

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY 7 - Operational system development		PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM								
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
Total Program Element (PE) Cost	109955	74672	54055	60003	20748	8517	10741	10167	Continuing	Continuing
090 MLRS HIMARS	10823	17187	4456	3798	2047	3500	6595	6450	Continuing	Continuing
093 MLRS JOINT TECH ARCHITECTURE	814	3276	4700	4135	4645	2421	1500	1000	Continuing	Continuing
784 GUIDED MLRS	98318	54209	44899	52070	14056	2596	2646	2717		271511

A. Mission Description and Budget Item Justification: The High Mobility Artillery Rocket System (HIMARS), M270A1, Guided Multiple Launch Rocket System (GMLRS), GMLRS Unitary provide precision strike capability, and GMLRS DPICM has 404 submunitions.

HIMARS, is a C-130 transportable launcher mounted on a Family of Medium Tactical Vehicles (FMTV) chassis. HIMARS is capable of firing either 6 MLRS Family of Munitions (MFOM) rockets or one Army Tactical Missile (ATACMS) Family of Munitions (AFOM) missile, including precision munitions, to a range of 300KM.

Compliance with the Joint Technical Architecture (JTA) supports HIMARS and M270A1 MLRS Launcher programs, and is required by both Department of the Army and Office of the Secretary of Defense. The M270A1 upgraded MLRS launcher is mounted on a Bradley Fighting Vehicle chassis, and is capable of firing the MFOM and the AFOM, including precision munitions, to a range of 300KM.

GMLRS is a precision munition providing increased range to 70KM, and Global Positioning System (GPS) accuracy. Fired from M270A1 and HIMARS launchers, GMLRS comes in two variants: Dual Purpose Improved Conventional Munitions (DPICM) contains 414 submunitions, for attacking area targets with improved accuracy and significantly reduced hazardous duds; and GMLRS Unitary has a 200lb High Explosive (HE) warhead for attacking point targets with reduced collateral damage.

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<u>B. Program Change Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	113652	74506	19278	13606
Current BES/President's Budget (FY 2008/2009)	109955	74672	54055	60003
Total Adjustments	-3697	166	34777	46397
Congressional Program Reductions		-286		
Congressional Rescissions				
Congressional Increases		1000		
Reprogrammings	-3697	-548		
SBIR/STTR Transfer				
Adjustments to Budget Years			34777	46397

Change Summary Explanation: The FY07 President's Budget listed above does not reflect the SBIR/STTR reductions. Those reductions are listed in the FY07 Accomplishments/Planned Program section.

Increased funding in FY 2008 and FY 2009 is intended to support an incremental improvement to DPICM capability to develop, test and field and alternate warhead. This alternate warhead will be employed against the DPICM area targets with a more Insensitive Munition (IM) compliant warhead whose effects will not include unexploded ordnance.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 7 - Operational system development				PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM					PROJECT 090	
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
090 MLRS HIMARS	10823	17187	4456	3798	2047	3500	6595	6450	Continuing	Continuing

A. Mission Description and Budget Item Justification: The High Mobility Artillery Rocket System (HIMARS) fully supports a more deployable, affordable, and lethal Joint Expeditionary Force. It is a light weight, deployable system which provides long range precision strike capability in both early and forced entry scenarios. Mounted on a medium tactical wheeled vehicle chassis, HIMARS is transportable in a C-130 aircraft, and is self-loading and self-locating using Global Positioning System (GPS) technology. It fires the full Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM) and Army Tactical Missile System (ATACMS) Family of Munitions (AFOM). Additionally a HIMARS battery requires significantly reduced airlift resources that are required to transport a battery of the tracked M270/M270A1 MLRS. HIMARS, as part of the Fires Brigade, will provide fires that shape, shield and isolate the battle space. HIMARS has been deployed to both Operation Iraqi Freedom and Operation Enduring Freedom with great success. HIMARS is also a key component of the Marine Corps Future Fighting Effort.

