ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

COST (In Thousands)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
FC1	FCS MANNED GRD VEHICLES & COMMON GRD VEHICLE			696333	772458	791186	361201	215665	103885	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat Systems, Brigade Combat Team (FCS BCT) is a joint system of systems (SoS) consisting of an advanced network integrated within of a series of manned/unmanned systems that via electronic architecture enables unprecedented joint connectivity, situational awareness/understanding, and synchronized operations. It will enhance the Army's most formidable weapon - the Warfighter. FCS provides unprecedented capability to see first, understand first and decisively defeat the enemy on the 21st Century battlefield. This FCS BCT SoS Force will be adaptable - from traditional to irregular warfare - conducted in various complex environments (rural/urban). FCS is the Army's Modernization Strategy and as such, is the #1 acquisition program for the Army.

This project supports development for a variety of Manned Ground Vehicles (MGVs) (exclusive of Non-Line of Sight - Cannon (NLOS-C) specific mission equipment) and includes technology maturation, systems engineering, subsystem/variant unique mission equipment (i.e. armament/fire control), integration/assembly, and prototype build. Also includes following common MGV subsystem development, (to include NLOS-C subsystems): armor, suspension, structures, defensive armament system, signature management, NBC, vetronics, power and energy (includes hybrid electric drive), auxiliary systems and hit avoidance system. Project specified MGVs include: Infantry Carrier Vehicle (ICV), Mounted Combat System (MCS), Non-Line of Sight Mortar (NLOS-M), Command and Control Vehicle (C2V), Recon and Surveillance Vehicle (RSV), FCS Recovery and Maintenance Vehicle (FMRV), and Medical Vehicle (MV).

The ICV provides mobility for 11 personnel (two man crew and nine-man infantry squad) on the battlefield. Located within the infantry platoons and companies within the CA battalions. Delivers the dismounted force to the close battle and supports the squad by providing self defense and supporting fires. The ICV carries the majority of equipment freeing the individual Soldier from being burdened with equipment.

The MV provides advanced trauma life support within 1 hour to critically injured Soldiers. The MV serves as the primary medical system within the BCT and will have two mission modules (Evacuation and Treatment). The time-sensitive nature of treating critically injured soldiers requires an immediately responsive force health protection system with an expedient field evacuation system. The MV-Evacuation (MV-E) vehicle allows trauma specialists, maneuvering with combat forces, to be closer to the casualty's point-of-injury and is used for casualty evacuation. The MV-Treatment (MV-T) vehicle enhances the ability to provide Advanced Trauma Management (ATM)/Advanced Trauma Life Support (ATLS) treatments and procedures forward for more rapid casualty interventions and clearance of the battlespace. Both MVs will be capable of conducting medical procedures and treatments using installed networked telemedicine interfaces.

The FRMV is the recovery and maintenance system for employment in the FCS BCT. The Brigade Support Battalion (BSB) maintainers will be organized into Combat Repair Teams (CRT) supported by 10 FRMVs. These CRTs will perform in-depth BDAR and unscheduled field-level maintenance requirements beyond the capabilities of the crew to include lift, welding, cutting, and heating of materials.

The NLOS-M is the short-to-mid-range indirect fire support component within the FCS BCT. It will be organic to and provide networked, responsive and sustained indirect fire support to the Combined Arms Maneuver Battalion in the FCS BCT. It fires a suite of 120mm munitions that include special purpose capabilities to provide a variety of fires on

demand including precision guided munitions such as precision guided mortar munitions (PGMM). NLOS-M will provide close support and destructive fires for tactical standoff engagement during both offensive and defensive operations in concert with line-of-sight, beyond-line-of-sight, other NLOS, external and joint capabilities in combat scenarios spanning the spectrum of ground combat and threats.

The RSV features a suite of advanced sensors to detect, locate, track, classify and automatically identify targets from increased standoff ranges under all climatic conditions, day or night. Included in this suite are a mast-mounted, long-range electro-optic infrared sensor, an emitter mapping sensor for radio frequency intercept and direction finding, remote chemical detection, and a multifunction RF sensor. The RSV carries 6 Soldiers (2 common crew and 4 scouts).

The C2V provides the tools for commanders and staffs to command and control various elements of the FCS BCT. Via mission workstations and a common warfighter-machine interface, C2Vs contain the interfaces that allow commanders and their staffs to perform tasks such as fusing friendly, enemy, civilian, weather and terrain situations and distributing this information via a common operating picture. The C2V carries 6 Soldiers (2 common crew and 4 mission crew).

