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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army **Date:** February 2015

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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	76.559	96.131	155.361	-	155.361	90.323	58.562	43.384	109.495	-	629.815
DU3: <i>IFPC2</i>	-	76.559	96.131	155.361	-	155.361	90.323	58.562	43.384	109.495	-	629.815

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)

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	79.190	96.177	156.523	-	156.523
Current President's Budget	76.559	96.131	155.361	-	155.361
Total Adjustments	-2.631	-0.046	-1.162	-	-1.162
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.631	-			
• Adjustments to Budget Years	-	-0.046	-1.162	-	-1.162

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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>
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COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
DU3: <i>IFPC2</i>	-	76.559	96.131	155.361	-	155.361	90.323	58.562	43.384	109.495	-	629.815
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

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 Fiscal Year (FY) 2013.)

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)

	FY 2014	FY 2015	FY 2016
Title: Indirect Fire Protection Capability Increment 2 - Intercept (IFPC Inc 2-I) System Engineering & Program Management	23.029	28.038	28.580
Description: Funding is provided for the following efforts:			
FY 2014 Accomplishments:			
<ul style="list-style-type: none"> - Continued Research, Development, Test, & Evaluation (RDT&E) efforts associated with the Engineering Demonstration - Performed system engineering, logistics engineering, system test and evaluation, technical control, and business management activities - Conducted system and program reviews - Performed technical assessments, concept studies, cost reduction, risk reduction, and required documentation 			
FY 2015 Plans:			
<ul style="list-style-type: none"> - Continue Research, Development, Test, & Evaluation (RDT&E) efforts associated with the Engineering Demonstration - Perform system engineering, logistics engineering, system test and evaluation management, technical control, and business management activities 			

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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)		FY 2014	FY 2015	FY 2016
<ul style="list-style-type: none"> - Conduct system and program reviews - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation <p>FY 2016 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 - Conduct Milestone B preparation, documentation, and execution activities - Transition from Technology Maturation and Risk Reduction (TMRR) to Engineering and Manufacturing Development (EMD) phase 				
<p>Title: IFPC Inc 2-I Engineering and Technical Support</p> <p>Description: Funding is provided for the following efforts:</p> <p>FY 2014 Accomplishments:</p> <ul style="list-style-type: none"> - Continued engineering and technical support for development of system hardware, software, and integration requirements and definition - Continued integration of design refinements into system baseline design - Participated in system and program reviews - Performed 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 - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation <p>FY 2016 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 - Perform technical assessments, concept studies, cost reduction, risk reduction, and required documentation 		30.328	52.548	48.655
<p>Title: IFPC Inc 2-I System/Subsystem Development, Integration, and Testing</p>		23.202	15.545	78.126

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
<p>Description: Funding is provided for the following efforts:</p> <p>FY 2014 Accomplishments:</p> <ul style="list-style-type: none"> - Continued system component hardware, software, and integration design and development activities - Participated in system and program reviews - Fabricated, integrated system/subsystem hardware - Continued development of technical data package - Performed technical assessments, concept studies, cost reduction, risk reduction, and required documentation - Performed missile assessment to inform identification of future missile candidates to counter Unmanned Aerial Systems (UAS), Cruise Missiles (CM), and Rocket, Artillery, and Mortar (RAM) threats. <p>FY 2015 Plans:</p> <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 <p>FY 2016 Plans:</p> <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 - Complete manufacturing, assembly, and integration of Multi-Mission Launcher (MML) prototypes - Conduct Engineering Demonstration - Purchase EMD test assets and components 			
Accomplishments/Planned Programs Subtotals	76.559	96.131	155.361

