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| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy                                                                              |                 |         |                      |              |                                             |               |         |         |         | DATE: April 2013 |                  |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|----------------------|--------------|---------------------------------------------|---------------|---------|---------|---------|------------------|------------------|------------|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: System Development & Demonstration (SDD) |                 |         |                      |              | R-1 ITEM NOMENCLATURE<br>PE 0604262N: V-22A |               |         |         |         |                  |                  |            |
| 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                                                                                                                   | 8,924.263       | 71.938  | 54.412               | 43.084       | -                                           | 43.084        | 69.816  | 60.659  | 53.319  | 53.002           | 68.500           | 9,398.993  |
| 1425: V-22                                                                                                                              | 8,924.263       | 71.938  | 54.412               | 43.084       | -                                           | 43.084        | 69.816  | 60.659  | 53.319  | 53.002           | 68.500           | 9,398.993  |

**MDAP/MAIS Code(s):** 212

<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**

The V-22 Osprey is an Acquisition Category IC Joint Program led by the Department of the Navy for the purpose of developing, testing, evaluating, procuring and fielding a tilt rotor, vertical takeoff and landing aircraft for Joint Service application. The V-22 program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the Marine Corps, the utility/rescue needs of the Navy, and the special operations needs of the Air Force and the United States Special Operations Command (USSOCOM). The V-22 is replacing the CH-46E and CH53A/D in the Marine Corps with the MV-22; will supplement the H-60 in the Navy with the MV-22; and replace the MH-53J and MH-53M as well as augment the C-130 in the Air Force and USSOCOM with the CV-22. The V-22 is capable of flying over 2100 nautical miles with a single refueling, giving the services the advantage of a Vertical/Short Take-off and Landing aircraft that can rapidly self-deploy to any location in the world. This program is funded under Engineering Manufacturing and Development for correction of deficiencies and includes Block A and Block B upgrades which encompassed engineering and manufacturing development of new end-items prior to the production incorporation decision. Block C suitability and effectiveness development upgrades continue through FY12. Funding in FY11 addressed Capability Development Document interoperability requirements through a spiral upgrade acquisition strategy. These funds were the first spiral providing Key Enabling Department of Defense mandated open systems architecture upgrades for the mission computer hardware and software while simultaneously addressing required interoperability common avionics upgrades and current avionics obsolescence issues. Development efforts include Block C Upgrade, Mission System Upgrade, Mid-Wing Process Unit, ARC 210 Generation 5 Radio, Mission Computer Obsolescence Initiative, Ramp Mounted Weapon System, AAR-47 Hostile Fire Indicator, Time on Wing, and Blue Force Tracker/Netted Weather. FY12-13 funds initiate instrumentation of a test aircraft. Joint and Allied Threat Awareness System testing will continue in FY14 and funding will provide for additional Aircraft Mission Maneuvering Envelope Expansion, Velocity Not to Exceed Expansion, and Time on Wing efforts such as Improved Inlet Solution.

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy                                               |         |                       |              | DATE: April 2013 |               |
| APPROPRIATION/BUDGET ACTIVITY                                                                            |         | R-1 ITEM NOMENCLATURE |              |                  |               |
| 1319: Research, Development, Test & Evaluation, Navy                                                     |         | PE 0604262N: V-22A    |              |                  |               |
| 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                                                                              | 84.477  | 54.412                | 40.279       | -                | 40.279        |
| Current President's Budget                                                                               | 71.938  | 54.412                | 43.084       | -                | 43.084        |
| Total Adjustments                                                                                        | -12.539 | 0.000                 | 2.805        | -                | 2.805         |
| • Congressional General Reductions                                                                       | -       | -                     |              |                  |               |
| • Congressional Directed Reductions                                                                      | -       | -                     |              |                  |               |
| • Congressional Rescissions                                                                              | -       | -                     |              |                  |               |
| • Congressional Adds                                                                                     | -       | -                     |              |                  |               |
| • Congressional Directed Transfers                                                                       | -       | -                     |              |                  |               |
| • Reprogrammings                                                                                         | -9.999  | 0.000                 |              |                  |               |
| • SBIR/STTR Transfer                                                                                     | -2.540  | 0.000                 |              |                  |               |
| • Program Adjustments                                                                                    | 0.000   | 0.000                 | -0.050       | -                | -0.050        |
| • Rate/Misc Adjustments                                                                                  | 0.000   | 0.000                 | 2.855        | -                | 2.855         |
| Change Summary Explanation                                                                               |         |                       |              |                  |               |
| Technical: Not applicable                                                                                |         |                       |              |                  |               |
| Schedule: Instrumented Aircraft Test Delivery moved from 3Q 2014 to 1Q 2015 in accordance with contract. |         |                       |              |                  |               |
| SSOT in 3rd QTRS of FY2013/FY2015/FY2017 now reflected as OT IIIJ, OT IIIK and OT IIIL.                  |         |                       |              |                  |               |
| OT-C1 in 3rd QTR of FY2014 new from PB13.                                                                |         |                       |              |                  |               |

