

# UNCLASSIFIED

|  |             |         |         |              |   |               |         |         |         |                |                  |            |
|--|-------------|---------|---------|--------------|---|---------------|---------|---------|---------|----------------|------------------|------------|
| Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force  |             |         |         |              |   |               |         |         |         | Date: May 2017 |                  |            |
| Appropriation/Budget Activity<br>3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development   |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |               |         |         |         |                |                  |            |
| COST (\$ in Millions)  | Prior Years | FY 2016 | FY 2017 | FY 2018 Base | FY 2018 OCO   | FY 2018 Total | FY 2019 | FY 2020 | FY 2021 | FY 2022        | Cost To Complete | Total Cost |
| Total Program Element  | 0.000       | 80.669  | 87.889  | 99.455       | 0.000   | 99.455        | 93.206  | 66.771  | 69.415  | 70.835         | Continuing       | Continuing |
| 67A030: Infrastructure   | 0.000       | 30.018  | 27.526  | 28.030       | 0.000   | 28.030        | 12.005  | 0.000   | 0.000   | 0.000          | 0.000            | 97.579     |
| 67A031: Mission Applications   | 0.000       | 38.270  | 20.496  | 15.595       | 0.000   | 15.595        | 11.806  | 0.000   | 0.000   | 0.000          | 0.000            | 86.167     |
| 67A035: Enterprise Space BMC2  | 0.000       | 12.381  | 39.867  | 55.830       | 0.000   | 55.830        | 69.395  | 66.771  | 69.415  | 70.835         | Continuing       | Continuing |
| Program MDAP/MAIS Code: N82  |             |         |         |              |   |               |         |         |         |                |                  |            |
| Note<br>In FY2018, PE 0305614F, JSpOC Mission System efforts were transferred to PE 1203614F, JSpOC Mission System due to the creation of a new Major Force Program for Space. FY2016 and FY2017 funding is now documented in the exhibits for PE 1203614F.  |             |         |         |              |   |               |         |         |         |                |                  |            |
| A. Mission Description and Budget Item Justification<br>The Joint Space Operations Center (JSpOC) Mission System (JMS) Program is a Space Command and Control (C2) capability for the Commander, Joint Functional Component Commander for Space (JFCC SPACE). The JMS program is predominately a software effort that will produce an integrated, net-centric Service Oriented Architecture (SOA) and the necessary software applications to accomplish required missions. The program will provide a collaborative environment that will enhance and modernize space situational awareness (SSA) capabilities; create decision-relevant views of the space environment; rapidly detect, track and characterize objects of interest; identify / exploit traditional and non-traditional sources; perform space threat analysis; and enable efficient distribution of data across the Space Surveillance Network (SSN). Furthermore, it provides a viable migration path from the legacy Space Defense Operations Center (SPADOC) system, which has 75% of its components beyond end of life or end of service, and the majority of its software is no longer vendor-supported. Enterprise Space BMC2 (previously JMS Increment 3) will provide a Battle Management Command & Control (BMC2) system which will allow the Commander, JFCC-Space to command and control space forces in the space control and space situational awareness realms. This system will develop and integrate battle management mission applications, create an interactive modeling and simulation environment to support training and exercises, provide for secure data sharing and workflow, and Course of Action (COA) development. Funding includes technical studies, development, experimentation, integration and related support costs.<br><br>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. |             |         |         |              |   |               |         |         |         |                |                  |            |

**UNCLASSIFIED**

| Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force                                   |         |                                    |              | Date: May 2017 |               |
|---|---------|------------------------------------|--------------|----------------|---------------|
| Appropriation/Budget Activity   |         | R-1 Program Element (Number/Name)  |              |                |               |
| 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development |         | PE 1203614F I JSpOC Mission System |              |                |               |
| B. Program Change Summary (\$ in Millions)  | FY 2016 | FY 2017                            | FY 2018 Base | FY 2018 OCO    | FY 2018 Total |
| Previous President's Budget   | 80.669  | 72.889                             | 62.799       | 0.000          | 62.799        |
| Current President's Budget  | 80.669  | 87.889                             | 99.455       | 0.000          | 99.455        |
| Total Adjustments   | 0.000   | 15.000                             | 36.656       | 0.000          | 36.656        |
| • 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  | 0.000   | 0.000                              |              |                |               |
| • Other Adjustments   | 0.000   | 15.000                             | 36.656       | 0.000          | 36.656        |
| Change Summary Explanation  |         |                                    |              |                |               |
| FY 2017: \$15.000M FY2017 Request for Additional Appropriations to fund Enterprise Space BMC2     |         |                                    |              |                |               |
| FY 2018: \$36.646M increase due to funding realignment to support Increment 2 schedule slip.      |         |                                    |              |                |               |

**UNCLASSIFIED**

| Exhibit R-2A, RDT&E Project Justification: FY 2018 Air Force |             |         |         |              |   |               |         |         |  | Date: May 2017 |                  |            |
|--|-------------|---------|---------|--------------|---|---------------|---------|---------|--|----------------|------------------|------------|
| Appropriation/Budget Activity<br>3600 / 7                    |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |               |         |         | Project (Number/Name)<br>67A030 / Infrastructure |                |                  |            |
| COST (\$ in Millions)  | Prior Years | FY 2016 | FY 2017 | FY 2018 Base | FY 2018 OCO   | FY 2018 Total | FY 2019 | FY 2020 | FY 2021  | FY 2022        | Cost To Complete | Total Cost |
| 67A030: Infrastructure                                       | 0.000       | 30.018  | 27.526  | 28.030       | 0.000   | 28.030        | 12.005  | 0.000   | 0.000  | 0.000          | 0.000            | 97.579     |
| Quantity of RDT&E Articles                                   | -           | -       | -       | -            | -   | -             | -       | -       | -  | -              |                  |            |

