Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	64.834	20.227	24.736	0.000	24.736	0.000	0.000	0.000	0.000	0	134.533
L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*	19.278	0.000	5.969	0.000	5.969	0.000	0.000	0.000	0.000	Continuing	Continuing
L88: *ENHANCED AN/TPQ 36*	45.556	20.227	18.767	0.000	18.767	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program funds design, development and test of primary target acquisition and counterfire radars to automatically detect, locate and classify hostile indirect fire weapons (mortars, artillery, rockets, and missiles). This PE directly supports the prioritization, tracking, and locating of targets, and dissemination of that information for simultaneous attack of multiple threats. It provides the Warfighter with continuous and responsive counterfire target acquisition systems for all types and phases of military operations. Project L86, Lightweight Counter Mortar Radar, Version 3 (LCMR (V)3) provides 360 degree coverage and is used to detect, locate and report hostile locations of enemy indirect firing systems out to a range of 10 kilometers. Project L88, Enhanced AN/TPQ-36 (EQ-36), is a highly mobile radar system that will leverage the latest in technology design to accelerate technology infusion and increase range while improving False Alarm Rate, reducing obsolescence and increasing reliability. EQ-36 will provide 90 degree coverage and extended range, with an incremental development to increase detection capability to 360 degrees. The EQ-36 will be interoperable with future Battle Command Systems.

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	47.688	20.333	6.926	0.000	6.926
Current President's Budget	64.834	20.227	24.736	0.000	24.736
Total Adjustments	17.146	-0.106	17.810	0.000	17.810
• Congressional General Reductions		-0.106			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	9.883	0.000			
• SBIR/STTR Transfer	-1.337	0.000			
• Adjustments to Budget Years	0.000	0.000	17.810	0.000	17.810
• OMNIBUS Reprogramming	8.600	0.000	0.000	0.000	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*

Change Summary Explanation

FY11 funding increase supports EQ-36 and LCMR development efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*	19.278	0.000	5.969	0.000	5.969	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The AN/TPQ-50 (formerly known as AN/TPQ-48(V)3) Lightweight Counter Mortar Radar (LCMR) is a digitally connected, day/night mortar, cannon, and rocket locating system. It is used to detect, locate, and report enemy indirect firing systems and will also provide observed fires from friendly units. AN/TPQ-50 will also be deployed as part of a System of Systems for Counter-Rockets, Artillery, and Mortars (C-RAM). It will provide data to the Forward Area Air Defense Command and Control (FAADC2) node to provide a sense and warn force protection capability for fixed and semi-fixed sites.It will provide 360 degrees of azimuth coverage and cover a range of 500 meters to 10 kilometers. The AN/TPQ-50 will provide twice the detection range and twice the targeting accuracy of the existing AN/TPQ-48(V)2 Quick Reaction Capability (QRC) currently fielded in support of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF).FY11 funds development efforts to include conduct of Initial Operational Test and Evaluation, 107mm rocket detection in low trajectories and radar networking.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	13.709	0.000	0.000	0.000	0.000
Complete development of test articles to include non-recurring engineering and Program Management support *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO					
Program #2 Initiate development effort for 107mm rocket detection in low trajectories and radar networking to include associated PMO and support costs. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO	0.000	0.000	4.172	0.000	4.172
Program #3 Test activities to support Limited User Test (LUT), Initial Operational Test & Evaluation (IOT&E) and Development Test (DT) for new initiatives. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010	5.569	0.000	1.797	0.000	1.797

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	19.278	0.000	5.969	0.000	5.969

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: *SSN: B05201 Lightweight Counter Mortar Radar*	67.760	90.151	32.980	25.000	57.980	33.867	36.196	21.281	21.227	Continuing	Continuing

D. Acquisition Strategy

The AN/TPQ-50 Lightweight Counter Mortar Radar (LCMR) is being developed to meet user Capabilities Production Document (CPD) requirements. Acquisition Strategy approval was obtained in May 2006. In September 2006, a sole source development contract was awarded to SRCTec, the developer and producer of the AN/TPQ-48(V)2 QRC LCMR. Government Development Test (DT) and Limited User Test (LUT) are scheduled for FY10 and development for 107mm rocket detection and radar networking capabilities will begin in FY11.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Primary Hardware Dev	SS/CPFF	SRCTec North Syracuse, NY	25.063	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Systems Engineering Government	C	CERDEC Fort Monmouth, NJ	2.964	0.000		0.000		0.000		0.000	Continuing	Continuing	0
107mm Rockets and Radar Networking	SS/CPFF	SRCTec North Syracuse, NY	0.000	0.000		3.407		0.000		3.407	Continuing	Continuing	0
Radar Environmental Simulators (RES)	C	Oakridge National Labs Oakridge, TN	0.125	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Systems Engineering Contractor	SS	Various Location could not be determined.	4.051	0.000		0.000		0.000		0.000	Continuing	Continuing	0
		Subtotal	32.203	0.000		3.407		0.000		3.407			0.000