The MCS provides offensive maneuver to close with and destroy enemy forces. The MCS is capable of conducting mounted operations, mounted operations supported by dismounted infantry, and supporting dismounted infantry operations in all environments. The MCS delivers precision fires at a rapid rate to destroy multiple targets at standoff ranges quickly and complements the fires of other systems in the FCS BCT. It is highly mobile and maneuvers out of contact to positions of advantage. It is capable of providing direct support to the dismounted infantry in an assault, defeating bunkers, and breeching walls during the tactical assault. The MCS can engage targets from Beyond Line of Sight (BLOS). The BLOS capability allows the FBCT the ability to stand-off from the enemy's lethality envelope, allowing the MCS to be more lethal, at greater ranges.

The MGV Common Subsystems project includes developmental and engineering effort for the detailed design and integration of common components and sub-systems into a common chassis configuration applicable to the entire fleet of MGV combat vehicles. Major subsytems included in the Common Chassis design include a Hit Avoidance System (HAS), Propulsion (Hybrid Electric Drive with a High Power Density Diesel Engine), active dampening suspension with band track, Common Crew Station (CCS), Close Combat Armament System (CCAS), hull structure and armor, chassis auxiliary, Vehicle Electronics and Power Distribution (Vetronics). The focus of this effort is on a producible, reliable, sustainable, maintainable, and affordable common chassis design.

Government GFX Mobility Shaker Table Rent - To test the Mounted Combat System Mobility Firing Fixture on the TARDEC Shaker Table

Accomplishments/Planned Program:	FY 2006	FY 2007	FY 2008	FY 2009
CONTRACTOR INFANTRY CARRIER VEHICLE (ICV)-FY08-Conduct ICV Preliminary Design Review. Initiate Detailed Design. Testing of slip ring brass boards. Deliver Ammo Feed System. Deliver Medium Caliber Gun System. Deliver Turret Angular Position Sensor. FY09 Procurement: ICV Component Parts, Slip Ring, MK 44 Gun System, 30/40 mm Feed System, Turret Drive System. Conduct ICV CDR. Software: Build 2 ongoing, Build 3 LCO. Modeling and Simulation: Build 3 FSE available from MS&I.System Integration Lab: Fabricate Firing Turret Test Stand. Dry Fire in SIL, initial firing from Turret Test Stand at contractor test site. Receive ICS, sensors, WIN-T JTRS. Fabricate Hulls and begin assembly and integration.			26186	29735
CONTRACTOR MOUNTED COMBAT SYSTEMS (MCS) FY08-09 - Turret Based Motion Simulator Dynamic Testing of Firing Fixture Turret at TARDEC. Improve subsystem reliability by conducting Firing Fixture Testing, Firing Test Rig Testing, Sympathetic Detonation Mitigation, Ammunition Data Link for use with BLOS Munitions, Dynamic Muzzle Reference Sensor, Advanced Fire Inhibit			92815	101369

