Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

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

PE 0401115F: C-130 Airlift Squadron

BA 7: Operational Systems Development

COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	6.321	5.000	0.400	-	0.400	66.100	69.800	11.800	3.500	Continuing	Continuing
674885: Avionics Modernization Program (AMP)	-	6.321	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675244: C-130 CNS/ATM	-	0.000	5.000	0.400	-	0.400	66.100	69.800	11.800	3.500	Continuing	Continuing

MDAP/MAIS Code(s): 298

## A. Mission Description and Budget Item Justification

C-130 Avionics Modernization Program (AMP) FY13 RDT&E funding has been deleted as a result of program cancellation by the Department of Defense.

The "Optimize" Legacy C-130 Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) program was a new start in FY13 in-lieu-of C-130 AMP, and provided CNS/ATM solution for 176 C-130H aircraft, addressed select obsolescence issues, and retined the navigator position.

The "Minimize" C-130 CNS/ATM program replaced the "Optimize" program in FY 14, and is an airspace compliance focused program to modify 184 C-130H aircraft with 8.33 kHz radios, cockpit voice and digital flight data recorders, Enhanced Mode S, and Automatic Dependent Surveillance-Broadcast (ADS-B) Out equipment.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year.

PE 0401115F: C-130 Airlift Squadron

Air Force Page 1 of 14

DATE: April 2013

<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

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

APPROPRIATION/BUDGET ACTIVITY

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

BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE** PE 0401115F: C-130 Airlift Squadron

FY 2012 FY 2013 FY 2014 Base FY 2014 OCO FY 2014 Total **B. Program Change Summary (\$ in Millions)** Previous President's Budget 6.321 5.000 41.500 41.500 Current President's Budget 6.321 5.000 0.400 0.400 **Total Adjustments** 0.000 0.000 -41.100 -41.100 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 0.000 0.000 -41.100 -41.100

## **Change Summary Explanation**

FY14 adjustment of -\$41.1M is because the FY14 "Minimize C-130 CNS/ATM" program is an update/change to FY13's "Optimize Legacy C-130 CNS/ATM" program. The FY14 funds for the updated program procure 8.33 kHz radios and only requires 0.4M of FY14 RDT&E funds.

PE 0401115F: C-130 Airlift Squadron Air Force

EXHIBIT IX-ZA, IXD TAL I TOJECTO	ustilleation	. 1 0 2017	WI I OLOC						DAIL: / pi	11 20 10	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM I	NOMENCLATURE		<b>PROJECT</b>			
3600: Research, Development, 7 BA 7: Operational Systems Deve		ation, Air Fo	orce		PE 040111	15F: C-130 Airlift Squadron 674885: Avionics Modernization Pro					Program
COST (\$ in Millions)  All Prior  FY 201		FY 2014	FY 2014	FY 2014				Cost To	Total		

COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
674885: Avionics Modernization Program (AMP)	-	6.321	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		

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

Exhibit R-24 RDT&F Project Justification: PR 2014 Air Force

### Note

In FY 2013, project 674885, C-130 Avionics Modernization Program was terminated.

# A. Mission Description and Budget Item Justification

C-130 Avionics Modernization Program (AMP) was cancelled in FY 2013 by the Department of Defense. Therefore all FY13 RD&TE funding has been deleted.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
Title: SDD	6.321	0.000	0.000
Description: Accomplished design activities for software spirals and remaining engineering data release for the H2, H2.5 and H3 configurations. Contractor also provided flight test support. To achieve the overall C-130 AMP development efforts, the following RDT&E tasks were also required: Training Systems Development (aircrew and maintenance systems), Engineering Change Orders (ECO), Development of new hardware and software resulting from Diminishing Manufacturing Sources (DMS) issues, Government furnished Equipment (GFE), the contractor Award Fee and program support and planning efforts.  FY 2012 Accomplishments:  Began C-130 AMP termination and planning activities including the development and implementation of a termination plan in order to close out the RDT&E contract as efficiently and effectively as possible.			
<b>FY 2013 Plans:</b> N/A			
<b>FY 2014 Plans:</b> N/A			
Accomplishments/Planned Programs Subtotals	6.321	0.000	0.000

