.7	
FY 2002 Eqpt -- 72 kits												72	5.1				72	5.1	
FY 2003 Eqpt -- 72 kits														72	5.5		72	5.5	
TC Equip-89 Kits															89	5.7	89	5.7	
Total Installation			28	1.6	20	1.2	18	1.2	12	0.7	72	5.1	72	5.5	89	5.7	311	21.0	
Total Procurement Cost		50.9	5.2	10.3	7.2	5.2	4.6	26.6	27.0	16.1								153.1	

INDIVIDUAL MODIFICATION																		
Date February 1998																		
MODIFICATION TITLE (Cont): Crew Seats - Sys Safety Enhancement TBD 4																		
FINANCIAL PLAN: (\$ in Millions)																		
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																		
PROCUREMENT																		
Kit Quantity			123		76		26		30		20		113				388	
Installation Kits					28	1.0	20	0.8	38	1.4	42	1.6	192	7.6	38	1.5	358	13.9
Installation Kits, Nonrecurring																		
Equipment				5.9		3.6	1.2			1.5		1.0		5.8				19.0
Equipment, Nonrecurring																		1.1
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
Interim Contractor Support																		
Beginning in FY 00, kits will be installed simultaneously on SSEP production line and via field retrofit. Thirty seats will be installed on the Kiowa Warrior Remanufacture and Retrofit production lines.																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits					28	0.1	20	0.1									28	0.1
FY 1998 Eqpt -- 28 Kits																	20	0.1
FY 1999 Eqpt -- 20 Kits																	38	0.1
FY 2000 Eqpt -- 38 Kits									38	0.1							42	0.1
FY 2001 Eqpt -- 42 Kits											42	0.1					192	1.5
FY 2002 Eqpt -- 192 kits													192	1.5	38	0.1	38	0.1
FY 2003 Eqpt -- 38 kits																		
TC Equip-Kits																		
Total Installation					28	0.1	20	0.1	38	0.1	42	0.1	192	1.5	38	0.1	358	2.0
Total Procurement Cost		1.1		5.9		4.7	2.1		3.0		2.7		14.9		1.6			36.0

INDIVIDUAL MODIFICATION																																																																																														
										Date	February 1998																																																																																			
MODIFICATION TITLE: Supplemental Restraint System - Sys Safety Enhancement TBD 5																																																																																														
MODELS OF SYSTEMS AFFECTED: OH-58D Kiowa Warrior																																																																																														
DESCRIPTION / JUSTIFICATION: As part of the System Safety Enhancement Program, supplemental restraints are required to protect the crew in all modes of otherwise survivable accidents. Air bags will be utilized in conjunction with crashworthy crew seats to provide reasonable crew protection in all modes of flight given the mission of the aircraft.																																																																																														
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: FY 96 Contract Award PLANNED Jul 96 ACCOMPLISHED Jul 96																																																																																														
Installation Schedule:																																																																																														
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="3">FY 1997</th> <th colspan="3">FY 1998</th> <th colspan="3">FY 1999</th> <th colspan="3">FY 2000</th> <th colspan="3">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th> <th>4</th><th>1</th><th>2</th> <th>3</th><th>4</th><th>1</th><th>2</th><th>3</th> <th>4</th><th>1</th><th>2</th> <th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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>												Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																	Outputs																
Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001																																																																																	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																														
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																														
Inputs																																																																																														
Outputs																																																																																														
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="3">FY 2002</th> <th colspan="3">FY 2003</th> <th colspan="3">FY 2004</th> <th colspan="3">FY 2005</th> <th colspan="3">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th> <th>4</th><th>1</th><th>2</th> <th>3</th><th>4</th><th>1</th><th>2</th><th>3</th> <th>4</th><th>To</th><th>Complete</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>22</td><td>46</td><td>47</td><td>47</td> <td>47</td><td>6</td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td>10</td><td>12</td><td>10</td><td>48</td> <td>48</td><td>48</td><td>24</td><td>24</td> <td>24</td><td>24</td><td>24</td><td>24</td> <td></td><td></td><td></td> </tr> <tr> <td>Totals</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>												Pr Yr	FY 2002			FY 2003			FY 2004			FY 2005			Totals			1	2	3	4	1	2	3	4	1	2	3	4	To	Complete	Inputs	22	46	47	47	47	6										Outputs	10	12	10	48	48	48	24	24	24	24	24	24				Totals																				
Pr Yr	FY 2002			FY 2003			FY 2004			FY 2005			Totals																																																																																	
	1	2	3	4	1	2	3	4	1	2	3	4	To	Complete																																																																																
Inputs	22	46	47	47	47	6																																																																																								
Outputs	10	12	10	48	48	48	24	24	24	24	24	24																																																																																		
Totals																																																																																														
METHOD OF IMPLEMENTATION: <table style="width: 100%;"> <tr> <td style="width: 33%;">Contract Dates: FY 1997</td> <td style="width: 33%;">ADMINISTRATIVE LEADTIME: 6 Months</td> <td style="width: 33%;">PRODUCTION LEADTIME: 6 Months</td> </tr> <tr> <td>Delivery Date: FY 1997</td> <td>FY 1998</td> <td>FY 1999 Jan 99</td> </tr> <tr> <td></td> <td>FY 1998</td> <td>FY 1999 Jul 99</td> </tr> </table>												Contract Dates: FY 1997	ADMINISTRATIVE LEADTIME: 6 Months	PRODUCTION LEADTIME: 6 Months	Delivery Date: FY 1997	FY 1998	FY 1999 Jan 99		FY 1998	FY 1999 Jul 99																																																																										
Contract Dates: FY 1997	ADMINISTRATIVE LEADTIME: 6 Months	PRODUCTION LEADTIME: 6 Months																																																																																												
Delivery Date: FY 1997	FY 1998	FY 1999 Jan 99																																																																																												
	FY 1998	FY 1999 Jul 99																																																																																												

Exhibit P-40, Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No:		Date: February 1998									
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft		P-1 Item Nomenclature: EH-60 QUICKFIX MODS (AB3000)									
Program Elements for Code B Items:		Other Related Program Elements:									
Code:											
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty											
Gross Cost	6.8	39.4	36.9	13.8	43.6	3.0	54.0	74.9	82.4	0.0	420.8
Less PY Adv Proc											
Plus CY Adv Proc											
Net Proc (P-1)	6.8	39.4	36.9	13.8	43.6	3.0	54.0	74.9	82.4		420.8
Initial Spares	71.1	0.1		2.3		0.8	1.2	5.3	6.6		88.6
Total Proc Cost	77.9	39.5	36.9	16.1	43.6	3.8	55.2	80.2	89.0	0.0	509.4
Flyaway U/C											
Wpnt Sys Proc U/C											

DESCRIPTION: QUICKFIX, EH-60A, is a tactical helicopter communications intercept, direction finding and jamming system. QUICKFIX consists of AN/ALQ-151(V)2 intercept and direction finding mission equipment, an AN/TQ-17A communications jammer and airborne self-protection equipment mounted in a BLACKHAWK helicopter. Four systems are currently in service with every active Army Division and Armored Cavalry Regiment (ACR). The system is used to search for, intercept, record, locate, report on and jam radio signals in the high frequency/very high frequency (HF/VHF) ranges. QUICKFIX systems interoperate with each other and the ground based TRAILBLAZER and TEAMMATE systems in a netted configuration for direction finding purposes. The EH-60 QUICKFIX MODS line pays for required materiel changes to these fielded QUICKFIX systems.

Advanced QUICKFIX (AQF) is an absolute "win the battlefield information war" system. AQF, EH-60L, is a materiel change to the existing helicopter QUICKFIX system. The system provides Commanders of Division and ACRs with an organic capability to listen to, precisely locate for hard kill or order-of-battle resolution, or render ineffective through electronic attack threat conventional and Low Probability of Intercept (LPI) command and control and fire control communications nets. AQF will identify and precisely locate opposition counter/mortar and counter/battery ground surveillance radar emissions. The system is specifically designed to ensure transportability, prime mover maintainability, and mobility equal to, or greater than that of the supported divisions and regiments, while exploiting or eliminating - at the Commander's discretion - the latest, most modern types of hostile modulations and transmission techniques at the key time and place on the battlefield. The system interoperates with ground based intelligence and electronic warfare assets (Ground Based Common Sensor-Light/Heavy) to provide for emitter location accuracies sufficient for "steel on target" and to provide for line of sight extension for C3 electronic attack.

JUSTIFICATION: FY99 funds the annualized costs required to support the on-going modification of the QUICKFIX into the Advanced QUICKFIX (AQF). The modifications initiated in prior fiscal years incorporate into the AQF the following subsystems: (1) TACJAM-A Electronic Support Measures (ESM) subsystem to intercept and locate conventional digital data, burst, and Low Probability of Intercept (LPI) communications; (2) TACJAM-A Electronic Countermeasures (ECM) subsystem to freeze the enemy in place by jamming command and control and fire control communications; (3) CHALS-X(M) miniaturized precision location subsystem to provide for location accuracies of communications emitters sufficient for targeting by organic artillery; and (4) Common Modules ELINT Subsystem (CMES) to identify and locate, also with targeting accuracies, hostile counter/mortar and counter/battery ground surveillance radars.

[illegible]

INDIVIDUAL MODIFICATION													
								Date	February 1998				
MODIFICATION TITLE: T701C Helicopter Engines 1-91-07-0001(1)													
MODELS OF SYSTEMS AFFECTED:													
DESCRIPTION / JUSTIFICATION: Funds provide for the Advanced QUICKFIX BLACKHAWK Helicopter Power Train Upgrade, whereby existing helicopter engines will be replaced with T701C engines. Improved Durability Gear Boxes (IDGB) and improved Flight Controls thereby increasing lift payload capability. This upgrade is essential to provide the lift capability necessary to carry the mission equipment, External Storage Support Systems (ESSS) and additional fuel required to increase the time on station from 2 hours to the Operational Requirements Document (ORD) requirement of 4.5 hours. Without this upgrade, the mission equipment and fuel would exceed the maximum gross takeoff weight permitted.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:													
T701 HELICOPTER ENGINES PLANNED CONTRACT AWARD FY 95 FIRST KIT APPLIED LAST KIT APPLIED				PLANNED FEB 95 NOV 96 AUG 01		ACCOMPLISHED FEB 95 NOV 96							
Installation Schedule:													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Totals		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													
Outputs		3										6	
Totals		3										6	
Inputs													
Outputs												6	
Totals												6	

FY 2002		FY 2003		FY 2004		FY 2005		To			
1	2	3	4	1	2	3	4	1	2	3	4
Inputs											
Outputs		24								24	
Totals		24								24	

METHOD OF IMPLEMENTATION: Contractor's Facility		ADMINISTRATIVE LEADTIME: 13 Months		PRODUCTION LEADTIME: 21 Months	
Contract Dates: FY 1997 FY 1998 FY 1999		FY 1998 FY 1999		FY 1999 FY 1999	
Delivery Date:		FY 1997		FY 1999	

INDIVIDUAL MODIFICATION																		February 1998		
Date																				
MODIFICATION TITLE (Cont):																				
T701C Helicopter Engines 1-91-07-0001(1)																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment	24	31.8																	24	31.8
Equipment, Nonrecurring																				0.9
Engineering Change Orders																				1.5
Data																				
Training Equipment																				0.8
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	3	0.1									21	0.9							24	1.0
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	3	0.1									21	0.9							24	1.0
Total Procurement Cost		35.1										0.9								36.0

INDIVIDUAL MODIFICATION																																																																																																																																																													
										Date	February 1998																																																																																																																																																		
MODIFICATION TITLE: External Storage Support Systems 1-91-07-0001(2)																																																																																																																																																													
MODELS OF SYSTEMS AFFECTED: QUICKFIX, EH-60A, AN/ALQ-151(V)2																																																																																																																																																													
DESCRIPTION / JUSTIFICATION: Funds will procure External Storage Support Systems (ESSS) to balance the quantity of ESSSSs and Engines so that there will be an equal number of complete aircraft sets. These ESSSSs are required to carry enough fuel to meet the Operational Requirements Document (ORD) requirement of 4.5 hours time-on station.																																																																																																																																																													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: EXTERNAL STORAGE SUPPORT SYSTEM (ESSS) PLANNED CONTRACT AWARD LAST KIT APPLIED PLANNED FEB 95 SEP 96 ACCOMPLISHED MAR 95 SEP 96																																																																																																																																																													
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td> </tr> <tr> <td>Outputs</td> <td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td></td> <td>24</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> <tr> <td></td> <td>24</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>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																					Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		24																					24																			
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																																												
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																									
Inputs																																																																																																																																																													
Outputs																																																																																																																																																													
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																									
	24																																																																																																																																																												
	24																																																																																																																																																												
<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>To</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="2"></td> </tr> <tr> <td>Outputs</td> <td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="2"></td> </tr> <tr> <td></td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td></td><td></td> </tr> <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> </tr> <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>24</td><td>24</td> </tr> </tbody> </table>													FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To	Inputs																			Outputs																				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																							24	24														
	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																																																												
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																																																																																																																																											
Inputs																																																																																																																																																													
Outputs																																																																																																																																																													
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																													
																	24	24																																																																																																																																											
METHOD OF IMPLEMENTATION: Contractor's Facility ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME: Months																																																																																																																																																													
Contract Dates: FY 1997 FY 1998 FY 1999 FY 1999																																																																																																																																																													
Delivery Date: FY 1997 FY 1998 FY 1999																																																																																																																																																													

INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont):														External Storage Support Systems 1-91-07-0001(2)						
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment	24	9.2																	24	9.2
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	24	0.7																	24	0.7
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	24	0.7																	24	0.7
Total Procurement Cost		9.9																		9.9

