

UNCLASSIFIED

| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army | | | | | | | | | | Date: March 2019 | | |
|---|-------------|---------|---------|--------------|--|---------------|---------|---------|---------|------------------|------------------|------------|
| Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 4: Advanced Component Development & Prototypes (ACD&P) | | | | | R-1 Program Element (Number/Name) PE 0603627A I Smoke, Obscurant and Target Defeating Sys-Adv Dev | | | | | | | |
| 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 | - | 8.920 | 20.674 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 29.594 |
| E79: SMOKE/OBSCURANT SYSTEM | - | 8.920 | 20.674 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 29.594 |

Note

The Screening Obscuration Module (SOM) program will transition from Engineering and Manufacturing Development (EMD) to the Production and Deployment phase in FY20.

A. Mission Description and Budget Item Justification

The Screening Obscuration Module (SOM) will increase platform survivability and soldier protection levels of maneuver forces by degrading enemy forces ability to detect US targets. The use of battlefield obscuration is a time-tested military tactic to protect personnel, vehicles, equipment, and structures from detection; and to screen the locations, activities, and actions of friendly forces. Commanders who employ obscuration enjoy greater tactical success, freedom of maneuver, and force protection. The SOM assists the Brigade Combat Team (BCT) in retaining freedom of maneuver, conducting breaching operations, breaking contact with the enemy during security operations, and deceiving the enemy of the BCT's intentions. The SOM accomplishes this by degrading enemy forces ability to detect US targets in the visual and near infrared region of the electromagnetic spectrum. The SOM will provide a man portable mountable and dismountable medium area visual screening obscuration capability that can be applied to manned combat platforms and unmanned robotic systems. The individual Soldier or team will employ the SOM devices on open and complex terrain as part of cross-domain obscuration effects synchronized with land and air maneuver during cross-domain windows of advantage.

JUONS CC-0557 provides an enhanced early warning, detection, and identification of Chemical Warfare Agents and Toxic Industrial Materials (TIMs) to existing integrated base defense systems. These capabilities are in support of Operation Inherent Resolve and will be fully integrated into the Integrated Base Defense-Kits at 10 Forward Operating Bases in Iraq.

Chemical Biological Radiological and Nuclear (CBRN) Integrated Early Warning (IEW) requirements detailed in PACOM ONS 17-22580 (HQDA validated in Jan 2018). The capability developed in support of ONS 17-22580, will provide enhancements and integrated CBRN defense sensors to provide early warning of CBRN attacks and events, supplemented with decision support software. Increasing the level of confidence of information to the Commander, facilitating their ability to make critical, time sensitive decisions with high confidence and low regret to mitigate and manage the impacts of CBRN hazards.

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army | | | | Date: March 2019 | |
| Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 4: Advanced Component Development & Prototypes (ACD&P) | | R-1 Program Element (Number/Name) PE 0603627A I Smoke, Obscurant and Target Defeating Sys-Adv Dev | | | |
| B. Program Change Summary (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
| Previous President's Budget | 7.135 | 24.200 | 0.000 | - | 0.000 |
| Current President's Budget | 8.920 | 20.674 | 0.000 | - | 0.000 |
| Total Adjustments | 1.785 | -3.526 | 0.000 | - | 0.000 |
| • Congressional General Reductions | -0.006 | -0.026 | | | |
| • Congressional Directed Reductions | - | -3.500 | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | 2.070 | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | -0.279 | - | | | |
| Change Summary Explanation | | | | | |
| FY 2018 change is a result of a \$2.07M Congressional add to support JUONS CC-0557 efforts. | | | | | |
| FY 2020 change for Screening Obscuration Module (SOM) program attributable to the transition from Engineering and Manufacturing Development (EMD) to the Production and Deployment phase in FY 2020. | | | | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Army | | | | | | | | | | Date: March 2019 | | |
|---|----------------|---------|---------|-----------------|---|------------------|---------|---------|---|------------------|---------------------|---------------|
| Appropriation/Budget Activity 2040 / 4 | | | | | R-1 Program Element (Number/Name) PE 0603627A / Smoke, Obscurant and Target Defeating Sys-Adv Dev | | | | Project (Number/Name) E79 / SMOKE/OBSCURANT SYSTEM | | | |
| 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 |
| E79: SMOKE/OBSCURANT SYSTEM | - | 8.920 | 20.674 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 29.594 |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

