

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0605278F / <i>HC/MC-130 Recap RDT&E</i>
--	--

COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	43.095	52.940	36.536	0.000	36.536	24.889	25.871	26.135	26.974	27.390	263.830
675006: <i>HC/MC-130 Recap</i>	0.000	0.611	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.898
675278: <i>HC-130J Modernization</i>	0.000	0.000	0.000	0.926	0.000	0.926	0.746	0.892	0.763	0.790	24.777	28.894
675910: <i>Block 8.X</i>	0.000	42.484	52.653	35.610	0.000	35.610	24.143	24.979	25.372	26.184	2.613	234.038

Program MDAP/MAIS Code: 257

A. Mission Description and Budget Item Justification

HC/MC-130 Recapitalization provides a Medium-lift tanker aircraft to replace and augment the aging USAF fleet of combat rescue HC-130P/N and special operations MC-130E/H/P/W and AC-130H/U/W aircraft for Combat Search and Rescue (CSAR) and Air Force Special Operation Forces, which are experiencing airworthiness, maintainability, and operations limitations. HC/MC-130 Recap incorporates production line modifications to the C-130J production aircraft to convert them to an HC/MC model, providing a common baseline configuration aircraft. The program also funds post-production modifications to add special mission systems required for behind-enemy-line operations required of CSAR and Special Operations aircraft. The HC-130J aircraft provides combat search and rescue infiltration and exfiltration including aerial refueling of aircraft in combat search and rescue operations as well as acting as an airborne command post during rescue operations. The MC-130J can provide specialized mobility capability to position, supply, re-supply and recover specialized ground tactical units. The AC-130J is an MC-130J that has been highly modified to provide close air support and armed reconnaissance.

The Research, Development, Testing and Evaluation (RDT&E) portion of the Recap program funds engineering support and studies to conduct rapid development activities, and develops upgrades to deliver specific increments of capability in common configurations across the fielded fleet, which includes AC/HC/MC-130J. The RDT&E activities in PE 0605278F currently include, but are not limited to, Block 7.0/8.1, and Communications Modernization Phase I and Phase II. Block 7.0/8.1 leverages the baseline C-130J (PEC 0401132F) Block 7.0/8.1 upgrade, but funds unique AC/HC/MC-130J configuration integration requirements. The Block 7.0/8.1 project will deliver Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) capabilities required for compliance with evolving international airspace standards. It also incorporates a new Flight Management System (FMS) that allows AC/HC/MC-130J aircraft to maintain hardware and software commonality with the C-130J Enterprise. The remaining capabilities 7.0/8.1 provides are Link-16, Civil GPS Navigation and Data Link, Identification Friend or Foe (IFF) Transponder Mode-5, and Automatic Dependent Surveillance-Broadcast Out (ADS-B Out). The USAF has also initiated the Communications Modernization program to comply with Mobile User Objective System (MUOS) and VINSON/ANDVT Cryptographic Modernization (VACM) mandates, as well as deliver Second-generation Anti-jam Tactical UHF Radio for NATO (SATURN), Single Channel Ground and Airborne Radio System (SINCGARS), and HF Modernization capabilities to resolve DMS issues.

The Air Force decoupled IFF Mode 5 and ADS-B from the Block 7.0/8.1 program to accelerate fielding to address DoD mandates. Additionally, in 2018 the USAF significantly revamped its HC-130J Block 7.0/8.1. upgrade strategy, de-scoping the MC-130J from the current Block 7.0/8.1 program to allow the MC-130J to prioritize other (SOCOM- funded) modifications while allowing Air Combat Command (ACC) to move forward with Block 7.0/8.1 on the HC-130J. The majority of the AC/MC-130J Block 7.0/8.1 requirements, including meeting the DoD MUOS and VACM mandates, will be addressed through the Communications Modernization program. The remaining capabilities will be addressed at a future date.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force	Date: March 2023
--	-------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0605278F / <i>HC/MC-130 Recap RDT&E</i>
--	--

