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 Systems Development*					R-1 Program Element (Number/Name) PE 0702207N *I Depot Maintenance (NON-IF)*							
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	197.760	37.089	38.227	36.560	-	36.560	41.525	32.521	21.061	15.706	Continuing	Continuing
3030: *FA-18 SLAP*	171.755	37.089	26.879	24.334	-	24.334	24.686	18.597	10.252	10.390	Continuing	Continuing
3182: *T-45 SLAP*	26.005	0.000	0.000	5.400	-	5.400	6.700	6.800	5.600	0.000	0.000	50.505
3384: *MH-60 SLAP*	0.000	0.000	11.348	6.826	-	6.826	10.139	7.124	5.209	5.316	Continuing	Continuing

A. Mission Description and Budget Item Justification

3030: A significant portion of the F/A-18 airframe is believed to have additional inherent capability and a life extension may be possible for many portions of the airframe. The F/A-18 Service Life Assessment Program (SLAP) is assessing the structural and subsystem conditions of the F/A-18 fleet in order to determine what modifications are necessary to extend the aircraft designed life limits to allow it to achieve Chief of Naval Operations inventory requirements. Without SLAP and the follow on Service Life Extension Program, aircraft are retired from the USN inventory when a design service life metric is reached. RDTE funds will support aircraft teardown to validate SLAP analysis, identify unknown fatigue areas and assess the aircraft's material condition.

3182: The T-45 aircraft structure is currently fatigue limited to 14,400 flight hours based on initial full-scale fatigue tests. This service life limit prevents the T-45 fleet from meeting Integrated Production Plan (IPP) past 2025. Studies demonstrate that the 14,400 flight hour service life can be extended, with a Service Life Extension Program (SLEP), to 21,600 flight hours, which will support meeting IPP until 2035. A T-45 Structural Service Life Assessment Program (SLAP) was completed in February 2012. In order for the T-45 to meet IPP until 2035, it is also necessary to assess the subsystems of the T-45 in their ability to remain viable.
In FY13 an initial subsystem assessment, based on the updated fleet aircraft usage spectrum and future predicted training missions of the T-45 aircraft, found 79 dispositions requiring further analysis, teardowns, age explorations, recertification and/or testing . The assessment of the subsystems that make up these 79 dispositions will address all critical subsystems required and their ability to maintain IPP/NTR until 2035, analysis and studies will be conducted to outline improvements, assess manufacturing capabilities, prototype redesign and test of subsystems for trainer aircraft.

3384: The MH-60 SLAP is assessing the primary aircraft structure and subsystem condition of the MH-60S fleet in order to determine what efforts are necessary to extend the aircraft design life limits to allow it to meet Chief of Naval Operations operational inventory requirements through FY 2035. Without SLAP, aircraft are retired from the USN inventory when design service life limits are reached directly impacting fleet surface warfare, mine countermeasures, search and rescue, and vertical replenishment operational capabilities. FY 2018 budget request funds for the completion of external loads analysis, continuation of fatigue analysis, service life risk assessments of aircraft subsystems analysis and development of initial dispositions for safety critical items.

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.

The FY 2017 funding for MH-60 SLAP was a Congressional Directed Reduction.

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 Systems Development*	**R-1 Program Element (Number/Name)** PE 0702207N *I Depot Maintenance (NON-IF)*

The FY 2019 funding request was reduced by $3.225 million to account for the availability of prior year execution balances.

B. Program Change Summary ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	49.322	38.227	35.385	-	35.385
Current President's Budget	37.089	38.227	36.560	-	36.560
Total Adjustments	-12.233	0.000	1.175	-	1.175
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.188	0.000			
• Program Adjustments	0.000	0.000	0.311	-	0.311
• Rate/Misc Adjustments	0.000	0.000	0.864	-	0.864
• Congressional Directed Reductions Adjustments	-11.045	-	-	-	-

Change Summary Explanation

Technical: PU 3182: Increase from FY2018 to FY2019 due to the T-45 SLAP Aviation Technical Corrections.

Schedule:

PU 3182: Changes support product development beginning in FY19 for Subsystem SLAP C to include teardown, inspection, detailed analysis and recertification testing required to safely extend the service life of critical subsystems.

