

**UNCLASSIFIED**

|   |                            |
|---|----------------------------|
| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2016 Army | <b>Date:</b> February 2015 |
|---|----------------------------|

| <b>Appropriation/Budget Activity</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i> |                    |                |                |                     | <b>R-1 Program Element (Number/Name)</b><br>PE 0605456A / PAC-3/MSE Missile |                      |                |                |                |                |                         |                   |
|--|--------------------|----------------|----------------|---------------------|---|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| <b>COST (\$ in Millions)</b>   | <b>Prior Years</b> | <b>FY 2014</b> | <b>FY 2015</b> | <b>FY 2016 Base</b> | <b>FY 2016 OCO</b>  | <b>FY 2016 Total</b> | <b>FY 2017</b> | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020</b> | <b>Cost To Complete</b> | <b>Total Cost</b> |
| Total Program Element  | -                  | 86.223         | 34.991         | 2.272               | -   | 2.272                | -              | -              | -              | -              | -                       | 123.486           |
| PA3: <i>PAC-3/MSE Missile</i>  | -                  | 86.223         | 34.991         | 2.272               | -   | 2.272                | -              | -              | -              | -              | -                       | 123.486           |

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

This system is an integral part of the overall Air and Missile Defense (AMD) architecture and enables the incremental fielding of the Integrated Air and Missile Defense Fire Control System/capability for the composite Army Air and Missile Defense Battalions.

The Missile Segment Enhancement (MSE) is the latest version of the PAC-3 Missile. It provides a more agile and lethal interceptor that increases the engagement envelope/defended area of the PATRIOT System. Both Live Fire Test and Evaluation (LFT&E) and Initial Operational Test & Evaluation (IOT&E) activities are required to be executed during Low Rate Initial Production (LRIP) in support of the planned Full Rate Production (FRP) decision. As software and hardware improvements are developed there is a continuing need for system level modeling, simulations, and tests. Modeling and Simulation allow for performance assessment against all threats that would not be possible in flight tests due to cost, target, and range constraints. Flight testing is periodically required for validation of the Modeling and Simulation as well as satisfying Army Test & Evaluation Command/Director, Operational Test & Evaluation (ATEC/DOTE) requirements.

| <b>B. Program Change Summary (\$ in Millions)</b> | <b>FY 2014</b> | <b>FY 2015</b> | <b>FY 2016 Base</b> | <b>FY 2016 OCO</b> | <b>FY 2016 Total</b> |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget                       | 68.807         | 35.009         | 2.271               | -                  | 2.271                |
| Current President's Budget                        | 86.223         | 34.991         | 2.272               | -                  | 2.272                |
| Total Adjustments                                 | 17.416         | -0.018         | 0.001               | -                  | 0.001                |
| • Congressional General Reductions                | -0.036         | -              |                     |                    |                      |
| • Congressional Directed Reductions               | -              | -              |                     |                    |                      |
| • Congressional Rescissions                       | -              | -              |                     |                    |                      |
| • Congressional Adds                              | 19.701         | -              |                     |                    |                      |
| • Congressional Directed Transfers                | -              | -              |                     |                    |                      |
| • Reprogrammings                                  | -              | -              |                     |                    |                      |
| • SBIR/STTR Transfer                              | -2.249         | -              |                     |                    |                      |
| • Adjustments to Budget Years                     | -              | -0.018         | 0.001               | -                  | 0.001                |

**UNCLASSIFIED**

| Exhibit R-2A, RDT&E Project Justification: PB 2016 Army |             |         |         |              |  |               |         |         |  | Date: February 2015 |                  |            |
|---|-------------|---------|---------|--------------|--|---------------|---------|---------|--|---------------------|------------------|------------|
| Appropriation/Budget Activity<br>2040 / 5               |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 0605456A / PAC-3/MSE Missile |               |         |         | Project (Number/Name)<br>PA3 / PAC-3/MSE Missile |                     |                  |            |
| COST (\$ in Millions)                                   | Prior Years | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO  | FY 2016 Total | FY 2017 | FY 2018 | FY 2019  | FY 2020             | Cost To Complete | Total Cost |
| PA3: PAC-3/MSE Missile                                  | -           | 86.223  | 34.991  | 2.272        | -  | 2.272         | -       | -       | -  | -                   | -                | 123.486    |
| Quantity of RDT&E Articles                              | -           | -       | -       | -            | -  | -             | -       | -       | -  | -                   |                  |            |

