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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

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| 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 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> |
|--|---|

| COST (\$ in Millions) | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Cost To Complete | Total Cost |
|--|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | - | 62.146 | 13.543 | 61.887 | 0.000 | 61.887 | 58.577 | 14.417 | 7.010 | 42.301 | Continuing | Continuing |
| 672832: <i>MEECN System Improvements</i> | - | 25.059 | 0.948 | 0.965 | 0.000 | 0.965 | 0.985 | 1.003 | 1.022 | 1.041 | Continuing | Continuing |
| 672835: <i>Common VLF/LF Receiver Inc 2</i> | - | 8.559 | 12.478 | 25.234 | 0.000 | 25.234 | 57.576 | 13.404 | 5.988 | 41.260 | Continuing | Continuing |
| 676029: <i>Global Aircrew Strategic Network Terminal</i> | - | 19.181 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 676030: <i>Global ASNT Inc 2</i> | - | 9.347 | 0.117 | 35.688 | 0.000 | 35.688 | 0.016 | 0.010 | 0.000 | 0.000 | Continuing | Continuing |

Note
 Nuclear Command, Control, and Communications (NC3) Advanced Concepts will continue to execute FY19 funds from the MEECN System Improvements (MSI) Program 0303131F, Project 672832. NC3 Advanced Concepts efforts will be moved to PE 0604001F in future budgets.

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 MEECN portfolio modernizes the systems necessary to effectively provide assured communications connectivity between the President and the strategic deterrence forces in stressed environments.

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 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.

NC3 Advanced Concepts develops and prototypes NC3 unique and dual-use systems in support of Concept for Force Development (CFD), Joint All-Domain Command and Control (JADC2), and Advanced Battle Management Systems (ABMS) initiatives. This program ensures a responsive design and development engineering

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| 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 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | |
| <p>infrastructure to address evolving NDO mission requirements, emerging issues and technology insertion/technology application on the NC3 Weapon System, future strategic systems/capability, and other common strategic areas where appropriate, and develop enhanced multi-use capabilities. The NC3 Advanced Concepts Program will provide technology maturation and risk reduction activities to support the NC3 Weapon System (AN/USQ-225). Activity will reduce life cycle costs, inform technology maturation & risk reduction efforts, improve system performance, mitigate evolving threats, and ensure both viability and durability of the NC3 Weapon System.</p> <p>Common Very Low Frequency/Low Frequency (VLF/LF) Receiver (CVR) Increment 2 (CVR Inc 2) will deliver a survivable, beyond-line-of-sight path for Emergency Action Message (EAM) reception. The intent of CVR Inc 2 is to develop and produce a common VLF/LF receiver, capable of implementing an interoperable waveform for future platform integration to include airborne and ground based nodes, improved system performance, and reduced supportability costs through commonality. In parallel, the program will lead development of the Special Mode A waveform specification for the USAF and USN to increase reception range and accuracy while shortening required transmission time. The program will assume responsibility for the sustainment and configuration management of the CVR Inc 1 program's VLF receiver while also providing management support to the B-52 VLF Modernization Program for production and procurement of the AFGSC AF 1067 directed VLF receiver.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Global ASNT Increment 2 delivers a replacement Aircrew Alerting System (AAS) consisting of Ultra High Frequency (UHF) as well as High Frequency (HF) personal and general alerting equipment capabilities. Increment 2 replaces aging legacy Electromagnetic Pulse Hardened Dispersal Communication (EHDC) and Aircrew Alerting Communications Electromagnetic Pulse (AACE) systems.</p> <p>This program element may include necessary civilian pay expenses required to manage, execute, and deliver nuclear weapon support capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F or 0605833F.</p> <p>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.</p> | | |

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|--|---|

| B. Program Change Summary (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 64.543 | 13.543 | 91.814 | 0.000 | 91.814 |
| Current President's Budget | 62.146 | 13.543 | 61.887 | 0.000 | 61.887 |
| Total Adjustments | -2.397 | 0.000 | -29.927 | 0.000 | -29.927 |
| • 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 | 0.000 | 0.000 | | | |
| • SBIR/STTR Transfer | -2.397 | 0.000 | | | |
| • Other Adjustments | 0.000 | 0.000 | -29.927 | 0.000 | -29.927 |

