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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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0401119F: C-5 Airlift Squadrons							
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	110.191	85.266	58.990	0.000	58.990	15.118	0.000	0.000	0.000	Continuing	Continuing
674495: Avionics Modernization Program	4.219	3.933	4.867	0.000	4.867	0.000	0.000	0.000	0.000	0.000	433.202
674835: Reliability Enhancement & Reengining Program	105.972	61.671	34.654	0.000	34.654	15.118	0.000	0.000	0.000	0.000	1,638.098
675353: C-5 Block Upgrade	0.000	19.662	19.469	0.000	19.469	0.000	0.000	0.000	0.000	0.000	39.179
A. Mission Description and Budget Item Justification											
674495: Avionics Modernization Program (AMP): AMP implements communication, navigation, surveillance/air traffic management (CNS/ATM), navigation/safety capability and the All Weather Flight Control System (AWFCS). It installs directed navigation/safety equipment: Terrain Awareness and Warning System (TAWS) and Traffic Alert and Collision Avoidance System (TCAS), reducing the threat of controlled flight into terrain and mid-air collisions. CNS/ATM capability requirements are incorporated in the aircraft to meet current and future International Civil Aviation Organization (ICAO)/Federal Aviation Administration (FAA) requirements and to progress toward Next Gen Air Transportation System. AWFCS replaces low reliability line replaceable units (LRUs) in the automatic flight control system and replaces aging, non-supportable mechanical instruments in the engine and flight systems. Connectivity to mobility command and control capabilities is also incorporated in the AMP design. The TCAS portion was accelerated ahead of the rest of the AMP mod and was completed 31 Oct 02. The portion of avionics capability required for modernization that was not complete at the end of AMP development will be captured and funded in RERP. All other avionics capability will be captured in a separate follow-on block upgrade program. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. AMP requirements have been expanded to incorporate updates to the new avionics architecture, to include security enhancements to the Global Positioning System. Equipment Diminishing Manufacturing Source (DMS) issues will be resolved to support continued operations through studies, development, and redesign efforts. Congressional adds funded Inductive Thermography in FY08 (\$1.5M) and FY09 (\$2.4M).											
FY 2009/2010/2011: Funding required for development of Selective Availability Anti-Spoofing Module (SAASM)/Enhanced Surveillance (EHS) capabilities for insertion in aircraft that have previously completed the AMP modification.											
674835: C-5 Reliability Enhancement and Re-engining Program (RERP): RERP is a comprehensive modernization effort to improve aircraft reliability, maintainability, and availability. RERP will enable the C-5 to achieve wartime mission requirements by increasing fleet availability (mission capable rate, departure reliability). This effort centers around replacing the current TF39 engines with more reliable, Commercial Off-the-Shelf CF6 turbofan engines with increased take-off thrust and stage											

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<p>three noise compliance. The new engines increase payload capability and access to Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) airspace. The modification also decreases aircraft time to climb, increases engine-out climb gradient for takeoff, improves transportation system throughput, and decreases engine removals. Additionally, numerous other system modifications will be performed to increase fleet availability. Increased costs led to a review of total program requirements. On 14 Feb 08, USD (AT&L) certified a restructured RERP to Congress. This restructured program reduced RERP scope to include only 49 production aircraft (47 C-5Bs and 2 C-5Cs). The AF was directed to fully fund RERP to the OSD Cost Analysis Improvement Group (CAIG) Independent Cost Estimate (ICE). On March 14, 2008 USD AT&L conducted a successful Milestone C (MS C) Defense Acquisition Board (DAB). USD AT&L signed the Acquisition Program Baseline (APB) reflecting the N-M certification and the MS C approval on June 24, 2008. Equipment Diminishing Manufacturing Sources (DMS) issues will be resolved to support continued operations through studies, bridge buys, life of type buys, development and redesign efforts. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development.</p> <p>FY 2009: Funding supported RERP design, development, engineering change orders, and contractor/government test. Mission support funding is required for program office operations and second destination transportation costs. FY09 funding also supports initiation of development/delivery of aircrew/maintenance training devices to meet operational training requirements.</p> <p>FY2010: Funding supports RERP design, development, engineering change orders, and contractor/government test. Mission support funding is required for program office operations and second destination transportation costs. FY10 funding is also required to continue the development/delivery of aircrew/maintenance Training devices.</p> <p>FY2011: Funding supports RERP design, development, engineering change orders, contractor test, and final technical order publication. FY11 funding is also required to finalize the development/delivery of aircrew/maintenance training devices.</p> <p>675353: C-5 Block Upgrade: Purpose of this program is to provide a measured approach to implement a common baseline for the C-5 fleet and its training systems in order to allow insertion and integration of new/future capabilities and replacement of future unsupportable equipment. This program supports software (S/W) and hardware (H/W) baselines between legacy aircraft, Avionics Modernization Program (AMP) aircraft, and Reliability Enhancement and Re-engining Program (RERP) aircraft.</p> <p>C-5 AMP core processing platform has a total of two Core Processor Module (CPM) cards; C-5 RERP core processing platform has a total of three CPM cards. The AMP requirement is to have 50% spare processing and memory capability; CPM-1 and CPM-2, respectively, have only 22% and 19% throughput capability remaining. AMP throughput/capacity constraint does not allow for new/future capability and contributes to current computer problems. Failure to upgrade the AMP system to the 3 CPM RERP configuration will affect mission capable rates, will inhibit the ability to fix current Deficiency Reports (DRs), and will drive increased sustainment costs associated with S/W and H/W baseline divergence. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development.</p>		

