Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force											Date: March 2024	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	-	994.924	1,275.268	1,124.207	0.000	1,124.207	1,192.420	1,160.610	975.101	989.293	Continuing	Continuing
673501: *Air Vehicle - Tech Refresh 3*	-	89.738	0.000	0.000	0.000	0.000	0.000	8.619	8.930	9.106	Continuing	Continuing
673502: *Air Vehicle Block 4 Planning & Sys Eng*	-	338.287	490.402	179.043	0.000	179.043	293.475	323.024	268.189	272.851	Continuing	Continuing
673503: *Test and Evaluation (T&E)*	-	232.793	261.303	422.627	0.000	422.627	406.073	347.596	245.032	210.150	Continuing	Continuing
673504: *Propulsion (PP)*	-	50.634	266.422	267.962	0.000	267.962	206.961	217.240	197.919	201.828	Continuing	Continuing
673505: *Maintenance Systems (MxS)*	-	47.647	42.044	33.741	0.000	33.741	46.880	45.331	34.187	70.248	Continuing	Continuing
673506: *Combat Data Systems (CDS)*	-	49.844	39.496	29.955	0.000	29.955	36.407	39.513	40.945	41.754	Continuing	Continuing
673507: *Training Systems & Simulation*	-	85.490	61.472	54.987	0.000	54.987	62.560	68.360	70.835	72.234	Continuing	Continuing
673508: *Infrastructure & Support Costs*	-	85.165	73.600	84.758	0.000	84.758	88.073	90.127	93.555	95.308	Continuing	Continuing
673509: *DevSecOps*	-	15.326	22.886	23.540	0.000	23.540	24.637	4.414	4.573	4.663	Continuing	Continuing
673510: *Utility and Subsystem Support to Mission Systems*	-	0.000	16.263	27.251	0.000	27.251	27.354	16.386	10.936	11.151	Continuing	Continuing
674871: *Information Operations Technology*	-	0.000	0.342	0.343	0.000	0.343	0.000	0.000	0.000	0.000	0.000	0.685
675346: *F-35*	-	0.000	1.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.038
Program MDAP/MAIS Code: 198												

A. Mission Description and Budget Item Justification

The F-35 Joint Strike Fighter (JSF) Program will develop and field an affordable, highly common family of next generation strike aircraft for the United States Air Force, United States Navy, United States Marine Corps and International Partners countries. There are three variants: the F-35A Conventional Takeoff and Landing (CTOL), F-35B Short Take Off and Vertical Landing (STOVL), and the F-35C Carrier Variant (CV). Maximum commonality among the variants, consistent with National Disclosure Policy, will minimize total air system life cycle costs. Planning, systems engineering, development, and testing for Block 4 continues across the F-35 Air

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*

System to include the air vehicle, propulsion system, combat data systems, maintenance systems, and training systems as Initial Operational Capability (IOC) has been met for each variant.

The JSF Continuous Capability Development & Delivery (C2D2) efforts provide incremental warfighting capability improvements to maintain joint air dominance against evolving threats. Block 4 capability requirements were initiated through ongoing Service-led operational analysis of warfighting gaps identified in the Fifth Generation Fighter Modernization Initial Capabilities Document (ICD), and through F-35 JSF Block 4 Mission Decomposition analysis completed in FY2014. These analyses served as the basis for the Block 4 Capability Development Document (CDD), staffed through the Air Force Requirements Oversight Council (AFROC) and signed by the USAF Chief of Staff in January 2015. Joint Requirements Oversight Council (JROC) approved the CDD on 21 March 2017. Modernization activities in FY2025 continue with the incremental releases of Block 4 capabilities. Block 4 efforts include a robust weapons integration portfolio and provide new opportunities for International Partners to assess, integrate, and field unique capabilities based on global sovereign requirements.

The United Kingdom, Italy, Netherlands, Canada, Australia, Denmark and Norway are participants in F-35 modernization. The program shown here reflects United States Air Force funding. Foreign Military Sales are ongoing separately.

The FY2025 funding request was reduced by $204 million to account for the availability of prior year execution balances.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	1,032.528	1,275.268	1,325.999	0.000	1,325.999
Current President's Budget	994.924	1,275.268	1,124.207	0.000	1,124.207
Total Adjustments	-37.604	0.000	-201.792	0.000	-201.792
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-9.999	0.000			
• SBIR/STTR Transfer	-27.605	0.000			
• Other Adjustments	0.000	0.000	-201.792	0.000	-201.792

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*

Change Summary Explanation

FY2023 funding reduced by $9.999M due to reprogramming to PE 0207110F, Next Generation Air Dominance, Project 646007: AS 2030 Air Dominance Technologies (ADT), and $27.604M for Small Business Innovative Research (SBIR).

FY2025 funding reduced by $204M to leverage FY2024 carryover and rebalance the FY2025 profile to meet execution requirements while maintaining F-35 capability development.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673501 / *Air Vehicle - Tech Refresh 3*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673501: *Air Vehicle - Tech Refresh 3*	-	89.738	0.000	0.000	0.000	0.000	0.000	8.619	8.930	9.106	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Technology Refresh 3 (TR-3) conducts post Critical Design Review (CDR) design activities. This effort will develop and deliver a TR-3 system through full flight-worthy certification and production readiness review for Lot 15. The design of TR-3 subsystems Integrated Core Processor (ICP), Aircraft Memory System (AMS), and Panoramic Cockpit Display Electronics Unit and Display Unit (PCD-EU, PCD-DU) configurations will contain new backplane technology, commercial operating systems, and modified middleware necessary to support Block 3F functionality and incorporation of all Block 4 capabilities. This work includes nonrecurring engineering for the development, test, and certification of the ICP, AMS, PCD-EU, and PCD-DU, and includes processing capacity to ensure long term viability for future capabilities.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Technology Refresh 3 (TR-3)	89.738	0.000	0.000	-	0.000
Description: TR-3 conducts post CDR design activities. This effort will develop and deliver a TR-3 system through full flight-worthy certification and production readiness review for Lot 15. The design of TR-3 subsystems ICP, AMS, PCD-EU, and PCD-DU configurations will contain new backplane technology, commercial operating systems, and modified middleware necessary to support Block 3F functionality and incorporation of all Block 4 capabilities. This work includes nonrecurring engineering for the development, test, and certification of the ICP, AMS, PCD-EU, and PCD-DU, and includes processing capacity to ensure long term viability for future capabilities.					
FY 2024 Plans: N/A					
FY 2025 Base Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673501 / *Air Vehicle - Tech Refresh 3*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
N/A					
Accomplishments/Planned Programs Subtotals	89.738	0.000	0.000	-	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673501 / *Air Vehicle - Tech Refresh 3*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TR-3 Prime Development	C/CPIF	LM : Fort Worth, TX	-	89.738	Oct 2022	-		-		-		-	0.000	89.738	-
TR-3 Prime Next GenDAS Shipsets Proc	C/CPIF	LM : Fort Worth, TX	-	-		-		-		-		-	0.000	0.000	-
TR-3 Prime OT NRE	C/CPIF	LM : Fort Worth, TX	-	-		-		-		-		-	0.000	0.000	-
TR-3 Prime OT NextGen DAS NRE	C/CPIF	LM : Fort Worth, TX	-	-		-		-		-		-	0.000	0.000	-
		Subtotal	-	89.738		-		-		-		-	0.000	89.738	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	89.738		-		-		-		-	0.000	89.738	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673501 / *Air Vehicle - Tech Refresh 3*

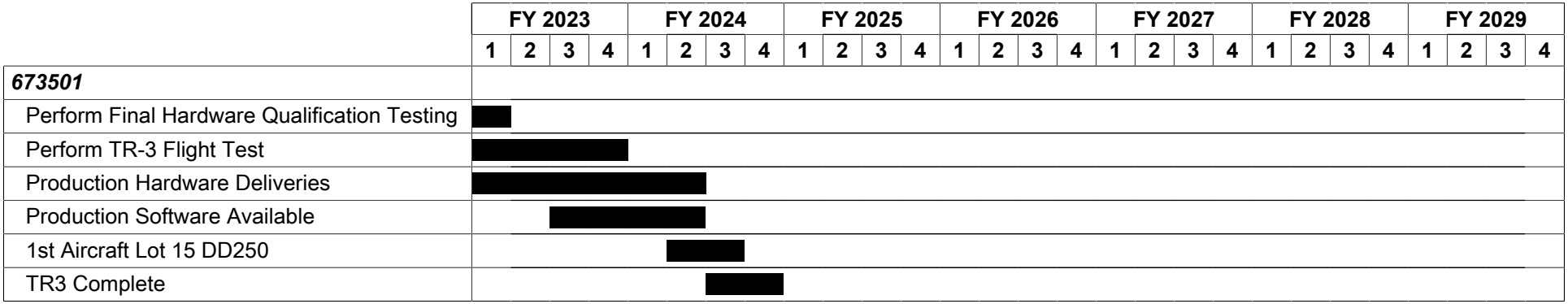

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673501 / *Air Vehicle - Tech Refresh 3*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
673501				
Perform Final Hardware Qualification Testing	1	2023	1	2023
Perform TR-3 Flight Test	1	2023	4	2023
Production Hardware Deliveries	1	2023	2	2024
Production Software Available	3	2023	2	2024
1st Aircraft Lot 15 DD250	2	2024	3	2024
TR3 Complete	3	2024	4	2024

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673502 / *Air Vehicle Block 4 Planning & Sys Eng*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673502: *Air Vehicle Block 4 Planning & Sys Eng*	-	338.287	490.402	179.043	0.000	179.043	293.475	323.024	268.189	272.851	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The F-35 Air Vehicle Program Management Office (AV PMO) development portfolio includes efforts to improve the F-35 air vehicle lethality, survivability, and interoperability in response to emerging threats outlined in the National Security Strategy and Operational Plans. The AV PMO delivers these capabilities utilizing a Continuous Capability Development and Delivery (C2D2) strategy combining traditional hardware upgrades and agile software integration processes.

F-35 Block 4 Modernization is designed to counter the full spectrum of evolving near-peer enemy threats to ensure US and Allied forces have freedom of operation even in the face of advanced adversary Anti-Access/Area Denial (A2/AD) capabilities. As designed, Block 4 consists of three principle lines of effort: development of software-based capabilities, development and integration of new and modernized aircraft hardware which enable the development of new capabilities, and new weapons integration. Efforts under the Air Vehicle / Block 4 Planning and Systems Engineering project range from requirements decomposition and preliminary design of capabilities through completion of Developmental Flight Test. These activities are a continuation of the previous Block 4 developmental contracts, and include activities required to enable the successful completion of Flight Test, to include select facility upgrades required for research, development, test and evaluation. Block 4 upgraded capabilities and continuous improvements will maintain Air System viability against the evolving threats indicated in the Electronic Warfare Initial Capabilities Document (ICD), the Fifth Generation Fighter Modernization ICD, and the Block 4 Capability Development Document (CDD). Additionally, the Block 4 capabilities will reduce life cycle cost, improve Air System Integration, and improve operational suitability. Weapons integration efforts included under this project include AARGM-ER integration, employment envelope expansion for current F-35 weapons, and Increased Air-to-Air Missile Carriage.

Included in the Air Vehicle (AV)/Block 4 Planning and Systems Engineering effort is both Prime and Government Systems Engineering Support needed for Avionics/ Electronic Warfare and Weapons Integration efforts to include studies, analysis and risk reduction efforts.

The FY2025 funding request was reduced by $204 million to account for the availability of prior year execution balances

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Air Vehicle Block 4 Planning & Sys Eng	338.287	490.402	179.043	-	179.043

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673502 / *Air Vehicle Block 4 Planning & Sys Eng*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Description: The F-35 Air Vehicle Program Management Office (AV PMO) development portfolio includes efforts to improve the F-35 air vehicle lethality, survivability, and interoperability in response to emerging threats outlined in the National Security Strategy and Operational Plans. As designed, Block 4 consists of three principle lines of effort: development of software-based capabilities, development and integration of new and modernized aircraft hardware which enable the development of new capabilities, and new weapons integration. Included in the AV/Block 4 Planning and Systems Engineering effort is both Prime and Government Systems Engineering Support needed for Avionics/Electronic Warfare and Weapons Integration efforts to include studies, analysis and risk reduction efforts. ***FY 2024 Plans:*** Continued with Agile development of capabilities through Developmental and Operational Flight Test. Continued requirements decomposition and preliminary design activities for advanced Block 4 capabilities. Continued development and maturity of key long lead capabilities and service unique weapons, enabling A2AD strategies including increased payloads, integrated fires, passive weapons, interoperability and multi-spectrum dominance in response to near-peer threats. Initiated development of enhanced cyber detection and mitigation capability for the F-35 in response to critical and emerging threats. Continued the application of cyber resilience engineering processes and tools for software, hardware, and weapons, though flight test. Continued and expanded application of cyber resilient engineering processes and tools for software, hardware, and weapons, though flight test. Continued development and timely delivery of software drops to meet warfighter need. Continued supporting efforts for airframe, air vehicle systems, Air-Ship integration, including Electromagnetic aircraft launch system advanced arresting gear (EMALS-AAG) launch bulletins and related work, mission systems, future capabilities studies and weapons integration efforts. Continued support for Block 4 Capabilities and support preliminary systems engineering efforts associated with AARGM-ER, AGM-158 family of weapons, and increased air to-air missile carriage. Continued systems engineering, integration, and test (SEIT) development for avionics, sensors, weapons, studies & analyses, and risk reduction efforts. Continued the joint requirement for Common Low Observable Waveform development as a new tactical data link (TDL) to be used for interoperability across joint platforms within a highly contested environment. ***FY 2025 Base Plans:*** Continue with Agile development of capabilities through Developmental and Operational Flight Test. Continue requirements decomposition and preliminary design activities for advanced Block 4 capabilities. Continue development and maturity of key long lead capabilities and service unique weapons, enabling A2AD strategies including increased payloads, integrated fires, passive weapons, interoperability, and multi-spectrum dominance					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673502 / *Air Vehicle Block 4 Planning & Sys Eng*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
in response to near-peer threats. Initiate development of enhanced cyber detection and mitigation capability for the F-35 in response to critical and emerging threats. Continue the application of cyber resilience engineering processes and tools for software, hardware, and weapons, though flight test. Continue the application of cyber resilient engineering processes and tools for software, hardware, and weapons, though flight test. Continuing development and timely delivery of software drops to meet warfighter need. Continue supporting efforts for airframe, air vehicle systems, Air-Ship integration, including Electromagnetic aircraft launch system advanced arresting gear (EMALS-AAG) launch bulletins and related work, mission systems, future capabilities studies and weapons integration efforts. Continue support for Block 4 Capabilities and advance systems engineering efforts associated with AARGM-ER, AGM-158 family of weapons, and increased air-to-air missile carriage. Continued systems engineering, integration, and test development for avionics, sensors, weapons, studies & analyses, and risk reduction efforts. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The decrease from FY2024 to FY2025 will be managed with FY2024 carryover to meet execution requirements while maintaining F-35 capability development.					
Accomplishments/Planned Programs Subtotals	338.287	490.402	179.043	-	179.043