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| Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |         |                      |              |                                             |               |         |         | DATE: April 2013      |         |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |         |                      |              | R-1 ITEM NOMENCLATURE<br>PE 0604262N: V-22A |               |         |         | PROJECT<br>1425: V-22 |         |                  |            |
| 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 |
| 1425: V-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 8,924.263       | 71.938  | 54.412               | 43.084       | -                                           | 43.084        | 69.816  | 60.659  | 53.319                | 53.002  | 68.500           | 9,398.993  |
| Quantity of RDT&E Articles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0               | 0       | 0                    | 0            |                                             | 0             | 0       | 0       | 0                     | 0       |                  |            |
| # 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 V-22 Osprey is an Acquisition Category IC Joint Program led by the Department of the Navy for the purpose of developing, testing, evaluating, procuring and fielding a tilt rotor, vertical takeoff and landing aircraft for Joint Service application. The V-22 program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the Marine Corps, the utility/rescue needs of the Navy, and the special operations needs of the Air Force and the United States Special Operations Command (USSOCOM). The V-22 is replacing the CH-46E and CH53A/D in the Marine Corps with the MV-22; will supplement the H-60 in the Navy with the MV-22; and replace the MH-53J and MH-53M as well as augment the C-130 in the Air Force and USSOCOM with the CV-22. The V-22 is capable of flying over 2100 nautical miles with a single refueling, giving the services the advantage of a Vertical/Short Take-off and Landing aircraft that can rapidly self-deploy to any location in the world. This program is funded under Engineering Manufacturing and Development for correction of deficiencies and includes Block A and Block B upgrades which encompassed engineering and manufacturing development of new end-items prior to the production incorporation decision. Block C suitability and effectiveness development upgrades continue through FY12. Funding in FY11 addressed Capability Development Document interoperability requirements through a spiral upgrade acquisition strategy. These funds were the first spiral providing Key Enabling Department of Defense mandated open systems architecture upgrades for the mission computer hardware and software while simultaneously addressing required interoperability common avionics upgrades and current avionics obsolescence issues. Development efforts include Block C Upgrade, Mission System Upgrade, Mid-Wing Process Unit, ARC 210 Generation 5 Radio, Mission Computer Obsolescence Initiative, Ramp Mounted Weapon System, AAR-47 Hostile Fire Indicator, Time on Wing, and Blue Force Tracker/Netted Weather. FY12-13 funds initiate instrumentation of a test aircraft. Joint and Allied Threat Awareness System testing will continue in FY14 and funding will provide for additional Aircraft Mission Maneuvering Envelope Expansion, Velocity Not to Exceed Expansion, and Time on Wing efforts such as Improved Inlet Solution. |                 |         |                      |              |                                             |               |         |         |                       |         |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |         |                      |              |                                             |               |         |         | FY 2012               | FY 2013 | FY 2014          |            |
| Title: Continued development of V-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |         |                      |              |                                             |               |         |         | 54.401                | 36.483  | 24.476           |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |         |                      |              |                                             |               |         |         | 0                     | 0       | 0                |            |
| FY 2012 Accomplishments:<br>Continued MV-22 development efforts by Bell-Boeing. Rolls-Royce continued to provide engine support and development of MV-22 flight testing. Continued MV-22 software development/sustainment efforts. Continued development in support of MV-22 Block upgrades. Continued engineering, logistics, flight test, flight test support and address correction of deficiencies. Continued contracted development efforts on test aircraft. Initiated funding for instrumentation of test aircraft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |         |                      |              |                                             |               |         |         |                       |         |                  |            |
| FY 2013 Plans:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |         |                      |              |                                             |               |         |         |                       |         |                  |            |

