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| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force | Date: February 2019 |
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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 0304260F / Airborne SIGINT Enterprise | | | | | | | | | | | |
|--|--|----------------|----------------|---------------------|--------------------|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| Total Program Element | - | 116.186 | 109.873 | 102.667 | 0.000 | 102.667 | 125.782 | 132.297 | 131.567 | 98.114 | Continuing | Continuing |
| 675180: <i>RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint)</i> | - | 60.353 | 50.577 | 33.396 | 0.000 | 33.396 | 42.195 | 43.071 | 43.856 | 44.646 | Continuing | Continuing |
| 675182: <i>MQ-1/MQ-9 (Airborne SIGINT Development - Predator)*</i> | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.001 | 0.000 | Continuing | Continuing |
| 675183: <i>Common Development (Airborne SIGINT Development - Common Development)</i> | - | 19.485 | 54.384 | 38.613 | 0.000 | 38.613 | 55.568 | 66.786 | 64.864 | 36.244 | Continuing | Continuing |
| 675185: <i>Non-Traditional SIGINT (NTS)</i> | - | 11.654 | 0.000 | 23.289 | 0.000 | 23.289 | 20.521 | 14.785 | 15.054 | 9.292 | Continuing | Continuing |
| 675186: <i>Special Programs (Airborne SIGINT Development - Special Platforms)</i> | - | 24.694 | 4.912 | 7.369 | 0.000 | 7.369 | 7.498 | 7.653 | 7.792 | 7.932 | Continuing | Continuing |

*This project's R-2a exhibit has been suppressed due to funding not beginning until after FY 2020

A. Mission Description and Budget Item Justification

This Program provides signals intelligence (SIGINT) development efforts for all USAF airborne platforms. The funds in this Program are distributed among all Airborne SIGINT Enterprise (ASE) projects based on the development priorities established by the USAF SIGINT Capabilities Working Group (SCWG) in order to build a total SIGINT capability. As a result, the USAF will move funds between projects periodically to develop the highest priority projects in response to urgent and emerging warfighter needs. This program will participate in the development, integration, testing, and implementation of international and Air Force standards (to include North Atlantic Treaty Organization (NATO) standardization agreements) to ensure joint, allied, and coalition interoperability. Modernization efforts include sensors for the platforms and where appropriate, their interfaces with the Air Force Distributed Common Ground System (AF DCGS). This approach supports a synergistic development effort providing a true Air Force-wide capability.

This enterprise will use the Air Force SIGINT Architecture (AFSA) for planning and decision-making and, in turn, employ open architecture standards whenever possible to allow maximum ease of future upgrades and system interoperability. The primary goal of the ASE is to produce an architecture-based, capability-focused SIGINT investment strategy for the USAF. Funds in any project may be used to fund initiatives in other projects within this Program at the discretion of the SCWG. Funds in any project can also cover activities to include studies and analysis to support both current program planning and execution and future program planning.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force **Date:** February 2019

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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 0304260F / <i>Airborne SIGINT Enterprise</i> |
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This program element may include necessary civilian pay expenses required to manage, execute, and deliver technology and sensor capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

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

| B. Program Change Summary (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 121.948 | 106.873 | 127.439 | 0.000 | 127.439 |
| Current President's Budget | 116.186 | 109.873 | 102.667 | 0.000 | 102.667 |
| Total Adjustments | -5.762 | 3.000 | -24.772 | 0.000 | -24.772 |
| • Congressional General Reductions | 0.000 | 0.000 | | | |
| • Congressional Directed Reductions | -6.000 | 0.000 | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | |
| • Congressional Adds | 0.000 | 3.000 | | | |
| • Congressional Directed Transfers | 0.000 | 0.000 | | | |
| • Reprogrammings | 0.000 | 0.000 | | | |
| • SBIR/STTR Transfer | 0.000 | 0.000 | | | |
| • Other Adjustments | 0.238 | 0.000 | -24.772 | 0.000 | -24.772 |

Change Summary Explanation

In FY 2018, 0304260F PE received -\$6.0M Congressional Reductions for Non-Traditional SIGINT unjustified growth.