Accomplishments/Planned Program:	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Continue system design and Production Qualification Testing (PQT), conduct Functional Configuration Audit (FCA), and develop Integrated Logistics Products (ILP); integrate and test Horizontal Technology Insertion (HTI) upgrades including Increased Crew Protection, Enhanced Command and Control, Improved Initialization and Long Range Communication. Perform technical assessments, concept studies, risk reduction, and required documentation.	10823	16703	4456	3798
Small Business Innovative Research (SBIR)/Small Business Technology Transfer (STTR) Programs		484		
Total	10823	17187	4456	3798

B. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
HIMARS Launcher (C02901)	161713	207547	235865	247919	221028	224725	23657	21096		1343550
HIMARS Modifications (C67501)	7896	9336	10541	16537	33377	27011	10178	9815	Continuing	Continuing
HIMARS Modifications: Initial Spares (CA0289)		1317	1261	1064	1855	1920	1962	2005	Continuing	Continuing
Initial Spares, HIMARS (CA0288)	6017	7910	11541	12037	9183	19627	975	1271		68561

Comment:

C. Acquisition Strategy The HIMARS program is currently in Full Rate Production (FRP) and awarded the FRP-2 contract December 2006. HIMARS follow-on Horizontal Technology Insertion (HTI) efforts include the Increased Crew Protection, Enhanced Command and Control Improved Initialization, and Long Range Communication.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)**February 2007**

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

7 - Operational system development**0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM****090**

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE									PROJECT		
7 - Operational system development			0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM									090		
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
Risk Reduction/ Maturation Contract	SS/CPIF & CPAF	LMMFC, Texas	113610										113610	
Path through Operational Test	SS/CPFF	LMMFC, Texas	11809										11809	
Work Directives/ Chassis and Cab	N/A	TACOM (S&S)	5733										5733	
Battle Command	SS/CPFF	CECOM, STRICOM, UA Networks, Techrizon, LMMFC, Texas	4040	1869	2-3Q	1834	2-4Q	1201	2-3Q	2639	2-3Q	Cont.	Cont.	
Government Support	N/A	AMCOM/ GSA, RSA & TSM	16554	151	2-4Q	176	2-4Q	491	2-3Q	223	2-3Q	Cont.	Cont.	
Increased Crew Protection	SS/CPFF	LMMFC, Texas	2335	6136	2-4Q	9306	2-3Q	1342	2-3Q				19119	
Subtotal:			154081	8156		11316		3034		2862		Cont.	Cont.	

Remarks: TACOM - Tank Automotive & Armaments Command; AMCOM - Aviation & Missile Command
 RSA - Redstone Arsenal Alabama; STRICOM - Simulation Training and Instrument Command
 S&S - Stewart & Stevenson; GSA - General Services Administration
 LMMFC - Lockheed Martin Missile and Fire Control
 TSM - TRADOC System Manager; TBD - To Be Determined; N/A - Not Applicable
 CECOM - US Army Communication - Electronics Command
 SS - Sole Source; CPIF - Cost Plus Incentive Fee; CPAF - Cost Plus Award Fee
 CPFF - Cost Plus Fixed Fee; UA - Unit of Action

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
Support Contract	C/CPFF	Camber Research/S3/TMI, Alabama	1888	231	2-4Q	232	2-3Q	385	2-3Q	354	2-3Q	Cont.	Cont.	
Subtotal:			1888	231		232		385		354		Cont.	Cont.	

Remarks: S3 - Systems Studies Simulation, Inc., TMI - Tec Masters Inc

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY 7 - Operational system development	PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM	PROJECT 090
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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
Test Support	N/A	Fort Hood,ATEC,APG MD,WSMR NM & RTTC RSA	33251	2151	2-4Q	5306	2-4Q	916	2-4Q	453	2-4Q	Cont.	Cont.	
Subtotal:			33251	2151		5306		916		453		Cont.	Cont.	

Remarks: APG MD - Aberdeen Proving Ground, Maryland
 WSMR NM - White Sands Missile Range, New Mexico
 RTTC RSA - Redstone Technical Test Center
 ATEC - US Army Test and Evaluation Command

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
In-House Support	N/A	PFRMS Project Office, Redstone Arsenal, AL	8112	285	2-4Q	333	2-4Q	121	2-4Q	129	2-4Q	Cont.	Cont.	
Subtotal:			8112	285		333		121		129		Cont.	Cont.	