System (AFIS), High Voltage Electric Gun Turret Drive (EGTD),Ammunition Handling System (AHS). Preliminary Design Review (PDR) in the 3rd quarter of FY08. Complete MCS 120mm Firing Fixture (FF) and Firing Test Rig (FTR) testing. Critical Design Review (CDR) in the 3rd quarter of FY 09. Software: Build 2 ongoing, Build 3 LCO. Modeling and Simulation: Build 3 FSE available from MS&I. System Integration Lab: SW/HW Integration (Phase 1 - Software Emulator Drop, Phase 2 - FSE Build 3 available from MS&I). Prototype #1- #6: Common Hardware Available (PRP, VET, SUS, Aux, NBC, SGM, CCS, CMS, STR, ARM). Prototype #2 - #6: C4ISR Hardware Available (ANS-GPS/INS, ICS, ANS NAV, Sensor and Communication suites). Technical Data Package completion. Begin prototypes turret and hull fabrication & assembly.				
CONTRACTOR NLOS-M - FY08- Preliminary Design Review. Modeling & Simulation Build 2 IV2. Mortar Tube & Breech Incr 1 Configuration Available for Mortar Firing Platform Tests. Firing Platform Tests at Camp Ripley Complete. Ship Firing Platform to Yuma Proving Grounds, Yuma AZ. Slip Ring CMP Tests Complete. FY09 CDR Complete in FY09. Turret structure detail design complete. Primary Vehicle Ammunition Handling complete.Software: Build 2 ongoing, Build 3 LCO. NLOS-M FP first shot (YPG). Prototype #1 Common hardware available.			34854	46380
CONTRACTOR COMMAND & CONTROL VEHICLE (C2V) - FY08- Conduct C2V Preliminary Design Review. Conduct C2V installed performance component maturation Phase II Testing at EPG. Develop critical design for C2V Mission Work Station / Controls. C2V simulation delivery to SoSIL (IV2).Begin SIL I&T Phase I of common/C4ISR equipment in C2V. FY09 Conduct Critcal Design Review: MWS Hardware Development (MWS Brassboard and Prototype), Topdeck Integration CMP Phase II Test Report. Software Build 2 initial drop for system integration. Software Build 3 LCO. System Integration Lab Phase 1 SW/HW Integration. Latest Common/C4ISR HW/SW Release. Modeling and Simulation Build 3 FSE available from MS&I.Prototype #1 fabrication.			23109	42058
CONTRACTOR RECONNAISSANCE & SURVEILLANCE VEHICLE (RSV) - FY08 - Conduct RSV Preliminary Design Review. Initiate RSV Detailed Design. RSV Simulation Delivery to SoSIL (IV2). Release RSV System/Subsystem Design Document. Complete RSV Hardware Schematic Models/Diagrams. Complete RSV Requirements Compliance Assessment. Document RSV Human Factors Engineering/MANPRINT Report. Complete RSV Installed Performance and Roof-Top Sensor De-Confliction Studies. Order all Long-Lead Materials.FY09 -Conduct RSV Critical Design Review. Complete RSV first prototype fabrication. Detail design requirement. Software Build 2 ongoing, Software Build 3 LCO.			23447	40065
CONTRACTOR FCS RECOVERY & MAINTENANCE VEHICLE(FRMV)- FY08- Conduct towing and crane subsystem maturation tests. Mission subsystem component deliveries. Conduct FRMV PDR. Initiate Detailed Design. FY09- CDR Complete. Fabricate Crane Test Fixture and Conduct Crane Testing. Software: Build 2 ongoing, Build 3 LCO. Procurement: Raw material procurement, Welder, cutter & Heating Equipment. Modeling and Simulation: Build 3 FSE from MS&I, begin ISM update. Integration Test Stand (Component and Subsystem Testing) - Crane Test at SIL. Begin prototype integration. Fabricate Hull for Prototype #1 and begin prototype #2.			19770	29147
CONTRACTOR MEDICAL VEHICLE (MV) - FY08-Install Litter Lift System in surrogate platform and test. Conduct MV Preliminary Design Review (PDR). Initiate detailed design activities.SOSIL SIM IV 2 Model updated. FY09- Conduct MV CDR. Software: Build 1 integration complete, Build 2 ongoing, Build 3 LCO. Modeling and Simulation: Build 3 ongoing. Plan MV-E & MV-T prototype fabrication.			12154	13581
CONTRACTOR COMMON SUBSYSTEMS - FY08 - Complete ATR Fabrication. All MGV Common subsystems will be ready to go into their detailed design following subsystem PDRs leading to a Common Chassis PDR. FY09 - All MGV Common subsystems completing their detailed design following subsystem CDRs leading to a Common Chassis CDR. Complete ATR Testing. Finalize Armor Recipes for Variants. Armor Component Maturation: Mine Blast / Add-on Armor complete. Armor PO issued. Software: Build 2 ongoing,			463000	469123

Build 3 RBR and LCO. Modeling & Simulation: Build 2 developed and tested, Build 3 initiated (FSE from MS&I). Integration and Verification: begin SEIT SIL integration and test. NBC SIL IV2 complete with NBC IV2 complete, begin SEIT SIL integration and test. Hull raw material available, procure appendages and first hull structure material available. Hit Avoidance System (HAS) detail design analysis and assessment complete. HAS Controller and Hit Avoidance Countermeasure Controller software Build 2 ongoing. MGV Active Protection System hardware/software Integration and verification begins. Short Range APS integration and verification completed and prototypes delivered. The common propulsion system hardware (High Density Diesel Engine, Generator, Traction Drive System, etc) is available for early prototypes. Fabricated and assembled 5 common chassis in FY08 and 3 common chassis in FY09.				
GOVERNMENT GFX - ACTIVE SYSTEM (APS) Consists of Government Support Subject Matter Experts (SMEs) to assist LSI in development of APS.			998	1000
Total			696333	772458

