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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0603913C I Israeli Cooperative Programs							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	1,928.289	373.800	300.000	300.000	-	300.000	300.000	300.000	300.000	300.000	Continuing	Continuing
MD20: Israeli Upper Tier	553.698	190.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	743.698
MD26: Arrow Weapon System	429.345	82.300	163.000	159.000	-	159.000	173.000	173.000	173.000	173.000	Continuing	Continuing
MD34: Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))	945.246	101.500	137.000	141.000	-	141.000	127.000	127.000	127.000	127.000	Continuing	Continuing
Program MDAP/MAIS Code: 362												
Note Content supports expected contributions from Israel per international agreements.												
A. Mission Description and Budget Item Justification Since 1986, the United States and the State of Israel have cooperated on missile defense. Currently, Missile Defense Agency (MDA) has three major projects with Israel to develop and improve their indigenous capability to defend against short and medium range ballistic missiles. These include Upper Tier Interceptors (MD20), the Arrow Weapon System (MD26) and the Short-Range Ballistic Missile Defense, also known as the David's Sling Weapon System (MD34). Within these projects MDA develops and produces weapon systems, conducts tests, and exercises interoperability between U.S. Ballistic Missile Defense System (BMDS) and the Israeli Missile Defense Architecture. The United States and State of Israel entered into a Memorandum of Understanding (MOU) on September 2016, in which `Such funding, should over a ten year period beginning in FY 2019 and ending in FY 2028, be provided at a level of \$500 million per year.' These funds will be distributed between the Israeli Programs in Research Development Test & Evaluation (RDT&E) and Procurement Funds.												

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency	Date: March 2019
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>
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B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	105.354	300.000	300.000	-	300.000
Current President's Budget	373.800	300.000	300.000	-	300.000
Total Adjustments	268.446	0.000	0.000	-	0.000
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	268.446	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.000	0.000	0.000	-	0.000

Change Summary Explanation

Increase in FY 2018 from PB19 to PB20 reflects enacted congressional adjustments that increased MD20: Israeli Upper Tier by \$133,139, MD26: Israeli Arrow Program by \$71,459 and MD34: Short Range Ballistic Missile Defense (David's Sling Weapon System) by \$63,848.

Funds for the Israeli Upper Tier MD20 were incorporated into Arrow Weapon System Development MD26 as part of the MOU beginning in FY 2019.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs				Project (Number/Name) MD20 / Israeli Upper Tier			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MD20: Israeli Upper Tier	553.698	190.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	743.698
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This project code encompasses the Missile Defense Agency's (MDA) U.S.-Israeli cooperative program for the Israeli Upper Tier Program. Funding for MD20 Israeli Upper Tier was incorporated into MD26 Arrow Weapon System (AWS) Development beginning in FY 2019.

A. Mission Description and Budget Item Justification

Israeli Upper Tier Interceptor (UTI) Project: The Upper Tier Program provides the Arrow-3 missile, increasing the system's capability against advanced medium range threats by providing approximately four times the current Arrow-2 battle space. The primary near term objective is to complete and demonstrate Upper Tier design, and continue Initial Lot Production (ILP) deliveries.

This project provides funding for the Upper Tier component of the Arrow Weapon System (AWS) development. The United States through the cooperative effort gains knowledge and experience of the Israeli Defense Forces operation of a multi-layered defense architecture. This project also includes the procurement of the Silver Sparrow Air-Launched Target which is necessary to validate the performance of the Arrow-3 Missile and related Block 5 spiral development activities.

Spiral development and UTI upgrades were incorporated into the Arrow Weapon System (MD26: Israeli ARROW Program) as the UTI initial development and Low Rate Initial Production were complete beginning in FY 2019.

The United States and State of Israel entered into a Memorandum of Understanding (MOU) on September 2016, in which 'Such funding, should over a ten year period beginning in FY 2019 and ending in FY 2028, be provided at a level of \$500 million per year.' These funds will be distributed between the Israeli Programs in Research Development Test & Evaluation (RDT&E) and Procurement Funds.

