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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604319A / <i>Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	-	534.457
DU3: <i>IFPC2</i>	-	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	-	534.457

The FY 2015 OCO Request will be submitted at a later date.

Note

Adjustments to Budget Years: Change due to overall decrease in TOA.

A. Mission Description and Budget Item Justification

This program supports the overall Air and Missile Defense (AMD) architecture and provides a robust intercept capability against Cruise Missiles (CM), Unmanned Aircraft System (UAS) and Rocket, Artillery, and Mortar (RAM) threats for deployed forces. The Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) is a ground-based weapon system that will be designed to acquire, track, engage, and defeat UAS, CM, and RAM. The System will provide 360-degree protection and will simultaneously engage threats arriving from different azimuths. A block acquisition approach will be used to provide this capability. The Block 1 system will consist of an existing interceptor and sensor and development of technical fire control and a Multi-Mission Launcher (MML) to support the UAS and CM mission. The IFPC Inc 2-I System will be compatible with the Army Integrated Air and Missile Defense (IAMD) Command and Control (C2) architecture. The IFPC Inc 2-I System will be transportable by Army common mobile platforms.

B. Program Change Summary (\$ in Millions)

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	76.039	79.232	107.587	-	107.587
Current President's Budget	25.710	79.190	96.177	-	96.177
Total Adjustments	-50.329	-0.042	-11.410	-	-11.410
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-47.210	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.809	-			
• Adjustments to Budget Years	-0.038	-0.042	-11.410	-	-11.410
• Other Adjustments 1	-2.272	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604319A / <i>Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)</i>	Project (Number/Name) DU3 / <i>IFPC2</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DU3: <i>IFPC2</i>	-	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	-	534.457
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

Note
 Previous PE/Project/Title: 0603305A/TR7 Army Missile Defense Systems Integration/TR7 Indirect Fire Protection Capability II-Intercept
 Current PE/Project/Title: 0604319A/DU3 Indirect Fire Protection Capability Increment 2/ DU3 IFPC2
 (Funds realigned to current PE in FY13.)

A. Mission Description and Budget Item Justification

This program supports the overall Air and Missile Defense (AMD) architecture and provides a robust intercept capability against Cruise Missiles (CM), Unmanned Aircraft System (UAS) and Rocket, Artillery, and Mortar (RAM) threats for deployed forces. The Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) is a ground-based weapon system that will be designed to acquire, track, engage, and defeat UAS, CM, and RAM. The System will provide 360-degree protection and will simultaneously engage threats arriving from different azimuths. A block acquisition approach will be used to provide this capability. The Block 1 system will consist of an existing interceptor and sensor and development of technical fire control and a Multi-Mission Launcher (MML) to support the UAS and CM mission. The IFPC Inc 2-I System will be compatible with the Army Integrated Air and Missile Defense (IAMD) Command and Control (C2) architecture. The IFPC Inc 2-I System will be transportable by Army common mobile platforms.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) System Engineering & Program Management	6.572	23.820	28.052
Articles:	-	-	-
Description: Funding is provided for the following efforts:			
FY 2013 Accomplishments:			
<ul style="list-style-type: none"> - Performed system engineering, logistics studies, analysis and design and business management activities - Conducted program reviews - Prepared milestone documentation - Conducted milestone review - Continued to provide technical support for Analysis of Alternatives (AOA) excursion - Performed technical assessments, concept studies, cost reduction, risk reduction, and required documentation 			
FY 2014 Plans:			
- Continue Research, Development, Test, & Evaluation (RDT&E) efforts associated with the Engineering Demonstration			