Change Summary Explanation

FY21 decreased -\$29.927M due to higher AF priorities

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| Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force | | | | | | | | | | Date: February 2020 | | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | | | | | Project (Number/Name) 672832 / <i>MEECN System Improvements</i> | | | |
| COST (\$ in Millions) | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Cost To Complete | Total Cost | |
| 672832: <i>MEECN System Improvements</i> | - | 25.059 | 0.948 | 0.965 | 0.000 | 0.965 | 0.985 | 1.003 | 1.022 | 1.041 | Continuing | Continuing | |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | | |

Note

NC3 Advanced Concepts will continue to execute FY19 funds from the MEECN System Improvements (MSI) Program 0303131F, Project 672832. NC3 Advanced Concepts efforts will be moved to PE 0604001F in future budgets.

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 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.

NC3 Advanced Concepts develops and prototypes NC3 unique and dual-use systems in support of Concept for Force Development (CFD), Joint All-Domain Command and Control (JADC2), and Advanced Battle Management Systems (ABMS) initiatives. This program ensures a responsive design and development engineering infrastructure to address evolving NDO mission requirements, emerging issues and technology insertion/technology application on the NC3 Weapon System, future strategic systems/capability, and other common strategic areas where appropriate, and develop enhanced multi-use capabilities. The NC3 Advanced Concepts Program will provide technology maturation and risk reduction activities to support the NC3 Weapon System (AN/USQ-225). Activity will reduce life cycle costs, inform technology maturation & risk reduction efforts, improve system performance, mitigate evolving threats, and ensure both viability and durability of the NC3 Weapon System.

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

| | | | |
|--|----------------|----------------|----------------|
| | FY 2019 | FY 2020 | FY 2021 |
| Title: MEECN System Improvements | 25.059 | 0.948 | 0.965 |
| 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 2020 Plans: | | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force | | Date: February 2020 |
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B. Accomplishments/Planned Programs (\$ in Millions)

| | FY 2019 | FY 2020 | FY 2021 |
|---|---------|---------|---------|
| <ul style="list-style-type: none"> - Refresh NC3 Architecture Roadmap - Plan and initiate integration, analysis, and testing activities for AF NC3 Weapon System - Develop enhanced multiuse capabilities - Evaluate integrated technology, representative modes, and prototype systems - 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) <p>FY 2021 Plans:</p> <ul style="list-style-type: none"> - 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 | | | |

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| B. Accomplishments/Planned Programs (\$ in Millions) | | FY 2019 | FY 2020 | FY 2021 |
| - Conduct studies, analysis, proof-of-concept, and prototyping for the assessment and modernization of the AF NC3 WS (AN/USQ-225) | | | | |
| FY 2020 to FY 2021 Increase/Decrease Statement: No significant change | | | | |
| Accomplishments/Planned Programs Subtotals | | 25.059 | 0.948 | 0.965 |
| 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. | | | | |
| To conduct NC3 Advanced Concepts essential activities a combination of competitively awarded contracts, as well as sole source contracts, may be used to augment AF organic capabilities with technical skill sets from FFRDCs, UARCs, and industry Advisory and Assistance Services (A&AS) providers. NC3 Advanced Concepts efforts will be moved to PE 0604001F in future budgets. | | | | |

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

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| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 672832 / <i>MEECN System Improvements</i> |
|--|---|---|

| Product Development (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| MSI NC3 Roadmap / NC3 Connectivity Performances Update | Various | JHU/APL : Laurel, MD | - | 0.792 | Mar 2019 | 0.100 | Mar 2020 | 0.300 | Jan 2021 | - | | 0.300 | Continuing | Continuing | - |
| Waveform Standards Documentation | Various | MITRE : Bedford, MA | - | - | | 0.450 | Mar 2020 | 0.240 | Dec 2020 | - | | 0.240 | Continuing | Continuing | - |
| Antenna Study | Various | MIT/LL : Lexington, MA | - | - | | 0.233 | Mar 2020 | 0.250 | Mar 2021 | - | | 0.250 | Continuing | Continuing | - |
| NC3 Advanced Concepts | TBD | Various : Various | - | 15.092 | Feb 2019 | - | | - | | - | | - | Continuing | Continuing | - |
| NC3 Advanced Concepts DMS FFRDC/UARC/A&AS | TBD | Various : Various | - | 8.115 | Dec 2018 | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 23.999 | | 0.783 | | 0.790 | | - | | 0.790 | Continuing | Continuing | N/A |