INDIVIDUAL MODIFICATION																																																																														
										Date	February 1998																																																																			
MODIFICATION TITLE: Advanced EH-60 Quickfix Mods 1-91-07-0001(3)																																																																														
MODELS OF SYSTEMS AFFECTED: QUICKFIX, EH-60A, AN/ALQ-151(V)3																																																																														
DESCRIPTION / JUSTIFICATION:																																																																														
Sensor subsystems to be incorporated into AQF include: TACJAM-A ESM and ECM; CHALS-X(M); and CMES ELINT. The FY 99 APA funds for Hardware costs were redirected to RDTE to complete IOT&E in FY99. The remaining FY99 APA funds are distributed to reflect the activities funded in FY99 as required to support the on-going modification of the QUICKFIX into the Advanced QUICKFIX.																																																																														
<table style="width:100%; border: none;"> <tr> <td style="width:33%; vertical-align: top;"> DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: ADVANCED QUICKFIX (AQF) PLANNED CONTRACT AWARD FIRST KIT APPLIED FIRST UNIT EQUIPPED LAST KIT APPLIED </td> <td style="width:33%; vertical-align: top; text-align: center;"> PLANNED DEC 95 JUN 98 AUG 01 MAR 14 </td> <td style="width:33%; vertical-align: top;"> ACCOMPLISHED NOV 95* </td> </tr> </table>												DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: ADVANCED QUICKFIX (AQF) PLANNED CONTRACT AWARD FIRST KIT APPLIED FIRST UNIT EQUIPPED LAST KIT APPLIED	PLANNED DEC 95 JUN 98 AUG 01 MAR 14	ACCOMPLISHED NOV 95*																																																																
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: ADVANCED QUICKFIX (AQF) PLANNED CONTRACT AWARD FIRST KIT APPLIED FIRST UNIT EQUIPPED LAST KIT APPLIED	PLANNED DEC 95 JUN 98 AUG 01 MAR 14	ACCOMPLISHED NOV 95*																																																																												
*Due to protest, contract was on hold until Jan 96																																																																														
Installation Schedule:																																																																														
<table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <th>Pr Yr</th> <th colspan="3">FY 1997</th> <th colspan="3">FY 1998</th> <th colspan="3">FY 1999</th> <th colspan="3">FY 2000</th> <th colspan="3">FY 2001</th> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td> <td>4</td><td>1</td><td>2</td> <td>3</td><td>4</td><td>1</td><td>2</td><td>3</td> <td>4</td><td>1</td><td>2</td> <td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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> </table>												Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001			Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																	Outputs																
Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001																																																																	
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																														
Inputs																																																																														
Outputs																																																																														
<table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <th colspan="3">FY 2002</th> <th colspan="3">FY 2003</th> <th colspan="3">FY 2004</th> <th colspan="3">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <td>1</td><td>2</td><td>3</td> <td>4</td><td>1</td><td>2</td> <td>3</td><td>4</td><td>1</td><td>2</td><td>3</td> <td>4</td><td>1</td><td>2</td> <td>Complete</td> </tr> <tr> <td>Inputs</td> <td>2</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>51</td> </tr> <tr> <td>Outputs</td> <td>1</td><td>1</td> <td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td> <td>51</td> </tr> </table>												FY 2002			FY 2003			FY 2004			FY 2005			Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	Complete	Inputs	2													51	Outputs	1	1												51								
FY 2002			FY 2003			FY 2004			FY 2005			Totals																																																																		
1	2	3	4	1	2	3	4	1	2	3	4	1	2	Complete																																																																
Inputs	2													51																																																																
Outputs	1	1												51																																																																
<table style="width:100%; border: none;"> <tr> <td style="width:33%;">METHOD OF IMPLEMENTATION:</td> <td style="width:33%;">ADMINISTRATIVE LEADTIME:</td> <td style="width:33%;">PRODUCTION LEADTIME:</td> </tr> <tr> <td>Contract Dates:</td> <td>Contractor's Facility</td> <td>Months</td> </tr> <tr> <td>Delivery Date:</td> <td></td> <td>Months</td> </tr> <tr> <td></td> <td>FY 1997</td> <td>FY 1998</td> </tr> <tr> <td></td> <td>FY 1997</td> <td>FY 1998</td> </tr> <tr> <td></td> <td></td> <td>FY 1999</td> </tr> <tr> <td></td> <td></td> <td>FY 1999</td> </tr> </table>												METHOD OF IMPLEMENTATION:	ADMINISTRATIVE LEADTIME:	PRODUCTION LEADTIME:	Contract Dates:	Contractor's Facility	Months	Delivery Date:		Months		FY 1997	FY 1998		FY 1997	FY 1998			FY 1999			FY 1999																																														
METHOD OF IMPLEMENTATION:	ADMINISTRATIVE LEADTIME:	PRODUCTION LEADTIME:																																																																												
Contract Dates:	Contractor's Facility	Months																																																																												
Delivery Date:		Months																																																																												
	FY 1997	FY 1998																																																																												
	FY 1997	FY 1998																																																																												
		FY 1999																																																																												
		FY 1999																																																																												

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												AIRBORNE AVIONICS (A40700)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	8.2	27.8	28.7	58.3	41.9	56.3	44.4	44.1	58.7	32.2	95.7	496.4	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	8.2	27.8	28.7	58.3	41.9	56.3	44.4	44.1	58.7	32.2	95.7	496.4	
Initial Spares													
Total Proc Cost	8.2	27.8	28.7	58.3	41.9	56.3	44.4	44.1	58.7	32.2	95.7	496.4	
Flyaway UIC													
Wpn Sys Proc UIC													

Description: The Airborne Avionics budget line includes the Global Positioning System (GPS), the Improved Data Modem (IDM) and the Aviation Mission Planning System (AMPS). The GPS, IDM and AMPS are three of the aviation systems required to support the digitization of the battlefield. The GPS provides Army aviation with extremely accurate and secure navigation capability and assists in situational awareness and prevention of fratricide. GPS is installed in several configurations based on mission profile, operational requirements, and avionics architecture of the aircraft. The Embedded Inertial Navigation System (EGI) is used for the scout and attack helicopters. This non-developmental system is part of an Air Force led joint program which was awarded in March 94. The Doppler GPS Navigation System (DGNS) - AN/ASN-128B was awarded in Jul 95. IDM supports battlefield synchronization. Use of the IDM will provide the field commander with the capability for enhanced command and control, situational awareness, and operations in joint service digitized environments. The IDM will enhance digitization of the battlefield, fusion of information, system integration and access to real-time fused intelligence. This joint service program for Air Force, Army, Marine aircraft, and Army command and control platforms is a digital data link modem which exchanges targeting data between the various weapon systems in support of the following missions: suppression of enemy defenses, close air support, forward air control, air combat and command. The IDM provides four (4) half duplex radio channels with three (3) different communication ports: analog, digital, and secure digital. The IDM provides interfaces with MIL-STD 1553B, the current standard military data channel. The AMPS is a planning/battle synchronization tool that will automate aviation mission planning tasks. The system will also provide generation of mission data in either hard copy or electronic formats. The AMPS includes tactical command and control, mission planning, mission management, and maintenance management. The AMPS interfaces with the Maneuver Control System (MCS) and associated networks. This interface will furnish the aviation commander with continuous situational awareness, allowing the commander to rapidly adjust mission plans.

Exhibit P-40C Budget Item Justification Sheet		Date	February 1998
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft		AIRBORNE AVIONICS (AA0700)	
Program Elements for Code B Items	Code	Other Related Program Elements	
Justification: The FY 99 funding provides for the installation of 53 EGI (GPS) kits on the Kiowa Warrior aircraft; procurement and modification of 383 AN/ASN 128B boxes to be integrated on the UH-60A/L aircraft and CH-47 without AN/ASN-149 systems. In addition, FY 99 funding provides 51 IDM for the planned Force Package One airframes. FY 99 funds will also procure enhanced ADPE, software upgrades for 91 AMPS. Systems project management, PM administration, nonrecurring engineering, installation and other costs for GPS, IDM and AMPS are also funded during these fiscal years. The FY 99 funding enables the Army to comply with Public Law 103-160 (which directs the installation of GPS on all DOD aircraft by FY00), the Joint Chiefs Of Staff Master Navigation Plan (which directs that the GPS capability be applied to all military aircraft by the year 2000) and the DOD Position/Navigation executive committee which directed the services to utilize GPS as a foundation to satisfy navigation requirements while striving for maximum standardization/commonality between the accurate, self-contained systems that satisfy unique platform mission requirements. Furthermore, the services are to invest in reliable, services. Tactical aircraft must have a GPS Precise Positioning Service (PPS) capability. The IDM program is in response to the need for "Digitization of the Battlefield". It supports the five (5) Army modernization objectives, i.e. project and sustain the force, protect the force, win the battlefield information war, conduct precision strikes throughout the battlefield and dominate the maneuver battle. Digitization is the solution for fusion of information. The IDM joint service application makes it particularly valuable in a threat environment. The AMPS is required to enable the Army to fully implement associated provisions of digitization. Missions and dissemination of battle plans must be electronically planned and transmitted. Manual sources for aviation plans and operations are inadequate for current warfare technology.			

Exhibit P-40M Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No.			P-1 Item Nomenclature			Date					
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft			AIRBORNE AVIONICS (AA0700)								
Program Elements for Code B Items			Code	Other Related Program Elements							
Description			Fiscal Years								
OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
Embedded GPS Inertial Navigation System (EGI)											
TBD 1	Legislative	26.2	6.8	0.9	0.6	0.0	0.0	0.0	0.0	0.0	34.5
Doppler GPS Navigation System (DGNS) (AN/ASN-128B)											
TBD 2	Legislative	18.0	23.4	16.9	18.4	15.7	2.8	0.0	0.0	0.0	95.2
Global Positioning System (GPS) [AN/ASN-149] (No P3a Set)											
TBD 3	Legislative	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Improved Data Modem (IDM)											
TBD 4	Oper/Log	11.7	13.6	15.4	27.8	16.6	16.1	22.7	17.2	85.1	226.2
Aviation Mission Planning System											
1-95-01-2185	Oper/Log	6.6	14.5	8.7	9.5	9.5	9.1	7.1	0.0	0.0	65.0
Embedded GPS Inertial Navigation System (EGI) PPI											
TBD 1-1	Legislative	0.0	0.0	0.0	0.0	1.7	8.0	14.2	7.5	6.9	38.3
Doppler GPS Navigation System (DGNS) (AN/ASN-128B) PPI											
TBD 2-2	Legislative	0.0	0.0	0.0	0.0	0.9	8.1	14.7	7.5	3.7	34.9
Totals											
		64.6	58.3	41.9	56.3	44.4	44.1	58.7	32.2	95.7	496.2

INDIVIDUAL MODIFICATION																																																																																																																															
										Date	February 1998																																																																																																																				
MODIFICATION TITLE: Embedded GPS Inertial Navigation System (EGI) TBD 1																																																																																																																															
MODELS OF SYSTEMS AFFECTED: Kiowa Warrior																																																																																																																															
DESCRIPTION / JUSTIFICATION: Modification of the OH-58 aircraft to integrate an Embedded Inertial GPS Navigation system. The goal is to enhance aircraft navigation and warfighting capability to meet the JCS navigation plan by installing GPS in the fleet. GPS is one of the aviation systems required for Digitization of the Battlefield. Forty-seven (47) systems will be integrated into Kiowa Warrior aircraft through an engineering change initiative funded by the platform Program Manager.																																																																																																																															
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Contract Award (NDI) ECP Award, Bell Textron International Planned Mar 94 Aug 94 Accomplished Mar 94 Aug 94																																																																																																																															
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="2">FY 1997</th> <th colspan="2">FY 1998</th> <th colspan="2">FY 1999</th> <th colspan="2">FY 2000</th> <th colspan="2">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td><td>1</td><td>2</td><td>3</td><td>4</td><td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td>76</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td>38</td><td></td><td>21</td><td>21</td><td>36</td><td>36</td><td>30</td><td>30</td><td>27</td><td>26</td><td>25</td><td>26</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="2">FY 2002</th> <th colspan="2">FY 2003</th> <th colspan="2">FY 2004</th> <th colspan="2">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th><th>Complete</th><th></th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>1</td><td>2</td><td>3</td><td>4</td><td>1</td><td>2</td><td>3</td><td>4</td><td>1</td><td>2</td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Totals</td> <td>303</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>												Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	76												Outputs	38		21	21	36	36	30	30	27	26	25	26	Pr Yr	FY 2002		FY 2003		FY 2004		FY 2005		Totals		1	2	3	4	1	2	3	4	Complete		Inputs	1	2	3	4	1	2	3	4	1	2	Outputs											Totals	303									
Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001																																																																																																																						
	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																			
Totals	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																			
Inputs	76																																																																																																																														
Outputs	38		21	21	36	36	30	30	27	26	25	26																																																																																																																			
Pr Yr	FY 2002		FY 2003		FY 2004		FY 2005		Totals																																																																																																																						
	1	2	3	4	1	2	3	4	Complete																																																																																																																						
Inputs	1	2	3	4	1	2	3	4	1	2																																																																																																																					
Outputs																																																																																																																															
Totals	303																																																																																																																														
METHOD OF IMPLEMENTATION: Contractor Teams ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 9 Months Contract Dates: FY 1997 Mar 97 FY 1998 FY 1999 Delivery Date: FY 1997 Apr 98 FY 1998 FY 1999																																																																																																																															

INDIVIDUAL MODIFICATION													
Date February 1998													
MODIFICATION TITLE (Cont): Embedded GPS Inertial Navigation System (EGI) TBD 1													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RD&E													
PROCUREMENT													
Kit Quantity	264	18.6	86	5.3									350
Installation Kits													
Installation Kits, Nonrecurring Equipment		5.2											5.2
Equipment, Nonrecurring Engineering Change Orders		0.6											0.6
Data													
Training Equipment													
Support Equipment													
Other (Inc PM ADMIN/MAT SPT)		1.3		1.2			0.4						2.9
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt 217 Ki	76	0.5	42	0.3	99	0.7							217
FY 1997 Eqpt 86 Kits					33	0.2	53	0.2					86
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installation	76	0.5	42	0.3	132	0.9	53	0.2					303
Total Procurement Cost		26.2		6.8		0.9		0.6					34.5

INDIVIDUAL MODIFICATION												Date	February 1998				
MODIFICATION TITLE: Doppler GPS Navigation System (DGNS) (AN/ASN-128B) TBD 2																	
MODELS OF SYSTEMS AFFECTED: Blackhawk (UH-60 A/L), Chinook (CH-47D)																	
DESCRIPTION / JUSTIFICATION:																	
Modification of UH-60A/L and CH-47D aircraft is required to integrate a state of the art Global Positioning System. The goal is to enhance aircraft navigation and warfighting capability to meet the JCS navigation plan. GPS is one of the six aviation systems required for Digitization of the Battlefield. The UH-60A/L kit includes a command instrument processor (CIP). Quantities for the CH-47D configuration are: FY97-203, FY98-100, FY99-100, FY00-25. The six integration units being utilized for test and ECP validation are not currently scheduled for installation.																	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																	
<u>Planned</u> Aug 93 Aug 95 Dec 95 <u>Accomplished</u> Aug 93 Aug 95 Dec 95																	
Integration Design Contract Award																	
Production Contract Award																	
Production Contract Award (Year II)																	
Installation Schedule:																	
Inputs Outputs	Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	60	60	60	60	49	119	119	119	119	120	100	100	100	83	100	100	100
		60	60	60	60	49	119	119	119	119	120	100	100	100	83	100	100
Inputs Outputs	FY 2002		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		
	1	2	3	4	1	2	3	4	1	2	3	4	Totals				
	63													1774	1774		
METHOD OF IMPLEMENTATION: Contractor Teams																	
Contract Dates: FY 1997 Jan 97 FY 1998 Jan 98 FY 1999 Jan 99																	
Delivery Date: FY 1997 Sep 97 FY 1998 Sep 98 FY 1999 Sep 99																	
PRODUCTION LEADTIME: 7 Months																	

INDIVIDUAL MODIFICATION													
Doppler GPS Navigation System (DGNS) (AN/ASN-128B) TBD 2													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E													
PROCUREMENT													
Kit Quantity	289	6.6	477	10.6	383	8.5	375	8.3	250	6.3			1774
Installation Kits		1.7		2.5		2.0		2.0		1.5			40.3
Installation Kits, Nonrecurring Equipment		0.8											9.7
Equipment, Nonrecurring		2.8		0.7									0.8
Engineering Change Orders		0.7											3.5
Data													0.7
Training Equipment													
Support Equipment	188	3.2	376	5.0		1.4	188	2.8	188	2.8			940
Other (Inc PM ADMIN/MAT SPT)		1.6		2.3				1.5		1.2			13.8
Interim Contractor Support													8.0
Installation of Hardware													
FY 1996 & Prior Eqpt 289 Ki	60	0.6	229	2.3									289
FY 1997 Eqpt 477 Kits					477	5.0							477
FY 1998 Eqpt 383 Kits							383	3.8					383
FY 1999 Eqpt 375 Kits									375	3.9			375
FY 2000 Eqpt 250 kits										2.8	250		250
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment	60	0.6	229	2.3	477	5.0	383	3.8	375	3.9	250	2.8	1774
Total Procurement Cost		18.0		23.4		16.9		18.4		15.7		2.8	
													95.2

