

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)			
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
C03 INTERIM ARMORED VEHICLE (IAV) FAMILY	127662	79350	90299	127641	424952

A. Mission Description and Budget Item Justification: This program element supports the development of the Family of Stryker vehicles. A critical need exists to improve the deployability and operational effectiveness of rapid response/early entry forces. The Stryker equipped Brigade Combat Team (BCT) is capable of deployment to anywhere on the globe in a combat ready configuration. Immediate response by a lethal, versatile, tactically agile joint force capable of operational maneuver once in the Area of Operations has been essential in fulfilling the warfighting needs of the U. S. Army. The Stryker family includes: Infantry Carrier Vehicle (ICV), Reconnaissance Vehicle (RV), Mobile Gun System (MGS), Mortar Carrier (MC), Commander's Vehicle (CV), Fire Support Vehicle (FSV), Engineer Squad Vehicle (ESV), Medical Evacuation Vehicle (MEV), Anti-Tank Guided Missile Vehicle (ATGM), and Nuclear/Biological/Chemical Reconnaissance Vehicle (NBCRV). The use of the common platform/common chassis design reduces requirements for repair parts and logistics support in the area of operations. RDT&E base funding is for integration of the mission equipment packages that make each platform unique and effective, and for vehicle testing to include developmental, production qualification, live fire, and Initial Operational Test and Evaluation (IOT&E). We will continue to address Overseas Contingency Operations, survivability, and Operational Needs Statements (ONS) issues with the Stryker base program. Funding will also be used to support RDT&E efforts required for the Stryker Modernization (S-MOD) program and correction of MGS deficiencies. The total Cost to Complete amount represents current funding in FY11 and FY12, not funding requirements.

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BUDGET ACTIVITY	PE NUMBER AND TITLE		
4 - Advanced Component Development and Prototypes	0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)		
<u>B. Program Change Summary</u>	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	143568	108012	
Current BES/President's Budget (FY 2010)	127662	79350	90299
Total Adjustments	-15906	-28662	90299
Congressional program reductions		-28662	
Congressional rescissions			
Congressional increases			
Reprogrammings	-11889		
SBIR/STTR Transfer	-4017		
Adjustments to Budget Years			90299

Change Summary Explanation - Funding: FY08 reflects reprogrammings to Weapons and Munitions Advanced Technology and Paladin (\$11.889 million.) FY09 reflects a net Congressional reduction of \$28.663 million, and FY10 reflects a funding increase to continue the Stryker program.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE									
4 - Advanced Component Development and Prototypes			0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)									
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Stryker Development/Engineering-Base Program	CPFF	GDLS Sterling Heights, MI	349459	43211	2-4Q	12933	2-3Q				405603	395188
Stryker Modernization (SMOD) and Correction of Mobile Gun System (MGS) Deficiencies	CPFF	GDLS Sterling Heights, MI		79952	1-4Q	64422	3Q	73284	1-3Q	60799	344196	341974
Subtotal:			349459	123163		77355		73284		60799	749799	737162

Remarks: Stryker development/engineering supports the Stryker Family of Vehicles base program efforts.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Other Gov't Agencies - Active Protection System (APS)	MIPR	TACOM, Warren, MI / Various	19291			1600	2-3Q				20891	20891
Subtotal:			19291			1600					20891	20891

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	MIPR	DPG, Utah	105786	83	3Q			5212	3Q	46210	157291	157291
Light Weight Stryker Reactive Armor Tile (LW SRAT)	MIPR	Army Test & Evaluation Command, DTC, MD, OTC, TX, AEC, VA						4063	1-2Q		4063	4063
Stryker Modernization (SMOD) Testing (PQT)	MIPR	Army Test & Evaluation Command, DTC, MD, OTC, TX, AEC, VA								37131	40486	40486
SMOD Live-Fire Test	MIPR	Army Test & Evaluation Command, DTC, MD,								14406	14406	14406

