

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2019 Navy	<b>Date:</b> February 2018
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<b>Appropriation/Budget Activity</b> 1319: Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)	<b>R-1 Program Element (Number/Name)</b> PE 0605611M / (U) MC AVS Development & Demonstration
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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	0.000	0.000	178.993	98.223	-	98.223	77.681	57.939	43.533	8.341	Continuing	Continuing
0025: Amphibious Combat Vehicle 1.1	0.000	0.000	178.993	42.448	-	42.448	19.703	0.462	0.000	0.000	0.000	241.606
0026: Amphibious Combat Vehicle 1.2	0.000	0.000	0.000	55.775	-	55.775	57.978	57.477	43.533	8.341	Continuing	Continuing

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** P472

**Note**

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**

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>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
Previous President's Budget	0.000	178.993	79.782	-	79.782
Current President's Budget	0.000	178.993	98.223	-	98.223
Total Adjustments	0.000	0.000	18.441	-	18.441
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	19.323	-	19.323
• Rate/Misc Adjustments	0.000	0.000	-0.882	-	-0.882

**Change Summary Explanation**

The decrease from FY 2018 to FY 2019 (\$80.77) is primarily attributed to the completion of two competitive Engineering and Manufacturing Development (EMD) contracts and subsequent down-select to one prime contract, the completion of Full-Up System Level (FUSL) vehicle procurement, and to the completed

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Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
1319: Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)	PE 0605611M / (U) MC AVS Development & Demonstration	
procurement of Government Furnished Equipment for FUSL test articles in FY 2018. In addition, Amphibious Combat Vehicle (ACV) 1.2 funding, project unit 0026, begins in FY 2019.		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy									Date: February 2018			
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605611M / (U) MC AVS Development & Demonstration				Project (Number/Name) 0025 / 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	0.000	0.000	178.993	42.448	-	42.448	19.703	0.462	0.000	0.000	0.000	241.606
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: P472												
Note												
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.												
The decrease in ACV 1.1 from FY 2018 to FY 2019 (\$136.545) is primarily attributed to the completion of two competitive Engineering and Manufacturing Development (EMD) contracts and subsequent down-select to one prime contract, the completion of Full-Up System Level (FUSL) vehicle procurement, and to the completed procurement of Government Furnished Equipment for FUSL test articles in FY 2018.												
A. Mission Description and Budget Item Justification												
The Amphibious Combat Vehicle (ACV) will be a partial and complementary replacement for the legacy Assault Amphibious Vehicle (AAV) battalions within the Marine Divisions. ACV-equipped AA companies will provide protected mobility and general support lift to elements of Marine Infantry Battalions. The ACV, an advanced generation, eight-wheeled armored personnel carrier, will mitigate current and projected capability gaps by providing improved lethality against dismounted enemy troops, more effective land and water tactical mobility, and increased force protection and survivability from blast, fragmentation, and kinetic energy threats. The ACV program is structured to be executed in multiple phases, with the first phase designed to provide an initial operational capability of personnel carriers. Subsequent phases are planned to expand the personnel carrier capacity and to develop additional command and control and tactical recovery capabilities.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	
Title: Product Development							0.000	138.834	21.993	0.000	21.993	
Articles:							-	4	-	-	-	
Description: System Design and Development; Engineering and Manufacturing Development (EMD) test vehicle manufacturing; prime contractor Developmental and Operational test, and development of Logistics Management Information (LMI) data.												
FY 2018 Plans:												
- Complete contractor competitive EMD Developmental Test activities.												
- Continue corrective action modifications which resulted from Reliability Growth Testing (RGT).												