| Support (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| NC3 Advanced Concepts Test | Various | Various : Various | - | 0.922 | Sep 2019 | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 0.922 | | - | | - | | - | | - | Continuing | Continuing | N/A |

| Management Services (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Management Services | C/CPAF | Not specified. : TBD | - | - | | 0.130 | Apr 2020 | 0.138 | Apr 2021 | - | | 0.138 | Continuing | Continuing | - |
| MSI PSC (Eng/Acq Spt/ Travel/IMPAC) | Various | Various : Various | - | 0.138 | Feb 2019 | 0.035 | Nov 2019 | 0.037 | Nov 2020 | - | | 0.037 | Continuing | Continuing | - |
| Subtotal | | | - | 0.138 | | 0.165 | | 0.175 | | - | | 0.175 | Continuing | Continuing | N/A |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force | | Date: February 2020 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 672832 / <i>MEECN System Improvements</i> |

| | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | | FY 2025 | | | |
|--|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <i>MEECN System Improvement</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MEECN System Improvement | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSI Summary Report - FY19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSI Summary Report - FY20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSI Summary Report - FY21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSI Summary Report - FY22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSI Summary Report - FY23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSI Summary Report - FY24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NC3 Advanced Concepts | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force | | Date: February 2020 |
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Schedule Details

| Events by Sub Project | Start | | End | |
|--|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| <i>MEECN System Improvement</i> | | | | |
| MEECN System Improvement | 1 | 2019 | 4 | 2025 |
| MSI Summary Report - FY19 | 1 | 2020 | 1 | 2020 |
| 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 |
| NC3 Advanced Concepts | 1 | 2019 | 2 | 2020 |

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| COST (\$ in Millions) | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Cost To Complete | Total Cost |
| 672835: <i>Common VLF/LF Receiver Inc 2</i> | - | 8.559 | 12.478 | 25.234 | 0.000 | 25.234 | 57.576 | 13.404 | 5.988 | 41.260 | Continuing | Continuing |
| 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) will deliver a survivable, beyond-line-of-sight path for Emergency Action Message (EAM) reception. The intent of CVR Inc 2 is to develop and produce a common VLF/LF receiver, capable of implementing an interoperable waveform for future platform integration to include airborne and ground based nodes, improved system performance, and reduced supportability costs through commonality. In parallel, the program will lead development of the Special Mode A waveform specification for the USAF and USN to increase reception range and accuracy while shortening required transmission time. The program will assume responsibility for the sustainment and configuration management of the CVR Inc 1 program's VLF receiver while also providing management support to the B-52 VLF Modernization Program for production and procurement of the AFGSC AF 1067 directed VLF receiver. The program will continue to invest in VLF Modernization activities directed by the VLF Enterprise Program Office to ensure technology and CONOPS are available for incorporation into current and next generation VLF architectures and aligning with integrating with Joint All Domain Command and Control (JADC2).

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

| | FY 2019 | FY 2020 | FY 2021 |
|---|----------------|----------------|----------------|
| Title: CVR Inc 2 | 8.559 | 12.478 | 25.234 |
| Description: Post-MDD and preparation for Development RFP Release Decision Point | | | |
| FY 2020 Plans: | | | |
| <ul style="list-style-type: none"> - Complete Acquisition Strategy and conduct Acquisition Strategy Panel with PEO Continue CVR Inc 2 and VLF/LF Working Groups - Draft statutory acquisition documentation - Finalize System Engineering Plan (SEP) - Complete remaining Call of Broad Agency Announcement (BAA) - Finalize Systems Requirement Document (SRD) - Release Draft EMD RFP - Host Industry Day(s) - Conduct interoperability tests of Special Mode A VLF/LF Waveform with USN counterparts Develop - Special Mode A Waveform Reference Architecture - Develop Modeling and Simulation on Special Mode A VLF/LF Waveform Standard - Coordinate with NC3 Integration Directorate, AFGSC/NC3C, and USSTRATCOM/NEC to establish | | | |

