### BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 11-102

8 DECEMBER 2020



FLYING HOUR PROGRAM MANAGEMENT



### COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: AF/A3TR Certified by: AF/A3T

(Maj Gen James A. Jacobson)

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This instruction implements Department of the Air Force Policy Directive (DAFPD) 11-1, Flying Hour Program, and establishes the Air Force single flying hour model. It describes the methodology used to determine the number of major command (MAJCOM) flying hours that make up the Air Force flying hour program (FHP) minimum requirement. This instruction applies to all civilian employees and uniformed members of the Regular Air Force (RegAF), Air Force Reserve (AFR) and Air National Guard (ANG). This instruction does not apply to the United States Space Force. Compliance with the attachments in this publication is mandatory. Ensure that records created as a result of processes prescribed in this instruction are maintained in accordance with Air Force Instruction (AFI) 33-322, Records Management and Information Governance Program, and disposed of in accordance with the Air Force Records Disposition Schedule located in the Air Force Records Information Management System. recommended changes and questions about this publication to the office of primary responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Forms 847 from the field through the appropriate functional chain of command to AF/A3TR; AF/A3TR Workflow AF.A3TR.Workflow@us.af.mil. MAJCOMs may supplement this instruction, but all supplements must be routed to the OPR of this publication for coordination prior to certification and approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. Submit requests for waivers using a completed AF Form 679, Air Force Publication Compliance Item Waiver Request/Approval through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor's commander for non-tiered compliance items. Commanders or equivalent may waive non-tiered requirements, but must send a copy of the approved waiver to the publication OPR within 30 days of approval for situational awareness and process improvement considerations.

### **SUMMARY OF CHANGES**

This document has been substantially revised and needs to be completely reviewed. Major changes include office symbol changes, recommended changes as a result of Air Force Audit Agency audit of the flying hour requirements processes, recommended changes as a result of March 2015 AF Compliance Statement Review and publication assessment, corrects terminology inaccuracies, programming drills as directed by Air Force Corporate Structure and removes non-standard acronyms per Secretary of the Air Force guidance.

### Chapter 1

### INTRODUCTION, COMPLIANCE, AND RESPONSIBILITIES

- **1.1. Introduction and Background.** The Air Force FHP is a requirements-based, peacetime program consisting of the flying hours necessary to train aircrews to safely operate aircraft while sustaining them in numbers sufficient to execute the core tasked mission as well as experiencing or aging requirements for aircrew management.
  - 1.1.1. The Air Force single flying hour model provide the methodology and processes that MAJCOMs use to build FHP requirements. The joint mission essential task list, the Air Force task lists, the mission design series specific volumes of the Air Force instruction (AFI) and Air Force manual (AFMAN) 11-2 series are the foundational requirements that link aircrew training to tasks, including as required to support combatant commanders. The centrality of the FHP to readiness and combat capability cannot be overemphasized. MAJCOMs ensure FHPs are auditable and defendable. To that end, FHPs are standard across the Total Air Force (RegAF, AFR Command (AFRC), ANG and Civil Air Patrol), connected to readiness indicators, based on the train-to-task concept, easily understood, and most importantly, based upon the requirements to train and experience aircrew to perform required Air Force missions. The model-driven requirements provide the foundation for the peacetime training program and are used in programming; however, the final budgeted flying hour program may not be equal to the minimum requirement based on corporate structure decisions made during the programming and budgeting processes. Note: Civil Air Patrol provides auxiliary support as required via a Pass-Through Appropriation Grant (flying dollar program) and as of fiscal year 2015 is officially a part of the Total Force Program.
  - 1.1.2. The intent of this instruction is to provide a common methodology and structure for determining future flying hour requirements based on authorized force structure and aircrew ratios while acknowledging unique MAJCOM requirements. This process will determine the optimum minimum requirement. The depiction of the model and the requirements of this instruction capture the necessary differences in the sortie-based, event-based and throughput-based FHPs of the combat, mobility and formal training forces.
- **1.2. Applicability and Compliance.** RegAF, AFRC, ANG and Civil Air Patrol use the Air Force single flying hour model described in this instruction with the following exceptions:
  - 1.2.1. Air Education and Training Command (AETC) and formal training units. AETC and formal training units do not use the Air Force single flying hour model described in this instruction. Flying hours for undergraduate and graduate formal training programs are driven principally by throughput and other support requirement factors. Multiple unique models covering all AETC programs are used and depend primarily upon the throughput as determined from the aircrew training distribution requirements process outlined in AFI 11-412, *Aircrew Management*, and vetted through the MAJCOMs to establish all aircrew requirements. Specific flying hour training requirements are identified in each course syllabus for both undergraduate and formal training units which are combined with all predicted factors and totaled to establish each annual FHP.
  - 1.2.2. Air Combat Command (ACC) formal training units, adversary air, Weapons Instructor Course and Test. ACC formal training units, Adversary Air T-38s, Weapons Instructor