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Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604319A / <i>Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)</i>	Project (Number/Name) DU3 / <i>IFPC2</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Perform system engineering, logistics engineering, system test and evaluation, technical control, and business management activities - Conduct system and program reviews - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Continue RDT&E efforts associated with the Engineering Demonstration - Perform system engineering, logistics engineering, system test and evaluation management, technical control, and business management activities - Conduct system and program reviews - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation 				
<p>Title: IFPC Inc 2-I Engineering and Technical Support</p> <p>Description: Funding is provided for the following efforts:</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Provided engineering and technical support for development of system hardware, software, and integration requirements and definition - Integrated design refinements from Science and Technology effort into system baseline design - Participated in program reviews - Provided technical support for milestone documentation and decision review - Performed technical assessments, concept studies, cost reduction, risk reduction, and required documentation <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Continue engineering and technical support for development of system hardware, software, and integration requirements and definition - Continued integration of design refinements from Science and Technology effort into system baseline design - Participate in system and program reviews - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Continue engineering and technical support for design of system hardware, software, and integration requirements and definition - Participate in system and program reviews 		Articles:	13.338	31.370
		-	-	52.573
		-	-	-

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Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604319A / <i>Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)</i>	Project (Number/Name) DU3 / <i>IFPC2</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
- Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation				
Title: IFPC Inc 2-I System/Subsystem Development, Integration, and Testing		5.800	24.000	15.552
Articles:		-	-	-
Description: Funding is provided for the following efforts:				
FY 2013 Accomplishments:				
<ul style="list-style-type: none"> - Supported completion of system/subsystem requirements definition - Initiated system/subsystem hardware, software, and integration design and development activities - Initiated development of Multi-Mission Launcher Technical Data Package - Participated in system and program reviews - Supported milestone documentation and decision review - Procured hardware long lead material and items - Initiated fabrication and integration development of hardware components including: <ul style="list-style-type: none"> - Rail/Tube Design - Missile Interface Control Design - Launcher Control Design - Elevation and Azimuth Drive Design - Prime Power and Electronic Design - Vehicle Design Modifications - Network Interface Design - Gear Bearing - Cradle Pre-Milestone A <ul style="list-style-type: none"> - Continued with Research, Development, Test, & Evaluation (RDT&E) efforts to support the Engineering Demonstration - Performed technical assessments, concept studies, cost reduction, risk reduction, and required documentation 				
FY 2014 Plans:				
<ul style="list-style-type: none"> - Continue system component hardware, software, and integration design and development activities - Participate in system and program reviews - Fabricate, integrate system/subsystem hardware - Continue development of technical data package - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation 				
FY 2015 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604319A / <i>Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)</i>	Project (Number/Name) DU3 / <i>IFPC2</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Continue system component hardware, software, and integration development activities - Participate in system and program reviews - Continue development of technical data package - Perform technical assessments, concept studies, cost reduction, required documentation, and integration, component, and system level risk reduction - Continue system/subsystem hardware, software, and integration test activities - Perform missile assessment to inform selection of optimum missile to counter Unmanned Aerial Systems (UAS), Cruise Missiles (CM), and Rocket, Artillery, and Mortar (RAM) threats 			
Accomplishments/Planned Programs Subtotals	25.710	79.190	96.177

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0604869A, Proj M06: <i>Patriot/MEADS Combined Aggregate Program (CAP)</i>	348.234	-	-	-	-	-	-	-	-	-	348.234
• PE 0605456A, Proj PA3: <i>PAC-3/MSE MISSILE</i>	63.123	68.807	35.009	-	35.009	2.271	-	-	-	Continuing	Continuing
• SSN C53101: <i>MSE Missile</i>	8.249	690.401	384.605	-	384.605	419.791	422.527	458.724	497.553	Continuing	Continuing
• PE 0205456, Proj EF9: <i>System Integration and Test</i>	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	Continuing	Continuing
• SSN C50016: <i>Lower Tier Air and Missile Defense (AMD)</i>	-	-	110.300	-	110.300	116.416	131.549	114.678	113.281	Continuing	Continuing
• PE 0102419A, Proj E55: <i>JLENS</i>	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	Continuing	Continuing
• PE 0605457A, Proj S40: <i>Army Integrated Air and Missile Defense (AIAMD)</i>	233.892	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing
• SSN BZ5075: <i>IAMD Battle Command System</i>	-	-	-	-	-	21.091	206.300	298.990	379.981	Continuing	Continuing
• PE 0604820A, Proj E10: <i>Sentinel</i>	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing
• PE 654741A, Proj 126, 146, 149: <i>Air Defense C2I Eng Dev</i>	42.876	18.284	15.906	-	15.906	20.248	19.632	19.878	20.165	Continuing	Continuing

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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

This program is an integral part of the Army Integrated Air and Missile Defense (IAMD) architecture.