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The C2D2 acquisition strategy employs both Cost and Fixed Price Incentive contracts for the Block 4 engineering and development efforts. In addition, a separate Basic Ordering Agreement or Indefinite Quantity/Indefinite Delivery contract is planned to provide a long term approach to upgrading and maintaining laboratories and test aircraft and supporting technology maturation for future C2D2 capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673502 / *Air Vehicle Block 4 Planning & Sys Eng*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AV Prime Phase II Cape/ Development	C/CPIF	LM : Fort Worth, TX	-	240.633	Oct 2022	296.568	Nov 2023	77.000	Nov 2024	-		77.000	Continuing	Continuing	-
AV Prime Phase II Fee	C/CPIF	LM : Fort Worth, TX	-	11.500	Oct 2022	42.600	Nov 2023	7.500	Nov 2024	-		7.500	Continuing	Continuing	-
AV Prime LM Block Four Contract (BFC)	C/CPIF	LM : Fort Worth, TX	-	33.651		-		39.583	Nov 2024	-		39.583	Continuing	Continuing	-
AV Prime LM Block Four Contract (BFC) Fee	C/CPIF	LM : Fort Worth, TX	-	0.000		-		15.000	Nov 2024	-		15.000	Continuing	Continuing	-
AV Prime Air Vehicle Integration	C/CPFF	LM : Fort Worth, TX	-	2.500	Oct 2022	3.128	Nov 2023	1.500	Nov 2024	-		1.500	Continuing	Continuing	-
AV Common Low Observable Waveform	TBD	TBD : TBD	-	-		99.000	Nov 2023	11.000	Nov 2024	-		11.000	Continuing	Continuing	-
AV Systems Engineering	Various	Various : TBD	-	24.037	Dec 2022	11.668	Nov 2023	5.240	Nov 2024	-		5.240	Continuing	Continuing	-
AV Cyber Survivability	Various	Various : TBD	-	2.000	Oct 2022	18.764	Nov 2023	7.860	Nov 2024	-		7.860	Continuing	Continuing	-
		Subtotal	-	314.321		471.728		164.683		-		164.683	Continuing	Continuing	N/A

Remarks

1. Breaking out the Prime LM Block Four Contract (BFC) lines starting in FY2025. This is not a new start and is captured under the Ph II Cape/Development line prior to FY2025.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AV Mission Systems Support	Various	Various : TBD	-	12.499	Nov 2022	10.651	Nov 2023	6.480	Nov 2024	-		6.480	Continuing	Continuing	-
AV Vehicle Systems Support	Various	Various : TBD	-	4.380	Nov 2022	0.500	Nov 2023	3.340	Nov 2024	-		3.340	Continuing	Continuing	-
AV CSO Development Support	Various	Various : TBD	-	7.087	Nov 2022	7.523	Nov 2023	4.540	Nov 2024	-		4.540	Continuing	Continuing	-
		Subtotal	-	23.966		18.674		14.360		-		14.360	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673502 / *Air Vehicle Block 4 Planning & Sys Eng*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	338.287		490.402		179.043		-		179.043	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673502 / *Air Vehicle Block 4 Planning & Sys Eng*

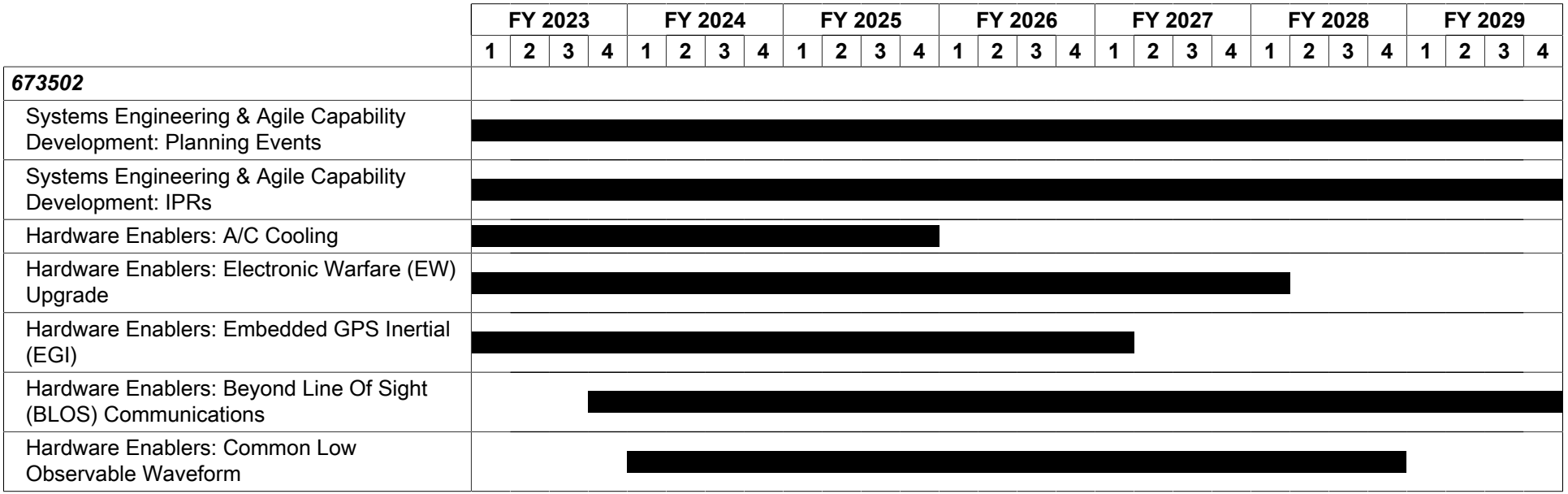

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673502 / *Air Vehicle Block 4 Planning & Sys Eng*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
673502				
Systems Engineering & Agile Capability Development: Planning Events	1	2023	4	2029
Systems Engineering & Agile Capability Development: IPRs	1	2023	4	2029
Hardware Enablers: A/C Cooling	1	2023	4	2025
Hardware Enablers: Electronic Warfare (EW) Upgrade	1	2023	1	2028
Hardware Enablers: Embedded GPS Inertial (EGI)	1	2023	1	2027
Hardware Enablers: Beyond Line Of Sight (BLOS) Communications	4	2023	4	2029
Hardware Enablers: Common Low Observable Waveform	1	2024	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673503 / *Test and Evaluation (T&E)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673503: *Test and Evaluation (T&E)*	-	232.793	261.303	422.627	0.000	422.627	406.073	347.596	245.032	210.150	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Integrated Test activities in support of C2D2, to include Lockheed Martin support at all test sites. Non-recurring engineering required to plan for the service life extension of existing DT aircraft and modifications necessary to bring DT aircraft fleet to a more production-representative and sustainable configuration, and to develop flight test instrumentation and release test software to meet Block 4 requirements. Additional upgrades required to support development and evaluation of improvements driven by changes in the threat environment and as identified in the Electronic Warfare ICD, the Fifth Generation Fighter Modernization ICD, and the Block 4 Capability Development Document (CDD). Efforts include non-recurring engineering and procurement of a test article to evaluate service life of F-35B STOVL Aircraft. Integrated test also supports the evaluation of upgrades to ALIS, fielding of ODIN Base Kits, regression testing of fielded weapons upgrades, and various validation/verification efforts.

Costs in the Accomplishments/Planned and Program R2A section have been broken out into the following R-2A categories: Development Foundation Contract, Development Test, Operational Test, Future Flight Test Capabilities/Investments, Ground Test and Simulation Infrastructure. All of the development efforts presented in the budget submission existed in prior years and were rolled up under previously submitted Accomplishments/Planned and Program costs in Test and Evaluation category.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Development Foundation Contract (DFC) Flight Test and Tech Refresh	77.877	81.832	117.091	-	117.091
Description: Provides a foundation for flight test operations support and developmental test aircraft fleet maintenance at Edwards Air Force Base (EDW AFB), CA; Naval Air Station Patuxent River (NAS PAX), MD; and tech refresh for F-35 development laboratory at Fort Worth, TX, for Lockheed Martin Aeronautics (LM Aero) and its subcontractors. This includes investment planning and other test planning activities required for Block 4 capability development, integration, and developmental test and evaluation. Funding is required for the Lockheed Martin Integrated Test Force contractor labor, suppliers, and material. Other support efforts are provided for airframe, air vehicle systems, air-ship integration, mission systems, weapons integration, offboard					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
mission support, autonomic logistics development, joint reprogramming enterprise, and modeling and joint simulation environment activities. ***FY 2024 Plans:*** Support F-35 capability enhancements. DFC provided flight test for C2D2 Block 4 capabilities including weapons testing, as well as continued annualized equipment recapitalization along with technology refresh and specific lab modernization efforts. These efforts will sustain, replace, upgrade, and modify hardware and software. ***FY 2025 Base Plans:*** DFC will provide flight test support for C2D2 Block 4 capabilities and weapons testing to accelerate delivery of weapons to the Services. Continues annualized equipment recapitalization of ground support equipment along with technology refresh and specific lab modernization efforts. These efforts will sustain, replace, upgrade, and modify test infrastructure hardware and software. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increase for DFC in FY2025 to account for cost inflation factors, acceleration of weapons delivery to the services, procurement of Block 4 PME for HITL labs, as well as replacement of ground support equipment and tech refresh of aging lab equipment.					
Title: Developmental Test (DT) ***Description:*** Government test site Integrated Test activities to support development of Air Vehicle C2D2 and TR-3 programs, as well as inherent maintenance systems, training systems, and combat data systems test support. Testing includes ground, logistics, and flight testing of incremental flight software releases, weapon integration, DMS/fleet sustainment, service-life extension, hardware refresh, and regression efforts to ensure total system integration meets program requirements. Test site capabilities to meet program requirements include infrastructure, ranges, engineering, administration, logistics, maintenance, controls, information technologies, classified facilities, and service unique supporting capabilities. The sites to be funded include but are not limited to NAWCAD Pax River, NAWCWD China Lake, and Edwards AFB. ***FY 2024 Plans:*** Continued to support Integrated Test capacity and flight test execution (manpower, weapons, flight hours, range time, and chase, target & tanker support assets) to develop and verify and test capabilities as directed by the F-35 JPO. Major program testing included continuing TR-3 regression, Block 4 weapons integration, integrated system evaluations, multi-ship operations, and mission effectiveness evaluations. Continued funding for Development Test Aircraft Modification broken out from the rest of the Development activities. This is continued	37.747	37.581	65.736	-	65.736

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
support from for Developmental Test (DT) aircraft modifications in order to be test-ready and operationally-representative. Funding will also procure Developmental Test (DT) Kits. Continued to support flight test capacity and flight test execution. This includes first increment testing through initial and fully operational increments. The funding was used for continuing to develop and test incrementally, for new capability releases and deficiency fixes. ***FY 2025 Base Plans:*** Developmental Testing activities at NAS Patuxent River ("Pax"), Edwards AFB, and NAWS China Lake continue FY24 activities under a level-of-effort test capacity as defined in updated USN Work Assignment Agreements (WAAs) and USAF Statements of Capability (SOCs). DT efforts in FY25 are expected to be prioritized for continued US Services and Cooperative Partner nation weapons integration and other operational air system capabilities, but will also include other efforts as described for FY24. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increase for DT in FY2025 to improve ability for F-35 Integrated Test Forces (ITFs) at NAS Patuxent River and Edwards AFB to complete DT activities for F-35 common capabilities, mission systems, and weapons capabilities, necessary to reach maturity required to field the warfighter.					
Title: Operational Test (OT) ***Description:*** Government test site Integrated Test activities to support development of Air Vehicle C2D2 and TR-3 programs, as well as inherent maintenance systems, training systems, and combat data systems test support. Testing includes ground, logistics, and flight-testing of incremental flight software releases, weapon integration, DMS/fleet sustainment, hardware refresh and regression efforts to ensure total system integration meets program requirements in an operationally representative environment. Test site capabilities to meet program requirements include infrastructure, ranges, engineering, administration, logistics; maintenance, controls, information technologies, classified facilitates, and US Service-unique supporting capabilities. The sites to be funded include but are not limited to Nellis AFB, Edwards AFB, and MCAS Yuma. ***FY 2024 Plans:*** Funding supported Integrated Test capacity and flight test execution (manpower, weapons, flight hours, range time, and chase, target & tanker support assets) to develop and verify and test capabilities as directed by the F-35 JPO. Major program testing included TR-3 integration, Block 4 weapons integration, integrated system evaluations, multi-ship operations and mission effectiveness evaluations in an operationally representative environment. Continued funding for Operational Test (OT) aircraft modifications in order to be test-ready and operationally-representative. The funding was used for continual development through incremental test of new	16.986	31.059	29.752	-	29.752

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
software and deficiency fixes. Funding also included the final analysis and reporting of the remaining 64 OT virtual mission trials completed in FY23, and other IOT&E closeout tasks. AV PMO is the TR-3 system owner responsible for verifying capability (per their funding in PU 2567) with data provided from DT and OT funded in this chart. ***FY 2025 Base Plans:*** Operational Test activities will continue from FY24 into FY25 under a level-of-effort OT capacity as defined in the Integrated Test Team (ITT) charter and as required to support the C2D2 construct's incremental capability releases. These activities may include OT squadron participation in large force fleet-representative exercises or joint force exercises to stress the capabilities in an operational environment. Funding will also be used to continue refining and improving OT data analysis tools and OT data management. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decrease for OT in FY2025 due to reducing overall flight test execution at Nellis AFB and Edwards AFB.					
Title: Future Flight Test Capabilities/Investments ***Description:*** Test fleet modifications, test mission equipment/assets, instrumentation capability, and data center investments are required to continue to support Block 4 capability development and integrated test requirements. TR-3-related capability requires current test aircraft and replacement test aircraft configurations to be modified to new hardware, software, and flight test instrumentation (FTI) systems. Program priorities, flight test demand, data quantity/bandwidth upgrades, and capability delivery schedules require a steady update to test fleet configurations. Modifications and instrumentation design/ procurement/install are long-lead efforts requiring stable funding and contract vehicles to meet program needs. ***FY 2024 Plans:*** Began incremental funding for Flight Sciences Replacements jets FTI design, procurement and installation (1 per variant). Began incremental funding for Flight Science Lite jets for FTI design in support of weapons testing (1xF-35A, 1xF-35B and 2xF-35C). Continued FTI design/fabrication/installation (long-lead NRE, parts procurement, kit fabrication) for replacement test aircraft on multiple TR-2 and TR-3 USG FTI designs. Continued NRE/procurement/installation to retrofit or maintain test aircraft viability. Additionally, development, procurement, and installation of flight test data center system upgrades to support Integrated Testing across multiple F-35 stakeholder sites. FTI development, procurement, fabrication, and installation for current/ future service loaner aircraft in order to continue Integrated Testing with Service Operational Test organizations.	88.891	104.005	192.622	-	192.622