In FY 2019, ASE PE received \$3.0M Increase for U-2 Single Pod Development

In FY 2020, ASE PE received a total of -\$24.772M (\$7.3M for RC-135 BPAC and \$17.472M for Common Development BPAC) reduction for support of higher Air Force priorities

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | | | | | | | | | Date: February 2019 | | |
|---|-------------|---------|---------|--------------|---|---------------|---------|---------|---|---------------------|------------------|------------|
| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675180 / RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint) | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| 675180: RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint) | - | 60.353 | 50.577 | 33.396 | 0.000 | 33.396 | 42.195 | 43.071 | 43.856 | 44.646 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 SIGINT sensors and their associated air and ground components. Through extensive utilization of commercial-off-the-shelf (COTS) based solutions to field needed capabilities, it also incurs a need for continuous identification of suitable replacements for components affected by Diminishing Manufacturing Sources and integration efforts consistent with the COTS technology cycle. These efforts provide required engineering for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations integrated into the various baseline modifications. These funds will be split between the RC-135V/W RIVET JOINT, the RC-135U COMBAT SENT, and the RC-135S COBRA BALL programs. Funding reflects the SCWG priorities and the accomplishment of other Airborne SIGINT Enterprise initiatives.

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

| | FY 2018 | FY 2019 | FY 2020 |
|--|----------------|----------------|----------------|
| Title: RC-135 SIGINT Development | 60.353 | 50.577 | 33.396 |
| Description: Non-Recurring Engineering for the RC-135 signals intelligence Systems. See Classified Budget Exhibits (PE 0305207F) | | | |
| FY 2019 Plans: - Continue SIGINT development efforts for the RC-135 fleet to include new signal sets and upgrades to current capabilities. | | | |
| FY 2020 Plans: - Will continue SIGINT development efforts for the RC-135 fleet to include new signal sets and upgrades to current capabilities. See PE 0305207F for classified details. Classified requirements POC is HAF AF/A2OO (704) 614-7317. | | | |
| FY 2019 to FY 2020 Increase/Decrease Statement: Funding decreased from FY19 to FY20 was caused by a requirement decrease for new signal sets and reduced number of upgrades to the RC-135 fleet for SIGINT development. | | | |
| Accomplishments/Planned Programs Subtotals | 60.353 | 50.577 | 33.396 |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | Project (Number/Name) 675180 / RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint) | |

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

| <u>Line Item</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>FY 2020</u> <u>Base</u> | <u>FY 2020</u> <u>OCO</u> | <u>FY 2020</u> <u>Total</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>Cost To</u> <u>Complete</u> | <u>Total Cost</u> |
|---------------------------------------|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
| • APAF 05 Line Item DARPO1: RC-135 | 280.734 | 234.706 | 239.037 | - | 239.037 | 243.443 | 248.318 | 252.788 | - | Continuing | Continuing |

Remarks

The funds within Program 0305207F procure all necessary aircraft modifications for the RC-135 program and include those funds necessary to field SIGINT capabilities developed under Project 675180 of the ASE. Not all procurement funds in #DARPO1: RC-135 are for ASE SIGINT projects.

D. Acquisition Strategy

Aircraft, aircraft sensor systems, and associated ground support system modifications planned include the procurement, fielding and logistical support for future RC-135V/W RIVET JOINT, RC-135U COMBAT SENT and RC-135S COBRA BALL baseline configurations. Development and integration is managed by the Big Safari Systems Group. They employ evolutionary acquisition approaches to field incremental capability improvements.

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.

