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

PE 0305205N I (U)UAS Integration and Interoperability

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	42.202	21.543	39.736	41.212	-	41.212	40.446	36.203	43.309	35.110	Continuing	Continuing
3379: Common Control System	42.202	21.543	39.736	41.212	-	41.212	40.446	36.203	43.309	35.110	Continuing	Continuing

Note

Navy

The Common Control System (CCS) was budgeted in PE 0604404N prior to FY16.

A. Mission Description and Budget Item Justification

Common Control System (CCS) budget profile changes are due to program realignment and acceleration to support CCS development and integration in support of MQ-25 Stingray, MQ-8 Fire Scout and follow on UxS platforms.

This PU funds the Unmanned Systems (UxSs) CCS. The primary mission of CCS is to provide common control across the Navy's UxSs portfolio to add scalable and adaptable warfighting capability, implement robust cybersecurity attributes, leverage existing government owned products, eliminate redundant software development efforts, consolidate product support, encourage innovation, improve cost control and enable rapid integration of UxS capabilities across Aviation, Surface, Sub-Surface, and Ground domains.

CCS will be a ship/shore/airborne/expeditionary based common control system that provides Vehicle Management (VM) and Mission Management/Mission Planning (MM/MP) capabilities for Naval Group 1 through 5 Unmanned Air Vehicles (UAVs) as well as other domain UxSs. VM is the software that allows the operator to control the UxS. MM/MP is the software that allows the operator to create mission plans and control the UxS's sensors. CCS software is based on the OSD Unmanned Control Segment (UCS) architecture which is a service oriented open architecture that is modular and scalable to meet evolving Service requirements and is also supportive of safety/airworthiness certification and cybersecurity certification and accreditation.

This program will define, develop, and deliver CCS capability that enables the flexibility for Ground Control Systems (GCS) that could be ship, shore, airborne, or expeditionary based to operate multiple and dissimilar Naval UxSs. CCS includes a common framework, user interface, and common components that will also be integrated and tested with legacy platform components. CCS is being developed with an open and modular business model with robust cybersecurity implementation and will be provided as Government Furnished Equipment (GFE) to UxS contractors as required.

The CCS acquisition approach provides increasing capability through incremental development for UxS platforms as follows:

Increment I delivers initial unmanned vehicle management (VM) functionality for MQ-25 Stingray in FY18, which includes flight maneuvering and stationing, situational awareness, and health & performance status monitoring, hosted on legacy platform hardware. CCS VM functionality will also be delivered to MQ-8 Fire Scout in FY19 with requirements development initiated in FY17. Additional efforts include developing plans for integration of common CCS VM services already developed under this program into other UxS cross-domain platforms' control stations to reduce department-level Total Ownership Costs for unmanned Ground Control Systems.

PE 0305205N: (U)UAS Integration and Interoperability

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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 0305205N I (U)UAS Integration and Interoperability

Increment II builds upon CCS Increment I software delivery, adding discrete common MM/MP capabilities as well as maturing VM capabilities. These MM/MP capabilities include route planning, aerial refueling, sensor and payload control, and data processing and dissemination. CCS Increment II software will be hosted on legacy platform hardware. Additionally, Increment II adds robust cybersecurity controls, key systems safety attributes and core program infrastructure, to include a system integration lab and software support activity (SSA).

Increment III develops common hardware for hosting CCS. CCS Increment III software will be developed and delivered with additional capabilities to include cross-domain capabilities and control of multiple dissimilar UxS for further enterprise-level Total Ownership Cost savings.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	36.509	39.736	17.547	-	17.547
Current President's Budget	21.543	39.736	41.212	-	41.212
Total Adjustments	-14.966	0.000	23.665	-	23.665
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.367	0.000			
Program Adjustments	0.000	0.000	24.158	-	24.158
 Rate/Misc Adjustments 	0.001	0.000	-0.493	-	-0.493
 Congressional Directed Reductions 	-14.600	_	-	-	-
Adjustments					

Change Summary Explanation

- Note 1: FY17 planned Increment II software requirements and development effort deferred one year
- Note 2: FY17 planned CCS Increment I integration into MQ-8 Fire Scout contract delayed six months
- Note 3: Schedule updated to show a more detailed breakout of activities of each Increment, including incremental delivery of additional capabilities in periodic software releases.
- Note 4: Schedule updated to show Increment I completion in FY19.
- Note 5: Moving Target Indicator (MTI) Speed-to-Fleet effort removed due to direction to allocate all Speed-to-Fleet funds to Geo-intelligence Unified Naval Streaming Systems (GUNNS) in FY17.