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| Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                             | DATE: April 2013      |         |         |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: System Development & Demonstration (SDD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | R-1 ITEM NOMENCLATURE<br>PE 0604262N: V-22A | PROJECT<br>1425: V-22 |         |         |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                             | FY 2012               | FY 2013 | FY 2014 |
| Continue MV-22 development efforts by Bell-Boeing. Rolls-Royce will continue to provide engine support and development of MV-22 flight testing. Continue MV-22 software development efforts. Continue development in support of MV-22 Block upgrades. Continue engineering, logistics, flight test, flight test support and address correction of deficiencies. Continue contracted development efforts on test aircraft. Continue instrumentation of test aircraft. Reduction in funding is the result of cost savings incurred on Instrumented Test Aircraft FPIF contract which awarded in March 2012.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                             |                       |         |         |
| FY 2014 Plans:<br>Continue MV-22 development efforts by Bell-Boeing. Rolls-Royce will continue to provide engine support and development of MV-22 flight testing. Continue MV-22 software development/sustainment efforts. Continue development in support of MV-22 Block upgrades and Time on Wing efforts such as Improved Inlet Solution. Continue engineering, logistics, flight test, flight test support and address correction of deficiencies. Continue contracted development efforts on test aircraft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                             |                       |         |         |
| Title: Continued support of V-22 development, test and evaluation program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                             | 17.537                | 17.929  | 18.608  |
| Articles:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                             | 0                     | 0       | 0       |
| FY 2012 Accomplishments:<br>Continued in-house field activity support of Integrated Test Team, Integrated Product Teams, engineering and logistics. Continued development in support of MV-22 Block Upgrades. Continued field development efforts on test aircraft. Provided Research & Development support in areas of Reliability and Maintainability data analysis, loads and dynamics, electromagnetic environmental effects, V-22 avionics, facilities management, structures, communications, etc. Provided engineering, logistics, flight test, flight test support, envelope expansion testing and correction of deficiencies as required in support of the Flight Test Program, Block C, Defensive Weapon System, and the overall V-22 development program. Initiated support of instrumentation of test aircraft. Conductd aero-performance rebaseline, Time on Wing and Mission Computer Obsolescence Initative Testing. Expanded shipboard launch and recovery envelopes with additional dynamic interface testing. Conducted KPP sustainment testing of propotor improvements and nacelle sail design.                                                                        |                                             |                       |         |         |
| FY 2013 Plans:<br>Continue in-house field activity support of Integrated Test Team, Integrated Product Teams, engineering and logistics. Continue development in support of MV-22 Block Upgrades. Continue field development efforts on test aircraft. Provide Research & Development support in areas of Reliability and Maintainability data analysis, loads and dynamics, electromagnetic environmental effects, V-22 avionics, facilities management, structures, communications, etc. Provide engineering, logistics, flight test, flight test support, envelope expansion testing and correction of deficiencies as required in support of the Flight Test Program, Block C, Defensive Weapon System, and the overall V-22 development program. Initiate support of instrumentation of test aircraft. Conduct aero-performance rebaseline, Time on Wing and Mission Computer Obsolescence Initative Testing. Expanded shipboard launch and recovery envelopes with additional dynamic interface testing. Conduct KPP sustainment testing of propotor improvements and nacelle sail design. Continue support of instrumentation of test aircraft. Test B 5.01 software suite. Conduct |                                             |                       |         |         |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Navy                                                                                                   |  |  |  |                                                    |  |  |  |                              |  | <b>DATE:</b> April 2013 |  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> |  |  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604262N: V-22A |  |  |  | <b>PROJECT</b><br>1425: V-22 |  |                         |  |

  

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| <b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  | <b>FY 2012</b> | <b>FY 2013</b> | <b>FY 2014</b> |
| Joint and Allied Threat Awareness System testing. Conduct Aircraft Mission Maneuvering Envelope Expansion and Velocity Not to Exceed Expansion testing.                                                                                                                          |  |  |  |  |  |  |  |  |  |                |                |                |
| <b>FY 2014 Plans:</b><br>Continue support of instrumentation of test aircraft. Conduct Joint and Allied Threat Awareness System (JATAS)/APR-39(D)v2 testing. Conduct Aircraft Time on Wing, Mission Maneuvering Envelope Expansion and Velocity Not to Exceed Expansion testing. |  |  |  |  |  |  |  |  |  |                |                |                |
| <b>Accomplishments/Planned Programs Subtotals</b>                                                                                                                                                                                                                                |  |  |  |  |  |  |  |  |  | 71.938         | 54.412         | 43.084         |

