Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force												Date: May 2021
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	-	13.132	44.640	20.700	0.000	20.700	-	-	-	-	-	-
672832: *MEECN System Improvements*	-	0.948	0.965	0.971	0.000	0.971	-	-	-	-	-	-
672835: *Common VLF/LF Receiver Inc 2*	-	12.067	22.284	0.000	0.000	0.000	-	-	-	-	-	-
676030: *Global ASNT Inc 2*	-	0.117	21.391	19.729	0.000	19.729	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Nuclear Deterrence Operations (NDO) is an Air Force Core Function. Within this core function, Nuclear Command and Control (NC2) is the exercise of authority and direction by the President, as Commander in Chief, through established command lines, over nuclear weapon operations of military forces. The President's authority and direction are exercised through the Nuclear Command and Control System (NCCS). The NCCS is the designated combination of flexible and enduring elements including facilities, equipment, communications, procedures, personnel, and the structure in which these elements are integrated, all of which are essential for planning, directing, and controlling nuclear weapon operations.

The Minimum Essential Emergency Communications Network (MEECN) portfolio modernizes the systems necessary to effectively provide assured communications connectivity between the President and the strategic deterrence forces in stressed environments.

MEECN System Improvements (MSI) is a long-range planning process with users (Air Force Global Strike Command (AFGSC), Air Combat Command (ACC), United States Space Force (USSF), Air Mobility Command (AMC), Air Force Special Operations Command (AFSOC), US Strategic Command (USSTRATCOM), and the US Navy) to monitor and assess the performance of existing NC3 systems and develop recommendations for strategic and tactical architecture upgrades, requirements, and issues based on available and emerging technologies. MSI is used to conduct technology testing; analyze technology strategies; conduct requirement trade space analysis, technology maturation and risk reduction efforts, and mission analysis; and build technology roadmaps as proactive support to the NC3 community. MSI performs analysis, integration, and testing activities for the NC3 Weapon System.

Common Very Low Frequency/Low Frequency (VLF/LF) Receiver (CVR) Increment 2 (CVR Inc 2) Program will develop and produce an open systems architecture (OSA) compliant, advanced, adaptable VLF/LF receiver for the NC3 weapon system, AN/USQ-225. The program will also lead development of the interoperable Special Mode A (SMA) waveform specification for USAF and USN implementation to VLF systems to improve reception range and accuracy while ultimately shortening required transmission time. As the USAF VLF receiver integrator, the VLF Enterprise Program Office will assume responsibility for VLF sustainment to include configuration management of the CVR Increment 1 (CVRi1) materiel solution while also providing management support to the B-52 VLF Modernization Program for its procurement and production of the directed VLF receiver. The VLF Enterprise Program Office will provide the same management support to other legacy NC3 platforms' VLF receiver requirements. The program will complete its investment in pre-EMD VLF modernization activities as directed by the VLF Enterprise Program Office to advance

technology maturation to be made available for incorporation into current and next generation VLF reception architectures and integrated with Joint All Domain Command and Control (JADC2). Effort unfunded in FY22.

Global Aircrew Strategic Network Terminal (Global ASNT) replaces inadequate, unsustainable strategic communications equipment at bomber, tanker and reconnaissance Wing Command Posts (WCPs), Nuclear Task Forces and Munitions Support Squadrons (MUNSS) and for Mobile Support Teams (MSTs). Global ASNT is a ground-based system that will provide survivable, secure communication paths to receive Emergency Action Messages (EAMs), Force Management messages, and Force Direction messages and disseminate them to bomber, tanker, and reconnaissance aircrews.

Global ASNT is being fielded in separate capability increments. Global ASNT Increment 1 (Inc. 1) includes early system engineering support for the planning and development for the future Global ASNT Increments.

Global ASNT Inc. 1 fields required Extremely High Frequency/Advanced Extremely High Frequency (EHF/AEHF) capabilities and replaces inadequate, unsustainable strategic mobile and fixed-site Single Channel Anti-jam Man-Portable (SCAMP) terminals and Secure, Mobile, Anti-Jam, Reliable, Tactical - Terminal (SMART-T) equipment. FY19 was last year of RDT&E funding.