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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 0401119F: C-5 Airlift Squadrons			
BA 7: Operational Systems Development					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	127.118	95.266	0.000	0.000	0.000
Current President's Budget	110.191	85.266	58.990	0.000	58.990
Total Adjustments	-16.927	-10.000	58.990	0.000	58.990
• 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	-16.927	-10.000	58.990	0.000	58.990
Change Summary Explanation					
FY 2009 Other Adjustments: Below Threshold Reductions (\$2.0M), SBIR reduction (\$5.12M), and Above Threshold Reductions (\$9.807).					
FY 2010 Other Adjustments: Congressional program reduction (\$10.0M).					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>				PROJECT 674495: <i>Avionics Modernization Program</i>			
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
674495: <i>Avionics Modernization Program</i>	4.219	3.933	4.867	0.000	4.867	0.000	0.000	0.000	0.000	0.000	433.202
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification 674495: Avionics Modernization Program (AMP): AMP implements communication, navigation, surveillance/air traffic management (CNS/ATM), navigation/safety capability and the All Weather Flight Control System (AWFCS). It installs directed navigation/safety equipment: Terrain Awareness and Warning System (TAWS) and Traffic Alert and Collision Avoidance System (TCAS), reducing the threat of controlled flight into terrain and mid-air collisions. CNS/ATM capability requirements are incorporated in the aircraft to meet current and future International Civil Aviation Organization (ICAO)/Federal Aviation Administration (FAA) requirements and to progress toward Next Gen Air Transportation System. AWFCS replaces low reliability line replaceable units (LRUs) in the automatic flight control system and replaces aging, non-supportable mechanical instruments in the engine and flight systems. Connectivity to mobility command and control capabilities is also incorporated in the AMP design. The TCAS portion was accelerated ahead of the rest of the AMP mod and was completed 31 Oct 02. The portion of avionics capability required for modernization that was not complete at the end of AMP development will be captured and funded in RERP. All other avionics capability will be captured in a separate follow-on block upgrade program. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. AMP requirements have been expanded to incorporate updates to the new avionics architecture, to include security enhancements to the Global Positioning System. Equipment Diminishing Manufacturing Source (DMS) issues will be resolved to support continued operations through studies, development, and redesign efforts. Congressional adds funded Inductive Thermography in FY08 (\$1.5M) and FY09 (\$2.4M). FY 2009/2010/2011: Funding required for development of Selective Availability Anti-Spoofing Module (SAASM)/Enhanced Surveillance (EHS) capabilities for insertion in aircraft that have previously completed the AMP modification.											
B. Accomplishments/Planned Program (\$ in Millions)											
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total						
MAJOR THRUST: Develop Selective Availability Anti-Spoofing Module (SAASM)/Enhanced Surveillance (EHS) capabilities for insertion in aircraft that have previously completed the AMP modification.	4.219	3.933	4.867	0.000	4.867						

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B. Accomplishments/Planned Program (\$ in Millions)						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2009 Accomplishments: In FY 2009: Develop software requirements to insert in C-5 legacy and AMP modified aircraft.											
FY 2010 Plans: In FY 2010: Finalize development of SAASM and continue EHS software requirements to insert in C-5 legacy and AMP modified aircraft.											
FY 2011 Base Plans: In FY 2011: Finalize development of EHS software requirements to insert in C-5 legacy and AMP modified aircraft.											
FY 2011 OCO Plans: In FY 2011 (OCO): N/A											
Accomplishments/Planned Programs Subtotals						4.219	3.933	4.867	0.000	4.867	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 040119F: Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-11	94.901	72.607	36.845	0.000	36.845	0.000	0.000	0.000	0.000	0.000	753.810
• PE Not Provided (1023): PE, 0401119F, Aircraft Procurement,	7.405	4.882	1.468	0.000	1.468	0.000	0.000	0.000	0.000	0.000	37.339