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Further, continued integration and procurement efforts for required Block 4 test mission assets, includes but not limited to weapons test vehicles, unique test mission equipment, and other test execution support equipment. ***FY 2025 Base Plans:*** Continue incrementally funding Flight Science Replacement jets FTI design, procurement, and installation (3 per variant) for Lots 19-24, to include for procurement of long-lead parts out of the production long-lead timeframe. Complete incremental funding for Flight Science Lite jets for FTI design in support of weapons testing (1xF-35A, 1xF-35B and 2xF-35 C). Continues FTI design/fabrication/installation (long-lead NRE, parts procurement, kit fabrication) for replacement test aircraft on multiple TR-2 and TR-3 USG FTI designs. Continues NRE/ procurement/installation to retrofit or maintain test aircraft viability. Development, procurement, and installation of flight test data center upgrades to support Integrated Testing across multiple F-35 stakeholder sites. FTI development, procurement, fabrication and installation or current and future service loaner aircraft to continue Integrated Testing with Service Operational Test organizations. Continue integration and procurement efforts required for Block 4 test mission assets. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increase for FTI in FY2025 is primarily due to the request for additional 6x Flight Science Aircraft in support of engine and Block 4 development testing. This will increase the capacity to complete engineering and long-lead parts for Flight Science Aircraft.					
Title: Ground Test and Simulation Infrastructure (GTSI)	11.292	6.826	17.426	-	17.426
Description: Development of Ground Test & Simulation Infrastructure capabilities from Block 4/TR-3 and other C2D2 early-on design and development through Installed Systems Verification activities prior to Developmental Flight Test for all variants of the F-35 aircraft. Infrastructure efforts include Laboratory Developments of Improvements & Modernization (I&M) assets used for design, development and test of Block 4 capabilities, and development of Ground Test & Evaluation Capabilities for digital and non-digital installed systems verification. Laboratory and/or Venue Developments will focus on the pure development of Block 4 capabilities through a Capability Verification Infrastructure that meets required fidelities that would advance the high-quality development of the Air System capabilities. Ground Test & Simulation Infrastructure will also include capabilities for cyber testing for TR-3 assessments within three main areas: air vehicle, information systems, and supply chain. ***FY 2024 Plans:*** Continued Ground Test & Simulation Infrastructure improvements and modernization capabilities needed for Block 4 air system developments. Efforts required to enable efficiencies in the Capability Verification process					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
and decrease reliance on Flight Test Operations as the overwhelmingly sole means of Verification. Test Infrastructure improvements included Vendor lab capabilities as well as USG Organic Infrastructure. Develop F-35 mission threads for continued digital verification automated capabilities for early-on software development, and continue aircraft cyber improvements and testing efforts. Major Investments included improvements to Digital Capabilities and Analysis and Ground Integrated Battlespace Verification. ***FY 2025 Base Plans:*** Continue Ground Test and Simulation Infrastructure Improvements and Modifications (I&M), M&S accreditation for DT, and test operation efforts that enable T&E of F-35 Block 4 Air System Capabilities. I&M efforts will be made to both DoD Organic Infrastructure such as integrated battlespace testing improvements to the anechoic chamber and associated labs, and LM lab infrastructure needed for Block 4 air system capability development. LM I&M efforts include updates to simulation software, improvements to stimulation labs, test equipment procurement, and engineering and test operations in support of EW, radar, communications, and weapon capabilities. Budget will also cover prime contractor support for the execution of M&S accreditation activities for DT, as well as activities for Government and CSS support needed for planning and reporting on the verification and validation of M&S to enable the use of M&S as capability verification venue. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increase for GTSI in FY2025 to increase support of Block 4 capability development, as well as procure hardware and engineering labor for laboratory infrastructure improvements.					
Accomplishments/Planned Programs Subtotals	232.793	261.303	422.627	-	422.627

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Test & Evaluation Project will maximize use of existing F-35 contracts, where possible, for the various T&E-related capabilities and investments outlined in Sections A-C above. For example, provisions for new instrumentation on new flight test aircraft are being implemented when applicable via existing Production contracts in order to allow installation of the required hardware while those airframes are still on the assembly line. This will save significant costs and effort that would be required if instrumentation installation occurred after aircraft delivery. Other modifications and/or non-recurring engineering (NRE) may be implemented via existing contracts being managed by the Air Vehicle Program Management Office as part of the Block 4 engineering and development efforts. In addition, a separate Cost-Plus-Incentive-Fee-type contract is planned to provide a long-term approach to upgrading and maintaining laboratories and also for maintaining the older existing SDD test aircraft. Viability modifications to the SDD test aircraft are being contracted via a combination of Streamlined Delivery Orders for NRE and hardware as well as a Cost Plus-type

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
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contract, using both to expedite the right modifications as needed at the right time in order to avoid test aircraft grounding and to maximize their availability. In addition, separate Basic Ordering Agreements or Indefinite Quantity/Indefinite Delivery contracts may be used to implement a long-term approach to upgrading and maintaining laboratories and test aircraft and supporting technology maturation for future capabilities. Several new cost reduction initiatives are being studied to determine possible migration away from Lockheed-Martin support to less-expensive organic support (via either government solutions, local test-base support contracts, or a combination of both) in areas such as test aircraft maintenance, test operations support, and networks/knowledge management. Other initiatives are being pursued to move more test data collection requirements from the open-air ranges to ground test chambers, computer-based models and simulations, or other laboratory venues where possible.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DFC - Prime Developmental Foundation Contract	C/CPIF	LM : Fort Worth, TX	-	77.876	Nov 2022	72.188	Nov 2023	117.092	Nov 2024	-		117.092	Continuing	Continuing	-
OT - Prime Operation Test Aircraft Modification	C/CPIF	LM : Fort Worth, TX	-	3.094	Aug 2023	18.251	Aug 2024	16.183	Aug 2025	-		16.183	Continuing	Continuing	-
FI - Prime DT AC Viability	C/CPIF	LM : Fort Worth, TX	-	22.241	Dec 2022	79.310	Dec 2023	17.891	Dec 2024	-		17.891	Continuing	Continuing	-
FI - Flight Test Asset	C/CPIF	LM : Fort Worth, TX	-	48.932	Dec 2022	21.394	Dec 2023	165.663	Dec 2024	-		165.663	Continuing	Continuing	-
DT - Prime Development Test Aircraft Modification	C/CPIF	LM : Fort Worth, TX	-	7.349	Aug 2023	4.332	Aug 2024	5.482	Aug 2025	-		5.482	Continuing	Continuing	-
BFC - Prime LM Laboratory Developments	C/CPIF	LM : Fort Worth, TX	-	-		9.645	Nov 2023	0.000	Nov 2024	-		0.000	Continuing	Continuing	-
		Subtotal	-	159.492		205.120		322.311		-		322.311	Continuing	Continuing	N/A

Remarks

R-3 Acronyms correspond to R-2A categories, per below breakout:
DFC - Development Foundation Contract (DFC) Flight Test
OT - Operational Test
DT - Developmental Test
FI - Future Flight Test Capabilities and Investments
GTSI - Ground Test Simulation and Infrastructure
Flight Test assets include DT and OT weapons procurement to support test and assets needed for flight test instrumentation

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (EDW)	MIPR	Edwards AFB, CA : TBD	-	14.087	Dec 2022	15.643	Dec 2023	37.902	Dec 2024	-		37.902	Continuing	Continuing	-
Developmental Test & Evaluation (IDT)	MIPR	IDT : Ballston, VA	-	2.952	Dec 2022	1.506	Dec 2023	2.812	Dec 2024	-		2.812	Continuing	Continuing	-
Developmental Test & Evaluation (JHU)	MIPR	JHU : Laurel, MD	-	1.610	Dec 2022	0.815	Dec 2023	2.812	Dec 2024	-		2.812	Continuing	Continuing	-
Developmental Test & Evaluation (PAX)	WR	NAWCAD : Pax River, MD	-	18.342	Dec 2022	15.549	Dec 2023	30.410	Dec 2024	-		30.410	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (CHLK)	WR	NAWCWD : China Lake, CA	-	0.742	Dec 2022	1.309	Dec 2023	4.217	Dec 2024	-		4.217	Continuing	Continuing	-
Operational Test & Evaluation (EDW)	MIPR	Edwards AFB, CA : TBD	-	0.473	Dec 2022	0.999	Nov 2023	1.037	Nov 2024	-		1.037	Continuing	Continuing	-
Operational Test & Evaluation (Eglin)	MIPR	Eglin AFB, FL : TBD	-	1.760	Dec 2022	1.251	Jun 2024	1.299	Jun 2025	-		1.299	Continuing	Continuing	-
Operational Test & Evaluation (PAX)	WR	NAWCAD : Pax River, MD	-	0.258	Dec 2022	0.192	Dec 2023	0.198	Dec 2024	-		0.198	Continuing	Continuing	-
Operational Test & Evaluation (CHLK)	WR	NAWCWD : China Lake, CA	-	3.501	Dec 2022	7.919	Dec 2023	8.215	Dec 2024	-		8.215	Continuing	Continuing	-
Operational Test & Evaluation (Nellis)	MIPR	Nellis AFB, NV : TBD	-	29.103	Dec 2022	9.765	Dec 2023	10.132	Dec 2024	-		10.132	Continuing	Continuing	-
Operational Test & Evaluation (NSMA)	MIPR	NSMA : NSMA : TBD	-	0.473	Dec 2022	1.235	Dec 2023	1.282	Dec 2024	-		1.282	Continuing	Continuing	-
		Subtotal	-	73.301		56.183		100.316		-		100.316	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	232.793		261.303		422.627		-		422.627	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

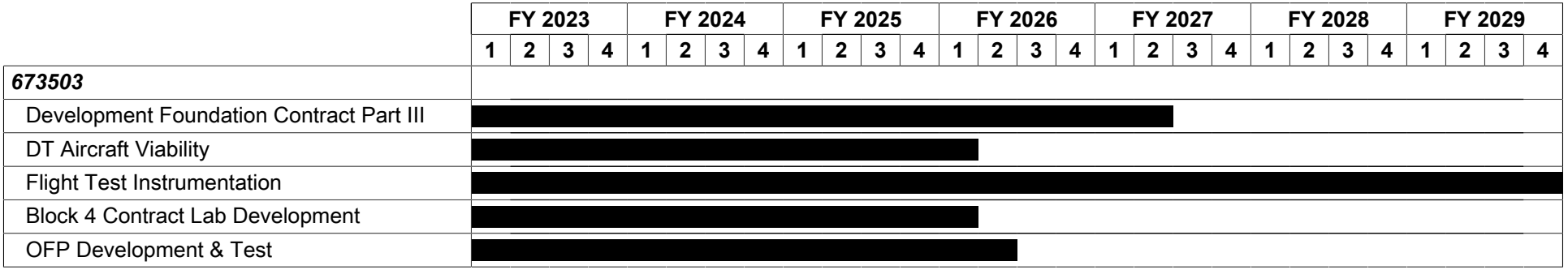

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673503 / *Test and Evaluation (T&E)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
673503				
Development Foundation Contract Part III	1	2023	2	2027
DT Aircraft Viability	1	2023	1	2026
Flight Test Instrumentation	1	2023	4	2029
Block 4 Contract Lab Development	1	2023	1	2026
OFP Development & Test	1	2023	2	2026

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673504 / *Propulsion (PP)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673504: *Propulsion (PP)*	-	50.634	266.422	267.962	0.000	267.962	206.961	217.240	197.919	201.828	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Propulsion F135 projects within the Continuous Capability Development & Delivery (C2D2) are provided for developmental efforts for propulsion systems and test engine requirements such as Block 4 Integrated Flight Test Support, Engine Flight Test Mechanics, Flight Test Engineering, Engine Hardware, Test Engine Procurements, research, component, and capability development, prototypes, various studies, costs integral to support the developmental stages for F-35 engine modernization, affordability drivers for top engine availability degraders, and improvement to support the F135 Propulsion System for the F-35 Air Vehicle. Testing and development of the three F-35 aircraft variants require engine propulsion funding to enable continued flight hours. Flight hours are budgeted and planned to meet the Block 4 Flight Test timelines and required Flight Test support. Flight Test Support efforts will transition to Organic support by CY2027. Transition of Flight Test Support requirements to organic capability includes efforts performed by contractor and government installations, Autonomic Logistics Information System / Operational Data Integrated Network (ALIS/ODIN) transition, replacement of development-only hardware, and updating Joint Technical Data (JTD) packages as required. The F-35 engine is being modernized as part of the Engine, Power, and Thermal Management System (PTMS) Modernization (EPM) subprogram. In FY24, Engine Modernization began being funded through the standard funding process. EPM Engine Modernization will continue funding propulsion system EMD in FY2025. In FY24 EPM began funding the Power and Thermal Management Upgrade, an upgrade to the F-35 Air System's (AS) Power and Thermal Management System (PTMS), Fuel Thermal Management System (FTMS) and Electrical Power System (EPS).

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Propulsion (PP)	50.634	266.422	267.962	-	267.962
Description: Propulsion F135 projects within the Continuous Capability Development & Delivery (C2D2) are provided for developmental efforts for propulsion systems and test engine requirements such as Block 4 Integrated Flight Test Support, Engine Flight Test Mechanics, Flight Test Engineering, Engine Hardware, Test Engine Procurements, research, component, and capability development, prototypes, various studies, costs integral to support the developmental stages for F-35 engine modernization, affordability drivers for top engine availability degraders, and improvement to support the F135 Propulsion System for the F-35 Air Vehicle. Testing and development of the three F-35 aircraft variants require engine propulsion funding to enable continued flight hours. Flight hours are budgeted and planned to meet the Block 4 Flight Test timelines and required					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673504 / *Propulsion (PP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Flight Test support. Flight Test Support efforts will transition to Organic support by CY2027. Transition of Flight Test Support requirements to organic capability includes efforts performed by contractor and government installations, Autonomic Logistics Information System / Operational Data Integrated Network (ALIS/ODIN) transition, replacement of development-only hardware, and updating Joint Technical Data (JTD) packages as required. The F-35 engine is being modernized as part of the Engine, Power, and Thermal Management System (PTMS) Modernization (EPM) subprogram. In FY24, Engine Modernization began being funded through the standard funding process. EPM Engine Modernization will continue funding propulsion system EMD in FY2025. In FY24 EPM began funding the Power and Thermal Management Upgrade, an upgrade to the F-35 Air System's (AS) Power and Thermal Management System (PTMS), Fuel Thermal Management System (FTMS) and Electrical Power System (EPS). ***FY 2024 Plans:*** Continued Propulsion F135 Block 4 Integrated Flight Test Support to include Engine Flight Test Mechanics, Flight Test Engineering, Engine Hardware, Test Engine Procurements, research, component and capability development, prototypes, various studies, and other associated government costs integral to support the developmental stages for engine modernization and improvement to support the F135 Air Vehicle. Propulsion Flight Test Support enables the execution of F135 Air Vehicle Air System Playbook (ASP 16.1), and Technology Refresh 3 (TR3) Requirements. The Flight Test Fleet will maintain similar elevated aircraft inventory at twelve aircraft in FY2024. This includes seven at Edwards Air Force Base and five at Patuxent River Naval Air Base. Flights and Engine Flight Hours (EFH) are expected to maintain their prior year levels at 240 flights and 480 flight hours per quarter. Flight Test Support efforts will transition to Organic support by FY2027. Transition of Flight Test Support requirements to organic capability includes efforts performed by contractor and government installations, Autonomic Logistics Information System / Operational Data Integrated Network (ALIS/ODIN) transition, and Final Flight Release (FFR) engine support efforts. FY2024 Propulsion C2D2 provides funding for requirements to support the Air Vehicle modernization efforts, Engine signature predicting improvement efforts, and continuing F135 Engine Modernization/Propulsion System Upgrade developmental efforts. ***FY 2025 Base Plans:*** Continue Propulsion F135 Block 4 Integrated Flight Test Support to include Engine Flight Test Mechanics, Flight Test Engineering, Engine Hardware, Test Engine Procurements, research, component, and capability development, prototypes, various studies, and other associated government costs integral to support the developmental stages for engine modernization and improvement to support the F135 Air Vehicle. Propulsion Flight Test Support enables the execution of Block 4 and Technology Refresh 3 (TR3) Requirements. The Flight Test Fleet will maintain similar aircraft inventory at eight aircraft in FY2025. This includes three at					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673504 / *Propulsion (PP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Edwards Air Force Base and five at Patuxent River Naval Air Base. Flights and Engine Flight Hours (EFH) are expected to maintain their prior year levels at over 600 flight hours in the year. Flight Test Support efforts will transition to Organic support by the end of CY2027. Transition of Flight Test Support requirements to organic capability includes efforts performed by contractor and government installations, Autonomic Logistics Information System / Operational Data Integrated Network (ALIS/ODIN) transition, replacement of development only hardware, and updating Joint Technical Data (JTD) packages as required. FY2025 Propulsion provides funding for requirements to support Engine Modernization Development efforts. PTMU will continue nonrecurring engineering effort to further understand SoS impacts and PTMS Upgrade cooling requirements and continued maturation of potential Thermal Management Systems (TMSs.) ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increase from FY2024 to FY2025 is due to continual requirements development relating to maturation efforts for the F135 Engine Modernization/propulsion System Upgrade developmental efforts.					
Accomplishments/Planned Programs Subtotals	50.634	266.422	267.962	-	267.962

