

# UNCLASSIFIED

**Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army** **DATE:** April 2013

**APPROPRIATION/BUDGET ACTIVITY**  
2040: *Research, Development, Test & Evaluation, Army*  
BA 5: *System Development & Demonstration (SDD)*

**R-1 ITEM NOMENCLATURE**  
PE 0604710A: *Night Vision Systems - Eng Dev*

| COST (\$ in Millions)                                       | All Prior Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014 Base | FY 2014 OCO <sup>##</sup> | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
|-------------------------------------------------------------|-----------------|---------|----------------------|--------------|---------------------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element                                       | -               | 55.412  | 32.621               | 43.405       | -                         | 43.405        | 37.581  | 24.084  | 15.581  | 22.585  | Continuing       | Continuing |
| L67: <i>Soldier Night Vision Devices</i>                    | -               | 23.268  | 0.000                | 11.271       | -                         | 11.271        | 16.987  | 13.880  | 12.773  | 19.729  | Continuing       | Continuing |
| L70: <i>Night Vision Dev Ed</i>                             | -               | 9.900   | 11.116               | 6.669        | -                         | 6.669         | 5.819   | 0.812   | 0.000   | 0.000   | Continuing       | Continuing |
| L75: <i>Profiler</i>                                        | -               | 2.512   | 0.000                | 2.759        | -                         | 2.759         | 3.605   | 0.936   | 0.000   | 0.000   | Continuing       | Continuing |
| L76: <i>Dismounted Fire Support Laser Targeting Systems</i> | -               | 0.000   | 0.000                | 1.100        | -                         | 1.100         | 1.119   | 1.138   | 1.157   | 1.177   | Continuing       | Continuing |
| L79: <i>Joint Effects Targeting Systems (JETS)</i>          | -               | 19.732  | 21.505               | 21.606       | -                         | 21.606        | 10.051  | 7.318   | 1.651   | 1.679   | Continuing       | Continuing |

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

## Note

Program Change Summary Explanation:

Fiscal Year 2012: Program decreases of \$2.389 million to Project L70, \$.081 million to Project L75, \$0.678 million to Project L67 and \$0.635 million to Project L79 which were realigned to higher priority Army efforts.

Fiscal Year 2014: Program increases of \$6.669 million to Project L70 for Next Generation FLIR B Kit and sensor development, program increase of \$2.759 million to Project L75 for Profiler development activities and program increase of \$1.100 million to Project L76 for Dismounted Fire Support Targeting System development efforts. Program decreases of -\$3.504 million to Project L67 and \$6.584 million to Project L79 realigned to higher priority Army efforts.

## A. Mission Description and Budget Item Justification

This program element provides night vision/reconnaissance, surveillance and target acquisition technologies required for U. S. defense forces to engage enemy forces twenty-four hours a day under conditions of degraded visibility due to darkness, adverse weather, battlefield obscurants, foliage and man-made structures. These developments and improvements to high performance night vision electro-optics, radar, laser, and thermal systems and integration of related multi-sensor suites will enable near to long range target acquisition, identification and engagement to include significant fratricide reduction, which will improve battlefield command and control in "around-the-clock" combat operations.

Project L67 develops, improves and miniaturizes high performance night vision electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-

# UNCLASSIFIED

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------|
| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | <b>DATE:</b> April 2013                                                            |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> |
| <p>clock combat operations. It focuses on adapting demonstrated technologies that bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability, sniper fire detection and location capability, and integrates improved target location and self-location capability to eliminate friendly fire incidents.</p> <p>Project L70 focuses on night vision, reconnaissance, surveillance and target acquisition (RSTA) sensor and suites of sensors to provide well-defined surveillance and targeting capabilities for a variety of Current, Modular, and Future Force platforms. This project includes: System Development and Demonstration of the Thermal Imaging Engine (transitioned from an Advanced Technology Objective); night vision sensor acquisition support of Unattended Ground Sensors and ASTAMIDS; development of a Standard Ground Station for Persistent Surveillance Sensors (RAID and PTDS), development for the Next Generation FLIR (NGF) B-kit and improvements and enhancements to Persistent Surveillance System (PSS) and Pre Planned Product Improvements (P3I) software related to meeting network interoperability requirements and improving the soldier - machine interface of the POR.</p> <p>Project L75 focuses on development of Profiler Block enhanced capabilities for meteorological measurement sensors and data. Improvements have reduced the footprint (less soldiers/vehicles) and complexity of the system, improved performance (accuracy), improved survivability, connectivity, no balloon sensor, multiple initialization data, and terrain visualization. The improved MET message data will increase lethality by enabling artillery a greater probability of first round hit with indirect fire systems. Profiler Block III will provide a networked laptop configuration while further reducing the system's logistics footprint with the elimination of the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) mounted shelter and trailer. The Block III configuration consist of one computer with a common operating system co-located within the Tactical Operation Center (TOC) with a direct interface to the TOC Local Area Network (LAN). The system will be able to provide Gridded MET along with autonomously generate MET messages upon request from AFATDS eliminating the need for a dedicated MET section crew. The Army will realize a significant cost avoidance with the improved configuration.</p> <p>Project L76 focuses on the engineering development of technologies for insertion into Laser Target Locators and Laser Designators to improve overall performance of those systems and reduce weight. Technologies developed under this project will benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1), various Laser Target Locators, and future precision targeting programs based on emerging Army requirements. In addition, this line will support improved accuracy (reduced target location error) in support of coordinate seeking weapons, such as Joint Direct Attack Munition (JDAM) and Excalibur.</p> <p>Project L79 focuses on development of the Joint Effects Targeting System (JETS). The goal is to develop a lightweight set of mission equipment for the dismounted forward observers and controller (including Joint Tactical Air Controllers - JTAC) that will provide means to call for fire and control delivery of air, ground and naval surface fire support using precision/near-precision/non-precision munitions and effects (lethal and non-lethal). JETS consist of two subsystems, the Target Location Designation System (TLDS) and the Target Effects Coordination System (TECS).</p> |  |                                                                                    |

**UNCLASSIFIED**

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army |         |                                             |              | DATE: April 2013 |               |
|------------------------------------------------------------|---------|---------------------------------------------|--------------|------------------|---------------|
| APPROPRIATION/BUDGET ACTIVITY                              |         | R-1 ITEM NOMENCLATURE                       |              |                  |               |
| 2040: Research, Development, Test & Evaluation, Army       |         | PE 0604710A: Night Vision Systems - Eng Dev |              |                  |               |
| BA 5: System Development & Demonstration (SDD)             |         |                                             |              |                  |               |
| B. Program Change Summary (\$ in Millions)                 | FY 2012 | FY 2013                                     | FY 2014 Base | FY 2014 OCO      | FY 2014 Total |
| Previous President's Budget                                | 59.195  | 32.621                                      | 42.965       | -                | 42.965        |
| Current President's Budget                                 | 55.412  | 32.621                                      | 43.405       | -                | 43.405        |
| Total Adjustments                                          | -3.783  | 0.000                                       | 0.440        | -                | 0.440         |
| • Congressional General Reductions                         | -       | -                                           |              |                  |               |
| • Congressional Directed Reductions                        | -       | -                                           |              |                  |               |
| • Congressional Rescissions                                | -       | -                                           |              |                  |               |
| • Congressional Adds                                       | -       | -                                           |              |                  |               |
| • Congressional Directed Transfers                         | -       | -                                           |              |                  |               |
| • Reprogrammings                                           | -       | -                                           |              |                  |               |
| • SBIR/STTR Transfer                                       | -       | -                                           |              |                  |               |
| • Adjustments to Budget Years                              | -3.783  | -                                           | 0.440        | -                | 0.440         |

**UNCLASSIFIED**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|----------------------|--------------|----------------------------------------------------------------------|---------------|---------|---------|----------------------------------------------|---------|------------------|------------|--|--|--|--|--|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |         |                      |              |                                                                      |               |         |         | DATE: April 2013                             |         |                  |            |  |  |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |         |                      |              | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev |               |         |         | PROJECT<br>L67: Soldier Night Vision Devices |         |                  |            |  |  |  |  |  |
| COST (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | All Prior Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014 Base | FY 2014 OCO <sup>##</sup>                                            | FY 2014 Total | FY 2015 | FY 2016 | FY 2017                                      | FY 2018 | Cost To Complete | Total Cost |  |  |  |  |  |
| L67: Soldier Night Vision Devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -               | 23.268  | 0.000                | 11.271       | -                                                                    | 11.271        | 16.987  | 13.880  | 12.773                                       | 19.729  | Continuing       | Continuing |  |  |  |  |  |
| Quantity of RDT&E Articles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
| # FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
| ## The FY 2014 OCO Request will be submitted at a later date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
| A. Mission Description and Budget Item Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
| This project develops, improves and miniaturizes high performance night vision electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. Further, this funding supports the development, test, and evaluation of Preemptive Threat Detection (PTD) through EMD. It focuses on adapting demonstrated technologies that bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability, sniper fire detection and location capability, and integrates improved target location and self-location capability to eliminate friendly fire incidents. |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |         |                      |              |                                                                      |               |         |         | FY 2012                                      | FY 2013 | FY 2014          |            |  |  |  |  |  |
| Title: Enhanced Night Vision Goggle (ENVG)<br><br>Articles:<br><br>Description: The AN/PSQ-20 ENVG is a helmet-mounted passive device for the individual Soldier that fuses image intensification and long wave infrared imagery into a single, integrated image.<br><br>FY 2012 Accomplishments:<br>Completed Production Qualification Testing (PQT) for multiple sources of AN/PSQ-20 (Enhanced Night Vision Goggle).<br><br>FY 2014 Plans:<br>Initiate production qualification testing for multiple (AN/PSQ-20) new contracts.                                                                                                                                                                                                                                                                                                                                                                                   |                 |         |                      |              |                                                                      |               |         |         | 1.901<br>0                                   | 0.000   | 1.735            |            |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
| Title: Sense Through The Wall (STTW)<br><br>Articles:<br><br>Description: The STTW is a handheld sensor that provides dismounted Soldiers with the capability to detect and locate personnel targets through walls from a standoff distance.<br><br>FY 2012 Accomplishments:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |         |                      |              |                                                                      |               |         |         | 5.747<br>0                                   | 0.000   | 0.000            |            |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |                      |              |                                                                      |               |         |         |                                              |         |                  |            |  |  |  |  |  |

