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 7: Operational

PE 0305231N / MQ-8 UAV

R-1 Program Element (Number/Name)

Systems Development

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	464.015	26.518	62.656	9.843	-	9.843	17.687	9.580	7.404	7.842	146.213	751.758
2768: MQ-8 Fire Scout	464.015	26.518	62.656	9.843	-	9.843	17.687	9.580	7.404	7.842	146.213	751.758

Program MDAP/MAIS Code:

Project MDAP/MAIS Code(s): 253

## A. Mission Description and Budget Item Justification

Note: This budget prioritizes system wholeness to ensure program of record capabilities are fully integrated and support fleet requirements. System wholeness supports completion of MQ-8C operational test requirements, development of radar, and component redesign required to maintain system hardware.

The MQ-8 Unmanned Air System is a Joint Military Intelligence Program.

The MQ-8 Unmanned Air System is popularly known as "Fire Scout". The program achieved MS C in June 2017. The program includes MQ-8B air vehicles, MQ-8C air vehicles, and associated Mission Control Systems (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. In addition to the air vehicles, Radar and Weapons capabilities were developed under the Navy's Rapid Deployment Capability (RDC) authorities. All acquisition actions previously planned under the RDCs have transitioned into the POR. Current analysis has determined that a total procurement of 63 air vehicles (54 procurement and 9 RDT&EN / 30 MQ-8Bs and 33 MQ-8Cs) will satisfy current and foreseeable operational needs.

The MQ-8 System provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline MQ-8 can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle damage assessment (including voice communications relay). Development efforts respond to emerging fleet requirements through integration and improvements to Common Operational Picture capabilities, avionics, payloads, range, endurance, and targeting.

The MQ-8 launches and recovers vertically, and can operate from suitably-equipped air capable ships, as well as confined area land bases. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the MCS, also referred to as a Ground Control Station (GCS), and through the use of the Tactical Common Data Link (TCDL). The data from the MQ-8 is provided through standard DoD Command, Control, Communications, Computers and ISR (C4ISR) system. architectures and protocols.

A deployed MQ-8 system includes air vehicle(s), payloads (i.e. electro-optical/infrared/laser designator-range finder, Automated Identification System, voice communications relay, Radar, Weapons, and other specialty payloads), MCS (with TCS and TCDL integrated for interoperability), a UCARS for automatic launch and recovery, and associated spares and support equipment. The schedules for MCS and UCARS components are based on host ship requirements, while schedules for air vehicle components, support equipment, and training equipment are based on operational deployment plans. A limited number of land-based mission control systems supplement the shipboard systems to support shore-based operations, such as pre-deployment or acceptance functional check flights. These land-based mission control

PE 0305231N: MQ-8 UAV

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

#### Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 7: Operational Systems Development

PE 0305231N / MQ-8 UAV

stations will also support depot-level maintenance/post-maintenance activities. The MQ-8C provides additional mission endurance and payload-weight-power, increased reliability, and improved maintainability to the MQ-8 Fire Scout System. MQ-8 systems will support missions on Littoral Combat Ship (LCS), Expeditionary Mobile Base (T-ESB), FFG(X), and/or suitably-equipped air capable ships. Quantities of air vehicles are derived from LCS and/or suitably-equipped air capable ship deployment requirements for Surface Warfare and Mine Countermeasures mission sets.

The MQ-8 Radar capability is the initial effort as part of the Surface Warfare (SUW) Increment of the MQ-8C. A non-developmental maritime Radar has been competitively selected for integration into the MQ-8C Fire Scout System. This system will provide the MQ-8 operators and the supported LCS crew enhanced situational awareness of the Recognized Maritime Picture (RMP) by providing multiple operational modes to include surface search, track, Inverse Synthetic Aperture Radar (ISAR) maritime target classification, and Synthetic Aperture Radar (SAR) target classification capabilities. The maritime Radar will be fully integrated with the Mission Control Systems (MCS) and ship's combat systems providing data in standardized format for ease of dissemination to other users.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	26.518	62.656	19.952	-	19.952
Current President's Budget	26.518	62.656	9.843	-	9.843
Total Adjustments	0.000	0.000	-10.109	-	-10.109
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
Program Adjustments	0.000	0.000	-9.987	-	-9.987
Rate/Misc Adjustments	0.000	0.000	-0.122	-	-0.122

## **Change Summary Explanation**

The FY 2019 funding request was reduced by \$0.229 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

The FY 2019 funding request was reduced by \$5.558 million to account for the availability of prior year execution balances.