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy				Date: February 2018		
Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0605611M / (U) MC AVS Development & Demonstration		Project (Number/Name) 0025 / Amphibious Combat Vehicle 1.1		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<div>- Procure 4 FUSL Live Fire vehicles.</div> <div>- Procure GFE communication suites and Amphibious Remote Weapon Stations (ARWS) for FUSL test articles.</div> <div>- Initiate advance capabilities improvements, Developmental Test (DT), Operational Assessment (OA), and Live Fire Test &amp; Evaluation (LFT&amp;E) support for the down-selected contractor.</div> <div>FY 2019 Base Plans:</div> <div>- Complete corrective action modifications which resulted from Reliability Growth Testing (RGT).</div> <div>- Continue advance capabilities improvements, DT, Operational Test &amp; Evaluation (OT&amp;E), and LFT&amp;E support for the down-selected contractor.</div> <div>FY 2019 OCO Plans:</div> <div>N/A</div> <div>FY 2018 to FY 2019 Increase/Decrease Statement:</div> <div>The decrease in System Design &amp; Development from FY 2018 to FY 2019 (\$116.841) is attributed to the completion of two competitive EMD contracts (\$86.812), completion of Full-Up System Level (FUSL) test vehicle procurement (\$23.385), completion of procurement of Government Furnished Equipment (GFE)in FY 2018 for FUSL test articles (\$2.546), and the remaining difference is in the reduced value of the system design and development between FY 2018 and FY 2019 (\$4.098) as the program progresses.</div>						
<div>Title: Management Services</div> <div>Articles:</div> <div>Description: Contract Advisory and Assistance Services (Engineering and Technical Support, Management Support Services, and Studies and Analyses).</div> <div>FY 2018 Plans:</div> <div>- Continue business, acquisition, logistics, and engineering related activities for program document development, program analysis, acquisition logistics management, and financial management support.</div> <div>- Continue engineering and technical services for Amphibious Remote Weapon Station (ARWS), logistical, maintenance support, and integration.</div> <div>- Continue force protection modeling and simulation activities.</div> <div>- Continue analyses of product support elements to support Maintenance Plan development, Support and Test Equipment, Calibration, and other logistics elements.</div> <div>FY 2019 Base Plans:</div>		0.000 -	7.242 -	3.461 -	0.000 -	3.461 -

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Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0605611M / (U) MC AVS Development & Demonstration		Project (Number/Name) 0025 / Amphibious Combat Vehicle 1.1		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<div>- Continue business, acquisition, logistics, and engineering related activities for program document development, program analysis, acquisition logistics management, and financial management support.</div> <div>- Continue engineering and technical services for logistical, maintenance support, and integration.</div> <div>- Continue force protection modeling and simulation activities.</div> <div>- Continue analyses of product support elements to support Maintenance Plan development, Support and Test Equipment, Calibration, and other logistics elements.</div> <div>FY 2019 OCO Plans: N/A</div> <div>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease in Management Support Services from FY 2018 to FY 2019 (\$3.781) is primarily attributed completion of ACV 1.1 EMD phase and allocation of a greater portion of Management Support Services to the PMC appropriation based on the transition to procurement phase of the system life cycle.</div>						
<div>Title: Program Support</div> <div>Articles:</div> <div>Description: Government labor, material, and travel for Integrated Logistics Support, Technical Publications, Support Equipment development, In-house Technical Support, and Program Management Support.</div> <div>FY 2018 Plans: - Complete ARWS marinization and integration support. - Continue Engineering Support for communication suite integration efforts documented during technical information and review meetings. - Continue procurement, inventory, checkout, kitting, shipment, and troubleshooting of ACV 1.1 communications suite Government Furnished Property (GFP) for FUSL test vehicles. - Continue Reliability, Availability, Maintainability, and Durability (RAM-D), and Human Systems Integration (HSI) activities for ACV 1.1. - Continue Digital Integrated Facility (DIF) architecture support. - Continue technical support for training packages. - Initiate development of Training Devices/Simulators for ACV 1.1.</div> <div>FY 2019 Base Plans: - Continue Engineering Support for communication suite integration efforts documented during technical information and review meetings.</div>		0.000 -	7.620 -	3.433 -	0.000 -	3.433 -