PU 3384: MH-60 SLAP delayed due to Congressional Directed Reduction.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0702207N / *Depot Maintenance (NON-IF)*	Project (Number/Name) 3030 / *FA-18 SLAP*	

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
3030: *FA-18 SLAP*	171.755	37.089	26.879	24.334	-	24.334	24.686	18.597	10.252	10.390	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The F/A-18 and EA-18G Service Life Assessment Program (SLAP) is assessing the structural and subsystem conditions of the F/A-18 fleet in order to determine what modifications are necessary to extend the aircraft designed life limits to allow it to achieve Chief of Naval Operations (CNO) inventory requirements. The goal of the F/A-18 SLAP program is to identify critical structures and components that can achieve the extended service life limit goals. SLAP consists of structural investigations of the main landing gear, arresting hook and catapult back-up structures, vertical tails, wings and fuselage. A second effort is to evaluate the subsystem components (hydraulics, wiring, actuators, etc) to identify over and above inspections, overhaul intervals or replacement schedules to fly past design life limits. The current life limits for the F/A-18 E/F are 6,000 Flight Hours (FH), 2,250 catapults/arrestments (Cat/Traps) and 15,750 total landings. The F/A-18 SLAP program of record states the SLAP goals as 12,000 FH, 3,500 Cat/Traps and 22,500 total landings. The primary objective of F/A-18 SLAP is to determine if the stated SLAP goals are feasible. An increase in total landings and flight hours would allow the F/A-18 to meet CNO inventory requirements. The requirements are integrated with the Joint Strike Fighter planned introduction. This effort is required to be conducted for these airframes and subsystems to ascertain what actions and modifications must be taken to safely operate each system beyond its designed life until the targeted end of service life.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: F/A-18 SLAP	37.089	26.879	24.334	0.000	24.334
Articles:	-	-	-	-	-
Description: The current design life limits do not support USN inventory requirements. Funding supports assessing the structural condition of the F/A-18 fleet in order to determine what modifications are necessary to extend the aircraft designed life limits to allow it to achieve CNO inventory requirements.					
FY 2018 Plans: Continue stress analysis of numerous data points to provide exploitation of complete structural fatigue testing with the expectation of extending the current service life of F/A-18E/F and EA-18G from the design limits to the SLAP goals. Locations encompass the forward, center and aft fuselage, inner and outer wings, as well as landing gear. Sonic and Thermal analysis will be performed on numerous structural and composite skin locations to assess elevated temperatures with the expectation of extending the current life of the F/A-18E/F Super Hornet and the EA-18G Growler. Aircraft Teardown assessments continue to be performed to analyze the fatigue and material condition of fleet aircraft to determine what modifications or inspections are required to extend the					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3030 / *FA-18 SLAP*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
current life of the aircraft. Crack growth analysis will be performed to determine recurring requirements to extend the platform beyond its current service life limits. ***FY 2019 Base Plans:*** Continue stress analysis of numerous data points to provide exploitation of complete structural fatigue testing with the expectation of extending the current service life of F/A-18E/F and EA-18G from the design limits to the SLAP goals. Locations encompass the forward, center and aft fuselage, inner and outer wings, as well as landing gear. Sonic and Thermal analysis will be performed on numerous structural and composite skin locations to assess elevated temperatures with the expectation of extending the current life of the F/A-18E/F Super Hornet and the EA-18G Growler. Aircraft Teardown assessments continue to be performed to analyze the fatigue and material condition of fleet aircraft to determine what modifications or inspections are required to extend the current life of the aircraft. Crack growth analysis will be performed to determine recurring requirements to extend the platform beyond its current service life limits. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** The FY 2019 funding request was reduced by $2.545 million to account for the availability of prior year execution balances.					
Accomplishments/Planned Programs Subtotals	37.089	26.879	24.334	0.000	24.334

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
• APN/05250: *F-18 Series (OSIP 020-14)*	45.252	87.424	137.254	-	137.254	137.910	210.756	210.836	296.372	3,134.079	4,294.649

Remarks

D. Acquisition Strategy

The Service Life Assessment Program (SLAP) program employs sole source contracts with Boeing, the aircraft prime manufacturer. SLAP further decomposes program of record goals into smaller discrete steps, developing requirements to extend flight hours (FH) from 6,000 to 9,000 first. These efforts will provide the raw engineering data to develop aircraft modifications to extend total aircraft landings, Cat/Traps, and FH. The F/A-18 and EA-18G SLAP Program consists of two major engineering efforts: the aircraft structural assessment and the aircraft subsystems assessment. Both efforts are broken into multiple phases which develop tools and models,

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3030 / *FA-18 SLAP*

evaluate current aircraft usage, and develop concepts to extend aircraft life to meet CNO objectives. The program will combine exploitation of complete structural fatigue testing and actual fleet usage with the expectation of extending the service life of the F/A-18 aircraft. Conducting F/A-18 SLAP to study the aircraft lifetime will provide a better estimate of aircraft service life and a follow on Service Life Extension Program (SLEP).

