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| Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army | Date: February 2018 |
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| Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development | | | | | R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV | | | | | | | |
|---|-------------|---------|---------|--------------|--|---------------|---------|---------|---------|---------|------------------|------------|
| COST (\$ in Millions) | Prior Years | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total | FY 2020 | FY 2021 | FY 2022 | FY 2023 | Cost To Complete | Total Cost |
| Total Program Element | - | 1.613 | 2.191 | 6.180 | - | 6.180 | 3.222 | 1.174 | 0.000 | 0.000 | 0.000 | 14.380 |
| RA7: RQ-11 Raven (MIP) | - | 1.613 | 2.191 | 6.180 | - | 6.180 | 3.222 | 1.174 | 0.000 | 0.000 | 0.000 | 14.380 |

A. Mission Description and Budget Item Justification

The Family of Small Unmanned Aircraft System (FoSUAS) provides the battalion and below ground maneuver elements critical situational awareness and enhance force protection. The system provides the small unit commander an organic and responsive tactical Intelligence, Reconnaissance, Surveillance (IRS) capability through the ability to view real-time Full Motion Video and sensor data via the system ground control stations. Other compatible receivers, such as the One System Remote Video Terminal and appropriately equipped manned platforms may also receive the FoSUAS products.

A FoSUAS includes three hand-launched aircraft that do not require an improved launch/recovery location. In addition to the aircraft, the system contains ground control equipment, which includes an interoperable hand controller, Tactical Open Government Owned Architecture (TOGA). The equipment is fully transportable in or on rucksack type packs that are organic to the unit. FoSUAS is transitioning to a Capabilities Production Document (CPD) that will utilize existing RQ-11 and RQ-20 in a system of systems fielding concept, with a Short Range Micro (SRM) option under consideration.

Justification: Fiscal Year (FY) 2019 Research, Development, Test, and Evaluation (RDTE) Base funding of \$6.180 million will be utilized for Program Management Engineering support and to meet CPD Increment II Block II related requirements. Specifically, to continue the research and development required to identify and baseline the SRM prototype solution for the FoSUAS effort. Options range from testing non developmental items produced by industry to researching what other government agencies have achieved in quad copter development and technology.

| B. Program Change Summary (\$ in Millions) | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019 Base</u> | <u>FY 2019 OCO</u> | <u>FY 2019 Total</u> |
|---|-----------------------|-----------------------|----------------------------|---------------------------|-----------------------------|
| Previous President's Budget | 1.613 | 2.191 | 0.180 | - | 0.180 |
| Current President's Budget | 1.613 | 2.191 | 6.180 | - | 6.180 |
| Total Adjustments | 0.000 | 0.000 | 6.000 | - | 6.000 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | - | - | | | |
| • Adjustments to Budget Years | - | - | 6.000 | - | 6.000 |

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army | | Date: February 2018 |
| Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i> | R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV | |
| <u>Change Summary Explanation</u> Increase in funding will primarily be used for Developmental Engineering for the investigation of options for Short Range Micro. | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2019 Army | | | | | | | | | | Date: February 2018 | | |
|---|-------------|---------|---------|--------------|--|---------------|---------|---------|--|---------------------|------------------|------------|
| Appropriation/Budget Activity 2040 / 7 | | | | | R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV | | | | Project (Number/Name) RA7 / RQ-11 Raven (MIP) | | | |
| COST (\$ in Millions) | Prior Years | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total | FY 2020 | FY 2021 | FY 2022 | FY 2023 | Cost To Complete | Total Cost |
| RA7: RQ-11 Raven (MIP) | - | 1.613 | 2.191 | 6.180 | - | 6.180 | 3.222 | 1.174 | 0.000 | 0.000 | 0.000 | 14.380 |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

The Family of Small Unmanned Aircraft System (FoSUAS) provides the battalion and below ground maneuver elements critical situational awareness and enhance force protection. The system provides the small unit commander an organic and responsive tactical Intelligence, Reconnaissance, Surveillance (IRS) capability through the ability to view real-time Full Motion Video and sensor data via the system ground control stations. Other compatible receivers, such as the One System Remote Video Terminal and appropriately equipped manned platforms may also receive the FoSUAS products.