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Note 6: Additional funding (\$24.2M) provided in FY19 for CCS program wholeness and MQ-25 acceleration.

Exhibit R-2A, RDT&E Project Ju	nibit R-2A, RDT&E Project Justification: PB 2019 Navy													
Appropriation/Budget Activity 1319 / 7					_	am Elemen 95N <i>I (U)UA</i> bility	•		(Number/Name) Common Control System					
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		
3379: Common Control System	41.212	-	41.212	40.446	36.203	43.309	35.110	Continuing	Continuing					
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-				

Note

Navy

The Common Control System (CCS) was budgeted in PE 0604404N prior to FY16.

A. Mission Description and Budget Item Justification

Common Control System (CCS) budget profile changes are due to program realignment and acceleration to support CCS development and integration in support of MQ-25 Stingray, MQ-8 Fire Scout and follow on UxS platforms.

This PE funds the Unmanned Systems (UxSs) CCS. The primary mission of CCS is to provide common control across the Navy's UxSs portfolio to add scalable and adaptable warfighting capability, implement robust cybersecurity attributes, leverage existing government owned products, eliminate redundant software development efforts, consolidate product support, encourage innovation, improve cost control and enable rapid integration of UxS capabilities across Aviation, Surface, Sub-Surface, and Ground domains.

CCS will be a ship/shore/airborne/expeditionary based common control system that provides Vehicle Management (VM) and Mission Management/Mission Planning (MM/MP) capabilities for Naval Group 1 through 5 Unmanned Air Vehicles (UAVs) as well as other domain UxSs. VM is the software that allows the operator to control the UxS. MM/MP is the software that allows the operator to create mission plans and control the UxS's sensors. CCS software is based on the OSD Unmanned Control Segment (UCS) architecture which is a service oriented open architecture that is modular and scalable to meet evolving Service requirements and is also supportive of safety/airworthiness certification and cybersecurity certification and accreditation.

This program will define, develop, and deliver CCS capability that enables the flexibility for Ground Control Systems (GCS) that could be ship, shore, airborne, or expeditionary based to operate multiple and dissimilar Naval UxSs. CCS includes a common framework, user interface, and common components that will also be integrated and tested with legacy platform components. CCS is being developed with an open and modular business model with robust cybersecurity implementation and will be provided as Government Furnished Equipment (GFE) to UxS contractors as required.

The CCS acquisition approach provides increasing capability through incremental development for UxS platforms as follows:

Increment I delivers initial unmanned vehicle management (VM) functionality for MQ-25 Stingray in FY18, which includes flight maneuvering and stationing, situational awareness, and health & performance status monitoring, hosted on legacy platform hardware. CCS VM functionality will also be delivered to MQ-8 Fire Scout in FY19 with requirements development initiated in FY17. Additional efforts include developing plans for integration of common CCS VM services already developed under this program into other UxS cross-domain platforms' control stations to reduce department-level Total Ownership Costs for unmanned Ground Control Systems.

PE 0305205N: (U)UAS Integration and Interoperability

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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 0305205N I (U)UAS Integration and	3379 I Con	mmon Control System
	Interoperability		

Increment II builds upon CCS Increment I software delivery, adding discrete common MM/MP capabilities as well as maturing VM capabilities. These MM/MP capabilities include route planning, aerial refueling, sensor and payload control, and data processing and dissemination. CCS Increment II software will be hosted on legacy platform hardware. Additionally, Increment II adds robust cybersecurity controls, key systems safety attributes and core program infrastructure, to include a system integration lab and software support activity (SSA).

Increment III develops common hardware for hosting CCS. CCS Increment III software will be developed and delivered with additional capabilities to include cross-domain capabilities and control of multiple dissimilar UxS for further enterprise-level Total Ownership Cost savings.