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force | | | | | | | | | | | | Date: February 2019 | | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675180 / RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint) | | | | | |

| Product Development (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 |
| RC-135 SIGINT Development | SS/ Various | L3COM : Greenville, TX | - | 60.353 | Jan 2018 | 50.577 | Jan 2019 | 33.396 | Jan 2020 | - | | 33.396 | Continuing | Continuing | - |
| Subtotal | | | - | 60.353 | | 50.577 | | 33.396 | | - | | 33.396 | Continuing | Continuing | N/A |

| | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Remarks Above contract method/type will be CPFF and FFP | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

| | | | Prior Years | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | Cost To Complete | Total Cost | Target Value of Contract |
|----------------------------|--|--|-------------|---------|--|---------|--|--------------|--|-------------|--|---------------|------------------|------------|--------------------------|
| Project Cost Totals | | | - | 60.353 | | 50.577 | | 33.396 | | - | | 33.396 | Continuing | Continuing | N/A |

| | | | | | | | | | | | | | | | |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Remarks | | | | | | | | | | | | | | | |
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| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force | | | | | | | | | | | | Date: February 2019 | | | | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | | | Project (Number/Name) 675180 / RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint) | | | |

| | FY 2018 | | | | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | |
|--|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| Development of RC-135 mission sensors | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development of RIVET JOINT mission sensors (see 0305207F for classified details) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development of COMBAT SENT mission sensors (see 0305207F for classified details) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development of COBRA BALL mission sensors (see 0305207F for classified details) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | Project (Number/Name) 675180 / RC-135 (Airborne SIGINT Development - RC-135 Rivet Joint) |

Schedule Details

| Events by Sub Project | Start | | End | |
|--|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Development of RC-135 mission sensors | | | | |
| Development of RIVET JOINT mission sensors (see 0305207F for classified details) | 1 | 2018 | 4 | 2023 |
| Development of COMBAT SENT mission sensors (see 0305207F for classified details) | 1 | 2018 | 4 | 2023 |
| Development of COBRA BALL mission sensors (see 0305207F for classified details) | 1 | 2018 | 4 | 2023 |

Note

Requirements documentation is classified. Classified requirements POC is HAF AF/A2OO (704) 614-7317

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | | | | | | | | | Date: February 2019 | | |
|---|-------------|---------|---------|--------------|---|---------------|---------|---------|---|---------------------|------------------|------------|
| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675183 / Common Development (Airborne SIGINT Development - Common Development) | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| 675183: Common Development (Airborne SIGINT Development - Common Development) | - | 19.485 | 54.384 | 38.613 | 0.000 | 38.613 | 55.568 | 66.786 | 64.864 | 36.244 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

This project supports design studies, engineering analysis, non-recurring engineering, program management administration and other efforts associated with the insertion of new capabilities integrated into Airborne Signals Intelligence Payload (ASIP) and other sensors and their associated air and ground components that will be used on/by more than one platform. The common development SIGINT project also supports development of new sensors capabilities, normalization of quick reaction capabilities, and develops replacement components affected by Diminishing Manufacturing Sources and Material Shortages (DMSMS). New capabilities are developed by separate efforts. This project also supports the development of efforts common to the Airborne SIGINT Enterprise Program overall to include, but not limited to: the Air Force SIGINT Architecture maintenance, modeling and simulation efforts, and NATO SIGINT efforts.

Development supports ASIP system upgrades and potential follow-on sensors. The ASIP sensor is designed to be a common SIGINT system, allowing for maximum coverage of the electromagnetic spectrum through the use of an integrated high and low band system. Follow-on objectives include but are not limited to use of open architecture concepts and rapid integration of new signals of interests.

Capability improvements will be inserted into the ASIP sensor through individual development efforts to exploit signals of interest identified as service priorities by the Air Force SCWG. This project provides the warfighter near term increased combat capability. Enhancements are implemented as soon as technology and risk achieve satisfactory levels. Compatibility improvements will be inserted into the ASIP through individual development efforts to exploit signals of interest identified as Service priorities by the USAF SCWG. Sensors will be integrated and tested on the various platforms as funding permits.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver SIGINT sensor capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.