E. Performance Metrics

The F/A-18 and EA-18G SLAP provides an assessment of aircraft structure fatigue life as affected by flight maneuver, Cat/Traps and landings, based on actual usage and identifies the efforts required to extend the aircraft life to SLAP goals. During SLAP Structures Phase A (FY08-FY13) tools and modeling necessary to assess usage and fatigue life are developed. During SLAP Structures Phase B (FY11-FY18) specific structural locations which do not meet SLAP goals are identified and evaluated. Subsystem SLAP is also initiated concurrently with Structures Phase (B). A Flight Control Surface SLAP, SLEP retrofit concepts and repairs for deficient locations are developed during SLAP Structures and Sub-Systems Phase C (FY14-FY23). SLAP is followed by the SLEP during which the actual retrofit and repairs are performed under OSIP 020-14 established in FY14.

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 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3030 / *FA-18 SLAP*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development SLAP F/A-18 E/F	SS/CPFF	Boeing : St. Louis, MO	109.485	33.868	Dec 2016	23.994	Dec 2017	21.456	Dec 2018	-		21.456	Continuing	Continuing	Continuing
Prior Year Prod Dev cost no longer funded in FYDP	SS/CPFF	Boeing : St. Louis, MO	28.775	0.000		0.000		0.000		-		0.000	0.000	28.775	28.775
		Subtotal	138.260	33.868		23.994		21.456		-		21.456	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SLAP Inventory Model	WR	ONR : Arlington, VA	6.525	0.000		0.000		0.000		-		0.000	0.000	6.525	-
SLAP F/A-18 E/F	WR	NAWCAD : Patuxent River, MD	8.605	0.619	Dec 2016	0.769	Dec 2017	0.739	Dec 2018	-		0.739	Continuing	Continuing	Continuing
SLAP F/A-18 E/F	WR	FRC Southwest : San Diego, CA	6.573	0.922	Dec 2016	0.592	Dec 2017	0.603	Dec 2018	-		0.603	Continuing	Continuing	Continuing
		Subtotal	21.703	1.541		1.361		1.342		-		1.342	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation F/A-18 E/F	WR	NAWCAD : Pax River, MD	0.971	0.157	Dec 2016	0.157	Dec 2017	0.157	Dec 2018	-		0.157	Continuing	Continuing	Continuing
		Subtotal	0.971	0.157		0.157		0.157		-		0.157	Continuing	Continuing	N/A

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 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3030 / *FA-18 SLAP*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering and Technical Support SLAP F/A-18 E/F	WR	NAWCAD : Pax River, MD	4.936	1.018	Dec 2016	1.036	Dec 2017	1.055	Dec 2018	-		1.055	Continuing	Continuing	Continuing
Travel	Various	NAVAIR : Pax River, MD	0.200	0.075	Jun 2017	0.075	Jun 2018	0.075	Jun 2019	-		0.075	Continuing	Continuing	Continuing
Program Management Support (Seaport-CSS)	C/CPFF	WYLE LAB : Pax River, MD	2.667	0.020	Dec 2016	0.050	Dec 2017	0.051	Dec 2018	-		0.051	Continuing	Continuing	Continuing
Program Management Support	Various	NAWCAD : Pax River, MD	2.757	0.040	Dec 2016	0.050	Dec 2017	0.051	Dec 2018	-		0.051	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	Engility : Pax River, MD	0.261	0.370	Dec 2016	0.156	Dec 2017	0.147	Dec 2018	-		0.147	0.000	0.934	0.934
		Subtotal	10.821	1.523		1.367		1.379		-		1.379	Continuing	Continuing	N/A

	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	171.755	37.089		26.879		24.334		-		24.334	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3030 / *FA-18 SLAP*

