Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0604226F: *B-1B*

BA 5: Development & Demonstration (SDD)

| • | | | | | | | | | | | |
|--|-------------------|---------------------|-----------------------------|----------------------------|------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------|
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | FY 2011 Base Estimate | FY 2011 OCO Estimate | FY 2011 Total Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| Total Program Element | 158.081 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 654596: Conventional Mission Upgrades | 158.081 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

Note

FY10, B-1B development efforts are transferring from PE 0604226F, Budget Program Activity Code (BPAC) 654596 to B-1B Squadrons, PE 0101126F, BPAC 675344. This transfers funds / efforts from Budget Activity (BA) 5 Demonstration / Validation to BA 7 Operations Systems Development.

A. Mission Description and Budget Item Justification

This program provides RDT&E funding for the B-1B Conventional Mission Upgrade Program (CMUP). The CMUP program provides new and improved capabilities to the B-1B weapon system that require significant hardware and software development and testing. In addition, the CMUP program addresses reliability and diminishing manufacturing sources (DMS) deficiencies to prevent future grounding of aircraft.

B-1B grounding items are addressed in the following efforts: Gyro Stabilization System (GSS), onboard diagnostics Central Integrated Test System (CITS) upgrade, Vertical Situation Display Upgrade (VSDU) to replace unsupportable pilot displays, Radar Reliability and Maintainability Improvement Program (RMIP), and Inertial Navigation System (INS) upgrade.

B-1B improvement efforts include, but are not limited to, the development of the Fully Integrated Data Link (FIDL), ALQ-161A defensive system upgrades and a laptop controlled targeting pod (LCTP) capability. Also included is the development of an improved Threat Situational Awareness System (TSAS), and a Digital Communications Improvement (DCI) upgrade.

FIDL integrates Link-16 and Beyond Line of Sight (BLOS) data links along with upgraded displays for improved connectivity to command and control authorities and for enhancements to targeting and weapons management. The ALQ-161A defensive system upgrades include the Preprocessor Avionics Control Unit (PACU) software re-host/development. The LCTP effort provides a limited targeting pod capability to meet emerging warfighter needs and a Digital Data Recorder (DDR) to support Non-Traditional Intelligence, Surveillance and Reconnaissance (NTISR). Program includes Congressional Add funding for 16-Carry Adapter Weapons Initiative and the Smart Bomb Rack Upgrade (BRU).

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

PE 0604226F: *B-1B*

Upgrades to the B-1B training systems are included in CMUP to keep the training systems current with the aircraft configuration. In addition, program funds cover engineering/planning studies, related engineering efforts, and initiatives for future weapon system enhancements, including efforts to improve weapon system operational capabilities, safety, supportability, maintainability, reliability, and total ownership cost.

All B-1B development programs support planned requirements for unique identification in their production phases. The B-1B CMUP upgrade program is included in Budget Activity (BA) 5, System Development and Demonstration.

B. Program Change Summary (\$ in Millions)

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|---------|---------|---------------------|-------------|---------------|
| Previous President's Budget | 142.643 | 0.000 | 0.000 | 0.000 | 0.000 |
| Current President's Budget | 158.081 | 0.000 | 0.000 | 0.000 | 0.000 |
| Total Adjustments | 15.438 | 0.000 | 0.000 | 0.000 | 0.000 |
| Congressional General Reductions | | 0.000 | | | |
| Congressional Directed Reductions | | 0.000 | | | |
| Congressional Rescissions | 0.000 | 0.000 | | | |
| Congressional Adds | | 0.000 | | | |
| Congressional Directed Transfers | | 0.000 | | | |
| Reprogrammings | 0.000 | 0.000 | | | |
| SBIR/STTR Transfer | 0.000 | 0.000 | | | |
| Other Adjustments | 15.438 | 0.000 | 0.000 | 0.000 | 0.000 |

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 654596: Conventional Mission Upgrades

Congressional Add: 16-Carry Adapter

Congressional Add: In FY2009: Smart BRU provides electrical connection to/fires the MK-107 Impulse Cartridges. End connectors frequently get damaged during weapons loading and repair requires the rack to be disassemb...