Global ASNT Increment 2 delivers a replacement Aircrew Alerting System (AAS) consisting of personal and general area alerting as well as Ultra High Frequency (UHF) line of sight (LOS) voice communications to bomber, tanker, and reconnaissance aircraft. Increment 2 replaces aging legacy Electromagnetic Pulse Hardened Dispersal Communication (EHDC) and Aircrew Alerting Communications Electromagnetic Pulse (AACE) systems.

This program element may include necessary emergent or unanticipated civilian pay expenses required to manage, execute, and deliver MEECN for emergent or unanticipated weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F and 0605833F. In FY2020 1.900M and in FY2021 2.205M was expended 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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force					Date: May 2021
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*			**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*		
B. Program Change Summary ($ in Millions)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Previous President's Budget	13.543	61.887	58.577	0.000	58.577
Current President's Budget	13.132	44.640	20.700	0.000	20.700
Total Adjustments	-0.411	-17.247	-37.877	0.000	-37.877
• Congressional General Reductions	0.000	-0.082			
• Congressional Directed Reductions	0.000	-17.165			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.411	0.000			
• Other Adjustments	0.000	0.000	-37.877	0.000	-37.877

Change Summary Explanation

FY2021 -14.215M GASNTi2
FY2021 -2.950M CVRi2
FY2022 -46.600M for NDO offsets
FY2022 +20.000M for GASNT Inc 2

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	Project (Number/Name) 672832 / *MEECN System Improvements*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
672832: *MEECN System Improvements*	-	0.948	0.965	0.971	0.000	0.971	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

MSI is a long-range planning process with users (Air Force Global Strike Command (AFGSC), Air Combat Command (ACC), United States Space Force (USSF), Air Mobility Command (AMC), Air Force Special Operations Command (AFSOC), US Strategic Command (USSTRATCOM), and the US Navy) to monitor and assess the performance of existing NC3 systems and develop recommendations for strategic and tactical architecture upgrades, requirements, and issues based on available and emerging technologies. MSI is used to conduct technology testing; analyze technology strategies; conduct requirement trade space analysis, technology maturation and risk reduction efforts, and mission analysis; and build technology Roadmaps as proactive support to the NC3 community. MSI performs analysis, integration, and testing activities for the NC3 Weapon System.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: MEECN System Improvements	0.948	0.965	0.971	0.000	0.971
Description: MSI is used to conduct technology testing, analyze technology strategies, conduct requirement trade space analysis, technology maturation and risk reduction efforts, and mission analysis, and build technology Roadmaps as proactive support to the NC3 community. MSI may also be used to execute test bed activities and exercise participation related to ABMS and JADC2 demonstrations and execute contracts in support of next generation NC3 systems and sub-systems					
FY 2021 Plans: - Conduct analysis of the performance/condition of NC3 platforms' VLF receiver Group A elements (e.g., antennas, power source, cabling/wiring, human machine interface (HMI), etc.) - Continue to refresh NC3 Architecture Roadmap - Continue planning and initiate integration, analysis, and testing activities for AF NC3 Weapon System - Complete MSI Summary Report - Conduct design and development engineering - Perform analysis of engineering issues and technology insertion - Develop enhanced multiuse capabilities - Conduct technology maturation and risk reduction activities - Evaluate integrated technology, representative modes, and prototype systems					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672832 / *MEECN System Improvements*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Conduct technology testing; analyze technology strategies - Build technology roadmaps as proactive support - Perform analysis, integration, and testing activities - Conduct NC3 Connectivity Performances updates - Develop messaging, waveform, mode, and system standards and documentation - Develop proof-of-concepts and prototypes for prediction-based system functionality, sensor systems, transmission modes and algorithms for traffic routing - Develop weapon system validation test environment including but not limited to the purchase of vendor radios and terminals and test equipment - Conduct studies, analysis, proof-of-concept, and prototyping for the assessment and modernization of the AF NC3 WS (AN/USQ-225)					
FY 2022 Base Plans: - Conduct analysis of the performance/condition of NC3 platforms' VLF receiver Group A elements (e.g., antennas, power source, cabling/wiring, human machine interface (HMI), etc.) - Continue to refresh NC3 Architecture Roadmap - Continue planning and initiate integration, analysis, and testing activities for AF NC3 Weapon System - Complete MSI Summary Report - Conduct design and development engineering - Perform analysis of engineering issues and technology insertion - Develop enhanced multiuse capabilities - Conduct technology maturation and risk reduction activities - Evaluate integrated technology, representative modes, and prototype systems - Conduct technology testing; analyze technology strategies - Build technology roadmaps as proactive support - Perform analysis, integration, and testing activities - Conduct NC3 Connectivity Performances updates - Develop messaging, waveform, mode, and system standards and documentation - Develop proof-of-concepts and prototypes for prediction-based system functionality, sensor systems, transmission modes and algorithms for traffic routing - Develop weapon system validation test environment including but not limited to the purchase of vendor radios and terminals and test equipment					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672832 / *MEECN System Improvements*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Conduct studies, analysis, proof-of-concept, and prototyping for the assessment and modernization of the AF NC3 WS (AN/USQ-225) ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** FY22 increase due to inflation of operating costs					
Accomplishments/Planned Programs Subtotals	0.948	0.965	0.971	0.000	0.971