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy				Date: February 2018		
Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0605611M / (U) MC AVS Development & Demonstration		Project (Number/Name) 0025 / Amphibious Combat Vehicle 1.1		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<div>- Continue procurement, inventory, checkout, kitting, shipment, and troubleshooting of ACV 1.1 communications suite GFP</div> <div>- Continue RAM-D, and HSI for ACV 1.1.</div> <div>- Continue DIF architecture support.</div> <div>- Continue technical support for training packages.</div> <div>FY 2019 OCO Plans: N/A</div> <div>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease in Program Support from FY 2018 to FY 2019 (\$4.187) is primarily due to the decrease in Training Devices/Simulators (\$2.286) for which development continues under ACV 1.2, due to the completion of Amphibious Remote Weapons Station (ARWS) marinization and integration support (\$1.810).</div>						
<div>Title: Test &amp; Evaluation</div> <div>Articles:</div> <div>Description: Government Developmental Test (DT), Operational Assessment (OA), and Live Fire Test and Evaluation (LFT&amp;E) activities.</div> <div>FY 2018 Plans: - Continue LFT&amp;E activities (armor coupon testing, exploitation shots, fire survivability, system level testing, etc.) for competitive contractor designs. - Continue Developmental Testing. - Initiate and complete Operational Assessment (OA).</div> <div>FY 2019 Base Plans: - Continue LFT&amp;E activities (armor coupon testing, exploitation shots, fire survivability, system level testing, etc.) for down-selected contractor. - Continue Developmental Testing for down-selected contractor.</div> <div>FY 2019 OCO Plans: N/A</div> <div>FY 2018 to FY 2019 Increase/Decrease Statement:</div>		0.000 -	25.297 -	13.561 -	0.000 -	13.561 -

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Navy										<b>Date:</b> February 2018	
<b>Appropriation/Budget Activity</b> 1319 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0605611M / (U) MC AVS Development & Demonstration				<b>Project (Number/Name)</b> 0025 / Amphibious Combat Vehicle 1.1			
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>											
				<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>			
The Decrease in Test and Evaluation from FY 2018 to FY 2019 (\$11.736) is attributed to the completion of the competitive portion of DT and Cold weather climatic testing.											
<b>Accomplishments/Planned Programs Subtotals</b>				0.000	178.993	42.448	0.000	42.448			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC/2025: Amphibious Combat Vehicle 1.1	0.000	161.511	167.478	-	167.478	286.098	507.400	0.000	0.000	0.000	1,122.487
• PMC/7000/0206211M/1: Initial Spares - ACV 1.1	0.000	5.569	6.145	-	6.145	13.960	13.643	0.000	0.000	0.000	39.317
• RDTEN/0603611M/0025: Marine Corps Assault Vehicles	131.381	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	557.610