PE 0401115F: *C-130 Airlift Squadron* Air Force

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R-1 Line #230

DATE: April 2013

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

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0401115F: C-130 Airlift Squadron	674885: Av	vionics Modernization Program
BA 7: Operational Systems Development		(AMP)	

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

	• • • • • • • • • • • • • • • • • • • •	<del></del>	FY 2014	FY 2014	FY 2014					<b>Cost To</b>	
<u>Line Item</u>	FY 2012	FY 2013	Base	OCO	<u>Total</u>	FY 2015	FY 2016	FY 2017	FY 2018	Complete	<b>Total Cost</b>
• APAF: BA05: Line Item # C13000: <i>C-130</i>	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	212.509
• APAF: BA05: Line Item # C1300A: <i>C-130 AMP</i>	208.135	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	208.135

### Remarks

# D. Acquisition Strategy

N/A

## **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 0401115F: C-130 Airlift Squadron

Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

R-1 ITEM NOMENCLATURE

**PROJECT** 

3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development

APPROPRIATION/BUDGET ACTIVITY

PE 0401115F: C-130 Airlift Squadron

674885: Avionics Modernization Program

DATE: April 2013

(AMP)

Product Developmer	nt (\$ in M	illions)		FY 2	2012	FY 2	013	FY 2 Ba		FY 2		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
C-130 AMP System Design & Development	SS/CPAF	Boeing:Oklahoma City, OK	-	0.000	Nov 2011	0.000		0.000		-		0.000	0.000	0.000	
Termination and Planning Activities	TBD	TBD:,	-	6.321		0.000		0.000		-		0.000	0.000	6.321	
	Subtotal 0.00			6.321		0.000		0.000		0.000		0.000	0.000	6.321	

#### Remarks

Note: FY12 funds are used for termination activities including the development and implementation of a termination plan in order to close out the RDT&E contract as efficiently and effectively as possible.

Support (\$ in Million	s)			FY 2	2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2	2014 CO	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
			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation	(\$ in Milli	ons)		FY 2	2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2		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
Various	Various	Various:Rosamond, CA	-	0.000	Nov 2011	0.000		0.000		-		0.000	0.000	0.000	
	Subtotal 0.00			0.000		0.000		0.000		0.000		0.000	0.000	0.000	

#### Remarks

DT&E flight test program is primarily done out of Edwards AFB.

Management Service	s (\$ in M	illions)		FY 2	2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2	2014 CO	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
PMA - Contractor Services	Various	Various:Dayton, OH	-	0.000		0.000		0.000		-		0.000	0.000	0.000	

PE 0401115F: C-130 Airlift Squadron

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Air Force

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

R-1 ITEM NOMENCLATURE

DATE: April 2013
PROJECT

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

PE 0401115F: C-130 Airlift Squadron

674885: Avionics Modernization Program

(AMP)

Management Service	es (\$ in M	illions)		FY 2	2012	FY 2	013	FY 2 Ba		FY 2		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
PMA - Gov't Cost	Various	Various:Dayton, OH	-	0.000		0.000		0.000		-		0.000	0.000	0.000	
Protest Settlement	SS/FFP	Lockheed Martin:Marietta, GA	-	0.000		0.000		0.000		-		0.000	0.000	0.000	
	Subtotal 0.00			0.000		0.000		0.000		0.000		0.000	0.000	0.000	

### Remarks

Protest Settlement cost category is FY11 funding reimbursement to Lockheed Martin for proposal preparation and submission materials for disputed C-130 AMP source selection.