  

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| <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> |
| • APN 0164: V-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2,265.833      | 1,457.322      | 1,487.769               |                        | 1,487.769                | 1,487.769      | 1,563.279      | 1,514.459      | 435.163        | 7,592.808                   | 37,046.980        |
| • APN 0590: V-22 Series                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 81.196         | 95.856         | 160.834                 |                        | 160.834                  | 156.970        | 138.235        | 160.111        | 162.934        | 863.571                     | 2,434.779         |
| • APN 0605: V-22 Initial Spares                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 9.772          | 15.985         | 10.729                  |                        | 10.729                   | 16.465         | 7.388          | 5.007          | 0.000          | 142.653                     | 974.726           |
| • RDTE 0401318F : CV-22 USAF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 12.836         | 28.027         | 46.705                  |                        | 46.705                   | 41.588         | 26.728         | 16.073         | 14.566         | 131.500                     | 660.416           |
| • RDTE 1160421BB: CV-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10.497         | 1.822          | 0.000                   |                        | 0.000                    | 0.000          | 0.000          | 0.000          | 0.000          | 0.000                       | 519.807           |
| SOCOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |                |                         |                        |                          |                |                |                |                |                             |                   |
| • RDTE 1160403BB: CV-22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.000          | 0.000          | 2.911                   |                        | 2.911                    | 0.182          | 0.000          | 0.000          | 0.000          | 0.000                       | 3.093             |
| Special Operations, Aviation Systems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |                |                         |                        |                          |                |                |                |                |                             |                   |
| <b>Remarks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                |                         |                        |                          |                |                |                |                |                             |                   |
| <b>D. Acquisition Strategy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                |                         |                        |                          |                |                |                |                |                             |                   |
| <p>The MV-22 is a post Milestone III ACAT-IC program. As a result of mishaps during and subsequent to MV-22 Operational Evaluation (Apr and Dec 00), the program was restructured employing a phased approach to return to flight and tactical introduction. The Contractor and Government defined deficient areas within the program/ aircraft requiring correction prior to return to flight. A Block Upgrade approach was planned, with required efforts identified in Block "A", "B", and "C". Block "A" included those efforts necessary to return the V-22 to safe and operational fleet operations. Block "B" included those efforts necessary to improve the effectiveness and suitability of the aircraft. Block "C" includes mission enhancements like weather radar, cabin effectiveness suitability improvements, i.e., Environmental Control System, and Forward Firing ALE-47. Non-recurring development activities are to be initiated and completed for all efforts identified in Block "A", "B", and "C". The Contractor will develop specific Statements of Work and Preliminary Specification Change Notices required to integrate the Block Upgrade efforts into the baseline Program. A Systems Requirements Review, Initial Design Review, and Final Design Review was held for each of the Block efforts so the design maturity could be reviewed and the Government could redirect activities as appropriate. The CV-22 Engineering Manufacturing and Development program is also structured in Blocks to define an evolutionary approach to achieving full operational capability. Block "0" is the initial baseline CV-22 variant. Block "10" enhances mission capability with</p> |                |                |                         |                        |                          |                |                |                |                |                             |                   |

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy                                                                                                                                                                                                                                                                      |                                             | DATE: April 2013      |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i>                                                                                                                                                                | R-1 ITEM NOMENCLATURE<br>PE 0604262N: V-22A | PROJECT<br>1425: V-22 |
| the addition of terrain following radar, additional fuel tanks, additional radios, and Block "20" includes capabilities such as radio frequency and infrared countermeasures improvements. Additional Blocks are in the planning stages to continue the growth process throughout the operational life of the weapon system. |                                             |                       |
| <u>E. Performance Metrics</u><br>Milestone Reviews.                                                                                                                                                                                                                                                                          |                                             |                       |