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

	FY 2018	FY 2019	FY 2020
Title: Upper Tier Interceptor	190.000	0.000	0.000
Articles:	-	-	-
Description: The scope of the Upper Tier Program covers interceptor development, testing, material procurement to include initial lot production, and integration of spiral software development for Block 5 AWS. Accomplishments included: - Testing of the Arrow-3 Interceptor - Algorithm design reviews to verify requirements - Interceptor Spiral Development			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD20 / <i>Israeli Upper Tier</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
- Procurement and Delivery of Initial Lot Production assets and Test Articles			
FY 2019 Plans: N/A			
FY 2020 Plans: N/A			
FY 2019 to FY 2020 Increase/Decrease Statement: Funding for MD20 Israeli Upper Tier was incorporated into MD26 Arrow Weapon System (AWS) Development beginning in FY 2019.			
Accomplishments/Planned Programs Subtotals		190.000	0.000
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy The Upper-Tier Interceptor Project Agreement under the Research, Development, Test and Evaluation (RDT&E) Framework agreement between the U.S. and Israel creates a joint program office to manage this program. Missile Defense Agency (MDA) and the Israeli Ministry of Defense (IMoD) continue to implement best management practices that allow for the more effective use of program management tools to ensure risk is adequately managed to include Knowledge Points that assess Israel's development progress. The DoD U.S. Israeli Cooperative Program Office jointly manages the Upper Tier program with IMoD to ensure that all systems are delivered on time, on budget, and meet the needs of the warfighter. The program is equitably funded between the U.S. and Israel. A portion of the Israeli cost share comes from non-financial contributions such as previously completed work prior to joint program initiation. Contracts are awarded by IMoD or MDA dependent on what is most advantageous to the Joint Governments. In regard to the Upper Tier Interceptor, IMoD will contract with Israel Aerospace Industries (IAI). IAI subcontracts with Israeli companies, Boeing and other U.S. companies.			
E. Performance Metrics N/A			

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs				Project (Number/Name) MD20 / Israeli Upper Tier					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Upper Tier Interceptor - Upper Tier Interceptor	C/CPFF	Israel Aerospace Industries (IAI) : Israel	553.698	190.000	Dec 2017	0.000		0.000		-		0.000	0.000	743.698	0.000
Subtotal			553.698	190.000		0.000		0.000		-		0.000	0.000	743.698	N/A
Remarks N/A															
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A
Remarks N/A															
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A
Remarks N/A															
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019		
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>				Project (Number/Name) MD20 / <i>Israeli Upper Tier</i>				

Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Remarks N/A															
			Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract				
Project Cost Totals			553.698	190.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	743.698	N/A	
Remarks Contract cost reflect U.S. contribution only. Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3. Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency													Date: March 2019						
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs						Project (Number/Name) MD20 / Israeli Upper Tier							
Significant Event Complete ▲		Milestone Decision Complete ★		Element Test Complete ◆		System Level Test Complete ●				Complete Activity ◆									
Significant Event Planned △		Milestone Decision Planned ☆		Element Test Planned ◇		System Level Test Planned ○				Planned Activity ◇									
						FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024	
Israeli Cooperative Arrow 3 Intercept Test #2- FY 2018						◆	◆	◆	◆										
Israeli Cooperative Arrow 3 Intercept Test #3 FY 2018						◆	◆	◆	◆										

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD20 / <i>Israeli Upper Tier</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Israeli Cooperative Arrow 3 Intercept Test #2- FY 2018	1	2018	4	2018
Israeli Cooperative Arrow 3 Intercept Test #3 FY 2018	1	2018	4	2018

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019			
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs				Project (Number/Name) MD26 / Arrow Weapon System				
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost	
MD26: Arrow Weapon System	429.345	82.300	163.000	159.000	-	159.000	173.000	173.000	173.000	173.000	Continuing	Continuing	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			
Note Funds for MD20 Israeli Upper Tier were incorporated into this project beginning in FY 2019.													
A. Mission Description and Budget Item Justification Israeli Arrow Weapon System (AWS): This system includes block upgrades to the AWS components which enhances capabilities against evolving medium range threats by increasing the total defended area. AWS elements include the Arrow-2 missile and launcher, Citron Tree Battle Management Center (BMC), Green Pine (GP) and Super Green Pine (SGP) Radars, and the Hazelnut Tree Launcher Control Center (LCC). Also included is the integration of Block 5 assets which include the Arrow-3 missile and launcher. Arrow Block 5 development will also incorporate a Long Range Detection Suite that consists of an unmanned aerial vehicle Airborne Early Warning System (ABEWS) and Sharp Eye Radar for increased sensor range, early detection and enhanced raid size capacity. The program also includes the continued development of Arrow’s interoperability with U.S. BMDS. The United States and State of Israel entered into a Memorandum of Understanding (MOU) on September 2016, in which ‘Such funding, should over a ten year period beginning in FY 2019 and ending in FY 2028, be provided at a level of \$500 million per year.’ These funds will be distributed between the Israeli Programs in Research Development Test & Evaluation (RDT&E) and Procurement Funds.													
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2018	FY 2019	FY 2020		
Title: Arrow Weapon System Articles: Description: The Arrow Weapon System (AWS) continues Block 4 and Block 5 spiral development and target development. Included is the integration of Block 5 assets, which consists of the Arrow-3 missile, launcher, and Long Range Detection Suite (LRDS). Continue proven Interoperability with U.S. Assets and enhancements to existing AWS System Components. Specific and/or unique planned accomplishments to each FY are as follows: FY 2019 Plans: -Conduct Block 4 Flight Test proving improved system performance in the U.S. FY 2020 Plans:									75.938	156.638	153.940		
									-	-	-		