HC/MC-130J Recap funding also supports innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/ demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs. It also covers integration and certification for Diminishing Manufacturing Sources Materiel Solutions (DMSMS) and other development activities under the Continuous Improvement Program (CIP) as needed to keep the AC/HC/MC programs effective against emerging threats. This development funding covers associated aircraft costs for testing purposes to include but not limited field level maintenance such as day-to-day launch, recovery, inspection, servicing, and removal and replacement of LRUs within the capabilities and qualifications of its maintenance team, support equipment needed to support flight test, maintenance repair team support during the transfer ferry sortie if the aircraft diverts and all test related aircraft flying hour costs.

The program may also include any Contractor Manpower Equivalent (CME)/A&AS support deemed necessary to support the program objectives. The HC/MC-130 Recap RDT&E permits the initiation and employment of rapid acquisition authorities to respond to emerging threats and requirements as needed.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver HC/MC-130 Recap weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022, \$1.135 million was expended for civilian pay expenses in this program element, and in 2023 \$4.075 million is forecast for civilian pay expenses in this program 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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	46.796	47.994	12.860	0.000	12.860
Current President's Budget	43.095	52.940	36.536	0.000	36.536
Total Adjustments	-3.701	4.946	23.676	0.000	23.676
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	4.946			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-2.000	0.000			
• SBIR/STTR Transfer	-1.701	0.000			
• Other Adjustments	0.000	0.000	23.676	0.000	23.676

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 675910: *Block 8.X*

	FY 2022	FY 2023

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force	Date: March 2023
--	-------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0605278F / <i>HC/MC-130 Recap RDT&E</i>
--	--

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Congressional Add: *Next Generation Space Array*

Congressional Add Subtotals for Project: 675910

Congressional Add Totals for all Projects

	FY 2022	FY 2023
	-	4.946
	-	4.946
	-	4.946

Change Summary Explanation

FY 2022 funding decreased by total of \$3.701 million for \$1.701 million Small Business Innovation and Research (SBIR) and \$2.000 million reprogramming to support higher Air Force priorities.

FY 2024 funding increased by \$23.676 million due to a re-phase of Communication Modification Phase II efforts.

NOTE: FY 2023 funding increase of \$4.946 million for \$5.000 million FY 2023 Congressional Add and a decrease for \$0.054 million for Federally Funded Research Development Centers.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E				Project (Number/Name) 675006 / HC/MC-130 Recap			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
675006: HC/MC-130 Recap	0.000	0.611	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.898
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Beginning with FY 2024, HC Modernization efforts in Project 675006, HC/MC-130 Recap, will transfer to Project 675278, Block 8.X to ensure proper execution and transparency. The HC-130J Modernization Development program includes, but is not limited to, critical upgrades needed as a baseline requirement for the HC-130J architecture and support.

A. Mission Description and Budget Item Justification

HC/MC-130 Recapitalization will replace and augment the aging USAF fleet of combat rescue HC-130P/N and special operations MC-130E/H/P/W and AC-130H/U/W aircraft for Combat Search and Rescue (CSAR) and Air Force Special Operation Forces, which are experiencing airworthiness, maintainability, and operations limitations.

The RDT&E portion of the Recap program funds three major thrusts to include but not limited to Continuous Improvement Program, HC Block 7.0/8.1, and Governmental Test.

The HC-130J Recap RDT&E activity integrates Block 7.0/8.1 into a HC-130J, provides program capability updates, and integration with other HC-130J unique modifications. The HC-130J Block 7.0/8.1 program follows the same "Block Upgrade" strategy being used in the C-130J program [PE 0401132F].