The CCS PU funds the Full Motion Video (FMV) for Geo-intelligence Unified Naval Streaming System (GUNSS) Speed-to-the-Fleet capability initiative in FY17.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Increment I Articles:	14.400	16.946	3.125 -	0.000	3.125
Description: Common Control System (CCS) Increment 1 provides Unmanned System (UxS) Vehicle Management (VM) hosted on legacy platform hardware required to support UxSs control system development, integration and test. Initial platforms include MQ-25 Stingray and MQ-8 Fire Scout. FY 2018 Plans: Development of CCS VM capability will continue in FY18 and includes support for accelerated MQ-25 Stingray capability delivery and CCS VM build delivery to MQ-8 Fire Scout. Increment I Vehicle Management capabilities and common requirements definition, analysis, and development continues in FY18 for other UxS target platforms.					
FY 2019 Base Plans: Development of CCS VM capability under Increment I will be completed. Correction of deficiencies, software delivery, and platform integration and test support will continue in FY19.					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$13.821M from FY 2018 to FY 2019 due to minimal tasking required in FY 2019 to complete the Increment I efforts.					
Title: Increment II Articles:	7.143 -	22.790	38.087 -	0.000	38.087

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy				Date: Febr	uary 2018	
1319 <i>I</i> 7	-1 Program Element (Number/I E 0305205N / (U)UAS Integration Interoperability			t (Number/Name) Common Control System		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in E	Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Description: CCS Increment II develops common MM/MP capabilities and updat capabilities, integrating these capabilities into the core CCS software baseline delin support of Naval UxSs. CCS Increment II will be the future common control syst MQ-25. Plans include ensuring that maximum commonality is maintained for transtriton, and other UxS to reduce enterprise Total Ownership Cost for UxS Ground incorporates cyber security measures, key systems safety attributes, and core prosystem integration lab and software support activities.	livered under Increment I stem software supporting sition to MQ-8 Fire Scout, MQ-4 Control Systems. Increment II					
FY 2018 Plans: CCS Increment II will begin initial software development incorporating results of redevelopment efforts. Increment II plans to develop and integrate cybersecurity software baseline. Increment II (Mission Planning and Mission Management) contanalysis, and development will continue in FY18. Target platforms include: MQ-2 and MQ-4 Triton but may be expanded to other UxS domains. Additionally, Increestablishment of the Software Support Activity (SSA) for CCS.	ftware modules into the CCS nmon requirements definition, 25 Stingray, MQ-8 Fire Scout					
FY 2019 Base Plans: CCS Increment II continues software common service development, supported by of incremental common service releases for MQ-25 Stingray and MQ-8 Fire Scout to support other future UxS platforms transitioning to CCS. SSA efforts will continuous infrastructure for systems engineering, development, integration, test, correction assurance, and cyber security compliance. Integration and test support for CCS pandounced development and risk reduction efforts support future UxS integration and CCS software test capabilities.	t which will also be able nue, including support of deficiencies, quality olatforms will continue.					
FY 2019 OCO Plans: N/A						
FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$15.297M from FY 2018 to FY 2019 due to increased tasking required Increment II development and integration efforts.	d in FY 2019 associated with					
Accomplishments	/Planned Programs Subtotals	21.543	39.736	41.212	0.000	41.212

PE 0305205N: *(U)UAS Integration and Interoperability* Navy

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Exhibit R-2A, RDT&E Project Justi	fication: PB	2019 Navy							Date: February 2018			
Appropriation/Budget Activity 1319 / 7				R-1 Pi PE 03 Interop	me) trol System							
C. Other Program Funding Summa	ry (\$ in Milli	ons)										
			FY 2019	FY 2019	FY 2019					Cost To		
<u>Line Item</u>	FY 2017	FY 2018	Base	OCO	<u>Total</u>	FY 2020	FY 2021	FY 2022	FY 2023	Complete	Total Cost	
RDTEN/0605414N: Unmanned	75.863	222.208	712.338	-	712.338	705.972	690.368	680.097	550.469	Continuing	Continuing	
Carrier Aviation (UCA)												
• OPN/4250: Common	0.000	0.000	0.594	-	0.594	0.792	1.188	1.484	11.788	Continuing	Continuing	
Control System												