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

| | FY 2018 | FY 2019 | FY 2020 |
|---|----------------|----------------|----------------|
| Title: Airborne Signals Intelligence Payload | 19.485 | 54.384 | 38.613 |
| Description: Develop and test a common SIGINT system for multiple SIGINT platforms including ASIP incremental upgrades using an open system architecture to the maximum extent possible. | | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | Project (Number/Name) 675183 / Common Development (Airborne SIGINT Development - Common Development) | |

| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 |
|--|---------|---------|---------|
| FY 2019 Plans: <ul style="list-style-type: none"> - Continue new signals capabilities and enhancements for the ASIP Family of Systems (FoS). - Continue integration activities and incorporate upgrades as appropriate. Details are classified. - Continue to develop replacement components affected by DMSMS. - Continue to evaluate options for expected follow-on open architecture systems. - Begin new sensor development activities. FY 2020 Plans: <ul style="list-style-type: none"> - Will continue new signals capabilities and enhancements for the ASIP FoS. - Will continue integration activities and incorporate upgrades as appropriate. Details are classified. - Will continue to develop replacement components affected by DMSMS. - Will continue to evaluate options for expected follow-on open architecture systems. - Will continue new sensor development activities. FY 2019 to FY 2020 Increase/Decrease Statement: Decrease for support of higher Air Force priorities. | | | |
| Accomplishments/Planned Programs Subtotals | 19.485 | 54.384 | 38.613 |

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

| Line Item | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
|--|---------|---------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|------------|
| • APAF 05 Line Item HAWK00: RQ-4 Mods | 43.968 | 23.715 | 4.851 | - | 4.851 | 126.340 | 117.382 | 106.166 | - | 167.265 | 589.687 |
| • RDTE 07 0305202F: Dragon U-2 | 14.714 | 0.520 | 0.550 | - | 0.550 | 1.840 | 3.920 | 0.000 | - | 0.000 | 21.544 |

Remarks

Not all Other Program Funding is associated with SIGINT.

D. Acquisition Strategy

SIGINT capabilities will be developed and integrated onto various platforms using an incremental acquisition approach. In response to requirements as validated by the SCWG, an incremental acquisition strategy plan will be executed, contracting with appropriate vendor(s) to deliver capability while encouraging competition where possible. In response to SCWG-validated requirements, a competitive acquisition approach is expected for a follow-on system.

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0304260F / <i>Airborne SIGINT Enterprise</i> | Project (Number/Name) 675183 / <i>Common Development (Airborne SIGINT Development - Common Development)</i> |

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.

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force | | | | | | | | | | | | Date: February 2019 | | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675183 / Common Development (Airborne SIGINT Development - Common Development) | | | | | |
| Product Development (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 |
| ASIP Global Hawk Increment 1 | SS/CPFF | Northrop Grumman : San Jose, CA | - | 2.948 | Dec 2017 | 4.175 | Jan 2019 | - | | - | | - | Continuing | Continuing | - |
| ASIP Increment 2 - Build A | SS/CPIF | Northrop Grumman : San Jose, CA | - | 6.747 | Aug 2019 | 16.282 | Aug 2019 | 1.200 | Dec 2019 | - | | 1.200 | Continuing | Continuing | - |
| Ground Station | Various | Various : Various | - | 1.850 | Jul 2018 | - | | - | | - | | - | Continuing | Continuing | - |
| Follow-on System Development (Post Inc 2 Build A) | Various | Various : Various | - | 2.000 | Jun 2018 | 6.200 | May 2019 | 2.500 | Jan 2020 | - | | 2.500 | Continuing | Continuing | - |
| Follow-on SIGINT Sensors | TBD | Various : Various | - | 0.150 | Aug 2018 | 17.510 | Sep 2019 | 25.312 | Mar 2020 | - | | 25.312 | Continuing | Continuing | - |
| Various SIGINT Efforts | Various | AECOM : Annapolis Junction, MD | - | 4.000 | Nov 2017 | 4.000 | Nov 2018 | 4.000 | Nov 2019 | - | | 4.000 | Continuing | Continuing | - |
| Subtotal | | | - | 17.695 | | 48.167 | | 33.012 | | - | | 33.012 | Continuing | Continuing | N/A |
| Support (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 |
| Various integration efforts and flight test | Various | Various : Various | - | 0.706 | Dec 2017 | 0.662 | Dec 2018 | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | 0.706 | | 0.662 | | - | | - | | - | Continuing | Continuing | N/A |
| Test and Evaluation (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 |
| Test and Evaluation Support | Various | Various : Various | - | - | | - | | - | | - | | - | Continuing | Continuing | - |
| Subtotal | | | - | - | | - | | - | | - | | - | Continuing | Continuing | N/A |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force | | | | | | | | | | | | Date: February 2019 | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675183 / Common Development (Airborne SIGINT Development - Common Development) | | | | |