The USAF will be fielding the IFF Mode 5, ADS-B Out and Link-16 portions of Block 7.0/8.1 ahead of the remaining 38 aircraft in order to comply with the 2020 mandates. The Link 16 has been deferred due to funding shortages driven by the requirement to upgrade, but will be developed as a future spiral capability should additional funds become available. A follow-on stand-alone program will be established to address issues out of the Block 7.0/8.1 effort. This stand-alone effort will include two (2) Capability Management Upgrades, CMU-1C and CMU-2, that address discrepancies in the Block 7.0/8.1 program and the Communication/Navigation/Identification - System Processors [CNI-SP], and also address Link-16 integration; and are planned to be accomplished in conjunction with the Star XIII mission computer software upgrade effort. This program would also include HC-130J platform certification for the Link-16 terminal [BU3] and any other discrepancies/upgrades that come up at that time.

The HC Block 7.0/8.1 Recap program is scheduled to complete development in 2023; however, the Direct Cite Authority [DCA] positions continue through the FYDP to support ACC program planning, and may be reallocated to future programs as they are established.

HC/MC-130J Recap funding also supports innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs. It also covers integration and certification for Diminishing Manufacturing Sources Materiel Solutions [DMSMS] and other development activities under the Continuous Improvement Program [CIP] as needed to keep the AC/HC/MC programs effective against emerging threats. This development funding covers associated aircraft costs for testing purposes to include but not limited

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force	Date: March 2023
---	-------------------------

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675006 / HC/MC-130 Recap
--	---	--

field level maintenance such as day-to-day launch, recovery, inspection, servicing, and removal and replacement of LRUs within the capabilities and qualifications of its maintenance team, support equipment needed to support flight test, maintenance repair team support during the transfer ferry sortie if the aircraft diverts and all test related aircraft flying hour costs, RDT&E permits the initiation and employment of rapid acquisition authorities to respond to emerging threats and requirements as needed.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver HC/MC-130 Recap weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022, \$0.000 million was expended for civilian pay expenses in this program element, and in FY 2023 \$0.000 million is forecast for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Title: Recap: Continuous Improvement Program [CIP]</p> <p>Description: Recurring Software and hardware enhancements to address evolving requirements for Special Operations Forces and Personnel Recovery missions. These enhancements will be incorporated in both production and fielded aircraft. These enhancements will include, but are not limited to, parallel operational flight program [OFP] updates.</p> <p>FY 2023 Plans: Plans include, but are not limited to, recurring Software and hardware enhancements required for HC-130J to remain effective against emerging threats.</p> <p>FY 2024 Base Plans: N/A</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decreased due to transfer from Project 675006 HC/MC-130 Recap to Project 675278 HC-130J Modernization to ensure proper execution and transparency.</p>	0.001	0.001	0.000	0.000	0.000
<p>Title: Recap: HC Block 7.0/8.1 Development</p> <p>Description: Combined software/hardware upgrade for Block 7.0/8.1. Block 7.0/8.1 includes, but is not limited to: Link 16, a new Flight Management System [FMS], Civil Global Positioning System [GPS], Navigation, a Special Mission Processor Interface [SMP-I], Identification Friend or Foe [IFF] Mode 5, Civil Data Link, Automatic Dependent Surveillance-Broadcast Out [ADS-B-Out] and the CSO 2.5.</p>	0.516	0.285	0.000	0.000	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675006 / HC/MC-130 Recap

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>FY 2023 Plans: Continued software/hardware upgrade for Block 7.0/8.1.; HC Block 7.0/8.1 program is scheduled to complete development in 2023. This also includes any support for ACC development in FY23.</p> <p>FY 2024 Base Plans: N/A</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decreased due to transfer from Project 675006 HC/MC-130 Recap to Project 675278 HC-130J Modernization to ensure proper execution and transparency.</p>					
<p>Title: Recap: Government Test Support</p> <p>Description: Includes, but is not limited to, test and evaluation planning, conduct and support to included MITRE/NSERC for developmental and operational testing for Phase II. This development activity also includes, but is not limited to, associated aircraft costs for testing purposes to include but not limited field level maintenance such as day-to-day launch, recovery, inspection, servicing, and removal and replacement of LRUs within the capabilities and qualifications of its maintenance team, support equipment needed to support flight test, maintenance repair team support during the transfer ferry sortie if the aircraft diverts and all test related aircraft flying hour costs.</p> <p>FY 2023 Plans: Government test support includes but is not limited to Development and operational testing for the HC Block 7.0/8.1 program.</p> <p>FY 2024 Base Plans: N/A</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decreased due to transfer from Project 675006 HC/MC-130 Recap to Project 675278 HC-130J Modernization to ensure proper execution and transparency.</p>	0.094	0.001	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	0.611	0.287	0.000	0.000	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675006 / HC/MC-130 Recap
--	---	--