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

The Missile Segment Enhancement (MSE) is the latest version of the PAC-3 Missile. It provides a more agile and lethal interceptor that increases the engagement envelope/defended area of the PATRIOT System. Both LFT&E and IOT&E activities are required to be executed during Low Rate Initial Production (LRIP) in support of the planned Full Rate Production (FRP) decision. As software and hardware improvements are developed there is a continuing need for system level modeling, simulations, and tests. Modeling and Simulation allow for performance assessment against all threats that would not be possible in flight tests due to cost, target and range constraints. Flight testing is periodically required for validation of Modeling and Simulation as well as satisfying ATEC/DOTE requirements.

PATRIOT is an integral part of the overall Air and Missile Defense (AMD) Architecture and enables the incremental fielding of the system capability for Army Air and Missile Defense Battalions.

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

|   | <b>FY 2014</b> | <b>FY 2015</b> | <b>FY 2016</b> |
|---|----------------|----------------|----------------|
| <b>Title:</b> MSE PAC-3<br><br><b>Description:</b> Funding is provided for the following efforts<br><br><b>FY 2014 Accomplishments:</b><br>MSE technical support for test program and initial PDB-8 testing.<br><br><b>FY 2015 Plans:</b><br>MSE technical support for initial PDB-8 testing. | 9.372          | 12.300         | -              |
| <b>Title:</b> Program Integration Efforts<br><br><b>Description:</b> Funding is provided for the following efforts<br><br><b>FY 2014 Accomplishments:</b><br>Integration of missile and ground system hardware and software.  | 16.683         | -              | -              |
| <b>Title:</b> Testing, Targets, and Modeling and Simulation<br><br><b>Description:</b> Funding is provided for the following efforts<br><br><b>FY 2014 Accomplishments:</b>   | 60.168         | 22.691         | 2.272          |

**UNCLASSIFIED**

|  |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
|--|---------|---------|-----------------|--|------------------|---------|---------|--|---------------------|---------------------|------------|--|
| Exhibit R-2A, RDT&E Project Justification: PB 2016 Army  |         |         |                 |  |                  |         |         |  | Date: February 2015 |                     |            |  |
| Appropriation/Budget Activity<br>2040 / 5  |         |         |                 | R-1 Program Element (Number/Name)<br>PE 0605456A / PAC-3/MSE Missile |                  |         |         | Project (Number/Name)<br>PA3 / PAC-3/MSE Missile |                     |                     |            |  |
| B. Accomplishments/Planned Programs (\$ in Millions)   |         |         |                 |  |                  |         |         |  | FY 2014             | FY 2015             | FY 2016    |  |
| Continued testing program to include utilization of targets/threat simulators, test missiles, mobile flight mission simulator, modeling efforts, PBD 8 DT and OT and test activities to support the Test and Evaluation Master Plan (TEMP).            |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| FY 2015 Plans:<br>Continues testing program to include utilization of targets/threat simulators, test missiles, flight simulator, modeling efforts and test activities to support Test and Evaluation Master Plan (TEMP) for initial IOT&E activities. |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| FY 2016 Plans:<br>Continues testing program in support of the Test and Evaluation Master Plan (TEMP) for IOT&E activities.   |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| Accomplishments/Planned Programs Subtotals   |         |         |                 |  |                  |         |         |  | 86.223              | 34.991              | 2.272      |  |
| C. Other Program Funding Summary (\$ in Millions)  |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| Line Item  | FY 2014 | FY 2015 | FY 2016<br>Base | FY 2016<br>OCO   | FY 2016<br>Total | FY 2017 | FY 2018 | FY 2019  | FY 2020             | Cost To<br>Complete | Total Cost |  |
| • SSN C53101: SSN C53101, MSE Missile  | 690.401 | 532.605 | 414.946         | -  | 414.946          | 430.622 | 462.676 | 493.613  | 569.488             | Continuing          | Continuing |  |
| • SSN C50016: SSN C50016, Lower-Tier Air and Missile Defense (AMD)   | -       | 110.300 | 115.075         | -  | 115.075          | 130.366 | 113.676 | 123.582  | 151.421             | Continuing          | Continuing |  |
| • PE 0102419A: PE 0102419A, Proj E55, Joint Aero Stat Program - EMD Effort   | 57.976  | -       | -               | -  | -                | -       | -       | -  | -                   | -                   | 57.976     |  |
| • PE 0205456: PE 0205456, Proj EF9, System Integration and Test  | -       | 78.720  | 64.159          | -  | 64.159           | 60.214  | 58.722  | 75.315   | 96.392              | Continuing          | Continuing |  |
| • PE 0604319A: PE 0604319A, Proj DU3, IFPC2, (FY12 PE 0603305A IFPC II - Intercept)  | 76.559  | 96.131  | 155.361         | -  | 155.361          | 90.323  | 58.562  | 43.384   | 109.495             | Continuing          | Continuing |  |
| • SSN C62002: SSN C62002, IFPC Inc 2-I Block 1 Missile   | -       | -       | -               | -  | -                | 19.920  | 48.046  | 139.362  | 175.738             | Continuing          | Continuing |  |
| • SSN C62001: SSN C62001, IFPC Inc 2-I Block 1 System  | -       | -       | -               | -  | -                | -       | 73.552  | 123.106  | 186.840             | Continuing          | Continuing |  |
| • PE 0604820A: PE 0604820A, Proj E10, SENTINEL   | 1.796   | 5.221   | 12.309          | -  | 12.309           | 11.465  | 10.971  | 12.191   | 30.277              | Continuing          | Continuing |  |