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The C2D2 acquisition strategy is to employ both Cost and Fixed Price Incentive contracts for the Block 4 engineering and development efforts. A new modernization contract structure will be established for all post SDD Block 4 efforts. In addition, a separate Basic Ordering Agreement or Indefinite Quantity/Indefinite Delivery contract is planned to provide a long term approach to upgrading and maintaining laboratories, test aircraft, and supporting technology maturation for future C2D2 capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673504 / *Propulsion (PP)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PP Prime C2D2 Propulsion DT Aircraft Procurement Engines	C/FPIF	PW : East Hartford, CT	-	1.000	Nov 2022	-		-		-		-	Continuing	Continuing	-
PP Prime C2D2 Propulsion Flight Test	C/CPIF	PW : East Hartford, CT	-	11.829	Oct 2022	11.737	Oct 2023	11.737	Oct 2024	-		11.737	Continuing	Continuing	-
PP DevSecOps Emulation Lab	C/CPIF	PW : East Hartford, CT	-	36.333	Oct 2022	-		-		-		-	Continuing	Continuing	-
PP F135 Engine Modernization Development	Various	Various : Various	-	-		154.685	Jun 2024	156.225	Jun 2025	-		156.225	Continuing	Continuing	-
PP F135 Engine Modernization Detailed Design	C/CPIF	TBD : TBD	-	1.472	Oct 2022	100.000	Dec 2023	100.000	Dec 2024	-		100.000	Continuing	Continuing	-
		Subtotal	-	50.634		266.422		267.962		-		267.962	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	50.634		266.422		267.962		-		267.962	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673504 / *Propulsion (PP)*

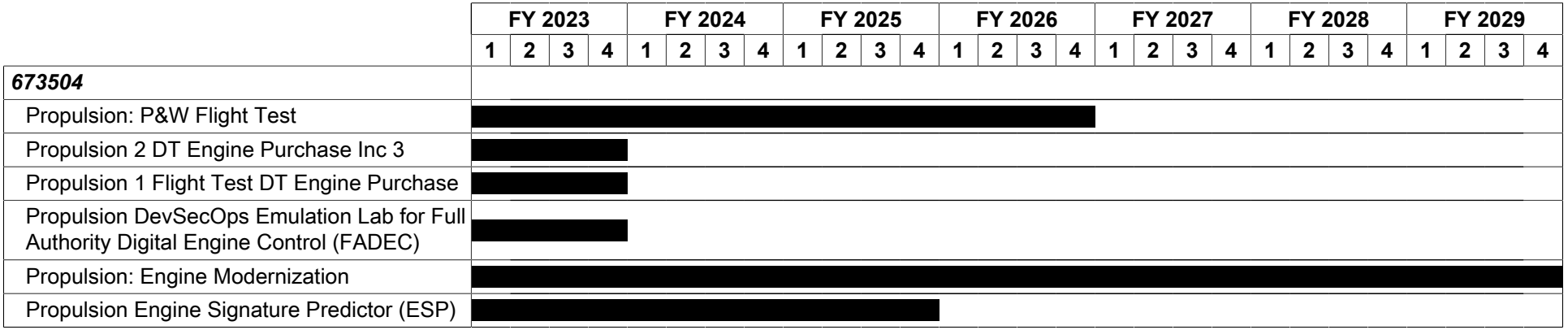

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673504 / *Propulsion (PP)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
673504				
Propulsion: P&W Flight Test	1	2023	4	2026
Propulsion 2 DT Engine Purchase Inc 3	1	2023	4	2023
Propulsion 1 Flight Test DT Engine Purchase	1	2023	4	2023
Propulsion DevSecOps Emulation Lab for Full Authority Digital Engine Control (FADEC)	1	2023	4	2023
Propulsion: Engine Modernization	1	2023	4	2029
Propulsion Engine Signature Predictor (ESP)	1	2023	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673505 / *Maintenance Systems (MxS)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673505: *Maintenance Systems (MxS)*	-	47.647	42.044	33.741	0.000	33.741	46.880	45.331	34.187	70.248	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Autonomic Logistics Information System (ALIS) is the current F-35 program solution for delivering core maintenance and logistics information solutions to F-35 warfighters. ALIS will continue to deliver the core logistics and maintenance infrastructure requirements for the F-35 enterprise as ALIS evolves into Operational Data Integrated Network (ODIN). ALIS includes features such as aircraft scheduling, training delivery, record keeping, technical data delivery, supply chain management, maintenance management, pilot and maintenance debriefing, and mission planning. Current ALIS development efforts are focused on low cost and high return investments that provide a high confidence return on investment in the short term, significant warfighter impact, and/or offer synergy with ODIN development efforts.

ODIN will incrementally provide a modern, user-friendly integrated information system for the F-35 to deliver core maintenance and logistics information solutions. ODIN will be comprised of multiple elements to include modern hardware, architectures, software development methods, data environments, and platforms. Leveraging agile and modern software development practices, ODIN will serve as the primary logistics tool to support F-35 warfighter operations, health and diagnostics, mission planning, supply chain management, maintenance, and training. ODIN will substantially decrease F-35 administrator and maintainer workload, increase readiness rates for all F-35 variants, and allow software engineers to rapidly develop and deploy updates in response to changing warfighter requirements and improve data management, quality, and integrity. The ALIS to ODIN transition is intended to enable holistic fleet management, improve performance, enhance readiness, and reduce costs to the F-35 program. ODIN is comprised of both hardware and software which support the flow of Unclassified and Classified aircraft and maintenance-related data.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Operational Data Integrated Network (ODIN)	46.647	42.044	33.741	0.000	33.741
Description: ODIN will incrementally provide a modern, user-friendly integrated information system for the F-35 to deliver core maintenance and logistics information solutions. ODIN will be comprised of multiple elements to include modern hardware, architectures, software development methods, data environments, and platforms. Leveraging agile and modern software development practices, ODIN will serve as the primary logistics tool to support F-35 warfighter operations, health and diagnostics, mission planning, supply chain management,					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673505 / *Maintenance Systems (MxS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
maintenance, and training. ODIN will substantially decrease F-35 administrator and maintainer workload, increase readiness rates for all F-35 variants, and allow software engineers to rapidly develop and deploy updates in response to changing warfighter requirements and improve data management, quality, and integrity. The ALIS to ODIN transition is intended to enable holistic fleet management, improve performance, enhance readiness, and reduce costs to the F-35 program. ODIN is comprised of both hardware and software which support the flow of Unclassified and Classified aircraft and maintenance-related data. ***FY 2024 Plans:*** Continued ALIS to ODIN software containerization efforts and development of foundational infrastructure for software and data modernization to increase user capability. Continued development of the Linux platform and ODIN data architecture. Finalized current generation hardware update. Continued analysis of alternatives on next-generation hardware tech insertion supporting ODIN development and test plan as well as capability requirements that are not currently encompassed in the baseline equipment. Optimized the ODIN cloud-based infrastructure while continuing migration and modernization of the ODIN enterprise. Leveraged the establishment of modern software architecture from Unclassified development efforts to support development and release of the Classified portion of the F-35 Maintenance Systems ODIN enterprise. Began to develop and deploy improved capabilities to replace legacy applications. ***FY 2025 Base Plans:*** Continue ALIS to ODIN software containerization efforts and development of foundational infrastructure, software, and data enhancements to enable enterprise-wide capabilities and increase user capabilities. Continue development of the Linux platform and ODIN data architecture. Develop next-generation hardware update. Continue analysis of alternatives on future hardware tech insertion supporting ODIN development and test plans as well as capability requirements that are not currently encompassed in the baseline equipment. Continue development and optimization of the ODIN cloud-based infrastructure while continuing migration and enhancement of the ODIN enterprise. Leverage the establishment of modern software architecture from Unclassified development efforts to develop and release the Classified portion of the F-35 Maintenance Systems ODIN enterprise. Develop and deploy improved capabilities to replace legacy applications. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673505 / *Maintenance Systems (MxS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Decrease in funding from FY2024 to FY2025 is primarily for Software and Data activities and resulted from lower negotiated Lockheed Martin labor rates on the prime development contract. The activities have been adjusted to more closely align to planned migration activities with ODIN containerized software.					
Title: Prognostics and Health Management (PHM) ***Description:*** Prognostics and Health Management (PHM) encompasses the Air-System set of software, technical data and capabilities to enable optimal maintenance, and resolution of aircraft failures and impending failures. On-aircraft software identifies failures, enables reporting of status to the pilot, and records data for life cycle management and sustaining engineering. The data processed by ALIS/ODIN supports maintenance debriefs, life cycle management via Assess Material Condition (AMC), and failure resolution via Health Reporting Codes (HRCs) and Anomaly and Failure Resolution System (AFRS). Maintenance performance (inclusive of reliability and maintainability) is enhanced via the collection and reporting of the Failure Reporting and Corrective Action System (FRACAS). Applied advanced analytics on the aggregate PHM is used for airframe lifing and enterprise use, and improves responsiveness to operational needs. ***FY 2024 Plans:*** N/A ***FY 2025 Base Plans:*** N/A ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** N/A	1.000	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	47.647	42.044	33.741	0.000	33.741

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673505 / *Maintenance Systems (MxS)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MxS Prime LM ODIN	C/CPFF	LM : Fort Worth, TX	-	22.029	Nov 2022	23.200	Nov 2023	13.862	Nov 2024	-		13.862	Continuing	Continuing	-
MxS Prime PW ODIN	C/CPFF	PW : East Hartford, CT	-	4.932	Nov 2022	3.800	Nov 2023	3.872	Nov 2024	-		3.872	Continuing	Continuing	-
MxS Prime PHM	C/CPFF	LM : Fort Worth, TX	-	1.000	Nov 2022	-		-		-		-	Continuing	Continuing	-
		Subtotal	-	27.961		27.000		17.734		-		17.734	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MxS ODIN Development Support	Various	Various : TBD	-	19.686	Nov 2022	10.644	Nov 2023	2.050	Nov 2024	-		2.050	Continuing	Continuing	-
MxS ODIN Development Support - DTIC	Various	DTIC : Fort Belvoir, VA	-	-		3.000	Nov 2023	3.348	Nov 2024	-		3.348	Continuing	Continuing	-
MxS ODIN Development Support - NIWC	Various	NIWC : Charleston, SC	-	-		1.400	Nov 2023	1.290	Nov 2024	-		1.290	Continuing	Continuing	-
MxS ODIN Development Support Platform Environment	Various	Various : TBD	-	-		-		7.100	Nov 2024	-		7.100	Continuing	Continuing	-
MxS ODIN Development Support - GFE	Various	Various : TBD	-	-		-		2.219	Nov 2024	-		2.219	Continuing	Continuing	-
		Subtotal	-	19.686		15.044		16.007		-		16.007	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	47.647		42.044		33.741		-		33.741	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673505 / *Maintenance Systems (MxS)*

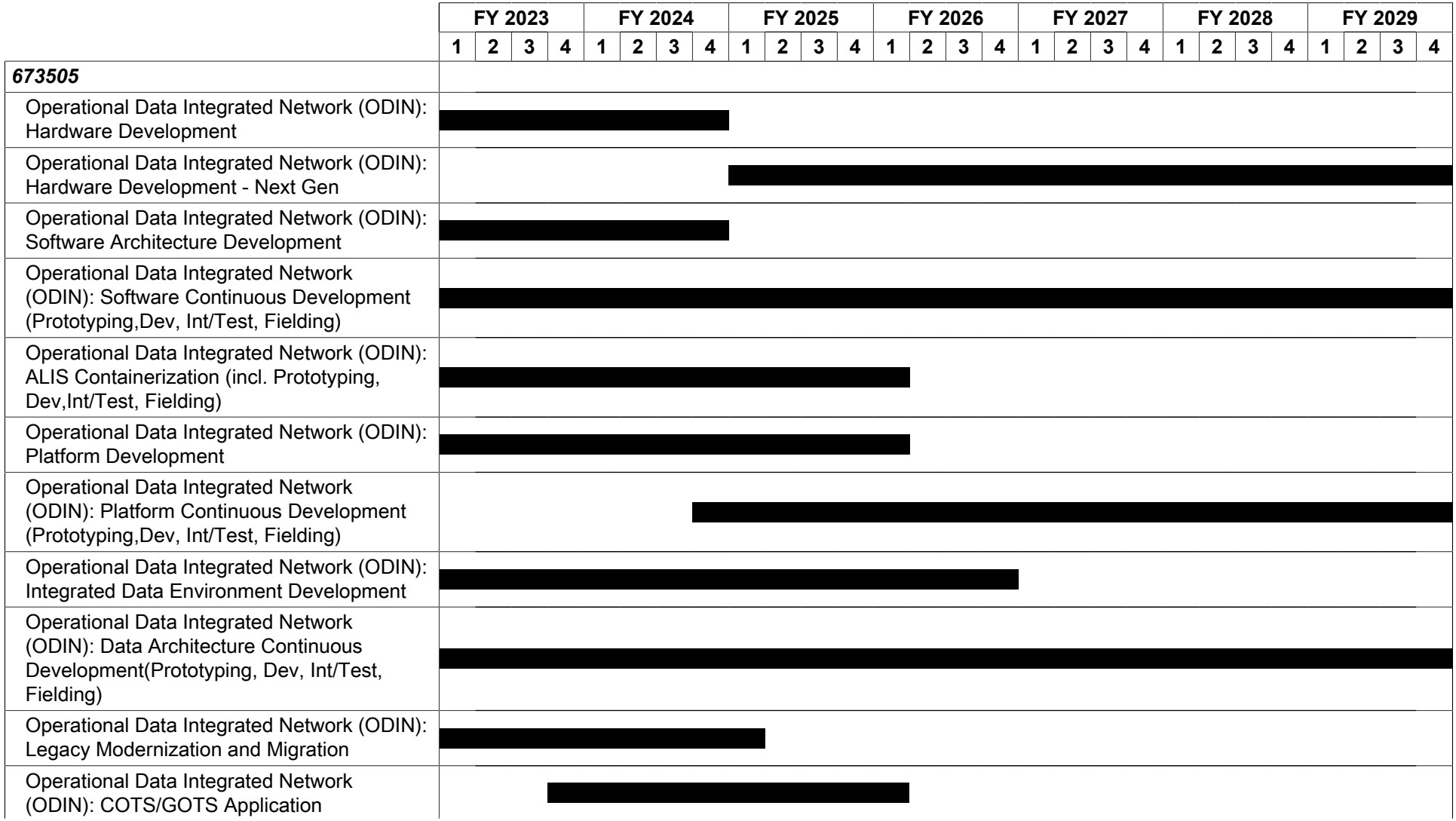

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673505 / *Maintenance Systems (MxS)*