Technical: FY19 funding decrease reflects the deferral of significant MQ-8C weapons development efforts to the end of the FYDP. Remaining FYDP funding supports completion of Radar development, MQ-8C and Radar test requirements, and continued weapons studies. Radar and weapons funding supports requirements outlined in the MQ-8C Capabilities Production Document (CPD). Test funding supports DT and OT events to meet IOC, and deployment dates. Future payload efforts will be considered when developing current efforts.

PE 0305231N: MQ-8 UAV

xhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy	Date: February 2018	
ppropriation/Budget Activity 319: Research, Development, Test & Evaluation, Navy I BA 7: Operational systems Development	R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV	,
Schedule: Updated Milestone C decision and other milestones to align to the rest Updated Radar capability contract awards, payloads efforts, and review Updated production and delivery schedules for the current production	ws to align to the restructured MQ-8 program.	

PE 0305231N: MQ-8 UAV

Exhibit R-2A, RDT&E Project Ju		Date: February 2018										
Appropriation/Budget Activity 1319 / 7						am Elemen 31N / MQ-8	t (Number/ UAV	Number/Name) Q-8 Fire Scout				
COST (\$ in Millions)  Prior Years  FY 2017  FY 2018  Base					FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2768: MQ-8 Fire Scout	464.015	26.518	62.656	9.843	-	9.843	17.687	9.580	7.404	7.842	146.213	751.758
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Droinet MDAD/MAIC Code: 252												

Project MDAP/MAIS Code: 253

### A. Mission Description and Budget Item Justification

This budget prioritizes system wholeness to ensure program of record capabilities are fully integrated and support fleet requirements. System wholeness supports completion of MQ-8C operational test requirements, development of radar, and component redesign required to maintain system hardware.

The MQ-8 Unmanned Air System is popularly known as "Fire Scout". The program achieved MS C in June 2017. The program includes MQ-8B air vehicles, MQ-8C air vehicles, and associated Mission Control Systems (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. In addition to the air vehicles, Radar and Weapons capabilities were developed under the Navy's Rapid Deployment Capability (RDC) authorities. All acquisition actions previously planned under the RDCs have transitioned into the POR. FY16 analysis has determined that a total fleet requirement of 60 air vehicles (51 procurement and 9 RDT&EN / 30 MQ-8Bs and 30 MQ-8Cs) will satisfy current Fleet needs.

The MQ-8 System provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline MQ-8 can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle damage assessment (including voice communications relay). Development efforts respond to emerging fleet requirements through integration and improvements to Common Operational Picture capabilities, avionics, payloads, range, endurance, and targeting.

The MQ-8 launches and recovers vertically, and can operate from suitably-equipped air capable ships, as well as confined area land bases. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the MCS, also referred to as a Ground Control Station (GCS), and through the use of the Tactical Common Data Link (TCDL). The data from the MQ-8 is provided through standard DoD Command, Control, Communications, Computers and ISR (C4ISR) system architectures and protocols.

A deployed MQ-8 system includes air vehicle(s), payloads (i.e. electro-optical/infrared/laser designator-range finder, Automated Identification System, voice communications relay, Radar, Weapons, and other specialty payloads), MCS (with TCS and TCDL integrated for interoperability), a UCARS for automatic launch and recovery, and associated spares and support equipment. The schedules for MCS and UCARS components are based on host ship requirements, while schedules for air vehicle components, support equipment, and training equipment are based on operational deployment plans. A limited number of land-based mission control systems supplement the shipboard systems to support shore-based operations, such as pre-deployment or acceptance functional check flights. These land-based mission control stations will also support depot-level maintenance/post-maintenance activities. The MQ-8C provides additional mission endurance and payload-weight-power, increased reliability, and improved maintainability to the MQ-8 Fire Scout System. MQ-8 systems will support missions on Littoral Combat Ship (LCS), Expeditionary Mobile Base (T-ESB), FFG(X), and/or suitably-equipped air capable ships. Quantities of air vehicles are derived from LCS and/or suitably-equipped air capable ship deployment requirements for Surface Warfare and Mine Countermeasures mission sets.

