ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2003

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0203744A - Aircraft Modifications/Product Improvement Program

COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost		141751	204562	187959	167274	149101	120432	192914	254847	Continuing	Continuing
028	AERIAL COMMON SENSOR (ACS) (TIARA)	14476	44139	103457	141255	114074	8735	8148	11269	Continuing	Continuing
179	CH-47D PRODUCT IMPRV	486	2965	0	0	0	0	0	0	0	3451
430	IMPR CARGO HELICOPTER	17735	3329	14259	2949	980	0	127554	225536	0	431053
504	BLACK HAWK RECAPITALIZATION/MODERNIZATION	69496	109990	70243	23070	14438	13717	17961	18042	15569	365717
508	APACHE 2ND GENERATION FLIR	39558	44139	0	0	0	0	0	0	0	135719
D12	LONGBOW APACHE OPERATIONAL SYSTEMS DEVELOP	0	0	0	0	19609	97980	39251	0	0	156840

A. Mission Description and Budget Item Justification: This PE provides for development of modifications and improvements for the Guardrail Common Sensor/Aerial Common Sensor, the Improved Cargo Helicopter (ICH), the UH-60A/L Black Hawk Recapitalization/Modernization, and the Apache 2nd Generation Forward Looking Infrared(FLIR).

B. Program Change Summary	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2003)	145169	201566	132729	111275
Current Budget (FY 2004/2005 PB)	141751	204562	187959	167274
Total Adjustments	-3418	2996	55230	55999
Congressional program reductions				
Congressional rescissions	-764	-2423		
Congressional increases	99	16000		
Reprogrammings	881	-1187		
SBIR/STTR Transfer	-3634	-4622		
Adjustments to Budget Years		-4772	55230	55999

FY 2004: Guardrail Common Sensor/ACS received $25.1 million for development of a geolocation precision COMINT subsystem; Impr Cargo Helicopter program office realigned $11.0 million from procurement to RDTE for the Initial Operational Test and Evaluation; and the UH-60A/L Black Hawk SLEP/Modernization program office realigned $17.0 million from procurement to RDTE for the qualificaiton of Dual Digital Flight controls and Multifunctional Displays.

FY 2005: Guardrail Common Sensor/ACS received an additional $53.4 million for the geolocation precision COMINT subsystem.

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203744A - Aircraft Modifications/Product Improvement Program**	**028**

COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
028	AERIAL COMMON SENSOR (ACS) (TIARA)	14476	44139	103457	141255	114074	8735	8148	11269	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Aerial Common Sensor (ACS) and the Guardrail Common Sensor (GRCS) are airborne intelligence collection systems required to provide critical support to U.S.-based early entry, forward deployed forces, and to support the Army's seamless intelligence architecture. ACS is the objective force system that will satisfy the Army's critical need for a responsive worldwide, self-deployable, airborne reconnaissance, intelligence, surveillance and target acquisition (RISTA) capability that can immediately begin operations when arriving in theatre. The ACS will merge the current Airborne Reconnaissance Low (ARL) and Guardrail Common Sensor (GRCS) capabilities into a single airborne system capable of providing a rapid response information dominance capability dedicated to the Land Component Commander's need for precision real-time geolocation of the enemy on the objective force battlefield. ACS will be composed of a family of modular sensors mounted on an airborne platform that is capable of operating independently or remotely via SATCOM or line-of-sight datalinks from a ground processor. ACS will be Joint Airborne SIGINT Architecture (JASA)and Unified Cryptologic Architecture (UCA) compliant and be interoperable within the open Network centric C4ISR architecture in order to support all combat and combat support functions through the emerging DOD "global infosphere". The primary mission will be standoff Signals Intelligence (SIGINT) collection, with a secondary mission of stand-off and overflight Imagery Intelligence (IMINT). ACS ground functionality will be an element of the Distributed Common Ground Station-ARMY(DCGS-A). ACS is primarily targeted against threat maneuver forces, logistic areas, rocket and artillery forces, air defense artillery, and command control communications and intelligence nodes (C3I). ACS will satisfy unique Army/Land Force Commander Intelligence, Surveillance and Reconnaissance (ISR), reporting and targeting requirements, and those of the Land Force Component of Joint and Combined Task Forces (JTF and CTF) across the spectrum of Operations.