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Configuration,Software Development, and Integration																												
Prognostics and Health Management (PHM): PHM Algorithm Development	[redacted]																											

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673505 / *Maintenance Systems (MxS)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
673505				
Operational Data Integrated Network (ODIN): Hardware Development	1	2023	4	2024
Operational Data Integrated Network (ODIN): Hardware Development - Next Gen	1	2025	4	2029
Operational Data Integrated Network (ODIN): Software Architecture Development	1	2023	4	2024
Operational Data Integrated Network (ODIN): Software Continuous Development (Prototyping,Dev, Int/Test, Fielding)	1	2023	4	2029
Operational Data Integrated Network (ODIN): ALIS Containerization (incl. Prototyping, Dev,Int/Test, Fielding)	1	2023	1	2026
Operational Data Integrated Network (ODIN): Platform Development	1	2023	1	2026
Operational Data Integrated Network (ODIN): Platform Continuous Development (Prototyping,Dev, Int/Test, Fielding)	4	2024	4	2029
Operational Data Integrated Network (ODIN): Integrated Data Environment Development	1	2023	4	2026
Operational Data Integrated Network (ODIN): Data Architecture Continuous Development(Prototyping, Dev, Int/Test, Fielding)	1	2023	4	2029
Operational Data Integrated Network (ODIN): Legacy Modernization and Migration	1	2023	1	2025
Operational Data Integrated Network (ODIN): COTS/GOTS Application Configuration,Software Development, and Integration	4	2023	1	2026
Prognostics and Health Management (PHM): PHM Algorithm Development	2	2023	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673506 / *Combat Data Systems (CDS)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673506: *Combat Data Systems (CDS)*	-	49.844	39.496	29.955	0.000	29.955	36.407	39.513	40.945	41.754	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Investment and modernization activities required for Block 4 development, integration, test and evaluation of Mission Data Tools, Verification & Validation Systems, and Mission Planning Software/Hardware. Funding related to key deliveries to Electronic Warfare Squadrons and F-35 Operational Squadrons and enables government and contractor labor for mission planning support environment and joint reprogramming enterprise. Other costs support Technology Investment for key Modernization / Innovation activities and cloud-based DevSecOps infrastructure.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Joint Reprogramming Environment (JRE)	36.588	29.510	19.997	-	19.997
Description: JRE is investment and modernization activities required for Block 4 development, integration, test and evaluation of Mission Data Tools, Verification & Validation Systems, and Mission Planning Software/ Hardware. Funding related to key deliveries to Electronic Warfare Squadrons and F-35 Operational Squadrons and enables government and contractor labor for joint reprogramming enterprise. Other costs support Technology Investment for key Modernization/Innovation activities and Cloud based DevSecOps infrastructure.					
FY 2024 Plans: Complete efforts for the Agile development of Common Reprogramming Tools (CRT) to provide Electronic Warfare Squadrons with essential software tools that reduce Mission Data File (MDF) development time and human error and increase combat effectiveness. Continue software coding and testing to support development / deployment of the software tools. Continue to upgrade Reprogramming Verification & Validation Systems (RVVS) to meet the Block 4 capability requirements and meet next generation threats. Continue ongoing efforts to support aircraft in relation to Continuous Capability Development and Delivery (C2D2), and Network Boundary Consolidation. Continue development support for defining, managing and acquiring the F-35 Reprogramming capability enhancements identified in approved requirements documents for Block 4 and modernization efforts					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673506 / *Combat Data Systems (CDS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
and support efforts for joint reprogramming enterprise activities. Continue efforts on the Advanced Development, Integration & Test contract to integrate Block 4 software data loads at reprogramming laboratories. ***FY 2025 Base Plans:*** Enhancement efforts for the Agile development of CRT to provide Electronic Warfare Squadrons with essential software tools that reduce both MDF development time & human error while increasing combat effectiveness. Continue software development efforts that deploy software tools to increase capacity within the reprogramming laboratories. Continue to upgrade RVVS to meet the Block 4 capability requirements and meet next generation threats. Continue ongoing efforts to support aircraft in relation to C2D2. Continue development support for defining, managing and acquiring the F-35 Reprogramming capability enhancements identified in approved requirements documents for Block 4 and modernization efforts and support efforts for joint reprogramming enterprise activities. Continue efforts to integrate Block 4 software data loads at reprogramming laboratories. Continue efforts to improving the velocity of MDF development, improving the tools available to the reprogramming laboratories to process and reprograming operational data, and to support rapid reprogramming activities. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decreased due to completion of efforts associated with Government Systems Engineering and Testing, specifically the Partner Analysis Laboratory.					
Title: Mission Planning Support Environment (MPSE)	13.256	9.986	9.958	-	9.958
Description: MPSE is investment and modernization activities required for Block 4 development, integration, test and evaluation of Mission Data Tools and Mission Planning Software/Hardware. Funding related to key deliveries to Electronic Warfare Squadrons and F-35 Operational Squadrons and enables government and contractor labor for mission planning support environment. Other costs support Technology Investment for key Modernization/Innovation activities and Cloud based DevSecOps infrastructure. ***FY 2024 Plans:*** Continue development support for F-35 Mission Planning capability enhancements identified in approved requirements documents for Block 4 and modernization efforts within the mission planning support hardware and software. Continue development support of the MPSE software suite that is customized for each and every air vehicle Operational Flight Program / Software Data Load (OFP/SDL) release to support the features and enhancements of that release. Continue development of the F-35 Next Generation Mission Planning. Continue efforts to transition F-35 mission planning software development to Agile and DevSecOps methodologies to reduce costs and increase speed of delivering capabilities to the warfighter. Continue ongoing efforts to					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673506 / *Combat Data Systems (CDS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
transition F-35 mission planning software development workload from contractor to the Government, securing organic software development capability and reducing costs. ***FY 2025 Base Plans:*** Continue development support for F-35 Mission Planning capability enhancements identified in approved requirements documents for Block 4 and modernization efforts within the mission planning support hardware and software. Improve the common, tailorable MPSE software suite that supports all developmental and fielded OFP/ SDL releases, as well as introducing a virtualized environment that reduces development build times and administrative burdens for squadrons. Further enhance F-35 Next Generation Mission Planning program, focusing on development and certification of Ground Data Receptacle replacement, meeting latest cybersecurity directives. Field first iteration of cloud-developed NextGen Open Mission Systems (NOMS) mission planning software, leveraging DevSecOps development pipeline; begin development of classified components on IL 6+ JPO Cloud environment. Continue efforts to improve data transfer layer for improved operational data movement. Build upon MPSE efforts to partner with government organizations for software development and contract directly with equipment suppliers, continuing to reduce overhead costs and management burdens. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decreased due to completion of efforts associated with Government Systems Engineering and Testing, specifically the Partner Analysis Laboratory.					
Accomplishments/Planned Programs Subtotals	49.844	39.496	29.955	-	29.955

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Combat Data Systems Program Management Office (CDS PMO) continues to develop JRE and MPSE requirements by leveraging existing F-35 Joint Program Office contracts, use of Other Government Contracts and organic Government software support, and by developing and competing new contract actions for unique CDS PMO requirements.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673506 / *Combat Data Systems (CDS)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CDS Prime JRE Development - CRT Increment 1	C/CPFF	LM : Fort Worth, TX	-	13.360	Dec 2022	7.102	Dec 2023	5.868	Dec 2024	-		5.868	Continuing	Continuing	-
CDS Prime JRE Development - RVVS	C/CPIF	LM : Fort Worth, TX	-	14.282	Dec 2022	10.340	Dec 2023	6.184	Dec 2024	-		6.184	Continuing	Continuing	-
CDS Prime JRE Development - TR-3	C/CPAF	LM : Fort Worth, TX	-	0.742	Mar 2023	-		-		-		-	Continuing	Continuing	-
CDS Prime JRE Development - Block 4 Contract (BFC - Integration, formerly SEIT, P2.3)	C/CPAF	LM : Fort Worth, TX	-	2.888	Jul 2023	6.898	Jul 2024	3.644	Jul 2025	-		3.644	Continuing	Continuing	-
CDS Prime JRE Development - FRL	Various	Various : TBD	-	0.438	Jan 2023	-		-		-		-	Continuing	Continuing	-
CDS Prime JRE Development - Capability Development	MIPR	LM : Eglin AFB, FL	-	6.840	Dec 2022	2.780	Dec 2023	2.674	Dec 2024	-		2.674	Continuing	Continuing	-
CDS Prime MPSE Development - F-35 Next Generation Mission Planning	C/CPIF	LM : Fort Worth, TX	-	2.922	Mar 2023	3.922	Mar 2024	3.744	Mar 2025	-		3.744	Continuing	Continuing	-
CDS Prime MPSE Development - Capability Development	Various	Various : TBD	-	3.908	Dec 2022	5.014	Dec 2023	5.100	Dec 2024	-		5.100	Continuing	Continuing	-
		Subtotal	-	45.380		36.056		27.214		-		27.214	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CDS JRE Development Support	Various	Various : TBD	-	1.942	Dec 2022	2.390	Dec 2023	1.627	Dec 2024	-		1.627	Continuing	Continuing	-
CDS MPSE Development Support	Various	Various : TBD	-	2.522	Dec 2022	1.050	Dec 2023	1.114	Dec 2024	-		1.114	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673506 / *Combat Data Systems (CDS)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	4.464		3.440		2.741		-		2.741	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	49.844		39.496		29.955		-		29.955	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673506 / *Combat Data Systems (CDS)*

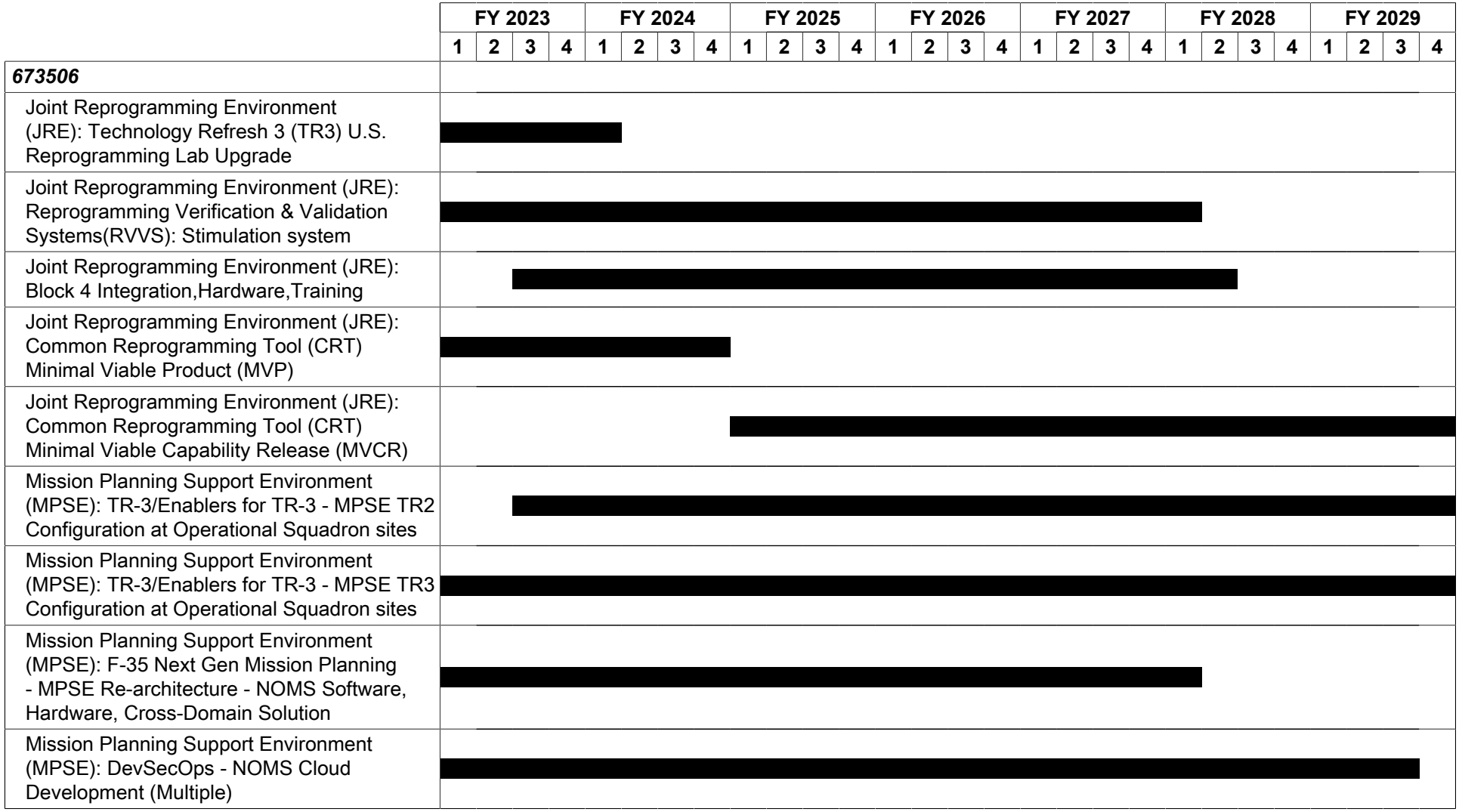

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673506 / *Combat Data Systems (CDS)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
673506				
Joint Reprogramming Environment (JRE): Technology Refresh 3 (TR3) U.S. Reprogramming Lab Upgrade	1	2023	1	2024
Joint Reprogramming Environment (JRE): Reprogramming Verification & Validation Systems(RVVS): Stimulation system	1	2023	1	2028
Joint Reprogramming Environment (JRE): Block 4 Integration,Hardware,Training	3	2023	2	2028
Joint Reprogramming Environment (JRE): Common Reprogramming Tool (CRT) Minimal Viable Product (MVP)	1	2023	4	2024
Joint Reprogramming Environment (JRE): Common Reprogramming Tool (CRT) Minimal Viable Capability Release (MVCR)	1	2025	4	2029
Mission Planning Support Environment (MPSE): TR-3/Enablers for TR-3 - MPSE TR2 Configuration at Operational Squadron sites	3	2023	4	2029
Mission Planning Support Environment (MPSE): TR-3/Enablers for TR-3 - MPSE TR3 Configuration at Operational Squadron sites	1	2023	4	2029
Mission Planning Support Environment (MPSE): F-35 Next Gen Mission Planning - MPSE Re-architecture - NOMS Software, Hardware, Cross-Domain Solution	1	2023	1	2028
Mission Planning Support Environment (MPSE): DevSecOps - NOMS Cloud Development (Multiple)	1	2023	3	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673507 / *Training Systems & Simulation*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673507: *Training Systems & Simulation*	-	85.490	61.472	54.987	0.000	54.987	62.560	68.360	70.835	72.234	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The F-35 Training Systems & Simulation Program Management Office (TSS PMO) development portfolio is aligned with the program's Continuous Capability Development & Delivery (C2D2) efforts and is organized in three primary lines of effort; Training System Capability Development (TSCD), Training Systems Investments (TSI) Roadmap, and Joint Simulation Environment (JSE) Development.