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)				
Current BES/President's Budget (FY 2008/2009)			696333	772458
Total Adjustments			696333	772458
Congressional Program Reductions				
Congressional Recissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			696333	772458

Change Summary Explanation: Funding - FY 2008/2009: Pursuant to National Defense Authorization Act for Fiscal Year 2006 - Section 214: Separate Program Elements for Significant Systems Development and Demonstration Projects for Armored Systems Modernization Program, the PM FCS (BCT) established this Program Element (0604660A Project FC1) for Manned Ground Vehicles SDD efforts.

This budget request is a continuation of the previous SDD efforts funded in FY07 under Program Element 0604645A Project F57; therefore, this budget request should not be construed as a new start program nor should it be constrained by "new start" program requirements and funding allocation (i.e. CRA) restrictions.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components			696333	772458	791186	361201	215665	103885	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management			1589466	1407410	1888349	1929853	1299062	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms			41164	34220	14398	9301	4587	1344	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles			90667	96666	65206	43912	27038	3603	Continuing	Continuing
0604664A FCS Unattended Ground Sensors			10999	12942	19103	16874			Continuing	Continuing
0604665A FCS Network Hardware & Software			678781	536387	336471	367894	292770	170602	Continuing	Continuing
0604646A Non Line of Sight - Launch System	216668	320650	253410	199064	40329	6000			Continuing	Continuing
0604647A Non Line of Sight _ Cannon	132223	110998	137802	89189	71906	43531	28971		Continuing	Continuing
0604666A FCS Spin Outs			64796	32442	65000	50000	50000	10000	Continuing	Continuing

0603639A FCS MRM			44578	45733	71961	56698	107077	51079	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support			381	391	401	409	418	429	Continuing	Continuing
WTCV G86100 FCS Core Program			79483	155838	149367	683788	2194625	5795292	Continuing	Continuing
WTCV G86200 FCS Spin Out Program			20123	172746	373790	557060	779742	958060	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	50692	26360							Continuing	Continuing
0604645 F53 UGV	121528	106516							Continuing	Continuing
0604645 F54 UGS	31242	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	139389	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	499469	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2027766	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604661A Project FC2.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
INFANTRY CARRIER VEHICLE (ICV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 2						25168	1-3Q	28667	1-3Q		53835	
MOUNTED COMBAT SYSTEMS (MCS)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1						89207	1-3Q	97729	1-3Q		186936	
NON-LINE OF SIGHT MORTAR (NLOS-M)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 3						33499	1-3Q	44714	1-3Q		78213	
Contractor Common Component Vehicle Subs	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 2						444794	1-3Q	452227	1-3Q		897021	
COMMAND & CONTROL VEHICLE (C2V)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1						22211	1-3Q	40548	1-3Q		62759	
RECONNAISSANCE & SURVEILLANCE VEHICLE	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1						22535	1-3Q	38626	1-3Q		61161	
Medical Vehicle (MV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 3						11682	1-3Q	13094	1-3Q		24776	
FCS RECOVERY & MAINT VEH (FRMV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 2						19001	1-3Q	28100	1-3Q		47101	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

GFX and other	Direct	PM FCS(BCT), St. Louis, MO						1000	1-3Q	1000	1-3Q		2000	
Subtotal:								669097		744705			1413802	

Remarks: Remark 1: Subcontractor: General Dynamics - Sterling Heights, MI, award date, Dec 2003
Remark 2: Subcontractor: BAE - Ground Systems Division - Santa Clara, CA, award date, June 2003
Remark 3: Subcontractor: BAE - Armament Systems Division - Minnepolis,MN, award date, Dec 2003

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government - Statutory Reductions	Direct	OSD					1Q	27236	1Q	27753	1Q		54989	
Subtotal:								27236		27753			54989	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Remarks: All Test and Evaluation costs for this project are included in 0604661 FC2 SoS Engineering and Program Management project.