INDIVIDUAL MODIFICATION										Date	February 1998	
MODIFICATION TITLE: Improved Data Modem (IDM) TBD 4												
MODELS OF SYSTEMS AFFECTED: IDM MD-1295/A; Aircraft: Longbow (AH-64D), Kiowa Warrior (OH-58D), Special Operations Aircraft (MH-47E/MH-60E), Aviation ground/operations centers.												
DESCRIPTION / JUSTIFICATION: The Improved Data Modem (IDM) is one of the aviation programs in response to the need for Digitization of the Battlefield. It will provide the field commander with the capability for enhanced command and control, situational awareness and enhanced operations in joint service digitized environments. IDM is a joint-service program with installation on Air Force, Army and Marine aircraft and Army command and control platforms. The IDM is a digital data link modem which exchanges targeting data between the various weapons systems in support of the following missions: suppression of enemy air defenses, close air support, forward air control, air combat and command control. The IDM provides four (4) half duplex radio channels with three (3) different communication ports: analog, digital and secure digital. The IDM will enable the army to maintain capabilities to gather, process and transmit information to all areas of the battlefield. IDMs for Longbow and uninducted Kiowa Warrior aircraft will be incorporated in production. IDMs for fielded Kiowa Warrior aircraft will be installed by the Kiowa Warrior PM during implementation of the safety enhancement engineering change. The IDMs for Special Operations Aircraft will be installed by SOA logistics contractors.												
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Planned Apr 96 Mar 96 Accomplished Apr 96 Mar 96 Exercise Air Force Production Contract Options Non-Recurring System Integration												
Installation Schedule:												
Inputs Outputs	Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		
	Totals	1	2	3	4	1	2	3	4	1	2	3
Inputs Outputs	FY 2002	FY 2003		FY 2004		FY 2005		To		Totals		
	1	2	3	4	1	2	3	4	1	2	3	4
METHOD OF IMPLEMENTATION:												
Contract Dates: FY 1997 Apr 97 FY 1998 Dec 97 FY 1999 Dec 98 FY 2000 Mar 00 FY 2001 Mar 00												
Delivery Date:												

INDIVIDUAL MODIFICATION																					Date	February 1998
MODIFICATION TITLE (Cont): Improved Data Modem (IDM) TBD 4																						
FINANCIAL PLAN: (\$ in Millions)																						
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
RDT&E																						
PROCUREMENT																						
Kit Quantity	115	3.5	94	3.5	51	1.9	51	2.0	54	2.1	51	2.0	120	4.9	120	5.0	282	12.8	938	37.7		
Installation Kits		2.1		3.2		5.9		3.0												14.2		
Installation Kits, Nonrecurring Equipment				0.1																0.1		
Equipment, Nonrecurring		2.6		1.4		1.3		0.8		0.8		0.4		0.3		0.3		1.9		9.8		
Engineering Change Orders		0.6		1.4		3.2		20.1		10.6		11.8		15.5		9.5		51.9		124.6		
Data																						
Training Equipment																						
Support Equipment		0.1																		0.1		
Other (Inc PM ADMIN/MAT SPT)		2.8		3.2		2.2		1.7		2.3		1.9		2.0		2.4		18.5		37.0		
Interim Contractor Support																						
Fielding				0.4		0.5		0.1												1.0		
System Test & Evaluation				0.4		0.4		0.1		0.8										1.7		
Installation of Hardware																						
FY 1996 & Prior Eqpt -- Kits																						
FY 1997 Eqpt -- Kits																						
FY 1998 Eqpt -- Kits																						
FY 1999 Eqpt -- Kits																						
FY 2000 Eqpt -- kits																						
FY 2001 Eqpt -- kits																						
FY 2002 Eqpt -- kits																						
FY 2003 Eqpt -- kits																						
TC Equip-Kits-Kits																						
Total Installment		11.7		13.6		15.4		27.8		16.6		16.1		22.7		17.2		85.1		226.2		
Total Procurement Cost																						

INDIVIDUAL MODIFICATION												Date	February 1998																																																																																				
MODIFICATION TITLE: Aviation Mission Planning System 1-95-01-2185																																																																																																	
MODELS OF SYSTEMS AFFECTED: Kiowa Warrior (OH-58D); Blackhawk (UH-60 A/L); MEDIVAC (UH-60Q); Chinook (CH-47D); Longbow (AH-64D/AH-64 Modernization)																																																																																																	
DESCRIPTION / JUSTIFICATION:																																																																																																	
Provides for state-of-the-art tactical automated data processing equipment, peripheral equipment, testing, software changes/updates, required to bring the current AMPS configuration to the required operational capability. Since the airframes have the data receptacles/busses required to interface with AMPS there is no installation cost/schedule.																																																																																																	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																																																																																																	
<u>Planned</u> Mar 95 Aug 95 Dec 98 Mar 99 <u>Accomplished</u> Mar 95 Aug 95																																																																																																	
Installation Schedule:																																																																																																	
<table border="1"> <thead> <tr> <th>Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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>														Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																													
Inputs																																																																																																	
Outputs																																																																																																	
<table border="1"> <thead> <tr> <th>Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="4">Totals</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td colspan="4">Complete</td> </tr> <tr> <td>Inputs</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 colspan="4"></td> </tr> <tr> <td>Outputs</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 colspan="4"></td> </tr> </tbody> </table>														Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals				Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete				Inputs																					Outputs																				
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete																																																																																
Inputs																																																																																																	
Outputs																																																																																																	
METHOD OF IMPLEMENTATION: N/A																																																																																																	
Contract Dates: FY 1997 Jan 97 FY 1998 Jan 98 FY 1999 Jan 99																																																																																																	
Delivery Date: FY 1997 Aug 97 FY 1998 Aug 98 FY 1999 Aug 99																																																																																																	
ADMINISTRATIVE LEADTIME: 2 Months																																																																																																	
PRODUCTION LEADTIME: 5 Months																																																																																																	

INDIVIDUAL MODIFICATION																		
Aviation Mission Planning System 1-95-01-2185																		
Date February 1998																		
den.																		
MODIFICATION TITLE (Cont):																		
FINANCIAL PLAN: (\$ in Millions)																		
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																		
PROCUREMENT																		
Kit Quantity	70	2.4	317	8.9	41	1.4	91	2.7	101	3.2	89	2.9	90	2.9			799	24.4
Installation Kits																		
Installation Kits, Nonrecurring Equipment		2.6		0.8		2.0		1.4		1.3		1.2						9.3
Equipment, Nonrecurring																		
Engineering Change Orders		0.9		3.9		4.2		4.3		4.0		4.0		3.7				25.0
Data																		
Training Equipment																		
Support Equipment																		
Other (Inc PM ADMIN/MAT SPT)		0.7		0.9		1.1		1.1		1.0		1.0		0.5				6.3
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits																		
FY 1999 Eqpt -- Kits																		
FY 2000 Eqpt -- kits																		
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
TC Equip-Kits																		
Total Installment																		
Total Procurement Cost		6.6		14.5		8.7		9.5		9.5		9.1		7.1				65.0

INDIVIDUAL MODIFICATION																																																																																							
										Date	February 1998																																																																												
MODIFICATION TITLE: Embedded GPS Inertial Navigation System (EGI) PPI TBD 1-1																																																																																							
MODELS OF SYSTEMS AFFECTED: Kiowa Warrior (OH-58D), Apache A+ (AH-64A+), Longbow (AH-64D), Special Operations Aircraft (SOA)																																																																																							
DESCRIPTION / JUSTIFICATION: GPS is one of the aviation systems required for Digitization of the Battlefield. FY 2000 starts the aircraft integration and the procurement of the GPS EGI Preplanned Product Improvement (PPPI) interchangeable module in accordance with NAVWARFARE and airspace requirements for the KIOWA WARRIOR (OH-58D), APACHE A+ (AH-64A+), LONGBOW (AH-64D), Special Operations Aircraft (SOA).																																																																																							
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Contract Award (ECP) Production Contract Award Planned Nov 99 Apr 01 Accomplished																																																																																							
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="2">FY 1997</th> <th colspan="2">FY 1998</th> <th colspan="2">FY 1999</th> <th colspan="2">FY 2000</th> <th colspan="2">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</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> <tr> <td>Outputs</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>												Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	Inputs													Outputs																										
Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001																																																																														
	1	2	3	4	1	2	3	4	1	2	3	4																																																																											
Totals	1	2	3	4	1	2	3	4	1	2	3	4																																																																											
Inputs																																																																																							
Outputs																																																																																							
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">FY 2002</th> <th colspan="2">FY 2003</th> <th colspan="2">FY 2004</th> <th colspan="2">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th> <th colspan="2">Complete</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>130</td><td>130</td><td>106</td><td>202</td> <td>202</td><td>202</td><td>200</td><td>100</td> <td>72</td><td>100</td> </tr> <tr> <td>Outputs</td> <td>130</td><td>130</td><td>106</td><td>202</td> <td>202</td><td>202</td><td>202</td><td>100</td> <td>72</td><td>100</td> </tr> <tr> <td>Totals</td> <td>130</td><td>130</td><td>106</td><td>202</td> <td>202</td><td>202</td><td>202</td><td>100</td> <td>72</td><td>100</td> </tr> <tr> <td>Inputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td> </tr> </tbody> </table>													FY 2002		FY 2003		FY 2004		FY 2005		Totals		1	2	3	4	1	2	3	4	Complete		Inputs	130	130	106	202	202	202	200	100	72	100	Outputs	130	130	106	202	202	202	202	100	72	100	Totals	130	130	106	202	202	202	202	100	72	100	Inputs											Outputs										
	FY 2002		FY 2003		FY 2004		FY 2005		Totals																																																																														
	1	2	3	4	1	2	3	4	Complete																																																																														
Inputs	130	130	106	202	202	202	200	100	72	100																																																																													
Outputs	130	130	106	202	202	202	202	100	72	100																																																																													
Totals	130	130	106	202	202	202	202	100	72	100																																																																													
Inputs																																																																																							
Outputs																																																																																							
METHOD OF IMPLEMENTATION: Contractor Teams ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months Contract Dates: FY 1997 FY 1998 FY 1999 Delivery Date: FY 1997 FY 1998 FY 1999																																																																																							

INDIVIDUAL MODIFICATION													
Date February 1998													
MODIFICATION TITLE (Cont): Embedded GPS Inertial Navigation System (EGI) PPI TBD 1-1													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits													
Installation Kits, Nonrecurring Equipment													
Equipment, Nonrecurring													
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other (Inc PM ADMIN/MAT SPT)													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- Kits													
FY 2001 Eqpt 496 kits													
FY 2002 Eqpt 806 kits													
FY 2003 Eqpt 372 kits													
TC Equip 325 Kits													
Total Installment													
Total Procurement Cost													

INDIVIDUAL MODIFICATION															Date	February 1998																					
MODIFICATION TITLE: Doppler GPS Navigation System (DGNS) (AN/ASN-128B) PPI TBD 2-2																																					
MODELS OF SYSTEMS AFFECTED: Blackhawk (UH-60 A/L), Chinook (CH-47D)																																					
DESCRIPTION / JUSTIFICATION: GPS is one of the six aviation systems required for Digitization of the Battlefield. FY 2000 starts the aircraft integration and the procurement of the AN/ASN-128B/LDNS Preplanned Product Improvement (PPPI) interchangeable module in accordance with NAVWARFARE and airspace requirements for the UH-60 A/L and CH-47D.																																					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Contract Award (ECP) Production Contract Award <u>Planned</u> Dec 99 Jan 01 <u>Accomplished</u>																																					
Installation Schedule:																																					
Inputs Outputs	Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																
Inputs Outputs	Totals	119	119	119	119	210	210	210	210	118	118	118	118	200	200	200	200	100	100	100	100	58	58	58	58	100	100	100	100	21	21	21	21	1774	1774	1774	1774
	Totals	119	119	119	119	210	210	210	210	118	118	118	118	200	200	200	200	100	100	100	100	58	58	58	58	100	100	100	100	21	21	21	21	1774	1774	1774	1774
METHOD OF IMPLEMENTATION: Contractor Teams ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months																																					
Contract Dates: FY 1997 FY 1998 FY 1999																																					
Delivery Date: FY 1997 FY 1998 FY 1999																																					

INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont): Doppler GPS Navigation System (DGNS) (AN/ASN-128B) PPI TBD 2-2																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity											475	6.9	820	11.9	358	5.2	121	1.7	1774	25.7
Installation Kits																				
Installation Kits, Nonrecurring Equipment										0.7										
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				0.7
Training Equipment																				
Support Equipment																				
Other (Inc PM ADMN/MAT SPT)										0.2	1.2		2.0		0.9			1.2		5.5
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt 475 kits													475	0.8					475	0.8
FY 2002 Eqpt 820 kits															820	1.4			820	1.4
FY 2003 Eqpt 358 kits																	358	0.6	358	0.6
TC Equip-121 Kits																	121	0.2	121	0.2
Total Installment													475	0.8	820	1.4	479	0.8	1774	3.0
Total Procurement Cost										0.9	8.1		14.7			7.5		3.7		34.9

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												ASE MODS (AA0720)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	103.1	8.8	14.1	25.9	18.6	2.7	12.7	21.8	17.3	14.7	0.0	239.7	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	103.1	8.8	14.1	25.9	18.6	2.7	12.7	21.8	17.3	14.7		239.7	
Initial Spares													
Total Proc Cost	103.1	8.8	14.1	25.9	18.6	2.7	12.7	21.8	17.3	14.7	0.0	239.7	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION:
 ASE modifications provides funding for Aircraft Survivability Equipment (ASE) upgrades by incorporation of latest state-of-the-art technology needed to meet current and emerging threats. Modular upgrades are applied in lieu of new developments to obtain the most cost effective improved systems. Modifications to current systems will sustain and protect the forces, conduct precision strikes, and dominate the maneuver battle. Installing ASE items on aircraft systems improves their threat defeating capabilities. This budget item rolls up four modification efforts that test, procure and install A-Kits on Army airframes.

JUSTIFICATION: FY99 funding will be used for:
 A. AN/ALQ-211 Suite of Integrated Radio Frequency Countermeasures (SIRFC) for the AH-64D aircraft. The AH-64D requires additional capabilities to detect and defeat air and ground radar frequency (RF) missiles and to provide situational awareness to the pilot. The improvements needed will be satisfied by SIRFC. FY99 funds are required for nonrecurring engineering for the integration program. This system was previously referred to as the Advanced Threat Radar Jammer (ATRJJ) and the new nomenclature was approved July 1996.

B. Advanced Threat Infrared Countermeasures/Common Missile Warning System (ATIRCM/CMWS). The ATIRCM/CMWS is the core of the Suite of Integrated Infrared Countermeasures. This suite will provide active and passive infrared countermeasures (IRCM) protection against infrared guided weapons. The system is applicable to the AH-64D, MH-47D/E, MH-60K/L, EH-60, UH-60, and CH-47D aircraft.