Training System Capability Development (TSCD): Efforts will continue with a primary focus on alignment of Training System capabilities with other elements of the Air System. Specific efforts will include development of Block 4 capabilities to equivalent maturity of those in the Air Vehicle enabling release of one capability upgrade per year to the fleet, continued development of the Production Runtime Server (PRTS) - Pilot Training Device TR-3 equivalent - to enable Block 4 capabilities, continued development of Live-Virtual-Constructive (LVC) capabilities including Distributed Mission Training (DMT), and appropriate lab infrastructure to enable Training System development.

Training Systems Investments (TSI) Roadmap: Development efforts will continue to focus on modernization of activities outlined in the TSS PMO roadmaps that will target the requirement of bringing higher fidelity training to the warfighter. Specific development and testing efforts focus on software architecture modernization, hardware architecture modernization, and Synthetic Threat Enhancement.

Joint Simulation Environment (JSE): Development and testing efforts will continue with a focus on remaining F-35 In-A-Box (FIAB) software integration, complex threat/ sensor model integration to establish operationally representative simulation environment required for operational test trial validity, and the completion of Verification, Validation and Accreditation (VV&A) activities for F-35 Block 4 modernization. Efforts will include FIAB development, model fidelity and capability upgrades for existing threats/sensors/weapons, development of new threat/sensor/weapon models, and environment upgrades to enable effective verification of Block 4 capabilities. Efforts will continue toward expansion of JSE capability to Edwards AFB and Nellis AFB.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Training Systems Capability Development (TSCD)	49.559	43.248	37.567	-	37.567

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673507 / *Training Systems & Simulation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Description: Efforts will continue with a primary focus on alignment of Training System capabilities with other elements of the Air System. Specific efforts will include development of Block 4 capabilities to equivalent maturity of those in the Air Vehicle enabling release of one capability upgrade per year to the fleet, continued development of the Production Runtime Server (PRTS) - Pilot Training Device TR-3 equivalent - to enable Block 4 capabilities, continued development of Live-Virtual-Constructive (LVC) capabilities including Distributed Mission Training (DMT), and appropriate lab infrastructure to enable Training System Development. ***FY 2024 Plans:*** Efforts continued to support development, integration and test of Block 4 capabilities in the Training System with a focus on equivalent capability maturity between the Training System and other elements of the Air System and preparing relevant capability upgrades (Pilot Training, Maintainer Training, Instructional Products) for release to the fleet in FY2024. Additionally, the Production Runtime Server (PRTS) continued critical development, integration and test activities required to enable TR-3 training capabilities. The Distributed Mission Trainer (DMT) Program continued with development activities to ensure DMT can support the Capability Increments (CI) 1-3 capabilities to be leveraged via US networks and in-line with overall Air System Capability to include certified and exportable Cross Domain Solutions (CDS) to enable fully integrated DMT across the F-35 Enterprise. Within the Live-Virtual-Constructive (LVC) portfolio, requirements derivation and planning activities for Enhanced Embedded Training and TCTS II integration continued to evolve to support the US Service's LVC integrated training environment. Training System lab infrastructure assets configured to enable current and future Training System development activities across the portfolio. Effects Based Simulation (EBS) continued design, development, and integration activities to support requirements analysis and pilot training tasks. EBS was formerly carried as an effort in the Joint Simulation Environment (JSE) R-2A category, but was aligned to the TSCD R-2A category beginning in FY23. ***FY 2025 Base Plans:*** Efforts will continue to support development, integration and test of Block 4 capabilities in the Training System with a focus on equivalent capability maturity between the Training System and other elements of the Air System and preparing relevant capability upgrades (Pilot Training, Maintainer Training, Instructional Products) for release to the fleet in FY2025. Additionally, the PRTS will continue critical development, integration and test activities required to enable TR-3 training capabilities. The DMT Program will continue with development activities to ensure DMT can support the CI1-3 capabilities to be leveraged via US networks and inline with overall Air System Capability to include certified and exportable CDS to enable fully integrated DMT across the F-35 Enterprise. Within the LVC portfolio, requirements derivation and planning activities for Enhanced Embedded Training and TCTS II integration will continue to evolve to support the US Service's LVC integrated					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673507 / *Training Systems & Simulation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
training environment. Training System lab infrastructure assets will be configured to enable current and future Training System development activities across the portfolio. EBS will continue design, development, and integration activities to support requirements analysis and pilot training tasks. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decreased due to delays in the components required for the Training System to shift from TR-2 to TR-3.					
Title: Training Systems Investments (TSI) Roadmap ***Description:*** Training Systems Investments (TSI) Roadmap: Development efforts will continue to focus on modernization of activities outlined in the TSS PMO roadmaps that will target the requirement of bringing higher fidelity training to the warfighter. Specific development and testing efforts focus on software architecture modernization, hardware architecture modernization, and Synthetic Threat Enhancement. ***FY 2024 Plans:*** Efforts continued to support analysis, design, development, integration and test of Block 4 capabilities in the Training System with a focus on equivalent capability maturity between the Training System and other elements of the Air System and preparing relevant capability upgrades (Pilot Training, Maintainer Training, Instructional Products) for release to the fleet in FY24. Additionally, F-35 Lightning Integrated Training Environment (FLITE) continued critical development, integration and test activities with the first delivery expected in FY26. The DMT Program continued with development activities to ensure DMT can support the CI1-3 capabilities to be leveraged via US networks and in-line with overall Air System Capability to include certified and exportable CDS to enable fully integrated DMT across the F-35 Enterprise. DMT will ensure the connection of F-35 Pilot Training Devices (PTDs) to customer provided and accredited Wide Area Networks (WAN) to facilitate connecting multiple sites and enabling a virtual training environment in a common synthetic environment for the US Services. Within the LVC portfolio, requirements derivation and planning activities for Enhanced Embedded Training and TCTS II integration continued to evolve to support the US LVC integrated training environment. ***FY 2025 Base Plans:*** Efforts will continue to support analysis, design, development, integration and test of Block 4 capabilities in the Training System with a focus on equivalent capability maturity between the Training System and other elements of the Air System and preparing relevant capability upgrades (Pilot Training, Maintainer Training, Instructional Products) for release to the fleet in FY25. Additionally, FLITE will continue critical development, integration and test activities with the first delivery expected in FY26. The DMT Program will continue with development activities to ensure DMT can support the CI1-3 capabilities to be leveraged via US networks and in-line with overall Air System Capability to include certified and exportable CDS to enable fully integrated DMT across the F-35	6.495	4.568	3.764	-	3.764

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673507 / *Training Systems & Simulation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Enterprise. DMT will ensure the connection of F-35 PTDs to customer provided and accredited WAN to facilitate connecting multiple sites and enabling a virtual training environment in a common synthetic environment for the US Services. Within the LVC portfolio, requirements derivation and planning activities for Enhanced Embedded Training and TCTS II integration will continue to evolve to support the US LVC integrated training environment. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decreased due to delays in the integration efforts of Joint Simulation Environment components, specifically Next Generation Threat System (NGTS), into the exportable Program of Record (PoR) Pilot Training Device (PTD).					
Title: Joint Simulation Environment (JSE) Development ***Description:*** Development and testing efforts will continue with a focus on remaining F-35 In-A-Box (FIAB) software integration, complex threat/sensor model integration to establish operationally representative simulation environment required for operational test trial validity, and the completion of Verification, Validation and Accreditation (VV&A) activities for F-35 Block 4 modernization. Efforts will include FIAB development, model fidelity and capability upgrades for existing threats/sensors/weapons, development of new threat/sensor/weapon models, and environment upgrades to enable effective verification of Block 4 capabilities. Efforts will continue toward expansion of JSE capability to Edwards AFB and Nellis AFB. ***FY 2024 Plans:*** Efforts included modernization of FIAB software development and integration, model fidelity and capability upgrades for existing threats/sensors/weapon models, development of new threat/sensor/weapon models, and environment upgrades to enable effective verification of Block 4 capabilities. Planning efforts continued toward expansion of JSE capability to Edwards AFB and Nellis AFB. ***FY 2025 Base Plans:*** Efforts will include modernization of FIAB software development and integration, model fidelity and capability upgrades for existing threats/sensors/weapon models, development of new threat/sensor/weapon models, and environment upgrades to enable effective verification of Block 4 capabilities. Planning efforts will continue toward expansion of JSE capability to Edwards AFB and Nellis AFB. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** N/A	29.436	13.656	13.656	-	13.656
Accomplishments/Planned Programs Subtotals	85.490	61.472	54.987	-	54.987

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673507 / *Training Systems & Simulation*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The majority of Training System capability development requirements (CI1-3 development, PRTS development, Lab Infrastructure) will be executed via training specific CLINs in Enterprise-level development contracts (Block 4 - Phase 2.3, Development Foundation). Training System Investment requirements will be executed via a combination of training specific CLINs in Enterprise-level contracts, TSS PMO specific contract actions and Other Transaction Authority (OTA) contracts. JSE development requirements will be executed via a combination of Enterprise-level contract actions and MIPR transactions to support OGC activities.

In concert with continued maturation of the F-35 organizational pivot, the TSS PMO acquisition strategy will transition toward TSS PMO controlled contract actions that will enable more effective oversight of PMO cost-schedule-performance execution.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673507 / *Training Systems & Simulation*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TSS Prime Training System Alignment (TSCD)	C/CPIF	Lockheed Martin : Ft. Worth, TX	-	21.041	Nov 2022	32.248	Nov 2023	16.992	Nov 2024	-		16.992	Continuing	Continuing	156.494
TSS Prime PTD TR-3 Development (TSCD)	C/CPIF	Lockheed Martin : Ft. Worth, TX	-	16.138	Nov 2022	4.500	Nov 2023	11.100	Nov 2024	-		11.100	Continuing	Continuing	87.945
TSS Prime Training Lab Infrastructure (TSCD)	C/CPFF	Lockheed Martin : Ft. Worth, TX	-	8.930	Nov 2022	5.000	Nov 2023	7.250	Nov 2024	-		7.250	Continuing	Continuing	73.316
TSS Live-Virtual-Constructive (LVC) - DMT (TSCD)	C/CPFF	Lockheed Martin : Ft. Worth, TX	-	2.250	Nov 2022	0.000	Nov 2023	1.000	Nov 2024	-		1.000	Continuing	Continuing	35.389
TSS Effects Based Simulation Development (TSCD)	C/CPFF	J.F. Taylor Inc. : Lexington Park, MD	-	1.200	Nov 2022	1.500	Nov 2023	1.225	Nov 2024	-		1.225	Continuing	Continuing	15.258
TSS Hardware Re-architecture (TSI)	Various	Not specified. : TBD	-	1.590	Nov 2022	3.000	Nov 2023	1.750	Nov 2024	-		1.750	Continuing	Continuing	20.223
TSS Software Re-architecture (TSI)	C/CPIF	Lockheed Martin : Ft. Worth, TX	-	4.905	Nov 2022	1.568	Nov 2023	2.014	Nov 2024	-		2.014	Continuing	Continuing	46.379
TSS Synthetic Threat Enhancement (TSI)	C/CPFF	Lockheed Martin : Ft. Worth, TX	-	0.000	Nov 2022	0.000	Nov 2023	0.000	Nov 2024	-		0.000	Continuing	Continuing	16.664
TSS JSE Prime FIAB Development	C/CPIF	Lockheed Martin : Ft. Worth, TX	-	4.865	Nov 2022	11.958	Nov 2023	4.156	Nov 2024	-		4.156	Continuing	Continuing	55.394
TSS JSE VWC Development	Various	Various : TBD	-	-		-		-		-		-	Continuing	Continuing	7.592
		Subtotal	-	60.919		59.774		45.487		-		45.487	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TSS JSE Pax Development Support	MIPR	NAWCAD : NAS Patuxent River, MD	-	18.873	Nov 2022	1.325	Nov 2023	7.500	Nov 2024	-		7.500	Continuing	Continuing	50.892
TSS JSE Other Development Support	Various	Various : TBD	-	5.698	Nov 2022	0.373	Nov 2023	2.000	Nov 2024	-		2.000	Continuing	Continuing	5.063

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673507 / *Training Systems & Simulation*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TSS JSE EBS Development Support	Various	Various : TBD	-	-		-		-		-		-	Continuing	Continuing	1.539
		Subtotal	-	24.571		1.698		9.500		-		9.500	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	85.490		61.472		54.987		-		54.987	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673507 / *Training Systems & Simulation*