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

MSI will continue to evaluate the performance of the NC3 Weapon System by assessing performance and technology areas for improvement with the assistance of expert technical support from FFRDCs, UARCs, and may include competitively awarded technical support contracts with industry. MITRE, Massachusetts Institute of Technology (MIT) Lincoln Labs, and Johns Hopkins University/Applied Physics Laboratory (JHU/APL) will continue to support NC3 Weapon System Architecture Roadmap updates.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672832 / *MEECN System Improvements*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MSI NC3 Roadmap / NC3 Connectivity Performances Update	Various	JHU/APL : Laurel, MD	-	0.100	Mar 2020	0.080	Jan 2021	0.425	Jan 2022	-		0.425	-	-	-
Waveform Standards Documentation	Various	MITRE : Bedford, MA	-	0.450	Mar 2020	-		-		-		-	-	-	-
Antenna Study	Various	MIT/LL : Lexington, MA	-	0.233	Mar 2020	0.680	Mar 2021	0.350	Mar 2022	-		0.350	-	-	-
		Subtotal	-	0.783		0.760		0.775		-		0.775	-	-	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	C/CPAF	Not specified. : TBD	-	-		0.017	Nov 2020	0.016	Nov 2021	-		0.016	-	-	-
MSI PSC (Eng/Acq Spt/ Travel/IMPAC)	Various	Various : Various	-	0.165	Nov 2019	0.188	Nov 2020	0.180	Nov 2021	-		0.180	-	-	-
		Subtotal	-	0.165		0.205		0.196		-		0.196	-	-	N/A

	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.948		0.965		0.971		-		0.971	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672832 / *MEECN System Improvements*