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: Laser Detecting Set - AN/AVR-2A(V)/AH-64 1-92-01-2182

MODELS OF SYSTEMS AFFECTED: AH-64

DESCRIPTION / JUSTIFICATION:

The AN/AVR-2A(V) Laser Detecting Set (LDS) consists of two dual sensor units and an infrared unit comparator. The system interfaces with the AN/APR-39 radar detecting set, and utilizes the AN/APR-39 signal comparator and control unit to function as an integrated radar and laser detecting set system. The laser sensor units detect laser energy and converts it to electrical signals. These signals are processed, formatted and sent to the comparator as digital word messages. The comparator further processes the data and forwards this threat information to be displayed on the AN/APR-39 signal indicator inside the cockpit, at the same time, an audio tone alerts the crew. Materiel change (MC) estimates include the following - procurement of hardware, retrofit for aircraft and project management cost. In addition, technical manual changes, retrofit kit data and the modification work order (MWO) will also be provided by the contractor. This procurement equals current requirements for installation kits for 346 APACHE aircraft. LONGBOW A-Kits will be installed as part of the LONGBOW production effort.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Engineering Change Proposal (ECP) Development Award - Oct 92	FY97 B-Kit Contract (Option) Award - Jun 97
ECP Approval - May 95	FY97 B-Kit Hardware Delivery - Jan 99
PY A-Kit Production Contract Award - May 95	FY98 B-Kit Contract (Option) Award - Mar 98
PY A-Kit Production Hardware Delivery - Mar 97	FY98 B-Kit Hardware Delivery - Mar 99
FY97 A-Kit Production Contract Award - Mar 97	
FY97 A-Kit Production Hardware Delivery - Jan 98	

Installation Schedule:

Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals																				
Inputs	20	100	100	100	43	40	43													
Outputs	20	100	100	100	43	40	43													

FY 2002		FY 2003				FY 2004				FY 2005				To	Totals		
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																	346
Outputs																	346

METHOD OF IMPLEMENTATION: OLR Teams

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 9 Months

Contract Dates: FY 1997 Mar 97 FY 1998

Delivery Date: FY 1997 Jan 98 FY 1998

PRODUCTION LEADTIME: 9 Months

METHOD OF IMPLEMENTATION: OLR Teams

Contract Dates: FY 1997 Mar 97 FY 1998 FY 1998

Delivery Date: FY 1997 Jan 98 FY 1998 FY 1998

INDIVIDUAL MODIFICATION																		February 1998		
MODIFICATION TITLE (Cont): Laser Detecting Set - AN/AVR-2A(V)/AH-64 1-92-01-2182																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity			50	6.3	50	6.8													100	13.1
Installation Kits	263	4.2	83	1.3															346	5.5
Installation Kits, Nonrecurring Equipment		4.4																		4.4
Equipment, Nonrecurring Engineering Change Orders				0.3																0.3
Data																				
Training Equipment																				
Support Equipment																				
Other		1.1		0.3		0.4														1.8
Interim Contractor Support				0.1																0.1
System Test																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits			220	3.2	43	0.6													263	3.8
FY 1997 Eqpt -- Kits					83	1.2													83	1.2
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installation			220	3.2	126	1.8													346	5.0
Total Procurement Cost		9.7		11.5		9.0														30.2

INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																																																																																																			
MODIFICATION TITLE: Infrared Countermeasure Set - AN/ALQ-144A/OH-58D 1-92-01-2181																																																																																																																																																																																																
MODELS OF SYSTEMS AFFECTED: OH-58D																																																																																																																																																																																																
DESCRIPTION / JUSTIFICATION: The AN/ALQ-144A Infrared Countermeasures Set is designed to confuse or decoy threat infrared (IR) missile systems. The purpose of this materiel change (MC) is the installation of the A-Kit on the fleet. This MC provides for the aircraft modification/A-Kit to accept the AN/ALQ-144A system. The milestones relate to the installation of the aircraft A-Kit hardware.																																																																																																																																																																																																
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Installation of Hardware FY95 - Jul 95 Installation of Hardware FY96 - Oct 95 Installation of Hardware FY97 - Mar 97 Installation of Hardware FY98 - Mar 98																																																																																																																																																																																																
Installation Schedule: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td>288</td><td>16</td><td>12</td><td>12</td> <td>24</td><td>17</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> <tr> <td>Outputs</td> <td>288</td><td>16</td><td>12</td><td>12</td> <td>24</td><td>17</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> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>Complete</th><th>Months</th> </tr> </thead> <tbody> <tr> <td>Inputs</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>385</td> </tr> <tr> <td>Outputs</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>385</td> </tr> </tbody> </table>														Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	288	16	12	12	24	17															Outputs	288	16	12	12	24	17															Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Months	Inputs																		385	Outputs																		385
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																																																																															
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																												
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																												
Inputs	288	16	12	12	24	17																																																																																																																																																																																										
Outputs	288	16	12	12	24	17																																																																																																																																																																																										
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																																																																																															
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Months																																																																																																																																																																														
Inputs																		385																																																																																																																																																																														
Outputs																		385																																																																																																																																																																														
METHOD OF IMPLEMENTATION: Contract/Depot Contract Dates: FY 1997 Delivery Date: FY 1997																																																																																																																																																																																																
ADMINISTRATIVE LEADTIME: Months FY 1998 FY 1998																																																																																																																																																																																																
PRODUCTION LEADTIME: Months FY 1999 FY 1999																																																																																																																																																																																																

INDIVIDUAL MODIFICATION														February 1998						
MODIFICATION TITLE (Cont):																Infrared Countermeasure Set - AN/ALQ-144A/OH-58D 1-92-01-2181				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	385	2.0																	385	2.0
Installation Kits																				
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	288	0.3	56	0.1	41	0.1													385	0.5
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	288	0.3	56	0.1	41	0.1													385	0.5
Total Procurement Cost		2.3		0.1		0.1														2.5

INDIVIDUAL MODIFICATION												Date	February 1998
MODIFICATION TITLE: AN/ALQ-211 Suite of Integrated Radio Frequency CMS 1-92-01-2187													
MODELS OF SYSTEMS AFFECTED: AH-64D													
DESCRIPTION / JUSTIFICATION: The AH-64D requires additional capabilities to detect and defeat air and ground launched radar frequency (RF) missiles. The improvements needed will be satisfied by the Suite of Integrated Radio Frequency Countermeasures (SIRFC). This system is identified in the ASE/APACHE requirements documents and will improve aircraft survivability and mission accomplishment. The protection of the AH-64D against Air Defense Artillery (ADA) threats is one of the most important considerations due to the aircraft's mission profile.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Engineering Change Proposal (ECP) Development Award - Apr 96 ECP Approval - Jul 99 Production Contract Award - Jan 00 Production Hardware Delivery - Jun 01 First Kit Applied - Jul 01													
Installation Schedule:													
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Pr Yr		1 2		3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4	
Totals													
Inputs													
Outputs													
		FY 2002		FY 2003		FY 2004		FY 2005		To		Totals	
1		2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		Complete			
Inputs													
Outputs													
METHOD OF IMPLEMENTATION: Contract/Depot													
Contract Dates: FY 1997													
Delivery Date: FY 1997													
ADMINISTRATIVE LEADTIME: Months													
PRODUCTION LEADTIME: Months													
Contract Dates: FY 1998													
Delivery Date: FY 1998													
Contract Dates: FY 1999													
Delivery Date: FY 1999													

INDIVIDUAL MODIFICATION																		Date		February 1998							
MODIFICATION TITLE (Cont):																		AN/ALQ-211 Suite of Integrated Radio Frequency CMS 1-92-01-2187									
FINANCIAL PLAN: (\$ in Millions)																											
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL								
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$							
RDT&E																											
PROCUREMENT																											
Kit Quantity																											
Installation Kits		11.9		5.2		2.2		2.7	22	2.8	55	6.8							77	9.6							
Installation Kits, Nonrecurring Equipment																				22.0							
Equipment, Nonrecurring																											
Engineering Change Orders																											
Data																											
Training Equipment																											
Support Equipment																											
Other		0.5										0.4	0.1							1.0							
Interim Contractor Support																											
Installation of Hardware																											
FY 1996 & Prior Eqpt -- Kits																											
FY 1997 Eqpt -- Kits																											
FY 1998 Eqpt -- Kits																											
FY 1999 Eqpt -- Kits																											
FY 2000 Eqpt -- kits											22	1.2							22	1.2							
FY 2001 Eqpt -- kits											5	0.3		50	2.8			55	3.1								
FY 2002 Eqpt -- kits																											
FY 2003 Eqpt -- kits																											
TC Equip-Kits																											
Total Installation		12.4		5.2		2.2		2.7		2.8	27	1.5	50	2.8					77	4.3							
Total Procurement Cost												8.7		2.9						36.9							

INDIVIDUAL MODIFICATION										Date	February 1998		
MODIFICATION TITLE: Advanced Threat Infrared Countermeasures (ATIRCM) TBD													
MODELS OF SYSTEMS AFFECTED: AH-64D, MH-47D/E, MH-60K/L, EH-60, UH-60, OH-58D, CH-47D													
DESCRIPTION / JUSTIFICATION: The ATIRCM is a requirement for current generation Army aircraft. The ATIRCM/CMWS is one system which is the core of a Suite of Integrated Infrared Countermeasures (SIIRCM). This Suite will provide active and passive infrared countermeasures (IRCM) protection against infrared guided weapons. The system is designed to meet operational requirements for a modular IRCM system capable of providing awareness and self protection jamming countermeasures. The system is applicable to AH-64D, MH-47D/E, MH-60K/L, EH-60, UH-60, OH-58D and CH-47D aircraft. The program has been designated a tri-service program, with application to Air Force and Navy aircraft. FY 99 funds are required to initiate procurement of Army ATIRCM/CMWS A-Kits for the Special Operations Aircraft.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Milestone I/II - Jun 95 EMD Contract Award - Sep 95 System Design Review - Mar 96 Preliminary Design Review - Jun 96 Critical Design Review - Feb 97 Production Contract Award - May 01 Production Hardware Delivery - May 02 First Kit Applied - Dec 02													
Installation Schedule:													
Inputs Outputs	Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4
Inputs Outputs	Totals												
Inputs Outputs	Totals	FY 2002		FY 2003		FY 2004		FY 2005		To Complete			
	1	2	3	4	1	2	3	4	1	2	3	4	
Inputs Outputs	Totals												
METHOD OF IMPLEMENTATION: Contract/Depot ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months													
Contract Dates: FY 1997 FY 1998 FY 1999 FY 1999													
Delivery Date: FY 1997 FY 1998 FY 1999 FY 1999													

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft												P-1 Item Nomenclature:
MODIFICATIONS < \$2.0M (AA0725)												
Program Elements for Code B Items:												
Other Related Program Elements:												
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	1.0	1.8	2.4	1.8	1.7	1.7	1.9	1.9	1.9	1.9	6.0	24.0
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	1.0	1.8	2.4	1.8	1.7	1.7	1.9	1.9	1.9	1.9	6.0	24.0
Initial Spares												
Total Proc Cost	1.0	1.8	2.4	1.8	1.7	1.7	1.9	1.9	1.9	1.9	6.0	24.0
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: This modification line updates and modernizes the C-12 aircraft communication, navigation and flight management equipment to current international standards in order to standardize the fleet, allow worldwide deployments, and upgrade capability for continued safe operations into the 21st Century. This line will also update the C-23, C-26 and UC-35 and other non-C-12 fixed-wing aircraft to meet future avionics requirements resulting from worldwide navigation transition to Global Positioning System enroute and approach systems and the Chairman of the Joint Chief of Staff Master Navigation Plan requirements.

JUSTIFICATION: FY 99 will provide funding for the C-12 avionics upgrade. The majority of the Army C-12 aircraft were purchased between 1971 and 1989 and were equipped with then current avionics and navigation equipment. Current Army modernization plans will retain the C-12 fleet in active service beyond 2017. Worldwide deployments using modern navigation and air traffic control facilities beyond the year 2000 are required. During deployments in support of Desert Storm/Desert Shield/Provide Comfort, only selected aircraft with non-standard modifications were capable of being deployed to and within the theater. Elimination of obsolete communication and navigation systems will enhance reliability and maintainability by employing current commercial systems thereby improving C-12 availability and cockpit standardization.

INDIVIDUAL MODIFICATION											
MODIFICATION TITLE: Avionics System Cockpit Upgrade - Group I 1-96-01-0611										Date February 1998	
MODELS OF SYSTEMS AFFECTED: C-12C, D, F, L and R											
DESCRIPTION / JUSTIFICATION:											
This effort will update and modernize C-12 communications, navigation, and flight direction equipment to current international standards to standardize the fleet, allow worldwide deployments and upgrade capability for continued safe operations into the 21st Century. As currently equipped, the aircraft are not suitable for worldwide deployment nor capable of using modern navigation and air traffic control facilities. The following equipment is included in this upgrade: Engine Instruments, Traffic Collision Avoidance Systems, and Army Engine Trend Monitor System Upgrades. 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 unit cost will vary significantly from year to year.											
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:											
Production Contract Award : Planned - 2Q97 Accomplished - 2Q97 Production Delivery Starts: Planned - 2Q97 Accomplished - 2Q97 Kit Application Starts: Planned - 2Q97 Accomplished - 2Q97 Kit Application Complete: Planned - 4Q99											
Installation Schedule:											
FY Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		
	1	2	3	4	1	2	3	4	1	2	
Totals	1	2	3	4	1	2	3	4	1	2	
Inputs	50	200	48	5	5	6	4	5			
Outputs	50	200	48	5	5	6	4	5			
FY Yr	FY 2002		FY 2003		FY 2004		FY 2005		To Complete		
	1	2	3	4	1	2	3	4			
Totals	1	2	3	4	1	2	3	4			
Inputs											
Outputs											

METHOD OF IMPLEMENTATION:		Contractor		ADMINISTRATIVE LEADTIME:		3 Months		PRODUCTION LEADTIME:		1 Month	
Contract Dates:	FY 1997	Jan 97		FY 1998	Mar 98			FY 1999	Jan 99		
Delivery Date:	FY 1997	Jan 97		FY 1998	Mar 98			FY 1999	Jan 99		

INDIVIDUAL MODIFICATION														Date		February 1998			
Avionics System Cockpit Upgrade - Group I 1-96-01-0611																			
MODIFICATION TITLE (Cont):																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																			
PROCUREMENT																			
Kit Quantity																			
Installation Kits		298	1.4	16	1.5	13	1.3	4	1.0	8	1.0	8	1.0	8	1.0	6.0	355	14.2	0.4
Installation Kits, Nonrecurring Equipment									0.4										
Equipment, Nonrecurring																			
Engineering Change Orders																			
Data			0.1																0.3
Training			0.1																0.3
Support Equipment																			
Other																			
Interim Contractor Support																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits																			
FY 1997 Eqpt -- 298 Kits		298	0.2	16	0.1	13	0.1	4	0.5	8	0.9	8	0.9	8	0.9		298	0.2	
FY 1998 Eqpt -- 16 Kits																	16	0.1	
FY 1999 Eqpt -- 13 Kits						13	0.1										13	0.1	
FY 2000 Eqpt --4 Kits								4	0.5	8	0.9	8	0.9	8	0.9		4	0.5	
FY 2001 Eqpt --8 Kits										8	0.9	8	0.9	8	0.9		8	0.9	
FY 2002 Eqpt --8 Kits												8	0.9	8	0.9		8	0.9	
FY 2003 Eqpt --8 Kits														8	0.9		8	0.9	
TC Equip-Kits																			
Total Installation		298	0.2	16	0.1	13	0.1	4	0.5	8	0.9	8	0.9	8	0.9		355	3.6	
Total Procurement Cost			1.8		1.7		1.7		1.9		1.9		1.9		1.9	6.0		18.8	