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| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 |
|--|----------------|----------------|----------------|
| <ul style="list-style-type: none"> - Configuration Control Board for Special Mode A - Coordinate with CVR Inc 1 PM to complete Transition Support Plan (TSP) - Coordinate with Low Frequency Transmitter System (LFTS) PM and NC3 Integration Directorate to explore installation of Special Mode A - Release EMD RFP <p>FY 2021 Plans:</p> <ul style="list-style-type: none"> - Review industry proposals and conduct Source Selection - Award EMD contract for CVR Inc 2 materiel solution - Conduct CVR Inc 2 System Requirements Review (SRR) / System Functional Review (SFR) to include Special Mode A - Finalize CVR Inc 2 Test and Evaluation Master Plan (TEMP) - Conduct CVR Inc 2 Preliminary Design Review (PDR) - Execute CVR Inc 1 Transition Support Plan and assume role as Chair of Interface Control Working Group (ICWG) - Continue CVR Inc 2 and VLF/LF Working Groups - Participate as USAF lead in USSTRATCOM CCB for Special Mode A <p>FY 2020 to FY 2021 Increase/Decrease Statement: FY21 increase required to execute EMD RFP, source selection activities, achieve Milestone B, and award EMD Contract.</p> | | | |
| Accomplishments/Planned Programs Subtotals | 8.559 | 12.478 | 25.234 |

| C. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | |
|--|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
| <u>Line Item</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> <u>Base</u> | <u>FY 2021</u> <u>OCO</u> | <u>FY 2021</u> <u>Total</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>Cost To</u> <u>Complete</u> | <u>Total Cost</u> |
| • APAF 03 PE 0303131F: <i>CVR Inc 2</i> | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 6.372 | 49.137 | 65.917 | 67.122 | Continuing | Continuing |
| Remarks | | | | | | | | | | | |

D. Acquisition Strategy
Following a streamlined DODI 5000.02 approach, CVR Inc 2 will use a full and open competitive source selection to award an EMD Contract for new development of an Open System Architecture (OSA) VLF receiver comprising a common core (i.e., receiver, crypto, filter, timing source, ground support equipment, and new waveform).

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

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| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 672835 / <i>Common VLF/LF Receiver Inc 2</i> |
|--|---|--|

| Product Development (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Product Development | C/CPAF | Not specified. : TBD | - | - | | - | | 11.829 | Jun 2021 | - | | 11.829 | Continuing | Continuing | - |
| Early Development (TMRR prototype contract FY 2020) | Various | Various : TBD | - | 0.729 | Aug 2019 | - | | - | | - | | - | Continuing | Continuing | - |
| MITRE (DMS) | Various | Various : Bedford, MA | - | 1.721 | Jan 2019 | 1.271 | Dec 2019 | 1.743 | Nov 2020 | - | | 1.743 | Continuing | Continuing | - |
| Broad Agency Announcement | Various | Various : TBD | - | 0.905 | Aug 2019 | 1.018 | Jan 2020 | - | | - | | - | Continuing | Continuing | - |
| NSA Certification | Various | Various : TBD | - | - | | 0.468 | | - | | - | | - | Continuing | Continuing | - |
| MIT Lincoln Lab (DMS) | Various | Various : Lexington, MA | - | 0.240 | Mar 2019 | 0.264 | Feb 2020 | 0.269 | Feb 2021 | - | | 0.269 | Continuing | Continuing | - |
| Direct Cite Civilian Pay | Various | Various : TBD | - | 0.550 | Sep 2019 | 1.710 | Nov 2019 | 2.383 | Nov 2020 | - | | 2.383 | Continuing | Continuing | - |
| Not specified. | C/CPAF | Not specified. : TBD | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 4.145 | | 4.731 | | 16.224 | | - | | 16.224 | Continuing | Continuing | N/A |

| Support (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| General Support (Eng/Acq Spt) | Various | Not specified. : TBD | - | - | | 3.084 | | - | | - | | - | Continuing | Continuing | - |
| GFE | Various | Various : TBD | - | 0.001 | | 0.000 | | 1.292 | Mar 2021 | - | | 1.292 | Continuing | Continuing | - |
| Subtotal | | | - | 0.001 | | 3.084 | | 1.292 | | - | | 1.292 | Continuing | Continuing | N/A |

| Test and Evaluation (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Test and Evaluation | C/CPAF | Not specified. : TBD | - | 0.344 | May 2019 | 0.356 | Mar 2020 | - | | - | | - | Continuing | Continuing | - |

