

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY		PE NUMBER AND TITLE							
<b>7 - Operational system development</b>		<b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>							
COST (In Thousands)	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	63189	53712	59749	20648	8506	10719	10155	Continuing	Continuing
090 MLRS HIMARS	17704	4428	3774	2032	3475	6550	6409	Continuing	Continuing
093 MLRS JOINT TECH ARCHITECTURE	2333	4670	4109	4612	2404	1490	994	Continuing	Continuing
784 GUIDED MLRS	43152	44614	51866	14004	2627	2679	2752	Continuing	Continuing

**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 Dual Purpose Improved Conventional Munitions (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 Multiple Launch Rocket System (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: 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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BUDGET ACTIVITY	PE NUMBER AND TITLE		
<b>7 - Operational system development</b>	<b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>		
<b><u>B. Program Change Summary</u></b>	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	74672	54055	60003
Current BES/President's Budget (FY 2009)	63189	53712	59749
Total Adjustments	-11483	-343	-254
Congressional Program Reductions		-343	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-9451		
SBIR/STTR Transfer	-2032		
Adjustments to Budget Years			-254

Change Summary Explanation: Funding - FY 2007: Funds reprogrammed to support high priority Army programs.

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>7 - Operational system development</b>		<b>PE NUMBER AND TITLE</b> <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>						<b>PROJECT</b> <b>090</b>	
COST (In Thousands)	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	17704	4428	3774	2032	3475	6550	6409	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** The M142 High Mobility Artillery Rocket System (HIMARS) fully supports more deployable, affordable, and lethal Brigade Combat Teams, Modular Forces and Joint Expeditionary Forces. 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, provides fires that shape, shield and isolate the battle space. Using both Precision Guided Multiple Launch Rocket System (GMLRS) and ATACMS Unitary munitions, HIMARS provides close support fires for Troops In Contact (TIC) in both open and urban terrain. 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.

<b>Accomplishments/Planned Program:</b>	<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, Obsolescence Mitigation, Tactical Fire Control, Embedded Training Launcher Loader Module (LLM) electric drive, Diagnostics/Pronostics, Alternate Coupling, Situational Awareness, Long Range Communication and future munition integration. Perform technical assessments, concept studies, cost reduction, risk reduction, field issue resolution and required documentation.	17704	4304	3774
Small Business Innovative Research (SBIR)/Small Business Technology Transfer (STTR) Programs		124	
<b>Total</b>	<b>17704</b>	<b>4428</b>	<b>3774</b>

<b>B. Other Program Funding Summary</b>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
HIMARS Launcher (C02901)	190309	225133	246041	219102	222751	23450	20911	Continuing	Continuing
HIMARS Modifications (C67501)	14886	10470	16408	33082	26769	10084	9724	Continuing	Continuing
HIMARS Modifications: Initial Spares (CA0289)	1312	1261	1056	1839	1903	1945	1987	Continuing	Continuing
Initial Spares, HIMARS (CA0288)	7909	11441	11946	9103	19455	966	1260	Continuing	Continuing

Comment:

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY

**7 - Operational system development**

PE NUMBER AND TITLE

**0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM**

PROJECT

**090**

**C. Acquisition Strategy** The HIMARS program is currently in Full Rate Production (FRP) and awarded the FRP-3 contract December 2007. 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 COST ANALYSIS (R3)

February 2008

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 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, Tchrizon, LMMFC, Texas	5909	1834	2-4Q	1201	2-3Q	2615	2-3Q	Cont.	Cont.	
Government Support	N/A	AMCOM/ GSA, RSA & TSM	16705	176	2-4Q	194	2-3Q	223	2-3Q	Cont.	Cont.	
Increased Crew Protection	SS/CPFF	LMMFC, Texas	8471	9823	2-3Q	1611	2-3Q				19905	
Subtotal:			162237	11833		3006		2838		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 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	2119	232	2-3Q	385	2-3Q	354	2-3Q	Cont.	Cont.	
Subtotal:			2119	232		385		354		Cont.	Cont.	