PE 0305231N: MQ-8 UAV

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
,	,	Project (Number/Name)
1319 / 7	PE 0305231N / MQ-8 UAV	2768 I MQ-8 Fire Scout

The MQ-8 Radar capability is the initial effort as part of the Surface Warfare (SUW) Increment of the MQ-8C. A non-developmental maritime Radar has been competitively selected for integration into the MQ-8C Fire Scout System. This system will provide the MQ-8 operators and the supported LCS crew enhanced situational awareness of the Recognized Maritime Picture (RMP) by providing multiple operational modes to include surface search, track, Inverse Synthetic Aperture Radar (ISAR) maritime target classification, and Synthetic Aperture Radar (SAR) target classification capabilities. The maritime Radar will be fully integrated with the Mission Control Systems (MCS) and ship's combat systems providing data in standardized format for ease of dissemination to other users.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Hardware and System Development  Articles:	9.429 -	31.375 -	1.193 -	0.000	1.193 -
FY 2018 Plans: Continue MQ-8C hardware, software modifications, other payload integration, cyber vulnerability closure and safety capability improvements such a backup landing system and collision avoidance systems. Continue MQ-8 integration and testing on LCS. Continue integration of the selected Radar with the MQ-8C Air Vehicle and MCS. Complete qualification of the selected Radar for the MQ-8C operational environment. Complete System Integration Lab testing of the software build for the maritime Radar integration. Continue MQ-8 FOT&E					
FY 2019 Base Plans: Continue MQ-8C hardware, software modifications, other payload integration, cyber vulnerability closure and safety capability improvements such a backup landing system and collision avoidance systems. Continue MQ-8 integration and testing on LCS. Continue integration of the selected Radar with the MQ-8C Air Vehicle and MCS. Complete qualification of the selected Radar for the MQ-8C operational environment. Complete System Integration Lab testing of the software build for the maritime Radar integration. Continue MQ-8 FOT&E.					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement:  Decrease results from deferral of MQ-8C weapons capability development to the end of the FYDP.					
Title: Development/Operational Testing  Articles:	7.966 -	19.616 -	5.268 -	0.000	5.268 -
FY 2018 Plans: Complete Dynamic Interface testing of MQ-8C on both classes of LCS. Continue MQ-8C developmental testing of hardware and software modifications and planning for the other payload integration. Complete Operational Test and Evaluation testing of MQ-8C on LCS. Continue developmental Testing of the maritime Radar on the					

PE 0305231N: MQ-8 UAV

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy				Date: Febr	uary 2018	
	<b>R-1 Program Element (Numbe</b> r/ PE 0305231N <i>I MQ-8 UAV</i>	Project (Number/Name) 2768 / MQ-8 Fire Scout				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in	Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
MQ-8C Air Vehicle. Complete transition of the test team from contractor to gove IOT&E and continue MQ-8 FOT&E.	rnment. Complete MQ-8C					
FY 2019 Base Plans: Continue Dynamic Interface testing of MQ-8C on both classes of Littoral Comba developmental testing of hardware and software modifications and planning for Continue developmental Testing of the maritime Radar on the MQ-8C Air Vehicle	he other payload integration.					
FY 2019 OCO Plans: N/A						
FY 2018 to FY 2019 Increase/Decrease Statement:  Decrease results from reduced resource requirements to support MQ-8C IOC et	forts and radar development.					
Title: Engineering and Technical Services	Articles:	9.123 -	11.665 -	3.382	0.000	3.382
FY 2018 Plans: Continue engineering, program technical management, logistics support of the N planning and execution to transition the Radar, and Weapons capabilities. Cont payloads, LCS integration, and system studies and design. Continue MQ-8 FO	inue Radar, Weapons, other					
FY 2019 Base Plans: Continue engineering, program technical management, logistics support of the National planning and execution to transition the Radar and Weapons capabilities. Continually payloads, LCS integration, and system studies and design. Continue MQ-8 FO	nue Radar, Weapons, other					
FY 2019 OCO Plans: N/A						
FY 2018 to FY 2019 Increase/Decrease Statement:  Decrease results from reduced engineering, management, and support requirent efforts.	nents for current development					
Accomplishment	s/Planned Programs Subtotals	26.518	62.656	9.843	0.000	9.843