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

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| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 672835 / <i>Common VLF/LF Receiver Inc 2</i> |
|--|---|--|

| Test and Evaluation (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Subtotal | | | - | 0.344 | | 0.356 | | - | | - | | - | Continuing | Continuing | N/A |

| Management Services (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| PSC (Eng/Acq Spt/Travel/IMPAC) | Various | Various : TBD | - | 2.197 | Nov 2018 | 3.036 | Nov 2019 | 3.650 | Oct 2020 | - | | 3.650 | Continuing | Continuing | - |
| MITRE (PSC) | Various | Various : Bedford, MA | - | 1.872 | Feb 2019 | 1.271 | Oct 2019 | 4.068 | Nov 2020 | - | | 4.068 | Continuing | Continuing | - |
| Subtotal | | | - | 4.069 | | 4.307 | | 7.718 | | - | | 7.718 | Continuing | Continuing | N/A |

| | | | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | Cost To Complete | Total Cost | Target Value of Contract |
|----------------------------|--|--|-------------|---------|---------|--------------|-------------|---------------|------------------|------------|--------------------------|
| Project Cost Totals | | | - | 8.559 | 12.478 | 25.234 | - | 25.234 | Continuing | Continuing | N/A |

Remarks
 In FY20,CVR Inc 2 will expend \$1.710M on manpower positions hired under Direct Cite Authority.
 In FY21,CVR Inc 2 will expend \$2.383M on manpower positions hired under Direct Cite Authority.

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| Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force | | Date: February 2020 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 672835 / <i>Common VLF/LF Receiver Inc 2</i> |

| | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | | FY 2025 | | | |
|-------------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| <i>CVR Inc. 2</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Early Systems Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Requirements Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Matériel Development Decision (MDD) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acquisition Strategy Panel | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Draft RFP Release | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Industry Day(s) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EMD RFP Release | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source Selection | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Milestone B Decision | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EMD Contract Award | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EMD | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force | | Date: February 2020 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 672835 / <i>Common VLF/LF Receiver Inc 2</i> |

Schedule Details

| Events by Sub Project | Start | | End | |
|-------------------------------------|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| <i>CVR Inc. 2</i> | | | | |
| Early Systems Engineering | 3 | 2019 | 3 | 2020 |
| Requirements Development | 3 | 2019 | 3 | 2020 |
| Material Development Decision (MDD) | 4 | 2019 | 4 | 2019 |
| Acquisition Strategy Panel | 2 | 2020 | 2 | 2020 |
| Draft RFP Release | 3 | 2020 | 3 | 2020 |
| Industry Day(s) | 3 | 2020 | 3 | 2020 |
| EMD RFP Release | 4 | 2020 | 4 | 2020 |
| Source Selection | 1 | 2021 | 1 | 2021 |
| Milestone B Decision | 2 | 2021 | 2 | 2021 |
| EMD Contract Award | 3 | 2021 | 3 | 2021 |
| EMD | 3 | 2021 | 4 | 2025 |

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|---|--------------------|----------------|----------------|---|--------------------|----------------------|----------------|---|----------------|----------------------------|-------------------------|-------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force | | | | | | | | | | Date: February 2020 | | |
| Appropriation/Budget Activity 3600 / 7 | | | | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | | | | Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i> | | | | |
| COST (\$ in Millions) | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Cost To Complete | Total Cost |
| 676029: <i>Global Aircrew Strategic Network Terminal</i> | - | 19.181 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

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.

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

| | FY 2019 | FY 2020 | FY 2021 |
|---|----------------|----------------|----------------|
| Title: Global ASNT Inc 1 | 19.181 | 0.000 | 0.000 |
| Description: Engineering & Manufacturing Development (EMD) | | | |
| FY 2020 Plans: N/A | | | |
| FY 2021 Plans: N/A | | | |
| FY 2020 to FY 2021 Increase/Decrease Statement: N/A | | | |
| Accomplishments/Planned Programs Subtotals | 19.181 | 0.000 | 0.000 |

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| Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force | | Date: February 2020 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i> |

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

| <u>Line Item</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> | | | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>Cost To</u> | |
|--|----------------|----------------|----------------|------------|--------------|----------------|----------------|----------------|----------------|-----------------|-------------------|
| | | | <u>Base</u> | <u>OCO</u> | <u>Total</u> | | | | | <u>Complete</u> | <u>Total Cost</u> |
| • OPAF 03 PE 0303131F: <i>Global ASNT Inc. 1 (834210)</i> | 140.875 | 132.648 | 29.664 | - | 29.664 | 63.552 | 40.638 | 47.557 | 44.279 | Continuing | Continuing |
| • OPAF 05 PE 0303131F: <i>Global ASNT Inc. 1 (861900)</i> | 73.470 | 68.795 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