The Screening Obscuration Module (SOM) will increase platform survivability and soldier protection levels of maneuver forces by degrading enemy forces' ability to detect US targets. The use of battlefield obscuration is a time-tested military tactic to protect personnel, vehicles, equipment, and structures from detection and to screen the locations, activities, and actions of friendly forces. Commanders who employ obscuration enjoy greater tactical success, freedom of maneuver, and force protection. The SOM assists the Brigade Combat Team (BCT) in retaining freedom of maneuver, conducting breaching operations, breaking contact with the enemy during security operations, and deceiving the enemy of the BCT's intentions. The SOM accomplishes this by degrading enemy forces' ability to detect US targets in the visual and near infrared region of the electromagnetic spectrum. The SOM will provide a man-portable mountable and dismountable medium area visual screening obscuration capability that can be applied to manned combat platforms and unmanned robotic systems. The individual Soldier or team will employ the SOM devices on open and complex terrain as part of cross-domain obscuration effects synchronized with land and air maneuver during cross-domain windows of advantage.

JUONS CC-0557 provides an enhanced early warning, detection, and identification of Chemical Warfare Agents and Toxic Industrial Materials (TIMs) to existing integrated base defense systems. These capabilities are in support of Operation Inherent Resolve and will be fully integrated into the Integrated Base Defense-Kits at 10 Forward Operating Bases in Iraq.

Chemical Biological Radiological and Nuclear (CBRN) Integrated Early Warning (IEW) requirements detailed in PACOM ONS 17-22580 (HQDA validated in Jan 2018). The capability developed in support of ONS 17-22580, will provide enhancements and integrated CBRN defense sensors to provide early warning of CBRN attacks and events, supplemented with decision support software. As a result, the capability will increase the level of confidence of information to the Commander, facilitating his/her ability to make critical, time sensitive decisions with high confidence and low regret to mitigate and manage the impacts of CBRN hazards.

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

| | FY 2018 | FY 2019 | FY 2020 |
|---|----------------|----------------|----------------|
| Title: SOM: Product Development | 4.529 | 2.283 | - |
| Description: Provide Screening Obscuration Module (SOM) Development: Government and Contractor team will continue design and development of hardware in preparation for Government Development and User testing. | | | |
| FY 2019 Plans: Will continue development, incorporate changes from the DT test. | | | |
| FY 2019 to FY 2020 Increase/Decrease Statement: | | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Army | | Date: March 2019 | | |
| Appropriation/Budget Activity 2040 / 4 | R-1 Program Element (Number/Name) PE 0603627A / Smoke, Obscurant and Target Defeating Sys-Adv Dev | Project (Number/Name) E79 / SMOKE/OBSCURANT SYSTEM | | |
| B. Accomplishments/Planned Programs (\$ in Millions) | | FY 2018 | FY 2019 | FY 2020 |
| Program transitioned to Production and Deployment Phase | | | | |
| Title: SOM: Test, Evaluation & Other Government Agencies (OGA's) Description: Provide Test and Evaluation of SOM systems (Developmental and User testing to ensure effectiveness, suitability, survivability, and safety as a mounted and dismounted system). FY 2019 Plans: Will continue test and evaluation planning, and conduct DT testing. FY 2019 to FY 2020 Increase/Decrease Statement: Program transitioned to Production and Deployment Phase. | | 1.496 | 2.465 | - |
| Title: SOM: Project Management Description: Provide Project Management efforts. FY 2019 Plans: Will continue Government program management, systems engineering, and Integrated Product Team (IPT) support. FY 2019 to FY 2020 Increase/Decrease Statement: Program transitioned to Production and Deployment Phase. | | 0.825 | 0.504 | - |
| Title: CBRN: Theater Chem Bio-Defense Description: CBRN Theater Chemical and Biological Defense efforts. FY 2019 Plans: Begin and complete the integration, testing, and evaluation of multiple sensor systems in the integrated early warning system for 8th Army. Developmental and user testing to ensure suitability and safety of all equipment in preparation for fielding of equipment in theater. FY 2019 to FY 2020 Increase/Decrease Statement: Program transitioned to Production and Deployment Phase. | | - | 14.600 | - |
| Title: JUONS CC-0557 Description: Chemical and Biological Stand-off Detection Compatibilities (JUONS CC-0557). | | 2.070 | - | - |
| Title: FY19 SBIR/STTR Transfer | | - | 0.822 | - |