Remarks: PFRMS - Precision Fires Rocket and Missile Systems

Project Total Cost:	197332	10823		17187		4456		3798		Cont.	Cont.			
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Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM

PROJECT
090

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	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) Full Rate Production (FRP) Contract Award (CA) 1 FRP 1 CA																																
Increased Crew Protection Development and Live Fire Test and Evaluation (LFT&E) Increased Crew Protection & LFT&E																																
Central Technical Support Facility Certification																																
Enhanced Command and Control development and testing																																

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY 7 - Operational system development		PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM						PROJECT 090	
<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</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>	
Full Rate Production (FRP) Contract Award (CA) 1	1Q								
Increased Crew Protection Development and Live Fire Test and Evaluation (LFT&E)	1Q - 4Q	1Q - 4Q	1Q						
Central Technical Support Facility Certification	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Enhanced Command and Control development and testing	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 7 - Operational system development			PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM						PROJECT 093	
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
093 MLRS JOINT TECH ARCHITECTURE	814	3276	4700	4135	4645	2421	1500	1000	Continuing	Continuing

A. Mission Description and Budget Item Justification: A. Compliance with the Joint Technical Architecture (JTA) as defined in the DoD Information Technical Standards Registry (DISR) supports the High Mobility Artillery Rocket System (HIMARS) and M270A1 Multiple Launch Rocket System (MLRS) launcher programs and is required by both the Department of the Army and the Office of the Secretary of Defense (OSD). JTA provides for analysis and integration of GPS upgrades and Selective Availability/Anti-Spoofing Module (SASSM) M-code. Network Interoperability includes upgrades to meet Joint reference standards, compliance with information assurance mandates, long range communications, Sensor to Effects (STE), and Enhanced Command and Control (C2) for HIMARS and M270A1 launchers. Support Joint and Army interoperability certifications via Central Technical Support Facility (CTSF), Joint Interoperability Test Certificate (JITC) and implementing Army Software Blocking policy. Conduct assessments on long range communications and situational awareness including implementation and prototyping.

<u>Accomplishments/Planned Program:</u>	FY 2006	FY 2007	FY 2008	FY 2009
Required Global Positioning System (GPS) Modernization.	51			442
Command, Control, Communications, Computers, and Intelligence (C4I)/Interoperability Certification.	250	599	637	950
Card Consolidation.	473	191		
Network interoperability.		1558	3100	2140
Perform technical assessments, concept studies, and risk reduction.	40	836	963	603
Small Business Innovative Research/Small Business Technology Transfer Program		92		
Total	814	3276	4700	4135

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
MLRS Launcher (C65900)	19836									19836
MLRS Mods(C67500)	14387	6885	5578	1886	3144	3149	3218	3289	Continuing	Continuing
HIMARS Launcher (C02901)	161713	207547	235865	247919	221028	224725				1298797
MLRS Mod Initial Spares (CA0265)	350	521	1043	1048	1048	1049	1072	1096	Continuing	Continuing
HIMARS Modifications (C67501)	7896	9336	10541	16537	33377	27011	10178	9815	Continuing	Continuing
HIMARS Initial Spares (CA0288)	6017	7910	11541	12037	9183	19627	975	1271		68561
HIMARS Mod Initial Spares (CA0289)		1317	1261	1064	1855	1920	1962	2005	Continuing	Continuing

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

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BUDGET ACTIVITY

7 - Operational system development

PE NUMBER AND TITLE

0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM

PROJECT

093

Comment:

C. Acquisition Strategy The JTA-Army standards are updated for the M270A1 and HIMARS launchers to meet DISR. The Joint Variable Message Format (JVMF) is currently being updated by the Software Engineering Directorate and will be integrated into the launchers using a sole source contracting strategy with Lockheed Martin Missile and Fire Control-Dallas (LMMFC-D). This contracting strategy will also be used for the Card Consolidation, Sensor to Effects (STE), and C2. Testing of software blocking upgrades is currently scheduled every 12 months to meet joint reference standards and information assurance.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY 7 - Operational system development			PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM									PROJECT 093		
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
Contract	CPFF	LMMFC-D, Dallas, Texas	21329	254	2Q	1797	2Q	1409	1-3Q	442	1-3Q	Cont.	Cont.	
Government Support	N/A	AMCOM/GSA, Redstone Arsenal, Alabama	5425	156	1-3Q	358	1-3Q	420	1-3Q	388	1-3Q	Cont.	Cont.	
Subtotal:			26754	410		2155		1829		830		Cont.	Cont.	