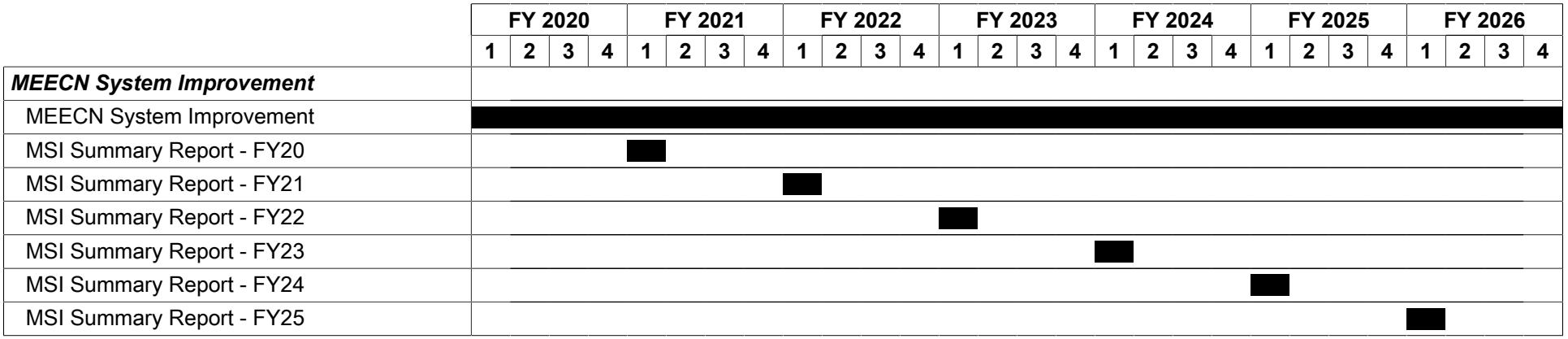

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672832 / *MEECN System Improvements*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MEECN System Improvement				
MEECN System Improvement	1	2020	4	2026
MSI Summary Report - FY20	1	2021	1	2021
MSI Summary Report - FY21	1	2022	1	2022
MSI Summary Report - FY22	1	2023	1	2023
MSI Summary Report - FY23	1	2024	1	2024
MSI Summary Report - FY24	1	2025	1	2025
MSI Summary Report - FY25	1	2026	1	2026

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	Project (Number/Name) 672835 / *Common VLF/LF Receiver Inc 2*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
672835: *Common VLF/LF Receiver Inc 2*	-	12.067	22.284	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Common Very Low Frequency/Low Frequency (VLF/LF) Receiver (CVR) Increment 2 (CVR Inc 2) Program will develop and produce an open systems architecture (OSA) compliant, advanced, adaptable VLF/LF receiver for the NC3 weapon system, AN/USQ-225. The program will also lead development of the interoperable Special Mode A waveform specification for USAF and USN implementation to VLF systems to improve reception range and accuracy while ultimately shortening required transmission time. As the USAF VLF receiver integrator, the VLF Enterprise Program Office will assume responsibility for VLF sustainment to include configuration management of the CVR Increment 1 (CVRi1) materiel solution while also providing management support to the B-52 VLF Modernization Program for its procurement and production of the directed VLF receiver. The VLF Enterprise Program Office will provide the same management support to other legacy NC3 platforms' VLF receiver requirements. The program will complete its investment in pre-EMD VLF modernization activities as directed by the VLF Enterprise Program Office to advance technology maturation to be made available for incorporation into current and next generation VLF reception architectures and integrated with Joint All Domain Command and Control (JADC2). Effort unfunded in FY22.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: CVR Inc 2	12.067	22.284	0.000	0.000	0.000
Description: Post-MDD and progression to prototype development employing a Middle Tier Approach (MTA) ***FY 2021 Plans:*** - Complete OSA-compliant VLF Reference Implementation Lab (RIL) with MITRE to allow for the evaluation of backplane and chassis options for the design and operation of a prototype VLF receiver and to facilitate technical maturation of OSA-compliant architecture and requisite Radio Frequency (RF) and crypto modules - Establish Cooperative Research and Development Agreements (CRADAs) with industry and other agencies to experiment with and mature technologies that can contribute to optimal VLF receiver performance - Develop OSA Crypto Requirements, Architecture and Design - Approve JHU/APL EMI filter final engineering design to improve VLF reception - Conduct end-to end demonstration to transmit and receive SMA waveform messages in laboratory environment to prepare for live fly proof of concept - Coordinate and execute live fly demonstration of SMA waveform messages transmission and receipt					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672835 / *Common VLF/LF Receiver Inc 2*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Co-lead execution of interoperability testing of SMA waveform with US Navy at Navy Information Warfare Center - Pacific (NIWC-PAC) & Navy COMM PMW 770 - Complete analysis of the performance/condition of NC3 platforms' VLF receiver Group A elements (e.g., antennas, power source, cabling/wiring, human machine interface (HMI), etc.) - Support higher echelon lead of VLF requirements High Performance Team (HPT) to realign target platform in accordance with MAJCOM priorities - Revise CVR Inc 2 Draft SRD in accordance with HPT report - Coordinate interface requirements with targeted NC3 platform - Conduct Acquisition Strategy Panel (ASP) for CVRi2 MTA acquisition approach - Initiate Other Transaction Authority (OTA) approach with Air Force Research Laboratory (AFRL) - Rome for CVRi2 prototype - Execute CVRi1 VLF receiver Transition Support Plan (TSP) and assume role as Chair of Interface Control Working Group (ICWG) - Complete Capability Gap Analysis and Shelf Life Extension Program (SLEP) for CVRi1 materiel solution - Initiate CVRi1 materiel solution receiver Logistics Requirement Determination Process (LRDP) - Coordinate approval of CVRi1 materiel solution Life-Cycle Sustainment Plan (LCSP) - Execute CVRi1 materiel solution Life-Cycle Sustainment Plan (LCSP) - Continue to participate as USAF lead in USSTRATCOM Configuration Control Board (CCB)for Special Mode A ***FY 2022 Base Plans:*** N/A ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Reduced for other AF priorities					
Accomplishments/Planned Programs Subtotals	12.067	22.284	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672835 / *Common VLF/LF Receiver Inc 2*