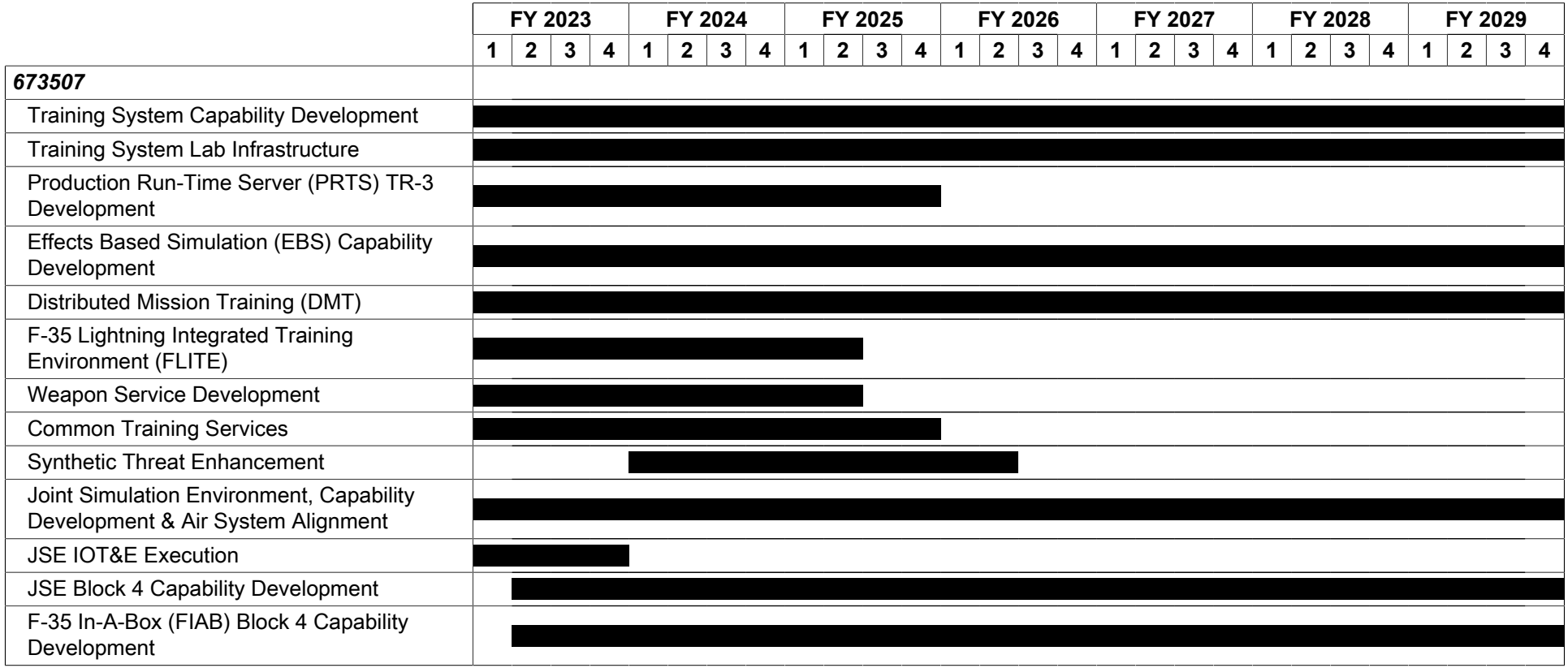

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673507 / *Training Systems & Simulation*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
673507				
Training System Capability Development	1	2023	4	2029
Training System Lab Infrastructure	1	2023	4	2029
Production Run-Time Server (PRTS) TR-3 Development	1	2023	4	2025
Effects Based Simulation (EBS) Capability Development	1	2023	4	2029
Distributed Mission Training (DMT)	1	2023	4	2029
F-35 Lightning Integrated Training Environment (FLITE)	1	2023	2	2025
Weapon Service Development	1	2023	2	2025
Common Training Services	1	2023	4	2025
Synthetic Threat Enhancement	1	2024	2	2026
Joint Simulation Environment, Capability Development & Air System Alignment	1	2023	4	2029
JSE IOT&E Execution	1	2023	4	2023
JSE Block 4 Capability Development	2	2023	4	2029
F-35 In-A-Box (FIAB) Block 4 Capability Development	2	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673508 / *Infrastructure & Support Costs*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673508: *Infrastructure & Support Costs*	-	85.165	73.600	84.758	0.000	84.758	88.073	90.127	93.555	95.308	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The F-35 Joint Program Office equips U.S. and allied forces with operational F-35 weapon systems in support of military and national security operations. The acquisition and product support workforce provides cutting edge weapon systems, sustainment capabilities, and is charged with providing management, tools, and technical and business capabilities needed to oversee acquisition programs throughout their life cycle. The acquisition workforce funded in this program element will support development phases of acquisition programs to include material solution analysis, technology development, engineering and manufacturing development. This funding does not include costs for base operating support civilian personnel. This program element supports both civilian pay and non-pay support requirements. Additional infrastructure and program management support costs include travel, supplies, contractor support, off-base leases, program office IT, cybersecurity, model-based systems engineering, and risk reduction studies directly related to C2D2 development efforts.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: F-35 JPO AFLCMC Civilian Pay	63.632	55.500	66.658	-	66.658
Description: The acquisition and product support workforce provides cutting edge weapon systems, sustainment capabilities, and is charged with providing management, tools, and technical and business capabilities needed to oversee F-35 acquisition programs throughout its life cycle. ***FY 2024 Plans:*** Continue to fund the F-35 Joint Program Office acquisition and product support workforce. ***FY 2025 Base Plans:*** Continue to fund the F-35 Joint Program Office acquisition and product support workforce. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increased due to actual FY2024 Average Work Year Cost (AWYC) adjustments and/or inflation.					
Title: Core Program Support/Contract Support Services (CSS) Support	21.533	18.100	18.100	-	18.100

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673508 / *Infrastructure & Support Costs*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Description: Includes off-base leases, Advisory and Assistance Services (A&AS), travel, supplies, Navy Working Capital fund subject matter expert support, program office IT, cybersecurity, model-based systems engineering, and risk reduction studies directly related to C2D2 development efforts. ***FY 2024 Plans:*** Continue to support program office efforts, including Arlington, VA program unique off-base lease costs, CSS support, travel, supplies, Navy working capital technical SME labor, program office IT, cybersecurity, model-based systems engineering, and risk reduction studies directly related to C2D2 development efforts. ***FY 2025 Base Plans:*** Continue to support program office efforts, including Arlington, VA program unique off-base lease costs, CSS support, travel, supplies, working capital technical SME labor, program office IT, cybersecurity, model-based systems engineering, and risk reduction studies directly related to C2D2 development efforts. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** N/A					
Accomplishments/Planned Programs Subtotals	85.165	73.600	84.758	-	84.758

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673508 / *Infrastructure & Support Costs*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Core Program Support Cyber Risk Reduction	Various	Various : TBD	-	1.200	Dec 2022	1.200	Dec 2023	1.200	Dec 2024	-		1.200	Continuing	Continuing	-
Core Program Support Model-Based Systems Engineering	Various	Various : TBD	-	0.500	Dec 2022	0.500	Feb 2024	0.500	Feb 2025	-		0.500	Continuing	Continuing	-
Core Program Support Air Worthiness Support and Cyber Safe Support	C/FFP	DTIC : TBD	-	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	-	1.700		1.700		1.700		-		1.700	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
F-35 JPO AFLCMC Civilian Pay	MIPR	Wright Patterson AFB, OH : TBD	-	63.632	Oct 2022	55.500	Oct 2023	66.658	Oct 2024	-		66.658	Continuing	Continuing	-
CSS Support/Civ Support	Various	Various : TBD	-	7.570	Dec 2022	5.300	Dec 2023	5.300	Dec 2024	-		5.300	Continuing	Continuing	-
Core Program Support Off-Base Leases	MIPR	WHS : NCR	-	10.863	Oct 2022	9.500	Oct 2023	9.500	Oct 2024	-		9.500	Continuing	Continuing	-
Core Program Support Travel	Various	Various : TBD	-	0.900	Oct 2022	1.200	Oct 2023	1.200	Oct 2024	-		1.200	Continuing	Continuing	-
Core Program Support GPC	Various	GPC : Arlington, VA	-	0.500	Dec 2022	0.400	Oct 2023	0.400	Oct 2024	-		0.400	Continuing	Continuing	-
		Subtotal	-	83.465		71.900		83.058		-		83.058	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	85.165		73.600		84.758		-		84.758	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673508 / *Infrastructure & Support Costs*

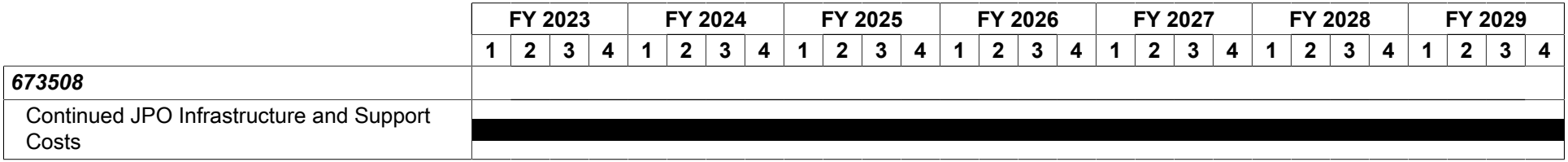

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673508 / *Infrastructure & Support Costs*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
673508				
Continued JPO Infrastructure and Support Costs	1	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673509 / *DevSecOps*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673509: *DevSecOps*	-	15.326	22.886	23.540	0.000	23.540	24.637	4.414	4.573	4.663	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The F-35 Software Development, Security & Operations (DevSecOps) Cloud platform environment allows for US Government and contracted software development teams to produce, test and deploy capabilities for F-35 supported Project Management Offices (PMO) and Directorates. This includes providing support to the Combat Data Systems (CDS), Air Vehicle (AV), Maintenance Systems (MxSYS), Propulsion, Training Systems and Simulation (TSS) PMOs, and Directorate of Engineering. The mission of DevSecOps is to provide a centralized F-35 Data repository, a consolidated F-35 software development environment, and support for system development lifecycle (SDLC) of the F-35 platform, allowing for rapid release cycles to keep the F-35 ahead of its adversaries. Investment in, and modernization of, DevSecOps include efforts to support F-35 Software modernization efforts, develop organic government software capabilities, support SDLC and flight-testing capabilities, enhance the security posture of the software development pipeline, and support goals of reducing long-term on-premise infrastructure environments cost, ultimately resulting in reducing fleet delivery timelines.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: DevSecOps Support	15.326	22.886	23.540	-	23.540
Description: The F-35 Software Development, Security & Operations (DevSecOps) Cloud platform environment allows for US Government and contracted software development teams to produce, test and deploy capabilities for F-35 supported Project Management Offices (PMO) and Directorates. This includes providing support to the Combat Data Systems (CDS), Air Vehicle (AV), Maintenance Systems (MxSYS), Propulsion, Training Systems and Simulation (TSS) PMOs, and Directorate of Engineering. The mission of DevSecOps is to provide a centralized F-35 Data repository, a consolidated F-35 software development environment, and support for system development lifecycle (SDLC) of the F-35 platform, allowing for rapid release cycles to keep the F-35 ahead of its adversaries. Investment in, and modernization of, DevSecOps include efforts to support F-35 Software modernization efforts, develop organic government software capabilities, support SDLC and flight-testing capabilities, enhance the security posture of the software development pipeline, and support goals of reducing long-term on-premise infrastructure environments cost, ultimately resulting in reducing fleet delivery timelines.					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673509 / *DevSecOps*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
FY 2024 Plans: Continued development and support for DevSecOps infrastructure, platform, software development pipeline, and joint F-35 organizational connections. Continued to develop a transition plan to stand-up a team consisting of Industry and Government personnel in support of software modernization and DevSecOps Cloud transition. Established initial capabilities and expanded existing software development efforts with the goal of transitioning dispersed and separated software development environments into model based systems engineering and fully collaborative requirements to development environment. Capabilities include software development environment for Maintenance Systems Operational Data Integrated Network (ODIN), Autonomic Logistics Information System (ALIS) to ODIN transition, Combat Data System's Mission Planning, Propulsion's Offboard Management System, and Air Vehicle Mission System domains. Additional goals of delivering flight-worthy rapid prototyping of capability, virtual test capability, and transitioning workloads to lower cost software sustainment efforts. New requirements from PMOs are expected. The team prepared the environment for on-boarding, as well as transitioning the PMOs from separate pillars to a centralized JPO-managed cloud environment. Major cost drivers included requirements, collaboration, and authentication tools - supporting Single Sign On, Multi-Factor Authentication and development tools. For software tooling efforts, working towards an eventual consolidation of tools across the PMOs (i.e. application rationalization) with an end goal of standardized compiler tool sets and Cybersecurity compliance. Accordingly, talent/consumption (hardware and software to run the environment) contracts must be renewed and expanded. Cybersecurity requirements must also be met, meaning additional resources for security processes, monitoring, scanning, vulnerability identification plus mitigation, and meeting all requirements for DoD compliance to obtain ongoing Authority to Operate (ATO) and continuous Authority to Operate (cATO). ***FY 2025 Base Plans:*** Continue development and support for DevSecOps infrastructure, platform, software development pipeline, and joint F-35 organizational connections. Continue to develop a transition plan to stand-up a team consisting of Industry and Government software development in support of software modernization and DevSecOps Cloud transition. Establish initial capabilities and expand existing software development efforts with the goal of transitioning dispersed and separated software development environments into model based systems engineering and a fully collaborative requirements to development environment. Capabilities include software development environment for Maintenance Systems ODIN, ALIS to ODIN migration, Combat Data System's Mission Planning, Propulsion's Offboard Management System, and Air Vehicle Mission System domains. Additional goals of delivering flight-worthy rapid prototyping of capability, virtual test capability, and transitioning workloads to lower cost software sustainment efforts. New requirements from PMOs are expected. Prepare					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673509 / *DevSecOps*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
environment for on-boarding, as well as transitioning the PMOs from separate pillars to a centralized JPO-managed cloud environment. Includes software licensing for PMO tool sets and associated applications. Major cost drivers include requirements tool, and collaboration tools, authentication tools - supporting Single Sign On, Multi-Factor Authentication and development tools. For software tooling efforts, working towards an eventual consolidation of tools across the PMOs (i.e. application rationalization) with an end goal of a standardized compiler tool sets and Cybersecurity compliance. Accordingly, talent/consumption (hardware and software to run the environment) contracts must be renewed and expanded. Cybersecurity requirements must also be met, meaning additional resources for security processes, monitoring, scanning, vulnerability identification plus mitigation, and meeting all requirements for DoD compliance to obtain ongoing ATO and cATO. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increased due to an update to the Cloud estimate based on component and service data actuals to support DevSecOps development and integration to a centralized Cloud environment.					
Accomplishments/Planned Programs Subtotals	15.326	22.886	23.540	-	23.540

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The DevSecOps Phase 1 demonstrates prototype designs, integration of Defense Industry Base partners and PMOs, appropriate set of technology stacks to be integrated, identifying ROI and buying down technical risk. Technology maturation: putting in place the necessary contracts for talent, licenses and Cloud consumption to support software pipeline delivery for F-35. Development; building, testing and deploying Cloud ecosystems Impact Level (IL) 2 - 6+ and software development pipeline utilizing contracted and government support. Operation and Support; maintain Cloud ecosystem utilizing industry research, resources, talent and technology modernization methodologies with the focus on reducing long-term costs for the program.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673509 / *DevSecOps*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Ops Development Support - Talent	C/FFP	Various : TBD	-	7.260	Dec 2022	12.034	Jan 2024	12.107	Jan 2025	-		12.107	Continuing	Continuing	-
Dev Ops Development Support - Licenses	C/FFP	August Schell Enterprises : TBD	-	4.045	Oct 2022	5.452	Jun 2024	4.400	Jun 2025	-		4.400	Continuing	Continuing	-
Dev Ops Development Support - Cloud Support	C/FFP	Amazon Web Services : TBD	-	4.021	Oct 2022	2.700	Dec 2023	4.400	Dec 2024	-		4.400	Continuing	Continuing	-
Dev Ops Development Support - Industry Stand-up	C/FFP	TBD : TBD	-	0.000	Mar 2023	2.700	Mar 2024	2.633	Mar 2025	-		2.633	Continuing	Continuing	-
		Subtotal	-	15.326		22.886		23.540		-		23.540	Continuing	Continuing	N/A

Remarks

DevSecOps Ecosystem Standup used for centralized software development in JPO-managed cloud.