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE										
4 - Advanced Component Development and Prototypes			0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)										
		OTC, TX, AEC, VA											
SMOD Initial Operational Test & Evaluation (IOT&E)	MIPR	OTC, Ft. Knox, KY									45977	45977	45977
Contractor Support to Test	CPFF	GM GDLS DG L.L.C. Shelby, MI	21251	935	2Q			1430	3Q	18820	43628	43628	
Subtotal:			127037	1018				10705		162544	305851	305851	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
Project Management Office (PMO)	N/A	TACOM, Warren, MI	10818	3481	1Q	395	1Q	7781	1Q	16610	47125	47125	
Subtotal:			10818	3481		395		7781		16610	47125	47125	
Project Total Cost:			506605	127662		79350		91770		239953	1123666	1111029	

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)

Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) NBCRV Extended LRIP	▲ NBCRV Extended LRIP																															
NBCRV Extended Reliability Growth Test					NBCRV Extended RGT																											
(2) NBCRV Milestone (MS) III Full-Rate Production									NBCRV MS C ▲																							
Mobile Gun System (MGS) IOT&E MGS IOTE	■																															
(3) MGS Extended LRIP	▲ MGS Extended LRIP																															
MGS DAB					MGS DAB ■																											
(4) Stryker Modernizatn Program (SMOD) MS B (T)									Stryker MOD MS B (T) ▲																							
(5) Stryker Modernizatn MS C (T)																	Stryker MOD MS C (T) ▲															
Stryker Light Weight Stryker Reactive Armor Tiles (LW SRAT)					LW SRAT LFT				■																							

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						
4 - Advanced Component Development and Prototypes		0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)						
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
Milestone (MS) II								
Stryker Initial Production								
IOC								
IOT&E								
MS III								
Full Production - Stryker 8	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Nuclear/Biological/Chemical Reconnaissance Vehicle (NBCRV)								
NBCRV IPR								
NBCRV Initial Production								
Nuclear/Biological/Chemical Reconnaissance Vehicle (NBCRV) IOT&E								
NBCRV Extended LRIP	1Q							
NBCRV Extended Reliability Growth Test		1Q - 4Q	1Q - 4Q					
NBCRV Milestone (MS) III Full-Rate Production			4Q					
Mobile Gun System (MGS) Development								
MGS IPR (14)								
MGS Initial Production								
MGS IPR (58)								
Mobile Gun System (MGS) IOT&E	1Q							
MGS Extended LRIP	2Q							
MGS DAB		3Q						
Stryker Modernizatop Program (SMOD) MS B (T)			4Q					
Stryker Modernizatop MS C (T)					3Q			

Stryker Light Weight Stryker Reactive Armor Tiles (LW SRAT)			1Q - 2Q					
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Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)		May 2009	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)	
Funding in \$000			
Program	FY 2008	FY 2009	FY 2010
Total Termination Liability Funding:			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)			PROJECT C03
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
C03 INTERIM ARMORED VEHICLE (IAV) FAMILY	127662	79350	90299	127641	424952