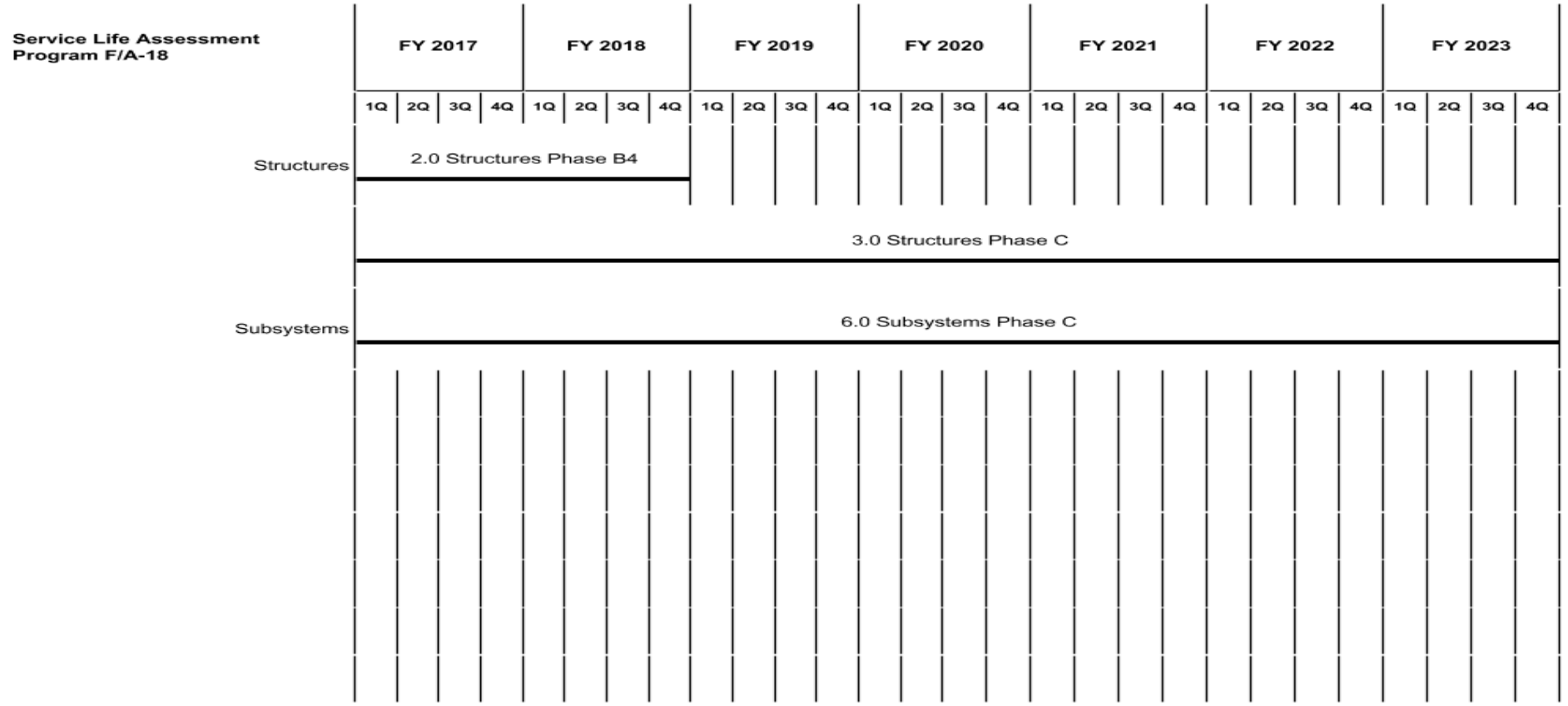

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3030 / *FA-18 SLAP*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Service Life Assessment Program F/A-18				
Structures: 2.0 Structures Phase B4	1	2017	4	2018
Structures: 3.0 Structures Phase C	1	2017	4	2023
Subsystems: 6.0 Subsystems Phase C	1	2017	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0702207N / *Depot Maintenance (NON-IF)*	Project (Number/Name) 3182 / *T-45 SLAP*	

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
3182: *T-45 SLAP*	26.005	0.000	0.000	5.400	-	5.400	6.700	6.800	5.600	0.000	0.000	50.505
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The T-45 Service Life Assessment Program (SLAP) is assessing the structural and subsystem conditions of the T-45fleet in order to determine what modifications are necessary to extend the aircraft designed life limits to allow it to achieve Chief of Naval Operations (CNO) inventory requirements. The goal of the T-45 SLAP program is to identify critical structures and components that can extend the aircraft designed service life to support IPP and Naval Flight Officer Training Requirements (NTR) until 2035. This initial subsystem assessment, based on the updated fleet aircraft usage spectrum and future predicted training missions of the T-45 aircraft, found 79 dispositions requiring further analysis, teardowns, age explorations, recertification and/or testing . The assessment of the subsystems that make up these 79 dispositions will address all critical subsystems required and their ability to maintain IPP/NTR until 2035, analysis and studies will be conducted to outline improvements, assess manufacturing capabilities, prototype redesign and test of subsystems for trainer aircraft. The current life limits for the T-45 is 14,400 Flight Hours (FH). The T-45 SLAP program of record states the SLAP goals is 21,600 FH. This effort is required to be conducted for these subsystems to ascertain what actions and modifications must be taken to safely operate each system beyond its designed life until the targeted end of service life.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: T-45 SLAP	0.000	0.000	5.400	0.000	5.400
Articles:	-	-	-	-	-
Description: Funding supports development, integration, test, and certification of a Subsystem SLAP to determine modifications necessary to extend service life through 2035.					
FY 2018 Plans: N/A					
FY 2019 Base Plans: Continue Subsystem SLAP activities and engineering studies with the expectation of extending the T-45 service life to 2035.					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3182 / *T-45 SLAP*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Increase from FY2018 to FY2019 due to the T-45 SLAP Aviation Technical Corrections. Changes support product development beginning in FY19 for Subsystem SLAP C to include teardown, inspection, detailed analysis and recertification testing required to safely extend the service life of critical subsystems.					
Accomplishments/Planned Programs Subtotals	0.000	0.000	5.400	0.000	5.400

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
• APN/0569: *T-45 Service Life Ext Prg (SLEP)*	42.479	37.710	33.911	-	33.911	41.445	48.591	47.313	51.441	214.017	614.650

Remarks

D. Acquisition Strategy

The subsystem SLAP is a sole source contract effort with Boeing, the aircraft prime contractor. SLAP consists of an analysis of the aircraft subsystems (e.g., Global Positioning System Inertial Navigation Assembly or Mission Data Processor). The analysis will facilitate the future development of subsystem modifications and/or redesigns necessary to extend their life until 2035.