**UNCLASSIFIED**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                            |                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------|----------------|
| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                    | <b>DATE:</b> April 2013                                    |                |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> | <b>PROJECT</b><br>L67: <i>Soldier Night Vision Devices</i> |                |
| <b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                    | <b>FY 2012</b>                                             | <b>FY 2013</b> |
| Completed software modifications to enhance sensors performance and completed operational test activities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                    |                                                            | <b>FY 2014</b> |
| <b>Title:</b> Family of Weapons Sights (FWS)<br><br><b>Description:</b> FWS is a family of weapon sights that utilize advances in thermal and image intensified technologies to produce Individual (I) , Crew-Served (CS), and Sniper (S) weapon sights operable in-line with a day optic or in a stand-alone mode. FWS includes fused multi-band imagery and rapid target acquisition with ballistic equations, providing the Soldier with improved capabilities during day and night operations.<br><br><b>FY 2012 Accomplishments:</b><br>In FY 2012, accelerated delivery of FWS I prototypes, developed technical requirements for wireless Rapid Target Acquisition (RTA) and used modeling and simulation efforts to identify capability increases provided by the FWS-I. Additionally, continued development of High Definition (HD) thermal sensor and Electron Bombarded Active Pixel Sensor (EBAPS) for use in the FWS-CS prototypes.<br><br><b>FY 2014 Plans:</b><br>Will initiate and perform Engineering and Manufacturing Development (EMD) for the FWS Individual (FWS-I) variant. EMD tasks include refining the FWS-I design and producing production representative hardware that will enable an FY 2015 Limited User Test (LUT) and Milestone C. |                                                                                    | 15.418<br>0                                                | 0.000          |
| <b>Title:</b> Small Tactical Optical Rifle Mounted<br><br><b>Description:</b> The AN/PSQ-23 Small Tactical Optical Rifle Mounted (STORM) Micro-Laser Range Finder (MLRF) is a weapon-mounted multi-function laser system. It provides an eye safe laser range finder, digital compass, Infrared (IR) and visible aiming lights, and an IR illuminator for far target location with continuous range, accuracy, weight and power performance enhanced capabilities. It also has an embedded training system, Multiple Integrated Laser Engagement System (MILES).<br><br><b>FY 2012 Accomplishments:</b><br>Completed production qualification testing for second source.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                    | 0.202<br>0                                                 | 0.000          |
| <b>Accomplishments/Planned Programs Subtotals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                    | 23.268                                                     | 11.271         |

**UNCLASSIFIED**

|                                                                                                                                                                    |         |         |                 |                                                                      |                  |         |         |                                              |                  |                     |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|-----------------|----------------------------------------------------------------------|------------------|---------|---------|----------------------------------------------|------------------|---------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                            |         |         |                 |                                                                      |                  |         |         |                                              | DATE: April 2013 |                     |            |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                            |         |         |                 | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev |                  |         |         | PROJECT<br>L67: Soldier Night Vision Devices |                  |                     |            |
| C. Other Program Funding Summary (\$ in Millions)                                                                                                                  |         |         |                 |                                                                      |                  |         |         |                                              |                  |                     |            |
| Line Item                                                                                                                                                          | FY 2012 | FY 2013 | FY 2014<br>Base | FY 2014<br>OCO                                                       | FY 2014<br>Total | FY 2015 | FY 2016 | FY 2017                                      | FY 2018          | Cost To<br>Complete | Total Cost |
| • 603774A VT7: 603774A -<br>Night Vision Systems Advanced<br>Development (VT7)                                                                                     |         | 10.715  | 9.066           |                                                                      | 9.066            | 6.208   | 5.260   | 5.193                                        | 5.000            | Continuing          | Continuing |
| • Helmet Mounted Enhanced<br>Vision Devi: Helmet Mounted<br>Enhanced Vision Devices<br>(HMEVD) (SSN K36400)                                                        | 119.078 | 125.917 | 167.379         |                                                                      | 167.379          | 174.861 | 183.695 | 121.581                                      | 64.238           | Continuing          | Continuing |
| • Thermal Weapon Sight (TWS):<br>Thermal Weapon Sight (TWS)<br>(SSN K22900)                                                                                        | 176.972 | 82.162  | 14.074          |                                                                      | 14.074           | 95.920  | 141.121 | 143.565                                      | 154.000          | Continuing          | Continuing |
| • Sniper Night Sight (SNS): Sniper<br>Night Sight (SNS) (SSN K41500)                                                                                               | 0.661   | 11.660  |                 |                                                                      |                  |         |         | 11.240                                       | 19.838           | Continuing          | Continuing |
| • Sense Through The Wall<br>(STTW): Sense Through The Wall<br>(STTW) (SSN KA2300)                                                                                  | 10.000  | 6.212   | 0.142           |                                                                      | 0.142            |         |         |                                              |                  | 0.000               | 16.354     |
| • Small Tactical Optical Rifle<br>Mounte: Small Tactical Optical Rifle<br>Mounted (STORM) (SSN K35110)                                                             | 10.227  | 20.717  | 22.300          |                                                                      | 22.300           | 20.319  | 15.305  | 15.025                                       | 21.611           | Continuing          | Continuing |
| Remarks                                                                                                                                                            |         |         |                 |                                                                      |                  |         |         |                                              |                  |                     |            |
| D. Acquisition Strategy                                                                                                                                            |         |         |                 |                                                                      |                  |         |         |                                              |                  |                     |            |
| The various developmental programs in this project continue to exercise competitively awarded contracts using best value source selection procedures.              |         |         |                 |                                                                      |                  |         |         |                                              |                  |                     |            |
| E. Performance Metrics                                                                                                                                             |         |         |                 |                                                                      |                  |         |         |                                              |                  |                     |            |
| Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. |         |         |                 |                                                                      |                  |         |         |                                              |                  |                     |            |

**UNCLASSIFIED**

|                                                                                                                                                |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   |                                                     |                         |                   |                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------|------------------------|----------------|-------------------|-----------------------------------------------------------------------------|-------------------|---------------------|-------------------|--------------------|-------------------|-----------------------------------------------------|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Army</b>                                                                              |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   | <b>DATE:</b> April 2013                             |                         |                   |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD) |                                   |                                           |                        |                |                   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: Night Vision Systems - Eng Dev |                   |                     |                   |                    |                   | <b>PROJECT</b><br>L67: Soldier Night Vision Devices |                         |                   |                                 |
| <b>Management Services (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                                |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| PROGRAM MGMT                                                                                                                                   | MIPR                              | Various:Various                           | 0.000                  | 0.946          | Apr 2012          | -                                                                           |                   | -                   |                   | -                  |                   | -                                                   | Continuing              | Continuing        | Continuing                      |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 0.000                  | 0.946          |                   | 0.000                                                                       |                   | 0.000               |                   | 0.000              |                   | 0.000                                               |                         |                   |                                 |
| <b>Product Development (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                                |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Sense Through The Wall (STTW)                                                                                                                  | MIPR                              | Various:Various                           | 1.963                  | 4.542          | Dec 2011          | -                                                                           |                   | -                   |                   | -                  |                   | -                                                   | 0.000                   | 6.505             | 0.000                           |
| Family of Weapon Sights (FWS)                                                                                                                  | MIPR                              | Various:Various                           | 5.939                  | 9.965          | Feb 2012          | -                                                                           |                   | 9.304               | Mar 2013          | -                  |                   | 9.304                                               | Continuing              | Continuing        | Continuing                      |
| Advanced Weapon Sight Technologies (AWST)                                                                                                      | MIPR                              | Various:Various                           | 0.000                  | 4.714          | May 2012          | -                                                                           |                   | -                   |                   | -                  |                   | -                                                   | 0.000                   | 4.714             | 0.000                           |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 7.902                  | 19.221         |                   | 0.000                                                                       |                   | 9.304               |                   | 0.000              |                   | 9.304                                               |                         |                   |                                 |
| <b>Support (\$ in Millions)</b>                                                                                                                |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                                |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Matrix Support                                                                                                                                 | Various                           | NVESD:Ft Belvoir, VA                      | 0.363                  | 1.323          | Feb 2012          | -                                                                           |                   | 0.232               | Dec 2014          | -                  |                   | 0.232                                               | Continuing              | Continuing        | 0.000                           |
| Matrix Support                                                                                                                                 | Various                           | TACOM:Warren, MI                          | 0.789                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                                   | 0.000                   | 0.789             | 0.000                           |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 1.152                  | 1.323          |                   | 0.000                                                                       |                   | 0.232               |                   | 0.000              |                   | 0.232                                               |                         |                   | 0.000                           |
| <b>Test and Evaluation (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                                |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Government Test Support Activity                                                                                                               | Various                           | Army Test and Evaluation Command:Various  | 39.782                 | 1.778          | Dec 2011          | -                                                                           |                   | 1.735               |                   | -                  |                   | 1.735                                               | Continuing              | Continuing        | Continuing                      |

**UNCLASSIFIED**

|                                                                                                                                                                      |  |  |  |  |  |                                                                                    |  |  |  |                                                            |  |                         |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|------------------------------------------------------------------------------------|--|--|--|------------------------------------------------------------|--|-------------------------|--|--|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2014 Army                                                                                                    |  |  |  |  |  |                                                                                    |  |  |  |                                                            |  | <b>DATE:</b> April 2013 |  |  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |  |  |  |  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> |  |  |  | <b>PROJECT</b><br>L67: <i>Soldier Night Vision Devices</i> |  |                         |  |  |

  

| Test and Evaluation (\$ in Millions) |                              |                                   |                    | FY 2012 |               | FY 2013 |               | FY 2014<br>Base |               | FY 2014<br>OCO |               | FY 2014<br>Total |               |                     |               |                                |
|--------------------------------------|------------------------------|-----------------------------------|--------------------|---------|---------------|---------|---------------|-----------------|---------------|----------------|---------------|------------------|---------------|---------------------|---------------|--------------------------------|
| Cost Category Item                   | Contract<br>Method<br>& Type | Performing<br>Activity & Location | All Prior<br>Years | Cost    | Award<br>Date | Cost    | Award<br>Date | Cost            | Award<br>Date | Cost           | Award<br>Date | Cost             | Award<br>Date | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
| <b>Subtotal</b>                      |                              |                                   | 39.782             | 1.778   |               | 0.000   |               | 1.735           |               | 0.000          |               | 1.735            |               |                     |               |                                |