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF 05 HCMC00: HC/ MC-130 Modifications	147.993	109.785	101.055	0.000	101.055	186.558	345.671	230.219	94.086	304.115	1,519.482
• APAF 07 HCMC00: HC/MC-130 PPS	0.000	20.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.000
• APAF 07 C130JM: MC-130J PPS	0.000	0.000	10.117	0.000	10.117	10.438	10.727	10.971	11.199	0.000	53.452

Remarks

D. Acquisition Strategy

Lockheed Martin is the primary contractor for Research and Development work in support of the HC/MC-130J Recap program. Block 7.0/8.1 strategy takes the common core Block 7.0/8.1 developed in the C-130J program and integrates it into the HC-130J. Block 7.0/8.1 will also integrate with HC- unique mods. The C-130J ADS-B Out program includes all C-130J variants.

Lockheed Martin is the primary contractor for Research and Development work in support of the HC-130J Modernization Development program. The HC-130J Modernization program will integrate capabilities needed to keep HC-130Js effective against emerging threats.

Development work done to date on the HC-130J Recap program has been on Cost Plus Award Fee (CPAF) and Cost Plus Incentive Fee (CPIF) type contracts.

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675006 / HC/MC-130 Recap
--	---	--

FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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

HC/MC-130 Recap Development	
Recap: Continuous Improvement Program	
Recap: HC-130 Block 7.0/8.01	
Recap: Government Test Support	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / <i>HC/MC-130 Recap RDT&E</i>	Project (Number/Name) 675006 / <i>HC/MC-130 Recap</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>HC/MC-130 Recap Development</i>				
Recap: Continuous Improvement Program	1	2022	4	2023
Recap: HC-130 Block 7.0/8.01	1	2022	4	2023
Recap: Government Test Support	1	2022	4	2023

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E				Project (Number/Name) 675278 / HC-130J Modernization			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
675278: HC-130J Modernization	0.000	0.000	0.000	0.926	0.000	0.926	0.746	0.892	0.763	0.790	24.777	28.894
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 7, PE 0605278F, project 675278, HC-130J Modernization, Major Thrust Government Test Support is not a new start; program efforts transferred from project 675006, HC/MC-130 Recap.

This program, BA 7, PE 0605278F, project 675278, HC-130J Modernization, Major Thrust HC-130J Modernization Development is not a new start; program efforts transferred from project 675006, HC/MC-130 Recap.

This program, BA 7, PE 0605278F, project 675278, HC-130J Modernization, Major Thrust Continuous Improvement Program (CIP) is not a new start; program efforts transferred from project 675006, HC/MC-130 Recap.

A. Mission Description and Budget Item Justification

HC/MC-130 Recapitalization replaces and augments the aging USAF fleet of combat rescue HC-130P/N and special operations MC-130E/H/P/W and AC-130H/U/W aircraft for Combat Search and Rescue (CSAR) and Air Force Special Operation Forces, which are experiencing airworthiness, maintainability, and operations imitations. The RDT&E portions of the Recap program are the primary effort to modernize CSAR capabilities on the HC-130J platform in order to keep the aircraft viable against emerging threats. The HC-130J Modernization Programs fund the program lifecycle from development to installation in three major thrust areas to include but not limited to Continuous Improvement Program (CIP), Development, and Government Test. RDT&E permits the initiation and employment of rapid acquisition authorities to respond to emerging threats and requirements as needed.