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
	C	Various	0.470	0.000		0.000		0.000		0.000	Continuing	Continuing	0

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Development Support (Government)		Location could not be determined.											
		Subtotal	0.470	0.000		0.000		0.000		0.000			0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Test Support (Contractor)	C	TBD Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Limited User Test	C	YUMA AZ/WSMR, NM	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Follow-On Test Event (FOTE)	C	YUMA AZ/WSMR, NM	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Initial Operational Test & Evaluation (IOT&E)	C	YUMA AZ/WSMR, NM	0.000	0.000		1.297		0.000		1.297	Continuing	Continuing	0
Developmental Test Operational Test (DT/OT)	C	Yuma AZ/WSMR, NM	0.126	0.000		0.500		0.000		0.500	Continuing	Continuing	0
Test Support (Government)	C	Various	0.250	0.000		0.000		0.000		0.000	Continuing	Continuing	0

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
		Location could not be determined.											
		Subtotal	0.376	0.000		1.797		0.000		1.797			0.000

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Program Management (Contractor)	C/FP	Various Location could not be determined.	2.823	0.000		0.350		0.000		0.350	Continuing	Continuing	0
Program Management	C	PM NV/RSTA Fort Monmouth, NJ	0.784	0.000		0.100		0.000		0.100	Continuing	Continuing	0
Program Management (Government Matrix)	C	Various Location could not be determined.	1.009	0.000		0.315		0.000		0.315	Continuing	Continuing	0
		Subtotal	4.616	0.000		0.765		0.000		0.765			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.665	0.000		5.969		0.000		5.969			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Development Test				#	#																							
Customer Test				#																								
Limited User Test						#																						
Milestone C						#																						
Initial Operational Test and Evaluation (IOT&E)										#																		
Award Urgent Contract Action (UCA) for V3 QRC systems			#																									
First Unit Equipped (FUE) (V3)							#																					
Full Rate Production Decision												#																
Initiate 107mm Rocket Detection and Radar Networking Efforts and Testing								#	#	#	#																	

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
Development Test	4	2009	1	2010
Customer Test	4	2009	4	2009
Limited User Test	2	2010	2	2010
Milestone C	2	2010	2	2010
Initial Operational Test and Evaluation (IOT&E)	2	2011	2	2011
Award Urgent Contract Action (UCA) for V3 QRC systems	3	2009	3	2009
First Unit Equipped (FUE) (V3)	3	2010	3	2010
Full Rate Production Decision	4	2011	4	2011
Initiate 107mm Rocket Detection and Radar Networking Efforts and Testing	4	2010	3	2011

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army											DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*				**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*				**PROJECT** L88: *ENHANCED AN/TPQ 36*			
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
L88: *ENHANCED AN/TPQ 36*	45.556	20.227	18.767	0.000	18.767	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Enhanced AN/TPQ-36 (EQ-36) is a highly mobile radar system designed to classify targets for automatic first-round location of mortar, cannon and rocket enemy fires and to provide observed fires from friendly units. The EQ-36 will provide 90 and 360 degree coverage against the entire threat set. This program will leverage the latest in technology design to provide increased range, reduced crew size, as well as increased reliability, availability, and maintainability. The EQ-36 will provide digital communications and be interoperable with future Battle Command Systems. Increment 2 will provide improved 360 degree capabilities against rocket and artillery with Integrated Fire Protection Capability (IFPC) interoperability and a quick disconnect capability for the 60kw generator. FY2011 funds will complete development, integration, and conduct of Limited User Test (LUT) for Increment 2 capabilities.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	30.997	7.868	0.000	0.000	0.000
Primary development and test of four (4) Enhanced AN/TPQ-36 NRE Increment 1 systems, and associated Program Management support to meet the Army's counterfire requirements. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L88: *ENHANCED AN/TPQ 36*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO					
Program #2 Increment 2 development, integration, test and test fixes to include associated PMO and support costs. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO	9.868	4.594	11.557	0.000	11.557
Program #3 Test activities to include Limited User Test (LUT). Efforts include cost of range times at YUMA Proving Ground (YPG), gun crews,ammunition, as well as associated PMO and support costs. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010	4.691	7.096	7.126	0.000	7.126

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L88: *ENHANCED AN/TPQ 36*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #4 Small Business Innovative Research/Small Business Technology Transfer Programs *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO	0.000	0.563	0.000	0.000	0.000
Program #5 Long Range Counterfire Radar *FY 2009 Accomplishments:* FY 2009	0.000	0.106	0.084	0.000	0.084