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C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-19											
D. Acquisition Strategy Avionics Modernization Program: Program acquisition strategy establishes a single integrating contractor (Lockheed Martin Aeronautics Company) to modify and qualify integrated commercial off-the-shelf line replaceable units and software to meet C-5 communication, navigation, surveillance/air traffic management requirements; update existing engineering and technical data; develop interface control specifications based on requirements; prototype the new system; and support flight testing. The AMP modification is planned for the C-5 fleet.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>				PROJECT 674495: <i>Avionics Modernization Program</i>					
Product Development (\$ 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
Lockheed Martin Aeronautics Company	SS/CPAF	LM Marietta GA	361.020	1.600		0.000		0.000		0.000	0.000	362.620	362.620
Rockwell Collins	TBD/TBD	TBD TBD	0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
Subtotal			361.020	1.600		0.000		0.000		0.000	0.000	362.620	362.620
Remarks Engineering complete.													
Support (\$ 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
730 ACSG, Robins AFB, GA	TBD/TBD	TBD TBD	2.275	0.733		0.288		0.000		0.288	0.000	3.296	3.296
716 AESG, Wright-Patterson AFB, OH	TBD/TBD	TBD TBD	22.448	0.000		0.000		0.000		0.000	0.000	22.448	22.448
Thermography	TBD/TBD	TBD TBD	3.937	0.000		0.000		0.000		0.000	0.000	3.937	3.937
Subtotal			28.660	0.733		0.288		0.000		0.288	0.000	29.681	29.681
Remarks Engineering complete.													

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<p>Test and Evaluation (\$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method & Type</th> <th rowspan="2">Performing Activity & Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>418 Test Squadron</td> <td>TBD/TBD</td> <td>418 Test Squadron Edwards AFB</td> <td align="right">14.214</td> <td align="right">0.000</td> <td></td> <td align="right">4.579</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">4.579</td> <td align="right">0.000</td> <td align="right">18.793</td> <td align="right">18.793</td> </tr> <tr> <td>578 ACSS (WR-ALC)</td> <td>TBD/TBD</td> <td>WR-ALC Robins AFB</td> <td align="right">1.110</td> <td align="right">1.600</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td align="right">0.000</td> <td align="right">2.710</td> <td align="right">2.710</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td align="right">15.324</td> <td align="right">1.600</td> <td></td> <td align="right">4.579</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">4.579</td> <td align="right">0.000</td> <td align="right">21.503</td> <td align="right">21.503</td> </tr> </tbody> </table>														Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	418 Test Squadron	TBD/TBD	418 Test Squadron Edwards AFB	14.214	0.000		4.579		0.000		4.579	0.000	18.793	18.793	578 ACSS (WR-ALC)	TBD/TBD	WR-ALC Robins AFB	1.110	1.600		0.000		0.000		0.000	0.000	2.710	2.710	Subtotal			15.324	1.600		4.579		0.000		4.579	0.000	21.503	21.503
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<p>Remarks Total Prior Years Cost may include only FY 2009 data.</p>																																																																												

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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 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