Remarks: GPS-Global Positioning System CPFF - Cost Plus Fixed Fee LMMFC-D - Lockheed Martin Missile and Fire Control-Dallas
AMCOM - Aviation and Missile Command GSA - General Services Administration

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
Support Contract	Various	Multiple		40	1-3Q	436	1-3Q	554	1-3Q	603	1-3Q	Cont.	Cont.	
Subtotal:				40		436		554		603		Cont.	Cont.	

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
Test Support, Joint Interoperability Test Certificate	N/A	CTSF, Ft. Hood, Texas	552	157	1-3Q	177	1-3Q	863	1-3Q	819	1-3Q	Cont.	Cont.	
Test Support	N/A	AMCOM, RTTC, Redstone Arsenal, Alabama		154	1-3Q	274	1-3Q	1198	1-3Q	1656	1-3Q	Cont.	Cont.	
Test Support	N/A	WSMR, New Mexico	442									Cont.	Cont.	
Subtotal:			994	311		451		2061		2475		Cont.	Cont.	

Remarks: CTSF - Central Test Support Facility RTTC-Redstone Technical Test Center WSMR - White Sands Missile Range

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY 7 - Operational system development	PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM	PROJECT 093
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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
In-House Support	N/A	PFRMS Proj Ofc, Redstone Arsenal, Alabama	2843	53	1-4Q	234	1-4Q	256	1-4Q	227	1-3Q	Cont.	Cont.	
Subtotal:			2843	53		234		256		227		Cont.	Cont.	

Remarks: PFRMS - Precision Fires Rocket and Missile Systems

Project Total Cost:	30591	814		3276		4700		4135		Cont.	Cont.			
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Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY		PE NUMBER AND TITLE																PROJECT														
7 - Operational system development		0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM																093														
Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	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
Command, Ctrl, Communications, Computers, and Intell (C4I)/Interoperability Cert	[Redacted]																															
Card Consolidation	[Redacted]																															
Network Interoperability					[Redacted]																											

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY 7 - Operational system development	PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM	PROJECT 093
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<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</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>
Command, Ctrl, Communications, Computers, and Intell (C4I)/Interoperability Cert	1Q - 4Q							
Card Consolidation	1Q - 4Q	1Q - 4Q						
Network Interoperability		1Q - 4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 7 - Operational system development	PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM							PROJECT 784		
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
784 GUIDED MLRS	98318	54209	44899	52070	14056	2596	2646	2717		271511

A. Mission Description and Budget Item Justification: Guided Multiple Launch Rocket System (GMLRS) munitions are the Army's primary organic Joint Expeditionary, all-weather, all-terrain, 24/7, tactical range precision guided rockets employed by modular fires Brigades supporting Brigade Combat Teams (BCT), Divisions, Corps, and Joint Special Operations Force (JSOF) combatant commanders. GMLRS are the primary munitions for units fielded with the High Mobility Artillery Rocket System (HIMARS) and MLRS M270A1 rocket and missile launcher platforms. GMLRS provides close, medium and long range pin point precision and massed fires to Destroy, Suppress and Shape threat forces and protect friendly forces against: cannon, mortar, rocket and missile artillery; light materiel and armor; personnel; command and control; and air defense surface targets. GMLRS is a major upgrade/replacement for the aging M26/A1/A2 rocket inventory that integrates a guidance and control package and an improved rocket motor achieving greater range and precision accuracy requiring fewer rockets to defeat targets than current artillery rockets, thereby reducing the logistics burden. There are two variants of GMLRS; GMLRS with Dual Purpose Improved Conventional Munitions (DPICM) and GMLRS with a 200 pound class high explosive warhead (Unitary). The GMLRS DPICM is a five nation cooperative program among France, Germany, Italy, United Kingdom and the United States. The GMLRS Unitary is a modification to the GMLRS DPICM integrating a multi-mode fuze and high explosive Insensitive Munition (IM) warhead making it an all-weather, low collateral damage, precision rocket. This expands the MLRS target set into urban and complex environments and adds point targets. Alternate warhead efforts will support an incremental improvement to the DPICM capability. This alternate warhead effort will develop and test a new capability to be employed against the DPICM area targets with a more Insensitive Munition (IM) compliant warhead whose effects will not include unexploded ordnance. To meet Central Command Operational Need Statements, two quantities (486/972) of limited capability GMLRS Unitary rockets were accelerated and fielded in Iraq between June 2005 and December 2008. In missions in which it has been deployed, GMLRS Unitary demonstrated both very high accuracy and low collateral damage. Continued GMLRS Unitary development efforts will incorporate trajectory shaping capability into the flight software. Additional material changes will provide operational flexibility and capability against an expanded target set. GMLRS is also a key component of the Marine Corps Future Fighting Effort.