| Management Services (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 |
| PMA | Various | Various : Dayton, OH | - | 1.084 | Nov 2017 | 5.555 | Nov 2018 | 5.601 | Nov 2019 | - | | 5.601 | Continuing | Continuing | - |
| Subtotal | | | - | 1.084 | | 5.555 | | 5.601 | | - | | 5.601 | Continuing | Continuing | N/A |

Remarks
FY18 PMA: lower costs were due to rephasing the funds to support the period of performance.

| | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | Cost To Complete | Total Cost | Target Value of Contract |
|----------------------------|-------------|---------|---------|--------------|-------------|---------------|------------------|------------|--------------------------|
| Project Cost Totals | - | 19.485 | 54.384 | 38.613 | - | 38.613 | Continuing | Continuing | N/A |

Remarks

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| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force | | | Date: February 2019 | | |
| Appropriation/Budget Activity 3600 / 7 | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | Project (Number/Name) 675183 / Common Development (Airborne SIGINT Development - Common Development) | |

| | FY 2018 | | | | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | |
|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| SIGINT Common Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ASIP Global Hawk Increment 1 Upgrades | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ASIP Upgrades Increment 2 - Build A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ground Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Follow-on System Development (Post Inc 2 Build A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Follow-on SIGINT Sensors | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | Project (Number/Name) 675183 / Common Development (Airborne SIGINT Development - Common Development) |

Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| <i>SIGINT Common Development</i> | | | | |
| ASIP Global Hawk Increment 1 Upgrades | 1 | 2018 | 4 | 2019 |
| ASIP Upgrades Increment 2 - Build A | 1 | 2018 | 4 | 2020 |
| Ground Station | 1 | 2018 | 1 | 2019 |
| Follow-on System Development (Post Inc 2 Build A) | 1 | 2018 | 4 | 2024 |
| Follow-on SIGINT Sensors | 4 | 2018 | 4 | 2024 |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | | | | | | | | | Date: February 2019 | | |
|--|-------------|---------|---------|--------------|---|---------------|---------|---------|--|---------------------|------------------|------------|
| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675185 / Non-Traditional SIGINT (NTS) | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| 675185: Non-Traditional SIGINT (NTS) | - | 11.654 | 0.000 | 23.289 | 0.000 | 23.289 | 20.521 | 14.785 | 15.054 | 9.292 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

COMPASS BRIGHT develops, demonstrates, and rapidly transitions advanced Air Force specific SIGINT capabilities against emerging and future target signals of interest. This program pursues SIGINT technologies for program transition, to include Communications Intelligence (COMINT), Electronic Intelligence (ELINT), Audio, Analytics, Special Signals of Interest, and Radio Frequency Measurement and Signature Intelligence (MASINT). The COMPASS BRIGHT program objective is to develop technologies for application in SIGINT and MASINT systems or subsystems. Acquisition and production of these developed technologies will occur within the appropriate platform programs. COMPASS BRIGHT projects are selected through a data call process, whereby the USAF evaluates proposals from the laboratories, platforms, and other government agencies, to select those projects that are most promising.