Course and Test do not use the Air Force single flying hour model described in this instruction for building programs but requirements are syllabus or event-driven.

- 1.2.3. Air Force Materiel Command, Research, Development, Test and Evaluation, and Depot. Air Force Materiel Command does not use the Air Force single flying hour model described in this instruction or build a FHP purely dedicated to training. Due to the unique nature of the Air Force Materiel Command mission, its FHP is tied to funding for executing its actual mission activities (e.g., missions required for test and evaluation, test support and depot operations). Air Force Materiel Command will establish training, standardization and evaluation and general operations procedures to govern procedures unique to flight test operations. See DAFPD 11-2, Aircrew Operations. Refer to AFMAN 11-2FTV1, Flight Test Aircrew Training, and AFMAN 11-502, Small Unmanned Aircraft Systems, for Air Force Materiel Command process and procedures governing initial qualification, upgrade and continuation training (covering Air Force Materiel Command intent associated with the model).
- 1.2.4. Air Force Special Operations Command. Air Force Special Operations Command is responsible for building and submitting to United States Special Operations Command forcedriven flying hour model that resources combat readiness and formal training hours. United States Special Operations Command is the validation and approval authority for all Major Force Program 11 funded flying hours. In turn, the Special Operations financial management office provides AF/A3TR programmatic changes at least twice a year after the program objective memorandum and president's budget submissions.
- 1.2.5. Civil Air Patrol. Civil Air Patrol model-driven FHP is currently under development by National Headquarters Civil Air Patrol/A3.
- **1.3. Roles and Responsibilities.** AF/A3TR is the office of primary responsibility for the Air Force single flying hour model and is the approval authority for suggested changes. RegAF lead MAJCOMs (ACC, AETC, Air Mobility Command and Air Force Global Strike Command), AFRC and ANG Directors of Operations are responsible for MAJCOM models.
  - 1.3.1. The Lead MAJCOM establishes the training requirements basis for all mission design series aircraft in its inventory. User commands (Air Force District of Washington, Pacific Air Forces and United States Air Forces in Europe) and Air Reserve Component (AFRC and ANG) will use the same flying hour model (e.g., combat air forces model, mobility air forces model, nuclear deterrence operations model, formal training model) as the Lead MAJCOM for their same mission design series aircraft. Lead MAJCOMs (RegAF) and Air Reserve Component are required to provide flying hour models with annotated changes or deviations to AF/A3TR for each year's program objective memorandum submission and update as required based on force structure, crew ratio and execution year changes. Lead MAJCOMs inform user commands of any training and calculation changes. AF/A3TR will inform AF plans and programs mission panels of annual programming flying hour requests. See DAFPD 10-9, Lead Command Designation and Responsibilities For Weapon Systems, for further information. Exception: Air Force Material Command will establish training, standardization and evaluation and general operations procedures unique to flight test operations. See AFPD 11-2.
  - 1.3.2. Lead MAJCOM FHP managers (subject matter experts) will provide single flying hour model training to using commands and Air Reserve Component.