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Justification: Fiscal Year (FY) 2019 Research, Development, Test, and Evaluation (RDTE) Base funding of \$6.180 million will be utilized for Program Management Engineering support and to meet CPD Increment II Block II related requirements. Specifically, to continue the research and development required to identify and baseline the SRM prototype solution for the FoSUAS effort. Options range from testing non developmental items produced by industry to researching what other government agencies have achieved in quad copter development and technology.

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

| | FY 2017 | FY 2018 | FY 2019 |
|---|----------------|----------------|----------------|
| Title: Program Management Support | 0.581 | 0.230 | 0.649 |
| Description: Program Management Support during SRM engineering and testing efforts | | | |
| FY 2018 Plans: Program Management Support | | | |
| FY 2019 Plans: Program Management Support | | | |
| FY 2018 to FY 2019 Increase/Decrease Statement: Increase continues Program Management Support for Short Range Micro solution investigation of candidates. | | | |
| Title: Developmental Engineering | 0.927 | 1.876 | 5.290 |
| Description: Developmental Engineering | | | |

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|---|----------------|----------------|-------------------------|---|--------------------------|----------------|----------------|---|----------------|-----------------------------|-------------------|----------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2019 Army | | | | | | | | | | Date: February 2018 | | |
| Appropriation/Budget Activity 2040 / 7 | | | | R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV | | | | Project (Number/Name) RA7 / RQ-11 Raven (MIP) | | | | |
| B. Accomplishments/Planned Programs (\$ in Millions) | | | | | | | | | | FY 2017 | FY 2018 | FY 2019 |
| FY 2018 Plans: Continuing the Short Range Micro (SRM) prototype materiel baseline FY 2019 Plans: Continuing the Short Range Micro (SRM) prototype materiel baseline FY 2018 to FY 2019 Increase/Decrease Statement: Increase continues Development Engineering effort Short Range Micro (SRM) candidate investigation. | | | | | | | | | | | | |
| Title: System Test and Evaluation Description: System Test and Evaluation FY 2018 Plans: Continue the prototype testing of the SRM FY 2019 Plans: Continue the development testing of the SRM FY 2018 to FY 2019 Increase/Decrease Statement: Increase for continuation of Test and Evaluation of candidates for Short Range Micro investigation. | | | | | | | | | | 0.105 | 0.085 | 0.241 |
| Accomplishments/Planned Programs Subtotals | | | | | | | | | | 1.613 | 2.191 | 6.180 |
| C. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | | |
| Line Item | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total | FY 2020 | FY 2021 | FY 2022 | FY 2023 | Cost To Complete | Total Cost | |
| • A00010: RQ-11 (RAVEN) | - | - | 46.416 | - | 46.416 | 25.000 | 32.500 | 35.400 | 10.500 | Continuing | Continuing | |
| Remarks | | | | | | | | | | | | |