• RDTE/0605611M/0026: Amphibious Combat Vehicle 1.2	0.000	0.000	55.775	-	55.775	57.978	57.477	43.533	8.341	Continuing	Continuing
• PMC/2026: Amphibious Combat Vehicle 1.2	0.000	0.000	0.000	-	0.000	0.000	0.000	710.373	701.456	Continuing	Continuing
• PMC/7000/0206211M: Initial Spares - ACV 1.2	0.000	0.000	0.000	-	0.000	0.000	0.000	19.346	19.773	Continuing	Continuing
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
The program office awarded two competitive Engineering and Manufacturing Development (EMD) contracts to two vendors to build 16 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.											
<b>E. Performance Metrics</b>											
Milestone Reviews											
Milestone B: 1QFY16											
Milestone C: 3QFY18											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy												Date: February 2018			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0605611M / (U) MC AVS Development & Demonstration				Project (Number/Name) 0025 / Amphibious Combat Vehicle 1.1					
Product Development (\$ in Millions)				FY 2017		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
System Design &Development	C/FPIF	Various : Various	0.000	0.000		136.288	Jan 2018	21.993	Jan 2019	-		21.993	0.000	158.281	-
Other Product Devolpment	C/FFP	SPAWAR : New Jersey/Charleston/ Picatinny	0.000	0.000		2.546	Jan 2018	0.000		-		0.000	0.000	2.546	-
Subtotal			0.000	0.000		138.834		21.993		-		21.993	0.000	160.827	N/A
Remarks															
- The decrease in System Design & Development between FY 2018 & FY 2019 (\$114.295) is attributed to the completion the competitive EMD phase with two vendors (\$86.812), completion of procurement of Full-Up System Level (FUSL) test vehicles (\$23.385), and the remaining difference is in the reduced value of the system design and development between FY 2018 and FY2019 (\$4.098) as the program progresses.															
- The decrease in Other Product Development between FY 2018 & FY 2019 (\$2.546) is attributed to the completed purchase of GFE (Communication Suites and Amphibious Remote Weapons Stations (ARWS)) for FUSL test purposes in FY 2018.															
Support (\$ in Millions)				FY 2017		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
Integrated Logistics Support	WR	NSWC-Dahlgren : Dahlgren, VA	0.000	0.000		0.425	Apr 2018	0.986	Apr 2019	-		0.986	0.000	1.411	-
Technical Data & Pubs Development	WR	SPAWAR : Charleston, SC	0.000	0.000		0.100	Sep 2018	0.100	Sep 2019	-		0.100	0.000	0.200	-
GFP Management	WR	SPAWAR : Charleston, SC	0.000	0.000		4.687	Apr 2018	2.213	Apr 2019	-		2.213	0.000	6.900	-
Training Devices/ Simulators	TBD	TBD : TBD	0.000	0.000		2.286	Apr 2018	0.000		-		0.000	0.000	2.286	-
Travel	Various	Various : Various	0.000	0.000		0.122	Sep 2018	0.134	Sep 2019	-		0.134	0.000	0.256	-
Subtotal			0.000	0.000		7.620		3.433		-		3.433	0.000	11.053	N/A
Remarks															
- The increase in Integrated Logistics Support between FY 2018 and FY 2019 (\$0.561) is attributed to calibration requirements analyses and Operational and Maintainability Logistics demonstrations in FY 2019.															