This project is assessing Horizontal Technology Integration (HTI) candidates. A key consideration is the affordability of these subsystems. The National Security Agency's Defense Cryptologic Program (DCP) provides funding to support enhanced SIGINT capabilities.

FY04/05 funding supports the System Integration (SI) portion of the System Demonstration and Development (SDD) Phase. The SDD phase will conclude the development and design of the Prime Mission Equipment (PME). Aircraft will be purchased and the PME will be integrated and tested on the aircraft. Air Worthiness Release (AWR) studies and testing will be conducted along with initial flight tests.

ACS supports the Objective transition path of the Transformation Campaign Plan.

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Concept Exploration (CE) agreements/Component Advanced Development (CAD) bridge contract to support Milestone process.	2400	0	0	0
Component Advanced Development (CAD) performance specification analysis and source selection.	360	0	0	0
Award and execute ACS CAD contract(s) which will transition virtual system concept and vet it into a system architecture and relevant integration environment; support the MS B process	5204	32991	0	0
System Integration (SI) Phase performance specification analysis and source selection.	0	414	0	0
Complete the prototype efforts required to validate Data Transport Systems performance capabilities.	1000	1650	0	0
Develop an Airborne Tactical Common Data Link (TCDL) for GRCS under a Total Ownership Cost Reduction (TOCR) initiative.	0	1042	0	0
Modeling, Program office, and Decision Review support for entry into CAD.	5512	0	0	0
Modeling, Program office and Milestone B Decision support for entry into System Integration (SI) of SDD Phase.	0	8042	8482	9483
Award and execute contract for System Integration Phase which will integrate technologies developed and demonstrated during the CAD phase	0	0	94975	131772
Totals	14476	44139	103457	141255

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
Defense Cryptologic Program (DCP)	26927	27949	28306	25830	23879	24966	19706	19706	Continuing	Continuing
0305206/DK98 Tactical Reconnaissance	4873	6767	4751	5094	5366	5449	5181	5465	Continuing	Continuing
A02005 Aerial Common Sensor- Aircraft Procurement, Army	0	0	0	0	24151	223876	225870	233871	Continuing	Continuing

FY04-FY05 DCP provides funding for the development of ACS technologies and technologies needed to ensure applicability of ACS in the evolving objective force architecture. Tactical Reconnaissance funds MASINT/IMINT technologies that will be integrated into ACS during SDD Phase.

C. Acquisition Strategy: The Concept Exploration (CE) Phase is complete. Two Component Advanced Development contracts were awarded 3QFY02 on a competitive basis to begin risk reduction efforts. The contractors are required to support the program through a milestone approval of the aircraft and sensor suites. MS B is scheduled 4QFY03, followed by a System Development and Demonstration (SDD) phase. The SDD phase will be a competitive solicitation with contract award scheduled in 1QFY04 and will take program through LUT and IOT&E to MS C Full Rate Production.

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BUDGET ACTIVITY
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0203744A - Aircraft Modifications/Product Improvement Program

PROJECT
028

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Concept Evaluation Agreement	C-FP	Raytheon; Greenville, TX	2785	0		0		0		0	2785	2785
b . Concept Evaluation Agreement	C-FP	Lockheed Martin; Palmdale, CA	3435	0		0		0		0	3435	3435
c . Concept Evaluation Agreement	C-FP	Northrup Grumman, Baltimore, MD	3200	0		0		0		0	3200	3200
d . Data Transport Contract (Includes FY03 TOCR initiative)	SS-CPFF	L3Comm, Salt Lake City, Utah	3000	1042	2Q	0		0		0	4042	4042
e . Omnibus contract	SS-FP	TRW, Sunnyvale, CA.	695	1650	2Q	0		0		0	2345	2345
f . TIBS Installation	C-CPFF	Mutiple	2000	0		0		0		0	2000	2000
g . ACS CAD Contract(s)	C-CPAF	Lockheed Martin, Littleton, CO & Northrup Grumman, Baltimore, MD	5204	32991	1Q	0		0		0	38195	48520
h . ACS SI Contract	C-CPXF	TBD	0	0		94975	2Q	131772	1Q	Continue	Continue	Continue
Subtotal:			20319	35683		94975		131772		Continue	Continue	Continue