Remarks

D. Acquisition Strategy

Global ASNT used a full and open competitive approach to award an EMD contract for Increment 1. Global ASNT will continue to use a competitive incremental approach to fulfill the overall requirements for Increments 2 and 3.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

| | | |
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| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i> |
|--|---|---|

| Product Development (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Product Development | C/CPAF | Not specified. : TBD | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 1 - Engineering & Manufacturing Development | C/FPIF | Raytheon : Marlborough, MA | - | 15.547 | Oct 2018 | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 1 - Satellite Simulations | SS/FFP | MIT/Lincoln Laboratory : Lexington, MA | - | 1.040 | Mar 2019 | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 16.587 | | - | | - | | - | | - | Continuing | Continuing | N/A |

Remarks
- Raytheon Global ASNT Inc 1 EMD contract is an incrementally funded continuing effort on the existing contract.

| Support (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Support | C/CPAF | Not specified. : TBD | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 1 - MITRE Lab | SS/CPFF | MITRE : Bedford, MA | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 1 - Software Support | Various | Various : NV | - | 0.371 | Mar 2019 | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 1 - GFE | Various | Various : NV | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 0.371 | | - | | - | | - | | - | Continuing | Continuing | N/A |

| Test and Evaluation (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Test and Evaluation | C/CPAF | Not specified. : TBD | - | - | | - | | - | | - | | - | Continuing | Continuing | - |

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

| | | |
|--|---|---|
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i> |
|--|---|---|

| Test and Evaluation (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Global ASNT Inc 1 - Government Test and Evaluation | Various | Various : NV | - | 0.540 | Dec 2018 | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 1 - NSA | MIPR | NSA, Maryland : NV | - | 0.007 | Apr 2019 | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 0.547 | | - | | - | | - | | - | Continuing | Continuing | N/A |

| Management Services (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Management Services | C/CPAF | Not specified. : TBD | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 1 - PSC (Eng/Acq Support, Travel) | Various | Various : NV | - | 1.676 | Oct 2018 | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 1 - PSC (MITRE) | SS/CPFF | MITRE : Bedford, MA | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 1.676 | | - | | - | | - | | - | Continuing | Continuing | N/A |

| | | | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | Cost To Complete | Total Cost | Target Value of Contract |
|----------------------------|--|--|-------------|---------|---------|--------------|-------------|---------------|------------------|------------|--------------------------|
| Project Cost Totals | | | - | 19.181 | 0.000 | - | - | - | Continuing | Continuing | N/A |

Remarks

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| Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force | | Date: February 2020 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i> |

| | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | | FY 2025 | | | |
|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| Global ASNT Inc. 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Global ASNT Inc 1 - Engineering and Manufacturing Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Global ASNT Inc 1 - Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Global ASNT Inc 1 - Milestone C Decision | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Global ASNT Inc 1 - Production and Deployment | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Global ASNT Inc 1 - RAA IOC | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Global ASNT Inc 1 - Interim Contractor Support | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Global ASNT Inc 1 - RAA FOC | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force | | Date: February 2020 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i> |

Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Global ASNT Inc. 1 | | | | |
| Global ASNT Inc 1 - Engineering and Manufacturing Development | 1 | 2019 | 4 | 2019 |
| Global ASNT Inc 1 - Test | 1 | 2019 | 3 | 2019 |
| Global ASNT Inc 1 - Milestone C Decision | 4 | 2019 | 4 | 2019 |
| Global ASNT Inc 1 - Production and Deployment | 4 | 2019 | 4 | 2024 |
| Global ASNT Inc 1 - RAA IOC | 4 | 2021 | 4 | 2021 |
| Global ASNT Inc 1 - Interim Contractor Support | 1 | 2020 | 4 | 2024 |
| Global ASNT Inc 1 - RAA FOC | 4 | 2024 | 4 | 2024 |