PE 0305231N: MQ-8 UAV

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
1319 / 7	PE 0305231N / MQ-8 UAV	2768 / MQ	-8 Fire Scout
C. Other Program Funding Summary (\$ in Millions)			

			FY 2019	FY 2019	FY 2019					<b>Cost To</b>	
Line Item	FY 2017	FY 2018	Base	OCO	<u>Total</u>	FY 2020	FY 2021	FY 2022	FY 2023	<b>Complete</b>	<b>Total Cost</b>
• APN, 044300: <i>MQ-8 UAV</i>	113.635	49.472	54.761	-	54.761	45.015	40.587	59.409	40.702	78.089	1,449.371
• APN, 060510: MQ-8 UAV Spares	0.000	3.499	0.000	-	0.000	0.519	0.188	0.136	0.143	15.939	132.352
<ul> <li>APN, 058800: MQ-8 Series</li> </ul>	19.003	32.361	37.907	-	37.907	35.504	43.529	31.830	28.787	72.993	328.625

#### Remarks

### D. Acquisition Strategy

The Navy's acquisition strategy capitalizes on prior Rapid Deployment Capability efforts, while leveraging existing program investments. The acquisition strategy maintains commonality of MQ-8B and MQ-8C systems, payloads, avionics, software, and ancillary equipment where possible. The acquisition strategy supports the revised Capability Production Document. Initial Operational Capability of an MQ-8B-based system was achieved in 2QFY14 while IOC of an MQ-8C-based system onboard Littoral Combat Ship is anticipated in 4QFY18. The maritime Radar has been competitively selected. The integration effort will require sole source contracts to the current prime Original Equipment Manufacturers for the Tactical Control System and the MQ-8 Fire Scout air vehicle.

#### E. Performance Metrics

Successfully provide an MQ-8C air vehicle that supports operational deployments. Successfully provide a Radar capability for operational deployments. Successfully achieve Littoral Combat Ship integration.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy	Date: February 2018		
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV	, ,	umber/Name) -8 Fire Scout
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Product Developmer	,			FY 2017		FY 2018		FY 2 Ba	2019 Ise		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
Primary Hardware Development (MQ-8)	C/CPIF	Northrop Grumman Corp : San Diego, CA	338.125	7.579	Nov 2016	28.838	Nov 2017	0.392	Nov 2018	-		0.392	80.193	455.127	455.127
Primary Hardware Development (MQ-8)	C/CPIF	Raytheon Corp : Falls Church, VA	24.251	0.000		2.537	Nov 2017	0.801	Nov 2018	-		0.801	11.368	38.957	38.957
Primary Hardware Development (RADAR OEM)	C/CPIF	Leonardo MW : Edinburgh, United Kingdom	10.821	0.000		0.000		0.000		-		0.000	0.000	10.821	10.821
Primary Hardware Development (Minotaur)	C/BA	John Hopkins University : Laurel, MD	0.000	1.850	May 2017	0.000		0.000		-		0.000	0.000	1.850	1.850
	Subtotal 373.19					31.375		1.193		-		1.193	91.561	506.755	N/A

Support (\$ in Million	Support (\$ in Millions)			FY 2	FY 2017		FY 2018		FY 2019 Base		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
Integrated Logistics Support	Various	Various : Various	3.051	0.000		1.819	Nov 2017	0.385	Nov 2018	-		0.385	5.374	10.629	-
		Subtotal	3.051	0.000		1.819		0.385		-		0.385	5.374	10.629	N/A

Test and Evaluation	(\$ in Milli	ons)		FY 2	2017	FY 2018		FY 2 Ba			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
Developmental Test & Evaluation	WR	NAWCAD : PAXRV, MD	10.235	6.040	Nov 2016	12.569	Nov 2017	4.484	Nov 2018	-		4.484	27.017	60.345	-
Operational Test & Evaluation/QRA	WR	NAWCWD : CHINALK, CA	9.776	0.658	Mar 2017	7.047	Nov 2017	0.784	Nov 2018	-		0.784	20.819	39.084	-
Prior Years T&E no longer funded in the FYDP	Various	Various : Various	0.378	1.268	Nov 2016	0.000		0.000		-		0.000	0.000	1.646	-
		Subtotal	20.389	7.966		19.616		5.268		-		5.268	47.836	101.075	N/A