Remarks

D. Acquisition Strategy

Program Executive Office Unmanned Aviation and Weapon Systems (PEO(U&W)) issued an Acquisition Decision Memorandum (ADM) 5000 Ser PEO(U&W)/11-093 dated July 1, 2011 to establish the Common Control System (CCS) to achieve Unmanned Aircraft System (UAS) common control across PEO(U&W) UAS platforms to eliminate redundant efforts, encourage innovation and improve cost control of unmanned aviation. As directed by the ADM the program will define, develop and deliver a common control system to operate respective naval Unmanned Systems (UxS)s. This will include a common framework, a common user interface and common components that will be integrated and tested with unique components on emerging or legacy platforms. The CCS acquisition approach provides increasing UxS capability through incremental development for UxS platforms as follows: Increment I provides common Vehicle Management (VM) capability to MQ-25 Stingray and MQ-8 Fire Scout which can also support other UxSs. Increment II develops common MM/MP capabilities and updates and matures VM capabilities, integrating these capabilities into the core CCS software baseline delivered under Increment I in support of Naval UxSs. Increment III develops common hardware for hosting CCS. CCS Increment III software will be developed and delivered with additional capabilities to include cross-domain capabilities and control of multiple dissimilar UxS for further enterprise-level Total Ownership Cost savings. CCS will be provided to the MQ-25 Stingray air vehicle prime as Government-Furnished Equipment (GFE) and also for transition to MQ-8 Fire Scout, MQ-4 Triton and follow-on UxS platforms to reduce enterprise Total Ownership Cost for Ground Control Systems. CCS will leverage existing government-owned products and employ competitive procurement vehicles. ASN (RDA) designated CCS Increment II as an ACAT II program on December 1, 2017.

E. Performance Metrics

Navy

CCS uses a Service-Oriented Architecture based on the OSD Unmanned Control Segment (UCS) architecture. CCS provided analyses and documentation to support the development of Key Performance Parameters (KPP's). CCS inherits the common requirements of each supported UxS platform's CDD through the respective specification trees. CCS must therefore also support the Key Performance Parameters, Key System Attributes, Measures of Suitability/Effectiveness, Concepts of Operations, etc., and concepts of operations flowed down from each supported platform.

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

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

1319 / 7 PE 0305205N / (U)UAS Integration and 3379 / Common Control System

Interoperability

Product Developmen	t (\$ in Mi	llions)		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
Primary Software Development (Increment I)	C/CPFF	Raytheon : Dulles, VA	17.036	14.910	Dec 2016	12.982	Dec 2017	0.000		-		0.000	0.000	44.928	44.928
Primary Software Development - Software Services (Increment II)	C/CPFF	TBD : TBD	0.000	0.000		4.311	May 2018	16.988	Feb 2019	-		16.988	Continuing	Continuing	Continuing
Advanced Development	WR	NAWC-WD : China Lake, CA	2.875	1.100	Nov 2016	1.000	Nov 2017	1.205	Nov 2018	-		1.205	Continuing	Continuing	Continuing
Software Cyber Modeling	C/CPFF	JHU APL : Baltimore, MD	2.000	0.000		0.000		0.000		-		0.000	0.000	2.000	2.000
Architecture Development	C/CPFF	SEI : Hanscom, MA	1.205	0.000		0.000		0.000		-		0.000	0.000	1.205	1.205
Architecture Development	C/CPFF	NRL : Washington, DC	2.330	0.000		0.000		0.000		-		0.000	0.000	2.330	2.330
Architecture Development	Various	Various : Various	2.461	1.144	Apr 2017	3.300	Feb 2018	1.000	Nov 2018	-		1.000	Continuing	Continuing	Continuing
SSA - Software Integration	C/CPFF	TBD : TBD	0.000	0.000		3.000	Feb 2018	5.000	Nov 2018	-		5.000	Continuing	Continuing	Continuing
		Subtotal	27.907	17.154		24.593		24.193		-		24.193	Continuing	Continuing	N/A

Remarks

The FY18 Primary Software Development - Software Services contract supports the development of software services that will be incorporated into CCS. Separate competitive contracts for these software services will be awarded and incrementally funded starting in FY18 so the performing activity and location are currently TBD due to the competitive contracting strategy. In FY19 this activity increases due to multiple parallel, incrementally funded design, development, and integration efforts which include CCS Increment II v2.0 (originally started in FY18 and which continues throughout FY19), and the concurrent start in FY19 of CCS Increment II v2.1 analysis, design, and development efforts.