# UNCLASSIFIED

|  |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
|--|---------|---------|-----------------|--|------------------|---------|---------|--|---------------------|---------------------|------------|--|
| Exhibit R-2A, RDT&E Project Justification: PB 2016 Army  |         |         |                 |  |                  |         |         |  | Date: February 2015 |                     |            |  |
| Appropriation/Budget Activity<br>2040 / 5  |         |         |                 | R-1 Program Element (Number/Name)<br>PE 0605456A / PAC-3/MSE Missile |                  |         |         | Project (Number/Name)<br>PA3 / PAC-3/MSE Missile |                     |                     |            |  |
| C. Other Program Funding Summary (\$ in Millions)  |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| Line Item  | FY 2014 | FY 2015 | FY 2016<br>Base | FY 2016<br>OCO   | FY 2016<br>Total | FY 2017 | FY 2018 | FY 2019  | FY 2020             | Cost To<br>Complete | Total Cost |  |
| • PE 0605457A: PE 0605457A,<br>Proj S40 Army Integrated Air<br>and Missile Defense (AIAMD)   | 358.192 | 152.516 | 214.099         | -  | 214.099          | 227.103 | 169.575 | 153.451  | 33.424              | Continuing          | Continuing |  |
| • SSN BZ5075: SSN BZ5075, IAMD<br>Battle Command System (IBCS)   | -       | -       | 20.917          | -  | 20.917           | 204.513 | 296.361 | 375.763  | 443.637             | Continuing          | Continuing |  |
| • PE 0604741A: PE 0604741A,<br>Proj 126,146,149, Air<br>Defense C2I Eng Dev  | 38.412  | 15.898  | 24.569          | -  | 24.569           | 27.131  | 20.524  | 20.018   | 18.082              | Continuing          | Continuing |  |
| • SSN AD50700: SSN<br>AD50700; Air & Missile Defense<br>Planning & Control Sys   | 13.090  | 27.374  | 28.176          | -  | 28.176           | 32.443  | 32.690  | 33.032   | 13.366              | Continuing          | Continuing |  |
| • PE 0202429A: PE 0202429A Proj<br>EP8 JLENS COCOM EXERCISE  | 22.659  | 43.248  | 40.565          | -  | 40.565           | 46.371  | 6.746   | -  | -                   | -                   | 159.589    |  |
| Remarks  |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| This program is an integral part of the Army Integrated Air and Missile Defense (IAMD) architecture.   |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| D. Acquisition Strategy  |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| The design objective of the PATRIOT system is to provide an element of an Integrated Ballistic Missile Defense System capable of being modified to cope with the evolving threat. This strategy minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. PAC-3 system development efforts further improve system capabilities against emerging and reactive threats. The PAC-3 Missile Program focuses on developing, fabricating and testing the high velocity, hit to kill, surface to air missile and associated ground support equipment to provide essential increases in battle space, accuracy, lethality and firepower to counter and destroy evolving air defense threats. The missile performance is demonstrated through a series of flight tests and modeling and simulation activities. The PAC-3 / MSE program evolves the PAC-3 system providing extended ranges, insensitive munitions enhancements, and greater logistical flexibility. The PAC-3 MSE will be fielded to U.S. PATRIOT units. |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| E. Performance Metrics   |         |         |                 |  |                  |         |         |  |                     |                     |            |  |
| N/A  |         |         |                 |  |                  |         |         |  |                     |                     |            |  |