A. Mission Description and Budget Item Justification: This project supports the development of the Family of Stryker vehicles. A critical need exists to improve the deployability and operational effectiveness of rapid response/early entry forces. The Stryker equipped Brigade Combat Team (BCT) is capable of deployment to anywhere on the globe in a combat ready configuration. Immediate response by a lethal, versatile, tactically agile joint force capable of operational maneuver once in the Area of Operations has been essential in fulfilling the warfighting needs of the U. S. Army. The Stryker family includes: Infantry Carrier Vehicle (ICV), Reconnaissance Vehicle (RV), Mobile Gun System (MGS), Mortar Carrier (MC), Commander's Vehicle (CV), Fire Support Vehicle (FSV), Engineer Squad Vehicle (ESV), Medical Evacuation Vehicle (MEV), Anti-Tank Guided Missile Vehicle (ATGM), and Nuclear/Biological/Chemical Reconnaissance Vehicle (NBCRV). The use of the common platform/common chassis design reduces requirements for repair parts and logistics support in the area of operations. RDT&E base funding will continue to address Overseas Contingency Operations (OCO), survivability, and Operational Needs Statements (ONS) issues with the Stryker base program. Funding will also be used to support RDT&E efforts required for the Stryker Modernization (S-MOD) fleet and correction of MGS deficiencies outlined in the 5 Aug 08 Acquisition Decision Memorandum (ADM). The total Cost to Complete amount represents current funding in FY11 and FY12, not funding requirements.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Completed MGS IOT&E 1QFY08. Operational Test and Evaluation (OT&E) for the NBCRV is scheduled for the May/June 2010 timeframe in preparation for the upcoming NBCRV Milestone (MS) III Full-Rate Production Decision.	54	510	4672
Government testing of OCO, Survivability and ONS efforts 1QFY08 through 4QFY09.	3565	500	
Undergo development and engineering for OCO, survivability and ONS issues on the Stryker vehicles, e.g., Hull Protection Kits, Tire Fire Suppression Kits, and Improved Common Ballistic Shields.	5740	2500	2500
Undergo development and engineering of Stryker Reactive Armor Tiles (SRAT) II	20635	11627	
Government testing of SRAT II begins in FY09 completes in FY10.		5270	4663
Contractor support to tests. To include MGS IOTE 1QFY08, NBCRV Operational Test and Evaluation (OTE), OCO Testing and SRAT II Testing.	1224	483	937
Support the S-MOD Program and the correction of MGS deficiencies effort. S-MOD target date for MS B is 4QFY10 and MS C is 3QFY14. Will develop system performance specifications, conduct trade studies, develop concept designs, undergo modeling and simulation activities and conduct technical demonstrations.	89922	51031	71320
Government Systems Engineering and Program Management (Base Program and Stryker Modernization Program)	6522	3607	6207
Active Protection System (APS) Radar		1600	
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR)		2222	

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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)	PROJECT C03
Total	127662	79350

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
PA, WTCV, G85100 Stryker	2792070	1308984	388596		4489650

Comment: FY09 funding includes the Bridge and Main Supplemental. Anticipating a Defense Acquisition Board (DAB) review for the Mobile Gun System (MGS) 3/4QFY09 which would allow additional procurements of the MGS. Anticipate a Milestone III review for the Nuclear/Biological/Chemical Reconnaissance Vehicle (NBCRV) 4QFY10.

C. Acquisition Strategy FY08 funding continues engineering and development efforts related to Overseas Contingency Operations (OCO), survivability, Operational Needs Statements (ONS) issues, and corrections of the Mobile Gun System (MGS) deficiencies outlined in the 5 Aug 08 Acquisition Decision Memorandum (ADM). FY08 funding also begins Technology Development Phase (TDP) activities for future enhancements and product improvements to all configurations within the Stryker family of vehicles. This portion of the program is the Stryker Modernization (S-MOD) program which includes long term solutions for MGS deficiencies as outlined in the 5 Aug 08 ADM. As the Stryker family of vehicles continues to be deployed, we will explore, enhance and increase the survivability of the Stryker. Examples of improvement are the vehicle's Hull Protection, Tire Fire Suppression Kits, Improved Common Ballistic Shields, and Belly Armor initiatives.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)							C03		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Stryker Development/Engineering-Base Program	CPFF	GDLS Sterling Heights, MI	349459	26375	2-4Q	14127	2-3Q	2500		5000	397461	397461
Stryker Modernization (S-MOD) and Correction of Mobile Gun System (MGS) Deficiencies	CPFF	GDLS Sterling Heights, MI		89973	1-4Q	51031	3Q	71320	1-3Q	106960	319284	319284
Subtotal:			349459	116348		65158		73820		111960	716745	716745
Remarks: Stryker development/engineering supports the Stryker Family of Vehicles base program efforts.												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Other Government Agencies -Base Program	MIPR	TACOM, Warren, MI / Various	19291	4570	1-4Q	3817	1-4Q				27678	27678
Other Government Agencies-S-MOD Program				1121	1-4Q	997	1-4Q				2118	2118
Subtotal:			19291	5691		4814					29796	29796
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation and OCO Testing	MIPR	DPG, Utah	105786	3619	3Q	1010	2-4Q	4672	3Q		115087	115087
Stryker Reactive Armor Tile (SRAT II)	MIPR	Army Test & Evaluation Command, DTC, MD, OTC, TX, AEC, VA				5270	2-4Q	4663	1-2Q		9933	9933
Stryker Modernization (S-MOD) Testing Production Qualification	MIPR	Army Test & Evaluation Command, DTC, MD,										

