Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy

Date: February 2018

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603611M / Marine Corps Assault Vehicles

Component Development & Froto	types (ACD	αi
	Duion	

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	426.229	131.381	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	557.610
0025: Amphibious Combat Vehicle 1.1	426.229	131.381	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	557.610

Program MDAP/MAIS Code:

Project MDAP/MAIS Code(s): P472

Note

Navy

ACV Increment 1.1 leverages and continues the work that was previously accomplished under the Marine Personnel Carrier (MPC) program, funded in PE 0206623M; Project 9C85.

Beginning in FY 2018, the program funding transitions from Program Element 0603611M Marine Corps Assault Vehicles to Program Element 0605611M MC AVS Development and Demonstration as the program proceeds through the acquisition process.

A. Mission Description and Budget Item Justification

PE 0603611M: Marine Corps Assault Vehicles

The Amphibious Combat Vehicle is an armored personnel carrier, balanced in performance, protection, and payload for employment within the Ground Combat Element (GCE) and throughout the range of military operations, to include a swim capability.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	158.682	0.000	0.000	-	0.000
Current President's Budget	131.381	0.000	0.000	-	0.000
Total Adjustments	-27.301	0.000	0.000	-	0.000
Congressional General Reductions	-	-			
Congressional Directed Reductions	-	-			
Congressional Rescissions	-	-			
Congressional Adds	-	-			
Congressional Directed Transfers	-	-			
Reprogrammings	-3.588	0.000			
SBIR/STTR Transfer	-3.794	0.000			
 Rate/Misc Adjustments 	0.001	0.000	0.000	-	0.000
Congressional Directed Reductions	-19.920	-	-	-	-
Adjustments					

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 Program Element (Number/Name) PE 0603611M / Marine Corps Assault Vehicles	
Change Summary Explanation Beginning in FY 2018, the program funding transitions from Program Development and Demonstration as the program proceeds through the		Program Element 0605611M MC AVS

PE 0603611M: *Marine Corps Assault Vehicles* Navy

Exhibit R-2A, RDT&E Project Ju	ustification:	PB 2019 N	lavy							Date: Febr	uary 2018	
Appropriation/Budget Activity 1319 / 4		_	am Elemen I1M / Marin	•	•	Project (Number/Name) 0025 I Amphibious Combat Vehicle 1.1						
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
0025: Amphibious Combat Vehicle 1.1	426.229	131.381	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	557.610
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: P472

A. Mission Description and Budget Item Justification

The Amphibious Combat Vehicle is an armored personnel carrier, balanced in performance, protection, and payload for employment within the Ground Combat Element (GCE) and throughout the range of military operations, to include a swim capability. Funds support Amphibious Combat Vehicle (ACV) Increment 1.1 Engineering, Manufacturing and Development (EMD) contracts, Test & Evaluation (T&E) activities and associated program support.

ACV Increment 1.1 leverages and continues the work previously accomplished under the Marine Personnel Carrier (MPC) program, funded in PE 0206623M; Project 9C85.

Beginning in FY 2018, the program funding transitions from Program Element 0603611M Marine Corps Assault Vehicles to Program Element 0605611M MC AVS Development and Demonstration as the program proceeds through the acquisition process.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2019	FY 2019	FY 2019
		FY 2017	FY 2018	Base	oco	Total
Title: Product Development		88.122	0.000	0.000	0.000	0.000
	Articles:	-	-	-	-	-
Description: System design and development; EMD test vehicle manufacturing; prime contractor Developmental and Operational test, and Logistics Management Information (LMI) data development.						
FY 2018 Plans: N/A						
FY 2019 Base Plans: N/A						
FY 2019 OCO Plans: N/A						
Title: Management Services		10.520	0.000	0.000	0.000	0.000
	Articles:	-	-	-	-	-

UNCLASSIFIED

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R-1 Line #59

L	JNCLASSIFIED							
Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy				Date: Febr	uary 2018			
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/ PE 0603611M / Marine Corps Ass Vehicles		Project (Number/Name) 0025 I Amphibious Combat Vehicle					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities	s in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total		
Description: Contract Advisory and Assistance Services (Engineering and Support Services, and Studies and Analyses).	Fechnical Support, Management							
FY 2018 Plans: N/A								
FY 2019 Base Plans: N/A								
FY 2019 OCO Plans: N/A								
Title: Test & Evaluation	Articles:	25.540 -	0.000	0.000	0.000	0.00		
Description: Government Developmental, Operational, and Live Fire Test a	nd Evaluation activities.							
FY 2018 Plans: N/A								
FY 2019 Base Plans: N/A								
FY 2019 OCO Plans: N/A								
Title: Program Support	Articles:	7.199 -	0.000	0.000	0.000	0.00		
Description: Government labor, material, and travel for integrated logistics support equipment development, in-house technical support, and program materials are considered to the control of the cont								
FY 2018 Plans: N/A								
FY 2019 Base Plans: N/A								