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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2019 Navy</b>												<b>Date: February 2018</b>			
<b>Appropriation/Budget Activity</b> 1319 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0605611M / (U) MC AVS Development & Demonstration						<b>Project (Number/Name)</b> 0025 / Amphibious Combat Vehicle 1.1			
<b>Support (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
- The decrease in GFP Management between FY 2018 & FY 2019 (\$2.474) is attributed to completion of Amphibious Remote Weapons Station (ARWS) marinization and integration support. - The decrease in Training Devices/Simulators between FY 2018 & FY 2019 (\$2.286) is attributed to the plan to continue to develop training devices/simulators under the auspices of ACV 1.2 for the system as a whole.															
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Development Test & Evaluation	WR	Various : Various	0.000	0.000		15.081	Jan 2018	3.268	Jan 2019	-		3.268	0.000	18.349	-
Operational Test & Evaluation	WR	MCOTEA : Quantico, VA	0.000	0.000		2.348	Jan 2018	2.098	Jan 2019	-		2.098	0.000	4.446	-
Live Fire Test & Evaluation	WR	Various : Various	0.000	0.000		7.868	Jan 2018	8.195	Jan 2019	-		8.195	0.000	16.063	-
<b>Subtotal</b>			0.000	0.000		25.297		13.561		-		13.561	0.000	38.858	N/A
<b>Remarks</b> - The decrease in Developmental Test & Evaluation between FY 2018 & FY 2019 (\$11.813) is attributed to the completion of competitive DT execution and reporting activities and Cold weather climatic testing. - The decrease in Operational Test & Evaluation between FY 2018 and FY 2019 (\$0.250) is attributed to the completion of Operational Assessment (OA). - The increase in Live Fire Test & Evaluation between FY 2018 & FY 2019 (\$0.327) is primarily attributed to shifting from Live Fire planning and preparation efforts in FY 2018 to Live Fire test event execution in FY 2019. * The FY 2018 award date for cost categories with various activities is the actual obligation date for the last award in the category.															
<b>Management Services (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Engineering and Technical Services	C/FFP	Various : Various	0.000	0.000		0.900	Jul 2018	0.846	Jul 2019	-		0.846	0.000	1.746	-
Management Support Services	C/FFP	DDG : Stafford, VA	0.000	0.000		6.042	Mar 2018	2.315	Mar 2019	-		2.315	0.000	8.357	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy												Date: February 2018			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0605611M I (U) MC AVS Development & Demonstration				Project (Number/Name) 0025 I Amphibious Combat Vehicle 1.1					
Management Services (\$ in Millions)				FY 2017		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
Force Protection Studies and Analysis	C/FFP	Various : Various	0.000	0.000		0.300	Jul 2018	0.300	Jun 2019	-		0.300	0.000	0.600	-
Subtotal			0.000	0.000		7.242		3.461		-		3.461	0.000	10.703	N/A
Remarks															
- The decrease in Management Support Services between FY 2018 & FY 2019 (\$3.781) is attributed to the completion of ACV 1.1 EMD Phase and allocation of a greater portion of Management Support Services to the PMC appropriation based on the transition to the procurement phase of the system life cycle.															
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.000		178.993		42.448		-		42.448	0.000	221.441	N/A
Remarks															