CIP includes recurring software and hardware enhancements to address evolving requirements for Special Operations Forces and Personnel Recovery missions. These enhancements will be incorporated in both production and fielded aircraft. These enhancements will include, but are not limited to, parallel operational flight program [OFFP] updates, integration and certification for Diminishing Manufacturing Sources Materiel Solutions [DMSMS], and other development activities as needed to keep the HC-130J programs effective against emerging threats. This funding also supports innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs.

The HC-130J Modernization Development program funds engineering support and development activities necessary to deliver specific capabilities; these activities include but are not limited to Block 7.0/8.1 and Defensive System Suite upgrades. The HC-130J Block 7.0/8.1 upgrade follows the same "Block Upgrade" strategy being used in the C-130J program [PEC 0401132F]. The Air Force decoupled IFF Mode 5 and ADS-B from the Block 7.0/8.1 program to accelerate fielding to address DoD mandates. Link 16 was originally part of this strategy but was deferred due to funding shortages; Link 16 will be developed as a future spiral capability should additional funds become available. These upgrades will include, but are not limited to, two (2) Capability Management Upgrades to address discrepancies in the Block 7.0/8.1 program and the Communication/Navigation/Identification - System Processors [CNI-SP], address Link-16 integration; and are planned to be accomplished in

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force	Date: March 2023
---	-------------------------

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675278 / HC-130J Modernization
--	---	--

conjunction with the Star XIII mission computer software upgrade effort. This program would include HC-130J platform certification for the Link-16 terminal and support upgrades to resolve deficiency reports and meet mission requirements/mandates to maintain the fleet.

The HC-130J Defensive System Suites upgrade is expected to complete a study to determine development/production/installation for a two-position yoke switch to support radio frequency countermeasure capabilities.

HC-130J Modernization Government Test thrust area funding supports associated aircraft costs for testing purposes to include, but not limited to, field level maintenance such as day-to-day launch, recovery, inspection, servicing, and removal and replacement of LRUs within the capabilities and qualifications of its maintenance team, support equipment needed to support flight test, maintenance repair team support during the transfer ferry sortie if the aircraft diverts and all test related aircraft flying hour costs.

This program element may include necessary Contractor Manpower Equivalent (CME)/A&AS support and civilian pay expenses required to manage, execute, and deliver HC-130J modernization weapon system capabilities. Currently, HC-130J Block 7.0/8.1 program has allocated Direct Cite Authority [DCA] positions and while the program is scheduled to complete development in 2023 the allocated positions continue through the FYDP to support ACC program planning and may be reallocated to future programs as they are established. The use of such program's funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022 \$0.000 million was expended for civilian pay expenses in this program element, and in FY 2023 \$0.000 million is forecast for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Title: Continuous Improvement Program (CIP)</p> <p>Description: Recurring Software and hardware enhancements to address evolving requirements for Special Operations Forces and Personnel Recovery missions. These enhancements will be incorporated in both production and fielded aircraft. These enhancements will include, but are not limited to, parallel operational flight program [OFP] updates.</p> <p>FY 2023 Plans: N/A</p> <p>FY 2024 Base Plans: CIP efforts for HC-130J Mod.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>	0.000	0.000	0.001	0.000	0.001

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force			Date: March 2023		
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675278 / HC-130J Modernization			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increased due to transfer of efforts from Project 675006, HC/MC-130 Recap to Project 675278, HC-130J Modernization.					
<p>Title: Government Test Support</p> <p>Description: Test support for HC-130J Modernization and development activities to include but not limited to, test and evaluation planning, conduct, and support to include MITRE/NSERC for developmental and operational testing. This development activity also includes, but is not limited to associated aircraft costs for testing purposes, field level maintenance, and launch, recovery, inspection, servicing, and removal and replacement of LRUs.</p> <p>FY 2023 Plans: N/A</p> <p>FY 2024 Base Plans: Development and Operational testing for the HC Block 7.0/8.1 program and other modernization efforts.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increased due to transfer of efforts from Project 675006, HC/MC-130 Recap to Project 675278, HC-130J Modernization.</p>	-	0.000	0.001	-	0.001
<p>Title: HC-130J Modernization</p> <p>Description: HC-130J Modernization and Development activities for CIP.</p> <p>FY 2023 Plans: N/A</p> <p>FY 2024 Base Plans: Initiate development activities for recurring Software and hardware enhancements to address evolving requirements for Special Operations Forces and Personnel Recovery missions.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increased due to transfer of efforts from Project 675006, HC/MC-130 Recap to Project 675278, HC-130J Modernization and ramp-up of Program Office activities.</p>	0.000	0.000	0.924	0.000	0.924
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.926	0.000	0.926