	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	15.326		22.886		23.540		-		23.540	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673509 / *DevSecOps*

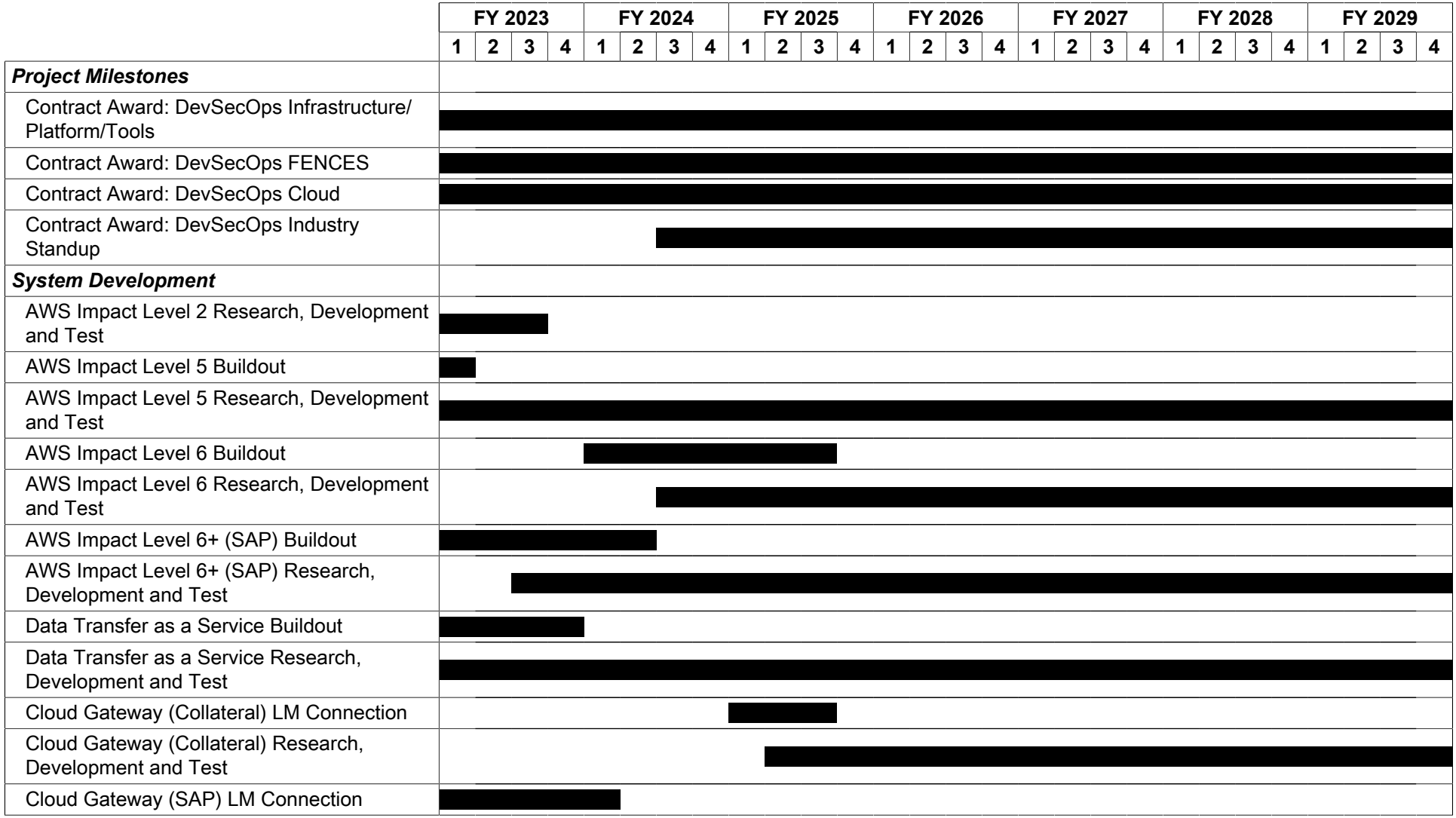

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673509 / *DevSecOps*

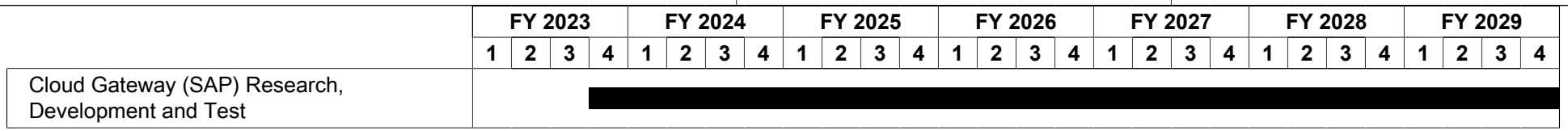

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673509 / *DevSecOps*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Project Milestones				
Contract Award: DevSecOps Infrastructure/Platform/Tools	1	2023	4	2029
Contract Award: DevSecOps FENCES	1	2023	4	2029
Contract Award: DevSecOps Cloud	1	2023	4	2029
Contract Award: DevSecOps Industry Standup	3	2024	4	2029
System Development				
AWS Impact Level 2 Research, Development and Test	1	2023	3	2023
AWS Impact Level 5 Buildout	1	2023	1	2023
AWS Impact Level 5 Research, Development and Test	1	2023	4	2029
AWS Impact Level 6 Buildout	1	2024	3	2025
AWS Impact Level 6 Research, Development and Test	3	2024	4	2029
AWS Impact Level 6+ (SAP) Buildout	1	2023	2	2024
AWS Impact Level 6+ (SAP) Research, Development and Test	3	2023	4	2029
Data Transfer as a Service Buildout	1	2023	4	2023
Data Transfer as a Service Research, Development and Test	1	2023	4	2029
Cloud Gateway (Collateral) LM Connection	1	2025	3	2025
Cloud Gateway (Collateral) Research, Development and Test	2	2025	4	2029
Cloud Gateway (SAP) LM Connection	1	2023	1	2024
Cloud Gateway (SAP) Research, Development and Test	4	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 673510 / *Utility and Subsystem Support to Mission Systems*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
673510: *Utility and Subsystem Support to Mission Systems*	-	0.000	16.263	27.251	0.000	27.251	27.354	16.386	10.936	11.151	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Current Mission System planning estimates due to Block 4 capabilities and beyond indicate that additional cooling is required for aircraft beginning in Lot 22 (FY28). This upgrade/modification consists of an upgrade to the current Honeywell PTMS that includes larger heat exchangers, shifting some systems from the cold liquid loop to the hot liquid loop, increasing system pressure, increasing pump speeds and raising compressor discharge temperatures. This modification upgrades components that are relatively low cost and already at a high technical readiness level. All PTMS changes for this level of cooling would be accomplished within the existing PTMS bay and there are not expected to be any necessary changes to the capacity of the cold liquid loop or the hot liquid loop. This work includes nonrecurring engineering for the development, test, and certification of the upgraded PTMS system to ensure suitable cooling is available for future capacities. The Government has assessed that EMD phase would take 5-6 years.

Due to the massive leap in cooling and power needed to support post 2029 mission system upgrades on the F-35 the existing PTMS will need to either be massively upgraded or replaced. During multiple iterations of market research, it is clear that industry is capable of manufacturing a TMS that meets the F-35's cooling and power demands. However, it is unclear which system will be best. Therefor during the initial part of the program, the multiple potential solutions will be matured and then the prime integrator will down select to the system that best meets the Government's cost, schedule, and performance needs.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: PTMS Upgrade	0.000	16.263	27.251	-	27.251
Description: Current Mission System planning estimates due to Block 4 capabilities and beyond indicate that additional cooling is required for aircraft beginning in Lot 22 (FY28). This upgrade/ modification consists of an upgrade to the current Honeywell PTMS that includes larger heat exchangers, shifting some systems from the cold liquid loop to the hot liquid loop, increasing system pressure, increasing pump speeds and raising compressor discharge temperatures. This modification upgrades components that are relatively low cost and already at a high technical readiness level. All PTMS changes for this level of cooling would be accomplished					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673510 / *Utility and Subsystem Support to Mission Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
within the existing PTMS bay and there are not expected to be any necessary changes to the capacity of the cold liquid loop or the hot liquid loop. This work includes nonrecurring engineering for the development, test, and certification of the upgraded PTMS system to ensure suitable cooling is available for future capacities. The Government has assessed that EMD phase would take 5-6 years. Due to the massive leap in cooling and power needed to support post 2029 mission system upgrades on the F-35 the existing PTMS will need to either be massively upgraded or replaced. During multiple iterations of market research, it is clear that industry is capable of manufacturing a TMS that meets the F-35's cooling and power demands. However, it is unclear which system will be best. Therefor during the initial part of the program, the multiple potential solutions will be matured and then the prime integrator will down select to the system that best meets the Government's cost, schedule, and performance needs. ***FY 2024 Plans:*** The PTMS Upgrade program will begin nonrecurring engineering effort to increase PTMS Upgrade cooling requirements. This work includes the necessary labor and nonrecurring engineering to support development of the cooling PTMS system and a detailed schedule of EMD to include the necessary operational testing and flight tests. ***FY 2025 Base Plans:*** Continue nonrecurring engineering effort to increase PTMS Upgrade cooling requirements and continued maturation of potential Thermal Mangement Systems (TMSs). This work includes the necessary labor and nonrecurring engineering to support development of the cooling PTMS system and a detailed schedule of EMD to include the necessary operational testing and flight tests. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase from FY2024 to FY2025 is due to the PTMS Upgrade requirements needed to meet Mission Systems Capabilities.					
Accomplishments/Planned Programs Subtotals	0.000	16.263	27.251	-	27.251

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673510 / *Utility and Subsystem Support to Mission Systems*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SEIT NRE System	C/CPIF	TBD : TBD	-	-		16.263	Feb 2024	27.251	Feb 2025	-		27.251	0.000	43.514	-
		Subtotal	-	-		16.263		27.251		-		27.251	0.000	43.514	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		16.263		27.251		-		27.251	0.000	43.514	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673510 / *Utility and Subsystem Support to Mission Systems*

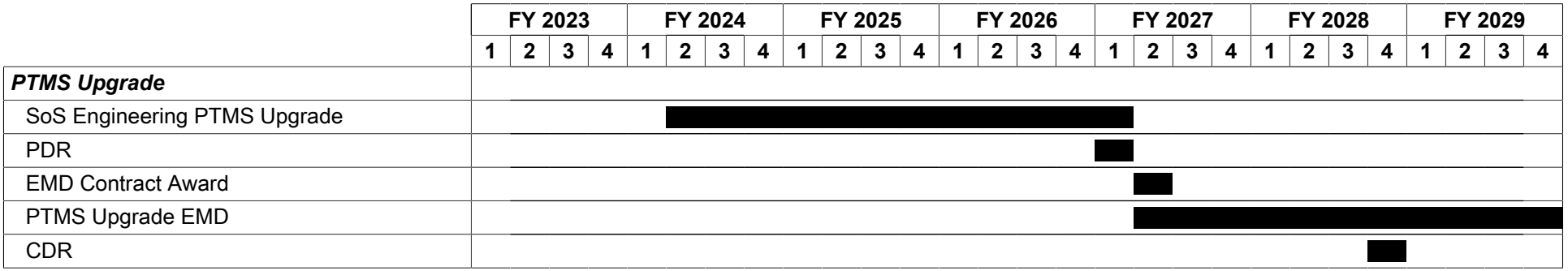

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 673510 / *Utility and Subsystem Support to Mission Systems*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
PTMS Upgrade				
SoS Engineering PTMS Upgrade	2	2024	1	2027
PDR	1	2027	1	2027
EMD Contract Award	2	2027	2	2027
PTMS Upgrade EMD	2	2027	4	2029
CDR	4	2028	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 674871 / *Information Operations Technology*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
674871: *Information Operations Technology*	-	0.000	0.342	0.343	0.000	0.343	0.000	0.000	0.000	0.000	0.000	0.685
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Procure Microsoft 365 Enterprise Licensing Upgrades for Improved Zero Trust (ZT) Capabilities.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Information Operations Technology ***Description:*** Procure Microsoft 365 Enterprise Licensing Upgrades for Improved Zero Trust (ZT) Capabilities. ***FY 2024 Plans:*** Procure Microsoft 365 Enterprise Licensing Upgrades for Improved Zero Trust (ZT) Capabilities. ***FY 2025 Base Plans:*** Procure Microsoft 365 Enterprise Licensing Upgrades for Improved Zero Trust (ZT) Capabilities. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase from FY2024 to FY2025 is due to economic rate adjustments.	0.000	0.342	0.343	-	0.343
Accomplishments/Planned Programs Subtotals	0.000	0.342	0.343	-	0.343

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 674871 / *Information Operations Technology*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Enterprise Software Agreement (ESA)	C/FFP	Dell Marketing L.P. : Austin, TX	-	-		0.342		0.343		-		0.343	0.000	0.685	-
		Subtotal	-	-		0.342		0.343		-		0.343	0.000	0.685	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		0.342		0.343		-		0.343	0.000	0.685	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 674871 / *Information Operations Technology*

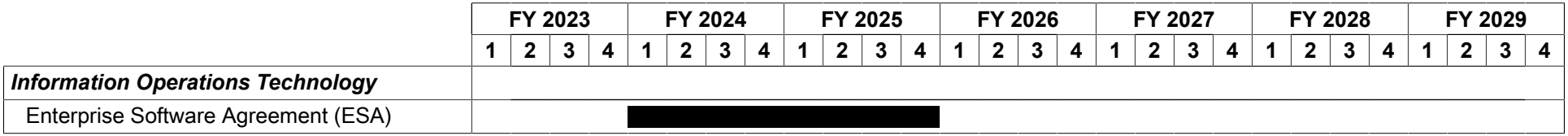

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 674871 / *Information Operations Technology*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Information Operations Technology				
Enterprise Software Agreement (ESA)	1	2024	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 675346 / *F-35*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
675346: *F-35*	-	0.000	1.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.038
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY2022, PE 0604840F Project 675346 was reduced to zero due to breakout of new Projects per Congressional mandate. In FY2024, civilian pay funding will be moved from Project 675346 to the Infrastructure & Support Costs Project 673508.

A. Mission Description and Budget Item Justification

F-35 Continuous Capability Development and Delivery (C2D2) provides continuing incremental upgrades of the three F-35 variants and associated ground equipment. Upgrades are essential capabilities for Air Interdiction and Strategic Attack, Close Air Support, Suppression and Destruction of Enemy Air Defenses, Offensive and Defensive Counter Air and expanded Surface Warfare. The C2D2 acquisition strategy is based upon incremental deliveries of capabilities. The strategy includes periodic deliveries with a focus on hardware, tech refresh and software. C2D2 capability planning includes an efficient transition from F-35 SDD to C2D2. As SDD development activities ramp down C2D2 will assume responsibility for improvements and modernization efforts.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, $63.6M was expended for civilian pay expenses in this project element, and in FY24, $67.1M is forecasted for civilian pay expenses in this project element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Clerical Error for Infrastructure and Support Costs	0.000	1.038	0.000	-	0.000
Description: In FY2024, a clerical error added civilian pay funding to Project 675346. A tech adjustment will be made to move the funding to the Infrastructure & Support Costs Project 673508.					
FY 2024 Plans: In FY2024, civilian pay funding will be moved from Project 675346 to the Infrastructure & Support Costs Project 673508.					
FY 2025 Base Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 675346 / *F-35*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
In FY2024, civilian pay funding will be moved from Project 675346 to the Infrastructure & Support Costs Project 673508.					
Accomplishments/Planned Programs Subtotals	0.000	1.038	0.000	-	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

This is a joint program with no executive service. Service Acquisition Executive (SAE) authority alternates between the Department of the Navy and the Department of the Air Force and currently resides with the Navy. The United Kingdom, Italy, Netherlands, Canada, Australia, Denmark, and Norway are participants in the SDD phase of JSF.

D. Acquisition Strategy

The C2D2 acquisition strategy is to employ both Cost and Fixed Price Incentive contracts for the Block 4 engineering and development efforts. A new modernization contract structure will be established for all post SDD Block 4 efforts. In addition, a separate Basic Ordering Agreement or Indefinite Quantity/Indefinite Delivery contract is planned to provide a long term approach to upgrading and maintaining laboratories and test aircraft and supporting technology maturation for future C2D2 capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0604840F / *F-35 C2D2*	Project (Number/Name) 675346 / *F-35*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Clerical Error for Infrastructure and Support Costs	Various	Various : Various	-	-		1.038		-		-		-	0.000	1.038	-
		Subtotal	-	-		1.038		-		-		-	0.000	1.038	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		1.038		-		-		-	0.000	1.038	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 675346 / *F-35*

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
675346																												
Funds allocated to this BPAC in error. Placeholder event.					[redacted]																							

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0604840F / *F-35 C2D2*	**Project (Number/Name)** 675346 / *F-35*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
675346				
Funds allocated to this BPAC in error. Placeholder event.	1	2024	4	2024