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

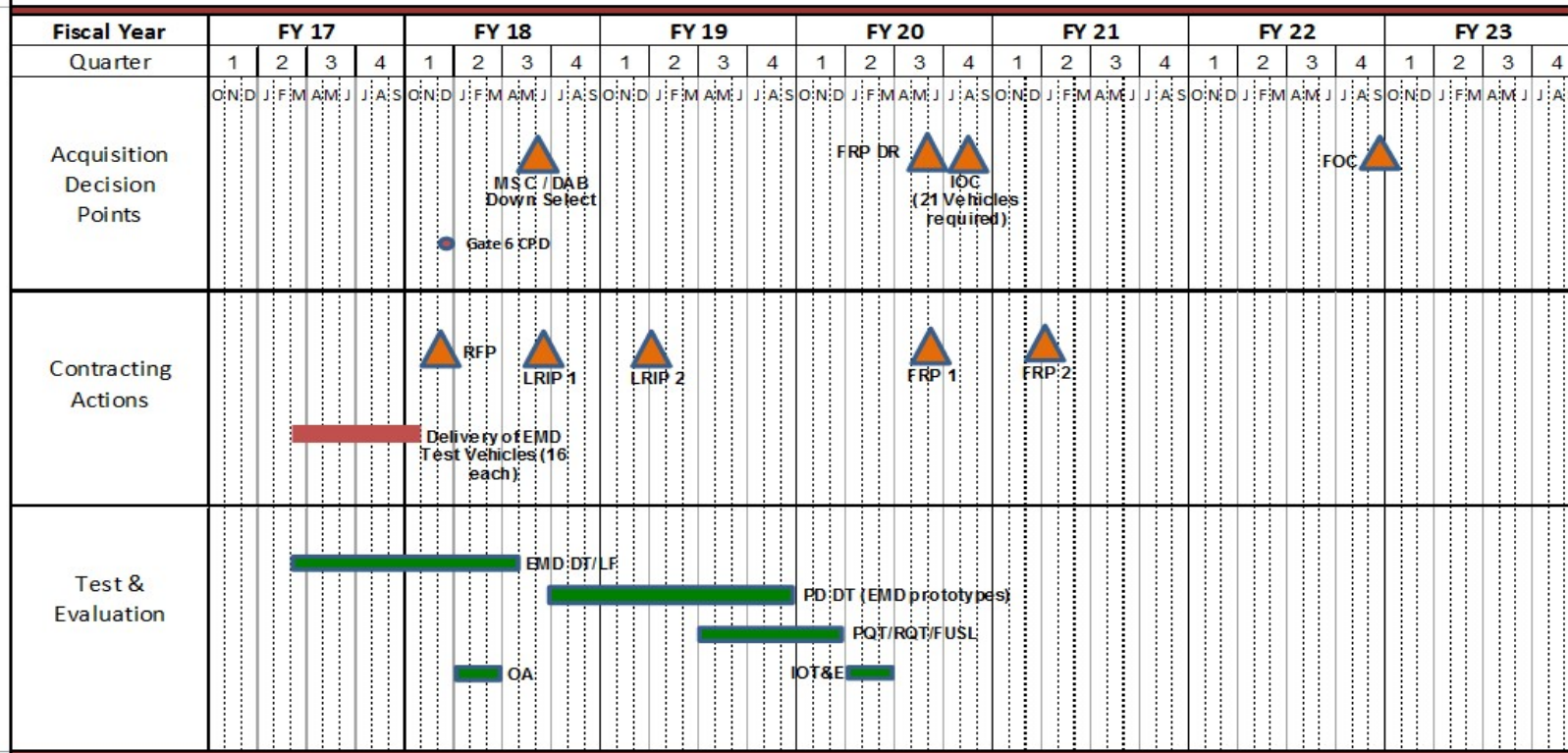
Date: February 2018

Appropriation/Budget Activity  
1319 / 5

R-1 Program Element (Number/Name)  
PE 0605611M / (U) MC AVS Development  
& Demonstration

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

## ACV 1.1 PB-19 PROGRAM SCHEDULE



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Navy			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605611M / (U) MC AVS Development & Demonstration	<b>Project (Number/Name)</b> 0025 / Amphibious Combat Vehicle 1.1	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 0025</b>				
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)	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
Gate 6 Capabilities Production Document (CPD)	1	2018	1	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy										Date: February 2018		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605611M / (U) MC AVS Development & Demonstration				Project (Number/Name) 0026 / Amphibious Combat Vehicle 1.2			
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
0026: Amphibious Combat Vehicle 1.2	0.000	0.000	0.000	55.775	-	55.775	57.978	57.477	43.533	8.341	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Amphibious Combat Vehicle (ACV) will be a partial and complementary replacement for the legacy Amphibious Assault Vehicle (AAV) battalion's within the Marine Divisions. ACV-equipped AA companies will provide protected mobility and general support lift to elements of Marine Infantry Battalions. The ACV, an advanced generation, eight-wheeled armored personnel carrier, will mitigate current and projected capability gaps by providing improved lethality against dismounted enemy troops, more effective land and water tactical mobility, and increased force protection and survivability from blast, fragmentation, and kinetic energy threats. The ACV program is structured to be executed in multiple phases, with the first phase designed to provide an initial operational capability of personnel carriers. Subsequent phases are planned to expand the personnel carrier capacity and to develop additional command and control and tactical recovery capabilities. ACV 1.2 will provide the Marine Corps with armored protected land mobility to effectively maneuver with the rest of the armored MAGTF, the direct fire lethality to support infantry maneuver, and the water mobility to self-deploy from amphibious shipping. In addition to fielding more ACV Personnel variants, ACV 1.2 will develop and field Command & Control and Recovery variants.