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 3 / Spares and Repair Part												INITIAL SPARES AIR (AA0950)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	6643.9	36.5	27.7	38.2	23.2	36.0	26.2	19.0	25.4	28.3	0.0	6904.4	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	6643.9	36.5	27.7	38.2	23.2	36.0	26.2	19.0	25.4	28.3	0.0	6904.4	
Initial Spares													
Total Proc Cost	6643.9	36.5	27.7	38.2	23.2	36.0	26.2	19.0	25.4	28.3	0.0	6904.4	
Flyaway U/C													
Wpn Sys Proc U/C													
Description: Provides for procurement of spares to support initial fielding of new or modified end items.													
Justification: The funds in this account procure depot level repairable (DLRs) secondary items from the Supply Management, Army activity of the Army Working Capital Fund. To provide initial support, funds are normally required in the same year that end items are fielded. Initial spares breakout:													
<u>System</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>									
ASE	5.3	0.6	0.6	0.6									
Helicopter, Utility, UH-60	8.5	6.4	2.4	1.9									
Guardrail, Common Sensor	4.7	11.3	0.8										
Guardrail Mods (TIARA)	0.4	5.7	3.3	6.8									
Helicopter, OH-58D		2.3		0.7									
(cont)													

Exhibit P-40C Budget Item Justification Sheet				
Appropriation / Budget Activity/Serial No.	Date			
AIRCRAFT PROCUREMENT / 3 / Spares and Repair Part	February 1998			
Program Elements for Code B Items	P-1 Item Nomenclature	INITIAL SPARES AIR (AA0950)		
	Code	Other Related Program Elements		
<u>System</u>		<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
Kiowa Warrior		6.4	1.4	
ANVIS (Night Vision Goggles)		0.8		
Avionics		1.6	3.1	2.9
Longbow			7.4	13.2
				4.1
				21.9
Total		27.7	38.2	23.2
				36.0

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities												AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	801.3	34.6	52.0	0.3	8.1	5.1	51.0	40.0	96.7	99.5	770.0	1958.6	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	801.3	34.6	52.0	0.3	8.1	5.1	51.0	40.0	96.7	99.5	770.0	1958.6	
Initial Spares													
Total Proc Cost	801.3	34.6	52.0	0.3	8.1	5.1	51.0	40.0	96.7	99.5	770.0	1958.6	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION:

Aircraft Survivability Equipment (ASE) provides self protection, both active and passive, against anti-aircraft systems. The ASE program enables the Army tactical aircraft fleet to accomplish its mission on the modern battlefield by enhancing aircraft and aircrew survivability. The program is structured to procure and field the required ASE to effectively combine tactics with passive devices, active devices, and vulnerability reduction items so that Army aviation will be able to operate as intended in support of Army land battle operations in spite of modern anti-aircraft threats. Individual ASE items are generic systems, which are adapted to various aircraft. ASE CORE programs provide for priority aircraft units to receive tailored ASE suites.

ASE includes radar, infrared, and electro-optical (EO) countermeasure devices. To ensure that all aircraft have the ability to detect and defeat threat anti-aircraft systems, each airframe within the fleet is equipped or provisioned with a combination of devices based on mission requirements, space, weight, and power. Current and future acquisitions are programmed to keep pace as threat capabilities improve. ASE will sustain and protect the forces, conduct precision strikes, dominate the maneuver battle, and improve aircraft threat capabilities.

JUSTIFICATION: FY99 funds provide resources for Advanced Threat Infrared Countermeasures (ATIRCM) and Suite of Integrated Radio Frequency Countermeasures (SIRFC) initial production programs.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities				P-1 Line Item Nomenclature: AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)				Weapon System Type:		Date: February 1998	
Aircraft Cost Elements		FY 96		FY 97		FY 98		FY 99					
ID	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. AZ3506 - ASE Warning Receivers													
AN/APR-39A(V)1 Radar Signal Detecting Set	A	945											
Government In-House Support													
AN/APR-39A(V)2 Radar Signal Detecting Set	A	3700											
Nonrecurring Engineering		355											
Government In-House Support													
AN/APR-48A Radar Interferometer	A	3300											
Nonrecurring Engineering/Tooling													
AN/AVR-2A(V) Laser Detecting Set	A	912											
Government In-House Support													
Project Management Support & Fielding of ASE Systems		4572			284			905					
ASE Integration Program		3071											
ASET IV Threat Generator		960						7212					
SUBTOTAL - ASE WARNING RECEIVERS		17815			284			8117					
2. AZ3507 - ASE INFRARED CMS													
Advanced Threat Infrared Countermeasures	B												
Nonrecurring Engineering													
Recurring Engineering													
Engineering Changes													
Project Management													
Data													
SUBTOTAL - ASE INFRARED CMS													
3. AZ3508 - ASE RADAR CMS													
Suite of Integrated Radio Freq CMS (SIRFC)	B												
Nonrecurring Engineering													
Recurring Engineering											4931		
Engineering Change Orders											213		
Project Management													
Data													
System Test and Evaluation													
SUBTOTAL - ASE RADAR CMS												5144	

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities				P-1 Line Item Nomenclature: AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)				Weapon System Type:		Date: February 1998	
Aircraft Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
4.		AZ5700 - ASE TRAINING DEVICES												
		AN/TPQ-45 (ASET IV) Threat Generator												
	A	AN/TPQ-45 Systems	24300	3	8100									
		Project Management	1000											
		Prototype Refurbishment	3000											
		MILES/Night Vision	2000											
		Nonrecurring Engineering	3840											
		SUBTOTAL - ASE TRAINING DEVICES	34140											
		SUBTOTAL - ASE	51955			284			8117			5144		
		Initial SPARES	5307			599			575			583		
		SUBTOTAL - ASE INITIAL SPARES	5307			599			575			583		
		TOTAL	57262			883			8692			5727		

Exhibit P-5a, Budget Procurement History and Planning										Date: February 1998	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			Weapon System Type:			P-1 Line Item Nomenclature: ASE TRAINING DEVICES (AZ5700)					
WBS Cost Elements: Fiscal Years	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 Revisn Avail	RFP Issue Date	
ASET IV Threat Generator FY 98	Sierra Technologies, Inc Buffalo, NY	Option	AMCOM, Huntsville, AL	Jun-96	Oct-98	3	8100	Yes	No		
REMARKS:											

Exhibit P-40, Budget Item Justification Sheet

Appropriation / Budget Activity/Serial No:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities

Program Elements for Code B Items:

P-1 Item Nomenclature:
AIRBORNE COMMAND & CONTROL (AA0710)

Other Related Program Elements:

Date: February 1998

	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	37.8	0.0	5.7	0.0	0.0	24.4	18.9	17.6	36.1	116.8	93.0	350.4
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	37.8	0.0	5.7	0.0	0.0	24.4	18.9	17.6	36.1	116.8	93.0	350.4
Initial Spares												
Total Proc Cost	37.8	0.0	5.7	0.0	0.0	24.4	18.9	17.6	36.1	116.8	93.0	350.4
Flyaway U/C												
Wpn Sys Proc U/C												

Description: The Aviation Mission Planning System (AMPS) is a planning/battle synchronization tool that will automate aviation mission planning tasks, replacing inadequate manual procedures and providing generation of mission data in either hard copy or electronic formats. The AMPS includes tactical command and control (C2), mission planning, and mission management. The AMPS interfaces with the Maneuver Control System (MCS) and associated networks, providing the aviation commander with continuous situational awareness which allows the commander to rapidly adjust his plan to accomplish his assigned mission. The Army Airborne Command and Control System (A2C2S) functions as a highly mobile command post. When mounted in the UH-60 helicopter with auxiliary equipment, it provides tactical voice, data, and imagery digitized battlefield communications in both secure and nonsecure modes for Corps, Division, and Brigade commanders. The system provides battle commanders access to critical situational awareness and off-board national asset intelligence information via satellite communications, digitized battlefield communications links with Army combined arms team members, joint service and combined force elements, channel scanning, and intercommunications facilities for up to six operators, and joint interoperability as well as maritime and air traffic control communications.

Justification: FY 99 funding will procure 11 A2C2S systems, related system engineering, preproduction and data costs for the systems. The A2C2S is in response to real world needs of combat maneuver commanders to perform highly mobile and responsive digital, voice, and imagery C2 functions in the UH-60 helicopter. This system enables the commander and staff to interject critical C2 across the designated battle area without sacrificing access to information products or jeopardizing continuity of operations due to command post relocation. Interoperability is enhanced with this system by providing the capability to communicate digitally with Navy or Air Force close air support as well as relaying target information. This system supports close, deep, rear, and security operations and disaster relief, peacekeeping, drug interdiction, and both low and high intensity conflict missions. The A2C2S will assist in eliminating costly fratricide incidents via the capability to closely monitor and control operations. Satellite communications provide access to tactical communication systems

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities				P-1 Line Item Nomenclature: AIRBORNE COMMAND & CONTROL (AA0710)				Weapon System Type:		Date: February 1998	
Aircraft Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
CD			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
A			1981	62	32									
AMPS: AMPS Light Weight Computer (LCU) Systems			1209											
Project Management Administration			1548											
Nonrecurring Engineering			441	311	1									
Data Transfer Systems			164											
Peripheral Devices			315											
Logistics Support														
SUBTOTAL			5658									22561	11	2051
A2C2S: A2C2S Kits												790		
Preproduction Tooling												496		
System Engineering												574		
Data														
SUBTOTAL												24421		
TOTAL			5658									24421		

Exhibit P-5a, Budget Procurement History and Planning										Date:
Appropriation / Budget Activity/Serial No:										February 1998
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities										
Weapon System Type:										
P-1 Line Item Nomenclature:										
AIRBORNE COMMAND & CONTROL (AA0710)										
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 Reven Avail	RFP Issue Date
Fiscal Years										
AMPS Light Weight Computer (LCU)	Science Applications INC. International INC San Diego, CA	C/FP	CECOM, PM CHS	Apr-96	Jun-96	62	32	Yes	No	
Data Transfer Systems	Smith Industries Grand Rapids, MI	SS/FP	CECOM	Apr-96	Nov-96	311	1	Yes	No	
A2C2S	Naval Research Lab, Washington, DC	MIPR	Naval Research Lab	Jan-99	Dec-99	11	2051	No	Yes	Jul-98
FY 96										
FY 99										
REMARKS:										

[illegible]

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities												
P-1 Item Nomenclature:												
AVIONICS SUPPORT EQUIPMENT (AZ3000)												
Program Elements for Code B Items:												
Other Related Program Elements:												
Code:												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty												
Gross Cost	71.3	29.5	14.9	2.6	2.6	0.0	0.0	0.0	0.0	0.0	130.8	
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	71.3	29.5	14.9	2.6	2.6	0.0	0.0	0.0	0.0	0.0	130.8	
Initial Spares	1.3	2.3	0.9								4.4	
Total Proc Cost	72.5	31.8	15.8	2.6	2.6	0.0	0.0	0.0	0.0	0.0	135.2	
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Heads Up Display (HUD) AN/AVS-7 is a System which works in conjunction with the Aviator's Night Vision Imaging System (ANVIS) AN/AVS-6. The ANVIS/HUD collects critical flight information from aircraft sensors and converts this information into visual imagery. This system allows continuous heads up flight by the pilot without needing to look inward at the instrument panel. This provides significant operational and safety enhancements to Night Vision Goggle flight. The HUD is made up of two subsystems, an Aircraft Integration Kit (brackets, wiring harness, etc.) [A Kit] and an Interface Box, Control Panels and two Optical Displays per aircraft [B Kit]. The entire System weight ranges from 32 to 40 pounds per aircraft. The display unit head weight is approximately 140 grams. HUD is being acquired for the highest priority aircraft in the Army inventory.

JUSTIFICATION: The FY99 funds are required to procure retrofit upgrades for previously fielded HUDs for priority aircraft in the Army. The Army's capability to fly more effectively and safely at night will be met by the procurement of this system. The HUD, intended for the highest priority aircraft, will display critical flight information over the ANVIS image, reducing the need to divert the pilot's attention to look inward at the instrument panel.

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AVIONICS SUPPORT EQUIPMENT (A23000)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements	ID	CD	FY 96			FY 97			FY 98			FY 99		
			TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
ANVIS/HUD			14940	94	159	9877	34	291	2640			2555		
NOTE: FY96 and FY97 quantities in the database are not correct. The correct quantities are 94 and 34 respectively.														
TOTAL			14940			9877			2640			2555		

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No.												February 1998
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities												
P-1 Item Nomenclature:												
ANVIS-HUD (K35601)												
Program Elements for Code B Items:												
Other Related Program Elements:												
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	1435	547	94	34								2110
Gross Cost	71.3	29.5	14.9	9.9	2.6	2.6	0.0	0.0	0.0	0.0	0.0	130.8
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	71.3	29.5	14.9	9.9	2.6	2.6	0.0	0.0	0.0	0.0	0.0	130.8
Initial Spares	1.3	2.3	0.9									4.4
Total Proc Cost	72.5	31.8	15.8	9.9	2.6	2.6	0.0	0.0	0.0	0.0	0.0	135.2
Flyaway U/C	0.047	0.052	0.159	0.287								0.060
Wpn Sys Proc U/C	0.050	0.055	0.159	0.291								0.062

DESCRIPTION: Heads Up Display (HUD) AN/AVS-7 is a System which works in conjunction with the Aviator's Night Vision Imaging System (ANVIS) AN/AVS-6. The ANVIS/HUD collects critical flight information from aircraft sensors and converts this information into visual imagery. This system allows continuous heads up flight by the pilot without needing to look inward at the instrument panel. This provides significant operational and safety enhancements to Night Vision Goggle flight. The HUD is made up of two subsystems, an Aircraft Integration Kit (brackets, wiring harness, etc.) [A Kit] and an Interface Box, Control Panels and two Optical Displays per aircraft [B Kit]. The entire System weight ranges from 32 to 40 pounds per aircraft. The display unit head weight is approximately 140 grams. HUD is being acquired for the highest priority aircraft in the Army inventory.

JUSTIFICATION: The FY99 funds are required to procure retrofit upgrades for previously fielded quantities of HUDs for priority aircraft in the Army. The Army's capability to fly more effectively and safely at night will be met by the procurement of this system. The HUD, intended for the highest priority aircraft, will display critical flight information over the ANVIS image, reducing the need to divert the pilot's attention to look inward at the instrument panel.

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities				P-1 Line Item Nomenclature: ANVIS/ HUD (K35601)				Weapon System Type:		Date: February 1998		
Aircraft Cost Elements			ID	FY 96		FY 97		FY 98		FY 99					
			cd	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
				\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
AIRCRAFT Flyaway Costs															
Airframes / CFE				3487	94	37	1380	34	41						
Avionics (ANVIS/ HUD)							2481								
AN/AVS-6 Trade-In Program															
Other GFE															
Armament (FCR)				10684			3809			1572			1977		
ECO (All Flyaway Components)															
Other Costs (Halon)				14171			7670			1672			1977		
Subtotal Flyaway Costs															
Non-Recurring Costs															
Tooling Equipment							910			738			248		
Other (Installation)*							8580			2310			2225		
Total Flyaway				14171											
Support Cost															
Testing							819								
Fielding							71			113			113		
Government Engineering				577			224			98			98		
Peculiar Training Equipment							58								
Publications Tech / Data															
Engineering Change Orders				192			125			119			119		
Other (Project Management)				769			1297			330			330		
Subtotal Support Cost															
Gross P-1 End Cost				14940			9877			2640			2555		
Less: Prior Year Adv Proc															
Net P-1 Full Funding Cost				14940			9877			2640			2555		
Plus: P-1 CY Adv Proc															
Other Non P-1 Costs															
Initial Spares				856											
Mods															
TOTAL				15796			9877			2640			2555		

Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998											
Appropriation / Budget Activity/Serial No:			Weapon System Type:			P-1 Line Item Nomenclature:				ANVIS/HUD (K35801)												
AIRCRAFT PROCUREMENT 14 / Support Equipment and Facilities																						
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 Revisn Avail		RFP Issue Date	
Fiscal Years																						
Avionics (ANVIS/HUD)			TRACOR, Austin, TX		C/FFPM-5(5)		CECOM		Jan-96		Jun-97		94		37		Yes		No			
FY 96			TRACOR, Austin, TX		C/Option		CECOM		Dec-96		Jan-98		34		41							
FY 97			TRACOR, Austin, TX		C/Option		CECOM		Feb-98		*											
FY 98			TRACOR, Austin, TX		C/Option		CECOM		Feb-99		*											
FY 99																						
* No new quantities of ANVIS/HUD systems are being procured.																						
REMARKS: ANVIS/HUD is integrated into different aircraft in different FY's. ANVIS/HUD increase in unit cost from FY96 to FY97 is due to A Kit variations for different aircraft platforms.																						