PE 0305231N: *MQ-8 UAV* Navy

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

R-1 Program Element (Number/Name)

Date: February 2018

Appropriation/Budget Activity 1319 / 7

PE 0305231N / MQ-8 UAV

Project (Number/Name) 2768 / MQ-8 Fire Scout

Management Service	s (\$ in M	illions)		FY 2	2017	FY 2	2018	FY 2 Ba	2019 ise	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
Government Engineering Support	WR	NAWCAD : PAXRV, MD	48.537	6.400	Nov 2016	7.116	Nov 2017	2.000	Nov 2018	-		2.000	28.515	92.568	-
Program Management Support	Various	Various : Various	14.972	2.448	Nov 2016	2.405	Nov 2017	0.712	Nov 2018	-		0.712	12.636	33.173	-
Travel	WR	NAVAIR : PAXRV, MD	1.412	0.275	Nov 2016	0.325	Nov 2017	0.285	Nov 2018	-		0.285	2.804	5.101	-
Prior years Mgmt Svcs no longer funded in the FYDP	Various	Various : Various	2.457	0.000		0.000		0.000		-		0.000	0.000	2.457	-
		Subtotal	67.378	9.123		9.846		2.997		-		2.997	43.955	133.299	N/A

### Remarks

Travel contract type is TO.

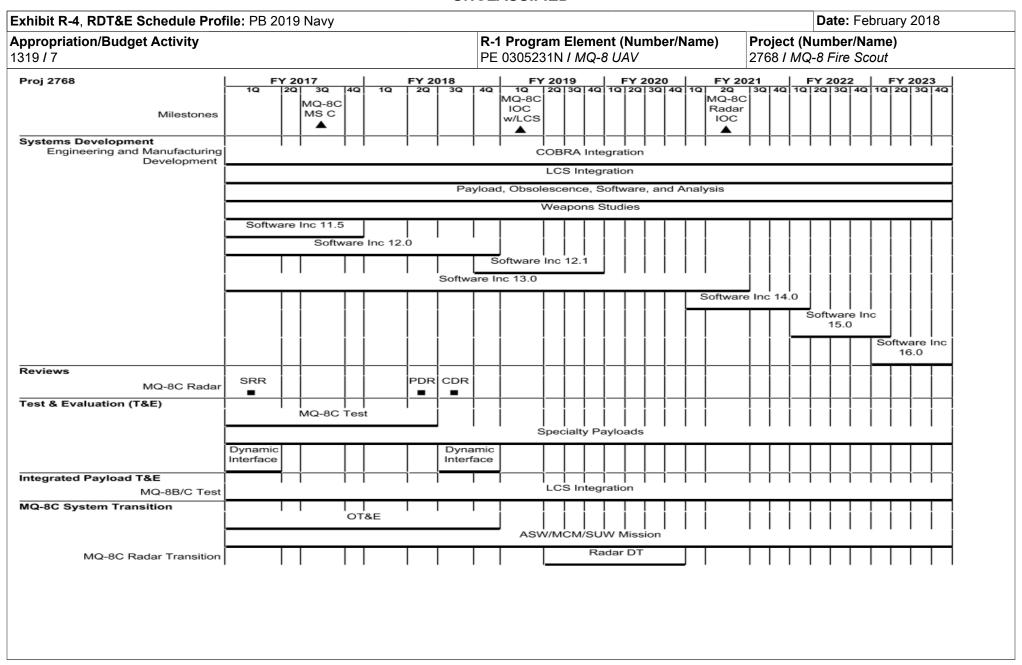
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Total	464.015	26.518	62.656	9.843	-	9.843	188.726	751.758	N/A