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675278 / HC-130J Modernization

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• APAF 05 HCMC00: HC/ MC-130 Modifications	147.993	109.785	101.055	-	101.055	186.558	345.671	230.219	94.086	304.115	1,519.482
• APAF 07 HCMC00: HC/MC-130 PPS	0.000	20.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	20.000
• APAF 07 C130JM: MC-130 PPS	0.000	0.000	10.117	-	10.117	10.438	10.727	10.971	11.199	0.000	53.452

Remarks

D. Acquisition Strategy

The HC-130J Modernization Programs fund the program lifecycle from development to installation in three major thrust areas to include but not limited to Continuous Improvement Program (CIP), Development, and Government Test.

The Continuous Improvement Program (CIP) acquisition strategy is developed on an as needed basis dependent on each activity.

The HC-130J Modernization Development program funds engineering support and development activities necessary to deliver specific capabilities; these activities include but are not limited to Block 7.0/8.1 and Defensive System Suite upgrades. Lockheed Martin is the primary contractor for Research and Development work in support of the Block 7.0/8.1 and Defensive System Suite upgrades. Block 7.0/8.1 strategy takes the common core Block 7.0/8.1 developed in the C-130J program and integrates it into the HC-130J. Block 7.0/8.1 will also integrate with HC- unique mods. The Defensive System Suite upgrade will initiate with a study to inform the subsequent acquisition strategy.

Development work done to date on the HC-130J Modernization Program has been on Cost Plus Award Fee (CPAF) and Cost Plus Incentive Fee (CPIF) type contracts.

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675278 / HC-130J Modernization
--	---	--

FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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

HC-130J Modernization	
HC-130J Modernization Program Development	
HC-130J Modernization Continuous Improvement Program (CIP)	
HC-130J Modernization Government Test Support	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675278 / HC-130J Modernization

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>HC-130J Modernization</i>				
HC-130J Modernization Program Development	2	2024	4	2028
HC-130J Modernization Continuous Improvement Program (CIP)	2	2024	4	2028
HC-130J Modernization Government Test Support	2	2024	4	2028

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E				Project (Number/Name) 675910 / Block 8.X			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
675910: <i>Block 8.X</i>	0.000	42.484	52.653	35.610	0.000	35.610	24.143	24.979	25.372	26.184	2.613	234.038
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funding is intended to execute system upgrades for AC/HC/MC-130J aircraft. The upgrades currently include, but are not limited to, AC/MC-130J Communications Modernization as well as studies and integration activities required for special mission 130J aircraft.

The USAF has also initiated the Communications Modernization program to comply with Mobile User Objective System [MUOS] and VINSON/ANDVT Cryptographic Modernization [VACM] mandates, as well as deliver Second-generation Anti-jam Tactical UHF Radio for NATO [SATURN], Single Channel Ground and Airborne Radio System [SINCGARS], and HF Modernization capabilities to resolve DMS issues.

Near-term, the Air Force intends to execute critical portions of AC/MC-130J 7.0/8.1 program as part of the Communications Modernization program. The remaining AC/MC-130J 7.0/8.1 capabilities [i.e., those not needed to execute Communications Modernization] will be installed on the AC and MC-130J under a future RDT&E program within this project, projected to begin in FY 2025.

Communication Modernization funding also supports innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs.