**A. Mission Description and Budget Item Justification**

Infrastructure provides a Service Oriented Architecture (SOA), net-centric collaborative information environment at the Unclassified, Secret, and TS/SCI levels. Efforts incorporate net-centric enterprise services and integrating incremental space mission applications services. Priority is migration off the legacy SPADOC hardware and services into a sustainable infrastructure. Effort integrates components of SSA mission applications and C2 capabilities into the JSpOC to create timely, actionable knowledge necessary for maintaining space superiority and exercising command and control of space forces.

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

|   | <b>FY 2016</b> | <b>FY 2017</b> | <b>FY 2018</b> |
|---|----------------|----------------|----------------|
| <b>Title:</b> Increment 2   | 30.018         | 27.526         | 28.030         |
| <b>Description:</b> Pursues and integrates a collaborative net-centric, SOA information environment.  |                |                |                |
| <b>FY 2016 Accomplishments:</b><br>Continued testing of SP-9 and development/integration of SP-11. Continued to develop JMS Standard Space Trainer.   |                |                |                |
| <b>FY 2017 Plans:</b><br>Complete testing of SP-9 and development/integration of SP-11. Update Standard Space Trainer with SP-11 capabilities and develop capability to net-centrally expose intelligence data and non-traditional data sources.                          |                |                |                |
| <b>FY 2018 Plans:</b><br>Execute testing for SP-11 to include content accelerated from SP-13 and complete Standard Space Trainer. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc. |                |                |                |
| <b>Accomplishments/Planned Programs Subtotals</b>   |                |                | 28.030         |

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

| <b>Line Item</b>   | <b>FY 2016</b> | <b>FY 2017</b> | <b>FY 2018 Base</b> | <b>FY 2018 OCO</b> | <b>FY 2018 Total</b> | <b>FY 2019</b> | <b>FY 2020</b> | <b>FY 2021</b> | <b>FY 2022</b> | <b>Cost To Complete</b> | <b>Total Cost</b> |
|--|----------------|----------------|---------------------|--------------------|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| • SPAF: BA01: Line Item #<br>836790: <i>Space Mods Space</i> | 0.000          | 0.000          | 3.850               | 0.000              | 3.850                | 20.533         | 12.471         | 12.695         | 12.956         | 134.274                 | 196.779           |

**UNCLASSIFIED**

|   |  |   |                       |
|---|--|---|-----------------------|
| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Air Force |  |   | <b>Date:</b> May 2017 |
| <b>Appropriation/Budget Activity</b><br>3600 / 7                        | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSpOC Mission System | <b>Project (Number/Name)</b><br>67A030 / Infrastructure |                       |

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

| <u>Line Item</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u><br><u>Base</u> | <u>FY 2018</u><br><u>OCO</u> | <u>FY 2018</u><br><u>Total</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>Cost To</u><br><u>Complete</u> | <u>Total Cost</u> |
|------------------|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
|------------------|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|

**Remarks**

Replaces JMS components and provides an operational, sustainable environment to maintain capabilities that fuse data from space intelligence, surveillance, reconnaissance, and environmental sources. This modification will procure commercial hardware, software licenses, and warranties to upgrade the operational environment enclaves (2 Secret / 2 TS/SCI), as well as keep up to date development/operational testing locations.

**D. Acquisition Strategy**

The JMS overarching Acquisition Strategy, approved by the Milestone Decision Authority on 15 April 2012, provides for a multi-increment program to develop, integrate, test, and deliver JMS capability. The acquisition strategy reflects new principles that address the speed, agility, and adaptability required for successful IT acquisition resulting in a tailored incremental acquisition approach to deliver early and often by leveraging mature industry capabilities and taking advantage of previous Government investments in Federally Funded Research and Development Center (FFRDC) and Government lab prototyping efforts.