E. Performance Metrics

SLAP provides an assessment of aircraft component life as affected by flight maneuver, catapults, arrestments, landings, and obsolescence based on actual usage and identifies the efforts required to extend the aircraft life to SLAP goals (2035). Effort delineates tasking incrementally to include; Tools and modeling necessary to assess usage and life are developed, specific designs which do not meet SLAP goals are identified and analyzed. Retrofit concepts and redesigns for problem areas are developed, followed by the Service Life Extension Program during which the actual retrofits are undertaken.SLAP is followed by the Service Life Extension Program (SLEP) during which the actual retrofit and repairs are performed under OSIP 022-14.

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 0702207N / *Depot Maintenance (NON-IF)*	Project (Number/Name) 3182 / *T-45 SLAP*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development SLAP T-45	SS/CPFF	Boeing : St. Louis, MO	12.882	0.000		0.000		4.505	Jan 2019	-		4.505	16.383	33.770	33.770
Product Development SLAP T-45 NACES	C/FFP	Martin Baker : United Kingdom	0.450	0.000		0.000		0.000		-		0.000	0.000	0.450	0.450
		Subtotal	13.332	0.000		0.000		4.505		-		4.505	16.383	34.220	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Technical Support	WR	NAWCAD : Patuxent River, MD	6.270	0.000		0.000		0.635	Nov 2018	-		0.635	1.929	8.834	-
Engineering Technical Support	WR	NADEP : Jacksonville, FL	2.472	0.000		0.000		0.180	Nov 2018	-		0.180	0.548	3.200	-
Engineering Technical Support	WR	NAWCAD : Various	1.213	0.000		0.000		0.000		-		0.000	0.000	1.213	-
SLAP Engineering Study	SS/BOA	JHU/APL : Laurel, MD	1.969	0.000		0.000		0.000		-		0.000	0.000	1.969	1.969
SLAP ETS Support	SS/BOA	ASI : Virginia Beach, VA	0.267	0.000		0.000		0.000		-		0.000	0.000	0.267	0.267
		Subtotal	12.191	0.000		0.000		0.815		-		0.815	2.477	15.483	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Various	NAVAIR : Patuxent River, MD	0.482	0.000		0.000		0.080	Nov 2018	-		0.080	0.240	0.802	-
		Subtotal	0.482	0.000		0.000		0.080		-		0.080	0.240	0.802	N/A

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 0702207N / *Depot Maintenance (NON-IF)*	Project (Number/Name) 3182 / *T-45 SLAP*	

	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	26.005	0.000		0.000		5.400		-		5.400	19.100	50.505	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3182 / *T-45 SLAP*