  

|                            | All Prior<br>Years | FY 2012 |  | FY 2013 |  | FY 2014<br>Base |  | FY 2014<br>OCO |  | FY 2014<br>Total | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
|----------------------------|--------------------|---------|--|---------|--|-----------------|--|----------------|--|------------------|---------------------|---------------|--------------------------------|
| <b>Project Cost Totals</b> | 48.836             | 23.268  |  | 0.000   |  | 11.271          |  | 0.000          |  | 11.271           |                     |               |                                |

  

**Remarks**



**UNCLASSIFIED**

|                                                                                                                                                                      |  |                                                                                    |                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------|------------------------------------------------------------|
| <b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2014 Army                                                                                                         |  |                                                                                    | <b>DATE:</b> April 2013                                    |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> | <b>PROJECT</b><br>L67: <i>Soldier Night Vision Devices</i> |

|                                                  | FY 2012 |   |   |   | FY 2013 |   |   |   | FY 2014 |   |   |   | FY 2015 |   |   |   | FY 2016 |   |   |   | FY 2017 |   |   |   | FY 2018 |   |   |   |
|--------------------------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|                                                  | 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 |
| ENVG Production Qualification Testing            |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FWS-I MS B                                       |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FWS-I Engineering and Manufacturing Development  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FWS-I MS C                                       |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FWS-I Development/Operational Testing            |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FWS-CREW SERVED (CS) MS B                        |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FWS-CS Engineering and Manufacturing Development |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FWS- SNIPER (S)                                  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FWS- S Engineering and Manufacturing Development |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| PTD MS B                                         |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| PTD Engineering and Manufacturing Development    |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| PTD MS C                                         |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

# UNCLASSIFIED

|                                                                                                                                                                      |                                                                                    |                                                            |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Army                                                                                                        |                                                                                    |                                                            | <b>DATE:</b> April 2013 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> | <b>PROJECT</b><br>L67: <i>Soldier Night Vision Devices</i> |                         |

## Schedule Details

| Events                                           | Start   |      | End     |      |
|--------------------------------------------------|---------|------|---------|------|
|                                                  | Quarter | Year | Quarter | Year |
| ENVG Production Qualification Testing            | 3       | 2014 | 3       | 2015 |
| FWS-I MS B                                       | 2       | 2014 | 2       | 2014 |
| FWS-I Engineering and Manufacturing Development  | 2       | 2014 | 4       | 2015 |
| FWS-I MS C                                       | 2       | 2015 | 2       | 2015 |
| FWS-I Development/Operational Testing            | 3       | 2015 | 4       | 2016 |
| FWS-CREW SERVED (CS) MS B                        | 2       | 2015 | 2       | 2015 |
| FWS-CS Engineering and Manufacturing Development | 2       | 2015 | 4       | 2016 |
| FWS- SNIPER (S)                                  | 1       | 2016 | 1       | 2016 |
| FWS- S Engineering and Manufacturing Development | 2       | 2016 | 3       | 2017 |
| PTD MS B                                         | 1       | 2016 | 1       | 2016 |
| PTD Engineering and Manufacturing Development    | 2       | 2016 | 4       | 2017 |
| PTD MS C                                         | 1       | 2018 | 1       | 2018 |

**UNCLASSIFIED**

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                 |                 |         |                      |              |                                                                      |               |         |         |                                     | DATE: April 2013 |                  |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|----------------------|--------------|----------------------------------------------------------------------|---------------|---------|---------|-------------------------------------|------------------|------------------|------------|
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD) |                 |         |                      |              | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev |               |         |         | PROJECT<br>L70: Night Vision Dev Ed |                  |                  |            |
| COST (\$ in Millions)                                                                                                                   | All Prior Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014 Base | FY 2014 OCO <sup>##</sup>                                            | FY 2014 Total | FY 2015 | FY 2016 | FY 2017                             | FY 2018          | Cost To Complete | Total Cost |
| L70: Night Vision Dev Ed                                                                                                                | -               | 9.900   | 11.116               | 6.669        | -                                                                    | 6.669         | 5.819   | 0.812   | 0.000                               | 0.000            | Continuing       | Continuing |
| Quantity of RDT&E Articles                                                                                                              |                 |         |                      |              |                                                                      |               |         |         |                                     |                  |                  |            |

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

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

This project performs Engineering and Manufacturing Development (EMD) on high performance night vision, Reconnaissance, Surveillance, and Target Acquisition (RSTA) systems and other related systems that allow forces to locate and track enemy units in day, night, and all battlefield conditions, and through natural and man-made structures and obscurants. It also develops and integrates suites of these sensors to provide well-defined surveillance and targeting capabilities, as well as architectures for these sensors to communicate automatically. The focus is on meeting the requisite night vision and RSTA capabilities required for evolving Current Force, Modular Force, and Future Force systems.

The project will leverage critical technologies from the Advanced Thermal Imaging EMD effort and Combat Vehicle Advanced Sensor Technology (CVASt) to develop a common Improved-Forward Looking Infrared (I-FLIR) B-Kit for integration into US Army FLIR sensor systems including emerging requirements of I-FLIR Army Combat and reconnaissance sensor systems to the Ground Combat Vehicle Infantry Fighting Vehicle (GCV IFV), Abrams, and Bradley. The I-FLIR B-Kit provides Mid Wave Infrared and Long Wave Infrared digital video and the electronic interfaces required to integrate the Next Generation FLIR (NGF) technology with the host platform sensor. This technology enhances the war-fighters' survivability and lethality through increased identification range performance when integrated in current sensor packages, while enabling the detection of difficult or obscured targets and faster threat detection through automated processes. The I-FLIR B-Kit will also be used to enhance mobility by maintaining current range performance in significantly smaller and lighter sensor packages.

This project also supports the Army Sensor Computing Environment effort in support of the Common Operating Environment (COE) vision. It focuses on the improving the network interoperability requirement and improving the soldier - machine interface. Resultant improvements would be implemented through upgrades to fielded systems, or informing future programs.

The funds allocated to Gunshot Detection supported a System Characterization study and Technology Readiness Level (TRL) determination for potential technical capabilities. The system characterization study will ascertain the performance of industry systems and will enhance Government knowledge of the benefits of various technology types and modalities in determining incoming gunshots. The study will aid the Government in writing the Performance Work Statement (PWS), Performance Specification and the Interface Control Document (ICD) and will enable schedule acceleration.

This project also supports development efforts for the I-FLIR B-Kit, to include specification development, integration analysis, milestone and solicitation preparation activities, and continues development and implementation of Block II Electro Optic Counter-Counter Measures (EOCCM). In addition, this project also supports the development of meeting the Army's network interoperability requirements and improving the soldier - machine interface.

# UNCLASSIFIED

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                      |                                     |            |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------|------------|---------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                      | DATE: April 2013                    |            |         |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev | PROJECT<br>L70: Night Vision Dev Ed |            |         |
| FY 2014 Base Funding in the amount of \$6.669 Million supports I-FLIR B-Kit component and sensor integration assessments, milestone and solicitation preparation activities, and also supports the continued activities associated with meeting network interoperability requirements and improving the soldier - machine interface in support of the Army's vision of the Common Operating Environment (COE).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                      |                                     |            |         |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                      | FY 2012                             | FY 2013    | FY 2014 |
| Title: Thermal Imaging Engine<br><br>Articles:<br><br>Description: Engineering and Manufacturing Development (EMD) of Thermal Imaging Engine. MS B approval in FY08 initiated EMD effort. EMD program develops the Thermal Imaging Engine for the Next Gen FLIR Army Combat and reconnaissance systems to include fabrication and qualification of 15 prototypes.<br><br>FY 2012 Accomplishments:<br>FY 2012 Base Funding supported completion of qualification testing, System Verification Review, and contract closeout activities.                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                      | 1.379<br>0                          | 0.000      | 0.000   |
| Title: Improved-Forward Looking Infrared (I-FLIR) B-Kit<br><br>Articles:<br><br>Description: Development of the I-FLIR B-Kit. The I-FLIR B-Kit will represent the B-Kit materiel solution in accordance with the I-FLIR CDD, resulting in a common sensor component for both Ground and Airborne host platforms.<br><br>FY 2012 Accomplishments:<br>FY 2012 Base Funding supported I-FLIR B-Kit performance spec & interface control document development, platform requirements decomposition, and maturation of critical technologies.<br><br>FY 2013 Plans:<br>Following FY12 approval of the I-FLIR CDD and Platform ECP/Sensor Upgrade programs, funding supports I-FLIR B-Kit specification development and I-FLIR B-Kit MS B preparation activities.<br><br>FY 2014 Plans:<br>FY 2014 Base Funding will support I-FLIR B-Kit component and platform sensor integration assessments. Funding will also support milestone and solicitation preparation activities. |                                                                      | 5.790<br>0                          | 6.909<br>0 | 6.069   |
| Title: Pre Planned Product Improvements (P3I) software for the Persistent Surveillance System (PSS) Program of Record (POR)<br><br>Articles:<br><br>Description: Funding is provided for the following efforts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                      | 2.731<br>0                          | 4.207<br>0 | 0.600   |