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February 2003

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0203744A - Aircraft Modifications/Product Improvement Program

PROJECT
028

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . ACS Operational Performance Model	SS-CPFF	Raytheon System Dev. Marlborough, MA	5020	1000	1Q	1000	1Q	1000	1Q	Continue	Continue	Continue
b . Model Evalution Support		Multiple	2390	1329	1-2Q	1528	1Q	1757	2Q	Continue	Continue	Continue
c . ASARC Support	C-CPFF	CSC, Falls Church, VA	270	135	1-2Q	150	1Q	225	1Q	Continue	Continue	Continue
Subtotal:			7680	2464		2678		2982		Continue	Continue	Continue

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering Support	C-CPFF	CACI Technologies; Chantilly, VA	1000	0		0		0		0	1000	1000
b . Engineering Support	C-CPFF	Multiple	1924	1026	1Q	1180	1Q	1357	1Q	Continue	Continue	Continue
c . AEC Support	C-CPFF	Multiple	260	833	1-2Q	1251	1Q	1266	1Q	Continue	Continue	Continue
d . Analysis and Evaluation of CAD Products	C-CPFF	Multiple	0	1200	1Q	0		0		0	1200	1200

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BUDGET ACTIVITY
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PE NUMBER AND TITLE
0203744A - Aircraft Modifications/Product Improvement Program

PROJECT
028

III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			3184	3059		2431		2623		Continue	Continue	Continue

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management	MIPR	PM, Signals Warfare	1379	1499	1Q	1724	1Q	1982	1Q	Continue	Continue	Continue
b . Matrix Support	MIPR	HQ, CECOM	2180	1434	1Q	1649	1Q	1896	1Q	Continue	Continue	Continue
Subtotal:			3559	2933		3373		3878		Continue	Continue	Continue
Project Total Cost:			34742	44139		103457		141255		Continue	Continue	Continue

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203744A - Aircraft Modifications/Product Improvement Program**	**028**

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Field TIBS Capability	2-4Q							
GRCS upgrade contracts (to include FY 03 TOCR initiative)	1-4Q	1-4Q						
ACS Concept Exploration Agreements	1-2Q							
Decision Review for ACS Component Advanced Development (CAD)	1Q							
ACS CAD Contract(s)	3-4Q	1-3Q						
Conduct CAD Contractor Tests		3Q						
ACS Milestone B Decision		4Q						
ACS System Integration Phase Contract			2-4Q	1-4Q	1-2Q			
Conduct SI DT&E					1-2Q			
ACS System Demonstration (SD) Phase Decision Review					3Q			
ACS SD Phase Contract Option					3-4Q	1-4Q	1-4Q	1-2Q
ACS SD DT&E						3-4Q		
ACS LUT							1-2Q	
IOT&E								1-2Q
ACS MS C Full Rate Production Decision								2Q
FUE								4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203744A - Aircraft Modifications/Product Improvement Program**	**430**

COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
430	IMPR CARGO HELICOPTER	17735	3329	14259	2949	980	0	127554	225536	0	431053

A. Mission Description and Budget Item Justification: The CH-47F, Improved Cargo Helicopter (ICH), is a recapitalization program to extend the useful life of the CH-47D Cargo helicopter. This funding will assure heavy lift capability into the 21st century. This program awarded a contract for Engineering Manufacturing Development (EMD) which includes decreasing operation and support costs through vibration reduction/airframe stiffening, incorporating a new electronics/architecture system for compatibility with the digital battlefield and structural modifications as necessary to extend the life of the airframe. This program is the basis for establishing remanufacture, modernization, and upgrade program to meet the readiness needs of the future for heavy lift capability. The CH-47F (ICH) Program includes testing of the two engineering development models plus component testing for Live Fire. Developmental improvements to the T55-L-714A engines are funded as part of a shared, cooperative effort with the Component Improvement Program Office. This system supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Continue Engineering Manufacture Development (EMD).	13722	0	0	0
Provide product technical support	0	2632	4400	0
Continue Contract Live Fire Test & Evaluation	0	97	0	0
Continue in-house and program management administration.	326	250	300	0
Continue Government Test & Evaluation.	3687	350	4800	0
Test Analysis	0	0	1500	0
714B Engine	0	0	3259	2949
Totals	17735	3329	14259	2949

