ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non Line of Sight Cannon**	**F58**

COST (In Thousands)		FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F58	NON LINE OF SIGHT CANNON	0	260495	497643	459084	285095	104452	32388	0	1639157

A. Mission Description and Budget Item Justification: Future Combat Systems (FCS) will operate as a system of systems (SoS) that will network existing systems, systems already under development, and new systems to be developed to meet the needs of the Unit of Action (UA). The network will enable improved intelligence, surveillance and reconnaissance, battle command, real time sensor-shooter linkages, and increased synergy between echelons and within small units. It will also enable the UA to connect to the Unit of Employment (UE), joining capabilities, and national assets making these capabilities available to the small units of the UA.

FCS enables the networked UA to develop the situation in and out of contact, set conditions, maneuver to positions of advantage to close with and destroy the enemy through standoff attack and combat assault as articulated in the Future Force UA Operations and Organizational (O&O) plan.

The FCS program is contained in two Program Elements (PEs): Non-Line of Sight - Cannon (NLOS-C) and Armored Systems Modernization (ASM). PE NLOS-C contains the development effort associated with NLOS-C unique work and all Manned Ground Vehicle (MGV) common components. PE ASM contains the development effort for the balance of the MGVs, Unmanned Ground Vehicles (UGVs), Unmanned Air Vehicle (UAVs), Non-Line of Sight - Launch System (NLOS-LS), and SoS development efforts including the network, integration, and software.

Army transformation is grounded in the operational framework of joint doctrine and the concepts for future joint and combined operations. Transforming to the Future Force and developing the FCS is the Army's number one priority. The FCS family of systems (FoS) is being designed with the joint fight in mind.

FCS are comprised of a family of advanced, networked air and ground based maneuver, maneuver support, and sustainment systems that will include manned and unmanned platforms which are networked via a Command, Control, Computers, Communication, Intelligence, Surveillance and Reconnaissance (C4ISR) architecture, including networked communications, network operations, sensors, battle command systems, and manned and unmanned reconnaissance and surveillance capabilities that will enable improved situational understanding and operations at a level of synchronization heretofore unachievable.

This PE comprises a portion of the System Development and Demonstration (SDD) funding requirement for the FCS program.

The R-Forms will now be based on the WBS program management structure, which will provide Congress the same program baseline data for budget justification as the Program Manager uses for program management. The two Program Elements (PE) and fourteen projects reflect the WBS reporting structure that will be provided to Congress quarterly

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A brief description of the NLOS-C project is networked, sustained, extended-range (30km) cannon fires for precision attack of point and area targets in support of the FCS UA.

The Army is executing the FCS program to achieve the earliest possible fielding of the first FCS-equipped UA. Within the FCS appropriation, which includes the separate PE for NLOS-C, the Army plan is to deliver NLOS-C and other MGV pre-production systems for limited user and developmental testing in 2007 and again in 2008. Fielding of the Initial Operational Capability (IOC) of the UA will be in place by the end of calendar year 2010.

The Army established NLOS-C as the lead MGV of the FCS FoS. Two aspects of the FCS program are critical in understanding the Army's acquisition approach for FCS development. Firstly, the FCS program focus is on providing combat capability at the unit level. This program is not about systems operating in isolation. Key to this approach is the synergy achieved by integrated development and acquisition of sensors, unmanned vehicles, airframes, and combat vehicles including NLOS-C working together and connected by a network, all operated by skilled soldiers. We cannot separate individual variants from the SoS concept because this would decrease synergy and effectiveness of the UA and places soldiers and their combat systems at a lethality and survivability disadvantage. Secondly, commonality of hardware and software within the FCS program is a priority action needed to reduce the Lifecycle costs and logistical footprint of the UA.

This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Non-Line of Sight - Cannon (NLOS-C) Unique Mission Equipment	0	36400	93686
Ground Sensors	0	9800	129252
Communication Systems	0	19600	43221
Crew Stations	0	17743	27149
Vetronics	0	17743	27149
Computers	0	71700	52384
Survivability Suites	0	17743	27149
Tractions and Suspensions	0	17743	27149
Powertrain	0	17743	27149
Structure	0	17743	27149
Vehicle Utility Systems	0	16537	16206
Common Software	0	0	0
Totals	0	260495	497643

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B. Program Change Summary	FY 2003	FY 2004	FY 2005
Previous President's Budget	0	0	0
Current Budget (FY 2005 PB)	0	260495	497643
Total Adjustments	0	260495	497643
Congressional program reductions			
Congressional rescissions			
Congressional increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years		260495	497643

Creation of a new Program Element (PE) 0604647A, Project F58, as required by Congress.

C. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	ToCompl	TotalCost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S&T Activities for Future Spirals	162000	0	0	0	0	0	0	0	162000

C. Other Program Funding Summary (continued)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009		
604645A F59 Common Components	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight – Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
604645A F71 Joint Military Intel Program (JMIP)	0	0	0	0	0	0	0	0	0
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

D. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved Operational Requirements Document (ORD) and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
5 - System Development and Demonstration

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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 . Non-Line of Sight – Cannon (NLOS-C) Unique Mission Equipment	OTA	The Boeing Company - Seattle, Washington - See remark 1	0	0		36400	1-3Q	93686	1-3Q	0	130086	0
b . Ground Sensors	OTA	The Boeing Company - Seattle, Washington - See remark 3	0	0		9800	1-3Q	129252	1-3Q	0	139052	0
c . Communication Systems	OTA	The Boeing Company - Seattle, Washington - See remark 4	0	0		19600	1-3Q	43221	1-3Q	0	62821	0
d . Crew Stations	OTA	The Boeing Company - Seattle, Washington - See remark 1 & 2	0	0		17743	1-3Q	27149	1-3Q	0	44892	0
e . Vetronics	OTA	The Boeing Company - Seattle, Washington - See remark 1 & 2	0	0		17743	1-3Q	27149	1-3Q	0	44892	0
f . Computers	OTA	The Boeing Company - Seattle, Washington - See remark 5	0	0		71700	1-3Q	52384	1-3Q	0	124084	0
g . Survivability Suites	OTA	The Boeing Company - Seattle, Washington - See remark 1 & 2	0	0		17743	1-3Q	27149	1-3Q	0	44892	0

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BUDGET ACTIVITY
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I. Product Development (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
h . Tractions and Suspensions	OTA	The Boeing Company - Seattle, Washington - See remark 1 & 2	0	0		17743	1-3Q	27149	1-3Q	0	44892	0
i . Powertrain	OTA	The Boeing Company - Seattle, Washington - See remark 1 & 2	0	0		17743	1-3Q	27149	1-3Q	0	44892	0
j . Structure	OTA	The Boeing Company - Seattle, Washington - See remark 1 & 2	0	0		17743	1-3Q	27149	1-3Q	0	44892	0
k . Vehicle Utility Systems	OTA	The Boeing Company - Seattle, Washington - See remark 1 & 2	0	0		16537	1-3Q	16206	1-3Q	0	32743	0
l . Common Software	OTA	The Boeing Company - Seattle, Washington - See remark 1 & 2 see remark 6	0	0		0		0		0	0	0
Subtotal:			0	0		260495		497643		0	758138	0

Remarks: Remark 1 - Subcontractor: United Defense Limited Partnership - Minneapolis, MN
Remark 2 - Subcontractor: General Dynamics Land Systems - Sterling Heights, MI
Remark 3 - Subcontractor: Raytheon Network Centric Systems, Plano, TX
Remark 4 - Subcontractor: BAE Systems, CNI - Wayne, NJ
Remark 5 - Subcontractor: General Dynamics Advanced Information Systems - Bloomington, MN
Remark 6 - the NLOS-C (Common Vehicle Utility Subsystem) is now funded in the FCS Program Element (PE 0604645A) under project 59, Common Components.

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
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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 . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Remarks: * All Government Support costs are included in PE 0604645A Project F61, Government Support Costs.

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 . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Remarks: * All Government System Test & Evaluation are included in PE 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in PE 0604645A, Project F66, System of Systems Test & Evaluation.

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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 . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Remarks: * All Management Services costs are included in PE 0604645A, Project F61, Government Support Costs.