# UNCLASSIFIED

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |         |                 |                                                                      |                  |         |         |                                     |         |                     |            |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|-----------------|----------------------------------------------------------------------|------------------|---------|---------|-------------------------------------|---------|---------------------|------------|---------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |         |                 |                                                                      |                  |         |         |                                     |         | DATE: April 2013    |            |         |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                        |         |         |                 | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev |                  |         |         | PROJECT<br>L70: Night Vision Dev Ed |         |                     |            |         |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |         |                 |                                                                      |                  |         |         |                                     |         | FY 2012             | FY 2013    | FY 2014 |
| FY 2012 Accomplishments:<br>FY 2012 Base Funding supports Developed Systems Engineering plan and path forward to meet the network interoperability requirement and improving the soldier - machine interfaces for COE execution plan.                                                                                                                                                                                                                                                                                          |         |         |                 |                                                                      |                  |         |         |                                     |         |                     |            |         |
| FY 2013 Plans:<br>Continued development of the Pre Planned Product Improvements (P3I) software for the Persistent Surveillance System (PSS) Program of Record (POR), to include meeting the network interoperability requirement and improving the soldier - machine interface of the POR. Resultant improvements would be implemented through maintenance upgrades to fielded systems. This effort establishes the Army Sensor Computing Environment (CE) effort in support of the Common Operating Environment (COE) vision. |         |         |                 |                                                                      |                  |         |         |                                     |         |                     |            |         |
| FY 2014 Plans:<br>FY 2014 Base Funding supports continued development of meeting the network interoperability requirement and improving the soldier - machine interface. Resultant improvements would be implemented through upgrades to fielded systems, or informing future programs. This effort continues the Army Sensor Computing Environment (CE) effort in support of the Common Operating Environment (COE) vision.                                                                                                   |         |         |                 |                                                                      |                  |         |         |                                     |         |                     |            |         |
| Accomplishments/Planned Programs Subtotals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |         |                 |                                                                      |                  |         |         |                                     |         | 9.900               | 11.116     | 6.669   |
| C. Other Program Funding Summary (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |         |                 |                                                                      |                  |         |         |                                     |         |                     |            |         |
| Line Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | FY 2012 | FY 2013 | FY 2014<br>Base | FY 2014<br>OCO                                                       | FY 2014<br>Total | FY 2015 | FY 2016 | FY 2017                             | FY 2018 | Cost To<br>Complete | Total Cost |         |
| • GCV (PE 0605625A FC8):<br>Ground Combat Vehicle (PE 0605625A FC8)                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 434.977 | 639.874 | 592.201         |                                                                      | 592.201          | 953.081 | 948.718 | 718.000                             | 550.037 | Continuing          | Continuing |         |
| • ABRAMS Tank Improvement<br>Program: Abrams Tank Improvement Program (PE 0203735A)                                                                                                                                                                                                                                                                                                                                                                                                                                            | 9.347   | 97.278  | 101.319         |                                                                      | 101.319          | 135.228 | 110.917 | 90.042                              | 34.115  | Continuing          | Continuing |         |
| • BRADLEY Improvement<br>Program: Bradley Improvement Program (PE 0203735A)                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 11.858  | 82.586  | 76.213          |                                                                      | 76.213           | 84.709  | 59.010  | 40.539                              |         | 0.000               | 354.915    |         |
| • LRAS3 (K38300): Long Range<br>Advanced Scout Surveillance System (LRAS3) (K38300) OPA2                                                                                                                                                                                                                                                                                                                                                                                                                                       | 102.334 |         | 5.183           |                                                                      | 5.183            |         |         |                                     |         | 0.000               | 107.517    |         |

# UNCLASSIFIED

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |                |                |                                                                             |                |                |                |                                            |                |                  |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|-----------------------------------------------------------------------------|----------------|----------------|----------------|--------------------------------------------|----------------|------------------|-------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |                |                |                                                                             |                |                |                |                                            |                | DATE: April 2013 |                   |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |                |                | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: Night Vision Systems - Eng Dev |                |                |                | <b>PROJECT</b><br>L70: Night Vision Dev Ed |                |                  |                   |
| <b>C. Other Program Funding Summary (\$ in Millions)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                |                |                |                                                                             |                |                |                |                                            |                |                  |                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |                | <u>FY 2014</u> | <u>FY 2014</u>                                                              | <u>FY 2014</u> |                |                |                                            |                | <u>Cost To</u>   |                   |
| <u>Line Item</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <u>FY 2012</u> | <u>FY 2013</u> | <u>Base</u>    | <u>OCO</u>                                                                  | <u>Total</u>   | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u>                             | <u>FY 2018</u> | <u>Complete</u>  | <u>Total Cost</u> |
| <b>Remarks</b><br>Comment: Above figures reflect PB14 budget.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                |                |                                                                             |                |                |                |                                            |                |                  |                   |
| <b>D. Acquisition Strategy</b><br>The development programs in this project are currently based on competitive awards and under cost reimbursement type contracts. Following approval of the I-FLIR CDD planned activities include I-FLIR B-Kit component and sensor integration assessments, as well as milestone and solicitation preparation activities. Additional activities include continued development of meeting the network interoperability requirement and improving the soldier - machine interface in support of the Army's vision of the Common Operating Environment (COE). |                |                |                |                                                                             |                |                |                |                                            |                |                  |                   |
| <b>E. Performance Metrics</b><br>Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.                                                                                                                                                                                                                                                                                                                                                                                         |                |                |                |                                                                             |                |                |                |                                            |                |                  |                   |

**UNCLASSIFIED**

|                                                                                                                                                |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   |                                            |                         |                   |                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------|------------------------|----------------|-------------------|-----------------------------------------------------------------------------|-------------------|---------------------|-------------------|--------------------|-------------------|--------------------------------------------|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Army</b>                                                                              |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   | <b>DATE:</b> April 2013                    |                         |                   |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD) |                                   |                                           |                        |                |                   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: Night Vision Systems - Eng Dev |                   |                     |                   |                    |                   | <b>PROJECT</b><br>L70: Night Vision Dev Ed |                         |                   |                                 |
| <b>Management Services (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                       |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Project Management                                                                                                                             | C/FP                              | PM, NV/RSTA:Ft. Belvoir, VA               | 8.239                  | 0.216          | Apr 2012          | 0.616                                                                       | Sep 2013          | 0.229               | Mar 2014          | -                  |                   | 0.229                                      | 0.000                   | 9.300             | 9.454                           |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 8.239                  | 0.216          |                   | 0.616                                                                       |                   | 0.229               |                   | 0.000              |                   | 0.229                                      | 0.000                   | 9.300             | 9.454                           |
| <b>Product Development (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                       |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| SGS/RAID                                                                                                                                       | C/CPIF                            | Sarnoff:Princeton, NJ                     | 4.913                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                          | 0.000                   | 4.913             | 4.913                           |
| FY 2009 - FY 2011: Thermal Imaging - Design and Demonstration                                                                                  | C/FP                              | Various:Various                           | 13.478                 | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                          | 0.000                   | 13.478            | 13.478                          |
| FY 2010-FY 2011: Thermal Imaging - Source Risk Reduction                                                                                       | C/CPAF                            | Various:Various                           | 1.361                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                          | 0.000                   | 1.361             | 1.361                           |
| FY 2012-FY 2013: Develop, Fab, and Qual of a common Ground Platform Engine with Block II EOCCM                                                 | TBD                               | Various:Various                           | 0.000                  | 0.049          | Jun 2012          | 2.918                                                                       | Mar 2013          | -                   |                   | -                  |                   | -                                          | 0.000                   | 2.967             | 7.535                           |
| Improved-Forward Looking Infrared (I-FLIR) B-Kit                                                                                               | TBD                               | Various:Various                           | 0.000                  | 4.461          | Sep 2012          | -                                                                           |                   | 3.249               | Mar 14            | -                  |                   | 3.249                                      | 0.000                   | 7.710             | 0.000                           |
| Gunshot Detection Systems                                                                                                                      | RO                                | ARDEC:Aberdeen Proving Grounds (APG)      | 2.211                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                          | 0.000                   | 2.211             | 2.211                           |
| PSS P3I                                                                                                                                        | C/FP                              | TBD:TBD                                   | 0.000                  | 2.244          | Sep 2012          | 3.591                                                                       | Mar 2013          | -                   |                   | -                  |                   | -                                          | 0.000                   | 5.835             | 8.904                           |
| Standoff Suicide Bomber Detection System (SSBDS)                                                                                               | C/CPFF                            | CACI:Lorton, VA                           | 2.000                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                          | 0.000                   | 2.000             | 2.000                           |
| FOB S2S (Forward Operating Base Sensor to Shooter)                                                                                             | C/CPFF                            | CACI:Lorton, VA                           | 0.500                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                          | 0.000                   | 0.500             | 0.500                           |

**UNCLASSIFIED**

|                                                                                                                                                |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   |                                            |                         |                   |                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------|------------------------|----------------|-------------------|-----------------------------------------------------------------------------|-------------------|---------------------|-------------------|--------------------|-------------------|--------------------------------------------|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Army</b>                                                                              |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   | <b>DATE:</b> April 2013                    |                         |                   |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD) |                                   |                                           |                        |                |                   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: Night Vision Systems - Eng Dev |                   |                     |                   |                    |                   | <b>PROJECT</b><br>L70: Night Vision Dev Ed |                         |                   |                                 |
| <b>Product Development (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                       |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Remotely Operated HMDS (Husky Mounted Detection System)                                                                                        | C/CPFF                            | EOIR:Fredericksburg VA                    | 7.700                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                          | 0.000                   | 7.700             | 7.000                           |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 32.163                 | 6.754          |                   | 6.509                                                                       |                   | 3.249               |                   | 0.000              |                   | 3.249                                      | 0.000                   | 48.675            | 47.902                          |
| <b>Support (\$ in Millions)</b>                                                                                                                |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                       |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| I-FLIR Support                                                                                                                                 | Various                           | Various:Various                           | 22.244                 | 2.658          | Sep 2012          | 3.991                                                                       | Mar 2013          | 2.820               | Mar 14            | -                  |                   | 2.820                                      | 0.000                   | 31.713            | 27.995                          |
| COE Support                                                                                                                                    | Various                           | Various:Various                           | 0.000                  | 0.272          | Apr 2012          | -                                                                           |                   | 0.371               | Mar 14            | -                  |                   | 0.371                                      | Continuing              | Continuing        | 0.000                           |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 22.244                 | 2.930          |                   | 3.991                                                                       |                   | 3.191               |                   | 0.000              |                   | 3.191                                      |                         |                   | 27.995                          |
| <b>Test and Evaluation (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                       |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Other Test Support*                                                                                                                            | MIPR                              | Various:Various                           | 15.850                 | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                                          | 0.000                   | 15.850            | 15.850                          |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 15.850                 | 0.000          |                   | 0.000                                                                       |                   | 0.000               |                   | 0.000              |                   | 0.000                                      | 0.000                   | 15.850            | 15.850                          |
| <b>Remarks</b>                                                                                                                                 |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   |                                            |                         |                   |                                 |
| * Includes PSDS2, UGS, STTW, 3GF, PSDS2, FCS UGS and other sensor test and evaluation activities.                                              |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   |                                            |                         |                   |                                 |
|                                                                                                                                                |                                   |                                           | <b>All Prior Years</b> | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                       | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| <b>Project Cost Totals</b>                                                                                                                     |                                   |                                           | 78.496                 | 9.900          |                   | 11.116                                                                      |                   | 6.669               |                   | 0.000              |                   | 6.669                                      |                         |                   | 101.201                         |
| <b>Remarks</b>                                                                                                                                 |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   |                                            |                         |                   |                                 |