**UNCLASSIFIED**

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army |                        |                                       |             |         |            |  |            |                 |            |  |            | Date: February 2015 |                  |            |                          |
|--|------------------------|---------------------------------------|-------------|---------|------------|--|------------|-----------------|------------|--|------------|---------------------|------------------|------------|--------------------------|
| Appropriation/Budget Activity<br>2040 / 5              |                        |                                       |             |         |            | R-1 Program Element (Number/Name)<br>PE 0605456A / PAC-3/MSE Missile |            |                 |            | Project (Number/Name)<br>PA3 / PAC-3/MSE Missile |            |                     |                  |            |                          |
| Management Services (\$ in Millions)                   |                        |                                       |             | FY 2014 |            | FY 2015  |            | FY 2016<br>Base |            | FY 2016<br>OCO                                   |            | FY 2016<br>Total    |                  |            |                          |
| Cost Category Item                                     | Contract Method & Type | Performing Activity & Location        | Prior Years | Cost    | Award Date | Cost   | Award Date | Cost            | Award Date | Cost   | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Government Program Management                          | Various                | Various : Huntsville, AL              | 3.009       | 1.100   | Dec 2013   | -  |            | -               |            | -  |            | -                   | -                | 4.109      | 4.109                    |
| PAC-3 Product Office                                   | Various                | Various : Huntsville, AL              | 9.628       | 2.400   | Dec 2013   | 1.000  | Dec 2014   | -               |            | -  |            | -                   | -                | 13.028     | -                        |
| Subtotal   |                        |                                       | 12.637      | 3.500   |            | 1.000  |            | -               |            | -  |            | -                   | -                | 17.137     | 4.109                    |
| Product Development (\$ in Millions)                   |                        |                                       |             | FY 2014 |            | FY 2015  |            | FY 2016<br>Base |            | FY 2016<br>OCO                                   |            | FY 2016<br>Total    |                  |            |                          |
| Cost Category Item                                     | Contract Method & Type | Performing Activity & Location        | Prior Years | Cost    | Award Date | Cost   | Award Date | Cost            | Award Date | Cost   | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Program Integration                                    | Various                | Various : Huntsville, AL              | 43.798      | 5.783   | Dec 2013   | -  |            | -               |            | -  |            | -                   | -                | 49.581     | 49.573                   |
| MSE/PAC-3 Raytheon                                     | Various                | Raytheon : Waltham, Massachusetts     | 41.909      | 10.900  | Dec 2013   | -  |            | -               |            | -  |            | -                   | -                | 52.809     | 52.809                   |
| SETA Contracts   | Various                | Various : Huntsville, AL              | 8.876       | 3.772   | Feb 2014   | -  |            | -               |            | -  |            | -                   | -                | 12.648     | 12.640                   |
| Subtotal   |                        |                                       | 94.583      | 20.455  |            | -  |            | -               |            | -  |            | -                   | -                | 115.038    | 115.022                  |
| Test and Evaluation (\$ in Millions)                   |                        |                                       |             | FY 2014 |            | FY 2015  |            | FY 2016<br>Base |            | FY 2016<br>OCO                                   |            | FY 2016<br>Total    |                  |            |                          |
| Cost Category Item                                     | Contract Method & Type | Performing Activity & Location        | Prior Years | Cost    | Award Date | Cost   | Award Date | Cost            | Award Date | Cost   | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Targets/Threat Simulators                              | Various                | Various : Huntsville, AL              | 27.666      | 4.585   | Dec 2013   | -  |            | -               |            | -  |            | -                   | -                | 32.251     | 32.251                   |
| Modeling and Simulation                                | Various                | Various : Huntsville, AL              | 3.974       | 3.930   | Dec 2013   | -  |            | -               |            | -  |            | -                   | -                | 7.904      | 7.904                    |
| Contractor T&E funding                                 | Various                | Various : Huntsville, AL / Dallas, TX | 10.428      | 1.048   | Dec 2013   | 5.691  | Dec 2014   | -               |            | -  |            | -                   | -                | 17.167     | 24.185                   |
| Other T&E Funding                                      | MIPR                   | Various : Holloman AFB, NM            | 23.462      | 3.605   | Dec 2013   | 7.000  | Dec 2014   | 2.272           | Dec 2015   | -  |            | 2.272               | -                | 36.339     | 36.338                   |
| Mobile Flight Mission Simulator                        | TBD                    | Raytheon : Massachusetts              | 9.700       | 11.800  | Dec 2013   | -  |            | -               |            | -  |            | -                   | -                | 21.500     | 21.500                   |