Operational Reconnaissance (Ops Recce) is part of the initiative to improve overall USAF intelligence, surveillance, and reconnaissance (ISR) capability through development and use of sensor data from non-ISR platforms and innovative use of sensors. This program pursues Ops Recce capabilities for transition through development, testing, demonstration and implementation efforts across all platforms. The Ops Recce program objective is to provide increased battlespace awareness through the use of sensors/platforms to achieve effects beyond what those sensor/platforms were originally designed.

The program office authority extends to accomplishment of out-of-cycle, nontraditional SIGINT (NTISR) efforts. These tasks may be filtered through the SIGINT Capability Working Group (SCWG) outside the normal vetting process to expedite acquisition of high-end capabilities for the warfighter.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver technology and sensor capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.

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

| | FY 2018 | FY 2019 | FY 2020 |
|--|----------------|----------------|----------------|
| Title: Non-Traditional SIGINT Tech Development | 11.654 | 0.000 | 23.289 |
| Description: Develops projects in the SIGINT and MASINT areas for transition to the RC-135 fleet, other intelligence, surveillance, and reconnaissance platforms and Ops Recce. | | | |
| FY 2019 Plans: N/A | | | |
| FY 2020 Plans: | | | |

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|---|----------------|----------------|-------------------------|--|--------------------------|----------------|----------------|---|----------------|-------------------------|-------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | | | | | | | Date: February 2019 | | | |
| Appropriation/Budget Activity 3600 / 7 | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675185 / Non-Traditional SIGINT (NTS) | | | |
| B. Accomplishments/Planned Programs (\$ in Millions) | | | | | | | | FY 2018 | FY 2019 | FY 2020 | |
| Will initiate, continue, and complete various SIGINT projects to include enhanced ELINT exploitation, COMINT, Audio exploitation, Ops Recce, signals of interest prosecution, and NTISR. | | | | | | | | | | | |
| FY 2019 to FY 2020 Increase/Decrease Statement: FY20 Non-Traditional SIGINT increased to right-sized program support levels with payback to support Compass Bright and Ops Recce. | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | | 11.654 | 0.000 | 23.289 | |
| C. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | |
| Line Item | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| • APAF 05 Line Item DARP01: RC-135 | 280.734 | 234.706 | 239.037 | - | 239.037 | 243.443 | 248.318 | 252.788 | - | Continuing | Continuing |
| Remarks Not all funds are associated with SIGINT. | | | | | | | | | | | |
| D. Acquisition Strategy Air Force Life Cycle Management Center/Intelligence, Surveillance, and Reconnaissance and Special Operations Forces Directorate (AFLCMC/WI) will execute COMPASS BRIGHT and Operational Reconnaissance efforts through technology development and demonstration contracts which leverage existing laboratory relationships and other existing contractual vehicles, with future development projects emphasizing full and open competition. | | | | | | | | | | | |
| 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. | | | | | | | | | | | |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force | | | | | | | | | | | | Date: February 2019 | | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675185 / Non-Traditional SIGINT (NTS) | | | | | |
| Product Development (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 |
| Non Traditional SIGINT Tech Development | Various | Multiple : Various | - | 9.654 | Dec 2017 | - | | 17.789 | Jan 2020 | - | | 17.789 | Continuing | Continuing | - |
| Ops Recce | Various | Multiple : Various | - | 1.600 | Dec 2017 | - | | 4.000 | Jan 2020 | - | | 4.000 | Continuing | Continuing | - |
| Subtotal | | | - | 11.254 | | - | | 21.789 | | - | | 21.789 | Continuing | Continuing | N/A |
| Remarks | | | | | | | | | | | | | | | |
| On an annual basis, the SIGINT Capabilities Working Group (SCWG) reviews developmental technologies against warfighter capabilities and requirements based on strategic roadmaps. Projects advancing the technological maturity of promising sensors and processing capabilities are reviewed and prioritized into a recommended list for senior executive direction to implement for the coming fiscal year. | | | | | | | | | | | | | | | |
| Management Services (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 |
| PMA | Various | Various : Various, OH | - | 0.400 | Oct 2018 | - | | 1.500 | Oct 2019 | - | | 1.500 | Continuing | Continuing | - |
| Subtotal | | | - | 0.400 | | - | | 1.500 | | - | | 1.500 | Continuing | Continuing | N/A |
| | | | Prior Years | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals | | | - | 11.654 | | 0.000 | | 23.289 | | - | | 23.289 | Continuing | Continuing | N/A |
| Remarks | | | | | | | | | | | | | | | |
| FY20 Non-Traditional SIGINT increased to right-sized program support levels with payback to support Compass Bright and Ops Recce. | | | | | | | | | | | | | | | |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force | | | | | | | | | | Date: February 2019 | | |
| Appropriation/Budget Activity | | | | | R-1 Program Element (Number/Name) | | | Project (Number/Name) | | | | |
| 3600 / 7 | | | | | PE 0304260F / Airborne SIGINT Enterprise | | | 675185 / Non-Traditional SIGINT (NTS) | | | | |