| D. Acquisition Strategy | | | | | | | | | | | | |
| The Tactical Unmanned Product Office (TUAS) will contract utilizing full and open competition via an Other Transaction Agreement (OTA) or a traditional contracting method to host a fly-off and down select. The Government will make contract award based upon competitive source selection criteria. | | | | | | | | | | | | |
| E. Performance Metrics | | | | | | | | | | | | |
| N/A | | | | | | | | | | | | |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army | | | | | | | | | | | | Date: February 2018 | | | |
|--|------------------------|---|-------------|---------|------------|--|------------|-----------------|------------|--|------------|---------------------|------------------|------------|--------------------------|
| Appropriation/Budget Activity 2040 / 7 | | | | | | R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV | | | | Project (Number/Name) RA7 / RQ-11 Raven (MIP) | | | | | |
| Management Services (\$ in Millions) | | | | FY 2017 | | FY 2018 | | FY 2019 Base | | FY 2019 OCO | | FY 2019 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 |
| Program Management Personnel | RO | AMRDEC, Redstone Arsenal, AL : AMRDEC, Redstone Arsenal, AL | 1.109 | 0.581 | Nov 2016 | 0.230 | | 0.649 | | - | | 0.649 | 0.462 | 3.031 | - |
| Subtotal | | | 1.109 | 0.581 | | 0.230 | | 0.649 | | - | | 0.649 | 0.462 | 3.031 | N/A |
| Product Development (\$ in Millions) | | | | FY 2017 | | FY 2018 | | FY 2019 Base | | FY 2019 OCO | | FY 2019 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 |
| Developmental Engineering | C/IDIQ | Aberdeen Proving Grounds, Natick Contracting Division, Orlando, FL : Aberdeen Proving Grounds, Natick Contracting Divis | 8.897 | 0.927 | Dec 2016 | 1.876 | Dec 2017 | 5.290 | Dec 2018 | - | | 5.290 | 3.763 | 20.753 | - |
| Developmental Engineering | C/IDIQ | AMRDEC, Redstone Arsenal, Redstone, AI : AMRDEC, Redstone Arsenal, Redstone, AI | 1.935 | - | | - | | - | | - | | - | 0.000 | 1.935 | - |
| Subtotal | | | 10.832 | 0.927 | | 1.876 | | 5.290 | | - | | 5.290 | 3.763 | 22.688 | N/A |
| Test and Evaluation (\$ in Millions) | | | | FY 2017 | | FY 2018 | | FY 2019 Base | | FY 2019 OCO | | FY 2019 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 1 | MIPR | Various : Various | 0.941 | 0.105 | Jul 2017 | 0.085 | Jul 2018 | 0.241 | Jul 2019 | - | | 0.241 | 0.171 | 1.543 | - |
| Test and Evaluation 2 | MIPR | Varies : Varies | 0.300 | - | | - | | - | | - | | - | 0.000 | 0.300 | - |
| Subtotal | | | 1.241 | 0.105 | | 0.085 | | 0.241 | | - | | 0.241 | 0.171 | 1.843 | N/A |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army | | | | | | | | | | Date: February 2018 | | | |
| Appropriation/Budget Activity 2040 / 7 | | | | | R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV | | | | | Project (Number/Name) RA7 / RQ-11 Raven (MIP) | | | |
| | Prior Years | FY 2017 | | FY 2018 | | FY 2019 Base | | FY 2019 OCO | | FY 2019 Total | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals | 13.182 | 1.613 | | 2.191 | | 6.180 | | - | | 6.180 | 4.396 | 27.562 | N/A |
| Remarks | | | | | | | | | | | | | |