Congressional Add Subtotals for Project: 654596

Congressional Add Totals for all Projects

| FY 2009 | FY 2010 |
|---------|---------|
| | |
| 4.160 | 0.000 |
| 1.560 | 0.000 |
| 5.720 | 0.000 |
| 5.720 | 0.000 |

| Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force | | DATE: February 2010 |
|--|---|---------------------|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD) | R-1 ITEM NOMENCLATURE PE 0604226F: B-1B | |
| Change Summary Explanation FY10/11, B-1B development efforts are transferring from PE 060 675344. This transfers funds / efforts from Budget Activity (BA) | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

DATE: February 2010

| | | 0 | 0.00 | | | | | | | | | |
|---|---------|-------|-------|----------------------------|------------------------------------|---------------------|---------------------|---|---------------------|------------|---------------|--|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD) | | | | | IOMENCLA 6F: <i>B-1B</i> | TURE | | PROJECT 654596: Conventional Mission Upgrades | | | | |
| COST (\$ in Millions) FY 2009 FY 2010 Ba Actual Estimate Esti | | | | FY 2011 OCO Estimate | FY 2011 Total Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To | Total Cost | |
| 654596: Conventional Mission Upgrades | 158.081 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing | |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |

A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

This program provides RDT&E funding for the B-1B Conventional Mission Upgrade Program (CMUP). The CMUP program provides new and improved capabilities to the B-1B weapon system that require significant hardware and software development and testing. In addition, the CMUP program addresses reliability and diminishing manufacturing sources (DMS) deficiencies to prevent future grounding of aircraft.

B-1B grounding items are addressed in the following efforts: Gyro Stabilization System (GSS), onboard diagnostics Central Integrated Test System (CITS) upgrade, Vertical Situation Display Upgrade (VSDU) to replace unsupportable pilot displays, Radar Reliability and Maintainability Improvement Program (RMIP), and Inertial Navigation System (INS) upgrade.

B-1B improvement efforts include, but are not limited to, the development of the Fully Integrated Data Link (FIDL), ALQ-161A defensive system upgrades and a laptop controlled targeting pod (LCTP) capability. Also included is the development of an improved Threat Situational Awareness System (TSAS), and a Digital Communications Improvement (DCI) upgrade.

FIDL integrates Link-16 and Beyond Line of Sight (BLOS) data links along with upgraded displays for improved connectivity to command and control authorities and for enhancements to targeting and weapons management. The ALQ-161A defensive system upgrades include the Preprocessor Avionics Control Unit (PACU) software re-host/development. The LCTP effort provides a limited targeting pod capability to meet emerging warfighter needs and a Digital Data Recorder (DDR) to support Non-Traditional Intelligence, Surveillance and Reconnaissance (NTISR). Program includes Congressional Add funding for 16-Carry Adapter Weapons Initiative and the Smart Bomb Rack Upgrade (BRU).

Upgrades to the B-1B training systems are included in CMUP to keep the training systems current with the aircraft configuration. In addition, program funds cover engineering/planning studies, related engineering efforts, and initiatives for future weapon system enhancements, including efforts to improve weapon system operational capabilities, safety, supportability, maintainability, reliability, and total ownership cost.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604226F: *B-1B*

654596: Conventional Mission Upgrades

All B-1B development programs support planned requirements for unique identification in their production phases. The B-1B CMUP upgrade program is included in Budget Activity (BA) 5, System Development and Demonstration.