ARMY RDT&E COST ANALYSIS (R3)

May 2009

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4 - Advanced Component Development and Prototypes			0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)								C03	
Test (PQT)		OTC, TX, AEC, VA										
S-MOD Live-Fire Test	MIPR	Army Test & Evaluation Command, DTC, MD, OTC, TX, AEC, VA										
S-MOD Initial Operational Test & Evaluation (IOT&E)	MIPR	OTC, Ft. Knox, KY										
Contractor Support to Test	CPFF	GM GDLS DG L.L.C. Shelby, MI	21251	1224	2Q	483	1-4Q	937	3Q		23895	23895
Subtotal:			127037	4843		6763		10272			148915	148915

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management Office (PMO) Base Program	N/A	TACOM, Warren, MI	10818	272	1Q	408	1Q	380	1Q	804	12682	12682
Project Management Office (PMO) S-MOD Program		TACOM, Warren, MI		508	2-4Q	2207	2-4Q	5827	1Q	14877	23419	23419
Subtotal:			10818	780		2615		6207		15681	36101	36101

Project Total Cost:	506605	127662		79350		90299		127641	931557	931557
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Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE																PROJECT															
4 - Advanced Component Development and Prototypes	0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)																C03															
Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) NBCRV Extended LRIP Decision	▲ ₁ NBCRV Extended LRIP Decision																															
NBCRV Extended LRIP Production					NBCRV LRIP																											
NBCRV Reliability Growth Test					NBCRV RGT																											
(2) NBCRV Milestone (MS) III					NBCRV MS III ▲ ₂																											
(3) MGS Extended LRIP Decision	▲ ₃ MGS Extended LRIP Decision																															
MGS Extended LRIP Production									MGS Extended LRIP Production																							
(4) MGS Defense Acquisition Board (DAB) Decision	MGS DAB Decision ▲ ₄																															
(5) Stryker Modernization Program (S-MOD) MS B (T)					Stryker MOD MS B (T) ▲ ₅																											
Stryker Modernization Program (S-MOD) Testing													S-MOD Testing																			
(6) Stryker Modernization MS C (T) Full Rate Production																	Stryker MOD MS C (T) ▲ ₆															
Stryker Reactive Armor Tiles (SRAT) II Development Effort					SRAT II Development Effort																											
SRAT II Testing					SRAT II Testing																											

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT
4 - Advanced Component Development and Prototypes		0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)						C03
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
Milestone (MS) II								
Stryker Initial Production								
IOC								
IOT&E								
MS III								
Full Production - Stryker 8	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Nuclear/Biological/Chemical Reconnaissance Vehicle (NBCRV)								
NBCRV IPR								
NBCRV Initial Production								
Nuclear/Biological/Chemical Reconnaissance Vehicle (NBCRV) IOT&E								
NBCRV Extended LRIP Decision	2Q							
NBCRV Extended LRIP Production		3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q			
NBCRV Reliability Growth Test		1Q - 4Q	1Q - 4Q					
NBCRV Milestone (MS) III			4Q					
Mobile Gun System (MGS) Development								
MGS IPR (14)								
MGS Initial Production								
MGS IPR (58)								
Mobile Gun System (MGS) IOT&E	1Q							
MGS Extended LRIP Decision	4Q							
MGS Extended LRIP Production			2Q - 4Q	1Q - 2Q				
MGS Defense Acquisition Board (DAB) Decision		3Q						
Stryker Modernizatopn Program (S-MOD) MS B			4Q					

(T)								
Stryker Modernization Program (S-MOD) Testing					4Q	1Q - 4Q	1Q - 2Q	
Stryker Modernization MS C (T) Full Rate Production							3Q	
Stryker Reactive Armor Tiles (SRAT) II Development Effort		2Q - 4Q	1Q					
SRAT II Testing		3Q - 4Q	1Q - 2Q					