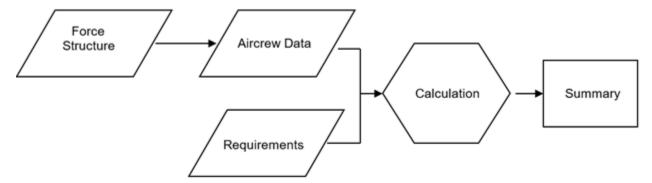
1.3.3. Air Force and MAJCOM FHP managers maintain flying hour models and all supporting documentation (preferably electronic file) for each budget year along with the programmed flying hours. This documentation includes variable input factors used in the flying hour calculation process (e.g., re-fly rates, cost of business adjustment factor). FHP managers will maintain this documentation for at least three years after the budget year execution.

### Chapter 2

### THE AIR FORCE SINGLE FLYING HOUR MODEL

2.1. Core Components of the Air Force single flying hour model. The Air Force single flying hour model is composed of five core components: Force structure, aircrew data, requirements, calculation and summary (Figure 2.1). For operational flying units, the relationship of these components expresses the mathematical formula. Force structure determines the number of authorized Aircrew Position Indicator 1 pilots. Pilots multiplied by requirements determine the number of required flying hours. For formal training units, the mathematical formula consists of the average daily student load multiplied by the average number of flying hours per student per day, multiplied by the number of training days. This result determines the number of required student flying hours and, in turn, the required force structure. MAJCOMs may add other functions to the model as long as its core structure remains intact. The Air Force single flying hour model is not applicable to Air Force Material Command. Refer to AFMAN 11-2 FTV1 and AFMAN 11-502 for Air Force Material Command process and procedures governing initial qualification, upgrade and continuation training covering Air Force Material Command intent associated with the model. Note: Send any suggested changes to the Air Force single flying hour model to AF/A3TR. See Attachment 8 for example.

Figure 2.1. The Air Force single flying hour model.



- **2.2. Force Structure.** This component is the input site for primary mission aircraft inventory and crew ratio. It determines the required number of Aircrew Position Indicator 1 pilots. Refer to AFI 65-503, *US Air Force Cost and Planning Factors*, **Table 3.3** for current crew ratios. At MAJCOM discretion, this data may be portrayed by fleet or by unit. For pilot production, no input is needed because force structure is a function of the student load. See **Attachment 3** for example.
- **2.3. Aircrew Data.** This component is the input site for the types and number of aircrew that require training. It includes calculations that result in the number of aircrew members by specialty (e.g., pilots, combat systems officers, boom operators) that require flying training. The crew position that drives the greatest number of flying hours is the total requirement. The number of Aircrew Position Indicator 1 aircrew members is derived normally from crew ratio and primary mission aircraft inventory in the force structure component. The number of attached (Aircrew Position Indicator 6 and 8) aircrew members is determined by manpower standards and MAJCOM guidance. For pilot production, aircrew data is derived from production goals and

average daily student load. **Note:** MAJCOMS will only use valid attached Aircrew Position Indicator 6 and 8 will be used in developing the requirement. Refer to Department of the Air Force Manual (DAFMAN) 11-401, *Aviation Management*. See **Attachment 4** for example. Position and category of aircrew members and other pertinent aircrew data include but are not limited to:

- 2.3.1. Aircrew Position Indicator 1 line pilots. Refer to AFI 65-503 for approved crew ratios.
- 2.3.2. Aircrew Position Indicator 2 line combat systems officer.
- 2.3.3. Aircrew Position Indicator 6 and 8 staff and supervisory positions below (6) and above (8) wing level (document specific positions and source of Aircrew Position Indicator 6 and 8 authorizations included in FHP development). Refer to DAFMAN 11-401 and AFI 11-412 for aircrew authorizations and validation. Ensure that AF Form 480, *Aircrew AFSC/Active Flying Justification*, authorizations or other documented authorizations are validated.
- 2.3.4. Experience mix as provided in automated aircrew management system. MAJCOMs will utilize historical experience mix when completing requirements calculations. MAJCOMs will update their supplements to this instruction to outline "optimum experience mix."
- 2.3.5. Instructors.
- 2.3.6. In-unit requalification.
- 2.3.7. Number of projected upgrades.
- 2.3.8. Number of aircrew requiring special qualifications.
- 2.3.9. Production goals.
- 2.3.10. Average daily student load.
- 2.3.11. Number and experience mix of instructors.
- **2.4. Requirements.** This is the input site for the type, number, or duration of annual aircrew flying training requirements by aircrew position and category as well as operational mission requirements derived from appropriate tasking documents. Requirements include those events associated with undergraduate pilot training, initial and mission qualification training, continuation training, upgrade, requalification, and special capability training sorties that aircrew accomplish during the training cycle. Requirements may also include missions performed in support of operational users. Requirement sources include AFI/AFMAN 11-2 mission design series Volume 1, MAJCOM ready aircrew program tasking messages, as well as MAJCOM and numbered AFIs, operational plans or other validated requirement documents. See **Attachment 5** for example.
  - 2.4.1. Because of mission and training differences, training requirement computations should remain sortie-based for combat air forces aircraft (including helicopters) and event-based for mobility air forces aircraft. In cases when a mission design series is operated by multiple MAJCOMs, the lead MAJCOM methodology takes precedence. User commands forward proposed deviation from Lead MAJCOM methodology to Lead MAJCOM and AF/A3TR with supporting justification.

- 2.4.2. Examples of requirements include:
  - 2.4.2.1. Ready aircrew program sorties (those sorties required to achieve and maintain basic mission capable or combat mission ready status), other sorties that build basic pilot skills such as instrument, advanced handling and non-ready aircrew program sorties. Non-ready aircrew program sorties are cost of business sorties which are over the requirement as defined in the ready aircrew program.
  - 2.4.2.2. Mission qualification training.
  - 2.4.2.3. Special capability requirements.
  - 2.4.2.4. Operational missions as defined by lead MAJCOM.
  - 2.4.2.5. Force support sorties (ferry, functional check flight, weather ship, control ship, etc.).
  - 2.4.2.6. Aging or seasoning rate required for aircrew to achieve required upgrade qualifications.
  - 2.4.2.7. Number of training events.
  - 2.4.2.8. In-unit requalification training.
  - 2.4.2.9. Syllabus hours associated with undergraduate and graduate flying training.
  - 2.4.2.10. Re-fly rate, scheduling effectiveness (see **Attachment 9** for example).
  - 2.4.2.11. Number of training days.
  - 2.4.2.12. Flying hour factor (the average number of flying hours per student per day, multiplied by the re-fly rate).
- 2.5. Flying Hour Computations. Flying hour computations include an experiencing (aging) calculation. Although the terms are different for fighter versus multi-crew aircraft, copilots and wingmen accumulate hours permitting them to upgrade at a minimal rate to support planned absorption and crew qualification requirements to maintain a unit's capability to fulfill its assigned missions. This calculation ensures that FHPs identify the required hours to upgrade at a prescribed rate and ensures a standardized requirement computation for all aircraft. Mobility Air Forces use Transportation Working Capital Fund customer-driven hours for experiencing. However, if Transportation Working Capital Fund customer driven-hours are unavailable, the requirements will be included in the peacetime training requirement. Headquarters Air Mobility Command will provide Transportation Working Capital Fund projections to Air Reserve Component for use in flying hour computations. Note: Experiencing (aging) calculations may be different for AFRC and ANG.
- **2.6.** Calculation. Flying hour requirements are based on the authorized number of aircrew members that need to be trained and their annual flying training requirements. The following basic formula applies (See Attachment 6 for example):
  - 2.6.1. For operational flying units: Hours equal number aircrews by category times requirements times duration (hours = number of aircrews by category x requirements x duration). Due to combat air forces computations being sortie-based, Headquarters ACC and AFRC flying hour managers will track, determine, document and utilize average sortie duration by location in flying hour models.