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

# ARMY RDT&E COST ANALYSIS (R3)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>7 - Operational system development</b>	<b>PE NUMBER AND TITLE</b> <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>	<b>PROJECT</b> <b>090</b>
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III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	35402	5306	2-4Q	916	2-4Q	453	2-4Q	Cont.	Cont.	
Subtotal:			35402	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 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	8397	333	1-4Q	121	1-4Q	129	1-4Q	Cont.	Cont.	
Subtotal:			8397	333		121		129		Cont.	Cont.	

Remarks: PFRMS - Precision Fires Rocket and Missile Systems

<b>Project Total Cost:</b>		<b>208155</b>		<b>17704</b>		<b>4428</b>		<b>3774</b>		<b>Cont.</b>	<b>Cont.</b>	
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**Schedule Detail (R4a Exhibit)**

**February 2008**

BUDGET ACTIVITY <b>7 - Operational system development</b>		PE NUMBER AND TITLE <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>					PROJECT <b>090</b>	
<u>Schedule Detail</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>	
Increased Crew Protection Development and Live Fire Test and Evaluation (LFT&E)	1Q - 4Q	1Q - 3Q						
Central Technical Support Facility Certification	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	

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>7 - Operational system development</b>			<b>PE NUMBER AND TITLE</b> <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>					<b>PROJECT</b> <b>093</b>	
COST (In Thousands)	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	2333	4670	4109	4612	2404	1490	994	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** Compliance with the Joint Technical Architecture (JTA) as defined in the DoD Information Technical Standards Registry (DISR) supports the M142 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 Network Interoperability, and Global Positioning System (GPS) Modernization. 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 M142 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. These efforts include conducting assessments, integration, and prototyping of long range communications and situational awareness.

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Required GPS Modernization.			442
Command, Control, Communications, Computers, and Intelligence (C4I)/Interoperability Certification Tests, Improved Operational Timeline.	1424	2407	2825
Card Consolidation.	191		
Network interoperability Testing/Certification.	442	558	356
Perform technical assessments, concept studies, and risk reduction.	276	1574	486
Small Business Innovative Research/Small Business Technology Transfer Program		131	
<b>Total</b>	<b>2333</b>	<b>4670</b>	<b>4109</b>

<u>B. Other Program Funding Summary</u>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
MLRS Mods(C67500)	5508	5540	1872	3117	3121	3190	3260	Continuing	Continuing
HIMARS Launcher (C02901)	190309	225133	246041	219102	222751	23450	20911	Continuing	Continuing
MLRS Mod Initial Spares (CA0265)	519	1043	1040	1039	1040	1063	1086	Continuing	Continuing
HIMARS Modifications (C67501)	14886	10470	16408	33082	26769	10084	9724	Continuing	Continuing
HIMARS Initial Spares (CA0288)	7909	11441	11946	9103	19455	966	1260	Continuing	Continuing
HIMARS Mod Initial Spares (CA0289)	1312	1261	1056	1839	1903	1945	1987	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 Joint Technical Architecture (JTA) program ensures compliance as defined in the Department of Defense (DoD) Information Technical Standards. Funding is provided to several Government Agencies/Laboratories each Fiscal Year in support of this program. Support efforts include Enhanced C2, Interoperability Certifications, and Information Assurance compliance.