PE 0603611M: *Marine Corps Assault Vehicles* Navy

FY 2019 OCO Plans:

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R-1 Line #59

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy Appropriation/Budget Activity 1319 / 4 R-1 Program Element (Number/Name) PE 0603611M / Marine Corps Assault Values O025 / Amphibious Combat Vehicle 1.		Date: February 2018	
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
N/A					
Accomplishments/Planned Programs Subtotals	131.381	0.000	0.000	0.000	0.000

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

				FY 2019	FY 2019	FY 2019					Cost To	
	<u>Line Item</u>	FY 2017	FY 2018	Base	<u>000</u>	<u>Total</u>	FY 2020	FY 2021	FY 2022	FY 2023	Complete	Total Cost
	PMC/2025: Amphibious	0.000	161.511	167.478	-	167.478	286.098	507.400	0.000	0.000	0.000	1,122.487
	Combat Vehicle 1.1											
	• PMC/7000/0605611M-1:	0.000	5.569	6.145	-	6.145	13.960	13.643	0.000	0.000	0.000	39.317
	Initial Spares - ACV 1.1											
	• RDT&E/0605611M/0025:	0.000	178.993	42.448	-	42.448	19.703	0.462	0.000	0.000	0.000	241.606
Ar	mphibious Combat Vehicle 1.1											
	• RDT&E/0605611M/0026:	0.000	0.000	55.775	-	55.775	57.978	57.477	43.533	8.341	0.000	223.104
Ar	mphibious Combat Vehicle 1.2											
	 PMC/2026: Amphibious 	0.000	0.000	0.000	-	0.000	0.000	0.000	710.373	701.456	Continuing	Continuing
	Combat Vehicle 1.2											
	• PMC/7000/0605611M:	0.000	0.000	0.000	-	0.000	0.000	0.000	19.346	19.773	Continuing	Continuing
	Initial Spares - ACV 1.2											

Remarks

D. Acquisition Strategy

The program office awarded two competitive Engineering, Manufacturing and Development (EMD) contracts to two vendors to build 16 test vehicles each (32 total). ACV Increment 1.1 entered the acquisition cycle at Milestone B in FY 2016 and will down-select to one vendor at Milestone C. In FY 2018, the program will enter into Low Rate Initial Production (LRIP) and Full Rate Production (FRP) will begin in FY 2020.

E. Performance Metrics

Milestone Reviews Milestone B: 1QFY16 Milestone C: 3QFY18

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

Appropriation/Budget Activity 1319 / 4

PE 0603611M / Marine Corps Assault

0025 I Amphibious Combat Vehicle 1.1

Date: February 2018

Vehicles

Product Developme	roduct Development (\$ in Millions)					FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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	Total Cost	Target Value of Contract
System Design & Development	C/FPIF	Various : Various	316.825	88.122	Jan 2017	0.000		0.000		-		0.000	0.000	404.947	-
Other Product Development	C/FFP	SPAWAR/ NEW JERSEY : Charleston/Picatinny	13.844	0.000		0.000		0.000		-		0.000	0.000	13.844	-
Prior Years Cumulative Funding	Various	Various : Various	18.506	0.000		0.000		0.000		-		0.000	0.000	18.506	-
	Subtotal 349.175					0.000		0.000		-		0.000	0.000	437.297	N/A

Support (\$ in Millions	,					FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Test and Evaluation - EMD Detailed Planning	WR	AVTB : Camp Pendleton, CA	1.069	0.000		0.000		0.000		-		0.000	0.000	1.069	-
Propulsion System Demonstrator	WR	NSWC Carderock - SSES Philly : Philadelphia, PA	1.193	0.000		0.000		0.000		-		0.000	0.000	1.193	-
Integrated Logistics Support	WR	NSWC - Dahlgren : Dahlgren, VA	1.473	0.616	Apr 2017	0.000		0.000		-		0.000	0.000	2.089	-
Technical Data & Pubs Development	WR	NSWC Carderock : Philadelphia, PA	0.050	0.100	Sep 2017	0.000		0.000		-		0.000	0.000	0.150	-
GFP Management	WR	SPAWAR Charleston : SPAWAR Charleston	23.843	6.233	Apr 2017	0.000		0.000		-		0.000	0.000	30.076	-
Travel	Various	Various : Various	0.791	0.250	Sep 2017	0.000		0.000		-		0.000	0.000	1.041	-
		Subtotal	28.419	7.199		0.000		0.000		-		0.000	0.000	35.618	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy

Date: February 2018

Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name)