RDT&E permits the initiation and employment of rapid acquisition authorities to respond to emerging threats and requirements as needed.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver HC/MC-130 Recap weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022 \$1.135 million was expended for civilian pay expenses in this program element, and in FY 2023 \$4.075 million is forecasted for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Communications Modernization Phase I	40.635	38.897	4.896	-	4.896
Description: Includes, but is not limited to compliance with Mobile User Objective System (MUOS) and VINSON/ANDVT Cryptographic Modernization (VACM) mandates, which will allow for continuous secure voice, data, video, network-centric, and satellite communications in real-time as the satellite constellation transitions and cryptographic algorithms are modernized.					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force	Date: March 2023
---	-------------------------

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675910 / Block 8.X
--	---	--

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>FY 2023 Plans: Continue EMD activities.</p> <p>FY 2024 Base Plans: Continuation of EMD activities and Trial Kit Install.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decreased due to reduced EMD activities.</p>					
<p>Title: Communications Modernization Phase II</p> <p>Description: Includes, but is not limited to, Second-generation Anti-jam Tactical UHF Radio for NATO (SATURN), Single Channel Ground and Airborne Radio System SINCGARS, and HF Modernization capabilities to resolve DMS issues, which will allow for continuous UHF, VHF, and HF communications in real-time. Due to technical inter-dependencies of the Communications Modernization program on some sub-systems delivered in the Block 7.0/8.1 program, AC/MC-130J 7.0/8.1 requirements will be addressed through both the Communications Modernization program and a future AC/MC-130J 7.0/8.x program.</p> <p>FY 2023 Plans: Begin Phase II EMD activities.</p> <p>FY 2024 Base Plans: Continuation of Phase II EMD activities.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to ramp up of EMD activities for Comms Mod Ph II.</p>	0.003	1.906	26.093	0.000	26.093
<p>Title: Government Test Support - Phase I</p> <p>Description: Test and evaluation planning, support to MITRE/NSERC for developmental and operational testing for Phase I. This development activity also supports associated aircraft costs for testing purposes to include but not limited field level maintenance, and day-to-day launch, recovery, inspection, servicing, and removal and replacement of LRUs, support equipment needed to support flight test, maintenance repair team support during the transfer ferry sortie if the aircraft diverts and all test related aircraft flying hour costs.</p> <p>FY 2023 Plans:</p>	0.086	3.227	3.738	0.000	3.738

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675910 / Block 8.X

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Begin Phase I EMD activities.</p> <p>FY 2024 Base Plans: Continuation of Phase I EMD activities for Communications Modernization.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increased due to ramp up of test activities.</p>					
<p>Title: Government Test Support - Phase II</p> <p>Description: Includes test and evaluation planning, conduct and support to included MITRE/NSERC for developmental and operational testing for Phase II. This development activity also includes, but is not limited to, associated aircraft costs for testing purposes to include but not limited field level maintenance such as day-to-day launch, recovery, inspection, servicing, and removal and replacement of LRUs within the capabilities and qualifications of its maintenance team, support equipment needed to support flight test, maintenance repair team support during the transfer ferry sortie if the aircraft diverts and all test related aircraft flying hour costs.</p> <p>FY 2023 Plans: Begin Phase II EMD activities.</p> <p>FY 2024 Base Plans: Continue Phase II EMD activities for Communications Modernization.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to ramp up of Comms Mod Phase II activities.</p>	0.000	0.001	0.882	0.000	0.882
<p>Title: Continuous Improvement (CIP)</p> <p>Description: Recurring Software and hardware enhancements to address evolving requirements. These enhancements will be incorporated in both production and fielded aircraft. These enhancements will include, but are not limited to parallel operational flight program [OFP] updates.</p> <p>FY 2023 Plans:</p>	1.760	3.676	0.001	0.000	0.001

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675910 / Block 8.X

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Developmental and testing activities for recurring software and hardware enhancements required for AC/MC-130J to remain effective against emerging threats. FY 2024 Base Plans: Phase I studies and other research projects. FY 2024 OCO Plans: N/A FY 2023 to FY 2024 Increase/Decrease Statement: Decreased due reduction in CIP projects and studies.					
Accomplishments/Planned Programs Subtotals	42.484	47.707	35.610	0.000	35.610