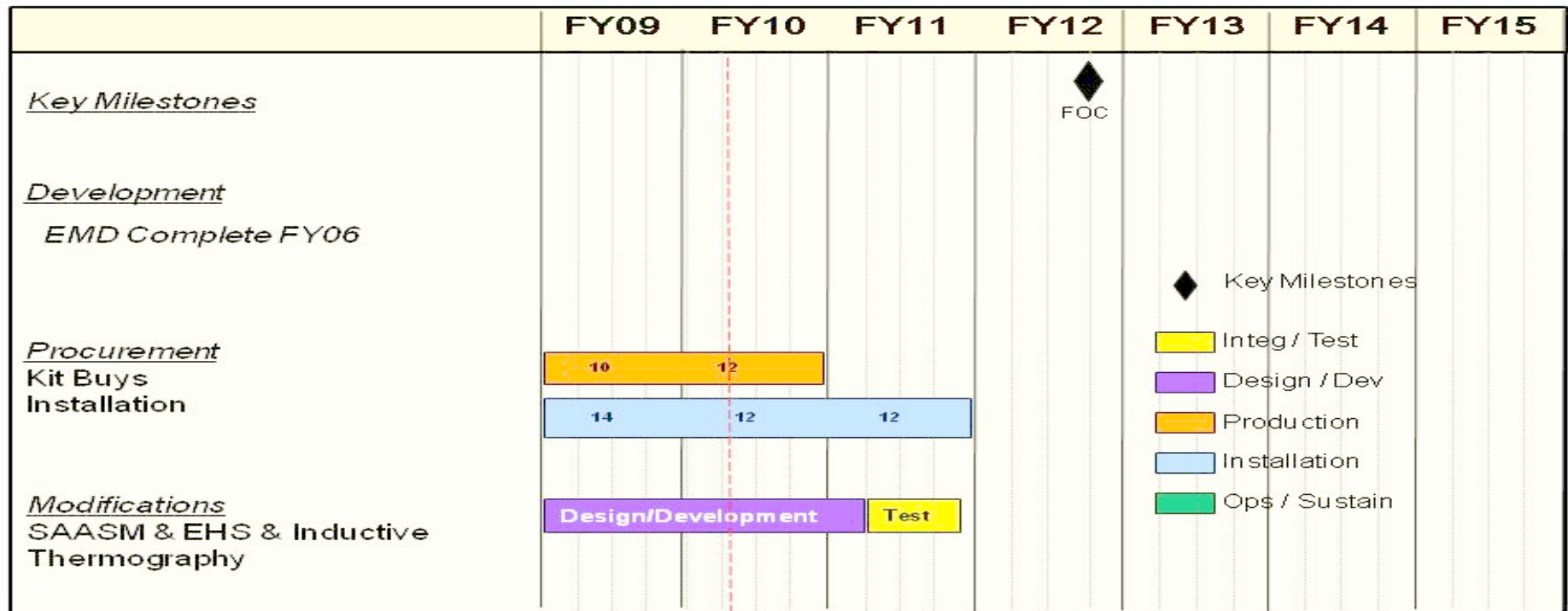
PE 0401119F: C-5 Airlift Squadrons

PROJECT

674495: Avionics Modernization Program



C-5 AMP Schedule FY11 PB



Integrity - Service - Excellence

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

Event	Start		End	
	Quarter	Year	Quarter	Year
Aircraft is in production	1	2009	4	2011
Selective Availability Anti-Spoofing Module (SAASM)/Enhanced Surveillance (EHS) Development/ Inductive Thermography	1	2009	4	2011

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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
674835: <i>Reliability Enhancement & Reengining Program</i>	105.972	61.671	34.654	0.000	34.654	15.118	0.000	0.000	0.000	0.000	1,638.098
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

674835: C-5 Reliability Enhancement and Re-engining Program (RERP): RERP is a comprehensive modernization effort to improve aircraft reliability, maintainability, and availability. RERP will enable the C-5 to achieve wartime mission requirements by increasing fleet availability (mission capable rate, departure reliability). This effort centers around replacing the current TF39 engines with more reliable, Commercial Off-the-Shelf CF6 turbofan engines with increased take-off thrust and stage three noise compliance. The new engines increase payload capability and access to Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) airspace. The modification also decreases aircraft time to climb, increases engine-out climb gradient for takeoff, improves transportation system throughput, and decreases engine removals. Additionally, numerous other system modifications will be performed to increase fleet availability. Increased costs led to a review of total program requirements. On 14 Feb 08, USD (AT&L) certified a restructured RERP to Congress. This restructured program reduced RERP scope to include only 49 production aircraft (47 C-5Bs and 2 C-5Cs). The AF was directed to fully fund RERP to the OSD Cost Analysis Improvement Group (CAIG) Independent Cost Estimate (ICE). On March 14, 2008 USD AT&L conducted a successful Milestone C (MS C) Defense Acquisition Board (DAB). USD AT&L signed the Acquisition Program Baseline (APB) reflecting the N-M certification and the MS C approval on June 24, 2008. Equipment Diminishing Manufacturing Sources (DMS) issues will be resolved to support continued operations through studies, bridge buys, life of type buys, development and redesign efforts. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development.

FY 2009: Funding supported RERP design, development, engineering change orders, and contractor/government test. Mission support funding is required for program office operations and second destination transportation costs. FY09 funding also supports initiation of development/delivery of aircrew/maintenance training devices to meet operational training requirements.

FY2010: Funding supports RERP design, development, engineering change orders, and contractor/government test. Mission support funding is required for program office operations and second destination transportation costs. FY10 funding is also required to continue the development/delivery of aircrew/maintenance Training devices.