<u>Accomplishments/Planned Program:</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Perform technical assessments, concept studies, prepare milestone documentation and risk reduction	2249	2152	2473	3624
Conduct Development and Engineering for Insensitive Munitions (IM) Program	10096	2341	3251	5038
Conduct Development Engineering; Design and Develop Alternate Warheads and Multi Mode Fuzes	8049	5852	10931	10546
Initiate Initial Common Hardware Buy for Test Activities for Unitary (test articles for Engineering Development Testing (EDT), Production Qualification Testing (PQT), Cold Region Testing, & Initial Operational Test & Evaluation (IOT&E))	19053	12318		
Perform Anti-Jamming Analysis and System Engineering/Integration	3939	4533		
Conduct EDT Flight Test, PQT Ground and Flight Tests, Test Analysis	22187	6321	2958	4352
Conduct Functional Configuration Audit, Final PDDP, and System Integration Test	9622	3572	3687	4428
Conduct system test and evaluation activities	11576	11182	11547	12278
Perform Integration and Test of Alternative Warheads and Multi-Mode Fuzes	11547	4482	10052	11804

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2007

BUDGET ACTIVITY 7 - Operational system development	PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM	PROJECT 784
Small Business Innovative Research/Small Business Technology Transfer Programs		1456
Total	98318	54209

<u>B. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Missile Procurement Army - GMLRS (C64400)	121555	136851	225282	249204	314025	344435	371668	372691	Continuing	Continuing

Comment:

C. Acquisition Strategy The Guided Multiple Launch Rocket System (GMLRS) Dual Purpose Improved Conventional Munitions (DPICM) is currently in Full Rate Production (FRP). The primary objective of the GMLRS DPICM System Development and Demonstration (SDD) was to develop a rocket with greater range and significantly enhanced accuracy with minimum impact on existing MLRS companion hardware and software. Other GMLRS development efforts include an improved mechanical fuze; a self-destruct fuze; desired new rocket capabilities; design, evaluation, and test of alternative warhead technologies; and increased range.

The GMLRS Unitary Acquisition Strategy is a streamlined product improvement program. Initial configuration hardware will maximize commonality with GMLRS DPICM and incorporate a new warhead and multi-mode fuze (point detonation, airburst and delay). The European Cooperative Development Partners for GMLRS have expressed a desire to join the GMLRS Unitary development program during the Follow-On configuration effort. In FY05, Congress encouraged the Army to accelerate the GMLRS Unitary program to field a quantity of not less than 450 rockets with limited capability no later than fourth quarter FY06. In December 2004, the Army received an urgent need statement from Central Command requesting limited capability GMLRS Unitary rockets by fourth quarter FY06. The first 72 limited capability GMLRS Unitary Rockets were fielded in theater during June 05.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY 7 - Operational system development			PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM									PROJECT 784		
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
SDD DPICM Contract	SS/CPAF	LMMFCS Dallas, TX	91194									Cont.	Cont.	
SDD Unitary Contract	SS/CPFF	LMMFCS Dallas, TX	119133	44546	2Q	24129	1Q	23646	1Q	32012	1Q	Cont.	Cont.	
Government Support	N/A	AMCOM/AMRDEC, RSA	33099	24338	1-4Q	12040	1-4Q	4671	1-4Q	3126	1-4Q	Cont.	Cont.	
Subtotal:			243426	68884		36169		28317		35138		Cont.	Cont.	