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| Appropriation/Budget Activity 2040 / 4 | R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i> | Project (Number/Name) E79 / <i>SMOKE/OBSCURANT SYSTEM</i> | |
| B. Accomplishments/Planned Programs (\$ in Millions) | | FY 2018 | FY 2019 |
| Description: FY19 SBIR/STTR Transfer | | | |
| FY 2019 Plans: FY19 SBIR/STTR Transfer | | | |
| FY 2019 to FY 2020 Increase/Decrease Statement: FY19 SBIR/STTR Transfer realized in the year of execution | | | |
| Accomplishments/Planned Programs Subtotals | | 8.920 | 20.674 |
| C. Other Program Funding Summary (\$ in Millions) | | | |
| N/A | | | |
| Remarks | | | |
| D. Acquisition Strategy | | | |
| Acquisition Strategy: | | | |
| Screening Obscuration Module (SOM): The SOM acquisition strategy is a single-step System Integration and Development (SID) phase leading to a Milestone C production decision. A Full and Open Cost Plus Incentive Fee competitive contract was awarded and will be used to develop the SOM during the SID phase. Fixed Price Incentive (Successive Targets) options for production were included in the contract. The acquisition strategy includes system development and demonstration, full system integration, design for producibility and demonstration of interoperability, safety, military utility and reliability. | | | |
| JUONS CC-0557: The acquisition strategy includes integration, demonstration and piloting the solution prior to fielding to the 10 FOB locations. Leveraging an existing Federal Acquisition Regulation based contract delivery order to rapidly complete mission requirements. | | | |
| Chemical Biological Radiological and Nuclear (CBRN) Integrated Early Warning (IEW) ONS 17-22580: the \$14.6 million in Fiscal Year 2019 (FY19), will address this rapid capability development, cyber security, qualification and performance test and evaluation (T&E) efforts. This funding will yield a Capability and Limitation Report in 1QFY20 to support the deployment of the Full Operational Capability (FOC) in 2QFY20 | | | |
| E. Performance Metrics | | | |
| N/A | | | |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army | | | | | | | | | | | | Date: March 2019 | | | |
| Appropriation/Budget Activity 2040 / 4 | | | | | | R-1 Program Element (Number/Name) PE 0603627A / Smoke, Obscurant and Target Defeating Sys-Adv Dev | | | | | | Project (Number/Name) E79 / SMOKE/OBSCURANT SYSTEM | | | |
| 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 |
| SOM-Project Management Personnel | MIPR | JPM NBC CA : Edgewood, MD | 7.971 | 0.825 | Nov 2017 | 0.504 | Nov 2018 | - | | - | | - | Continuing | Continuing | Continuing |
| JUONS CC-0557 Project Management Personnel | Various | JPM Guardian : Edgewood, MD | - | 0.674 | Apr 2018 | - | | - | | - | | - | 0.000 | 0.674 | - |
| CBRN-Theater Chem Bio Defense | TBD | JPEO-CBRND : APG | - | - | | 1.850 | Feb 2019 | - | | - | | - | 0.000 | 1.850 | - |
| Subtotal | | | 7.971 | 1.499 | | 2.354 | | - | | - | | - | Continuing | Continuing | N/A |
| Remarks | | | | | | | | | | | | | | | |
| For Project Management Personnel, FY18 decrease in personnel management from PB19 is due to the reduction in planned engineering effort based on successful Developmental Test in 2QFY18. | | | | | | | | | | | | | | | |
| 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 |
| SOM Product Development | C/CPIF | L3 : Melbourne, FL | 28.050 | 4.529 | Feb 2018 | 2.283 | Feb 2019 | - | | - | | - | Continuing | Continuing | Continuing |
| CBRN-Theater Chem Bio Defense | C/Various | Vectrus : Reston, VA | - | - | | 6.750 | Mar 2019 | - | | - | | - | 0.000 | 6.750 | - |
| JUONS CC-0557 - Product Development | Option/ T&M | AMRDEC : Huntsville, AL | - | 1.396 | Aug 2018 | - | | - | | - | | - | 0.000 | 1.396 | - |
| CBRN-Theater Chem Bio Defense | MIPR | ECBC : APG | - | - | | 3.000 | Feb 2019 | - | | - | | - | 0.000 | 3.000 | - |
| Subtotal | | | 28.050 | 5.925 | | 12.033 | | - | | - | | - | 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 |
| FY 2019 SBIR / STTR Transfer | TBD | Headquarters, Department of the | - | - | | 0.822 | Jan 2019 | - | | - | | - | 0.000 | 0.822 | - |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army | | | | | | | | | | | | | Date: March 2019 | | |
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| 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 |
| | | Army : Washington, DC | | | | | | | | | | | | | |
| Subtotal | | | - | - | | 0.822 | | - | | - | | - | 0.000 | 0.822 | 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 |
| SOM Test, Evaluation & OGA's | MIPR | Various OGA : Various | 2.263 | 1.496 | Mar 2018 | 2.465 | Nov 2018 | - | | - | | - | Continuing | Continuing | Continuing |
| CBRN-Theater Chem Bio Defense | MIPR | Various OGAs : Various | - | - | | 3.000 | Jan 2019 | - | | - | | - | 0.000 | 3.000 | - |
| Subtotal | | | 2.263 | 1.496 | | 5.465 | | - | | - | | - | 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 | | | 38.284 | 8.920 | | 20.674 | | - | | - | | - | Continuing | Continuing | N/A |
| Remarks | | | | | | | | | | | | | | | |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army | | | Date: March 2019 | | |
| Appropriation/Budget Activity 2040 / 4 | | R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i> | | Project (Number/Name) E79 / <i>SMOKE/OBSCURANT SYSTEM</i> | |