**E. Performance Metrics**

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

**UNCLASSIFIED**

| Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Air Force        |                        |                                 |             |         |            |   |            |              |            |  |            | Date: May 2017 |                  |            |                          |
|--|------------------------|---------------------------------|-------------|---------|------------|---|------------|--------------|------------|--|------------|----------------|------------------|------------|--------------------------|
| Appropriation/Budget Activity<br>3600 / 7                          |                        |                                 |             |         |            | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |            |              |            | Project (Number/Name)<br>67A030 / Infrastructure |            |                |                  |            |                          |
| Product Development (\$ in Millions)                               |                        |                                 |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO                                      |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost   | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| SOA, Infrastructure and core service development                   | Various                | Various : Various               | 0.000       | 6.744   | Dec 2015   | 0.000   |            | 0.000        |            | 0.000  |            | 0.000          | 12.005           | 18.749     | 18.782                   |
| High-performance computing and security infrastructure development | Various                | Various : Various               | 0.000       | 2.031   | Dec 2015   | 0.000   |            | 0.000        |            | 0.000  |            | 0.000          | 0.000            | 2.031      | 2.593                    |
| Government Capability Providers                                    | Various                | Various : Various               | 0.000       | 0.000   |            | 1.178   | Dec 2016   | 0.000        |            | 0.000  |            | 0.000          | 0.000            | 1.178      | 1.575                    |
| JMS Enterprise SEI   | Various                | Various : Various               | 0.000       | 0.000   |            | 22.618  | Nov 2016   | 25.300       | Nov 2017   | 0.000  |            | 25.300         | 0.000            | 47.918     | 45.784                   |
| Mission Infrastructure   | Various                | Various : Various               | 0.000       | 8.050   | Nov 2015   | 0.000   |            | 0.000        |            | 0.000  |            | 0.000          | 0.000            | 8.050      | 10.256                   |
| Net-Centric Sensors and Data Sources                               | Various                | Various : Various               | 0.000       | 0.835   | Nov 2015   | 0.000   |            | 0.000        |            | 0.000  |            | 0.000          | 0.000            | 0.835      | 0.642                    |
| Standard Space Trainer   | C/TBD                  | Sonalyst : Colorado Springs, CO | 0.000       | 2.150   | Nov 2015   | 1.000   | Nov 2016   | 0.100        | Nov 2017   | 0.000  |            | 0.100          | 0.000            | 3.250      | 4.425                    |
| Integration & Acq Logistics  | Various                | SPAWAR : San Diego, CA          | 0.000       | 7.504   | Nov 2015   | 0.000   |            | 0.000        |            | 0.000  |            | 0.000          | 0.000            | 7.504      | 13.623                   |
| Subtotal   |                        |                                 | 0.000       | 27.314  |            | 24.796  |            | 25.400       |            | 0.000  |            | 25.400         | 12.005           | 89.515     | 97.680                   |
| Support (\$ in Millions)   |                        |                                 |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO                                      |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost   | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| Subtotal   |                        |                                 | -           | -       |            | -   |            | -            |            | -  |            | -              | -                | -          | -                        |
| Test and Evaluation (\$ in Millions)                               |                        |                                 |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO                                      |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost   | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| Subtotal   |                        |                                 | -           | -       |            | -   |            | -            |            | -  |            | -              | -                | -          | -                        |
|  |                        |                                 |             |         |            |   |            |              |            |  |            |                |                  |            |                          |

**UNCLASSIFIED**

|   |                        |                                |             |         |            |   |            |                 |            |  |            |                  |                  |            |                          |
|---|------------------------|--------------------------------|-------------|---------|------------|---|------------|-----------------|------------|--|------------|------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Air Force |                        |                                |             |         |            |   |            |                 |            |  |            | Date: May 2017   |                  |            |                          |
| Appropriation/Budget Activity<br>3600 / 7                   |                        |                                |             |         |            | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |            |                 |            | Project (Number/Name)<br>67A030 / Infrastructure |            |                  |                  |            |                          |
| Management Services (\$ in Millions)                        |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018<br>Base |            | FY 2018<br>OCO                                   |            | FY 2018<br>Total |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost            | Award Date | Cost   | Award Date | Cost             | Cost To Complete | Total Cost | Target Value of Contract |
| A&AS  | Various                | Various : Various              | 0.000       | 2.014   | Nov 2015   | 2.730   | Nov 2016   | 2.630           | Nov 2017   | 0.000  |            | 2.630            | 0.000            | 7.374      | 8.744                    |
| FFRDC   | Various                | Various : Various              | 0.000       | 0.690   |            | 0.000   |            | 0.000           |            | 0.000  |            | 0.000            | 0.000            | 0.690      | 0.690                    |
| Subtotal  |                        |                                | 0.000       | 2.704   |            | 2.730   |            | 2.630           |            | 0.000  |            | 2.630            | 0.000            | 8.064      | 9.434                    |
|   |                        |                                | Prior Years | FY 2016 |            | FY 2017   |            | FY 2018<br>Base |            | FY 2018<br>OCO                                   |            | FY 2018<br>Total | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals   |                        |                                | 0.000       | 30.018  |            | 27.526  |            | 28.030          |            | 0.000  |            | 28.030           | 12.005           | 97.579     | -                        |
| Remarks   |                        |                                |             |         |            |   |            |                 |            |  |            |                  |                  |            |                          |

**UNCLASSIFIED**

|   |                       |
|---|-----------------------|
| <b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> FY 2018 Air Force | <b>Date:</b> May 2017 |
|---|-----------------------|

|  |  |   |
|--|--|---|
| <b>Appropriation/Budget Activity</b><br>3600 / 7 | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSpOC Mission System | <b>Project (Number/Name)</b><br>67A030 / Infrastructure |
|--|--|---|

|   | FY 2016 |   |   |   | FY 2017 |   |   |   | FY 2018 |   |   |   | FY 2019 |   |   |   | FY 2020 |   |   |   | FY 2021 |   |   |   | FY 2022 |   |   |   |
|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|   | 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 |
| Commerical Software Operation Licenses (Nov 2015) |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Service Pack 9 Development and Delivery           |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Service Pack 11 Development and Delivery          |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Inc 2 Full Deployment Decision (FDD)              |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

**UNCLASSIFIED**

|  |  |   |                       |
|--|--|---|-----------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Air Force |  |   | <b>Date:</b> May 2017 |
| <b>Appropriation/Budget Activity</b><br>3600 / 7                   | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSpOC Mission System | <b>Project (Number/Name)</b><br>67A030 / Infrastructure |                       |

**Schedule Details**

| <b>Events</b>                                     | <b>Start</b>   |             | <b>End</b>     |             |
|---|----------------|-------------|----------------|-------------|
|   | <b>Quarter</b> | <b>Year</b> | <b>Quarter</b> | <b>Year</b> |
| Commerical Software Operation Licenses (Nov 2015) | 1              | 2016        | 1              | 2016        |
| Service Pack 9 Development and Delivery           | 1              | 2016        | 4              | 2017        |
| Service Pack 11 Development and Delivery          | 1              | 2016        | 3              | 2019        |
| Inc 2 Full Deployment Decision (FDD)              | 3              | 2019        | 3              | 2019        |

**Note**

Continue testing of SP-9 and development/integration of SP-11. Develop JMS Standard Space Trainer.