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
APA, SSN AA0252, CH-47 CARGO HELICOPTER MODS (MYP) (Including Adv Proc)	267848	442632	516040	545869	606388	515247	531744	557449	4917968	8901185

C. Acquisition Strategy: The CH-47F (ICH) will recapitalize an aging fleet and bridge the gap until the development of a follow-on aircraft. This will be achieved in a cost effective manner as the program will be based on a four-pronged approach which will include rebuilding the airframe, recapitalizing dynamic components, improving mission capability, and reducing vibrations to provide for long term O&S cost reductions. There will be two Low Rate Initial Production (LRIP) lots to ramp up to full rate production.

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7 - Operational system development

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0203744A - Aircraft Modifications/Product Improvement Program

PROJECT
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . EMD	CPIF	Various	117221	0		0		0		0	117221	117098
b . TOCR	CPIF	Various	1600	0		0		0		0	1600	1600
c . Technical Support	CPFF	Various	0	2632	1Q	4400	1Q	0		Continue	7032	0
d . 714B Engine	CPIF	Various	0	0		3259	1-2Q	2949	1-2Q	Continue	6208	0
Subtotal:			118821	2632		7659		2949		Continue	132061	118698

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PMO/OGA	Reimbursable	Various government	11814	250	2-3Q	300	2-3Q	0		0	12364	0
Subtotal:			11814	250		300		0		0	12364	0

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0203744A - Aircraft Modifications/Product Improvement Program

PROJECT
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III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . DT/OT	Reimbursable	Various government	9071	350	1Q	4800	1Q	0		0	14221	0
b . Live Fire Test & Eval	Reimbursable	Contract/Govt	6268	97	1Q	0		0		0	6365	0
c . Live Fire Test & Eval	Contract		50	0		0		0		0	50	0
d . Test Analysis	Reimbursable	Various Government	0	0		1500	2-3Q	0		0	1500	0
Subtotal:			15389	447		6300		0		0	22136	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . CAMBER/Westar	SS/FP	Huntsville, AL	3901	0		0		0		0	3901	3901
Subtotal:			3901	0		0		0		0	3901	3901

Project Total Cost:			149925	3329		14259		2949		Continue	170462	122599

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203744A - Aircraft Modifications/Product Improvement Program**	**504**

COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
504	BLACK HAWK RECAPITALIZATION/MODERNIZATION	69496	109990	70243	23070	14438	13717	17961	18042	15569	365717

A. Mission Description and Budget Item Justification: The UH-60 Black Hawk will serve as the Army's utility helicopter in the Objective Force. It is used for air assault, general support, aeromedical evacuation (MEDEVAC), and command and control in active and reserve component theater, corps, division, and Table of Distribution and Allowances (TDA) units. The UH-60A entered service in fiscal year 1978 (FY78), and the newer model UH-60L in FY89. The Army continues to procure UH-60L helicopters today. The Army has established a recapitalization goal for its systems of maintaining the fleet's average age at the design half-life or less. The UH-60 was designed for a 20 year service life. The oldest UH-60As are now over 23 years old, and the average age of the UH-60A fleet is 18 years old. The increased operational tempo, coupled with the technological age of the basic airframe, components, and systems, is having an adverse impact on the operational readiness (OR) and operating and support (O&S) costs of the over 1500 aircraft UH-60 fleet. In addition, the UH-60A/L helicopters lack the necessary digital avionics architecture to meet current and future Army and Joint Service interoperability communication requirements. The Army has determined that a recapitalization/upgrade program is required to address these issues. An Operational Requirements Document (ORD) for recapitalization of the Black Hawk fleet was approved by the Joint Requirements Oversight Council in March, 2001. The ORD describes an evolutionary, block approach to transform the utility helicopter force to one that is more deployable, responsive, and less expensive to operate. Block 1 recapitalizes the oldest UH-60A Black Hawks to the UH-60M configuration. The UH-60M selected upgrade includes airframe service life extension, structural improvements, upgrade of the propulsion system (UH-60A T700-GE-700 engine and drive train to UH-60L T700-GE-701D engine and drive train), and a digital cockpit. The UH-60M provides a common platform for the modernized air ambulance MEDEVAC mission equipment package (MEP). RDTE funds are required to develop, integrate, test and qualify the UH-60M configuration.