D. Acquisition Strategy

The Materiel Development Decision (MDD) was completed in fourth quarter Fiscal Year (FY) 2011, allowing for the initiation of an Analysis of Alternatives (AoA) to determine materiel solution approach; establishment of requirement baseline; initiation of development of required Milestone documents and execution of the Milestone decision to continue with Research, Development, Test, & Evaluation (RDT&E) efforts associated with conducting an Engineering Demonstration.

The Government will fund the Aviation and Missile Research Development and Engineering Center (AMRDEC) for the development and demonstration of the Multi-Mission Launcher (MML). The Government also plans to fund the Letterkenny Army Depot (LEAD) for the development and testing of the MML. The MML development schedule assumes use of this organic industrial base.

No new contracts are anticipated in support of the development of the Indirect Fire Protection Capability Increment 2-Intercept (IFPC Inc 2-I) Block I effort, unless determined to be necessary. The Cost Benefit Analysis (CBA) will further inform decisions on new contracts. The Government will use existing contracts and work performed by other Government agencies. The IFPC Inc 2-I Product Office will fund AMRDEC and LEAD to perform additional work. The Government will use the following contracts:

- No new contracts are anticipated to develop and integrate the IFPC suite of missiles to the Technical Fire Control (TFC) and IFPC Inc 2-I Block I Interceptor uplink. The existing contract will also be used to procure test missiles to support Pre-Milestone B activities and the Engineering and Manufacturing Development (EMD) phase.
- The government anticipates using the Army's Integrated Air and Missile Defense Battle Command System (IBCS) contract to support development, test, and integration of the IFPC Inc 2-I Block I Interceptor with the IBCS and the MML.
- The government anticipates using the Army's Sentinel contract to incorporate sensor software upgrades to enhance detection of small radar cross section (RCS), slow-moving, and low-flying targets.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Admin	MIPR	Cruise Missile Defense Systems Project Office : Huntsville, Alabama	0.000	0.483		10.067		8.778		-		8.778	Continuing	Continuing	Continuing
Subtotal			0.000	0.483		10.067		8.778		-		8.778	-	-	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Engineering & Integration	MIPR	Cruise Missile Defense Systems Project Office : Huntsville, AL	0.000	6.089		13.753		19.274		-		19.274	Continuing	Continuing	Continuing
Engineering and Technical Support	MIPR	Aviation and Missile Research, Development, Engineering Center : Huntsville, AL	0.000	13.338	Apr 2013	31.370		52.573		-		52.573	Continuing	Continuing	Continuing
System/Subsystem Development, Integration, and Test	MIPR	Multiple Activities : Multiple Locations	0.000	5.800		24.000		15.552		-		15.552	Continuing	Continuing	Continuing
Subtotal			0.000	25.227		69.123		87.399		-		87.399	-	-	-

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		0.000	25.710	79.190	96.177	-	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604319A / <i>Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)</i>	Project (Number/Name) DU3 / <i>IFPC2</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Analysis of Alternatives (AoA)	██████████																											
Pre-Milestone A Transition	██████████																											
Block 1 Milestone A					██████████																							
Block 1 Pre-Milestone B Activities					██																							
Engineering Demonstration													██████████															
Block 1 Milestone B													██████████															
Block 1 Engineering and Manufacturing (EMD) Phase													██															
Block 1 Milestone C																					██████████							

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604319A / <i>Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)</i>	Project (Number/Name) DU3 / <i>IFPC2</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Analysis of Alternatives (AoA)	4	2011	3	2013
Pre-Milestone A Transition	2	2011	4	2013
Block 1 Milestone A	4	2013	4	2013
Block 1 Pre-Milestone B Activities	1	2014	2	2016
Engineering Demonstration	1	2016	1	2016
Block 1 Milestone B	3	2016	3	2016
Block 1 Engineering and Manufacturing (EMD) Phase	3	2016	3	2018
Block 1 Milestone C	4	2018	4	2018