**UNCLASSIFIED**

| Exhibit R-2A, RDT&E Project Justification: FY 2018 Air Force |             |         |         |              |   |               |         |         |  | Date: May 2017 |                  |            |
|--|-------------|---------|---------|--------------|---|---------------|---------|---------|--|----------------|------------------|------------|
| Appropriation/Budget Activity<br>3600 / 7                    |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |               |         |         | Project (Number/Name)<br>67A031 / Mission Applications |                |                  |            |
| COST (\$ in Millions)  | Prior Years | FY 2016 | FY 2017 | FY 2018 Base | FY 2018 OCO   | FY 2018 Total | FY 2019 | FY 2020 | FY 2021  | FY 2022        | Cost To Complete | Total Cost |
| 67A031: Mission Applications                                 | 0.000       | 38.270  | 20.496  | 15.595       | 0.000   | 15.595        | 11.806  | 0.000   | 0.000  | 0.000          | 0.000            | 86.167     |
| Quantity of RDT&E Articles                                   | -           | -       | -       | -            | -   | -             | -       | -       | -  | -              |                  |            |

**A. Mission Description and Budget Item Justification**

Mission applications provides space services to enhance the accuracy, sustainability, and responsiveness of space surveillance capabilities by providing the knowledge environment necessary to enable the Commander JFCC Space to make rapid, responsive decisions for the protection of space assets from proliferating threats (adversary as well as orbiting debris). The system provides a high accuracy space catalog (knowledge of space objects), increased observation verification and capabilities, and improved event processing. Research, development, and system design provides SSA space catalog applications, services, space surveillance observation processing, and sensor tasking. Funding includes technical studies, development, and integration.

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

|   |                |                |                |
|---|----------------|----------------|----------------|
|   | <b>FY 2016</b> | <b>FY 2017</b> | <b>FY 2018</b> |
| <b>Title:</b> Increment 2   | 38.270         | 20.496         | 15.595         |
| <b>Description:</b> Services/mission applications to conduct space control/situational awareness.   |                |                |                |
| <b>FY 2016 Accomplishments:</b><br>Continued development, testing and fielding of commercial software, capabilities for Space Event Processing and other operator tools.  |                |                |                |
| <b>FY 2017 Plans:</b><br>Complete testing and fielding of commercial software for event processing functions, complete integration of exercise/training capabilities and software management tools.   |                |                |                |
| <b>FY 2018 Plans:</b><br>Integrate and test commercial software supporting test, training and exercises as well as software management tools. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc. |                |                |                |
| <b>Accomplishments/Planned Programs Subtotals</b>   |                |                |                |
|   | 38.270         | 20.496         | 15.595         |

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

| <b>Line Item</b>          | <b>FY 2016</b> | <b>FY 2017</b> | <b>FY 2018 Base</b> | <b>FY 2018 OCO</b> | <b>FY 2018 Total</b> | <b>FY 2019</b> | <b>FY 2020</b> | <b>FY 2021</b> | <b>FY 2022</b> | <b>Cost To Complete</b> | <b>Total Cost</b> |
|---------------------------|----------------|----------------|---------------------|--------------------|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| • SPAF: BA01: Line Item   | 0.000          | 0.000          | 3.850               | 0.000              | 3.850                | 20.533         | 12.471         | 12.695         | 12.956         | 134.274                 | 196.779           |
| #836790: Space Mods Space |                |                |                     |                    |                      |                |                |                |                |                         |                   |
| <b>Remarks</b>            |                |                |                     |                    |                      |                |                |                |                |                         |                   |

**UNCLASSIFIED**

|   |  |   |                       |
|---|--|---|-----------------------|
| <b>Exhibit R-2A, RDT&amp;E Project Justification: FY 2018 Air Force</b> |  |   | <b>Date:</b> May 2017 |
| <b>Appropriation/Budget Activity</b><br>3600 / 7                        | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSPOC Mission System | <b>Project (Number/Name)</b><br>67A031 / Mission Applications |                       |

### D. Acquisition Strategy

The JMS overarching Acquisition Strategy, approved by the Milestone Decision Authority on 15 Apr 2012, provides for a multi-increment program to develop, integrate, test, and deliver JMS capability. The acquisition strategy reflects new principles that address the speed, agility, and adaptability required for successful IT acquisition resulting in a tailored incremental acquisition approach to deliver early and often by leveraging mature industry capabilities and taking advantage of previous Government investments in Federally Funded Research and Development Center (FFRDC) and Government lab prototyping efforts.