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

| FY | 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|--------|---------|-----------------|----------------|------------------|
| | 52.361 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: In FY 2009: The B-1 was fully into development efforts involving FIDL, VSD, Radar RMIP, CITS and INS. From almost the beginning of FY09 funding issues were evident. FIDL, VSD and CITS all breached their APBs. CITS was a known breach due to managing it alongside FIDL and VSD. The decision to package FIDL, VSD and CITS was made as early as 2006 in order to minimize the overall production costs, specifically installation costs. FIDL costs rose and the schedule moved to the right significantly. The new FIDL APB had to be approved by SAF/AQ. CITS did complete a new APB; however, VSD did not. FIDL completed Phase I flight test and is postured for Phase II. Radar and INS both continued to use the BAC 1-11 to reduce risk and prepare for MS C. VSD faced continued schedule adjustments and related cost growth. During third and fourth quarter the B-1 3600 funding position became such that a work slowdown was initiated with the prime contractor which lasted through the end of the FY. Programs felt the impact of that slowdown in various ways. Due to major support from ASC and SAF, prior year funds were provided to help alleviate the impacts of the slowdown. The B-1 entered FY10 in a much better position that was thought to be possible due to extended fiscal support from multiple agencies. | | | | | |
| FY 2010 Plans: In FY2010: Not Applicable | | | | | |
| FY 2011 Base Plans: In FY2011: Not Applicable | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force | | | | DATE: Feb | uary 2010 | |
|---|--|---------|--------------|-----------------|----------------|------------------|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD) | R-1 ITEM NOMENCLATURE PE 0604226F: <i>B-1B</i> | | lission Upgr | ades | | |
| B. Accomplishments/Planned Program (\$ in Millions) | ' | | 1 | | | |
| | | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable. | | | | | | |
| Accor | mplishments/Planned Programs Subtotals | 152.361 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | FY 2009 | FY 2010 | | | |
| Congressional Add: 16-Carry Adapter FY 2009 Accomplishments: In FY2009: The 16-Carry Adaper enhances the B-1 weapons Multi-Purpose Rotary Launcher (MPRL) with a 16 weapon carr 82 Low Drag General Purpose (LDGP) weapons. This demons development, testing and technical data requirements necessa GBU-38/B and/or MK82 LDGP weapons. Minimal software are accomplished. Program baseline is complete; contract was aw | riage capability of GBU-38/B and/or MK stration effort provides for the hardware ary for safe weapon separation of the chitecture development will also be | 4.160 | 0.000 | | | |
| FY 2010 Plans: In FY2010: Not Applicable | | | | | | |
| Congressional Add: In FY2009: Smart BRU provides electrical concartridges. End connectors frequently get damaged during weapor be disassemb | • | 1.560 | 0.000 | | | |
| FY 2009 Accomplishments: In FY2010: Not Applicable | | | | | | |

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0604226F: B-1B 654596: Conventional Mission Upgrades

PROJECT

BA 5: Development & Demonstration (SDD)

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

| | FY 2009 | FY 2010 |
|---|---------|---------|
| FY 2010 Plans: In FY2011: Not Applicable | | |
| Congressional Adds Subtotals | 5.720 | 0.000 |

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

| | | | FY 2011 | FY 2011 | FY 2011 | | | | | Cost To | |
|--|---------|---------|-------------|---------|--------------|---------|---------|---------|---------|-----------------|------------|
| <u>Line Item</u> | FY 2009 | FY 2010 | Base | OCO | <u>Total</u> | FY 2012 | FY 2013 | FY 2014 | FY 2015 | Complete | Total Cost |
| • PE 0101126F: <i>B-1B, Aircraft</i> | 29.887 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Procurement BP11, Mods | | | | | | | | | | | |
| • PE 0101126F (1): <i>B-1B, Aircraft</i> | 2.515 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Procurement BP16, Initial Spares | | | | | | | | | | | |
| • PE 0101126F (2): <i>B-1B, Aircraft</i> | 2.649 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Procurement BP12, Common | | | | | | | | | | | |
| Support Equipment | | | | | | | | | | | |
| • PE 0207446F: Bomber TDL Core | 21.603 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | | | |

D. Acquisition Strategy

(U) Key elements of the overall CMUP acquisition strategy include: use of a sole source contract with a prime/integrating contractor (Boeing); installed performance responsibility; use of cost plus incentive fee (CPIF) development contracts; and combining developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime and differences in fielded configurations.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