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|---|--------------------|----------------|----------------|---------------------|---|----------------------|----------------|----------------|---|----------------------------|-------------------------|-------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force | | | | | | | | | | Date: February 2020 | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | | | | Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i> | | | |
| COST (\$ in Millions) | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Cost To Complete | Total Cost |
| 676030: <i>Global ASNT Inc 2</i> | - | 9.347 | 0.117 | 35.688 | 0.000 | 35.688 | 0.016 | 0.010 | 0.000 | 0.000 | Continuing | Continuing |
| 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 HEMP and 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 2019 | FY 2020 | FY 2021 |
|---|----------------|----------------|----------------|
| Title: Global ASNT Inc 2, Block 1 | 9.347 | 0.117 | 35.688 |
| Description: Pre-Technology Maturation and Risk Reduction (TMRR) | | | |
| FY 2020 Plans: | | | |
| - Work with STRATCOM/AFGSC to define operational trade space | | | |
| - Prepare Source Selection/Technical Evaluation Criteria | | | |
| - Release Request for Proposal (RFP) | | | |
| FY 2021 Plans: | | | |
| - Award Other Transaction Agreement (OTA) [Contract Award] | | | |
| - Initiate TMRR activities (Kickoff, etc.) | | | |
| - Examine/Analyze COTS implementations of alerting devices | | | |
| - Initiate designs and prototypes across range of materiel solutions | | | |
| - Examine trade-offs between cost/performance across prototype | | | |
| FY 2020 to FY 2021 Increase/Decrease Statement: | | | |
| FY21 increase reflects recovery profile after Cong mark in FY20. Ramp-up is required to support TMRR contract award in 1QFY21 | | | |
| Accomplishments/Planned Programs Subtotals | 9.347 | 0.117 | 35.688 |

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|---|---|---|
| Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force | | Date: February 2020 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i> |

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 institutes a tailored DoD 5000.02 rapid acquisition strategy. Global ASNT Inc 2, Blocks 2 and 3 will notionally utilize a traditional DoD 5000.02 acquisition strategy.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

| | | |
|--|---|---|
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i> |
|--|---|---|

| Product Development (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Product Development | C/CPAF | Various : Bedford, MA | - | - | | - | | 28.429 | Nov 2020 | - | | 28.429 | Continuing | Continuing | - |
| MITRE Lab | SS/CPFF | MITRE : Bedford, MA | - | 0.235 | Jan 2020 | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 2 - Pre-TMRR Activities | Various | Various : Bedford, MA | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Risk Reduction | TBD | Not specified. : TBD | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 0.235 | | - | | 28.429 | | - | | 28.429 | Continuing | Continuing | N/A |

| Support (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Support | Various | Not specified. : TBD | - | 0.000 | | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 2 - Information Assurance | SS/CPAF | Booz Allen Hamilton : Bedford, MA | - | 0.145 | Nov 2019 | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 0.145 | | - | | - | | - | | - | Continuing | Continuing | N/A |

| Test and Evaluation (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 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 | | | |
| Test and Evaluation | C/CPAF | Not specified. : TBD | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Global ASNT Inc 2 - Test Planning | PO | 96 TW : Eglin AFB, FL | - | 0.040 | Feb 2019 | - | | 0.484 | Oct 2020 | - | | 0.484 | Continuing | Continuing | - |
| Subtotal | | | - | 0.040 | | - | | 0.484 | | - | | 0.484 | Continuing | Continuing | N/A |

UNCLASSIFIED

| | | |
|--|---|---|
| Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force | | Date: February 2020 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i> | Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i> |

Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Global ASNT Inc. 2 | | | | |
| Global ASNT Inc 2 - Pre-TMRR Activities | 1 | 2019 | 2 | 2020 |
| Global ASNT Inc 2 - Materiel Development Decision/Acquisition Strategy Review | 2 | 2020 | 2 | 2020 |
| Global ASNT Inc 2 - Release Request for Proposal (RFP) | 3 | 2020 | 3 | 2020 |
| Global ASNT Inc 2 - OTA (Contract Award) | 1 | 2021 | 1 | 2021 |
| Global ASNT Inc 2 - Technology Maturation and Risk Reduction (TMRR) | 1 | 2021 | 4 | 2023 |
| Global ASNT Inc 2 - Milestone B/C | 4 | 2023 | 4 | 2023 |
| Global ASNT Inc 2 - Initial Operational Capability (IOC) | 1 | 2025 | 1 | 2025 |

Note

GASNT Inc 2, Block 1 schedule is notional.