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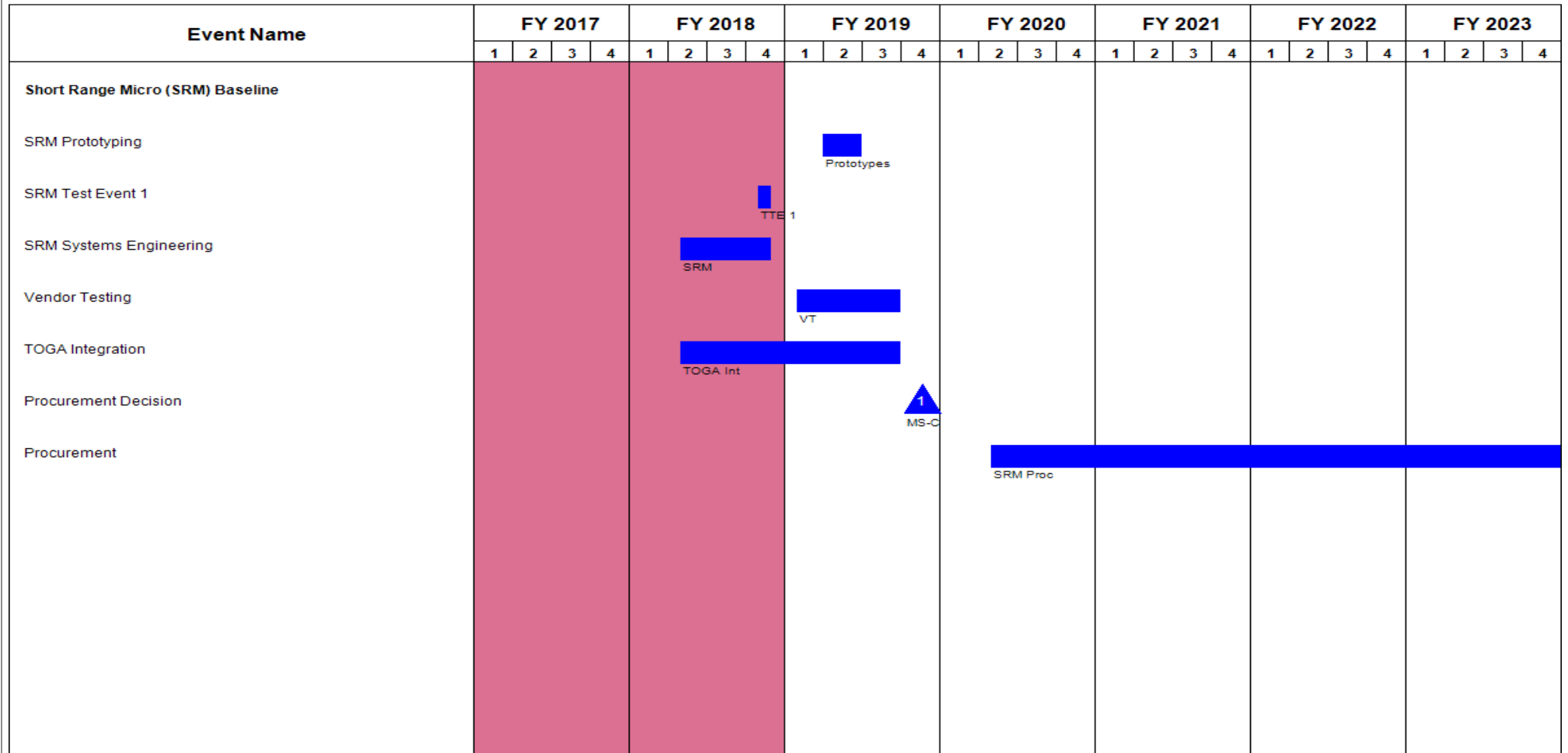
Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army

Date: February 2018

Appropriation/Budget Activity
2040 / 7

R-1 Program Element (Number/Name)
PE 0305232A / RQ-11 UAV

Project (Number/Name)
RA7 / RQ-11 Raven (MIP)



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| Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army | | | Date: February 2018 |
| Appropriation/Budget Activity 2040 / 7 | R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV | Project (Number/Name) RA7 / RQ-11 Raven (MIP) | |

Schedule Details

| Events | Start | | End | |
|----------------------------------|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Short Range Micro (SRM) Baseline | 1 | 2018 | 4 | 2018 |
| SRM Prototyping | 2 | 2019 | 2 | 2019 |
| SRM Test Event 1 | 4 | 2018 | 4 | 2018 |
| SRM Systems Engineering | 2 | 2018 | 4 | 2018 |
| Vendor Testing | 1 | 2019 | 3 | 2019 |
| TOGA Integration | 2 | 2018 | 3 | 2019 |
| Procurement Decision | 4 | 2019 | 4 | 2019 |
| Procurement | 2 | 2020 | 4 | 2023 |

Note

N/A