D. Acquisition Strategy

Employing a Middle Tier Acquisition (MTA) approach, CVR Inc 2 will use an Other Transaction Authority (OTA) to negotiate agreement with member(s) of approved consortium to develop an advanced, OSA-compliant, and adaptable VLF/LF receiver prototype. Acquisition strategy approval projected 4QFY21.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672835 / *Common VLF/LF Receiver Inc 2*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Early Development (TMRR prototype contract FY 2020)	Various	Various : TBD	-	-		5.994	Jun 2021	-		-		-	-	-	-
MITRE (DMS)	Various	Various : Bedford, MA	-	2.018	Dec 2019	1.791	Feb 2021	-		-		-	-	-	-
Broad Agency Announcement	Various	Various : TBD	-	1.743	Jan 2020	-		-		-		-	-	-	-
NSA Certification	Various	Various : TBD	-	0.403	Apr 2020	0.400	Jun 2021	-		-		-	-	-	-
Direct Cite Civilian Pay	Various	Various : TBD	-	1.610	Nov 2019	1.105	Sep 2021	-		-		-	-	-	-
		Subtotal	-	5.774		9.290		-		-		-	-	-	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
General Support (Eng/Acq Spt)	Various	Not specified. : TBD	-	2.152		-		-		-		-	-	-	-
GFE	Various	Various : TBD	-	0.000		-		-		-		-	-	-	-
		Subtotal	-	2.152		-		-		-		-	-	-	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	C/CPAF	Not specified. : TBD	-	0.434	Mar 2020	0.234	Aug 2021	-		-		-	-	-	-
		Subtotal	-	0.434		0.234		-		-		-	-	-	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672835 / *Common VLF/LF Receiver Inc 2*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PSC (Eng/Acq Spt/Travel/ IMPAC)	Various	Various : TBD	-	2.436	Nov 2019	10.339	Mar 2021	-		-		-	-	-	-
MITRE (PSC)	Various	Various : Bedford, MA	-	1.271	Oct 2019	2.421	Mar 2021	-		-		-	-	-	-
		Subtotal	-	3.707		12.760		-		-		-	-	-	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	12.067		22.284		-		-		-	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672835 / *Common VLF/LF Receiver Inc 2*