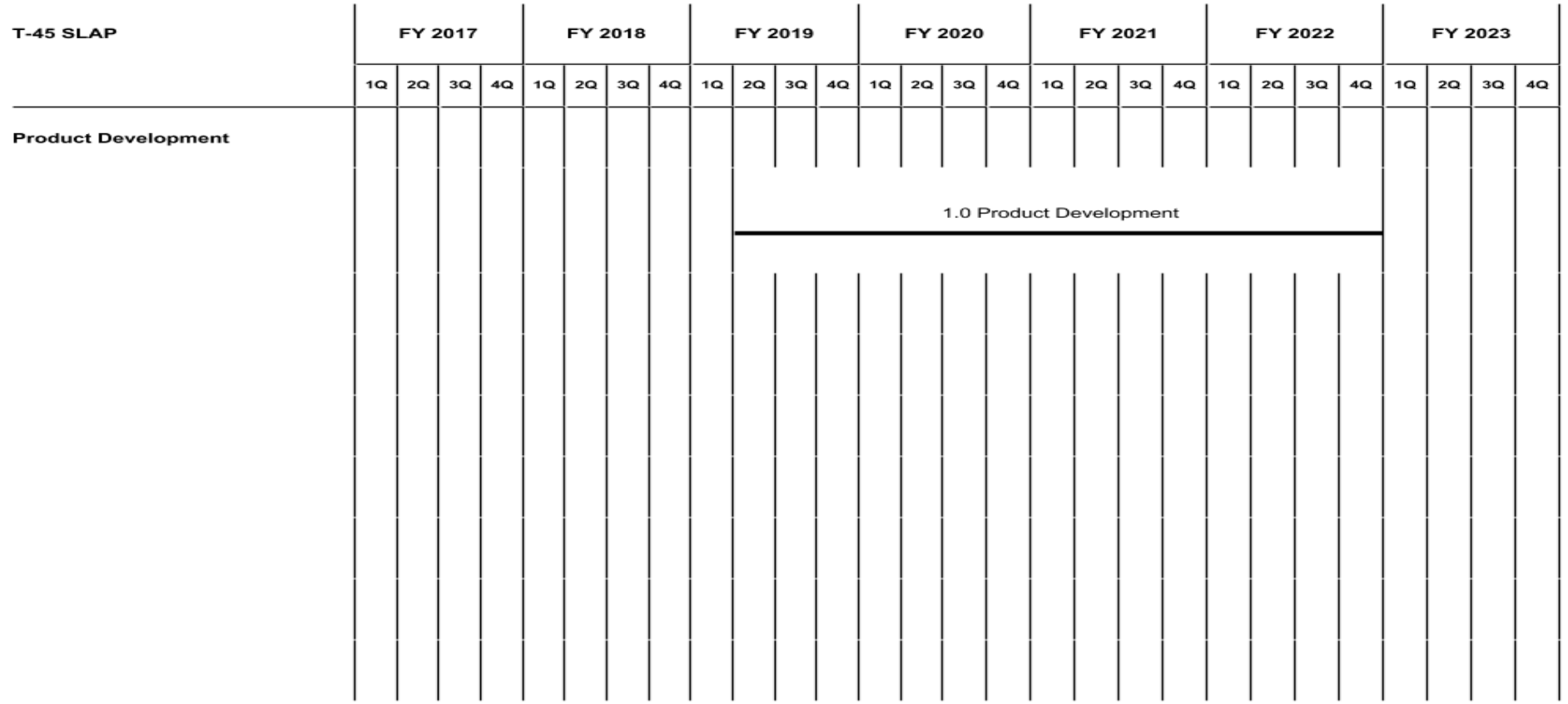

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3182 / *T-45 SLAP*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
T-45 SLAP				
Product Development: SLAP T-45C	2	2019	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0702207N / *Depot Maintenance (NON-IF)*	Project (Number/Name) 3384 / *MH-60 SLAP*	

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
3384: *MH-60 SLAP*	0.000	0.000	11.348	6.826	-	6.826	10.139	7.124	5.209	5.316	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

MH-60 SLAP is assessing the primary aircraft structure and subsystem condition of the MH-60S fleet in order to determine what efforts are necessary to extend the aircraft design life limits to allow it to meet Chief of Naval Operations (CNO) operational inventory requirements to bridge to a follow-on program procurement. The highest flight time MH-60S helicopters are expected to exceed the currently assumed design life limit of 10,000 flight hours in 2025, at which time as many as 30 aircraft per year could be downed without a SLAP and Service Life Extension Program (SLEP) established in FY 2018. The MH-60S has experienced significant structural issues since Initial Operational Capability in August 2002, resulting in downed aircraft and additional inspections for the operational fleet. Similar issues could very well precede the 10,000 flight hour life limit, particularly without the insight provided by a SLAP effort commenced as soon as possible. The goal of the MH-60S SLAP program is to identify critical structures, components,
and subsystems that can achieve the extended service life limit goals. The initial efforts of the MH-60S SLAP is to assess the primary aircraft structure and subsystem condition of the MH-60S fleet in order to determine what efforts are necessary to validate the currently assumed design life limit of 10,000 hours and potentially extend the aircraft life limit. The MH-60 SLAP is comprised of two distinct assessments: Fatigue Life Assessment (FLA),which will establish the fatigue life of the aircraft and air vehicle systems and Subsystem Life Assessment (SLA), which will determine subsystem components that are critical to safe flight and ground operations and identify safety risk and risk mitigation strategies for critical components. FLA consists of structural investigations of the cockpit beams, main gearbox beams/frames, upper deck, engine mount, lower tub, main landing gear, tail landing gear, cargo hook, transition splice and tie-down fittings/structure, tailcone, tail gearbox, intermediate gearbox, stabilator, manufactured joints/splices, and flight controls support structure. SLA will evaluate engine start and engine inlet anti-ice, rotor brake, hydraulic, flight controls, avionics components and infrastructure, etc., to identify over-and-above inspections, overhaul intervals or replacement schedules to fly beyond the current design limit assumption.