UNCLASSIFIED

|                                                      |  |  |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |  |  |
|------------------------------------------------------|--|--|--|--|--|--|--|--|--|-----------------------------------------|--|--|--|--|--|--|--|--|--|
| Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army    |  |  |  |  |  |  |  |  |  | DATE: April 2013                        |  |  |  |  |  |  |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY                        |  |  |  |  |  |  |  |  |  | R-1 ITEM NOMENCLATURE                   |  |  |  |  |  |  |  |  |  |
| 2040: Research, Development, Test & Evaluation, Army |  |  |  |  |  |  |  |  |  | PE 0604710A: Night Vision Systems - Eng |  |  |  |  |  |  |  |  |  |
| BA 5: System Development & Demonstration (SDD)       |  |  |  |  |  |  |  |  |  | L70: Night Vision Dev Ed                |  |  |  |  |  |  |  |  |  |
|                                                      |  |  |  |  |  |  |  |  |  | Dev                                     |  |  |  |  |  |  |  |  |  |

|                                                                                  | FY 2012 |   |   |   | FY 2013 |   |   |   | FY 2014 |   |   |   | FY 2015 |   |   |   | FY 2016 |   |   |   | FY 2017 |   |   |   | FY 2018 |   |   |   |
|----------------------------------------------------------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|                                                                                  | 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 |
| Thermal Imaging - Develop, Fab and Qual of Ground Platform Engine with BII EOCCM |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| PSS P3I effort; Common Operating Environment Development                         |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

**UNCLASSIFIED**

|                                                                                                                                                                      |                                                                                    |                                                   |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Army                                                                                                        |                                                                                    |                                                   | <b>DATE:</b> April 2013 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> | <b>PROJECT</b><br>L70: <i>Night Vision Dev Ed</i> |                         |

Schedule Details

| Events                                                                           | Start   |      | End     |      |
|----------------------------------------------------------------------------------|---------|------|---------|------|
|                                                                                  | Quarter | Year | Quarter | Year |
| Thermal Imaging - Develop, Fab and Qual of Ground Platform Engine with BII EOCCM | 2       | 2012 | 4       | 2013 |
| PSS P3I effort; Common Operating Environment Development                         | 2       | 2012 | 4       | 2014 |

**UNCLASSIFIED**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|----------------------|--------------|----------------------------------------------------------------------|---------------|---------|---------|--------------------------|---------|------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |         |                      |              |                                                                      |               |         |         | DATE: April 2013         |         |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |         |                      |              | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev |               |         |         | PROJECT<br>L75: Profiler |         |                  |            |
| COST (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | All Prior Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014 Base | FY 2014 OCO <sup>##</sup>                                            | FY 2014 Total | FY 2015 | FY 2016 | FY 2017                  | FY 2018 | Cost To Complete | Total Cost |
| L75: Profiler                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -               | 2.512   | 0.000                | 2.759        | -                                                                    | 2.759         | 3.605   | 0.936   | 0.000                    | 0.000   | Continuing       | Continuing |
| Quantity of RDT&E Articles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |
| # FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |
| ## The FY 2014 OCO Request will be submitted at a later date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |
| Note                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |
| Not applicable for this item.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |
| A. Mission Description and Budget Item Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |
| Profiler provides meteorological(MET) information such as wind speed, wind direction, temperature, pressure, humidity, rate of precipitation, visibility, cloud height and cloud ceiling. All of these are required for precise targeting and terminal guidance. Profiler uses this information to build a four-dimensional MET model (height, width, depth and time) that includes terrain effects. By providing more accurate MET messages, Profiler will enable the artillery to have a greater probability of a first round hit with indirect fire systems. The new capabilities will increase the lethality of field artillery systems such as Multiple Launch Rocket Systems (MLRS), Paladin, and self-propelled or towed howitzers. When analysis determined that Block I Profiler already satisfied the requirements of Block II, the decision was made to proceed directly to Block III as the next evolution of the Profiler capability. The Block I, AN/TMQ-52 Meteorological Measuring Set-Profiler (MMS-P),uses a ground tactical meteorological (TACMET) sensor and Meteorological (MET) data from communication satellites along with an advanced weather model to provide highly accurate MET data covering an operational area of 500 kilometers with a tested range of 60 kilometers. Block III CMD-P, AN/GMK-2 will provide a networked laptop configuration that will enhance system efficiencies while further reducing the system's operational and logistical footprint with the elimination of the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) mounted shelter and trailer. The Block III configuration consists of one computer with a common operating system co-located within the Tactical Operation Center (TOC) with a direct interface to the TOC Local Area Network (LAN). The system will be able to autonomously generate MET messages upon request from Advanced Field Artillery Tactical Data Systems (AFATDS) eliminating the need for a dedicated MET section crew. The Army will realize a significant Operations and Support cost avoidance with the improved configuration.The Profiler Virtual Module (PVM) using the IT Box Construct concept will address emerging requirements and system long-term sustainment challenges. The PVM concept includes the following updates to the Profiler; the software architecture will be redone to create a modular framework, the weather model will be updated from Mesoscale Model version5(MM5) to Weather Research Forecast model(WRF), the weather data format for initiation data and data exchange will be updated to Gridded Binary version2 (GRIB 2), and the Graphical User Interface(GUI) made into a Common Operating Environment(COE)compliant thin client. Along with these changes, a primary goal is to recode the multiple language reuse code pieces into a common development environment. This will also be developed in conjunction with the AFATDS program. This concept is a flexible approach that will be able to support both stand alone application (on a PC), or integrated into the COE (i.e. a Slice in the TOC server). |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |
| FY2014 Base funds in the amount of \$2.759M are provided for the Profiler Virtual Module to develop the new MET process and the replacement of the weather model from MM5 to WRF.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |         |                      |              |                                                                      |               |         |         |                          |         |                  |            |

**UNCLASSIFIED**

|                                                                                                                                                                      |  |  |  |                                                                                    |  |  |                                        |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|------------------------------------------------------------------------------------|--|--|----------------------------------------|--|--|--|
| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Army                                                                                                   |  |  |  |                                                                                    |  |  | <b>DATE:</b> April 2013                |  |  |  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |  |  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> |  |  | <b>PROJECT</b><br>L75: <i>Profiler</i> |  |  |  |

  

|                                                                                                                                                                                                                                                        |  |  |  |                |                |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|----------------|----------------|----------------|
| <b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>                                                                                                                                                                |  |  |  | <b>FY 2012</b> | <b>FY 2013</b> | <b>FY 2014</b> |
| <b>Title:</b> Profiler Virtual Module (PVM) development<br><b>Description:</b> VM provides software architecture to create a modular framework.<br><b>FY 2014 Plans:</b><br>Profiler Virtual Module (PVM) development                                  |  |  |  | 0.000          | 0.000          | 2.759          |
| <b>Title:</b> Block III Limited User Testing and Austere Testing.<br><b>Description:</b> Conduct Block III Limited User Testing and Austere Testing.<br><b>FY 2012 Accomplishments:</b><br>Conduct Block III Limited User Testing and Austere Testing. |  |  |  | 2.512<br>0     | 0.000          | 0.000          |
| <b>Accomplishments/Planned Programs Subtotals</b>                                                                                                                                                                                                      |  |  |  | 2.512          | 0.000          | 2.759          |

  

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |                |                         |                        |                          |                |                |                |                |                             |                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-------------------------|------------------------|--------------------------|----------------|----------------|----------------|----------------|-----------------------------|-------------------|
| <b>C. Other Program Funding Summary (\$ in Millions)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |                |                         |                        |                          |                |                |                |                |                             |                   |
| <b>Line Item</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>FY 2012</b> | <b>FY 2013</b> | <b>FY 2014<br/>Base</b> | <b>FY 2014<br/>OCO</b> | <b>FY 2014<br/>Total</b> | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017</b> | <b>FY 2018</b> | <b>Cost To<br/>Complete</b> | <b>Total Cost</b> |
| • Profiler OPA SSN K27900:<br><i>Profiler</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.312          | 12.482         | 3.027                   |                        | 3.027                    | 4.684          | 5.359          |                |                | 0.000                       | 28.864            |
| <b>Remarks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |                |                         |                        |                          |                |                |                |                |                             |                   |
| <b>D. Acquisition Strategy</b><br>The Profiler Block III acquisition strategy decision brief to the Milestone Decision Authority (MDA) was presented in January 2010. The Acquisition Decision Memorandum (ADM) authorizing initiation of Profiler Block III was signed by the MDA on 23 February 2010. A limited competitive Firm-Fixed Price (FFP)/Cost Plus Fixed Fee (CPFF) contract was awarded via the Strategic Services Sourcing (S3) contract to build, test and deliver the Block III software to support eight (8) Profiler Block III Production Representative Prototype Systems (PRPS). The Block III program is on schedule and entered production and fielding in the first quarter of FY13. The revised Profiler Acquisition Strategy was approved by the MDA on 28 March 2012 for a product improvement to the Profiler Block III for a Virtual Module supporting the Command Post Computing Environment of the Common Operating Environment (COE). |                |                |                         |                        |                          |                |                |                |                |                             |                   |
| <b>E. Performance Metrics</b><br>Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |                |                         |                        |                          |                |                |                |                |                             |                   |