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
<b>7 - Operational system development</b>			<b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>							<b>093</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	21583	191	2Q	257	1-3Q	442	1-3Q	Cont.	Cont.	
Government Support	N/A	AMRDEC-RSA AL, FT SILL OK, CECOM-NJ	5581	941	1-3Q	1683	1-3Q	2153	1-3Q	Cont.	Cont.	
Subtotal:			27164	1132		1940		2595		Cont.	Cont.	
Remarks: CPFF - Cost Plus Fixed Fee LMMFC-D - Lockheed Martin Missile and Fire Control-Dallas N/A - Not Applicable AMRDEC - United States Army Research, Development, and Engineering Command RSA AL - Redstone Arsenal, Alabama OK - Oklahoma CECOM - United States Army Communication - Electronics Command												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	593	1-3Q	2004	1-3Q	987	1-3Q	Cont.	Cont.	
Subtotal:			40	593		2004		987		Cont.	Cont.	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	709	442	1-3Q	558	1-3Q	356	1-3Q	Cont.	Cont.	
Test Support	N/A	AMCOM, RTTC, Redstone Arsenal, Alabama	154							Cont.	154	
Test Support	N/A	WSMR, New Mexico	442							Cont.	442	
Subtotal:			1305	442		558		356		Cont.	Cont.	

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY <b>7 - Operational system development</b>	PE NUMBER AND TITLE <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>	PROJECT <b>093</b>
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Remarks: CTSF - Central Test Support Facility AMCOM - Army Missile Command RTTC-Redstone Technical Test Center  
WSMR - White Sands Missile Range

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	2896	166	1-4Q	168	1-4Q	171	1-4Q	Cont.	Cont.	
Subtotal:			2896	166		168		171		Cont.	Cont.	

Remarks: PFRMS - Precision Fires Rocket and Missile Systems

<b>Project Total Cost:</b>	<b>31405</b>	<b>2333</b>		<b>4670</b>		<b>4109</b>		<b>Cont.</b>	<b>Cont.</b>			
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# Schedule Profile (R4 Exhibit)

February 2008

Event Name	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
	Comd, Cntrl, Com, Comp, and Intell (C4I)/Interop Cert Tests, Imp Oper Timeline																											
Card Consolidation																												
Network Interoperability Testing/Cerification																												

**Schedule Detail (R4a Exhibit)**

**February 2008**

BUDGET ACTIVITY <b>7 - Operational system development</b>		PE NUMBER AND TITLE <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>					PROJECT <b>093</b>	
<u>Schedule Detail</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>	
Comd, Cntrl, Com, Comp, and Intell (C4I)/Interop Cert Tests, Imp Oper Timeline	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Card Consolidation	1Q - 4Q							
Network Interoperability Testing/Cerification	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			

Command, Control, Communications, Computers, and Intelligence (C4I)/Interoperability Certification Tests, Improved Operational Timeline.

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>7 - Operational system development</b>		<b>PE NUMBER AND TITLE</b> <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>						<b>PROJECT</b> <b>784</b>	
COST (In Thousands)	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	43152	44614	51866	14004	2627	2679	2752	Continuing	Continuing

**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, Joint Special Operations Force (JSOF), and Joint Force combatant commanders. GMLRS are the primary munitions for units fielded with the High Mobility Artillery Rocket System (HIMARS) and Multiple Launch Rocket System (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, adds point targets, and supports Troops in Contact (TIC). The alternative warhead will service the DPICM target set and leave zero unexploded ordnance on the battlefield. This effort includes development and test activities. 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 2007. In the more than 500 missions flown in Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF), the GMLRS Unitary Rocket has recorded a 98% reliability rate demonstrating high effectiveness and low collateral damage while supporting TIC. 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.

<b><u>Accomplishments/Planned Program:</u></b>	<b><u>FY 2007</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>
Perform technical assessments, concept studies, prepare milestone documentation and risk reduction	2152	2473	3624
Conduct Development and Engineering for Insensitive Munitions (IM) Program	2341	4715	5038
Conduct Development Engineering; Design and Develop; Perform Integration and Test of Multi-Mode Fuzes and Alternative Warheads	9790	19801	22350
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))	10318		
Perform Anti-Jamming Analysis and System Engineering/Integration	3533		
Conduct Functional Configuration Audit, Final Product Data Definition Package (PDDP), and System Integration Test	8893	8181	8780
Conduct system test and evaluation activities	6125	8262	12074
Small Business Innovative Research/Small Business Technology Transfer Programs		1182	