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------|-----------------|---------|------------|---------------------------------------------|------------|--------------|------------|-----------------------|------------|------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy                                                                                                                                         |                        |                                    |                 |         |            |                                             |            |              |            |                       |            | DATE: April 2013 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: System Development & Demonstration (SDD)                                                        |                        |                                    |                 |         |            | R-1 ITEM NOMENCLATURE<br>PE 0604262N: V-22A |            |              |            | PROJECT<br>1425: V-22 |            |                  |                  |            |                          |
| Product Development (\$ in Millions)                                                                                                                                                           |                        |                                    |                 | FY 2012 |            | FY 2013                                     |            | FY 2014 Base |            | FY 2014 OCO           |            | FY 2014 Total    |                  |            |                          |
| Cost Category Item                                                                                                                                                                             | Contract Method & Type | Performing Activity & Location     | All Prior Years | Cost    | Award Date | Cost                                        | Award Date | Cost         | Award Date | Cost                  | Award Date | Cost             | Cost To Complete | Total Cost | Target Value of Contract |
| MV-22 Hardware Dev Airframe                                                                                                                                                                    | SS/CPAF                | Boeing Co.:Ridley Park, PA         | 3,820.466       | 33.123  | Jan 2012   | 27.940                                      | Jan 2013   | 24.176       | Jan 2014   | -                     |            | 24.176           | 188.109          | 4,093.814  | 4,093.814                |
| MV-22 Award Fee (BLK C)                                                                                                                                                                        | SS/CPAF                | Boeing Co.:Ridley Park, PA         | 212.167         | 0.000   |            | 0.000                                       |            | 0.000        |            | -                     |            | 0.000            | 0.000            | 212.167    | 212.167                  |
| MV-22 Hardware Dev Propulsion                                                                                                                                                                  | SS/CPIF                | Rolls-Royce Corp.:Indianapolis, IN | 195.969         | 0.168   | Jan 2012   | 0.807                                       | Jan 2013   | 0.300        | Jan 2014   | -                     |            | 0.300            | 0.500            | 197.744    | 197.744                  |
| MV-22 Hardware Dev Airframe:Instrumented A/C                                                                                                                                                   | SS/FPIF                | Boeing Co.:Ridley Park, PA         | 0.000           | 21.110  | Mar 2012   | 7.736                                       | Mar 2013   | 0.000        |            | -                     |            | 0.000            | 0.000            | 28.846     | 28.846                   |
| Prior Year Prod Dev                                                                                                                                                                            | Various                | Various:Various                    | 1,015.617       | 0.000   |            | 0.000                                       |            | 0.000        |            | -                     |            | 0.000            | 0.000            | 1,015.617  |                          |
| Subtotal                                                                                                                                                                                       |                        |                                    | 5,244.219       | 54.401  |            | 36.483                                      |            | 24.476       |            | 0.000                 |            | 24.476           | 188.609          | 5,548.188  |                          |
| Remarks                                                                                                                                                                                        |                        |                                    |                 |         |            |                                             |            |              |            |                       |            |                  |                  |            |                          |
| The Instrumented Aircraft was originally part of the Boeing Co. Hardware Dev. Airframe line. When the contract was awarded, it was awarded as a FPIF. It is now broken out as a separate line. |                        |                                    |                 |         |            |                                             |            |              |            |                       |            |                  |                  |            |                          |
| Support (\$ in Millions)                                                                                                                                                                       |                        |                                    |                 | FY 2012 |            | FY 2013                                     |            | FY 2014 Base |            | FY 2014 OCO           |            | FY 2014 Total    |                  |            |                          |
| Cost Category Item                                                                                                                                                                             | Contract Method & Type | Performing Activity & Location     | All Prior Years | Cost    | Award Date | Cost                                        | Award Date | Cost         | Award Date | Cost                  | Award Date | Cost             | Cost To Complete | Total Cost | Target Value of Contract |
| MV-22 Govt Engineering Sppt                                                                                                                                                                    | WR                     | NAWCAD:Pax River, MD               | 1,099.706       | 1.926   | Dec 2011   | 1.627                                       | Nov 2012   | 1.686        | Nov 2013   | -                     |            | 1.686            | 27.169           | 1,132.114  |                          |
| Prior Year Support                                                                                                                                                                             | Various                | Various:Various                    | 189.718         | 0.000   |            | 0.000                                       |            | 0.000        |            | -                     |            | 0.000            | 0.000            | 189.718    |                          |
| Subtotal                                                                                                                                                                                       |                        |                                    | 1,289.424       | 1.926   |            | 1.627                                       |            | 1.686        |            | 0.000                 |            | 1.686            | 27.169           | 1,321.832  |                          |
| Test and Evaluation (\$ in Millions)                                                                                                                                                           |                        |                                    |                 | FY 2012 |            | FY 2013                                     |            | FY 2014 Base |            | FY 2014 OCO           |            | FY 2014 Total    |                  |            |                          |
| Cost Category Item                                                                                                                                                                             | Contract Method & Type | Performing Activity & Location     | All Prior Years | Cost    | Award Date | Cost                                        | Award Date | Cost         | Award Date | Cost                  | Award Date | Cost             | Cost To Complete | Total Cost | Target Value of Contract |
| MV-22 Dev Test & Evaluation                                                                                                                                                                    | WR                     | NAWCAD:Pax River, MD               | 988.803         | 8.894   | Dec 2011   | 8.722                                       | Nov 2012   | 8.931        | Nov 2013   | -                     |            | 8.931            | 43.315           | 1,058.665  |                          |