**UNCLASSIFIED**

|  |   |   |                        |                |                       |   |                       |                         |                       |   |                       |                          |                             |                       |   |
|--|---|---|------------------------|----------------|-----------------------|---|-----------------------|-------------------------|-----------------------|---|-----------------------|--------------------------|-----------------------------|-----------------------|---|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2016 Army</b>                              |   |   |                        |                |                       |   |                       |                         |                       |   |                       |                          | <b>Date:</b> February 2015  |                       |   |
| <b>Appropriation/Budget Activity</b><br>2040 / 5   |   |   |                        |                |                       | <b>R-1 Program Element (Number/Name)</b><br>PE 0605456A / PAC-3/MSE Missile |                       |                         |                       | <b>Project (Number/Name)</b><br>PA3 / PAC-3/MSE Missile |                       |                          |                             |                       |   |
| <b>Test and Evaluation (\$ in Millions)</b>  |   |   |                        | <b>FY 2014</b> |                       | <b>FY 2015</b>  |                       | <b>FY 2016<br/>Base</b> |                       | <b>FY 2016<br/>OCO</b>                                  |                       | <b>FY 2016<br/>Total</b> |                             |                       |   |
| <b>Cost Category Item</b>  | <b>Contract<br/>Method<br/>&amp; Type</b> | <b>Performing<br/>Activity &amp; Location</b> | <b>Prior<br/>Years</b> | <b>Cost</b>    | <b>Award<br/>Date</b> | <b>Cost</b>   | <b>Award<br/>Date</b> | <b>Cost</b>             | <b>Award<br/>Date</b> | <b>Cost</b>   | <b>Award<br/>Date</b> | <b>Cost</b>              | <b>Cost To<br/>Complete</b> | <b>Total<br/>Cost</b> | <b>Target<br/>Value of<br/>Contract</b> |
| PDB 8 DT/OT  | TBD                                       | Various : Huntsville,<br>AL                   | 0.000                  | 27.300         | Dec 2013              | 7.000   |                       | -                       |                       | -   |                       | -                        | -                           | 34.300                | 9.900                                   |
| U.S. Other Government<br>Agencies (OGAs)   | MIPR                                      | Various : Huntsville,<br>AL                   | 16.149                 | 7.900          | Nov 2013              | 3.000   | Nov 2014              | -                       |                       | -   |                       | -                        | -                           | 27.049                | 27.049                                  |
| Missile Segment<br>Enhancement (MSE) -<br>Lockheed Martin Missiles<br>and Fire Control (LMMFC) | C/CPIF                                    | LMMFC Dallas, :<br>Texas                      | 72.138                 | 2.100          | Dec 2013              | 11.300  | Dec 2014              | -                       |                       | -   |                       | -                        | -                           | 85.538                | 85.538                                  |
| <b>Subtotal</b>  |   |   | 163.517                | 62.268         |                       | 33.991  |                       | 2.272                   |                       | -   |                       | 2.272                    | -                           | 262.048               | 244.665                                 |
|  |   |   | <b>Prior<br/>Years</b> | <b>FY 2014</b> |                       | <b>FY 2015</b>  |                       | <b>FY 2016<br/>Base</b> |                       | <b>FY 2016<br/>OCO</b>                                  |                       | <b>FY 2016<br/>Total</b> | <b>Cost To<br/>Complete</b> | <b>Total<br/>Cost</b> | <b>Target<br/>Value of<br/>Contract</b> |
| <b>Project Cost Totals</b>   |   |   | 270.737                | 86.223         |                       | 34.991  |                       | 2.272                   |                       | -   |                       | 2.272                    | -                           | 394.223               | 363.796                                 |
| <b>Remarks</b>   |   |   |                        |                |                       |   |                       |                         |                       |   |                       |                          |                             |                       |   |