FY 2018 budget request funds the completion of external loads analysis, continuation of fatigue analysis, service life risk assessments of aircraft subsystems, and development of initial dispositions for safety critical items. This initial analysis, assessment and disposition will be further refined throughout the SLAP effort, augmented with specific system teardown, inspection and test, culminating in a follow-on SLEP, which will design and implement the solutions resulting from the SLAP findings.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: MH-60 SLAP	0.000	11.348	6.826	0.000	6.826
Articles:	-	-	-	-	-
Description: The current design life limits do not support United States Navy inventory requirements to bridge to a follow-on program procurement. Funding supports assessing the structural and subsystem condition of the					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
MH-60S fleet in order to determine what modifications are necessary to extend the aircraft designed life limits to bridge that gap. ***FY 2018 Plans:*** Collect aircraft historical regime and usage data for assessment, initiate airframe external loads analysis and fatigue analysis, and perform non-destructive tear-down examinations of two (2) aircraft and aircraft components. Perform analytical service life risk assessments of aircraft subsystems, develop initial dispositions for safety critical items. ***FY 2019 Base Plans:*** Continue to collect aircraft historical regime and usage data for assessment, continue airframe external loads analysis and fatigue analysis, and finish non-destructive tear-down examinations of two (2) aircraft and aircraft components. Continue analytical service life risk assessments of aircraft subsystems and the development of initial dispositions for safety critical items. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease of $4.522M from FY 2018 to FY 2019 is due to the completion of the external loads analysis.					
Accomplishments/Planned Programs Subtotals	0.000	11.348	6.826	0.000	6.826

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The SLAP program employs sole source contracts with Lockheed Martin, the aircraft prime manufacturer, in conjunction with government engineering and logistics expertise at Naval Air Station Patuxent River and the H-60 Fleet Support Team at Cherry Point, NC. Analyses from the SLAP efforts will provide the engineering data necessary to develop aircraft structural, component, and subsystem modifications to extend service life flight hour limits in order to avoid flight line inventory shortfalls. The MH-60S SLAP consists of two major engineering efforts: the FLA and the aircraft SLA. These efforts are broken into multiple phases which develop tools and models, assess current aircraft usage, and develop concepts to extend aircraft life to meet Chief of Naval Operations objectives. The program will combine exploitation

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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of complete aircraft teardown inspections and actual historical fleet usage. Conducting MH-60S SLAP to study the aircraft lifetime will define aircraft service life and is required to determine scope of the future follow-on SLEP.

E. Performance Metrics

The MH-60 SLAP FLA provides an assessment of aircraft structure fatigue life as affected by flight maneuver and Ground-Air-Ground cycles, based on Government furnished usage spectra and identifies the efforts required to extend the aircraft life to SLAP goals. During the FLA External Loads Analysis (FY 2018-2019), external loads for all fatigue conditions are identified from the three usage spectra. During the FLA (FY 2018-FY 2021), the fatigue assessment results and calculated fatigue lives are documented and areas for future improvements to extend the aircraft service life are identified. During the FLA Structural Analysis (FY 2020-FY 2022), static fail-safety analyses of specific airframe sites are conducted to substantiate continued safe flight and identify areas for future service life extensions. Subsystems Phase A utilizes an interdisciplinary team within the USN tasked to develop a methodology for service life assessment of safety critical subsystems. The resulting methodology will be based on a risk-focused approach that evaluates subsystems for potential safety critical failure modes, analyzes the associated hardware for age-related risk factors, and develops data-gathering or risk reduction dispositions. Subsystem SLAP Phase B is initiated concurrently with the FLA. During Subsystems SLAP Phase B (FY 2018-FY 2021), analytical service life risk assessments of aircraft subsystems are conducted and initial dispositions for safety-critical items are developed. During Subsystems SLAP Phase C (FY 2020-FY 2023), dispositions of Phase B are executed by performing component tests, aircraft inspections, and assembly teardowns. Additionally, SLAP assessments are continued on components needing further investigation. Subsystem SLAP Phase C is defined as the execution of the disposition decision resulting from Phase B efforts and will include the performance of component tests, aircraft inspections, component level fatigue analysis, and assembly teardowns. During this Phase, Phase B dispositions will be refined for safety critical components based on new data.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Fatigue Life Assessment MH-60S	SS/CPFF	Lockheed Martin : Owego, NY	0.000	0.000		3.700	Jan 2018	2.700	Jan 2019	-		2.700	Continuing	Continuing	Continuing
Subsystem Life Assessment MH-60S	SS/CPFF	Lockheed Martin : Owego, NY	0.000	0.000		1.910	Jun 2018	1.700	Jun 2019	-		1.700	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		5.610		4.400		-		4.400	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SLAP MH-60S	WR	NAWCAD : Patuxent River, MD	0.000	0.000		3.849	Oct 2017	1.443	Dec 2018	-		1.443	Continuing	Continuing	Continuing
SLAP MH-60S	WR	FRC : Various	0.000	0.000		1.445	Oct 2017	0.531	Dec 2018	-		0.531	Continuing	Continuing	Continuing
Eng & Tech Srvc (Non FFRDC)	Various	Various : Various	0.000	0.000		0.103	Oct 2017	0.105	Oct 2018	-		0.105	0.000	0.208	Continuing
		Subtotal	0.000	0.000		5.397		2.079		-		2.079	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support SLAP MH-60S	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.220	Oct 2017	0.224	Dec 2018	-		0.224	Continuing	Continuing	Continuing
Mgmt Supt Services (Non FFRDC)	Various	Various : Various	0.000	0.000		0.103	Oct 2017	0.105	Oct 2018	-		0.105	0.000	0.208	-
Travel	Various	NAVAIR : Patuxent River, MD	0.000	0.000		0.018	Oct 2017	0.018	Oct 2018	-		0.018	0.000	0.036	-
		Subtotal	0.000	0.000		0.341		0.347		-		0.347	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
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	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		11.348		6.826		-		6.826	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0702207N / *Depot Maintenance (NON-IF)*	**Project (Number/Name)** 3384 / *MH-60 SLAP*