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

	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
<b>Title:</b> Product Development	0.000	0.000	49.293	0.000	49.293
<b>Articles:</b>	-	-	4	-	4
<b>Description:</b> System Design and Development; Engineering and Manufacturing Development (EMD) test vehicle manufacturing; prime contractor Developmental and Operational test, and development of Logistics Management Information (LMI) data.					
<b>FY 2018 Plans:</b> N/A					
<b>FY 2019 Base Plans:</b> - Initiate Trade Studies and design efforts. - Initiate conversion of four (4) ACV 1.1 Personnel-variant Engineering and Manufacturing Development (EMD) Prototypes into three (3) ACV 1.2 Personnel-variant and one (1) ACV 1.2 Command-variant configurations. - Initiate Systems Engineering/Program Management for Prime Contractor. - Initiate Vehicle Protection System (VPS) design and integration for Prime Contractor.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy				Date: February 2018		
Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0605611M / (U) MC AVS Development & Demonstration		Project (Number/Name) 0026 / Amphibious Combat Vehicle 1.2		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
- Initiate Prime Contractor training.  <b>FY 2019 OCO Plans:</b> N/A  <b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> The increase between FY 2018 and FY 2019 (\$49.293) is required for the Prime Contractor to design and develop the new Command and Control (C2) and Recovery variants and to modify the ACV 1.1 Personnel test vehicles into the ACV 1.2 configurations.						
<b>Title:</b> Program Support  <b>Articles:</b>  <b>Description:</b> Government Labor, material, and travel for Integrated Logistics Support, Technical Publications, Support Equipment development, In-house Technical Support, and Program Management support.  <b>FY 2018 Plans:</b> N/A  <b>FY 2019 Base Plans:</b> - Initiate technical support for Armor Characterization efforts. - Initiate technical support for Modular Active Protection Systems (MAPS) integration. - Initiate training devices and simulators design and development. - Initiate development of technical data and publications.  <b>FY 2019 OCO Plans:</b> N/A  <b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> The increase between FY 2018 and FY 2019 (\$3.393) is primarily required to initiate Training Devices and Simulators (\$2.286) for ACV 1.2 and to initiate technical support for Armor Characterization (\$0.245) and Modular Active Protection Systems (MAPS)(\$0.250).		0.000 -	0.000 -	3.393 -	0.000 -	3.393 -
<b>Title:</b> Management Services  <b>Articles:</b>  <b>Description:</b> Contract Advisory and Assistance Services (Engineering and Technical Support, Management Support Services, and Studies and Analyses).		0.000 -	0.000 -	3.089 -	0.000 -	3.089 -

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy									Date: February 2018		
Appropriation/Budget Activity 1319 / 5				R-1 Program Element (Number/Name) PE 0605611M / (U) MC AVS Development & Demonstration				Project (Number/Name) 0026 / Amphibious Combat Vehicle 1.2			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
FY 2018 Plans: N/A											
FY 2019 Base Plans: - Initiate business, acquisition, logistics, and engineering related activities for program document development, program analysis, acquisition logistics management, and financial management support. - Initiate Studies and Analysis.											
FY 2019 OCO Plans: N/A											
FY 2018 to FY 2019 Increase/Decrease Statement: The increase between FY 2018 and FY 2019 (\$3.089) is primarily required to initiate business acquisition, logistics, and engineering related activities to support program document development, program analysis, acquisition logistics management, and financial management support for ACV 1.2 (\$2.789).											
Accomplishments/Planned Programs Subtotals							0.000	0.000	55.775	0.000	55.775
C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• PMC/2025: Amphibious Combat Vehicle 1.1	0.000	161.511	167.478	-	167.478	286.098	507.400	0.000	0.000	0.000	1,122.487
• PMC/2026: Amphibious Combat Vehicle 1.2	0.000	0.000	0.000	-	0.000	0.000	0.000	710.373	701.456	Continuing	Continuing
• PMC/2025/7000: Initial Spares 1.1	0.000	5.569	6.145	-	6.145	13.960	13.643	0.000	0.000	0.000	39.317
• PMC/2026/7000: Initial Spares 1.2	0.000	0.000	0.000	-	0.000	0.000	0.000	19.346	19.773	Continuing	Continuing
• RDTE/0605611/0025: Amphibious Combat Vehicle 1.1	131.380	178.993	42.448	-	42.448	19.703	0.462	0.000	0.000	0.000	372.986
Remarks											
D. Acquisition Strategy											
The ACV Program Increment 1.2 will improve Personnel carrier capabilities over Increment 1.1 and will deliver Command and Control (C2) and Recovery Mission Role Variants (MRVs). The development acquisition approach for ACV 1.2 will be streamlined by modifying ACV 1.1 Engineering and Manufacturing Development (EMD) vehicles to an ACV 1.2 configuration. Areas of improvement for the ACV 1.2 personnel variant will be focused on changes resulting from ACV 1.1 performance during											