**UNCLASSIFIED**

|  |         |   |   |   |         |   |   |   |         |  |   |   |         |   |                     |   |         |   |   |  |         |   |   |   |         |   |   |   |  |
|--|---------|---|---|---|---------|---|---|---|---------|--|---|---|---------|---|---------------------|---|---------|---|---|--|---------|---|---|---|---------|---|---|---|--|
| Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army            |         |   |   |   |         |   |   |   |         |  |   |   |         |   | Date: February 2015 |   |         |   |   |  |         |   |   |   |         |   |   |   |  |
| Appropriation/Budget Activity<br>2040 / 5                    |         |   |   |   |         |   |   |   |         | R-1 Program Element (Number/Name)<br>PE 0605456A / PAC-3/MSE Missile |   |   |         |   |                     |   |         |   |   | Project (Number/Name)<br>PA3 / PAC-3/MSE Missile |         |   |   |   |         |   |   |   |  |
| Event Name   | FY 2014 |   |   |   | FY 2015 |   |   |   | FY 2016 |  |   |   | FY 2017 |   |                     |   | FY 2018 |   |   |  | FY 2019 |   |   |   | FY 2020 |   |   |   |  |
|  | 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 |  |
| (1) Milestone Decision C Defense Acquisition Board Scheduled |         |   |   |   |         |   |   |   |         |  |   |   |         |   |                     |   |         |   |   |  |         |   |   |   |         |   |   |   |  |
| MSE System Test and Evaluation                               |         |   |   |   |         |   |   |   |         |  |   |   |         |   |                     |   |         |   |   |  |         |   |   |   |         |   |   |   |  |
| DTE  |         |   |   |   |         |   |   |   |         |  |   |   |         |   |                     |   |         |   |   |  |         |   |   |   |         |   |   |   |  |
| IOT&E  |         |   |   |   |         |   |   |   |         |  |   |   |         |   |                     |   |         |   |   |  |         |   |   |   |         |   |   |   |  |

**UNCLASSIFIED**

|   |   |   |                            |
|---|---|---|----------------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Army |   |   | <b>Date:</b> February 2015 |
| <b>Appropriation/Budget Activity</b><br>2040 / 5              | <b>R-1 Program Element (Number/Name)</b><br>PE 0605456A / PAC-3/MSE Missile | <b>Project (Number/Name)</b><br>PA3 / PAC-3/MSE Missile |                            |

Schedule Details

| Events   | Start   |      | End     |      |
|--|---------|------|---------|------|
|  | Quarter | Year | Quarter | Year |
| Milestone Decision C Defense Acquisition Board Scheduled | 2       | 2014 | 2       | 2014 |
| MSE System Test and Evaluation                           | 1       | 2014 | 2       | 2017 |
| DTE  | 1       | 2016 | 2       | 2016 |
| IOT&E  | 3       | 2016 | 1       | 2017 |