**UNCLASSIFIED**

|                                                                                                                                                |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   |                                 |                         |                   |                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------|------------------------|----------------|-------------------|-----------------------------------------------------------------------------|-------------------|---------------------|-------------------|--------------------|-------------------|---------------------------------|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Army</b>                                                                              |                                   |                                           |                        |                |                   |                                                                             |                   |                     |                   |                    |                   | <b>DATE:</b> April 2013         |                         |                   |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD) |                                   |                                           |                        |                |                   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: Night Vision Systems - Eng Dev |                   |                     |                   |                    |                   | <b>PROJECT</b><br>L75: Profiler |                         |                   |                                 |
| <b>Management Services (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>            |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Project Management                                                                                                                             | SS/FP                             | PM Nav Sys:Various                        | 2.150                  | 0.473          |                   | -                                                                           |                   | 0.270               |                   | -                  |                   | 0.270                           | Continuing              | Continuing        | Continuing                      |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 2.150                  | 0.473          |                   | 0.000                                                                       |                   | 0.270               |                   | 0.000              |                   | 0.270                           |                         |                   |                                 |
| <b>Product Development (\$ in Millions)</b>                                                                                                    |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>            |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Award efforts for s/w porting to laptop                                                                                                        | C/FP                              | Mantech:Red Bank, NJ                      | 5.495                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                               | Continuing              | Continuing        | Continuing                      |
| Initiate backup sensor effort                                                                                                                  | Various                           | Army Research Lab:various                 | 1.191                  | -              |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                               | Continuing              | Continuing        | Continuing                      |
| Profiler VM SW development and data gathering                                                                                                  | MIPR                              | SEC, FSED:Ft. Sill, Oklahoma              | 0.000                  | -              |                   | -                                                                           |                   | 1.999               |                   | -                  |                   | 1.999                           | 0.000                   | 1.999             | 0.000                           |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 6.686                  | 0.000          |                   | 0.000                                                                       |                   | 1.999               |                   | 0.000              |                   | 1.999                           |                         |                   |                                 |
| <b>Support (\$ in Millions)</b>                                                                                                                |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                              |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>            |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                      | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Matrix Support                                                                                                                                 | MIPR                              | CECOM:Aberdeen, MD                        | 2.516                  | 0.499          |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                               | Continuing              | Continuing        | Continuing                      |
| Sys Engr/Technical Assistance                                                                                                                  | SS/FP                             | Various:Various                           | 1.246                  | 0.671          |                   | -                                                                           |                   | -                   |                   | -                  |                   | -                               | Continuing              | Continuing        | Continuing                      |
| Conversion from MM5 to WRF for PVM                                                                                                             | MIPR                              | ARL, Various:WSMR, NM                     | 1.089                  | 0.178          |                   | -                                                                           |                   | 0.490               |                   | -                  |                   | 0.490                           | Continuing              | Continuing        | Continuing                      |
| <b>Subtotal</b>                                                                                                                                |                                   |                                           | 4.851                  | 1.348          |                   | 0.000                                                                       |                   | 0.490               |                   | 0.000              |                   | 0.490                           |                         |                   |                                 |

**UNCLASSIFIED**

|                                                                                                                                                                      |                                   |                                           |                        |                |                   |                                                                                    |                   |                     |                   |                    |                   |                                        |                         |                   |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------|------------------------|----------------|-------------------|------------------------------------------------------------------------------------|-------------------|---------------------|-------------------|--------------------|-------------------|----------------------------------------|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2014 Army                                                                                                    |                                   |                                           |                        |                |                   |                                                                                    |                   |                     |                   |                    |                   | <b>DATE:</b> April 2013                |                         |                   |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |                                   |                                           |                        |                |                   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> |                   |                     |                   |                    |                   | <b>PROJECT</b><br>L75: <i>Profiler</i> |                         |                   |                                 |
| <b>Test and Evaluation (\$ in Millions)</b>                                                                                                                          |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                                     |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                   |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                                            | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| Test Planning and Preparation                                                                                                                                        | Various                           | ATEC, Various, CECOM, PRD,:Dir, APG, MD   | 1.557                  | -              |                   | -                                                                                  |                   | -                   |                   | -                  |                   | -                                      | Continuing              | Continuing        | Continuing                      |
| Limited User Test                                                                                                                                                    | MIPR                              | ATEC,:Various                             | 1.200                  | 0.352          |                   | -                                                                                  |                   | -                   |                   | -                  |                   | -                                      | Continuing              | Continuing        | Continuing                      |
| Conduct Block III Austere Testing                                                                                                                                    | MIPR                              | ARL, ATEC,:Aberdeen Proving Ground, MD    | 0.000                  | 0.339          |                   | -                                                                                  |                   | -                   |                   | -                  |                   | -                                      | Continuing              | Continuing        | Continuing                      |
| <b>Subtotal</b>                                                                                                                                                      |                                   |                                           | 2.757                  | 0.691          |                   | 0.000                                                                              |                   | 0.000               |                   | 0.000              |                   | 0.000                                  |                         |                   |                                 |
|                                                                                                                                                                      |                                   |                                           | <b>All Prior Years</b> | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                                     |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                   | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| <b>Project Cost Totals</b>                                                                                                                                           |                                   |                                           | 16.444                 | 2.512          |                   | 0.000                                                                              |                   | 2.759               |                   | 0.000              |                   | 2.759                                  |                         |                   |                                 |
| <b>Remarks</b>                                                                                                                                                       |                                   |                                           |                        |                |                   |                                                                                    |                   |                     |                   |                    |                   |                                        |                         |                   |                                 |

**UNCLASSIFIED**

|                                                                                                                                         |  |  |  |  |  |                                                                      |  |  |  |                          |  |                  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|----------------------------------------------------------------------|--|--|--|--------------------------|--|------------------|--|
| Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army                                                                                       |  |  |  |  |  |                                                                      |  |  |  |                          |  | DATE: April 2013 |  |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD) |  |  |  |  |  | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev |  |  |  | PROJECT<br>L75: Profiler |  |                  |  |

|                                                                  | FY 2012 |   |   |   | FY 2013 |   |   |   | FY 2014 |   |   |   | FY 2015 |   |   |   | FY 2016 |   |   |   | FY 2017 |   |   |   | FY 2018 |   |   |   |
|------------------------------------------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|                                                                  | 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 |
| Austere Testing                                                  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| PVM SW development and data gathering                            |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Profiler Virtual Module Development Testing/<br>Formal Qual Test |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Profiler Virtual Module Limited User Testing                     |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Profiler Virtual Module FQT Delta Testing                        |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

**UNCLASSIFIED**

|                                                                                                                                                                      |                                                                                    |                                        |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------|-------------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Army                                                                                                        |                                                                                    |                                        | <b>DATE:</b> April 2013 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> | <b>PROJECT</b><br>L75: <i>Profiler</i> |                         |

Schedule Details

| Events                                                       | Start   |      | End     |      |
|--------------------------------------------------------------|---------|------|---------|------|
|                                                              | Quarter | Year | Quarter | Year |
| Austere Testing                                              | 4       | 2012 | 4       | 2012 |
| PVM SW development and data gathering                        | 1       | 2014 | 4       | 2014 |
| Profiler Virtual Module Development Testing/Formal Qual Test | 1       | 2015 | 3       | 2015 |
| Profiler Virtual Module Limited User Testing                 | 4       | 2015 | 4       | 2015 |
| Profiler Virtual Module FQT Delta Testing                    | 1       | 2016 | 2       | 2016 |



**UNCLASSIFIED**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|----------------------|--------------|----------------------------------------------------------------------|---------------|---------|---------|-----------------------------------------------------------------|---------|------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |         |                      |              |                                                                      |               |         |         | DATE: April 2013                                                |         |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |         |                      |              | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev |               |         |         | PROJECT<br>L76: Dismounted Fire Support Laser Targeting Systems |         |                  |            |
| COST (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | All Prior Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014 Base | FY 2014 OCO <sup>##</sup>                                            | FY 2014 Total | FY 2015 | FY 2016 | FY 2017                                                         | FY 2018 | Cost To Complete | Total Cost |
| L76: Dismounted Fire Support Laser Targeting Systems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -               | 0.000   | 0.000                | 1.100        | -                                                                    | 1.100         | 1.119   | 1.138   | 1.157                                                           | 1.177   | Continuing       | Continuing |
| Quantity of RDT&E Articles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| # FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| ## The FY 2014 OCO Request will be submitted at a later date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| A. Mission Description and Budget Item Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| This project matures technologies and capabilities which benefit, and may be inserted into, the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1) and other precisioning targeting systems. These precision targeting systems are used by dismounted Soldiers to locate, identify, and target enemy assets. This project focuses on reducing weight, improving imaging performance, and increasing targeting accuracy. Development also focuses on affordable, non-magnetic, high accuracy, Azimuth and Vertical Angle Measurement (AVAM) devices with reduced size, weight and power characteristics. |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |         |                      |              |                                                                      |               |         |         | FY 2012                                                         | FY 2013 | FY 2014          |            |
| Title: Azimuth and Vertical Angle Measurement (AVAM) devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |         |                      |              |                                                                      |               |         |         | 0.000                                                           | 0.000   | 0.900            |            |
| Description: AVAM is a non-magnetic based inertial navigation materiel solution for targeting devices. This AVAM effort improves azimuth accuracy leading to reduced collateral damage and improved engagement efficiency.                                                                                                                                                                                                                                                                                                                                                                                     |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| FY 2014 Plans:<br>Will fund the integration and testing of emerging smaller, lightweight, low cost AVAMs that can be inserted into the legacy Lightweight Laser Designator Rangefinder.                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| Title: Laser development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |         |                      |              |                                                                      |               |         |         | 0.000                                                           | 0.000   | 0.200            |            |
| Description: Development of lightweight, low cost, multi-spectral, and more efficient lasers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| FY 2014 Plans:<br>Will investigate the integration of emerging high accuracy capabilities into the current portfolio of laser targeting systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |
| Accomplishments/Planned Programs Subtotals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |         |                      |              |                                                                      |               |         |         | 0.000                                                           | 0.000   | 1.100            |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |         |                      |              |                                                                      |               |         |         |                                                                 |         |                  |            |