The FY18 SSA-Software Integration contract supports the establishment of a CCS software support activity (SSA). FY19 continues incremental funding for the SSA software integration contract efforts awarded via a competitive 3rd Qtr. FY18 contract award. Performing activity and location are currently TBD due to the competitive contracting strategy.

Support (\$ in Million	s)			FY 2	2017	FY 2	2018	FY 2 Ba		FY 2		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
Systems Engineering	WR	NAWC-AD : Pax River, MD	4.900	2.559	Nov 2016	7.228	Nov 2017	8.104	Nov 2018	-		8.104	Continuing	Continuing	Continuing

PE 0305205N: *(U)UAS Integration and Interoperability* Navy

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

R-1 Program Element (Number/Name)

Project (Number/Name)

Appropriation/Budget Activity 1319 / 7

PE 0305205N I (U)UAS Integration and

3379 I Common Control System

Date: February 2018

Interoperability

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	Total Cost	Target Value of Contract
Lead Systems Engineering and Integration	WR	NAWC-WD : Pt Mugu, CA	2.545	0.450	Nov 2016	0.000		0.000		-		0.000	0.000	2.995	-
Systems Engineering	C/CPFF	Engility : Pax River, MD	0.756	0.000		0.000		0.000		-		0.000	0.000	0.756	0.756
Systems Engineering Integration Test	C/CPFF	Booz Allen : Pax River, MD	2.714	0.000		0.000		0.000		-		0.000	0.000	2.714	2.714
Systems Engineering Study	C/CPFF	CNA : Alexandria, VA	0.800	0.000		0.000		0.000		-		0.000	0.000	0.800	0.800
Systems Engineering	Various	Various : Various	1.100	0.566	Dec 2016	0.000		0.000		-		0.000	0.000	1.666	1.666
Systems Engineering Technical Agent	C/CPFF	DCS Corporation : Alexandria, VA	0.000	0.535	Aug 2017	4.000	Feb 2018	4.000	Nov 2018	-		4.000	Continuing	Continuing	Continuing
		Subtotal	12.815	4.110		11.228		12.104		-		12.104	Continuing	Continuing	N/A

Remarks

Increase in FY19 due to additional support for Increment II software service efforts.

Test and Evaluation	(\$ in Milli	ons)		FY 2	2017 FY 2				2019 ise	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
DT&E/OT	WR	NAWC-AD : Pax River, MD	0.100	0.209	Nov 2016	3.315	Nov 2017	4.315	Nov 2018	-		4.315	Continuing	Continuing	Continuing
DT&E	WR	NAWC-WD : Pt Mugu, CA	0.730	0.000		0.000		0.000		-		0.000	0.000	0.730	-
	•	Subtotal	0.830	0.209		3.315		4.315		-		4.315	Continuing	Continuing	N/A

Remarks

Test and Evaluation efforts increase beginning in FY19 to support MQ-8 DT/OT events for the integration, test, and fielding of CCS Increment I software in MQ-8 control stations.

PE 0305205N: *(U)UAS Integration and Interoperability* 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 0305205N I (U)UAS Integration and

Project (Number/Name)
3379 / Common Control System

Interoperability

Management Service	es (\$ in M	illions)		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	Total Cost	Target Value of Contract
Program Management	WR	NAWC-AD : Pax River, MD	0.650	0.020	Nov 2016	0.000		0.000		-		0.000	0.000	0.670	-
Program Management Support	C/CPFF	Ausley Associates : Lexington Park, MD	0.000	0.050	May 2017	0.600	Nov 2017	0.600	Nov 2018	-		0.600	Continuing	Continuing	Continuing
	•	Subtotal	0.650	0.070		0.600		0.600		-		0.600	Continuing	Continuing	N/A