## E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

**UNCLASSIFIED**

| Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Air Force |                        |                                |             |         |            |   |            |              |            |  |            | Date: May 2017 |                  |            |                          |
|---|------------------------|--------------------------------|-------------|---------|------------|---|------------|--------------|------------|--|------------|----------------|------------------|------------|--------------------------|
| Appropriation/Budget Activity<br>3600 / 7                   |                        |                                |             |         |            | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |            |              |            | Project (Number/Name)<br>67A031 / Mission Applications |            |                |                  |            |                          |
| Product Development (\$ in Millions)                        |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO  |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost   | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| Mission applications and service pack content development   | Various                | Various : Various              | 0.000       | 14.833  | Dec 2015   | 0.000   |            | 0.000        |            | 0.000  |            | 0.000          | 0.000            | 14.833     | 5.845                    |
| JMS Enterprise SEI  | Various                | Various : Various              | 0.000       | 0.000   |            | 6.575   | Nov 2016   | 2.660        | Jan 2017   | 0.000  |            | 2.660          | 0.000            | 9.235      | 9.235                    |
| Technical Mission Analysis (WS)                             | Various                | Various : Various              | 0.000       | 1.152   | Nov 2015   | 1.302   | Nov 2016   | 0.400        | Nov 2016   | 0.000  |            | 0.400          | 0.000            | 2.854      | 11.094                   |
| COTS hardware, software purchase and engineering support    | Various                | Various : Various              | 0.000       | 13.965  | Nov 2015   | 5.556   | Nov 2016   | 6.788        | Oct 2016   | 0.000  |            | 6.788          | 0.000            | 26.309     | 27.923                   |
| Subtotal  |                        |                                | 0.000       | 29.950  |            | 13.433  |            | 9.848        |            | 0.000  |            | 9.848          | 0.000            | 53.231     | 54.097                   |
| Support (\$ in Millions)                                    |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO  |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost   | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| Support Costs   | Various                | Various : Various              | 0.000       | 0.361   | Nov 2015   | 0.372   | Nov 2016   | 0.300        | Nov 2016   | 0.000  |            | 0.300          | 0.000            | 1.033      | 1.033                    |
| Subtotal  |                        |                                | 0.000       | 0.361   |            | 0.372   |            | 0.300        |            | 0.000  |            | 0.300          | 0.000            | 1.033      | 1.033                    |
| Test and Evaluation (\$ in Millions)                        |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO  |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost   | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| Combined Developmental Test / Operational Test              | Various                | Various : Various              | 0.000       | 2.300   | Nov 2015   | 2.300   | Nov 2016   | 2.300        | Dec 2016   | 0.000  |            | 2.300          | 0.000            | 6.900      | 6.157                    |
| Combined Test Facility                                      | Various                | Various : Various              | 0.000       | 1.623   | Nov 2015   | 1.207   | Nov 2016   | 1.210        | Dec 2016   | 0.000  |            | 1.210          | 0.000            | 4.040      | 4.473                    |
| Subtotal  |                        |                                | 0.000       | 3.923   |            | 3.507   |            | 3.510        |            | 0.000  |            | 3.510          | 0.000            | 10.940     | 10.630                   |
| Management Services (\$ in Millions)                        |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO  |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost   | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| A&AS  | Various                | Various : Various              | 0.000       | 2.912   | Dec 2015   | 1.685   | Dec 2016   | 1.337        | Nov 2016   | 0.000  |            | 1.337          | 0.000            | 5.934      | 3.338                    |

**UNCLASSIFIED**

|  |  |  |  |  |  |  |  |  |  |   |  |                       |  |  |  |
|--|--|--|--|--|--|--|--|--|--|---|--|-----------------------|--|--|--|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Air Force</b> |  |  |  |  |  |  |  |  |  |   |  | <b>Date: May 2017</b> |  |  |  |
| <b>Appropriation/Budget Activity</b><br>3600 / 7                       |  |  |  |  |  | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSpOC Mission System |  |  |  | <b>Project (Number/Name)</b><br>67A031 / Mission Applications |  |                       |  |  |  |

  

| <b>Management Services (\$ in Millions)</b> |                                   |   |                    | <b>FY 2016</b> |                   | <b>FY 2017</b> |                   | <b>FY 2018 Base</b> |                   | <b>FY 2018 OCO</b> |                   | <b>FY 2018 Total</b> |                         |                   |                                 |
|---|-----------------------------------|---|--------------------|----------------|-------------------|----------------|-------------------|---------------------|-------------------|--------------------|-------------------|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Cost Category Item</b>                   | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>         | <b>Award Date</b> | <b>Cost</b>        | <b>Award Date</b> | <b>Cost</b>          | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| FFRDC                                       | Various                           | Various : Various                         | 0.000              | 0.974          | Dec 2015          | 1.382          | Dec 2016          | 0.500               | Dec 2016          | 0.000              |                   | 0.500                | 0.000                   | 2.856             | 3.455                           |
| Other Support                               | Various                           | Various : Various                         | 0.000              | 0.150          | Dec 2015          | 0.117          | Dec 2016          | 0.100               | Nov 2016          | 0.000              |                   | 0.100                | 0.000                   | 0.367             | 0.372                           |
| <b>Subtotal</b>                             |                                   |   | 0.000              | 4.036          |                   | 3.184          |                   | 1.937               |                   | 0.000              |                   | 1.937                | 0.000                   | 9.157             | 7.165                           |

  

|                            | <b>Prior Years</b> | <b>FY 2016</b> |  | <b>FY 2017</b> |  | <b>FY 2018 Base</b> |  | <b>FY 2018 OCO</b> |  | <b>FY 2018 Total</b> | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
|----------------------------|--------------------|----------------|--|----------------|--|---------------------|--|--------------------|--|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Project Cost Totals</b> | 0.000              | 38.270         |  | 20.496         |  | 15.595              |  | 0.000              |  | 15.595               | 0.000                   | 74.361            | -                               |

  