**UNCLASSIFIED**

|                                                                                                                                                                                                     |                |                |                         |                        |                                                                             |                |                |                                                                        |                |                             |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-------------------------|------------------------|-----------------------------------------------------------------------------|----------------|----------------|------------------------------------------------------------------------|----------------|-----------------------------|-------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                                                             |                |                |                         |                        |                                                                             |                |                |                                                                        |                | DATE: April 2013            |                   |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                                                      |                |                |                         |                        | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: Night Vision Systems - Eng Dev |                |                | <b>PROJECT</b><br>L76: Dismounted Fire Support Laser Targeting Systems |                |                             |                   |
| <b>C. Other Program Funding Summary (\$ in Millions)</b>                                                                                                                                            |                |                |                         |                        |                                                                             |                |                |                                                                        |                |                             |                   |
| <b>Line Item</b>                                                                                                                                                                                    | <b>FY 2012</b> | <b>FY 2013</b> | <b>FY 2014<br/>Base</b> | <b>FY 2014<br/>OCO</b> | <b>FY 2014<br/>Total</b>                                                    | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017</b>                                                         | <b>FY 2018</b> | <b>Cost To<br/>Complete</b> | <b>Total Cost</b> |
| • LLDR (SSN K31100): <i>Lightweight Laser Designator Rangefinder (LLDR) (SSN K31100)</i>                                                                                                            | 67.929         |                |                         |                        |                                                                             |                |                |                                                                        |                | 0.000                       | 67.929            |
| • LLDR Mod-of-In-Service (SSN KA3100): <i>Lightweight Laser Designator Rangefinder (LLDR) MOD-of-In-Service (SSN KA3100)</i>                                                                        |                | 22.403         | 26.037                  |                        | 26.037                                                                      | 48.163         | 49.000         | 54.600                                                                 |                | 0.000                       | 200.203           |
| • JETS (SSN K32101): <i>Joint Effects Targeting System (JETS) (SSN K32101)</i>                                                                                                                      |                |                |                         |                        |                                                                             | 95.894         | 91.695         | 77.443                                                                 | 79.452         | 905.332                     | 1,249.816         |
| • PE 654710/DL79: <i>Joint Effects Targeting System (JETS) (PE 654710 Project DL79)</i>                                                                                                             | 20.367         | 21.505         | 21.606                  |                        | 21.606                                                                      | 10.051         | 7.318          | 1.651                                                                  | 1.679          | 0.000                       | 84.177            |
| <b>Remarks</b>                                                                                                                                                                                      |                |                |                         |                        |                                                                             |                |                |                                                                        |                |                             |                   |
| <b>D. Acquisition Strategy</b><br>Not applicable for this item                                                                                                                                      |                |                |                         |                        |                                                                             |                |                |                                                                        |                |                             |                   |
| <b>E. Performance Metrics</b><br>Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010. |                |                |                         |                        |                                                                             |                |                |                                                                        |                |                             |                   |

**UNCLASSIFIED**

|                                                                                                                                                                      |  |  |  |  |  |  |                                                                                    |  |  |  |  |                                                                               |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|------------------------------------------------------------------------------------|--|--|--|--|-------------------------------------------------------------------------------|--|--|--|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2014 Army                                                                                                    |  |  |  |  |  |  |                                                                                    |  |  |  |  | <b>DATE:</b> April 2013                                                       |  |  |  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |  |  |  |  |  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> |  |  |  |  | <b>PROJECT</b><br>L76: <i>Dismounted Fire Support Laser Targeting Systems</i> |  |  |  |

  

| <b>Product Development (\$ in Millions)</b> |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b> |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b> |  |                         |                   |                                 |
|---------------------------------------------|-----------------------------------|-------------------------------------------|------------------------|----------------|-------------------|----------------|-------------------|---------------------|-------------------|--------------------|-------------------|----------------------|--|-------------------------|-------------------|---------------------------------|
| <b>Cost Category Item</b>                   | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| AVAM Development and Integration            | TBD                               | Various:TBD                               | 0.000                  | -              |                   | -              |                   | 0.900               | Apr 2014          | -                  |                   | 0.900                |  | 0.000                   | 0.900             | 0.000                           |
| Laser Development                           | TBD                               | Various:TBD                               | 0.000                  | -              |                   | -              |                   | 0.200               | Dec 2013          | -                  |                   | 0.200                |  | 0.000                   | 0.200             | 0.000                           |
| <b>Subtotal</b>                             |                                   |                                           | 0.000                  | 0.000          |                   | 0.000          |                   | 1.100               |                   | 0.000              |                   | 1.100                |  | 0.000                   | 1.100             | 0.000                           |

  

|                            | <b>All Prior Years</b> | <b>FY 2012</b> |  | <b>FY 2013</b> |  | <b>FY 2014 Base</b> |  | <b>FY 2014 OCO</b> |  | <b>FY 2014 Total</b> | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
|----------------------------|------------------------|----------------|--|----------------|--|---------------------|--|--------------------|--|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Project Cost Totals</b> | 0.000                  | 0.000          |  | 0.000          |  | 1.100               |  | 0.000              |  | 1.100                | 0.000                   | 1.100             | 0.000                           |

  

**Remarks**

UNCLASSIFIED

|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|------------------------------------------------------|--|--|--|--|--|--|--|-----------------------------------------|--|--|--|--|--|--|--|------------------------------------|--|--|--|
| Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army    |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  | DATE: April 2013                   |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY                        |  |  |  |  |  |  |  | R-1 ITEM NOMENCLATURE                   |  |  |  |  |  |  |  | PROJECT                            |  |  |  |
| 2040: Research, Development, Test & Evaluation, Army |  |  |  |  |  |  |  | PE 0604710A: Night Vision Systems - Eng |  |  |  |  |  |  |  | L76: Dismounted Fire Support Laser |  |  |  |
| BA 5: System Development & Demonstration (SDD)       |  |  |  |  |  |  |  | Dev                                     |  |  |  |  |  |  |  | Targeting Systems                  |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |
|                                                      |  |  |  |  |  |  |  |                                         |  |  |  |  |  |  |  |                                    |  |  |  |

**UNCLASSIFIED**

|                                                                                                                                                                      |                                                                                    |                                                                               |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Army                                                                                                        |                                                                                    |                                                                               | <b>DATE:</b> April 2013 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> | <b>PROJECT</b><br>L76: <i>Dismounted Fire Support Laser Targeting Systems</i> |                         |

Schedule Details

| Events                                                                    | Start   |      | End     |      |
|---------------------------------------------------------------------------|---------|------|---------|------|
|                                                                           | Quarter | Year | Quarter | Year |
| Laser Development                                                         | 2       | 2014 | 4       | 2018 |
| Azimuth and Vertical Angle Measurement (AVAM) Development and Integration | 3       | 2014 | 4       | 2018 |

**UNCLASSIFIED**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|----------------------|--------------|----------------------------------------------------------------------|---------------|---------|---------|--------------------------------------------------------|------------------|------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |         |                      |              |                                                                      |               |         |         |                                                        | DATE: April 2013 |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |         |                      |              | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng Dev |               |         |         | PROJECT<br>L79: Joint Effects Targeting Systems (JETS) |                  |                  |            |
| COST (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | All Prior Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014 Base | FY 2014 OCO <sup>##</sup>                                            | FY 2014 Total | FY 2015 | FY 2016 | FY 2017                                                | FY 2018          | Cost To Complete | Total Cost |
| L79: Joint Effects Targeting Systems (JETS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -               | 19.732  | 21.505               | 21.606       | -                                                                    | 21.606        | 10.051  | 7.318   | 1.651                                                  | 1.679            | Continuing       | Continuing |
| Quantity of RDT&E Articles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| # FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| ## The FY 2014 OCO Request will be submitted at a later date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| A. Mission Description and Budget Item Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| The Joint Effects Targeting System (JETS) is an Army program with joint interest (Air Force and Marine Corps). JETS provides individual dismounted forward observers and Joint Terminal Attack Controllers (JTAC) the means to call for fire and control delivery of air, ground and naval surface fire support using precision munitions and effects (both lethal and non-lethal). The JETS provides the observers and controllers the ability to conduct surveillance, acquire and accurately locate targets, designate targets for attack by laser seeking munitions, mark targets for aviation and ground-based targeting systems, and transmit targeting data to existing Forward Entry Systems for each Service. |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |         |                      |              |                                                                      |               |         |         |                                                        | FY 2012          | FY 2013          | FY 2014    |
| Title: Joint Effects Targeting System (JETS)<br><br>Articles:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |         |                      |              |                                                                      |               |         |         |                                                        | 19.732           | 21.505           | 21.606     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |         |                      |              |                                                                      |               |         |         |                                                        | 0                | 0                |            |
| Description: JETS is a lightweight mission equipment set for the dismounted forward observers and Joint Terminal Attack Controllers (JTAC). JETS provides observers and controllers the means to call for fire and control delivery of air, ground and naval surface fire support, including using precision munitions and effects (both lethal and non-lethal).                                                                                                                                                                                                                                                                                                                                                       |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| FY 2012 Accomplishments:<br>Tested Prototype Systems and Azimuth and Vertical Angle Measurement (AVAM) devices, conducted developmental and early user testing, initiated source selection preparation / process for the Engineering and Manufacturing Development (EMD) phase.                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| FY 2013 Plans:<br>Complete Full and Open EMD source selection, award two prime contracts, and begin EMD development of JETS prototype systems from the vendors. The prototypes will include integration with precision AVAM solutions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| FY 2014 Plans:<br>Will continue EMD phase development. Will complete initial build of up to 30 prototypes and begin early user assessment (EUA) and development testing (DT) of prototypes at White Sands Missile Range (WSMR) and Aberdeen Proving Ground (APG). Will develop supportability products and initiate production planning.                                                                                                                                                                                                                                                                                                                                                                               |                 |         |                      |              |                                                                      |               |         |         |                                                        |                  |                  |            |
| Accomplishments/Planned Programs Subtotals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |         |                      |              |                                                                      |               |         |         |                                                        | 19.732           | 21.505           | 21.606     |

# UNCLASSIFIED

|                                                                                                                                         |                                                                         |                                                        |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------|------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Army                                                                                 |                                                                         |                                                        | DATE: April 2013 |
| APPROPRIATION/BUDGET ACTIVITY<br>2040: Research, Development, Test & Evaluation, Army<br>BA 5: System Development & Demonstration (SDD) | R-1 ITEM NOMENCLATURE<br>PE 0604710A: Night Vision Systems - Eng<br>Dev | PROJECT<br>L79: Joint Effects Targeting Systems (JETS) |                  |

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

| Line Item                                                                                                       | FY 2012 | FY 2013 | FY 2014<br>Base | FY 2014<br>OCO | FY 2014<br>Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To<br>Complete | Total Cost |
|-----------------------------------------------------------------------------------------------------------------|---------|---------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|------------|
| • Fire Support Laser Targeting Sys:<br>Dismounted Fire Support Laser<br>Targeting Systems (PE 654710 /<br>DL76) |         |         | 1.100           |                | 1.100            | 1.119   | 1.138   | 1.157   | 1.177   | Continuing          | Continuing |
| • Joint Effects Targeting System:<br>Joint Effects Targeting System<br>(SSN K32101)                             |         |         |                 |                |                  | 95.894  | 91.695  | 77.443  | 79.452  | 905.332             | 1,249.816  |

## Remarks

DL76 supports technology development and integration efforts applicable to multiple programs (e.g. JETS, Lightweight Laser Designator Rangefinder (LLDR).