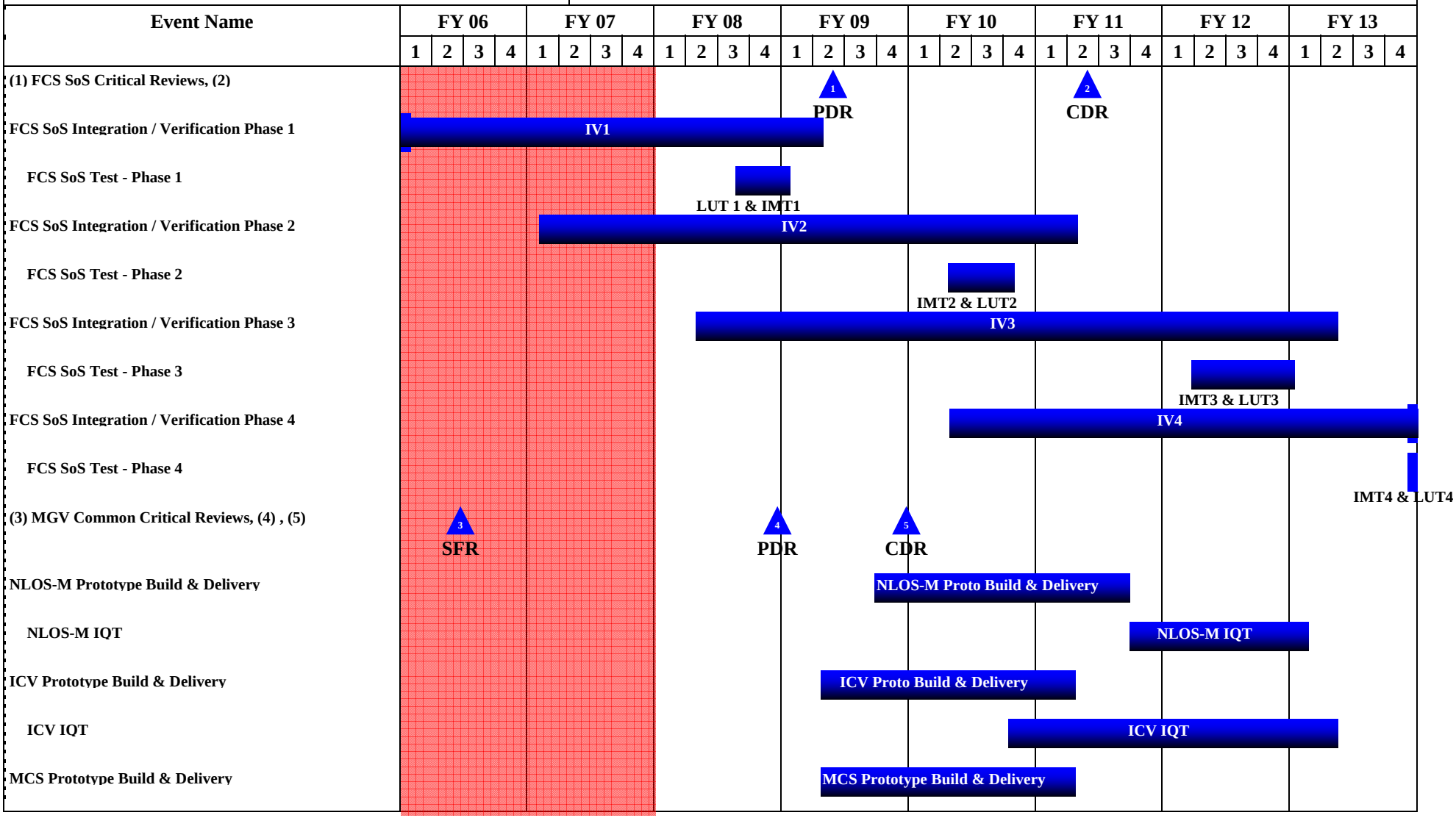
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:														

Project Total Cost:								**696333**		**772458**			**1468791**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**