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605611M / (U) MC AVS Development & Demonstration	<b>Project (Number/Name)</b> 0026 / Amphibious Combat Vehicle 1.2
development testing and the operational assessment. This strategy will maximize the use of current ACV 1.1 vehicles and provide integration of the latest standard government furnished communications, weapons, sensors etc. This approach will minimize program cost, schedule, and performance risks, minimize development costs and provide rapid fielding of current capabilities to meet operational requirements. Specifically, the ACV Program Office plans to initially procure 422 ACV 1.2 Personnel carriers immediately following the completion of ACV 1.1 production with 68 Mission Role Variants being delivered near the end of the production timeframe.		
<b>E. Performance Metrics</b> N/A		



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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2019 Navy</b>												<b>Date: February 2018</b>			
<b>Appropriation/Budget Activity</b> 1319 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0605611M / (U) MC AVS Development & Demonstration						<b>Project (Number/Name)</b> 0026 / Amphibious Combat Vehicle 1.2			
<b>Product Development (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
System Design & Development	C/CPFF	TBD : TBD	0.000	0.000		0.000		49.293	Jan 2019	-		49.293	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		49.293		-		49.293	Continuing	Continuing	N/A
<b>Support (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Integrated Logistics Support	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.425	Apr 2019	-		0.425	Continuing	Continuing	Continuing
Training Decives/ Simulators	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		2.286	Apr 2019	-		2.286	Continuing	Continuing	Continuing
Technical Data & Pubs Development	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.100	Jan 2019	-		0.100	Continuing	Continuing	Continuing
In-House Technical Support	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.495	May 2019	-		0.495	Continuing	Continuing	Continuing
Travel	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.087	Sep 2019	-		0.087	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		3.393		-		3.393	Continuing	Continuing	N/A
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Developmental Test & Evaluation (DT&E)	Various	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Live Fire Test & Evaluation (LFT&E)	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	N/A

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2019 Navy</b>												<b>Date:</b> February 2018			
<b>Appropriation/Budget Activity</b> 1319 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0605611M / (U) MC AVS Development & Demonstration						<b>Project (Number/Name)</b> 0026 / Amphibious Combat Vehicle 1.2			
<b>Management Services (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Engineering and Technical Services	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Management Support Services	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		2.789	Mar 2019	-		2.789	Continuing	Continuing	Continuing
Studies and Analysis	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.300	Jul 2019	-		0.300	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		3.089		-		3.089	Continuing	Continuing	N/A
			<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			0.000	0.000		0.000		55.775		-		55.775	Continuing	Continuing	N/A
<b>Remarks</b>															

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PE 0605611M: (U) MC AVS Development & Demonstration  
Navy

Date: February 2018

**Appropriation/Budget Activity**  
1319 / 5

**R-1 Program Element (Number/Name)**  
PE 0605611M / (U) MC AVS Development  
& Demonstration

**Project (Number/Name)**  
0026 / Amphibious Combat Vehicle 1.2

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Navy			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605611M / (U) MC AVS Development & Demonstration	<b>Project (Number/Name)</b> 0026 / Amphibious Combat Vehicle 1.2	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 0026</b>				
MROC DRAFT CDD	1	2018	1	2018
JROC CDD	1	2019	1	2019
MS B	2	2019	2	2019
EMD Award	2	2019	2	2019
Modify Test Assets	4	2019	4	2019
Developmental Test & Evaluation (DT&E)	3	2020	2	2021
Release Production RFP	2	2021	3	2021
CPD	3	2021	3	2021
MS C	1	2022	1	2022
Lot 1 Contract Award (125 vehicles)	2	2022	2	2022
Lot 1 Production	2	2022	2	2023
Lot 2 Contract Award (125 vehicles)	2	2023	2	2023