FY2011: Funding supports RERP design, development, engineering change orders, contractor test, and final technical order publication. FY11 funding is also required to finalize the development/delivery of aircrew/maintenance training devices.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0401119F: C-5 Airlift Squadrons		PROJECT 674835: Reliability Enhancement & Reengining Program	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Reliability Enhancement and Re-engining Program (RERP) will enable the C-5 to achieve wartime mission requirements by increasing fleet availability (mission capable rate, departure re...	105.972	61.671	34.654	0.000	34.654
FY 2009 Accomplishments: In FY 2009: The requirement for the FY09 Accomplishments funding in Paragraph B are to support RERP design, development, engineering change orders, and contractor/government test. Mission support funding is required for program office operations and Second Destination Transportation costs.					
FY 2010 Plans: In FY 2010: The requirement for the FY10 Accomplishments/Planned Program funding in Paragraph B are to support RERP design , development, engineering change orders, and contractor/government test . Mission support funding is required for program office operations and Second Destination Transportation costs.					
FY 2011 Base Plans: In FY 2011: The requirement for the FY11 Accomplishments/Planned Program funding in Paragraph B are to support RERP design, development, engineering change orders, contractor test, and final Technical Order publication.					
FY 2011 OCO Plans: In FY 2011 (OCO): N/A					
Accomplishments/Planned Programs Subtotals	105.972	61.671	34.654	0.000	34.654

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0401119F: C-5 Airlift Squadrons				PROJECT 674835: Reliability Enhancement & Reengining Program			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0401119F: Aircraft Procurement, AF, BA-5, C-5 Reliability Enhancement and Re-engining Program, Ad	50.762	108.300	166.900	0.000	166.900	175.300	175.800	0.000	0.000	0.000	782.594
• PE 0401119F (1): Aircraft Procurement, AF, BA-5, C-5 Mods, Reliability Enhancement and Re-engining Progr	280.116	462.664	676.457	0.000	676.457	950.459	1,045.637	1,136.369	324.852	0.000	5,033.494
• PE 0401119F (2): Aircraft Procurement, AF, BA-5, C-5 Other, BP19	0.000	12.337	19.541	0.000	19.541	9.389	0.000	0.000	0.000	0.000	0.000
D. Acquisition Strategy											
Reliability Enhancement and Re-engining Program (RERP): Reliability Enhancement and Re-engining Program (RERP): System Development & Demonstration (SDD) includes 1 C-5A and 2 C-5Bs. The acquisition strategy considers every opportunity to use commercial components to modernize the C-5 to meet or exceed required system performance and support, so as to renew the weapon system until 2040. Lockheed Martin was selected as the prime contractor through a sole source arrangement. Lockheed has selected General Electric (Powerplant), Goodrich (Pylon), and Honeywell (Avionics) as the major subcontractors.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0401119F: C-5 Airlift Squadrons					PROJECT 674835: Reliability Enhancement & Reengining Program	

Product Development (\$ 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
Lockheed Martin Aeronautics Co (Pre-EMD)	SS/FFP	LM Marietta Georgia	46.738	0.000		0.000		0.000		0.000	0.000	46.738	46.738
Lockheed Martin Aeronautics Co (SDD)	SS/CPAF	LM Marietta Georgia	1,273.329	34.831	Oct 2009	4.357	Oct 2010	0.000		4.357	0.000	1,312.517	1,312.517
Lockheed Martin Aeronautics Co (ICS)	SS/Various	LM Marietta Georgia	0.000	3.367	Jan 2010	2.141	Jan 2011	0.000		2.141	0.000	5.508	5.508
Subtotal			1,320.067	38.198		6.498		0.000		6.498	0.000	1,364.763	1,364.763

Remarks

Costs shown on Interim Contract Support (ICS) line were previously included in SDD line. Due to a change in contracting strategy post-FY09 PB submission, these costs were moved from the SDD line to the ICS line. These costs represent the costs associated with post-SDD DMS resolution and Deficiency Report (DR) resolution during QOT&E to be executed using the ICS contract vehicle.

Support (\$ 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
730 ACSG, Robins AFB, GA	TBD/TBD	WR-ALC Robins AFB	31.302	0.394		0.000		0.000		0.000	0.000	31.696	31.696
716 AESG, Wright-Patterson AFB, OH	TBD/TBD	ASC Wright-Patterson AFB	47.069	0.327		0.000		0.000		0.000	0.000	47.396	47.395

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0401119F: C-5 Airlift Squadrons				PROJECT 674835: Reliability Enhancement & Reengining Program					
Support (\$ 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
Subtotal			78.371	0.721		0.000		0.000		0.000	0.000	79.092	79.091
Remarks													
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
418 Test Squadron (Edwards AFB)	TBD/TBD	418 Test Squadron Edwards AFB	63.504	1.518		0.000		0.000		0.000	0.000	65.022	65.023
Subtotal			63.504	1.518		0.000		0.000		0.000	0.000	65.022	65.023
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>				PROJECT 674835: <i>Reliability Enhancement & Reengining Program</i>					
Management Services (\$ 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
Aircrew & Maintenance Trainer	TBD/TBD	OO-ALC Hill AFB	31.977	21.234		28.156		0.000		28.156	15.118	96.485	96.485
Omnibus	TBD/TBD	TBD TBD	3.500	0.000		0.000		0.000		0.000	0.000	3.500	3.500
Subtotal			35.477	21.234		28.156		0.000		28.156	15.118	99.985	99.985
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1,497.419	61.671		34.654		0.000		34.654	15.118	1,608.862	1,608.862
Remarks Total Prior Years Cost may include only FY 2009 data.													