1319 / 4 PE 0603611M / Marine Corps Assault Vehicles

Marine Corps Assault 0025 I Amphibious Combat Vehicle 1.1

Test and Evaluation (\$ in Millions)			FY 2	2017	FY 2	018	FY 2019 Base		FY 2019 OCO		FY 2019 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
Operational Test Evaluation (OT&E)	WR	MCOTEA : Quantico, Va	0.258	1.950	Jan 2017	0.000		0.000		-		0.000	0.000	2.208	-
Development Test & Evaluation	WR	Various : Various	2.740	18.721	Jan 2017	0.000		0.000		-		0.000	0.000	21.461	-
Live Fire Test & Evaluation	WR	Various : Various	2.487	4.869	Jan 2017	0.000		0.000		-		0.000	0.000	7.356	-
		Subtotal	5.485	25.540		0.000		0.000		-		0.000	0.000	31.025	N/A

Remarks

^{*} The FY 2017 award date for cost categories with various activities is the actual obligation date for the last award in the category.

Management Service	s (\$ in M	illions)		FY 2	2017	FY 2	018	FY 2 Ba		FY 2	2019 CO	FY 2019 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
Engineering and Technical Services	C/FFP	Various : Various	17.509	1.666	Jul 2017	0.000		0.000		-		0.000	0.000	19.175	-
Management Support Services	C/FFP	DDG : Stafford VA	19.326	8.854	Mar 2017	0.000		0.000		-		0.000	0.000	28.180	-
Studies and Analyses	C/FFP	Various : Various	6.315	0.000		0.000		0.000		-		0.000	0.000	6.315	-
		Subtotal	43.150	10.520		0.000		0.000		-		0.000	0.000	53.670	N/A

	Prior Years	FY 201	17	FY 2	018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	426.229	131.381		0.000		0.000	-	0.000	0.000	557.610	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy

Appropriation/Budget Activity
1319 / 4

R-1 Program Element (Number/Name)
PE 0603611M / Marine Corps Assault
Vehicles

Project (Number/Name)
0025 / Amphibious Combat Vehicle 1.1

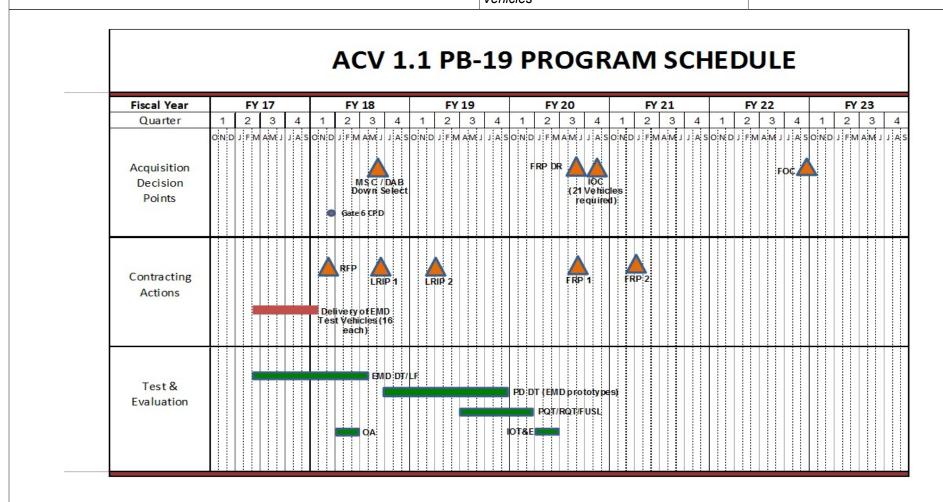


Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 4	,	-,	umber/Name) phibious Combat Vehicle 1.1

Schedule Details

	St	art	End		
Events by Sub Project	Quarter	Year	Quarter	Year	
Proj 0025					
EMD Vehicle Delivery (32 Vehicles)	2	2017	1	2018	
Vehicle Acceptance Review	2	2017	1	2018	
Development Test/Live Fire Test	2	2017	1	2020	
Tactics, Techniques, and Procedures (TTP) Development	3	2017	4	2017	
Production Readiness Review (PRR)	1	2018	1	2018	
Operational Assessment (OA)	2	2018	3	2018	
System Verification Review (SVR)	2	2018	2	2018	
JROC Capabilities Production Document (CPD)	3	2018	3	2018	
MS C/DAB Down Select	3	2018	3	2018	
LRIP Option 1 Exercised	3	2018	3	2018	
Physical Configuration Audit (PCA)	4	2019	4	2019	
LRIP Option 2 Exercised	2	2019	2	2019	
Initial Operational Test & Evaluation (IOT&E)/Full Up System Level (FUSL)	2	2020	2	2020	
Full Rate Production (FRP) Decision	3	2020	3	2020	
FRP #1 Option Exercised	3	2020	3	2020	
Initial Operational Capability (IOC)	4	2020	4	2020	
FRP #2 Option Exercised	2	2021	2	2021	
Full Operational Capability (FOC)	4	2022	4	2022	