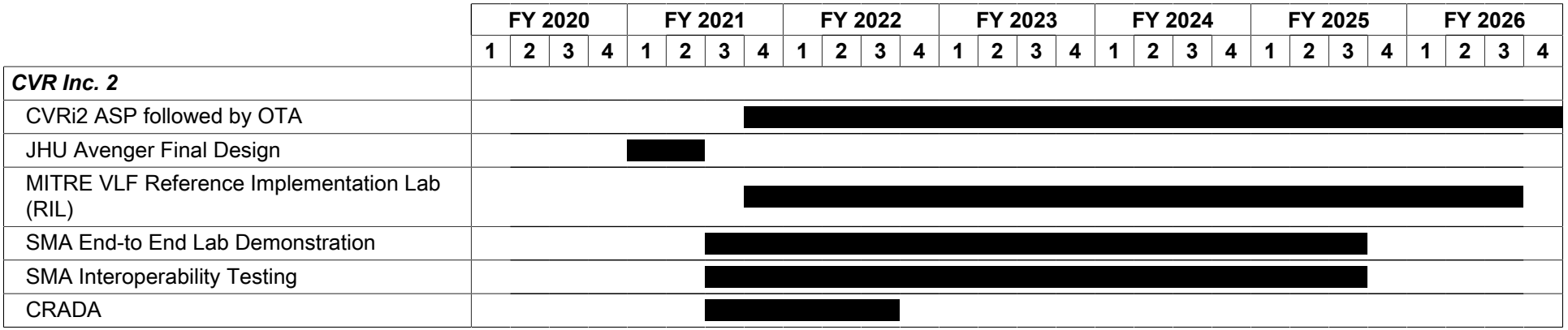

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 672835 / *Common VLF/LF Receiver Inc 2*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
CVR Inc. 2				
CVRi2 ASP followed by OTA	4	2021	4	2026
JHU Avenger Final Design	1	2021	2	2021
MITRE VLF Reference Implementation Lab (RIL)	4	2021	3	2026
SMA End-to End Lab Demonstration	3	2021	3	2025
SMA Interoperability Testing	3	2021	3	2025
CRADA	3	2021	3	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	Project (Number/Name) 676030 / *Global ASNT Inc 2*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
676030: *Global ASNT Inc 2*	-	0.117	21.391	19.729	0.000	19.729	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Global ASNT Inc 2 replaces aging legacy strategic communications equipment at bomber, tanker and reconnaissance Wing Command Posts (WCPs), Nuclear Task Forces, Munitions Support Squadrons (MUNSS), and Mobile Support Teams (MSTs). Global ASNT Inc 2 is a ground-based system that will provide survivable, secure communication paths to disseminate Emergency Action Messages (EAMs) to bomber, tanker, and reconnaissance aircrews.

Global ASNT Inc 2 is being fielded in 3 separate capability incremental blocks; all 3 blocks are High-Altitude Electro-Magnetic Pulse (HEMP) and Radiation Hazard (RADHAZ) protected.

Global ASNT Inc 2, Block 1 delivers a replacement Aircrew Alerting System (AAS) consisting of Ultra High Frequency (UHF) personal and general alerting equipment replacing EHDC and AACE systems. Global ASNT Inc 2, Blocks 2 and 3 provide High Frequency (HF) capabilities and other enhancements.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Global ASNT Inc 2, Block 1	0.117	21.391	19.729	0.000	19.729
Description: Middle Tier Acquisition - Rapid Prototyping					
FY 2021 Plans: - Acquisition Strategy Panel (ASP) approved - Solicitation released - Proposal evaluations completed - Other Transaction Authority (OTA) Agreement award					
FY 2022 Base Plans: - Begin and complete Phase 1 (Non-HEMP) prototype development - Begin Phase 2 (HEMP) prototype development - Complete Phase 1 (Non-HEMP) site prep in support of first two fixed site installs					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 676030 / *Global ASNT Inc 2*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
FY22 decrease reflects continuing development activities that were awarded in FY21.					
Accomplishments/Planned Programs Subtotals	0.117	21.391	19.729	0.000	19.729