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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 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0401119F: C-5 Airlift Squadrons

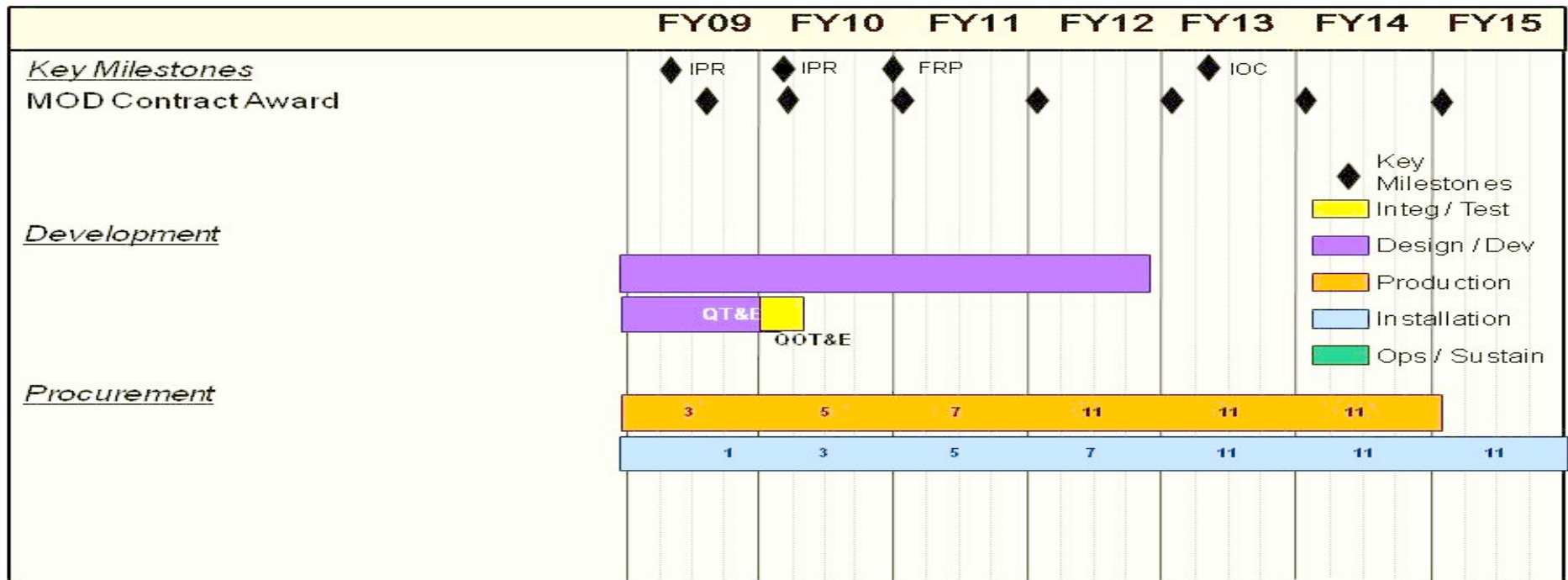
PROJECT

674835: Reliability Enhancement & Reengining Program



U.S. AIR FORCE

C-5 RERP Schedule



Integrity - Service - Excellence

As of: 12/30/09 1

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674835: <i>Reliability Enhancement & Reengining Program</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Complete Dedicated Qualification Operational Test and Evaluation (QOT&E) (AFOTEC Report Complete)	3	2010	3	2010
Full Rate Production (FRP) decision	4	2010	4	2010
LRIP aircraft modification (input/induction)	4	2009	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>				PROJECT 675353: <i>C-5 Block Upgrade</i>			
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
675353: <i>C-5 Block Upgrade</i>	0.000	19.662	19.469	0.000	19.469	0.000	0.000	0.000	0.000	0.000	39.179
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

675353: C-5 Block Upgrade: Purpose of this program is to provide a measured approach to implement a common baseline for the C-5 fleet and its training systems in order to allow insertion and integration of new/future capabilities and replacement of future unsupportable equipment. This program supports software (S/W) and hardware (H/W) baselines between legacy aircraft, Avionics Modernization Program (AMP) aircraft, and Reliability Enhancement and Re-engining Program (RERP) aircraft.