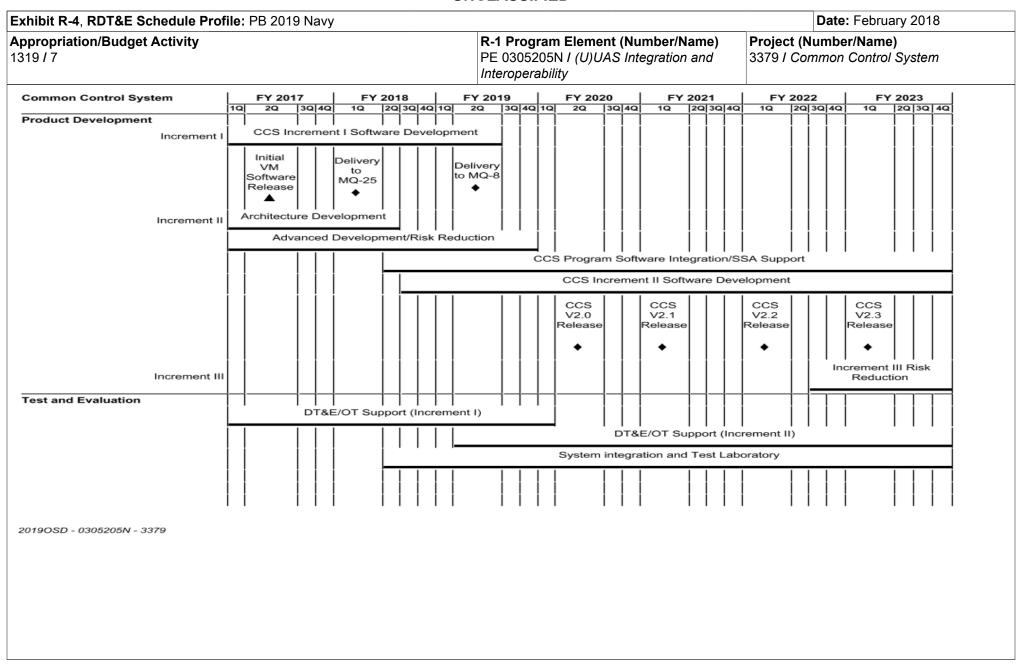
Remarks

Contractor support supporting multiple platforms in FY18 and FY19.

									Target
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Value of Contract
Project Cost Totals	42.202	21.543	39.736	41.212	-	41.212	Continuing	Continuing	N/A

Remarks

PE 0305205N: *(U)UAS Integration and Interoperability* Navy



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy	Date: February 2018		
1319 / 7	, ,	- , (umber/Name) nmon Control System

Schedule Details

	St	art	End		
Events by Sub Project	Quarter	Year	Quarter	Year	
Common Control System					
Product Development: Increment I: CCS Increment I Software Development	1	2017	2	2019	
Product Development: Increment I: CCS Increment I Initial VM Software Release	2	2017	2	2017	
Product Development: Increment I: Delivery to MQ-25	1	2018	1	2018	
Product Development: Increment I: Delivery to MQ-8	2	2019	2	2019	
Product Development: Increment II: Architecture Development	1	2017	2	2018	
Product Development: Increment II: Advanced Development/Risk Reduction	1	2017	4	2019	
Product Development: Increment II: CCS Program Software Integration/SSA Support	2	2018	4	2023	
Product Development: Increment II: CCS Increment II Software Development	3	2018	4	2023	
Product Development: Increment II: CCS V2.0 Release	2	2020	2	2020	
Product Development: Increment II: CCS V2.1 Release	1	2021	1	2021	
Product Development: Increment II: CCS V2.2 Release	1	2022	1	2022	
Product Development: Increment II: CCS V2.3 Release	1	2023	1	2023	
Product Development: Increment III: Increment III Risk Reduction	3	2022	4	2023	
Test and Evaluation: DT&E/OT Support (Increment I)	1	2017	1	2020	
Test and Evaluation: DT&E/OT Support (Increment II)	2	2019	4	2023	
Test and Evaluation: System Integration and Test Laboratory	2	2018	4	2023	