FY06-FY09 funding includes Pre-Planned Product Improvements (P3I) which are essential for the future UH-60M fleet, one of four helicopter airframes in the Army's objective force. P3I funding will integrate horizontal and vertical technology such as Joint Tactical Radio System (JTRS) as it evolves which is essential for the UH-60M. P3I improvements will ensure that the UH-60M fleet remains effective on the digital battlefield through upgrades, weight reductions, and performance enhancements. This system supports the Legacy-to-Objective (LO) transition path of the Transformation Campaign Plan (TCP).
(NOTE: The UH-60M contractor recently submitted an Estimate at Completion (EAC) for the Integration and Qualification contract that indicates the program may not be executable as currently budgeted. The proposed solution would be to take appropriate actions to realign UH-60M funds from APA to RDT&E for FY04; and to make adjustments to FY05 through FY07 prior to the FY05 budget submission.)

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Airframe, avionics and powerplant development. Completed airframe Critical Design Review (CDR).	15424	0	0	0
Continue airframe, avionics and powerplant development based on finalized configuration as a result of airframe CDR. Conduct System Preliminary Design Review and Critical Design Review.	0	16313	22290	3217
Software Development - includes failure modes and effects criticality analysis; software design descriptions; qualification testing of mission critical computer resources; update software requirements specifications and multiplex interface control documents; and prepare software design descriptions.	7056	12489	8339	4428
Continue Producibility Engineering and Planning (PEP) as well as manufacturing planning and control.	6101	7099	5020	1385
Prototype build and delivery to support Development Testing (DT).	12901	24695	4633	4445
Test planning to include approval of Test & Evaluation Master Plan (FY2002).	11311	1409	0	0
Testing (Conduct flight testing, EME testing and ground testing).	0	30051	26156	5526
Preparation of training documentation for Logistics Demonstration Familarization Course, Government Test Pilot Familiarization Course and Test Data Collection Training Course.	2264	3245	2505	0
Conduct training course to support Operational Test (OT).	0	201	527	1371
Maintain Continuous Acquisition and Life Cycle Support (CALS)/Contractor Integrated Technical Information Service (CITIS) and deliver Interface Control Documents (ICD's).	417	493	477	432
Depot Study/Prove-out (Study FY2002-2004 and Prove-out FY2005).	494	832	296	2266
IMD-HUMS demonstration program.	13528	13163	0	0
Totals	69496	109990	70243	23070

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
AA0492 UH-60 MODS	59945	51570	136496	230756	426572	426412	652830	662391	Continuing	Continuing

C. Acquisition Strategy: The UH-60 Black Hawk will serve as the Army's utility helicopter in the Objective Force. The recapitalization/upgrade of the legacy UH-60 fleet for the interim/objective force will be accomplished using an evolutionary, block approach to transform the system. The Block 1 program will selectively upgrade the UH-60A/L fleet to the UH-60M configuration. This includes airframe structural improvements, a propulsion upgrade, and a digital cockpit that will meet lift, range, survivability, and interoperability requirements while decreasing O&S costs. This will extend the useful life of these aircraft another 20 years, or through the FY25 time frame. These improvements will be accomplished through integration of existing technologies, by upgrading the UH-60A propulsion system to that currently in the UH-60L, and by adding the UH-60Q advanced MEDEVAC medical equipment package (MEP) to the air ambulance fleet. This program addresses current UH-60 fleet aging problems such as decreasing operational readiness (OR) and increasing O&S costs, including all top-ten cost drivers, and provides a common, modernized platform for the UH-60 utility and MEDEVAC fleet of the future. The program will be executed over four phases: pre-System Development/Demonstration Phase (FY00-01), System Development/Demonstration Phase (FY01-06), Production/Readiness Phase (FY04-23), and Operations and Sustainment Phase (FY05-FY44).