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

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PE 0605456A, Proj PA3: <i>PAC-3/MSE MISSILE</i>	86.223	34.991	2.272	-	2.272	-	-	-	-	Continuing	Continuing
• SSN C53101: <i>MSE Missile</i>	690.401	532.605	414.946	-	414.946	430.622	462.676	493.613	569.488	Continuing	Continuing
• PE 0205456, Proj EF9: <i>System Integration and Test</i>	-	78.720	64.159	-	64.159	60.214	58.722	75.315	96.392	Continuing	Continuing
• SSN C50016: <i>Lower Tier Air and Missile Defense (AMD)</i>	-	110.300	115.075	-	115.075	130.366	113.676	123.582	151.421	Continuing	Continuing
• PE 0102419A, Proj E55: <i>Joint Aero Stat Program - EMD Effort</i>	57.976	-	-	-	-	-	-	-	-	Continuing	Continuing
• SSN C62002: <i>IFPC Inc 2-I Block 1 Missile</i>	-	-	-	-	-	-	73.552	123.106	186.480	Continuing	Continuing
• SSN C62001: <i>IFPC Inc 2-I Block 1 System</i>	-	-	-	-	-	19.920	48.076	139.362	175.738	Continuing	Continuing
• PE 0604820A, Proj E10: <i>Sentinel</i>	1.796	5.221	12.309	-	12.309	11.465	10.971	12.191	30.277	Continuing	Continuing
• PE 0605457A, Proj S40: <i>Army Integrated Air and Missile Defense (AIAMD)</i>	358.192	152.516	214.099	-	214.099	227.103	169.575	153.451	33.424	Continuing	Continuing
• SSN BZ5075: <i>IAMD Battle Command System</i>	-	-	20.917	-	20.917	204.513	296.361	375.763	443.637	Continuing	Continuing
• PE 654741A, Proj 126, 146, 149: <i>Air Defense C2I Eng Dev</i>	38.412	15.898	24.569	-	24.569	27.131	20.524	20.018	18.082	Continuing	Continuing
• SSN AD50700: <i>AIR & MSL Defense Planning & Control Sys</i>	13.090	27.374	28.176	-	28.176	32.443	32.690	33.032	13.366	Continuing	Continuing
• PE 0202429A, Proj EP8: <i>JLENS COCOM EXERCISE</i>	22.659	43.248	40.565	-	40.565	46.371	6.746	-	-	-	159.589

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.

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The Government will fund the Aviation and Missile Research Development and Engineering Center (AMRDEC) for the development and demonstration of the Multi-Mission Launcher during the Technology Maturation and Risk Reduction phase of the program. An independent Cost Benefit Analysis will inform the Acquisition Strategy for the Engineering, Manufacturing and Development and Production phases of acquisition.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 4				PE 0604319A / Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)				DU3 / IFPC2							
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Admin	MIPR	Cruise Missile Defense Systems Project Office : Huntsville, Alabama	0.483	9.733		8.774		9.988		-		9.988	Continuing	Continuing	Continuing
Subtotal			0.483	9.733		8.774		9.988		-		9.988	-	-	-
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering & Integration	MIPR	Cruise Missile Defense Systems Project Office : Huntsville, AL	6.089	13.296		19.264		18.592		-		18.592	Continuing	Continuing	Continuing
Engineering and Technical Support	MIPR	Aviation and Missile Research, Development, Engineering Center : Huntsville, AL	13.338	30.328		52.548		48.655		-		48.655	Continuing	Continuing	Continuing
System/Subsystem Development, Integration, and Test	MIPR	Multiple Activities : Multiple Locations	5.799	23.202		15.545		78.126		-		78.126	Continuing	Continuing	Continuing
Subtotal			25.226	66.826		87.357		145.373		-		145.373	-	-	-
Project Cost Totals			25.709	76.559		96.131		155.361		-		155.361	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army **Date:** February 2015

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Event Name	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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) Block 1 Milestone A	▲ Blk 1 Milestone A																											
Block 1 Pre-Milestone B Activities	Blk 1 Pre-Milestone B Activities																											
Engineering Demonstration									ED																			
(2) Block 1 Milestone B													▲ Blk 1 Milestone B															
Block 1 Engineering and Manufacturing Development (EMD) Phase									Blk 1 EMD Phase																			
(3) Block 1 Milestone C																	▲ Blk 1 Milestone C											

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
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
Block 1 Milestone A	2	2014	2	2014
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 Development (EMD) Phase	3	2016	3	2018
Block 1 Milestone C	4	2018	4	2018