PE 0604226F: *B-1B*

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

654596: Conventional Mission Upgrades

BA 5: Development & Demonstration (SDD)

Product Development (\$ in Millions)

| | | | | FY 20 |)10 | FY 2011 Base | | FY 2 | | FY 2011 Total | | | |
|---|------------------------------|--------------------------------------|---------------------------|-------|---------------|-----------------|---------------|-------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| (U) Central Integrated Test System (CITS) | SS/CPIF | Boeing Long Beach, CA | 43.011 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 43.011 | 0.000 |
| (U) Vertical Situation Display Upgrade (VSDU) | SS/CPFF | Boeing Long Beach CA | 72.122 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 72.122 | 0.000 |
| (U) Radar Reliability and Maintainability Improvement Program (RMIP) | SS/CPIF | Boeing Long Beach, CA | 150.867 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 150.867 | 0.000 |
| (U) Inertial Navigation System (INS) upgrade | SS/CPIF | Boeing Long Beach, CA | 34.369 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 34.369 | 0.000 |
| (U) Fully Integrated Data Link (FIDL) | SS/CPIF | Boeing Long Beach, CA | 93.556 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 93.556 | 0.000 |
| (U) ALQ-161A Preprocessor Avionics Control Unit (PACU) | SS/CPFF | 561st Robins AFB, GA | 44.735 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 44.735 | 0.000 |
| (U) Threat Situational Awareness System (TSAS) | SS/CPFF | Boeing Long Beach, CA | 33.701 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 33.701 | 0.000 |
| (U) Laptop Controlled Targeting Pod (LCTP) | SS/CPFF | Boeing Long Beach, CA | 4.157 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 4.157 | 0.000 |
| (U) 16-Carry (Congressional Add (CA)) | SS/CPIF | Boeing Long Beach, CA | 12.960 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 12.960 | 0.000 |
| (U) Smart Bomb Rack Unit (BRU) (CA) | TBD/TBD | TBD TBD | 1.560 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 1.560 | 0.000 |
| | | Subtotal | 491.038 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 491.038 | 0.000 |

UNCLASSIFIED

R-1 Line Item #61 Page 8 of 12

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)

PE 0604226F: *B-1B*

654596: Conventional Mission Upgrades

Product Development (\$ in Millions)

| | . , | | | | | FY | 2011 | FY | 2011 | FY 2011 | | | |
|--------------------|------------------------------|--------------------------------------|---------------------------|------|---------------|------|---------------|------|---------------|---------|---------------------|------------|--------------------------------|
| | | | FY 2010 | | Base | | осо | | Total | | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |

Remarks

Support (\$ in Millions)

| | | | | FY 2 | FY 2010 | | FY 2011 Base | | FY 2011 OCO | | | | |
|---|------------------------------|--------------------------------------|---------------------------|-------|---------------|-------|-----------------|-------|----------------|-------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| (U) Advisory & Assistance Support (A&AS) | Various/ Various | Various Various | 10.865 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 10.865 | 0.000 |
| (U) Studies & Analyses / Modeling & Simulation | C/FPI | Rockwell Collins Sterling VA | 1.296 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 1.296 | 0.000 |
| | | Subtotal | 12.161 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 12.161 | 0.000 |

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)

PE 0604226F: *B-1B*

654596: Conventional Mission Upgrades

Test and Evaluation (\$ in Millions)

| | | | FY 2010 | | FY 2011 Base | | FY 2011 OCO | | FY 2011 Total | | | | |
|---|------------------------------|--------------------------------------|---------------------------|-------|-----------------|-------|----------------|-------|------------------|-------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| (U) Air Force Flight Test Center (AFFTC) | PO | AFFTC Edwards AFB, CA | 70.986 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 70.986 | 0.000 |
| | | Subtotal | 70.986 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 70.986 | 0.000 |