- 2.6.2. For pilot production units: Hours equal flying hour factor times re-fly times class load times number of training days or sorties (hours = flying hour factor x re-fly x class load x number of training days or sorties). **Note:** Instructor pilot continuation training requirements are determined in the same manner as operational pilots.
- 2.6.3. Within this area, the individual formulas are listed that calculate the hours necessary to meet each training requirement. In general, each requirement is represented by its own formula that yields flying hours specific to that requirement. Examples of operational training formulas include: Combat mission ready, basic mission capable, navigation training/instrument/advanced handling characteristics hours, etc. (For additional requirements see AFI/AFMAN 11-2 mission design series Volume 1 series.)
- 2.6.4. Cost of business is the hours required to replace or supplement hours utilized in the program for ineffective training sorties, reoccurring non-training sorties, or sorties needed to support other unit training. See **Attachment 9** for example.
- 2.6.5. Examples for formal training formulas include:
  - 2.6.5.1. For each mission design series, calculations producing the number of training days by month and class, or number of students by month and class.
  - 2.6.5.2. Lastly, a position summarized by mission design series indicating total student, instructor pilot continuation training and collateral flying hours.
- 2.7. Adjusting Programmed Aircrew Flying Training Requirements. Flying hour training requirements defined in AFI/AFMAN 11-2 mission design series volume 1 support the individual pilot training needs. However, those requirements do not address the additional sorties needed to supplement the program. Additional sorties include: (1) ineffective training sorties; (2) reoccurring non-training sorties; and (3) sorties needed to support other unit training requirements. Program adjustments for these additional sorties are referred to as "cost of business" adjustments. The cost of business adjustment process identifies sorties related to the above three categories and then quantifies, on a percentage basis, the sorties that did not achieve This historical factor becomes the auditable cost of business required aircrew training. adjustment for future flying hour programming. (See Attachment 9 for example). For the purposes of this AFI, "required Ready Aircrew Program training" constitutes sorties identified in the MAJCOM Ready Aircrew Program tasking message for which the required volume has not been accomplished. Red Air is considered required volume up to the maximum allowed by the Ready Aircrew Program tasking message. Sorties that can count as commander directed also are considered required training until the maximum "commander directed" option sorties have been accomplished (most impact to Basic Mission Capable pilots).
  - 2.7.1. Cost of business responsibilities.
    - 2.7.1.1. AF/A3TR is the office of primary responsibility for oversight of the cost of business adjustment process and is the approval authority for MAJCOM supplements and suggested changes.
    - 2.7.1.2. MAJCOMs will oversee their units' cost of business inputs and ensure the application of the collected data as a flying hour programming adjustment.
  - 2.7.2. Cost of business tracking. Standardized fifth character mission symbols will be utilized in tracking cost of business. The intent is to identify cost of business factors for use

within the flying hour requirement development and programming processes. Reliability and Maintainability Information System does not recognize the 5th character of the mission symbol; therefore, the official source for tracking it will be in Flying Hours Online which is being deployed as AF/A3 official source for flying hour tracking. Refer to AFI 11-101 *Management Reports on the Flying Hour Program.* See **Attachment 10** for list of approved fifth characters for cost of business tracking. MAJCOM will use cost of business outcomes in the single flying hour model requirements determination. **Note**: MAJCOMs will continue manually accounting for cost of business in programming flying hours using existing methods until Flying Hours Online can effectively automate data importation from existing MAJCOM produced reports.