	All Prior Years	FY 2	012	FY 2013	FY 2 Ba	-	FY 2	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	6.321		0.000	0.000		0.000	0.000	0.000	6.321	

#### Remarks

PE 0401115F: *C-130 Airlift Squadron* Air Force

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	<b>PROJECT</b>	
3600: Research, Development, Test & Evaluation, Air Force	PE 0401115F: C-130 Airlift Squadron	674885: Av	vionics Modernization Program
BA 7: Operational Systems Development		(AMP)	

Program to terminate in FY13, therefore no schedule is attached. Remaining FY12 funding to be used in contract termination and planning activities.

PE 0401115F: *C-130 Airlift Squadron* Air Force

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0401115F: C-130 Airlift Squadron 675244: C-130 CNS/ATM

BA 7: Operational Systems Development

COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675244: C-130 CNS/ATM	-	0.000	5.000	0.400	-	0.400	66.100	69.800	11.800	3.500	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

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

# A. Mission Description and Budget Item Justification

With the FY13 PB's cancellation of the C-130 Avionics Modernization Program (AMP), the Minimize C-130 Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) option provides minimal airspace compliance focused program to modify 184 C-130H aircraft with Automatic Dependent Surveillance-Broadcast (ADS-B) Out equipment, 8.33 kHz radios, updated cockpit voice and digital flight data recorders, and Enhanced Mode S.

The 184 aircraft Minimize C-130 CNS/ATM program is comprised of H3s, H2.5s, H2s and H1s; and includes 28 Active Duty, 108 Guard, and 48 Reserve aircraft. The modification effort will be completed in three phases: Phase A updates to 8.33 kHz radios on 156 aircraft (28 modifications previously accomplished); Phase B modifies cockpit voice and digital data recorders (CVR/DVR) for 184 aircraft; Phase C relates to ADS-B Out and Enhanced Mode S modifications. Phase C will have 4 prototype aircraft required for accomplishment of the ADS-B Out Engineering and Manufacturing Development (EMD) phase, with the remaining 180 being production aircraft. The prototype aircraft represent each type of C-130H configuration listed above.

Based on the direction in the 2013 National Defense Authorization Act, quantities will increase from 184 to 224.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014	
Title: Minimize C-130 CNS/ATM Program	0.000	5.000	0.400	
<b>Description:</b> Refine and complete the requirements definition phase of program in fiscal year 2013, followed by pre-EMD activities.				
FY 2013 Plans: Accomplish requirements definition and pre-EMD planning.				
FY 2014 Plans: Accomplish requirements definition and pre-EMD planning.				
Accomplishments/Planned Programs Subtot	0.000	5.000	0.400	

PE 0401115F: C-130 Airlift Squadron

Air Force

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

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0401115F: C-130 Airlift Squadron 675244: C-130 CNS/ATM

BA 7: Operational Systems Development

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

			FY 2014	FY 2014	FY 2014					<b>Cost To</b>	
<u>Line Item</u>	FY 2012	FY 2013	Base	OCO	<u>Total</u>	FY 2015	FY 2016	FY 2017	FY 2018	Complete	<b>Total Cost</b>
• ΔPΔF· BΔ05· Line Item #	0.000	0.000	14 200		14 200	14 508	14 654	40 942	74 781	165 725	324 900

C13000: C-130

### Remarks

## D. Acquisition Strategy

Current schedule is for the EMD contract to be awarded, following a competitive source selection, in the 3rd quarter of fiscal year 2014. Fiscal year 2013 primarily involved initiating the program requirements and pre-contract efforts in preparation for the EMD source selection phase of the program.