	FY 2022	FY 2023
Congressional Add: Next Generation Space Array FY 2023 Plans: Funding increase of \$4.946 million for \$5.000 million FY 2023 Congressional Add and a decrease for \$0.054 million for Federally Funded Research Development Centers. This supports network enabled weapons systems to respond to emerging threats and requirements.	-	4.946
Congressional Adds Subtotals	-	4.946

C. Other Program Funding Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• APAF 05 HCMC00: HC/MC-130 Modifications	147.993	109.785	101.055	-	101.055	186.558	345.671	230.219	94.086	304.115	1,519.482
• APAF 07 HCMC00: HC/MC-130 PPS	0.000	20.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	20.000
• APAF 07 C130JM: MC-130J PPS	0.000	0.000	10.117	-	10.117	10.438	10.727	10.976	11.199	0.000	53.457

Remarks

D. Acquisition Strategy

The Communications Modernization Phase I program complies with Mobile User Objective System [MUOS] and VINSON/ANDVT Cryptographic Modernization [VACM] mandates, which will allow for continuous secure voice, data, video, network-centric, and satellite communications in real-time as the satellite constellation transitions and cryptographic algorithms are modernized.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / <i>HC/MC-130 Recap RDT&E</i>	Project (Number/Name) 675910 / <i>Block 8.X</i>

The Communications Modernization Phase II program addresses critical Second-generation Anti-jam Tactical UHF Radio for NATO [SATURN], Single Channel Ground and Airborne Radio System [SINCGARS], and HF Modernization capabilities to resolve DMS issues, which will allow for continuous UHF, VHF, and HF communications in real-time.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675910 / Block 8.X
--	---	--

Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Communications Modernization Phase I	SS/CPAF	Lockheed Martin : Marietta, GA	0.000	39.500	Mar 2022	39.768	Mar 2023	4.896	Mar 2024	-		4.896	0.000	84.164	-
Communications Modernization Phase II	SS/CPAF	Lockheed Martin : Marietta, GA	0.000	0.003	Aug 2023	1.906	Aug 2024	26.093	Aug 2025	-		26.093	0.000	28.002	-
Subtotal			0.000	39.503		41.674		30.989		-		30.989	0.000	112.166	N/A

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Direct Cite Civ Pay	TBD	Not specified. : TBD	0.000	1.135		4.075		-		-		-	0.000	5.210	-
Government Support Test	RO	46th Test Wing; TBD : TBD	0.000	0.086	Mar 2022	3.227	Mar 2023	3.738	Mar 2024	-		3.738	0.000	7.051	-
Government Support Test Phase II	RO	46th Test Wing; TBD : TBD	0.000	0.000	Mar 2022	0.001	Mar 2024	0.882	Aug 2024	-		0.882	0.000	0.883	-
Subtotal			0.000	1.221		7.303		4.620		-		4.620	0.000	13.144	N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Continuous Improvement Program (CIP)	C/Various	Various : TBD	0.000	1.760	Jul 2022	3.676	Jul 2023	0.001	Jul 2024	-		0.001	0.000	5.437	-
Subtotal			0.000	1.760		3.676		0.001		-		0.001	0.000	5.437	N/A

			Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	42.484	52.653	35.610	-	35.610	0.000	130.747	N/A

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675910 / Block 8.X
--	---	--

FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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

Communication Modification	
Communications Modernization Phase I	
Communications Modernization Phase II	
Government Test Support Phase I	
Government Test Support Phase II	
Continuous Improvement Program (CIP)	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605278F / HC/MC-130 Recap RDT&E	Project (Number/Name) 675910 / Block 8.X
--	---	--

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Communication Modification</i>				
Communications Modernization Phase I	2	2022	4	2024
Communications Modernization Phase II	4	2022	4	2028
Government Test Support Phase I	1	2022	4	2024
Government Test Support Phase II	4	2022	4	2028
Continuous Improvement Program (CIP)	1	2022	4	2024