Remarks

| | Total Prior Years Cost | FY 2010 | | 2011 Ise | FY 2 | FY 2011 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---------------------|---------------------------|---------|-------|-------------|-------|------------------|---------------------|------------|--------------------------------|
| Project Cost Totals | 574.185 | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 574.185 | 0.000 |

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

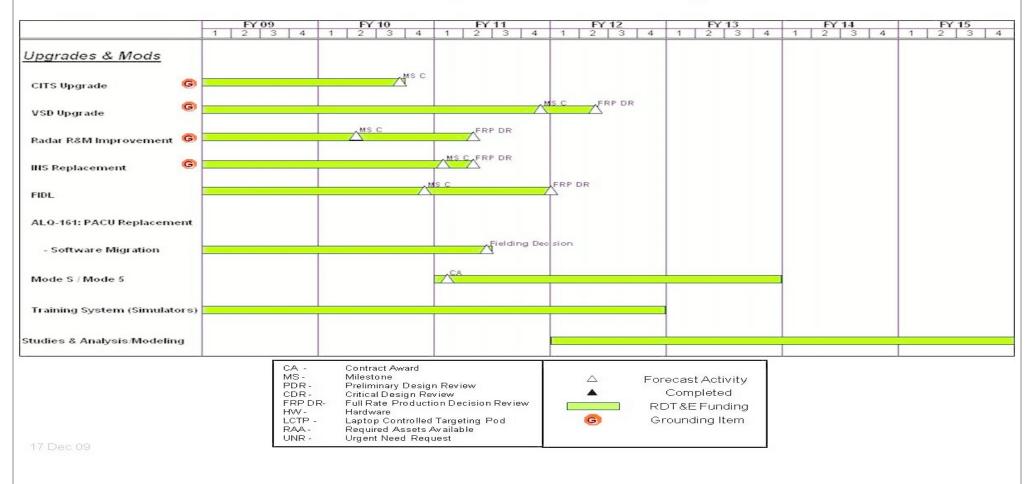
R-1 ITEM NOMENCLATURE

PE 0604226F: *B-1B*

PROJECT

654596: Conventional Mission Upgrades

Development Activity



R-1 Line Item #61 Page 11 of 12

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

PROJECT R-1 ITEM NOMENCLATURE 3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

PE 0604226F: *B-1B* 654596: Conventional Mission Upgrades

Schedule Details

| | St | art | Er | nd |
|--|---------|------|---------|------|
| Event | Quarter | Year | Quarter | Year |
| Central Integrated Test System (CITS) - program start FY2004 | 1 | 2009 | 4 | 2009 |
| Central Integrated Test System (CITS) - program completion FY2010 | 1 | 2009 | 4 | 2009 |
| Vertical Situational Display Upgrade (VSDU) - program start FY2006 | 1 | 2009 | 4 | 2009 |
| Vertical Situational Display Upgrade (VSDU) - program completion FY2012 | 1 | 2009 | 4 | 2009 |
| Radar Reliability & Maintainability Improvement Program (RMIP) - program start FY2006 | 1 | 2009 | 4 | 2009 |
| Radar Reliability & Maintainability Improvement Program (RMIP) - program completion FY2011 | 1 | 2009 | 4 | 2009 |
| Inertial Navigation System (INS) - program start FY2007 | 1 | 2009 | 4 | 2009 |
| Inertial Navigation System (INS) - program completion FY2011 | 1 | 2009 | 4 | 2009 |
| Fully Integrated Data Link (FIDL) - program start FY2004 | 1 | 2009 | 4 | 2009 |
| Fully Integrated Data Link (FIDL) - program completion FY2011 | 1 | 2009 | 4 | 2009 |
| Preprocessor Avionics Control Unit (PACU) software migration - program start FY2004 | 1 | 2009 | 4 | 2009 |
| Preprocessor Avionics Control Unit (PACU) software migration - program completion FY2011 | 1 | 2009 | 4 | 2009 |