### **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 0401115F: C-130 Airlift Squadron

Air Force

DATE: April 2013 Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE PROJECT** 3600: Research, Development, Test & Evaluation, Air Force PE 0401115F: C-130 Airlift Squadron 675244: C-130 CNS/ATM BA 7: Operational Systems Development FY 2014 FY 2014 FY 2014 **Product Development (\$ in Millions)** FY 2012 FY 2013 Base oco Total Contract Target Method Performing All Prior Award Award Award Award **Cost To** Total Value of Cost Category Item & Type Activity & Location Years Cost Date Date Cost Cost Date Complete Contract Cost Date Cost Cost **EMD Contract** C/TBD TBD:. 0.000 0.000 0.000 0.000 Continuing Continuing 121.009 Trainers/Training **TBD** 0.000 0.000 0.000 0.000 Continuing Continuing 8.014 TBD:, 0.000 0.000 0.000 129.023 Subtotal 0.000 0.000 0.000 FY 2014 FY 2014 FY 2014 Support (\$ in Millions) FY 2012 FY 2013 oco Base Total Contract Target Method Performing All Prior Award Award Award Award Cost To Total Value of **Cost Category Item** & Type **Activity & Location** Years Cost Date Cost Date Cost Date Cost Date Cost Complete Contract Cost 0.000 0.000 Subtotal 0.000 0.000 0.000 0.000 0.000 0.000 0.000 FY 2014 FY 2014 FY 2014 Test and Evaluation (\$ in Millions) FY 2012 FY 2013 oco Total Base Contract Target Method Performing All Prior Cost To Award Award Award Award Total Value of **Cost Category Item** & Type **Activity & Location** Cost Cost Cost Complete Contract Years Date Cost **Date** Date Cost Date Cost Developmental Flight Test **TBD** Not specified .: , 0.000 0.000 0.000 0.000 Continuing Continuing 12.404 0.000 Subtotal 0.000 0.000 0.000 0.000 0.000 12.404 FY 2014 FY 2014 FY 2014 Management Services (\$ in Millions) oco FY 2012 FY 2013 Base Total Contract Target All Prior **Cost To** Method Performing Award Award Award Award Total Value of **Cost Category Item** Activity & Location Cost Complete & Type Years Date Cost Date Cost Date Cost Date Cost Cost Contract PMA - Contractor Services Various Not specified .: , 0.000 4.400 Jan 2013 0.339 0.339 Continuing Continuing 5.182 PMA - Gov't Cost Various Not specified .: , 0.000 0.600 0.061 0.061 Continuing Continuing 9 991 Subtotal 0.000 0.000 5.000 0.400 0.000 0.400 15.173 Target All Prior FY 2014 FY 2014 FY 2014 **Cost To Total** Value of FY 2012 FY 2013 oco Years Base Total Complete Cost Contract **Project Cost Totals** 0.000 0.000 5.000 0.400 0.000 0.400 156.600

PE 0401115F: C-130 Airlift Squadron

Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 20	14 Air F	orce					DATE	: April 201	3		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, A BA 7: Operational Systems Development	Air Force		<b>R-1 ITEM NOME</b> PE 0401115F: 0	ENCLATURE C-130 Airlift Squadro	n	<b>PROJEC</b> 675244:	•	NS/ATM			
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks											

The acquisition and installation schedule and budget estimate displayed in this exhibit is subject to change as the program requirements continue to be refined by the Air Force over the next fiscal year.