## D. Acquisition Strategy

This project continues to exercise competitively awarded contracts using best value source selection procedures.

## E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

**UNCLASSIFIED**

|                                                                                                                                                                      |                                   |                                                             |                        |                |                   |                                                                                    |                   |                     |                   |                    |                   |                                                                      |                         |                   |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------|------------------------|----------------|-------------------|------------------------------------------------------------------------------------|-------------------|---------------------|-------------------|--------------------|-------------------|----------------------------------------------------------------------|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Army</b>                                                                                                    |                                   |                                                             |                        |                |                   |                                                                                    |                   |                     |                   |                    |                   | <b>DATE:</b> April 2013                                              |                         |                   |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |                                   |                                                             |                        |                |                   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> |                   |                     |                   |                    |                   | <b>PROJECT</b><br>L79: <i>Joint Effects Targeting Systems (JETS)</i> |                         |                   |                                 |
| <b>Product Development (\$ in Millions)</b>                                                                                                                          |                                   |                                                             |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                                     |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                                                 |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                                            | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b>                   | <b>All 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> |
| Completed JETS TLDS Tech Development (TD) prototype development, integration, and test                                                                               | C/T&M                             | Various:Various                                             | 0.000                  | 3.844          | Dec 2011          | -                                                                                  |                   | -                   |                   | -                  |                   | -                                                                    | 0.000                   | 3.844             | 0.000                           |
| AVAM Development                                                                                                                                                     | C/T&M                             | Various:Various                                             | 0.000                  | 7.810          | Dec 2011          | -                                                                                  |                   | 2.600               | Mar 2014          | -                  |                   | 2.600                                                                | 0.000                   | 10.410            | 0.000                           |
| JETS TLDS EMD prototype development, integration, and test - Contractor 1 year 2                                                                                     | C/TBD                             | TBD:TBD                                                     | 0.000                  | -              |                   | 8.122                                                                              |                   | 6.734               | Mar 2014          | -                  |                   | 6.734                                                                | 0.000                   | 14.856            | 0.000                           |
| JETS TLDS EMD prototype development, integration, and test - Contractor 2 year 2                                                                                     | C/TBD                             | TBD:TBD                                                     | 0.000                  | -              |                   | 8.122                                                                              |                   | 6.734               | Apr 2014          | -                  |                   | 6.734                                                                | 0.000                   | 14.856            | 0.000                           |
| <b>Subtotal</b>                                                                                                                                                      |                                   |                                                             | 0.000                  | 11.654         |                   | 16.244                                                                             |                   | 16.068              |                   | 0.000              |                   | 16.068                                                               | 0.000                   | 43.966            | 0.000                           |
| <b>Support (\$ in Millions)</b>                                                                                                                                      |                                   |                                                             |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>                                                                     |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>                                                 |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                                            | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b>                   | <b>All 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> |
| JETS TLDS prototype technical maturation                                                                                                                             | SS/CPFF                           | Night Vision Electronics Sensors Directorate:Ft Belvoir, VA | 0.000                  | 0.500          | Jan 2012          | -                                                                                  |                   | -                   |                   | -                  |                   | -                                                                    | 0.000                   | 0.500             | 0.000                           |
| Functional Support Cost                                                                                                                                              | MIPR                              | Night Vision Electronics Sensors Directorate:Ft. Belvoir    | 0.000                  | 1.206          | Apr 2012          | 1.837                                                                              |                   | 1.819               | Mar 2014          | -                  |                   | 1.819                                                                | Continuing              | Continuing        | 0.000                           |
| Science and Engineering Support                                                                                                                                      | MIPR                              | Various:Various                                             | 0.000                  | 3.829          | May 2012          | 0.652                                                                              |                   | 0.675               | May 2014          | -                  |                   | 0.675                                                                | Continuing              | Continuing        | 0.000                           |
| Program Management Support                                                                                                                                           | TBD                               | Various:Various                                             | 0.000                  | 1.925          |                   | 1.985                                                                              |                   | 2.044               | Apr 2014          | -                  |                   | 2.044                                                                | Continuing              | Continuing        | 0.000                           |
| <b>Subtotal</b>                                                                                                                                                      |                                   |                                                             | 0.000                  | 7.460          |                   | 4.474                                                                              |                   | 4.538               |                   | 0.000              |                   | 4.538                                                                |                         |                   | 0.000                           |



**UNCLASSIFIED**

|                                                                                                                                                                      |                                   |                                           |                        |                |                   |                |                                                                                    |                     |                   |                    |                                                                      |                      |                         |                   |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------|------------------------|----------------|-------------------|----------------|------------------------------------------------------------------------------------|---------------------|-------------------|--------------------|----------------------------------------------------------------------|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2014 Army                                                                                                    |                                   |                                           |                        |                |                   |                |                                                                                    |                     |                   |                    |                                                                      |                      | <b>DATE:</b> April 2013 |                   |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |                                   |                                           |                        |                |                   |                | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> |                     |                   |                    | <b>PROJECT</b><br>L79: <i>Joint Effects Targeting Systems (JETS)</i> |                      |                         |                   |                                 |
| <b>Test and Evaluation (\$ in Millions)</b>                                                                                                                          |                                   |                                           |                        | <b>FY 2012</b> |                   | <b>FY 2013</b> |                                                                                    | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                                                                      | <b>FY 2014 Total</b> |                         |                   |                                 |
| <b>Cost Category Item</b>                                                                                                                                            | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All 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> |
| All RDTE Testing and Support                                                                                                                                         | MIPR                              | Various:Various                           | 0.000                  | 0.618          | Apr 2012          | 0.787          |                                                                                    | 1.000               | Mar 2014          | -                  |                                                                      | 1.000                | Continuing              | Continuing        | 0.000                           |
| <b>Subtotal</b>                                                                                                                                                      |                                   |                                           | 0.000                  | 0.618          |                   | 0.787          |                                                                                    | 1.000               |                   | 0.000              |                                                                      | 1.000                |                         |                   | 0.000                           |
|                                                                                                                                                                      |                                   |                                           | <b>All Prior Years</b> | <b>FY 2012</b> |                   | <b>FY 2013</b> |                                                                                    | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                                                                      | <b>FY 2014 Total</b> | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| <b>Project Cost Totals</b>                                                                                                                                           |                                   |                                           | 0.000                  | 19.732         |                   | 21.505         |                                                                                    | 21.606              |                   | 0.000              |                                                                      | 21.606               |                         |                   | 0.000                           |
| <b>Remarks</b>                                                                                                                                                       |                                   |                                           |                        |                |                   |                |                                                                                    |                     |                   |                    |                                                                      |                      |                         |                   |                                 |

**UNCLASSIFIED**

|                                                                                                                                                                      |  |  |                                                                                    |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|------------------------------------------------------------------------------------|--|--|
| <b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2014 Army                                                                                                         |  |  | <b>DATE:</b> April 2013                                                            |  |  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> |  |  |
|                                                                                                                                                                      |  |  | <b>PROJECT</b><br>L79: <i>Joint Effects Targeting Systems (JETS)</i>               |  |  |

|                                         | FY 2012 |   |   |   | FY 2013 |   |   |   | FY 2014 |   |   |   | FY 2015 |   |   |   | FY 2016 |   |   |   | FY 2017 |   |   |   | FY 2018 |   |   |   |
|-----------------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|                                         | 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 |
| JETS TLDS prototype development         |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Engineering Characterization            |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Early user assessments                  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Technology Readiness Assessments        |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JETS TLDS MS B                          |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Engineering & Manufacturing Development |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JETS TLDS MS C                          |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| LRIP                                    |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| FMR                                     |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| IOC                                     |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

**UNCLASSIFIED**

|                                                                                                                                                                      |                                                                                    |                                                                      |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Army                                                                                                        |                                                                                    |                                                                      | <b>DATE:</b> April 2013 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604710A: <i>Night Vision Systems - Eng Dev</i> | <b>PROJECT</b><br>L79: <i>Joint Effects Targeting Systems (JETS)</i> |                         |

Schedule Details

| Events                                  | Start   |      | End     |      |
|-----------------------------------------|---------|------|---------|------|
|                                         | Quarter | Year | Quarter | Year |
| JETS TLDS prototype development         | 2       | 2012 | 4       | 2012 |
| Engineering Characterization            | 2       | 2012 | 4       | 2012 |
| Early user assessments                  | 3       | 2012 | 4       | 2012 |
| Technology Readiness Assessments        | 3       | 2012 | 4       | 2012 |
| JETS TLDS MS B                          | 2       | 2013 | 2       | 2013 |
| Engineering & Manufacturing Development | 2       | 2013 | 3       | 2015 |
| JETS TLDS MS C                          | 3       | 2015 | 3       | 2015 |
| LRIP                                    | 3       | 2015 | 1       | 2017 |
| FMR                                     | 1       | 2017 | 1       | 2017 |
| IOC                                     | 2       | 2017 | 2       | 2017 |