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:		Date: February 1998										
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		P-1 Item Nomenclature: TRAINING DEVICES (A23700)										
Program Elements for Code B Items:		Other Related Program Elements:										
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	14.0	29.0	7.4	13.0	0.0	0.0	0.0	0.0	0.0	0.0	63.4
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	14.0	29.0	7.4	13.0	0.0	0.0	0.0	0.0	0.0	0.0	63.4
Initial Spares												
Total Proc Cost	0.0	14.0	29.0	7.4	13.0	0.0	0.0	0.0	0.0	0.0	0.0	63.4
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The Apache Integrated Training Program (AITP) will provide a training system which supports training for maintainers and operators. The AITP is an interactive computer-based training program that will provide new equipment and sustainment training in the field and at the schools. The training system includes:

- Maintenance trainers, which support individual task training of the AH-64A Airframe and subsystems:
 - a. Airframe, Engine, and Drivetrain Systems Trainer (AEDST)
 - b. Armament and Electrical Trainer (AET)
- Operator trainers:
 - a. modification of the Cockpit, Weapons, Emergency Procedures Trainer (CWEPT) to an Apache Crew Trainer (ACT), which vastly improves individual and crew training.
 - b. Apache Collective Training System (ACTS) leveraged technology.
 - c. Upgrade flight simulators for Eighth Army in Korea

JUSTIFICATION: The development and delivery of AITP maintenance trainers returns flyable category B aircraft, used as maintenance trainers, back into the warfighting fleet. The operator trainers will provide and sustain task proficiency and optimize the greater capabilities to support the development and use of scarce flying hours. In particular, the leveraged ACTS technology will better prepare units for exercises at the National Training Center (NTC) and provide combined arms simulation training with other combat arms through Combined Arms Tactical Trainers (CATT).

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		P-1 Line Item Nomenclature: TRAINING DEVICES (A23700)		Weapon System Type:		Date: February 1998	
Aircraft Cost Elements	ID	FY 96		FY 97		FY 98		FY 99	
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty
	CD	\$000	Each	\$000	\$000	Each	\$000	\$000	Each
AIRCRAFT Flyaway Costs									
Airframes / CFE									
Avionics									
A. GFE									
Other GFE									
Armament (FCR)									
ECO (All Flyaway Components)									
Other Costs (Halon)									
Subtotal Flyaway Costs									
Non-Recurring Costs									
Tooling Equipment									
Other System Test									
Total Flyaway									
Support Cost									
Engine (leftover A model)									
Airframe PGSE									
Engine PGSE									
Peculiar Training Equipment									
Publications Tech / Data									
Engineering Change Orders									
Other (specify) Net/ICS/Mtxsupt									
Subtotal Support Cost									
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									
Initial Spares									
Mods									
TOTAL									

Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998		
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities				Weapon System Type:		P-1 Line Item Nomenclature:							
WBS Cost Elements: Fiscal Years				Contractor and Location		Contract Method and Type	Location of PCO	Award Date	QTY	Unit Cost	Specs Avail Now?	Date Revis Avail	RFP Issue Date
Peculiar Training Devices A6X FY96				E-SYSTEM, Lexington KY		C/CPFF	Bluegrass Station SOFSA	Apr-96	2	1578	Yes	No	
Apache Collective Training System (ACTS) FY96				Boeing, Mesa, AZ		C/CPFF	USAAMCOM	Dec-97		18192	No	No	
Apache Sustainment Training Kit FY 96 Hardware FY 96 Courseware				Precision Micron Rsch; L.A. CA McDonnell Douglas Helicopter Systems (MDHS), Mesa, AZ.		C/FP S/FP	USAAMCOM USAAMCOM	Jul-96 Jul-96	45	22 1000	N/A N/A	N/A N/A	
FY 96 Courseware FY 96 Courseware FY96 Hardware/Storage/Maintenance				LSI, Jacksonville, FL LSI, Jacksonville, FL E-SYSTEM, Lexington KY		C/CPFF C/CPFF C/CPFF	NAWC NAWC Bluegrass Station SOFSA	Jul-96 Jul-97 Jul-96		1300 2700 193	N/A N/A N/A	N/A N/A N/A	
AITP Upgrade FY96 FY97				Gov't Requisitions E-SYSTEM, Lexington KY		C/FP C/CPFF	USAAMCOM Bluegrass Station SOFSA	May-96 Jan-97		1445 7390	N/A N/A	N/A N/A	
Simulator upgrades FY98				HTI, Arlington, VA		C/CPFF	STRICOM	Jun-98		13000	N/A	N/A	
REMARKS: Changed to LSI on Courseware because MDHS proposal costs exceeded the dollars available for the level of effort required.													

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:		Date: February 1998										
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		P-1 Item Nomenclature: COMMON GROUND EQUIPMENT (AZ3100)										
Program Elements for Code B Items:		Other Related Program Elements:										
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	31.5	27.8	20.7	27.1	30.1	36.6	50.2	64.5	55.1	0.0	343.4
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	31.5	27.8	20.7	27.1	30.1	36.6	50.2	64.5	55.1	0.0	343.4
Initial Spares												
Total Proc Cost	0.0	31.5	27.8	20.7	27.1	30.1	36.6	50.2	64.5	55.1	0.0	343.4
Flyaway UIC												
Wpn Sys Proc UIC												

DESCRIPTION: The Common Ground Equipment line supports aviation related Sets, Kits, and Outfits (AZ3510), Aviation Ground Support Equipment (AZ3520) and Airfield Support Equipment (AZ1710). The Sets, Kits, and Outfits (SKO) consist of shop sets, tool kits, and outfits configured to accomplish both routine and safety-of-flight maintenance repair functions on Army aircraft. The Aviation Ground Support Equipment (AGSE) is required to make Army aircraft and associated subsystems operational in their intended operational environments. This equipment is required to guide, control, inspect, test, adjust, calibrate, assess, gauge, assemble/disassemble, handle, transport, service, repair and overhaul aircraft and associated equipment. The Airfield Support Equipment (AFSE) provides fixed based, high tech systems that support Army airfields. These systems are the same or similar to the Federal Aviation Administration (FAA) services.

JUSTIFICATION:

Sets, Kits, and Outfits: FY 99 funding will achieve and sustain the operational readiness of all Army aviation field units, which operate AH-64, UH-60, CH-47, OH-58D and other Army aircraft. Sets, Kits, and Outfits (SKO) funding will also provide systems to correct safety-of-flight discrepancies which endanger both life and property. With more aircraft being added to the Army inventory, the fielding of new aviation units and the diversification of aviation missions creates an ever increasing requirement for SKO. New Aircraft Tool System (NATS) is a system of new tool kits and sets that provide the aircraft mechanic with high quality industrial grade tools supported by commercial warranties configured in boxes for instant inventory capability.

Exhibit P-40C Budget Item Justification Sheet				Date
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature		February 1998
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		COMMON GROUND EQUIPMENT (AZ3100)		
Program Elements for Code B Items		Code	Other Related Program Elements	
Aviation Ground Support Equipment: FY 99 funding will achieve and sustain the operational readiness of all Army aviation field units, which are operating AH-64, UH-60, CH-47, OH-58D and other Army aircraft. Aviation Ground Support Equipment (AGSE) also provides a means to correct safety-of-flight discrepancies which endanger both life and property. With more aircraft being added to the Army inventory, the fielding of new aviation units and the diversification of aviation missions creates an ever increasing requirement for AGSE. The Shop Equipment Contact Maintenance (SECM) is a shelter designed to be mounted on a heavy variant 1 1/4 ton truck (HMMWV) and carry a tailored load of personnel, tools, supplies and repair parts necessary to perform aircraft repair and recovery missions at locations separate from the unit. The Self Generating Nitrogen Servicing Cart (SGNSC) is being developed to provide Army Aviation with 95% pure nitrogen gas to properly service/adjust aircraft accumulators, main rotor blades, landing gear struts and tires. The SGNSC will also be used to refill nitrogen bottles used at all levels of aviation maintenance. The Aircraft Cleaning/Deicing System (ACDS) will provide the Army with an Environmental Protection Agency (EPA) compliant system for all aircraft. EPA compliance is mandated by federal law to eliminate toxic run off of contamination into the environment. Airfield Support Equipment: FY 99 funds will procure and provide for joint service National Airspace Systems used in Army Air Traffic Control Towers. The new Enhanced Terminal Voice Switch (ETVS) will save Operational and Support (O&S) costs by replacing old, antiquated legacy systems with advanced, highly reliable switches. Funding will also ensure interoperability of Army air traffic control systems within the Department of Transportation while adhering to the Congressionally mandated FAA NAS modernization effort. The new tower automation packages will provide modern voice switching equipment that will ensure interoperability on Army air traffic control systems within the NAS and will replace outdated and unsupportable voice switches currently in the Army inventory. These systems will provide commonality of equipment and training for both crews and ground controllers. The new systems will support other services, host nations' interface requirements, and fixed base air traffic control facilities into the next century. These state of the art systems will reduce maintenance costs, increase reliability, and improve overall safety for Army Aviation.				

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		P-1 Line Item Nomenclature: COMMON GROUND EQUIPMENT (AZ3100)		Weapon System Type:		Date: February 1998		
Aircraft Cost Elements		FY 96		FY 97		FY 98		FY 99		
ID	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
SETS, KITS AND OUTFITS		8,417			7,160			5,487		3,613
AVIATION GROUND SUPPORT EQUIPMENT		10,262			9,457			9,133		9,488
ITEMS LESS THAN \$2.0M (ELECT WAR-AIR)		83								
AIRFIELD SUPPORT EQUIPMENT		9,003			3,992			12,392		17,006
TOTAL		27,765			20,609			27,012		30,107

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities												SETS, KITS AND OUTFITS (AZ3510)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	0.0	9.1	8.4	7.2	5.5	3.6	3.6	3.5	7.8	8.1	0.0	56.8	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	0.0	9.1	8.4	7.2	5.5	3.6	3.6	3.5	7.8	8.1	0.0	56.8	
Initial Spares													
Total Proc Cost	0.0	9.1	8.4	7.2	5.5	3.6	3.6	3.5	7.8	8.1	0.0	56.8	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: Sets, Kits and Outfits (SKO) consists of shop sets, tool kits and outfits configured to accomplish both routine and safety-of-flight maintenance repair functions on Army aircraft. All items of SKO are Code A.

JUSTIFICATION: FY 99 funding will achieve and sustain the operational readiness of all Army aviation field units, which operate AH-64, UH-60, CH-47, OH-58D and other Army aircraft. Sets, Kits, and Outfits (SKO) funding will also provide systems to correct safety-of-flight discrepancies which endanger both life and property. With more aircraft being added to the Army inventory, the fielding of new aviation units and the diversification of aviation missions creates an ever increasing requirement for SKO. New Aircraft Tool System (NATS) is a system of new tool kits and sets that provide the aircraft mechanic with high quality industrial grade tools supported by commercial warranties configured in boxes for instant inventory capability.

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nonendurance: SETS, KITS AND OUTFITS (A23510)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. New Aviation Tool Set (NATS) Hardware Fielding Program Management Support	A		6,832 12 150	3,681	2	6,084 25 173	4,773	1	3,386 12	2,033	2	3,212 11	1,875	2
2. Non-divisional Shop Set Hardware Production Engineering Non-divisional Partial Shop Set	A		576 62 31	1	576	47			14			375	1	375
3. International Standard Organization Shelters (ISO) (M31001) 60 Amp Shelters 100 Amp Shelters	A		142	3	47									
4. New Aviation Tool Set - A (NATS-A) Hardware Fielding Program Management Support	A		536 76	312	2	2,096 20 53	1,074	2	2,061 14	897	2	15		
Reprogrammings from SKO (PBAS error)						-1,338								
TOTAL			8,417			7,160			5,487			3,613		

Exhibit P-5a, Budget Procurement History and Planning													
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities					Weapon System Type:		P-1 Line Item Nomenclature: SETS, KITS AND OUTFITS (AZ3510)					Date: February 1998	
WBS Cost Elements: Fiscal Years		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 Revisn Avail	RFP Issue Date
<u>1. New Aviation Tool Set (NATS)</u>		Rock Island Arsenal (RIA)		MIPR	ATCOM	Jan-95	Oct-95	4,104	2	Yes		No	
FY 95		RIA		MIPR	ATCOM	Feb-96	Jul-96	3,681	2	Yes		No	
FY 96		RIA		MIPR	ATCOM	Apr-97	Nov-97	4,773	1	Yes		No	
FY 97		RIA		MIPR	AMCOM	Feb-98	Sep-98	2,033	2	Yes		No	
FY 98		RIA		MIPR	AMCOM	Feb-99	Sep-99	1875	2	Yes		No	
FY 99													
<u>2. Non-divisional Shop Set</u>		Rock Island Arsenal (RIA)		MIPR	ATCOM	Jun-96	Dec-96	1	576	Yes		No	
FY 96		RIA		MIPR	ATCOM	Dec-98	Jun-99	1	375	Yes		No	
FY 99													
<u>3. International Standard Organization Shelters (ISO) (M31001)</u>		Brunswick Defense, Inc. Marion, VA		C/FP-O	ATCOM	Sep-95	Jul-96	15	47	Yes		No	
FY 95		Brunswick Defense, Inc.		C/FP-O	ATCOM	Aug-96	Apr-97	3	47	Yes		No	
FY 96													
<u>4. New Aviation Tool Set - A (NATS-A)</u>		Rock Island Arsenal (RIA)		MIPR	ATCOM	Sep-96	Dec-96	312	2	Yes		No	
FY 96		RIA		MIPR	ATCOM	Mar-97	May-97	1,074	2	Yes		No	
FY 97		RIA		MIPR	AMCOM	Jan-98	Mar-98	897	2	Yes		No	
FY 98													
REMARKS:													

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities												P-1 Item Nomenclature:
Program Elements for Code B Items:												AVIATION GROUND SUPPORT EQUIPMENT (A23520)
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	15.6	10.3	9.5	9.2	9.5	8.9	8.8	8.3	8.1	0.0	88.2
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	15.6	10.3	9.5	9.2	9.5	8.9	8.8	8.3	8.1	0.0	88.2
Initial Spares												
Total Proc Cost	0.0	15.6	10.3	9.5	9.2	9.5	8.9	8.8	8.3	8.1	0.0	88.2
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Aviation Ground Support Equipment (AGSE) is necessary to make an aircraft, or one of its associated systems or subsystems, operational in it's intended environments. This includes all equipment required to guide, control, inspect, test, adjust, calibrate, assess, gauge, assemble, disassemble, handle, transport, store, actuate, service, repair and/or overhaul the aircraft system or subsystems. Included are such items as aviation ground power units, hydraulic test stands, etc.