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

<b>BUDGET ACTIVITY</b> <b>7 - Operational system development</b>	<b>PE NUMBER AND TITLE</b> <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>	<b>PROJECT</b> <b>784</b>
Total	43152	44614

<b><u>B. Other Program Funding Summary</u></b>	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Missile Procurement Army - GMLRS (C64400)	124952	201786	247213	311271	341392	368386	369399	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. Recent testing of the self-destruct fuze has proven a significantly lower dud rate and will be cut into production immediately. Other GMLRS development efforts include desired new rocket motor capabilities; design, evaluation, and test of alternative warhead technologies; and increased range. The European Cooperative Development Partners for GMLRS have expressed a desire to join the GMLRS Alternative Warhead program.

The GMLRS Unitary Acquisition Strategy is a streamlined product improvement program. Initial configuration hardware maximizes 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 program during the Production and Deployment Phase. 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. In the more than 500 missions flown in Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF), the GMLRS Unitary Rocket has recorded a 98% reliability rate demonstrating high effectiveness and low collateral damage while supporting Troops in Contact (TIC).

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
7 - Operational system development			0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM							784		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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								91194	
SDD Unitary Contract	SS/CPFF	LMMFCS Dallas, TX	163679	18097	1Q	24136	1Q	24168	1Q	Cont.	Cont.	
Government Support	N/A	AMCOM/AMRDEC, RSA	57437	3626	1-3Q	7183	1-4Q	3220	1-4Q	Cont.	Cont.	
Subtotal:			312310	21723		31319		27388		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; N/A - Not Applicable

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	15413	2845	1-3Q	1479	1-3Q	1932	1-3Q	Cont.	Cont.	
Subtotal:			15413	2845		1479		1932		Cont.	Cont.	

Remarks: C/CPFF-Cost/Cost Plus Fixed Fee  
S3-Systems Studies Simulation, Inc.  
TMI-Tec Masters, Inc.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	78251	14906	1-4Q	8227	1-4Q	20936	1-4Q	Cont.	Cont.	
Subtotal:			78251	14906		8227		20936		Cont.	Cont.	

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

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY <b>7 - Operational system development</b>			PE NUMBER AND TITLE <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>							PROJECT <b>784</b>		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	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	16631	3678	1-4Q	3589	1-4Q	1610	1-4Q	Cont.	Cont.	
Subtotal:			16631	3678		3589		1610		Cont.	Cont.	
Remarks: PFRMS - Precision Fires Rocket and Missile Systems												
<b>Project Total Cost:</b>			<b>422605</b>	<b>43152</b>		<b>44614</b>		<b>51866</b>		<b>Cont.</b>	<b>Cont.</b>	

# Schedule Profile (R4 Exhibit)

February 2008

Event Name	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
	Unitary POT-2																											
(1) UNITARY MS C																												
(2) UNITARY LRIP I CA																												
Alternative Warhead																												
UNITARY FRP IOTE																												
(3) UNITARY IOC																												
UNITARY FRP																												
Technical Assessment/Concept Studies/Cost Reduction Studies																												

**Schedule Detail (R4a Exhibit)**

**February 2008**

BUDGET ACTIVITY <b>7 - Operational system development</b>		PE NUMBER AND TITLE <b>0603778A - MLRS PRODUCT IMPROVEMENT PROGRAM</b>					PROJECT <b>784</b>	
<u>Schedule Detail</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>	
Unitary PQT-2	1Q							
UNITARY MS C	2Q							
UNITARY LRIP I CA	3Q							
Alternative Warhead	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q				
UNITARY FRP IOTE		2Q - 3Q						
UNITARY IOC		4Q						
UNITARY FRP			1Q					
Technical Assessment/Concept Studies/Cost Reduction Studies				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	

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

**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.