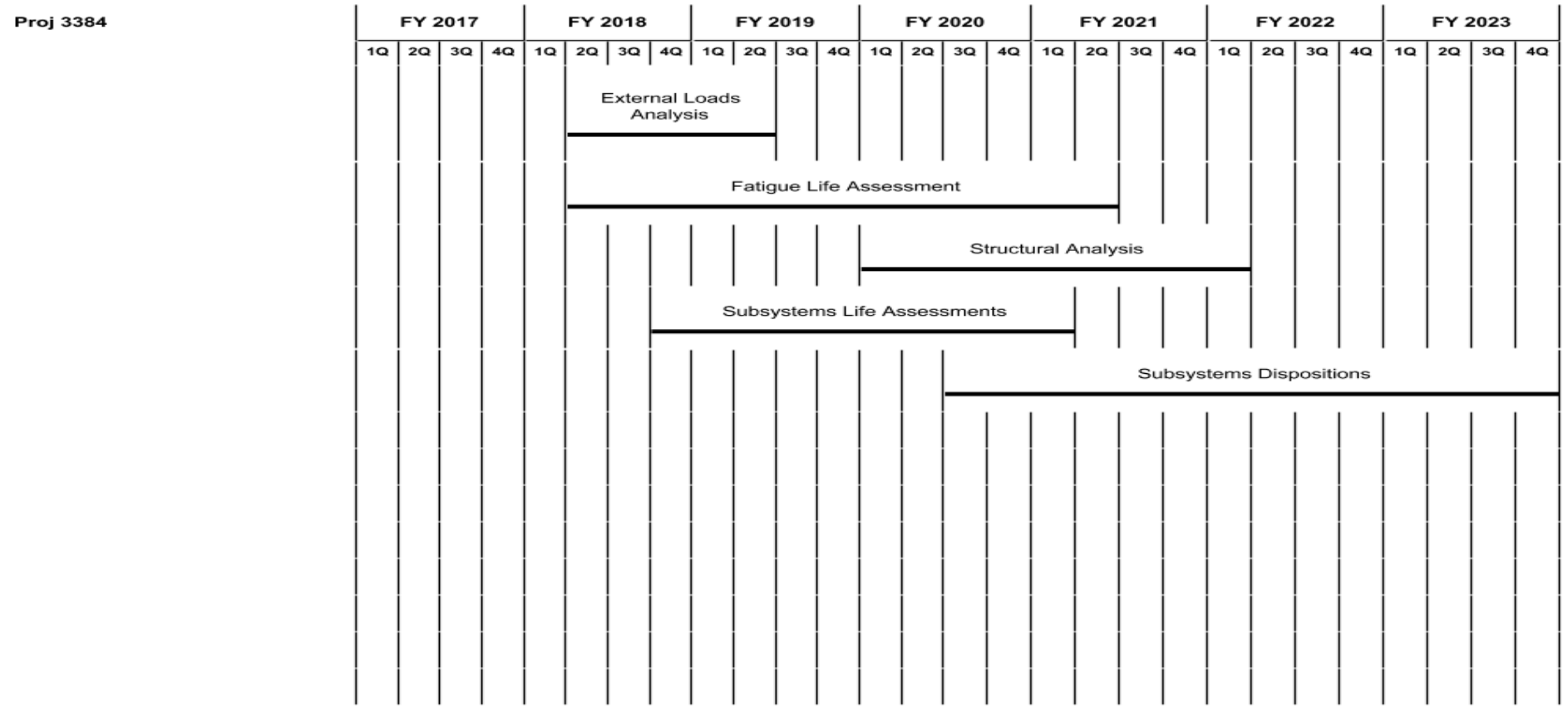

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3384				
External Loads Analysis	2	2018	2	2019
Fatigue Life Assessment	2	2018	2	2021
Structural Analysis	1	2020	1	2022
Subsystems Life Assessments	4	2018	1	2021
Subsystems Dispositions	3	2020	4	2023