JUSTIFICATION: FY 99 funding will achieve and sustain the operational readiness of all Army aviation field units, which are operating AH-64, UH-60, CH-47, OH-58D and other Army aircraft. Aviation Ground Support Equipment (AGSE) also provides a means to correct safety-of-flight discrepancies which endanger both life and property. With more aircraft being added to the Army inventory, the fielding of new aviation units and the diversification of aviation missions creates an ever increasing requirement for AGSE. The Shop Equipment Contact Maintenance (SECM) is a shelter designed to be mounted on a heavy variant 1 1/4 ton truck (HMMWV) and carry a tailored load of personnel, tools, supplies and repair parts necessary to perform aircraft repair and recovery missions at locations separate from the unit. The Self Generating Nitrogen Servicing Cart (SGNSC) is being developed to provide Army Aviation with 95% pure nitrogen gas to properly service/adjust aircraft accumulators, main rotor blades, landing gear struts and tires. The SGNSC will also be used to refill nitrogen bottles used at all levels of aviation maintenance. The Aircraft Cleaning/Deicing System (ACDS) will provide the Army with an Environmental Protection Agency (EPA) compliant system for all aircraft. EPA compliance is mandated by federal law to eliminate toxic run off of contamination into the environment.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AVIATION GROUND SUPPORT EQUIPMENT (A23520)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements		FY 96			FY 97			FY 98			FY 99		
ID	CD	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
1. Non-Destructive Test Equipment (NDTE) X-Ray Machine Ultra Sound Eddy Current Harmonic Bond NDTE Fielding	A	1,698 519	121	14	272 112 322 640	10 24 24	27 5 13						
2. Flexible Engine Diagnostics System (FEDS) (A08701) Hardware FEDS Fielding FEDS T24 Upgrade FEDS Remote Monitor FEDS Production Engineering FEDS Cost Adjustment	A	4,089	2	2,045	21			5,012	2	2,506			
3. Aviation Ground Power Unit (AGPU) (A00701) Hardware	A	2,394	11	218	3,482	16	218	10			12		
4. Fuel Quantity Gauge Testers (A07401) Hardware	A	208	40	5									
5. B-4 Maintenance Platforms (A05601) Hardware	A	174	50	3									
6. Shop Equipment Contact Maintenance (SECM) Hardware SECM Fielding Production Engineering	A												
7. Self Generating Nitrogen Servicing Cart (SGNSC) Hardware SGNSC Fielding	A							2,519	229	11	3,487	317	11
8. Aircraft Cleaning/Deicing System (ACDS) Hardware Program Documentation Fielding	A							30 25			42		
9. Large Area Maintenance Shelter Hardware	A	646	1	646							1,632	24	68
								37			28	85	50

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AVIATION GROUND SUPPORT EQUIPMENT (AZ9520)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
10. Aircraft Weighing Scales Hardware		A				97	30							
11. Aviation Vibration Analyzer (AVA)(Y2K) Hardware									1,500	1,348				
Reprogrammings from CH-47						787								
TOTAL			10,262			9,457			9,133			9,488		

Exhibit P-5a, Budget Procurement History and Planning											
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities					Weapon System Type:		P-1 Line Item Nomenclature: AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)			Date: February 1998	
WBS Cost Elements: Fiscal Years		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 Revis Avail	RFP Issue Date
1. Non-Destructive Test Equipment (NDTE)											
X-Ray Machine											
FY 95	Lorad Corporation, Danbury, CT	C/FP-O	Kelly Air Force Base	Aug-95	Nov-95	48	37	Yes	No		
FY 97	Lorad Corporation	C/FP-O	Kelly Air Force Base	Jan-97	Apr-97	10	27	Yes	No		
Ultra Sound											
FY 95	Krautkramer-Branson Inc. Lewistown, PA.	C/FP-O	Kelly Air Force Base	Sep-95	Nov-95	97	5	Yes	No		
FY 97	Krautkramer-Branson Inc.	C/FP-O	Kelly Air Force Base	Jan-97	Mar-97	24	5	Yes	No		
Eddy Current											
FY 95	Staveley Instruments Inc. Kennewick, WA	C/FP-O	Kelly Air Force Base	Aug-95	Nov-95	97	13	Yes	No		
FY 97	Staveley Instruments Inc.	C/FP-O	Kelly Air Force Base	Jan-97	Apr-97	24	13	Yes	No		
Harmonic Bond											
FY 96	Staveley Instruments Inc.	C/FP-O	ATCOM	May-96	Aug-96	97	14	Yes	No		
FY 96	Staveley Instruments Inc.	C/FP-O	ATCOM	Jul-96	Oct-96	24	14	Yes	No		
2. Flexible Engine Diagnostics System (FEDS)											
(A08701)											
FY 95	Corpus Christi Army Depot	**	ATCOM	Aug-95	Sep-97	3	2,044	Yes	No		
FY 96	Corpus Christi Army Depot	**	ATCOM	Mar-96	Apr-98	2	2,045	Yes	No		
FY 98	Corpus Christi Army Depot	**	ATCOM	Jan-98	Feb-00	2	2,506				
REMARKS: **Funds to Corpus Christi Army Depot (CCAD) through Industrial Operations Command (IOC).											

Exhibit P-5a, Budget Procurement History and Planning												
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities					Weapon System Type:		P-1 Line Item Nomenclature: AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)					
WBS Cost Elements: Fiscal Years		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 Revis Avail	RFP Issue Date
3. Aviation Ground Power Unit (AGPU)(A00701)		Engineered Air Systems Inc. St. Louis, MO		C/FP/O	ATCOM	May-95	May-97	20	216	Yes	No	
FY 95												
FY 96		Engineered Air Systems, Inc.		C/FP/O	ATCOM	Sep-96	Sep-98	11	218	Yes	No	
FY 97		Engineered Air Systems, Inc.		C/FP/O	ATCOM	May-97	May-99	16	218	Yes	No	
4. Fuel Quantity Gauge Tester (A07401)		J.C. Air, Industrial Airport, KS		C/FP-O	Kelly Air Force Base	May-95	Sep-95	55	5	Yes	No	
FY 95												
FY 96		J.C. Air		C/FP	Kelly Air Force Base	Jun-96	Oct-96	40	5	Yes	No	
5. B-4 Maintenance Platforms (A05601)		D&D Machinery and Sales, Inc. San Antonio, TX		C/FP	Naval Air Systems Cmd	Jun-96	Nov-96	50	3	Yes	No	
FY 96												
6. Shop Equipment Contact Maintenance (SECM)		TBS		C/FP	AMCOM	Jan-98	May-98	229	11	No	N/A	
FY 98												
FY 99		TBS		C/FP-O	AMCOM	Jan-99	May-99	317	11	No	N/A	
7. Self Generating Nitrogen Servicing Cart (SGNSC)		TBS		C/FP-O	Kelly Air Force Base	Jan-99	Jan-00	24	68	Yes	No	
FY 99												
8. Aircraft Cleaning/ Deicing System (ACDS)		TBS		C/FP	AMCOM	Apr-99	Oct-00	85	50	No	N/A	
FY 99												
9. Large Area Maintenance Shelter		Clamshell Buildings, Inc. Ventura, CA		C/FP	ATCOM	Sep-96	Nov-96	1	646	Yes	No	
FY 96												
REMARKS:												

Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998											
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			Weapon System Type:		P-1 Line Item Nomenclature:																	
					AVIATION GROUND SUPPORT EQUIPMENT																	
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 Revisn Avail		RFP Issue Date	
Fiscal Years																						
10. Aircraft Weighing Scales (AWS)			Kelly Air Force Base		C/FP		AMCOM		May-97		May-98		30		3		Yes		No			
FY 97																						
11. Aviation Vibration Analyzer (AVA)(Y2K)			Signal Processing Systems San Diego, CA		C/FP		AMCOM		Mar-98		Jun-98		1348		1		No		N/A			
FY 98																						
REMARKS:																						

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
AIRFIELD SUPPORT EQUIPMENT (AZ1710)												
P-1 Item Nomenclature:												
Other Related Program Elements:												
Code:	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog			
Prior Years												
Gross Cost	0.0	6.8	9.0	4.0	12.4	17.0	24.1	37.9	47.4	37.9	0.0	196.4
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	6.8	9.0	4.0	12.4	17.0	24.1	37.9	47.4	37.9	0.0	196.4
Initial Spares												
Total Proc Cost	0.0	6.8	9.0	4.0	12.4	17.0	24.1	37.9	47.4	37.9	0.0	196.4
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Airfield Support Equipment (Air Traffic Control) requirements will be met through a vast array of high-tech solutions which will provide a highly reliable air traffic control system. These systems will, as much as possible, be the same as the Federal Aviation Administration systems. The National Airspace (NAS) modernization program provides engineering and automation modernization necessary for Army air traffic control facilities to interface with radar, tower control communications, and navigational aides. The Enhanced Terminal Voice Switch (ETVS) is an integrated voice switching system that is highly reliable, rapidly reconfigurable, and provides air traffic control personnel with access to both air-to-ground and ground-to-ground connectivity to support terminal air traffic control operations. The ETVS will replace the remaining electromechanical switches in the Army DoD/FAA inventory. The switch will be sizeable from 8 to 150 positions and provide for a combination of 75 frequencies/interphone circuits. The Fixed Base Precision Approach Radar system will incorporate state of the art primary radar features with a precision approach digitized display. The ancillary equipment includes navigational aides, radios, the Non-Directional Beacon, the Distance Measuring Equipment, the Instrument Landing System and the Tactical Air Navigation System. These systems support immediate need requirements tailored to meet aviation stationing plans throughout the world.

Exhibit P-40C Budget Item Justification Sheet			Date	February 1998
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature		
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		AIRFIELD SUPPORT EQUIPMENT (AZ1710)		
Program Elements for Code B Items	Code	Other Related Program Elements		
JUSTIFICATION: FY 99 funds will procure and provide for joint service National Airspace Systems used in Army Air Traffic Control Towers. The new Enhanced Terminal Voice Switch (ETVS) will save Operational and Support (O&S) costs by replacing old, antiquated legacy systems with advanced, highly reliable switches. Funding will also ensure interoperability of Army air traffic control systems within the Department of Transportation while adhering to the Congressionally mandated FAA NAS modernization effort. The new tower automation packages will provide modern voice switching equipment that will ensure interoperability on Army air traffic control systems within the NAS and will replace outdated and unsupportable voice switches currently in the Army inventory. These systems will provide commonality of equipment and training for both crews and ground controllers. The new systems will support other services, host nations' interface requirements, and fixed base air traffic control facilities into the next century. These state of the art systems will reduce maintenance costs, increase reliability, and improve overall safety for Army Aviation.				

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIRFIELD SUPPORT EQUIPMENT (AZ1710)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. Radar Surveillance Central AN/FPN 66 (U126) Other Costs		A												
FPN Digitization			4,243	9	471	124	1	124						
Engineer, Furnish, & Install (EF&I)			265			197			100					
Fielding						15			432					
Other			293			428								
2. Communication Console System (CCS) Hardware														
Other Costs			700			132			29					
Engineer, Furnish, & Install (EF&I)			68			30								
Fielding														
3. Recorders/Reproducers Hardware			160	4	40									
Other Costs			271											
Engineer, Furnish, & Install (EF&I)														
Fielding														
Interim Contractor Support			50			80								
Second Level Engineering Support			80											
4. Precision Landing Approach Hardware														
Other Costs														
Engineer, Furnish, & Install (EF&I)						118								
									4,854	2	2,427	2,427	1	2,427
									1,005			2,091		
SUBTOTAL			6,130			1,124			6,500			4,518		

Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998
Appropriation / Budget Activity/Serial No:			Weapon System Type:		P-1 Line Item Nomenclature:						
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities					AIRFIELD SUPPORT EQUIPMENT (AZ1710)						
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 Reven Avail	RFP Issue Date	
Fiscal Years											
<u>1. Radar Surveillance Central AN/FPN-86</u>											
FY 96	Wilcox Kansas City Mo	C/FP	CECOM	Jan-97	Nov-97	9	471	Yes	No		
FY 97	Wilcox Kansas City Mo	C/FP	CECOM	Mar-97	Aug-98	1	124	Yes	No		
<u>2. Recorders/Reproducers</u>											
FY 96	Federal Aviation Administration (FAA) Washington, DC	C/FP-O	FAA	Apr-96	Oct-96	4	40	Yes	No		
<u>3. Precision Landing Approach</u>											
FY 95	Raytheon Cambridge, MA	C/FP	CECOM	May-95	Nov-97	1	2,453	Yes	No		
FY 98	Raytheon Cambridge, MA	C/FP-O	CECOM	Jun-98	Aug-99	2	2,427	Yes	No		
FY 99	Raytheon Cambridge, MA	C/FP-O	CECOM	Jan-00	May-01	1	2,427	Yes	No		
REMARKS:											

Exhibit P-5a, Budget Procurement History and Planning										Date:
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities										P-1 Line Item Nomenclature:
Weapon System Type:										AIRFIELD SUPPORT EQUIPMENT (AZ1710)
WBS Cost Elements: Fiscal Years	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 Revis Avail	RFP Issue Date
4. National Airspace System (NAS)										
A. Enhanced Terminal Voice Switch (ETVS) FY 96	Federal Aviation Administration (FAA) Washington, DC	C/FP	FAA	Dec-96	Aug-97	1	430	Yes	No	
FY 98	Federal Aviation Administration (FAA) Washington, DC	C/FP-O	FAA	Feb-98	Aug-98	10	194	Yes	No	
FY 99	Federal Aviation Administration (FAA) Washington, DC	C/FP-O	FAA	Feb-99	Aug-99	12	169	Yes	No	
B. Tower/Army Radar Approach Control FY 99	Federal Aviation Administration (FAA)	C/FP	FAA	Mar-99	Mar-00	7	765	Yes	No	
REMARKS:										

Exhibit P-40, Budget Item Justification Sheet											Date:	February 1998	
Appropriation / Budget Activity/Serial No:											P-1 Item Nomenclature:		
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities											AIRCREW INTEGRATED SYSTEMS (AZ3110)		
Program Elements for Code B Items:											Other Related Program Elements:		
Code:											RDTE: 643801(DB45) and 654801(DC45)		
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	25.7	9.1	7.1	11.3	12.2	9.1	4.5	1.4	21.5	35.2	349.4	489.7	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	25.7	9.1	7.1	11.3	12.2	9.1	4.5	1.4	21.5	35.2	352.6	489.7	
Initial Spares													
Total Proc Cost	25.7	9.1	7.1	11.3	12.2	9.1	4.5	1.4	21.5	35.2	349.4	489.7	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: Aircrew Integrated Systems (ACIS), formerly Aviation Life Support Equipment (ALSE), addresses those items of equipment that are used to sustain Army aircrews and troops throughout the flight profile, enhancing mission performance and aircrew survivability during operational missions, aircraft crash, and the post-crash period prior to rescue. The ACIS items that accomplish the aircrew-aircraft integration functions include aircraft cockpit air bags, chemical/biological protective mask blowers, helicopter oxygen systems, nuclear flash and laser eye protection, helmets, (including helmet mounted display and head tracker technology integration), aircrew microclimatic conditioning systems, flotation devices, survival kits and equipment, NBC warning, decontamination and filtration systems, and a Nondevelopmental Item demonstration program for Digital Source Collector/Flight Data Recorder voice and data recorder for bussed and non-bussed Army rotary wing aircraft.