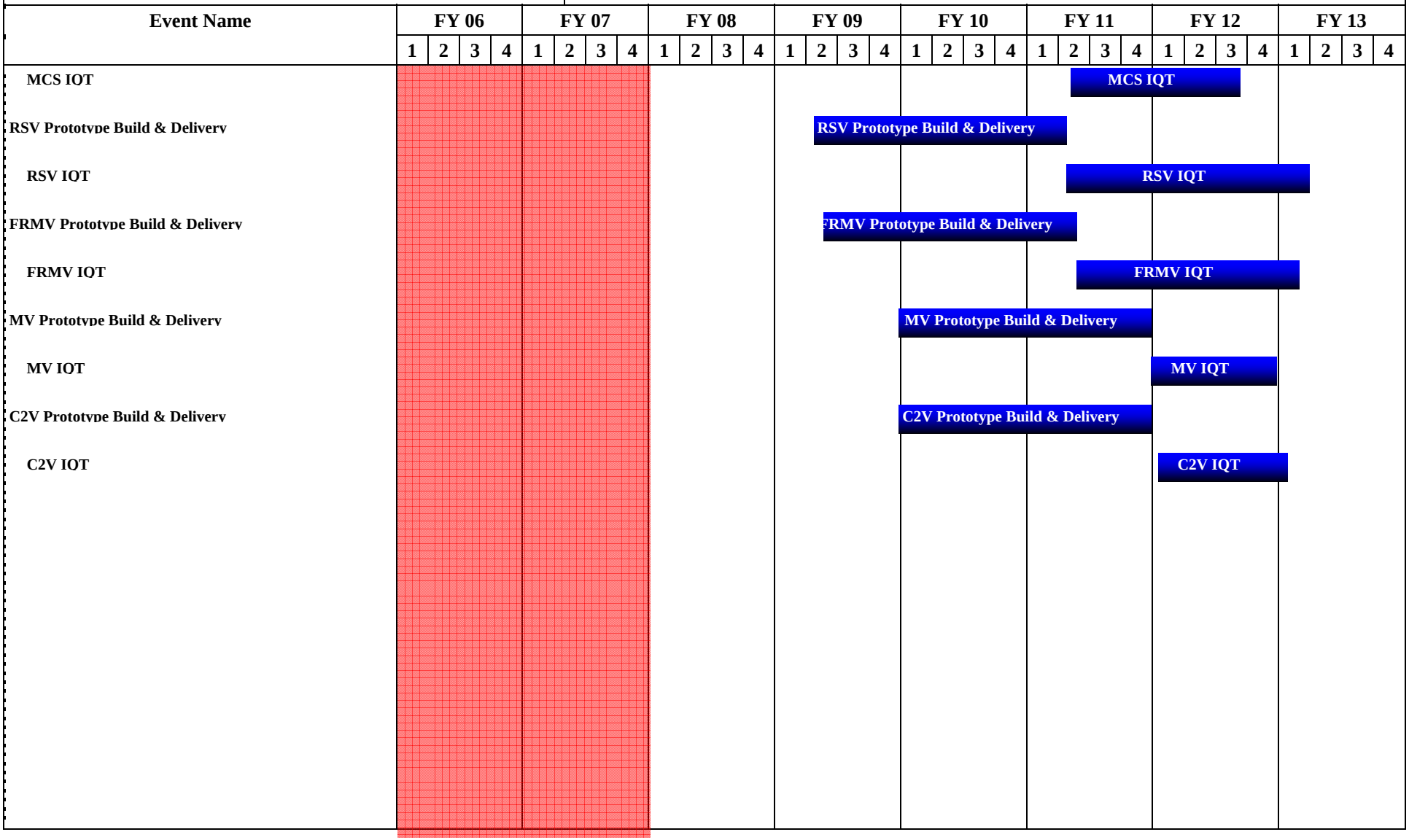
Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1



Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1

Schedule Detail	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews				2Q				
						2Q		
FCS SoS Integration / Verification Phase 1	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1			3Q - 4Q	1Q				
FCS SoS Integration / Verification Phase 2		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2					2Q - 4Q			
FCS SoS Integration / Verification Phase 3			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
FCS SoS Test - Phase 3							1Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4					2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FCS SoS Test - Phase 4								4Q
MGV Common Critical Reviews	2Q							
			4Q					
				4Q				
NLOS-M Prototype Build & Delivery				3Q - 4Q	1Q - 4Q	1Q - 3Q		
NLOS-M IQT						3Q - 4Q	1Q - 4Q	1Q
ICV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
ICV IQT					4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
MCS Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
MCS IQT						2Q - 4Q	1Q - 3Q	
RSV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
RSV IQT						2Q - 4Q	1Q - 4Q	1Q
FRMV Prototype Build & Delivery				2Q - 4Q	1Q - 4Q	1Q - 2Q		
FRMV IQT						2Q - 4Q	1Q - 4Q	1Q
MV Prototype Build & Delivery				4Q	1Q - 4Q	1Q - 4Q		
MV IQT						4Q	1Q - 4Q	

C2V Prototype Build & Delivery				4Q	1Q - 4Q	1Q - 4Q		
C2V IQT							1Q - 4Q	1Q