Project Total Cost:			0	0		260495		497643		0	758138	0

Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY
5 - System Development and Demonstration

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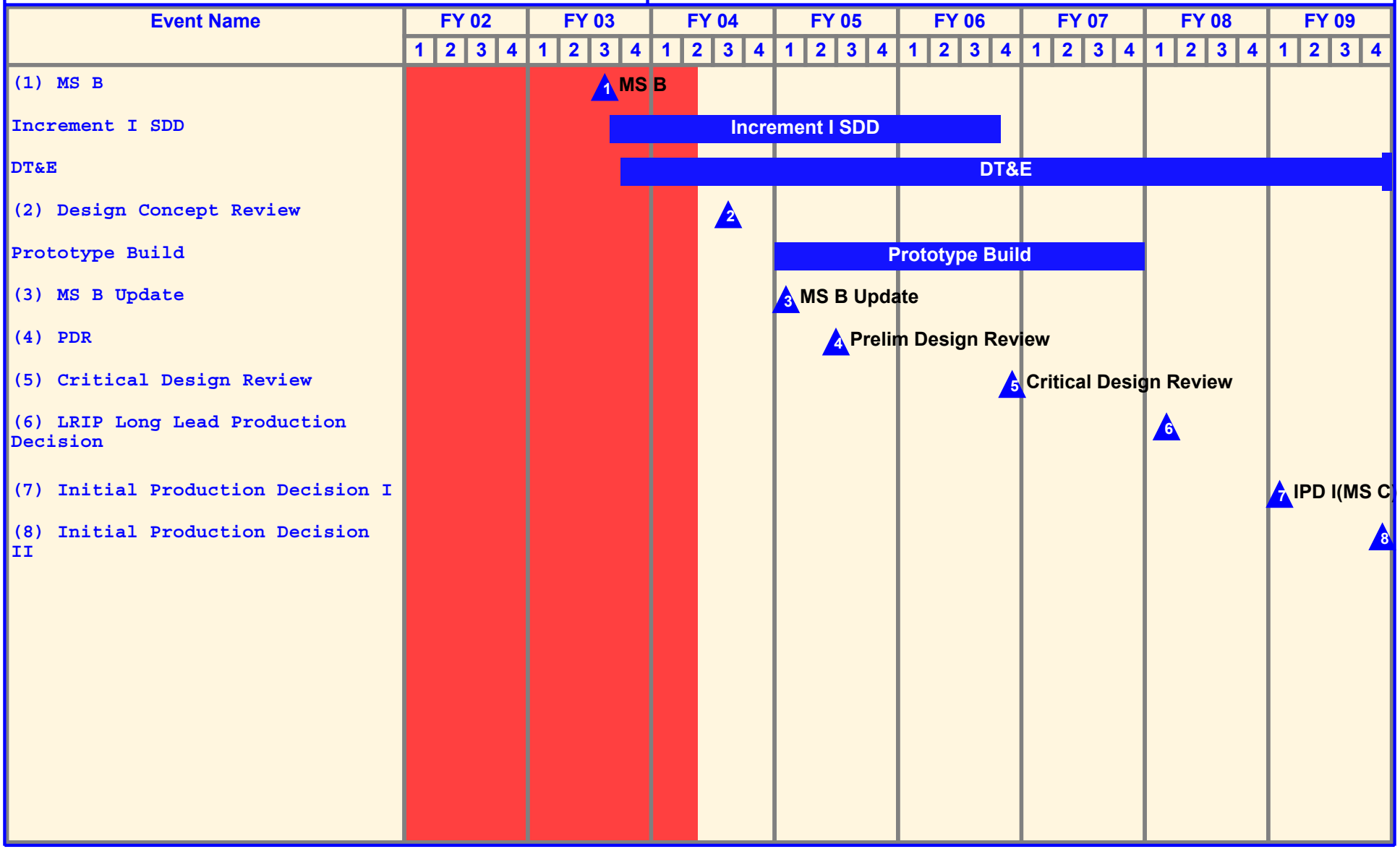

Schedule Detail (R4a Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non Line of Sight Cannon**	**F58**

Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirement Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Requirements MS B Update			1Q				
Long Lead for Prototpyes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead Production Decisin						1Q	
Network Maturity Milestone						4Q	
Initial Production Decision1							1Q
Initial Production Decision2							4Q