PE 0401115F: C-130 Airlift Squadron

Air Force

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

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

BA 7: Operational Systems Development

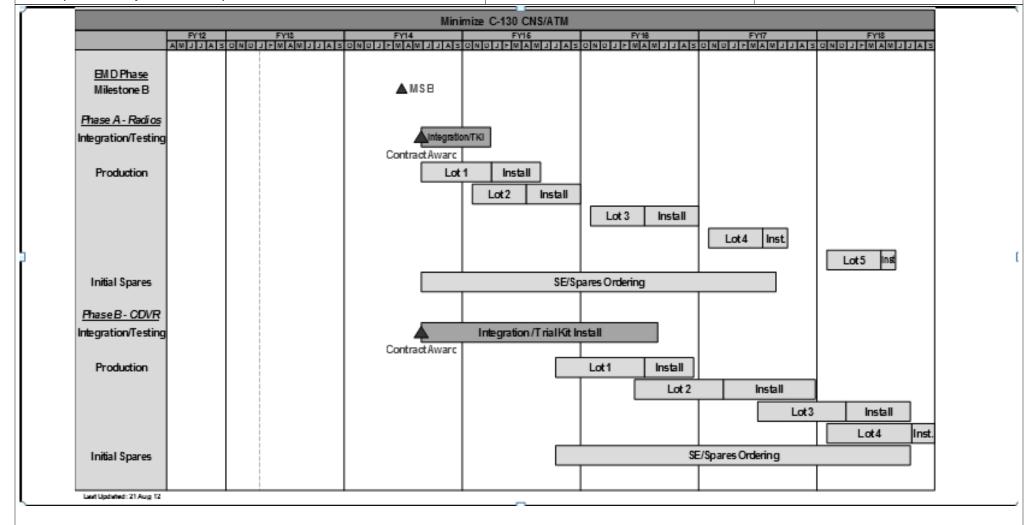
R-1 ITEM NOMENCLATURE

PE 0401115F: C-130 Airlift Squadron

**PROJECT** 

675244: C-130 CNS/ATM

DATE: April 2013



PE 0401115F: C-130 Airlift Squadron

Air Force

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

**R-1 ITEM NOMENCLATURE** 

DATE: April 2013 **PROJECT** 

APPROPRIATION/BUDGET ACTIVITY

PE 0401115F: C-130 Airlift Squadron

675244: C-130 CNS/ATM

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

BA 7: Operational Systems Development

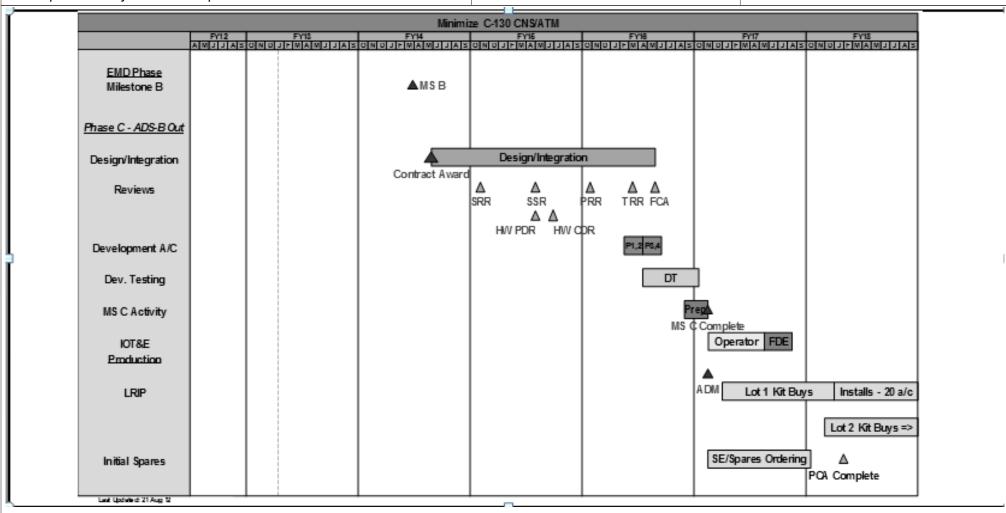


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0401115F: C-130 Airlift Squadron 675244: C-130 CNS/ATM

BA 7: Operational Systems Development

# Schedule Details

	St	Start		nd
Events	Quarter	Year	Quarter	Year
Milestone B	2	2014	2	2014
EMD Contract Awards	3	2014	3	2014
Design/Integration	3	2015	3	2016
Preliminary Design Review	3	2015	3	2015
Critical Design Review	4	2015	4	2015
Developmental Testing	3	2016	1	2017
Functional Configuration Audit	3	2016	3	2016
Milestone C	1	2017	1	2017
Force Development Evaluation (FDE)	3	2017	4	2017
Physical Configuration Audit (PCA)	2	2018	2	2018

PE 0401115F: *C-130 Airlift Squadron* Air Force

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