UNCLASSIFIED

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs	Project (Number/Name) MD26 / Arrow Weapon System		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020
-Conduct Block 5 Flight Test proving improved system performance				
FY 2019 to FY 2020 Increase/Decrease Statement: Funding for MD20 Israeli Upper Tier was incorporated into MD26 Arrow Weapon System (AWS) Development beginning in FY 2019.				
Title: Israeli Test Bed (ITB) Articles: Description: The Israeli Test Bed (ITB) provides experiments to evaluate Human Machine Interface (HMI) battle management and integration of Block 5 Arrow Weapon System Techniques Tactics and Procedures (TTPs) and CONOPs. Specific and/or unique accomplishments to each FY are as follows: FY 2019 Plans: -SEE ABOVE. FY 2020 Plans: -SEE ABOVE. FY 2019 to FY 2020 Increase/Decrease Statement: N/A		3.535 -	3.535 -	3.535 -
Title: Israeli Systems Architecture and Integration (ISA&I) Articles: Description: Israeli Systems Architecture and Integration conducts studies to assess Israel's future 2025 Missile Defense Architecture. This identifies the preferred missile defense architecture and reference threat for 10-15 year future epoch and interoperability special studies on regional threats and growth path options. Specific and/or unique accomplishments to each FY are as follows: FY 2019 Plans: -SEE ABOVE. FY 2020 Plans: -SEE ABOVE. FY 2019 to FY 2020 Increase/Decrease Statement: N/A		2.827 -	2.827 -	1.525 -
Accomplishments/Planned Programs Subtotals		82.300	163.000	159.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Arrow Weapon System</i>

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

N/A

Remarks

D. Acquisition Strategy

The DoD U.S. Israeli Cooperative Program Office jointly manages the Arrow Program with Israel Ministry of Defense (IMoD) to ensure that all systems are delivered with quality on time, on budget, and meet the needs of the warfighter. The program funding is equitably funded between the U.S. and Israel with Israel providing matching contributions. However, a portion of the Israeli cost share comes from non-financial contributions such as previously completed work prior to joint program initiation. Contracts are awarded by IMoD or MDA dependent on what is most advantageous to the Joint Governments. In regard to AWS, IMoD contracts on behalf of U.S. government with Israel Aerospace Industries (IAI). IAI subcontracts with Israeli and U.S. companies. For the Israeli Test Bed, the Missile Defense Agency (MDA) contracts directly with Elbit Systems, Ltd. while IMoD provides an equitable share of the funding to the U.S. Finally, MDA provides funding and contracts directly with WALES, Ltd for the Israeli System Architecture and Integration program.

E. Performance Metrics

N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs				Project (Number/Name) MD26 / Arrow Weapon System					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Arrow Weapon System - Arrow Weapon System	C/CPFF	Israel Aerospace Industries (IAI) : Israel	374.817	75.938	Dec 2017	156.638	Dec 2018	153.940	Dec 2019	-		153.940	Continuing	Continuing	Continuing
Israeli Test Bed (ITB) - Israeli Test Bed	C/FFP	Elbit Systems : Israel	31.815	3.535	Dec 2017	3.535	Nov 2018	3.535	Dec 2019	-		3.535	Continuing	Continuing	Continuing
Israeli Systems Architecture and Integration (ISA&I) - ISA&I	C/FFP	Wales LTD : Israel	22.713	2.827	Dec 2017	2.827	Oct 2018	1.525	Dec 2019	-		1.525	Continuing	Continuing	Continuing
Subtotal			429.345	82.300		163.000		159.000		-		159.000	Continuing	Continuing	N/A
Remarks N/A															
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A
Remarks N/A															
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A
Remarks N/A															

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency													Date: March 2019		
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>						Project (Number/Name) MD26 / <i>Arrow Weapon System</i>			

Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-		-	-	-	N/A

Remarks N/A																
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	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	429.345	82.300		163.000		159.000		-		159.000	Continuing	Continuing	N/A

Remarks Contract cost reflect U.S. contribution only. Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.													
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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency												Date: March 2019																																	
Appropriation/Budget Activity 0400 / 4												R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs												Project (Number/Name) MD26 / Arrow Weapon System																					
Significant Event Complete ▲				Milestone Decision Complete ★				Element Test Complete ◆				System Level Test Complete ●				Complete Activity ◆																													
Significant Event Planned △				Milestone Decision Planned ☆				Element Test Planned ◇				System Level Test Planned ○				Planned Activity ◇																													
												FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024									
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2018												◆	◆	◆	◆																														
Israeli Test Bed Experiments FY 2018												◆	◆	◆	◆																														
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2019																◇	◇	◇	◇																										
Israeli Test Bed Experiments FY 2019																◇	◇	◇	◇																										
Arrow Weapon System Flight Test (1 of 3) FY 2019																◇	◇	◇	◇																										
Arrow Weapon System Flight Test (2 of 3) FY 2019																◇	◇	◇	◇																										
Arrow Weapon System Flight Test (3 of 3) FY 2019																◇	◇	◇	◇																										
Israeli Test Bed Experiments FY 2020																				◇	◇	◇	◇																						
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2020																				◇	◇	◇	◇																						
Arrow Weapon System Flight Test FY 2020																				◇	◇	◇	◇																						
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2021																								◇	◇	◇	◇																		
Israeli Test Bed Experiments FY 2021																								◇	◇	◇	◇																		
Arrow Weapon System Flight Test FY 2021																								◇	◇	◇	◇																		
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2022																												◇	◇	◇	◇														
Israeli Test Bed Experiments FY 2022																												◇	◇	◇	◇														
Arrow Weapon System Flight Test FY 2022																												◇	◇	◇	◇														
Israeli Test Bed Experiments FY 2023																																◇	◇	◇	◇										
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2023																																◇	◇	◇	◇										
Arrow Weapon System Flight Test FY 2023																																◇	◇	◇	◇										
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2024																																									◇	◇	◇	◇	
Israeli Test Bed Experiments FY 2024																																									◇	◇	◇	◇	
Arrow Weapon System Flight Test FY 2024																																									◇	◇	◇	◇	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Arrow Weapon System</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2018	1	2018	4	2018
Israeli Test Bed Experiments FY 2018	1	2018	4	2018
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2019	1	2019	4	2019
Israeli Test Bed Experiments FY 2019	1	2019	4	2019
Arrow Weapon System Flight Test (1 of 3) FY 2019	1	2019	4	2019
Arrow Weapon System Flight Test (2 of 3) FY 2019	1	2019	4	2019
Arrow Weapon System Flight Test (3 of 3) FY 2019	1	2019	4	2019
Israeli Test Bed Experiments FY 2020	1	2020	4	2020
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2020	1	2020	4	2020
Arrow Weapon System Flight Test FY 2020	1	2020	4	2020
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2021	1	2021	4	2021
Israeli Test Bed Experiments FY 2021	1	2021	4	2021
Arrow Weapon System Flight Test FY 2021	1	2021	4	2021
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2022	1	2022	4	2022
Israeli Test Bed Experiments FY 2022	1	2022	4	2022
Arrow Weapon System Flight Test FY 2022	1	2022	4	2022
Israeli Test Bed Experiments FY 2023	1	2023	4	2023
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2023	1	2023	4	2023
Arrow Weapon System Flight Test FY 2023	1	2023	4	2023
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2024	1	2024	4	2024
Israeli Test Bed Experiments FY 2024	1	2024	4	2024
Arrow Weapon System Flight Test FY 2024	1	2024	4	2024

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs				Project (Number/Name) MD34 / Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MD34: Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))	945.246	101.500	137.000	141.000	-	141.000	127.000	127.000	127.000	127.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This project code encompasses the Missile Defense Agency's (MDA) U.S.-Israeli cooperative program for the Israeli David's Sling Weapon System Program.

A. Mission Description and Budget Item Justification

Short Range Ballistic Missile Defense (SRBMD): SRBMD, also known as the David's Sling Weapon System (DSWS), is designed to counter short range rockets, cruise missiles, and tactical ballistic missiles and will be integrated into the Israeli Missile Defense Architecture adding another layer of defense to the current Arrow System. The David's Sling Weapon System (DSWS) includes the Stunner Interceptor, Missile Firing Unit (MFU), Multi-Mission Radar (MMR), Launch Site Controller (LSC), Data Link (DL), Elevated Sensor (ES), and the Golden Almond Battle Management Center (BMC).