#### Remarks

OT&E includes MQ-8C FOT&E

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PE 0305231N: MQ-8 UAV Navy

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hibit R-4, RDT&E Schedule Prof	file: PB 20	019	Navy				_															Dat	te: I	Feb	ruai	ry 20	018	
Appropriation/Budget Activity 1319 / 7				R-1 Program Element (Number/Name) PE 0305231N / MQ-8 UAV								F	Project (Number/Name) 2768 / MQ-8 Fire Scout															
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Production Milestones		H		<del> </del>			i	† †		┤─		H	寸	十	┪	Ţ	1	┥	十	┪	┪	┪	┪	十	╁	- -	╁	1
Contract Awards	MQ-8C VI(a)			\	Q-8C I(b) ●																							
19PB - 0305231N - 2768																		·		·		·	·		·			

PE 0305231N: MQ-8 UAV Navy

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	,	, , ,	umber/Name) -8 Fire Scout
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# Schedule Details

	Sta	art	End				
Events by Sub Project	Quarter	Year	Quarter	Year			
Proj 2768							
Milestones: MQ-8 Initial Operational Capability (IOC) - MQ-8C Littoral Combat Ship (LCS)	1	2019	1	2019			
Milestones: MQ-8C Milestone C Decision	3	2017	3	2017			
Milestones: MQ-8C Radar IOC	2	2021	2	2021			
Systems Development: Engineering and Manufacturing Development: Coastal Battlefield Reconnaissance and Analysis Integration (COBRA), BLK 1/2/3	1	2017	4	2023			
Systems Development: Engineering and Manufacturing Development: Littoral Combat Ship (LCS) Integration	1	2017	4	2023			
Systems Development: Engineering and Manufacturing Development: Payload, Obsolescence, Software, and Analysis	1	2017	4	2023			
Systems Development: Engineering and Manufacturing Development: Weapons Studies	1	2017	4	2023			
Systems Development: Engineering and Manufacturing Development: Software Increment 11.5	1	2017	4	2017			
Systems Development: Engineering and Manufacturing Development: Software Increment 12.0	1	2017	4	2018			
Systems Development: Engineering and Manufacturing Development: Software Increment 12.1	4	2018	4	2019			
Systems Development: Engineering and Manufacturing Development: Software Increment 13.0	1	2017	2	2021			
Systems Development: Engineering and Manufacturing Development: Software Increment 14.0	1	2021	1	2022			
Systems Development: Engineering and Manufacturing Development: Software Increment 15.0	1	2022	1	2023			

PE 0305231N: *MQ-8 UAV* Navy

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

Appropriation/Budget Activity
1319 / 7

PE 0305231N / MQ-8 UAV

Date: February 2018

Project (Number/Name)
2768 / MQ-8 Fire Scout

	Sta	Start		nd
Events by Sub Project	Quarter	Year	Quarter	Year
Systems Development: Engineering and Manufacturing Development: Software Increment 16.0	1	2023	4	2023
Reviews: MQ-8C Radar: System Requirements Review (SRR)	1	2017	1	2017
Reviews: MQ-8C Radar: Preliminary Design Review (PDR)	2	2018	2	2018
Reviews: MQ-8C Radar: Critical Design Review (CDR)	3	2018	3	2018
Test & Evaluation (T&E): MQ-8C Development Test	1	2017	2	2018
Test & Evaluation (T&E): Specialty Payloads	1	2017	4	2023
Test & Evaluation (T&E): MQ-8C Dynamic Interface (DI) Testing LCS Even Class	1	2017	1	2017
Test & Evaluation (T&E): MQ-8C Dynamic Interface (DI) Testing LCS Odd Class	3	2018	4	2018
Integrated Payload T&E: MQ-8B/C Test: Littoral Combat Ship (LCS) Integration	1	2017	4	2023
MQ-8C System Transition: Operational Test and Evaluation (OT&E)	1	2017	4	2018
MQ-8C System Transition: ASW/MCM/SUW Mission	1	2017	4	2023
MQ-8C System Transition: MQ-8C Radar Transition: Radar Developmental Test (DT)	2	2019	4	2020
MQ-8C System Transition: MQ-8C Radar Transition: Radar Operational Test (OT)	4	2020	2	2021
Production Milestones: Contract Awards: Air Vehicles MQ-8C VI(a)	1	2017	1	2017
Production Milestones: Contract Awards: Air Vehicles MQ-8C VI(b)	1	2018	1	2018

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