**Remarks**

**UNCLASSIFIED**

|   |                       |
|---|-----------------------|
| <b>Exhibit R-4, RDT&amp;E Schedule Profile: FY 2018 Air Force</b> | <b>Date:</b> May 2017 |
|---|-----------------------|

|  |  |   |
|--|--|---|
| <b>Appropriation/Budget Activity</b><br>3600 / 7 | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSpOC Mission System | <b>Project (Number/Name)</b><br>67A031 / Mission Applications |
|--|--|---|

|   | FY 2016 |   |   |   | FY 2017 |   |   |   | FY 2018 |   |   |   | FY 2019 |   |   |   | FY 2020 |   |   |   | FY 2021 |   |   |   | FY 2022 |   |   |   |
|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|   | 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 |
| Commerical Software Operation Licenses (Nov 2015) |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Service Pack 9 Development and Delivery           |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Service Pack 11 Development and Delivery          |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Increment 2 FDD                                   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

**UNCLASSIFIED**

|  |  |   |                       |
|--|--|---|-----------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Air Force |  |   | <b>Date:</b> May 2017 |
| <b>Appropriation/Budget Activity</b><br>3600 / 7                   | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSpOC Mission System | <b>Project (Number/Name)</b><br>67A031 / Mission Applications |                       |

Schedule Details

| Events  | Start   |      | End     |      |
|---|---------|------|---------|------|
|   | Quarter | Year | Quarter | Year |
| Commerical Software Operation Licenses (Nov 2015) | 1       | 2016 | 1       | 2016 |
| Service Pack 9 Development and Delivery           | 1       | 2016 | 4       | 2017 |
| Service Pack 11 Development and Delivery          | 1       | 2016 | 3       | 2019 |
| Increment 2 FDD                                   | 3       | 2019 | 3       | 2019 |

**Note**

Continue testing of SP-9 and development/integration of SP-11. Develop JMS Standard Space Trainer.

**UNCLASSIFIED**

|  |             |         |         |              |   |               |         |         |   |                |                  |            |
|--|-------------|---------|---------|--------------|---|---------------|---------|---------|---|----------------|------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: FY 2018 Air Force   |             |         |         |              |   |               |         |         |   | Date: May 2017 |                  |            |
| Appropriation/Budget Activity<br>3600 / 7  |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |               |         |         | Project (Number/Name)<br>67A035 / Enterprise Space BMC2 |                |                  |            |
| COST (\$ in Millions)  | Prior Years | FY 2016 | FY 2017 | FY 2018 Base | FY 2018 OCO   | FY 2018 Total | FY 2019 | FY 2020 | FY 2021   | FY 2022        | Cost To Complete | Total Cost |
| 67A035: Enterprise Space BMC2  | 0.000       | 12.381  | 39.867  | 55.830       | 0.000   | 55.830        | 69.395  | 66.771  | 69.415  | 70.835         | Continuing       | Continuing |
| Quantity of RDT&E Articles   | -           | -       | -       | -            | -   | -             | -       | -       | -   | -              |                  |            |
| A. Mission Description and Budget Item Justification   |             |         |         |              |   |               |         |         |   |                |                  |            |
| Enterprise Space BMC2 (previously JMS Increment 3) will provide a Battle Management Command & Control (BMC2) System that allows JFCC Space to meet emerging threats. This system will develop and integrate mission applications which include, but are not limited to, providing the ability to aggregate intelligence data from various user-defined sources and automatically generating alerts, provide an integrated operating picture for radio frequency spectrum inputs, and create an interactive modeling and simulation environment to support training and exercises, collaborative data sharing, and Course of Action (COA) development and assessment. Funding includes technical studies, development, experimentation, integration and related support costs.  |             |         |         |              |   |               |         |         |   |                |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions)   |             |         |         |              |   |               |         |         | FY 2016   | FY 2017        | FY 2018          |            |
| Title: Enterprise Space BMC2   |             |         |         |              |   |               |         |         | 12.381  | 39.867         | 55.830           |            |
| Description: Services/mission applications to deliver a robust, responsive BMC2 capability to meet emerging threats. Completion of Enterprise Space BMC2 (previously JMS Increment 3) will deliver a system which provides critical margin of excellence for decision makers trying to prevent a conflict from extending to space, or winning it if it does.   |             |         |         |              |   |               |         |         |   |                |                  |            |
| FY 2016 Accomplishments:<br>Began systems engineering, design, and integration market research. Executed risk reduction with Joint Emergent Operational Need (JEON) ST-0006 to continue requirements refinement and program planning for Enterprise Space BMC2 (previously JMS Increment 3). Conducted technical maturation studies and risk reduction efforts to enable migration from catalog maintenance to predictive battle management and improved integration planning for intelligence and sensor data. Performed market research and data calls to determine existing capabilities that can be integrated into JMS to meet BMC2 objectives. Identified low tech maturity areas and mitigate program risk and include early prototyping.   |             |         |         |              |   |               |         |         |   |                |                  |            |
| FY 2017 Plans:<br>Mature requirements to support Enterprise Space BMC2, continue systems engineering and program planning. Conduct developmental planning efforts to migrate from catalog maintenance of space to predictive battle management and conduct integration of intelligence and sensor data. Perform market research and data calls and developmental planning contracts to determine existing capabilities that can meet ESBMC2 objectives. Initial Design, Build, and test will commence leveraging Government capabilities, industry capabilities and commercially available capabilities in order to understand and then mature Technology Readiness Levels (TRL). FY17 investments will develop prototypes to support experiments which will inform TTPs and CONOPS while revising or confirming requirements. |             |         |         |              |   |               |         |         |   |                |                  |            |
| FY 2018 Plans:   |             |         |         |              |   |               |         |         |   |                |                  |            |