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Design, Integration & Qualification Contract	SS/CPAF	Sikorsky Aircraft Co 30 Moffitt Street Stratford, CT 06601	81749	86740	2Q	59765	2Q	12764	2Q	73270	314288	0
b . Development Support - Organic	MIPR	UH PMO/matrix	3676	3636	1-4Q	1699	1-4Q	1473	1-4Q	1482	8290	0
c . Development Support - Contractor	C/FP	Support Contractors	4064	3203	1-3Q	587	1-3Q	663	1-3Q	674	5127	0
d . IMD-HUMS Development Support - Organic	MIPR	Aviation Applied Tech Directorate (AATD) Matrix	4364	1113	1-4Q	0		0		0	1113	0
e . IMD-HUMS Development Support - Contractor	C/FP	Goodrich, 100 Panton Road, Vergennes, Vermont 05491	9164	12050	3Q	0		0		0	12050	0
Subtotal:			103017	106742		62051		14900		75426	340868	0

Remarks: IMD-HUMS demonstration program was funded in FY02 and is separate from the UH-60M program.

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II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Cost Analysis Support	MIPR	AMCOM Matrix	417	81	1-4Q	212	1-4Q	212	1-4Q	212	717	0
b . Logistics Analysis Support - Organic	MIPR	AMCOM Matrix	0	0	1-4Q	332	1-4Q	2374	1-4Q	1566	4272	0
c . Logistics Analysis Support - Support Contractor	MIPR	Support Contractor	0	0	1-3Q	393	1-3Q	392	1-3Q	402	1187	0
Subtotal:			417	81		937		2978		2180	6176	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Test Planning, Test and Evaluation	MIPR	Various Activities	1965	1656	1-4Q	5175	1-4Q	3071	1-4Q	225	10127	0
b . Test Planning, Test and Evaluation	MIPR	Various Activities	0	0	1-4Q	262	1-4Q	265	1-4Q	0	527	0
Subtotal:			1965	1656		5437		3336		225	10654	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0203744A - Aircraft Modifications/Product Improvement Program

PROJECT
504

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PM Support - Organic	MIPR	UH PMO/matrix	1784	1265	1-4Q	900	1-4Q	922	1-4Q	944	4031	0
b . PM Support - Contract	C/FP	O2K Contractor	618	246	1-3Q	918	1-3Q	934	1-3Q	952	3050	0
Subtotal:			2402	1511		1818		1856		1896	7081	0
Project Total Cost:			107801	109990		70243		23070		79727	364779	0

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY
7 - Operational system development

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PROJECT
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Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Depot Partnership Study (UH-60M)	1-4Q	1-4Q	1Q					
Finish COSSI Effort (UH-60M)	2Q							
IMD-HUMS: Initiate demonstration program	3Q							
IMD-HUMS: Completion of demonstration program				3Q				
System Critical Design Review (UH-60M)		3Q						
Test article delivery for testing (UH-60M)		4Q	1Q					
OT preparation and conduct				1-4Q				
Milestone C (UH-60M)			2Q					
LRIP Lot 1 Contract Award (UH-60M)			3Q					
LRIP Lot 2 Contract Award (UH-60M)				2Q				
Full rate production IPR (UH-60M)					2Q			
First Unit Equipped (FUE) UH-60M					4Q			
Pre-Planned Product Improvements (P3I)					2-4Q	1-4Q	1-4Q	1-4Q
Closeout of Integration and Qualification					2Q			
Depot Partnership Prove-out (UH-60M)			3-4Q	1-4Q	1-4Q			