| | FY 2018 | | | | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | |
|------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| Non-Traditional SIGINT (NTS) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SIGINT Technologies | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - ELINT Programs | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - COMINT Programs | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - Special Signals Programs | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - Audio Programs | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - Analytics Programs | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ops Recce Efforts | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | Project (Number/Name) 675185 / Non-Traditional SIGINT (NTS) |

Schedule Details

| Events by Sub Project | Start | | End | |
|-------------------------------------|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Non-Traditional SIGINT (NTS) | | | | |
| SIGINT Technologies | 1 | 2018 | 4 | 2024 |
| - ELINT Programs | 1 | 2018 | 4 | 2024 |
| - COMINT Programs | 1 | 2018 | 4 | 2024 |
| - Special Signals Programs | 1 | 2018 | 4 | 2024 |
| - Audio Programs | 1 | 2018 | 4 | 2024 |
| - Analytics Programs | 1 | 2018 | 4 | 2024 |
| Ops Recce Efforts | 1 | 2018 | 4 | 2024 |

Note

On an annual basis, the SCWG reviews developmental technologies against warfighter capabilities and requirements based on strategic roadmaps. Projects advancing the technological maturity of promising sensors and processing capabilities are reviewed and prioritized into a recommended list for senior executive direction to implement for the coming fiscal year. As a result, the USAF will move funds between projects periodically to develop the highest priority projects in response to urgent and emerging warfighter needs.