C-5 AMP core processing platform has a total of two Core Processor Module (CPM) cards; C-5 RERP core processing platform has a total of three CPM cards. The AMP requirement is to have 50% spare processing and memory capability; CPM-1 and CPM-2, respectively, have only 22% and 19% throughput capability remaining. AMP throughput/capacity constraint does not allow for new/future capability and contributes to current computer problems. Failure to upgrade the AMP system to the 3 CPM RERP configuration will affect mission capable rates, will inhibit the ability to fix current Deficiency Reports (DRs), and will drive increased sustainment costs associated with S/W and H/W baseline divergence. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Upgrade AMP's core processing platform [Versatile Integrated Avionics (VIA) and Avionics Interface Unit (AIU)] to RERP's core processing platform configuration and address key AMP pr...	0.000	19.662	19.469	0.000	19.469
<i>FY 2009 Accomplishments:</i> In FY 2009: N/A					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>			PROJECT 675353: <i>C-5 Block Upgrade</i>				
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> In FY 2010: Development and integration of AMP core processing software for a 3 core processing module (CPM) environment; investigation and development of software solutions for AMP waivers.											
<i>FY 2011 Base Plans:</i> In FY 2011: Complete software development and integration, regression testing, Ground Testing, Developmental Testing & Evaluation (DT&E) and Operational Testing & Evaluation (OT&E).											
<i>FY 2011 OCO Plans:</i> In FY 2011 (OCO): N/A											
Accomplishments/Planned Programs Subtotals						0.000	19.662	19.469	0.000	19.469	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0401119F: <i>Aircraft Procurement, AF, BA-5, C-5 Mods, Block Upgrade Program, BP11</i>	0.000	0.000	21.260	0.000	21.260	0.000	0.000	0.000	0.000	0.000	0.000
D. Acquisition Strategy											
C-5 Block Upgrade: Program acquisition strategy establishes a single integrating contractor (Lockheed Martin) to modify and qualify an integrated software/hardware system to support all configurations of the C-5 fleet. Updates include software/hardware to meet C-5 Avionics Modernization Program requirements; Reliability Enhancement & Re-engining Program software/hardware requirements; Large Aircraft InfraRed CounterMeasures requirements, and other growth in capability that may occur in the future. Random incorporation of capabilities denies optimal user capabilities in time of need and increases overall cost. "Block Upgrade 01" is the start of a measured approach in implementing a more common baseline to allow insertion and integration of newly acquired/required capabilities and replacement of future unsupportable equipment due to obsolescence or Diminishing Manufacturing Source (DMS) issues.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 675353: <i>C-5 Block Upgrade</i>
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.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010																																																										
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>				PROJECT 675353: <i>C-5 Block Upgrade</i>																																																													
Product Development (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method & Type</th> <th>Performing Activity & Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td>Lockheed Martin Aeronautics Co</td> <td>SS/CPAF</td> <td>LM Marietta, Ga</td> <td align="right">0.000</td> <td align="right">14.269</td> <td></td> <td align="right">13.799</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">13.799</td> <td align="right">0.000</td> <td align="right">28.068</td> <td>Continuing</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td align="right">0.000</td> <td align="right">14.269</td> <td></td> <td align="right">13.799</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">13.799</td> <td align="right">0.000</td> <td align="right">28.068</td> <td></td> </tr> </table>																		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	Lockheed Martin Aeronautics Co	SS/CPAF	LM Marietta, Ga	0.000	14.269		13.799		0.000		13.799	0.000	28.068	Continuing	Subtotal			0.000	14.269		13.799		0.000		13.799	0.000	28.068	
				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																																																								
Lockheed Martin Aeronautics Co	SS/CPAF	LM Marietta, Ga	0.000	14.269		13.799		0.000		13.799	0.000	28.068	Continuing																																																								
Subtotal			0.000	14.269		13.799		0.000		13.799	0.000	28.068																																																									
Remarks																																																																					
Support (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method & Type</th> <th>Performing Activity & Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td>730 ACSG, Robins AFB, GA</td> <td>SS/Various</td> <td>ARINC Warner Robins, Ga</td> <td align="right">0.000</td> <td align="right">2.335</td> <td></td> <td align="right">2.445</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">2.445</td> <td align="right">0.000</td> <td align="right">4.780</td> <td>Continuing</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td align="right">0.000</td> <td align="right">2.335</td> <td></td> <td align="right">2.445</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">2.445</td> <td align="right">0.000</td> <td align="right">4.780</td> <td></td> </tr> </table>																		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	730 ACSG, Robins AFB, GA	SS/Various	ARINC Warner Robins, Ga	0.000	2.335		2.445		0.000		2.445	0.000	4.780	Continuing	Subtotal			0.000	2.335		2.445		0.000		2.445	0.000	4.780	
				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																																																								
730 ACSG, Robins AFB, GA	SS/Various	ARINC Warner Robins, Ga	0.000	2.335		2.445		0.000		2.445	0.000	4.780	Continuing																																																								
Subtotal			0.000	2.335		2.445		0.000		2.445	0.000	4.780																																																									
Remarks																																																																					