# UNCLASSIFIED

|   |                |                |                               |   |                                |                |                |   |                |                         |                   |                |
|---|----------------|----------------|-------------------------------|---|--------------------------------|----------------|----------------|---|----------------|-------------------------|-------------------|----------------|
| Exhibit R-2A, RDT&E Project Justification: FY 2018 Air Force  |                |                |                               |   |                                |                |                |   |                | Date: May 2017          |                   |                |
| Appropriation/Budget Activity<br>3600 / 7   |                |                |                               | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |                                |                |                | Project (Number/Name)<br>67A035 / Enterprise Space BMC2 |                |                         |                   |                |
| <b>B. Accomplishments/Planned Programs (\$ in Millions)</b>   |                |                |                               |   |                                |                |                |   |                | <b>FY 2016</b>          | <b>FY 2017</b>    | <b>FY 2018</b> |
| Continue developmental planning and contracting efforts to include contract awards from program support, systems engineering, design, technical maturation and risk reduction, prototyping and integration of Enterprise Space BMC2 commercial and government capabilities. Systems Engineering Enterprise Management will build roadmaps for BMC2 efforts including AFRCO, JEON and BMC2 prototypes. Contract for comprehensive system development and initial integration with government/commercial provider(s). Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, systems engineering, design, capability development, prototype development and integration, experimentation, program integration, support to residual capabilities and software integration. |                |                |                               |   |                                |                |                |   |                |                         |                   |                |
| <b>Accomplishments/Planned Programs Subtotals</b>   |                |                |                               |   |                                |                |                |   |                | 12.381                  | 39.867            | 55.830         |
| <b>C. Other Program Funding Summary (\$ in Millions)</b>  |                |                |                               |   |                                |                |                |   |                |                         |                   |                |
| <u>Line Item</u>  | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u><br><u>Base</u> | <u>FY 2018</u><br><u>OCO</u>  | <u>FY 2018</u><br><u>Total</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u>  | <u>FY 2022</u> | <u>Cost To Complete</u> | <u>Total Cost</u> |                |
| • N/A: N/A  | 0.000          | 0.000          | 0.000                         | 0.000   | 0.000                          | 0.000          | 0.000          | 0.000   | 0.000          | -                       | -                 |                |
| <b>Remarks</b>  |                |                |                               |   |                                |                |                |   |                |                         |                   |                |
| <b>D. Acquisition Strategy</b>  |                |                |                               |   |                                |                |                |   |                |                         |                   |                |
| The Air Force is in developmental planning for the Enterprise Space BMC2 (previously JMS Increment 3) acquisition strategy. Increments 1 and 2 used a government-as-an-integrator model with the Navy's SPAWAR Systems Center leading those efforts. The program developed and incrementally delivered service packs into operations. The Enterprise Space BMC2 (previously JMS Increment 3) strategy will focus on rapidly delivering capability to warfighters, leveraging commercial and government prototypes, followed by a sustained comprehensive system delivery.   |                |                |                               |   |                                |                |                |   |                |                         |                   |                |
| <b>E. Performance Metrics</b>   |                |                |                               |   |                                |                |                |   |                |                         |                   |                |
| Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.  |                |                |                               |   |                                |                |                |   |                |                         |                   |                |

**UNCLASSIFIED**

| Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Air Force |                        |                                |             |         |            |   |            |              |            |   |            | Date: May 2017 |                  |            |                          |
|---|------------------------|--------------------------------|-------------|---------|------------|---|------------|--------------|------------|---|------------|----------------|------------------|------------|--------------------------|
| Appropriation/Budget Activity<br>3600 / 7                   |                        |                                |             |         |            | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System |            |              |            | Project (Number/Name)<br>67A035 / Enterprise Space BMC2 |            |                |                  |            |                          |
| Product Development (\$ in Millions)                        |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO   |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost  | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| BMC2 Tools  | Various                | Various : Various              | 0.000       | 0.000   |            | 17.659  | Jun 2017   | 15.504       | Nov 2017   | 0.000   |            | 15.504         | Continuing       | Continuing | -                        |
| Government Capability Development                           | Various                | Various : Various              | 0.000       | 3.204   | Apr 2016   | 12.821  | Jun 2017   | 12.400       | Nov 2017   | 0.000   |            | 12.400         | Continuing       | Continuing | -                        |
| Integration   | Various                | Various : Various              | 0.000       | 0.000   |            | 0.000   |            | 17.700       | Jan 2108   | 0.000   |            | 17.700         | Continuing       | Continuing | -                        |
| Enterprise Systems Engeering & Integration                  | Various                | Various : Various              | 0.000       | 3.633   | Apr 2016   | 5.175   | Jun 2017   | 3.200        | Oct 2017   | 0.000   |            | 3.200          | Continuing       | Continuing | -                        |
| Technical Mission Analysis (WS)                             | Various                | Various : Various              | 0.000       | 0.000   |            | 0.000   |            | 0.584        | Oct 2017   | 0.000   |            | 0.584          | Continuing       | Continuing | -                        |
| Subtotal  |                        |                                | 0.000       | 6.837   |            | 35.655  |            | 49.388       |            | 0.000   |            | 49.388         | -                | -          | -                        |
| Support (\$ in Millions)                                    |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO   |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost  | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| Subtotal  |                        |                                | -           | -       |            | -   |            | -            |            | -   |            | -              | -                | -          | -                        |
| Test and Evaluation (\$ in Millions)                        |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO   |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost  | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| Subtotal  |                        |                                | -           | -       |            | -   |            | -            |            | -   |            | -              | -                | -          | -                        |
| Management Services (\$ in Millions)                        |                        |                                |             | FY 2016 |            | FY 2017   |            | FY 2018 Base |            | FY 2018 OCO   |            | FY 2018 Total  |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost  | Award Date | Cost         | Award Date | Cost  | Award Date | Cost           | Cost To Complete | Total Cost | Target Value of Contract |
| A&AS  | Various                | Various : Various              | 0.000       | 2.494   | Apr 2016   | 3.572   | Jun 2017   | 5.585        | Nov 2017   | 0.000   |            | 5.585          | Continuing       | Continuing | -                        |
| FFRDC   | Various                | Various : Various              | 0.000       | 3.000   | Apr 2016   | 0.570   | Jan 1901   | 0.752        | Oct 2017   | 0.000   |            | 0.752          | Continuing       | Continuing | -                        |
| Other Support   | Various                | Various : Various              | 0.000       | 0.050   | Apr 2016   | 0.070   | Jun 2017   | 0.105        | Oct 2017   | 0.000   |            | 0.105          | Continuing       | Continuing | -                        |
| Subtotal  |                        |                                | 0.000       | 5.544   |            | 4.212   |            | 6.442        |            | 0.000   |            | 6.442          | -                | -          | -                        |