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| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Navy</b>                                                                              |  |  |  |  |  |  |                                                    |  |  |  |                              |  | <b>DATE:</b> April 2013 |  |  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: System Development & Demonstration (SDD) |  |  |  |  |  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604262N: V-22A |  |  |  | <b>PROJECT</b><br>1425: V-22 |  |                         |  |  |

  

| <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> |
| MV-22 Operational Test & Evaluation         | WR                                | OT&E Force:Norfolk, VA                    | 41.914                 | 4.010          | Dec 2011          | 4.310          | Dec 2012          | 4.709               | Dec 2013          | -                  |                   | 4.709                | 18.345                  | 73.288            |                                 |
| Prior Year T & E                            | Various                           | Various:Various                           | 48.200                 | 0.000          |                   | 0.000          |                   | 0.000               |                   | -                  |                   | 0.000                | 0.000                   | 48.200            |                                 |
| <b>Subtotal</b>                             |                                   |                                           | 1,078.917              | 12.904         |                   | 13.032         |                   | 13.640              |                   | 0.000              |                   | 13.640               | 61.660                  | 1,180.153         |                                 |

  

| <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> |
| MV-22 Engineering Tech Sppt                 | Various                           | Various:Various                           | 1,045.448              | 0.675          | Nov 2011          | 0.538          | Nov 2012          | 0.484               | Nov 2013          | -                  |                   | 0.484                | 7.437                   | 1,054.582         |                                 |
| MV-22 Management Sppt Svc                   | Various                           | Various:Various                           | 154.325                | 0.543          | Nov 2011          | 0.553          | Nov 2012          | 0.641               | Nov 2013          | -                  |                   | 0.641                | 5.780                   | 161.842           |                                 |
| MV-22 Program Mgmt Support                  | WR                                | NAWCAD:Pax River, MD                      | 55.571                 | 0.974          | Nov 2011          | 1.855          | Nov 2012          | 1.865               | Nov 2013          | -                  |                   | 1.865                | 10.136                  | 70.401            |                                 |
| MV-22 Travel                                | WR                                | NAWCAD:Pax River, MD                      | 15.272                 | 0.515          | Jan 2012          | 0.324          | Jan 2013          | 0.292               | Jan 2014          | -                  |                   | 0.292                | 4.505                   | 20.908            |                                 |
| Prior Year Mgmt                             | Various                           | Various:Various                           | 41.087                 | 0.000          |                   | 0.000          |                   | 0.000               |                   | -                  |                   | 0.000                | 0.000                   | 41.087            |                                 |
| <b>Subtotal</b>                             |                                   |                                           | 1,311.703              | 2.707          |                   | 3.270          |                   | 3.282               |                   | 0.000              |                   | 3.282                | 27.858                  | 1,348.820         |                                 |

  

|                            | <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> | 8,924.263              | 71.938         |  | 54.412         |  | 43.084              |  | 0.000              |  | 43.084               | 305.296                 | 9,398.993         |                                 |

  