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | | | | | | | | | Date: February 2019 | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675186 / Special Programs (Airborne SIGINT Development - Special Platforms) | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| 675186: <i>Special Programs (Airborne SIGINT Development - Special Platforms)</i> | - | 24.694 | 4.912 | 7.369 | 0.000 | 7.369 | 7.498 | 7.653 | 7.792 | 7.932 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |
| A. Mission Description and Budget Item Justification <p>This project supports special SIGINT studies as well as the development and integration of advanced SIGINT capabilities for special programs including, but not limited to: quick reaction capability sensors, the processing, exploitation, and dissemination associated with these systems, and other efforts approved by the USAF SCWG. Development efforts will include, but are not limited to: new signal sets, antenna improvements, sensitivity upgrades, and data distribution upgrades, and new/advanced deployment capabilities. This project provides the warfighter with near term combat capabilities with increased capability improvements accomplished as technologies and risks achieve satisfactory levels. Sensors will be integrated and tested on various platforms including the MQ-1B/MQ-9A remotely piloted aircraft as funding permits.</p> | | | | | | | | | | | | |
| B. Accomplishments/Planned Programs (\$ in Millions) | | | | | | | | | FY 2018 | FY 2019 | FY 2020 | |
| Title: SIGINT Development Description: Develop, update, and test SIGINT capabilities for QRC and normalized special programs SIGINT projects. FY 2019 Plans: -Will continue to modernize SIGINT systems used by the MQ-1B/9A RPA. FY 2020 Plans: - Will continue to modernize SIGINT systems used by the MQ-1B/9A RPA. FY 2019 to FY 2020 Increase/Decrease Statement: - Funding increase in FY20 reflects slightly increased quick reaction capability upgrade requirements, which is consistent with future funding requests. | | | | | | | | | 24.694 | 4.912 | 7.369 | |
| Accomplishments/Planned Programs Subtotals | | | | | | | | | 24.694 | 4.912 | 7.369 | |
| C. Other Program Funding Summary (\$ in Millions) N/A Remarks | | | | | | | | | | | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | Project (Number/Name) 675186 / Special Programs (Airborne SIGINT Development - Special Platforms) |

D. Acquisition Strategy

SIGINT capabilities will be integrated to various classified platforms using an evolutionary acquisition approach. Capabilities and prototypes will be developed by Other Government Agencies and transitioned to select vendors as production needs develop.

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.

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force | | | | | | | | | | | | Date: February 2019 | | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | Project (Number/Name) 675186 / Special Programs (Airborne SIGINT Development - Special Platforms) | | | | | |

| Product Development (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 | |
| Upgrades to SIGINT systems used by the MQ-1/9 Rremotely piloted aircraft | Various | Various : Various | - | 23.914 | Jan 2018 | 4.000 | Jan 2019 | 7.369 | Jan 2020 | - | | 7.369 | Continuing | Continuing | - | |
| Subtotal | | | - | 23.914 | | 4.000 | | 7.369 | | - | | 7.369 | Continuing | Continuing | N/A | |

Remarks
Upgrades the quick reaction capability sensors already on the MQ-1/9 fleet

| Test and Evaluation (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 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 | |
| Flight Test | Various | Various : Various | - | 0.780 | May 2017 | 0.912 | May 2018 | - | | - | | - | Continuing | Continuing | - | |
| Subtotal | | | - | 0.780 | | 0.912 | | - | | - | | - | Continuing | Continuing | N/A | |

| | | | Prior Years | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | | Cost To Complete | Total Cost | Target Value of Contract |
|----------------------------|--|--|--------------------|----------------|--|----------------|--|---------------------|--|--------------------|--|----------------------|------------|-------------------------|-------------------|---------------------------------|
| Project Cost Totals | | | - | 24.694 | | 4.912 | | 7.369 | | - | | 7.369 | Continuing | Continuing | N/A | |

Remarks

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|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force | | | | | | | | | | Date: February 2019 | | | | | | | | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | | | | | Project (Number/Name) 675186 / Special Programs (Airborne SIGINT Development - Special Platforms) | | | | | | | | | |

| | FY 2018 | | | | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | |
|-------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| SIGINT Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MQ-1/9 Sensor 1 Modernization | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MQ-1/9 Sensor 2 Modernization | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MQ-1/9 Sensor Upgrades | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0304260F / Airborne SIGINT Enterprise | Project (Number/Name) 675186 / Special Programs (Airborne SIGINT Development - Special Platforms) |

Schedule Details

| Events by Sub Project | Start | | End | |
|-------------------------------|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| SIGINT Development | | | | |
| MQ-1/9 Sensor 1 Modernization | 1 | 2018 | 4 | 2023 |
| MQ-1/9 Sensor 2 Modernization | 1 | 2018 | 4 | 2023 |
| MQ-1/9 Sensor Upgrades | 1 | 2018 | 4 | 2023 |