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L88: *ENHANCED AN/TPQ 36*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	45.556	20.227	18.767	0.000	18.767

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: *B05310 Enhanced AN/ TPQ-36*	96.145	220.050	275.867	20.000	295.867	398.382	507.066	593.048	608.054	Continuing	Continuing

D. Acquisition Strategy

The Enhanced AN/TPQ-36 (EQ-36) leverages technology developed in the Multi-Mission Radar Advanced Technology Objective (ATO) program incorporating the latest antenna technology into the EQ-36. In order to field the EQ-36 capability to the Warfighter in the most expeditious manner with the least amount of risk, the EQ-36 will be produced in two increments based on two tiers of technical threshold requirements. Increment 1 capabilities are planned to be fielded as a replacement to the AN/TPQ-36 and AN/TPQ-37 radar systems. Increment 2 capabilities will provide increased performance over Increment 1 and will meet all of the user's threshold requirements. A contract was awarded in 4QFY06 based on full and open competition. A Limited Procurement Milestone C approval was received in July 2008 which supported use of OCO and Base budget funds to meet urgent operational requirements. An option for initial production units was exercised in July 08 in order to support an Operational Needs Statement (ONS). Additional systems are being procured in FY10 to support additional theater requirements. An update to the Milestone C approval will be conducted and a follow-on production contract will be competitively awarded in FY11. The system will eventually replace all of the AN/TPQ-36 and AN/TPQ-37 legacy systems in the fleet.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L88: *ENHANCED AN/TPQ 36*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Primary Hardware Development	C/CPIF	Lockheed Martin Syracuse, NY	120.363	9.697		8.907		0.000		8.907	Continuing	Continuing	0
Ancillary Equipment	C	Various Location could not be determined.	3.571	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Radar Environmental Simulators (RES)	C	Oakridge National Labs Oak Ridge, TN	4.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Systems Engineering (Contractor)	C/FP	Various Location could not be determined.	3.798	0.550		0.550		0.000		0.550	Continuing	Continuing	0
Systems Engineering (Government)	C	Various Location could not be determined.	0.726	0.630		0.630		0.000		0.630	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.563		0.000		0.000		0.000	Continuing	Continuing	0
		Subtotal	132.958	11.440		10.087		0.000		10.087			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L88: *ENHANCED AN/TPQ 36*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Development Support (Government)	C	Various Location could not be determined.	2.303	1.000		0.950		0.000		0.950	Continuing	Continuing	0
Development Support (Contractor)	C	Various Location could not be determined.	1.636	0.350		0.250		0.000		0.250	Continuing	Continuing	0
		Subtotal	3.939	1.350		1.200		0.000		1.200			0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Test Support (Government)	C	Various Location could not be determined.	0.325	7.096		7.126		0.000		7.126	Continuing	Continuing	0
		Subtotal	0.325	7.096		7.126		0.000		7.126			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L88: *ENHANCED AN/TPQ 36*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	**Contract Method & Type**	**Performing Activity & Location**	**Total Prior Years Cost**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Award Date**	**Cost**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Program Management (Contractor)	C/FP	Various Location could not be determined.	1.982	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Program Management (Government)	C	Various Location could not be determined.	0.702	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Program Management	C	PM NV/RSTA Fort Monmouth, NJ	2.116	0.235		0.270		0.000		0.270	Continuing	Continuing	0
		Subtotal	4.800	0.235		0.270		0.000		0.270			0.000

Remarks

	Total Prior Years Cost	**FY 2010**		**FY 2011 Base**		**FY 2011 OCO**		**FY 2011 Total**	**Cost To Complete**	**Total Cost**	**Target Value of Contract**
Project Cost Totals	142.022	20.121		18.683		0.000		18.683			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L88: *ENHANCED AN/TPQ 36*

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Dev Test/Operational Test (DT/OT) /Limited User Test (LUT) Increment 1				#	#	#	#																					
DT Increment 2					#	#																						
Limited User Test (LUT) #2											#																	
First Unit Equipped (FUE) - IP Systems					#																							
FY09/FY10 QRC Production					#	#	#	#	#	#	#	#	#	#	#													
Milestone C Update									#																			
Competitive Production Efforts									#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604823A: *FIREFINDER*	**PROJECT** L88: *ENHANCED AN/TPQ 36*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
Dev Test/Operational Test (DT/OT) /Limited User Test (LUT) Increment 1	4	2009	3	2010
DT Increment 2	1	2010	2	2010
Limited User Test (LUT) #2	3	2011	3	2011
First Unit Equipped (FUE) - IP Systems	1	2010	1	2010
FY09/FY10 QRC Production	1	2010	3	2012
Milestone C Update	1	2011	1	2011
Competitive Production Efforts	1	2011	3	2015