The United States and State of Israel entered into a Memorandum of Understanding (MOU) on September 2016, in which 'Such funding, should over a ten year period beginning in FY 2019 and ending in FY 2028, be provided at a level of \$500 million per year.' These funds will be distributed between the Israeli Programs in Research Development Test & Evaluation (RDT&E) and Procurement Funds.

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

Title: SRBMD Program		FY 2018	FY 2019	FY 2020
Articles:		101.500	137.000	141.000
		-	-	-
Description: The scope of the David's Sling Weapon System covers system development, testing, material procurement to include initial lot production, and integration of spiral software development for Blocks 1-3. Block 1 capability enhances the short range rocket and missile defense capability. Block 2 will add capability to defend against medium range and cruise missiles. Block 3 will provide robust defense capability and add significant detection capability to the Israeli Air Defense Architecture. Recurring Planned Accomplishments include: - Conduct Testing of the DSWS - Continue Blocks 2 and 3 Spiral Development of the DSWS - Establish and Continue Interoperability with Israeli Air Missile Defense Network				

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD34 / <i>Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
Specific and/or unique accomplishments to each FY are as follows:			
FY 2019 Plans: -Finalize Elevated Sensor development FY 2020 Plans: -Continue development of the Next Generation Multi-Mission Radar -Develop enhanced Stunner capability FY 2019 to FY 2020 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals		101.500	137.000
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
<p>The Short Range Ballistic Missile Defense (SRBMD), also known as the David's Sling Weapon System (DSWS) Project Agreement under the Research, Development, Test and Evaluation (RDT&E) Framework agreement between the U.S. and Israel creates a joint program office to manage this program. Missile Defense Agency (MDA) and the Israeli Ministry of Defense (IMoD) continue to implement management practices that allow for the more effective use of program management tools to ensure risk is adequately managed to include Knowledge Points that assess Israel's development progress. The DoD U.S. Israeli Cooperative Program Office jointly manages the SRBMD/DSWS program with IMoD to ensure that all systems are delivered in an effective manner, and meet the needs of the warfighter. The program is equitably funded between the U.S. and Israel. A portion of the Israeli cost share comes from non-financial contributions such as previously completed work prior to joint program initiation. Contracts are awarded by IMoD or MDA dependent on what is most advantageous to the Joint Governments. For the Stunner Interceptor, Rafael Advanced Systems (an Israeli company), subcontracts to Raytheon Missile Systems for Stunner interceptor components.</p>			
E. Performance Metrics			
N/A			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>						Project (Number/Name) MD34 / <i>Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))</i>			
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
SRBMD Program - SRBMD Program	C/CPFF	Rafael : Israel	945.246	101.500	Dec 2017	137.000	Dec 2018	141.000	Dec 2019	-		141.000	Continuing	Continuing	Continuing
Subtotal			945.246	101.500		137.000		141.000		-		141.000	Continuing	Continuing	N/A
Remarks N/A															
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A
Remarks N/A															
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A
Remarks N/A															
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019		
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>				Project (Number/Name) MD34 / <i>Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))</i>				

Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks N/A																	
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total		Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			945.246	101.500		137.000		141.000		-		141.000		Continuing	Continuing	N/A	
Remarks Contract cost reflect U.S. contribution only. Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.																	

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency													Date: March 2019					
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs					Project (Number/Name) MD34 / Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))								
Significant Event Complete ▲		Milestone Decision Complete ★		Element Test Complete ◆		System Level Test Complete ●		Complete Activity ◆										
Significant Event Planned △		Milestone Decision Planned ☆		Element Test Planned ◇		System Level Test Planned ○		Planned Activity ◇										
					FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024	
System Flight Test #6 FY 2019								◇	◇	◇	◇							
System Flight Test #7 FY 2021											◇	◇	◇	◇				
System Flight Test #8 FY 2022													◇	◇	◇	◇		
System Flight Test #9 FY 2023															◇	◇	◇	◇
System Flight Test #10 FY 2024																	◇	◇

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD34 / <i>Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Flight Test #6 FY 2019	1	2019	4	2019
System Flight Test #7 FY 2021	1	2021	4	2021
System Flight Test #8 FY 2022	1	2022	4	2022
System Flight Test #9 FY 2023	1	2023	4	2023
System Flight Test #10 FY 2024	1	2024	4	2024