Remarks: DPICM - Dual Purpose Improved Conventional Munitions; SS/CPAF - Sole Source/Cost Plus Award Fee; SS/CPFF - Sole Source/Cost Plus Fixed Fee; LMMFCS - Lockheed Martin Missile and Fire Control System; TX - Texas; AMCOM-Aviation & Missile Command; AMRDEC - U.S. Army Research, Development & Engineering Command; RSA - Redstone Arsenal, Alabama

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
Support Contract	C/CPFF	Camber Research/S3/TMI, Alabama	11475	3938	1-3Q	2693	1-3Q	2576	1-3Q	1919	1-3Q	Cont.	Cont.	
Subtotal:			11475	3938		2693		2576		1919		Cont.	Cont.	

Remarks: C/CPFF-Cost/Cost Plus Fixed Fee
S3-Systems Studies Simulation, Inc.
TMI-Tec Masters, Inc.
AMRDEC-U.S. Army Research, Development & Engineering Command

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
Test Support	N/A	WSMR, NM	56061	22190	1-4Q	11639	1-4Q	11751	1-4Q	12454	1-4Q	Cont.	Cont.	
Subtotal:			56061	22190		11639		11751		12454		Cont.	Cont.	

Remarks: WSMR, NM - White Sands Missile Range, New Mexico

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE									PROJECT		
7 - Operational system development			0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM									784		
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
In-House Support	N/A	PFRMS Proj Ofc, RSA	13325	3306	1-4Q	3708	1-4Q	2255	1-4Q	2559	1-4Q	Cont.	Cont.	
Subtotal:			13325	3306		3708		2255		2559		Cont.	Cont.	

Remarks: PFRMS - Precision Fires Rocket and Missile Systems
 RSA - Redstone Arsenal, Alabama

Project Total Cost:	324287	98318		54209		44899		52070		Cont.	Cont.			
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Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM

PROJECT
784

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13											
	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								
DPICM LRIP II Deliveries (786)	[Redacted]																																							
LRIP II Deliveries	[Redacted]				[Redacted]																																			
(1) DPICM IOC	[Redacted]				[Redacted]				[Redacted]																															
Unitary POT-1	[Redacted]				[Redacted]				[Redacted]																															
Unitary EDT-2	[Redacted]				[Redacted]				[Redacted]																															
Unitary POT-2	[Redacted]				[Redacted]				[Redacted]																															
(2) UNITARY MS C	[Redacted]				[Redacted]				[Redacted]																															
(3) UNITARY LRIP I CA	[Redacted]				[Redacted]				[Redacted]																															
Alternate Warhead	[Redacted]				[Redacted]				[Redacted]																															
(4) UNITARY FRP IOTE	[Redacted]				[Redacted]				[Redacted]																															
(5) UNITARY IOC	[Redacted]				[Redacted]				[Redacted]																															
(6) UNITARY FRP	[Redacted]				[Redacted]				[Redacted]																															
Technical Assesment/Concept Studies/Cost Reduction Studies	[Redacted]				[Redacted]				[Redacted]																															

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY 7 - Operational system development		PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM						PROJECT 784	
<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</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>	
DPICM LRIP II Deliveries (786)	1Q - 3Q								
DPICM IOC	1Q								
Unitary PQT-1	1Q								
Unitary EDT-2	2Q - 3Q								
Unitary PQT-2		1Q							
UNITARY MS C		2Q							
UNITARY LRIP I CA		3Q							
Alternate Warhead		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q				
UNITARY FRP IOTE			2Q						
UNITARY IOC			4Q	1Q - 4Q					
UNITARY FRP				2Q					
Technical Assesment/Concept Studies/Cost Reduction Studies					1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)	February 2007
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BUDGET ACTIVITY 7 - Operational system development	PE NUMBER AND TITLE 0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM	PROJECT 784
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Funding in \$000								
Program	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Guided MLRS								
Total Termination Liability Funding:								

Remarks:
 The GMLRS Program Prime Contract Incorporates the "Limitation Of Funds" Clause (DFARS 52.232-22) to limit the government's liability. For the GMLRS Program, The "Limitation of Funds" Clause limits the government's financial liability per the Contract to those funds placed on contract plus any outstanding commitments plus costs associated with the orderly termination of contractual actions.