| Event Name | 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 |
| SOM Design and Fabrication | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOM Developmental Testing #1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOM Developmental Testing #2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOM User Testing | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOM MS C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOM Production Award | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOM Production | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOM FAT | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| JUONS CC-0557 Development/Demonstration | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ONS 17-22580 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army | | | Date: March 2019 |
| Appropriation/Budget Activity 2040 / 4 | R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i> | Project (Number/Name) E79 / <i>SMOKE/OBSCURANT SYSTEM</i> | |

Schedule Details

| Events | Start | | End | |
|---|----------------|-------------|----------------|-------------|
| | Quarter | Year | Quarter | Year |
| SOM Design and Fabrication | 4 | 2016 | 2 | 2019 |
| SOM Developmental Testing #1 | 2 | 2018 | 4 | 2018 |
| SOM Developmental Testing #2 | 2 | 2019 | 2 | 2020 |
| SOM User Testing | 1 | 2020 | 1 | 2020 |
| SOM MS C | 3 | 2020 | 3 | 2020 |
| SOM Production Award | 3 | 2020 | 3 | 2020 |
| SOM Production | 3 | 2020 | 3 | 2022 |
| SOM FAT | 1 | 2021 | 1 | 2021 |
| JUONS CC-0557 Development/Demonstration | 2 | 2017 | 2 | 2019 |
| ONS 17-22580 | 1 | 2019 | 4 | 2019 |