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Global ASNT Inc 2 provides 3 separate capability incremental blocks. Global ASNT Inc 2, Block 1 is a Middle Tier of Acquisition (MTA) Section 804 Rapid Prototyping program. Global ASNT Inc 2, Blocks 2 and 3 will notionally utilize a traditional DoD 5000.02 acquisition strategy.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	Project (Number/Name) 676030 / *Global ASNT Inc 2*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	C/CPAF	Various : Bedford, MA	-	-		13.558	Aug 2021	11.435	Feb 2022	-		11.435	-	-	-
		Subtotal	-	-		13.558		11.435		-		11.435	-	-	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Information Assurance	SS/CPAF	Booz Allen Hamilton : Bedford, MA	-	-		0.160	Jul 2021	0.165	Apr 2022	-		0.165	-	-	-
		Subtotal	-	-		0.160		0.165		-		0.165	-	-	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Planning	PO	96 TW : Eglin AFB, FL	-	-		0.355	May 2021	0.489	Mar 2022	-		0.489	-	-	-
		Subtotal	-	-		0.355		0.489		-		0.489	-	-	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DMS - Civilian Pay	Various	Various : Bedford, MA	-	0.117	Oct 2020	1.100	Oct 2020	1.235	Oct 2021	-		1.235	-	-	-
PSC - (Eng/Acq Support, Travel)	C/CPAF	Various : Bedford, MA	-	-		6.218	Oct 2020	6.405	Oct 2021	-		6.405	-	-	-
		Subtotal	-	0.117		7.318		7.640		-		7.640	-	-	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force			Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 676030 / *Global ASNT Inc 2*	

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.117		21.391		19.729		-		19.729	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 676030 / *Global ASNT Inc 2*

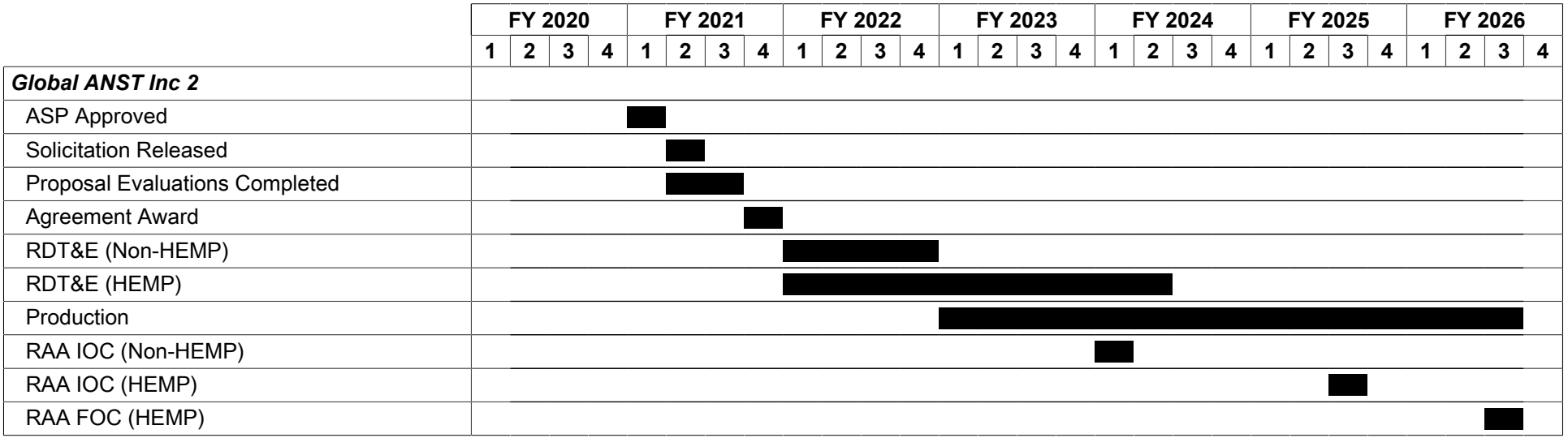

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0303131F / *Minimum Essential Emergency Communications Network (MEECN)*	**Project (Number/Name)** 676030 / *Global ASNT Inc 2*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Global ANST Inc 2				
ASP Approved	1	2021	1	2021
Solicitation Released	2	2021	2	2021
Proposal Evaluations Completed	2	2021	3	2021
Agreement Award	4	2021	4	2021
RDT&E (Non-HEMP)	1	2022	4	2022
RDT&E (HEMP)	1	2022	2	2024
Production	1	2023	3	2026
RAA IOC (Non-HEMP)	1	2024	1	2024
RAA IOC (HEMP)	3	2025	3	2025
RAA FOC (HEMP)	3	2026	3	2026