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| <b>Remarks</b> |
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|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------|----|----|---------|--------------|----|----|---------|---------------------------------------------|----|----|---------|----------------|----|------------------|---------|-----------------------|----|----|--------------|----|----|----|---------|----|----|----|
| Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy                                                                                       |                             |              |    |    |         |              |    |    |         |                                             |    |    |         |                |    | DATE: April 2013 |         |                       |    |    |              |    |    |    |         |    |    |    |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: System Development & Demonstration (SDD) |                             |              |    |    |         |              |    |    |         | R-1 ITEM NOMENCLATURE<br>PE 0604262N: V-22A |    |    |         |                |    |                  |         | PROJECT<br>1425: V-22 |    |    |              |    |    |    |         |    |    |    |
| V-22                                                                                                                                    | FY 2012                     |              |    |    | FY 2013 |              |    |    | FY 2014 |                                             |    |    | FY 2015 |                |    |                  | FY 2016 |                       |    |    | FY 2017      |    |    |    | FY 2018 |    |    |    |
|                                                                                                                                         | 1Q                          | 2Q           | 3Q | 4Q | 1Q      | 2Q           | 3Q | 4Q | 1Q      | 2Q                                          | 3Q | 4Q | 1Q      | 2Q             | 3Q | 4Q               | 1Q      | 2Q                    | 3Q | 4Q | 1Q           | 2Q | 3Q | 4Q | 1Q      | 2Q | 3Q | 4Q |
| Acquisition Milestones                                                                                                                  |                             |              |    |    |         |              |    |    |         |                                             |    |    |         |                |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |
| Engineering Milestones                                                                                                                  |                             |              |    |    |         |              |    |    |         |                                             |    |    |         |                |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |
| Block C Increment II & III                                                                                                              |                             | PCA<br>▼     |    |    |         |              |    |    |         |                                             |    |    |         |                |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |
| Systems Development                                                                                                                     |                             |              |    |    |         |              |    |    |         |                                             |    |    |         |                |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |
| Test & Evaluation                                                                                                                       |                             |              |    |    |         |              |    |    |         |                                             |    |    |         |                |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |
| Development Test                                                                                                                        | Flight Test/Integrated Test |              |    |    |         |              |    |    |         |                                             |    |    |         |                |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |
| Operational Evaluation                                                                                                                  | OTRR<br>II<br>■             | OT-IIIH<br>▼ |    |    |         | OT-IIIJ<br>▼ |    |    |         | OT-C1<br>▼                                  |    |    |         | OT-IIIK<br>▼   |    |                  |         |                       |    |    | OT-IIIL<br>▼ |    |    |    |         |    |    |    |
| Production Milestones                                                                                                                   |                             |              |    |    |         |              |    |    |         |                                             |    |    |         |                |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |
| Deliveries                                                                                                                              |                             |              |    |    |         |              |    |    |         |                                             |    |    |         | IT<br>A/C<br>◆ |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |
| 2014DON - 0604262N - 1425                                                                                                               |                             |              |    |    |         |              |    |    |         |                                             |    |    |         |                |    |                  |         |                       |    |    |              |    |    |    |         |    |    |    |

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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Navy                                                                                                        |                                                    |                              | <b>DATE:</b> April 2013 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>System Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604262N: V-22A | <b>PROJECT</b><br>1425: V-22 |                         |

Schedule Details

| Events by Sub Project                                                                                                                            | Start   |      | End     |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|---------|------|
|                                                                                                                                                  | Quarter | Year | Quarter | Year |
| <b>V-22</b>                                                                                                                                      |         |      |         |      |
| Engineering Milestones: Block C Increment II & III: Block C Inc II & III PCA                                                                     | 2       | 2012 | 2       | 2012 |
| Test & Evaluation: Development Test: Development Flight Test / Integrated Test (IT-IIID) & Continuous software sustainment developmental testing | 1       | 2012 | 4       | 2018 |
| Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIH)                                                                         | 3       | 2012 | 3       | 2012 |
| Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIJ)                                                                         | 3       | 2013 | 3       | 2013 |
| Test & Evaluation: Operational Evaluation: Joint and Allied Threat Awareness System Testing (OT-C1)                                              | 3       | 2014 | 3       | 2014 |
| Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIK)                                                                         | 3       | 2015 | 3       | 2015 |
| Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIL)                                                                         | 3       | 2017 | 3       | 2017 |
| Test & Evaluation: Operational Evaluation: Operational Test Readiness Review (OTRR) II                                                           | 2       | 2012 | 2       | 2012 |
| Production Milestones: Deliveries: Instrumented Test Aircraft Delivery                                                                           | 1       | 2015 | 1       | 2015 |