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>				PROJECT 675353: <i>C-5 Block Upgrade</i>					
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
418 Test Squadron	TBD/TBD	418 Test Squadron Edwards AFB	0.000	2.512		3.000		0.000		3.000	0.000	5.512	Continuing
Subtotal			0.000	2.512		3.000		0.000		3.000	0.000	5.512	
Remarks													
Management Services (\$ 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
N/A	SS/FFP	ARINC Warner Robins, Ga	0.000	0.546		0.225		0.000		0.225	0.000	0.771	Continuing
Subtotal			0.000	0.546		0.225		0.000		0.225	0.000	0.771	
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	19.662		19.469		0.000		19.469	0.000	39.131	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force							DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>			PROJECT 675353: <i>C-5 Block Upgrade</i>			
	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks Total Prior Years Cost may include only FY 2009 data.									

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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 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

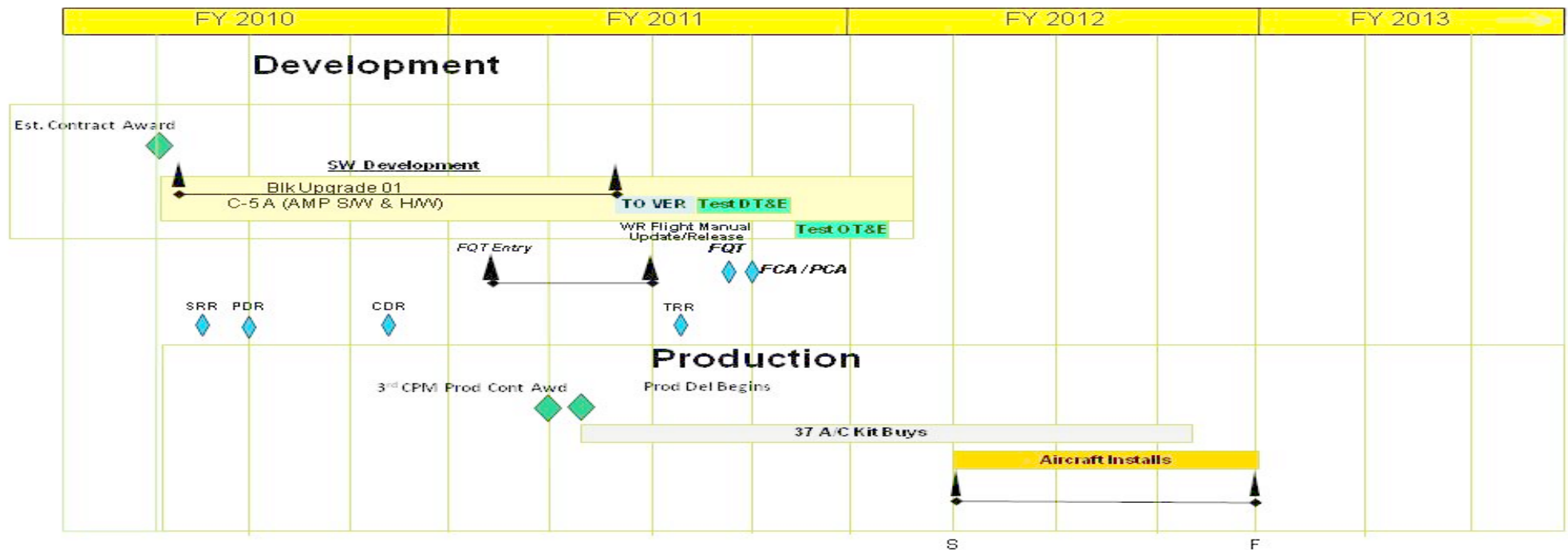
PE 0401119F: C-5 Airlift Squadrons

PROJECT

675353: C-5 Block Upgrade

Summary Schedule

C-5 Fleet Block Upgrade 01



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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 675353: <i>C-5 Block Upgrade</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
System Development and Demonstration	2	2010	4	2011
Production	2	2011	4	2011

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