JUSTIFICATION: FY99 funding will provide for acquisition of the Cockpit Air Bag System (CABS) for UH-60 Blackhawk helicopters to improve crash survivability and reduce potential injuries and fatalities. The CABS includes an "A" kit (aircraft modification that provides for adaptation of CABS to the aircraft, e.g., electrical power, hard points and miscellaneous attachment hardware) and a "B" kit (CABS components, including crewmember air bag modules, crash sensor, gas generator, and system packaging). Funding will permit incorporation of CABS into part of the UH-60 Blackhawk Force Package One aircraft.

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIRCREW INTEGRATED SYSTEMS (AZ3110)			Weapon System Type:			Date: February 1998		
Aircraft Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
HARDWARE:														
1.	A	Aircrew Integrated Helmet System (AIHS) Laser Eye Protective Visor	2455	6546	0.4									
2.	A	M48/M49 Aviator Mask-Lightweight Motor Blower (LWMB)	2063	2140	1									
3.	B	Cockpit Air Bag System (CABS):												
		UH-60 Blackhawk - Inertia Reels				2254	2324	1						
		UH-60 Blackhawk - Low Rate Initial Production (LRIP)							2520	140	18			
		UH-60 Blackhawk - Production							4036	224	18	6714	373	18
Subtotal Hardware Costs			4518			2254			6556			6714		
Non-recurring Production - CABS:			1900			6246								
Engineering Change Proposal - CABS:									4000					
UH-60 Blackhawk												1456		
Installation of Kits - CABS:														
UH-60 Blackhawk														
Non-recurring Production-Digital Source Collector/Flight Data Recorder (FDR)						1436								
Project Management Administration			447			1182			1300			730		
Subtotal Hdw, Installation, ECP and Admin Costs			6865			11118			11856			8900		
SUPPORT COSTS:														
Fielding			209			168			334			150		
Subtotal Support Costs			209			168			334			150		
TOTAL			7074			11286			12190			9050		

Exhibit P-5a, Budget Procurement History and Planning										
Date: February 1998										
P-1 Line Item Nomenclature: AIRCREW INTEGRATED SYSTEMS (AZ3110)										
Weapon System Type:										
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities										
WBS Cost Elements: Fiscal Years										
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 Revisn Avail										
RFP Issue Date										
1. <u>Aircrew Integrated Helmet System (AIHS)</u> <u>Laser Eye Protective Visor</u> FY 96 Gentex Corp., Carbondale, PA C/FP ATCOM, St. Louis, MO Jan-97 Aug-97 6546 0.4 Yes										
2. <u>M48/M49 Aviator Mask-Lightweight Motor Blower (LWMB)</u> FY 96 Micronel, Inc., Vista, CA C/FP (OP) ERDEC, APG, MD Aug-96 Nov-96 2140 1 Yes										
3. <u>Cockpit Air Bag System (CABS)</u> FY 97 (Inertia Reels) H. Koch and Sons, Inc., Anaheim, CA C/FP AMCOM, Huntsville, AL Sep-97 Nov-97 2324 1 Yes										
FY 98 (LRIP) Simula, Inc., Phoenix, AZ SS/FP AATD, Ft. Eustis, VA Jul-98 Feb-99 140 18 Yes										
FY 98 (Prod) Simula, Inc., Phoenix, AZ SS/FP AATD, Ft. Eustis, VA Sep-98 Mar-99 224 18 Yes										
FY 99 TBS C/FP AMCOM, Huntsville, AL Mar-99 Sep-99 373 18 Yes										
REMARKS: FY 98 CABS buy is sole source to Simula, Inc. (RDT&E Developer).										

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities												P-1 Item Nomenclature: AIR TRAFFIC CONTROL (AA0050)	
Program Elements for Code 8 Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	44.4	1.0	12.5	13.5	5.7	5.7	8.9	38.8	29.6	34.8	0.0	194.8	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	44.4	1.0	12.5	13.5	5.7	5.7	8.9	38.8	29.6	34.8	0.0	194.8	
Initial Spares													
Total Proc Cost	44.4	1.0	12.5	13.5	5.7	5.7	8.9	38.8	29.6	34.8	0.0	194.8	
Flyaway U/C													
Wpn Sys Proc U/C													

DESCRIPTION: Air Traffic Control equipment contained in this budget cycle are Tactical Terminal Control System (TTCS), Air Traffic Navigation Integration and Coordination System (ATNAVICS), and the Tactical Airspace Integration System (TAIS). The TTCS is providing secure, jam-resistant radio communication with manpack capabilities to remote landing and pickup zones along the forward edge of the battle area. The ATNAVICS will provide all weather instrument flight capabilities to include enroute, terminal and radar precision approach and landing services to all Army, other services, and allied aircraft. The TAIS will provide a highly mobile airspace deconflictional system providing Army Airspace Command and Control (A2C2) and air traffic control capabilities. It will interface with all Tactical Command and Control Systems while providing commanders with automated A2C2 capability to support all Task Force XXI digitization initiatives into the next century.

JUSTIFICATION: The FY 99 funding will provide for the production of the ATNAVICS, the continued effort and production of the TAIS, and the fielding of the TTCS. This new family of tactical air traffic control systems will replace current generation equipment that is antiquated and not economically supportable. These systems will be compact, high mobility, quick to install and will be able to keep pace with the fast tempo of the modern battlefield. The continued acquisition of these air traffic control systems will support present and future warfighting concepts and assist the maneuver commander/Army aviator by providing significant improvements in the area of secure communications, data processing automation, equipment reliability, survivability, and transportability.

Exhibit P-5, Weapon Aircraft Cost Analysis

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities				P-1 Line Item Nomenclature: AIR TRAFFIC CONTROL (AA0050)				Weapon System Type:		Date: February 1998	
Aircraft Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
1.	A	Tactical Terminal Control System (TTCS) (W614) Hardware Non Recurring Costs Interim Contractor Support Fielding GFE Other Costs	9,594	26	369	7,940	26	305						
			185			460			127			150		
			266			653			373					
						460								
2.		Tactical Airspace Integration System (TAIS) Hardware Non Recurring Costs Interim Contractor Support Fielding Testing Other Costs	2,500	1	2,500	3,925	1	3,925	4,800			1,500	1	1,500
									256			182		
												100		
3.		Air Traffic Navigation and Integration System (ATNAVICS) Hardware Non Recurring Costs Interim Contractor Support Fielding Testing Other Costs										3,418	1	3,418
												267		
									115			54		
		TOTAL	12,545			13,502			5,671			5,671		

Exhibit P-5a, Budget Procurement History and Planning										Date:
Appropriation / Budget Activity/Serial No:		Weapon System Type:		P-1 Line Item Nomenclature:						
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities				AIR TRAFFIC CONTROL (AA0050)						
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 Revisn Avail	RFP Issue Date
Fiscal Years										
1. Tactical Terminal Control System (TTCS)										
FY 96	Magnavox Ft. Wayne, IN	C/FP-O	CECOM	Mar-96	Jun-97	26	369	Yes	No	
FY 97	Magnavox Ft. Wayne, IN	C/FP-O	CECOM	Jan-97	Mar-98	26	305	Yes	No	
2. Tactical Airspace Integration System (TAIS)										
FY 96	Motorola Phoenix, AZ	CPFP	MICOM	Sep-96	Mar-97	1	2,500	Yes	No	
FY 97	Motorola Phoenix, AZ	CPFP	MICOM	Nov-96	Mar-97	1	2,387	Yes	No	
FY 99	Motorola Phoenix, AZ	CPFP	AMCOM	Feb-99	Nov-99	1	1,500	Yes	No	
3. Air Traffic Navigation and Integration System (ATNAVICS)										
FY 99	Raytheon Cambridge, MA	C/FP-O	CECOM	Feb-99	May-00	1	3,418	Yes	No	
REMARKS:										

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:										Date:		
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities										February 1998		
P-1 Item Nomenclature:										INDUSTRIAL FACILITIES (AZ3300)		
Program Elements for Code B Items:										Other Related Program Elements:		
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	393.6	2.8	2.8	2.0	2.0	1.5	1.5	1.5	1.6	1.6	0.0	410.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	393.6	2.8	2.8	2.0	2.0	1.5	1.5	1.5	1.6	1.6	0.0	410.9
Initial Spares												
Total Proc Cost	393.6	2.8	2.8	2.0	2.0	1.5	1.5	1.5	1.6	1.6	0.0	410.9
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: This program provides for Provision of Industrial Facilities (PIF). Funds are used to establish, modernize, expand and replace facilities owned by the Army and provide Production Support and Equipment Replacement (PSR) of Government owned equipment used in production, production testing and depot level maintenance of Aircraft items. Also provides funding for the Value Engineering (VE) program to stimulate activity for reducing manufacturing, acquisition, operation and support costs.

JUSTIFICATION: The FY99 requests will provide Digital Photo Equipment, Data Reduction Equipment, Vibration/Data Bus Software, test equipment and other equipment and instrumentation. This equipment is used in production acceptance testing of APACHE, Black Hawk, and aviation systems. Funding also supports rebuilds, upgrades and equipment rehabilitation of government owned equipment located within contractor facilities and value engineering support and training on various aircraft systems in production.

	FY 1996	FY 1997	FY 1998	FY 1999
PIF	1.902	1.205	1.174	0.651
VE	0.857	0.813	0.828	0.842
TOTAL	2.759	2.018	2.002	1.493

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		P-1 Line Item Nomenclature: INDUSTRIAL FACILITIES (AZ3300)		Weapon System Type:		Date: February 1998			
Aircraft Cost Elements		ID	FY 96		FY 97		FY 98		FY 99		
		CD	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
19X8173 PSR, Stratford Army Engine Plant Provided for emergencies & real property repairs.			0.281								
19X8181 PSR, Bell Helicopter Textron Rebuilds, upgrades/equip rehab of government owned equipment.			0.400		0.235	0.233					
19X8189 PSR General Electric Blisk Fac. Rebuilds, upgrades/equip rehab of government owned equipment.			0.518		0.370	0.341					
09X5072 PSR, Ft. Rucker Test Facilities Provides rehab, replacement of equipment/ Instrumentation used in production of various aircraft weapon systems.			0.703		0.600	0.600			0.651		
19X0016 Value Engineering, Support			0.630		0.592	0.548			0.552		
19X0017 Value Engineering, Training			0.176		0.160	0.150			0.150		
19X0025 Value Engineering, Prog Coord.			0.051		0.061	0.130			0.140		
TOTAL			2.759		2.018	2.002			1.493		

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No.												February 1998
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities												
P-1 Item Nomenclature:												AIRBORNE COMMUNICATIONS (AA0705)
Program Elements for Code B Items:												
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	12.1	10.0	24.6	39.3	46.4	41.9	44.3	0.0	23.3	19.6	61.4	322.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	12.1	10.0	24.6	39.3	46.4	41.9	44.3	0.0	23.3	19.6	61.4	322.9
Initial Spares												
Total Proc Cost	12.1	10.0	24.6	39.3	46.4	41.9	44.3	0.0	23.3	19.6	61.4	322.9
Flyaway U/C												
Wpn Sys Proc U/C												
Description:												
Airborne Communications include Havequick II (HQ II) and the AN/ARC-220 high frequency (HF) Nap-of-the-Earth (NOE) Communications. The Air Force has upgraded the Havequick communications family to Havequick II and it has become the standard for joint service communications. The HQ II is one of six aviation systems which are required to support digitization of the battlefield. The HQ II communications is an electronic-counter-counter measure (ECCM) capable UHF-AM radio set required for joint service communication. Efforts are on-going to standardize all Army aircraft with HQ II configurations and ground timing systems which are required for synchronization of Army HQ II nets. The AN/ARC-220 HF system meets the Army's modernization plan by providing reliable, secure communications at ranges beyond line of sight. The AN/ARC-220 HF incorporates automatic link establishment (ALE) to eliminate manual searches for workable frequencies, Night Vision compatible lighting and ECCM capabilities while allowing Army aviation to communicate securely at NOE altitudes. This capability allows the commander to dominate the maneuver battle while protecting his force. The AN/ARC-220 HF communications system is also capable of transmitting data and position, facilitating the winning of the information war.												
Justification:												
FY99 funding procures 512 AN/ARC-220 radios, 180 VRC-100 ground radios, 760 A-Kits and other associated program support activities. The AN/ARC-220 HF NOE communications system supports digitization of the battlefield and enhances joint service communications. The AN/ARC-220 HF communications system supports the five (5) Army modernization objectives: project and sustain the force, protect the force, win the battlefield information war, conduct precision strikes throughout the battlefield, and dominate the maneuver battle.												

Exhibit P-5, Weapon Aircraft Cost Analysis			Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIRBORNE COMMUNICATIONS (AA0705)			Weapon System Type:		Date: February 1998	
Aircraft Cost Elements			FY 96		FY 97		FY 98		FY 99			
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	
1. AN/ARC-164 Havequick II Recurring Production: VRC-83 Radio Remote Panel Mod Kits IFM Project Management Administration Fielding			1735	250	7	1790	60	30				
						3601	503	7				
						2249	351	6				
			147			249						
			1023			923						
2. AN/ARC-220 NOE Radio Nonrecurring A-kit integration Recurring Production: AN/ARC-220 Radio VRC-100 Ground Radio A-Kits A-Kit Installation Warranty Engineering Services Other Recurring (Non-bussed peripheral) Program Management Administration System Test Engineering Change Orders Data Support Equipment-Test Program Set Maintenance Model Radios Fielding Other: Force XXI/Digitization			10326			3227			7287			
			1764	73	24	6624	276	24	17567	743	24	
						2975			4774	155	31	
						2138			10492			
						355			1689			
						252			355			
			2			3122			69			
			3691			3247			1387			
			70			580						
			1114			979			1742			
						728			500			
						572						
			360	6	60	2821	47	60	518			
			285			1292						
			4052			1563						
TOTAL			24569			39287			46380			41911

Exhibit P-5a, Budget Procurement History and Planning														
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities					Weapon System Type:		P-1 Line Item Nomenclature:							
WBS Cost Elements: Fiscal Years					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 Revisn Avail	RFP Issue Date
Havequick II Mod Kils					Magnavox Magnavox	C/FP C/FP	Warner Robins AFB Warner Robins AFB	Apr-96 Jan-97	Apr-97 Jan-98	250 503	7 7	Yes Yes		
FY96														
FY97														
AN/ARC-220 NOE Communications System					Rockwell International Rockwell International Rockwell International Rockwell International	C/FP Option Option Option	CECOM CECOM CECOM CECOM	Oct-96 Sep-97 Feb-98 Jan-99	Aug-97 Jul-98 Jan-99 Dec-99	73 276 743 512	24 24 24 24	Yes Yes Yes Yes		
FY96														
FY97														
FY98														
FY99														
AN/VR-100 Ground Radio*					Rockwell International Rockwell International	Option Option	CECOM CECOM	Feb-98 Jan-99	Jan-99 Jan-99	155 180	31 30	Yes Yes		
FY98														
FY99														
Maintenance Model Radio*					Rockwell International Rockwell International	Option Option	CECOM CECOM	Oct-96 Jul-97	Aug-97 May-98	6 47	60 60	Yes Yes		
FY96														
FY97														
REMARKS: * Option to the AN/ARC-220 EMD contract.														

[illegible]