**UNCLASSIFIED**

|  |                        |                |  |                |  |                         |  |                        |  |  |                             |                       |   |
|--|------------------------|----------------|--|----------------|--|-------------------------|--|------------------------|--|--|-----------------------------|-----------------------|---|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Air Force</b> |                        |                |  |                |  |                         |  |                        |  | <b>Date:</b> May 2017  |                             |                       |   |
| <b>Appropriation/Budget Activity</b><br>3600 / 7                       |                        |                |  |                | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSpOC Mission System |                         |  |                        |  | <b>Project (Number/Name)</b><br>67A035 / Enterprise Space BMC2 |                             |                       |   |
|  | <b>Prior<br/>Years</b> | <b>FY 2016</b> |  | <b>FY 2017</b> |  | <b>FY 2018<br/>Base</b> |  | <b>FY 2018<br/>OCO</b> |  | <b>FY 2018<br/>Total</b>                                       | <b>Cost To<br/>Complete</b> | <b>Total<br/>Cost</b> | <b>Target<br/>Value of<br/>Contract</b> |
| <b>Project Cost Totals</b>   | 0.000                  | 12.381         |  | 39.867         |  | 55.830                  |  | 0.000                  |  | 55.830   | -                           | -                     | -                                       |
| <b>Remarks</b>   |                        |                |  |                |  |                         |  |                        |  |  |                             |                       |   |
|  |                        |                |  |                |  |                         |  |                        |  |  |                             |                       |   |

**UNCLASSIFIED**

|   |                       |
|---|-----------------------|
| <b>Exhibit R-4, RDT&amp;E Schedule Profile: FY 2018 Air Force</b> | <b>Date:</b> May 2017 |
|---|-----------------------|

|  |  |  |
|--|--|--|
| <b>Appropriation/Budget Activity</b><br>3600 / 7 | <b>R-1 Program Element (Number/Name)</b><br>PE 1203614F / JSpOC Mission System | <b>Project (Number/Name)</b><br>67A035 / Enterprise Space BMC2 |
|--|--|--|

|   | FY 2016 |   |   |   | FY 2017 |   |   |   | FY 2018 |   |   |   | FY 2019 |   |   |   | FY 2020 |   |   |   | FY 2021 |   |   |   | FY 2022 |   |   |   |
|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|   | 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 |
| Milestone A                                   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Tech Exploration, Maturation & Risk Reduction |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Systems Engineering/Design Effort             |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Prototyping & Experimentation                 |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Development/Integration                       |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Milestone B                                   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

# UNCLASSIFIED

|   |   |   |                |
|---|---|---|----------------|
| Exhibit R-4A, RDT&E Schedule Details: FY 2018 Air Force |   |   | Date: May 2017 |
| Appropriation/Budget Activity<br>3600 / 7               | R-1 Program Element (Number/Name)<br>PE 1203614F / JSpOC Mission System | Project (Number/Name)<br>67A035 / Enterprise Space BMC2 |                |

## Schedule Details

| Events  | Start   |      | End     |      |
|---|---------|------|---------|------|
|   | Quarter | Year | Quarter | Year |
| Milestone A                                   | 2       | 2018 | 2       | 2018 |
| Tech Exploration, Maturation & Risk Reduction | 2       | 2017 | 2       | 2018 |
| Systems Engineering/Design Effort             | 3       | 2016 | 2       | 2019 |
| Prototyping & Experimentation                 | 4       | 2017 | 4       | 2022 |
| Development/Integration                       | 3       | 2018 | 4       | 2022 |
| Milestone B                                   | 3       | 2020 | 3       | 2020 |

### Note

Prepare for Milestone-A activities for Enterprise Space BMC2. Begin integration of applications and capabilities. Continue BAA to determine existing capabilities that can be integrated into the program of record to meet BMC2 objectives. Continue systems engineering as well as technical maturation and risk reduction efforts on predictive battle management and conduct integration of intelligence and sensor data. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, systems engineering and design.