- 2.7.2.1. Non-Effective sortie; any sortie or mission that did not execute the original intent of the mission as scheduled due to unforeseen reasons. See **Attachment 9** for example.
- 2.7.2.2. Force Sustainment; any sortie or mission in support of unit training or currency. See **Attachment 9** for example.
- 2.7.2.3. Force Support; any sortie or mission not scheduled to support Ready Aircrew Program and Continuation Training. See **Attachment 9** for example.
- 2.7.2.4. Test Support; any sortie or mission not scheduled for training or currency but is in support of the Test and Evaluation program.
- 2.7.3. Formula. Using auditable historical data, the cost of business factor is added to the requirements based FHP to account for additional sorties needed for attrition, unit support and non-training sorties. See **Attachment 9** for example.
- 2.7.4. Programming Drills. Upon request, lead MAJCOMs, AFRC and ANG flying hour managers may be directed to develop "programming drills" executability, based on one of or all of the following: variations in experience mix, future force structure, maintenance manning, historical aircrew vice the approved crew ratio, overseas contingency, etc. The results of these drills will be used for programming purposes as it is not always feasible nor appropriate to program the optimal model-driven requirement. **Note:** AF/A3TR will include the Chief of Air Force Reserves in any programming drill requests for AFRC.

JOSEPH T. GUASTELLA, Jr., Lt Gen, USAF Deputy Chief of Staff, Operations

### GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

### References

AFI/AFMAN 11-2 MDS-specific volumes

AFI 11-101, Management Reports on the Flying Hour Program, 22 June 2015

AFI 11-412, Aircrew Management, 15 January 2019

AFI 33-322, Records Management and Information Governance Program, 23 March 2020

AFI 65-503, US Air Force Cost and Planning Factors, 13 July 2018

AFMAN 11-2FTV1, Flight Test Aircrew Training, 26 February 2019

AFMAN 11-502, Small Unmanned Aircraft Systems, 29 July 2019

DAFI 33-360, Publications and Forms Management, 1 December 2015

DAFMAN 11-401, Aviation Management, 27 October 2020

DAFPD 10-9, Lead Command Designation and Responsibilities for Weapon Systems, 8 March 2007

DAFPD 11-1, Flying Hour Program, 10 August 2004

DAFPD 11-2, Aircrew Operations, 31 January 2019

Air Force Task Lists

Joint Mission Essential Task List

### **Prescribed Forms**

None

### **Adopted Forms**

AF Form 480, Aircrew AFSC/ Active Flying Justification

AF Form 679, Air Force Publication Compliance Item Waiver Request/Approval

AF Form 847, Recommendation for Change of Publication

### Abbreviations and Acronyms

**ACC**—Air Combat Command

**AETC**—Air Education and Training Command

**AFI**—Air Force Instruction

AFMAN—Air Force Manual

AFR—Air Force Reserve

**AFRC**—Air Force Reserve Command

**ANG**—Air National Guard

**DAFMAN**—Department of the Air Force Manual

**DAFPD**—Department of the Air Force Policy Directive

**FHP**—Flying Hour Program

MAF—Mobility Air Force

**MAJCOM**—Major Command

**OPR**—Office of Primary Responsibility

**RegAF**—Regular Air Force

#### **Terms**

**AF Corporate Structure**—Embodies the corporate review process for HQ USAF. The primary groups are the AF Council, Air Force Board, the Intermediate Level Review, the Mission and Mission Support Panels, and Integrated Process Teams. This structure increases management effectiveness by providing a forum where senior Air Force leadership can apply their collective judgment to major programs, objectives and issues.

**AF Mission Essential Task List**—Fundamental requisites for the performance or accomplishment of an organization's assigned mission.

**Joint Mission Essential Task List**—Commander's priority joint warfighting requirements based on assigned missions.

**Lead Command**—Headquarters Air Combat Command, Headquarters Air Mobility Command, Headquarters Air Education & Training Command and Headquarters Air Force Global Strike Command.

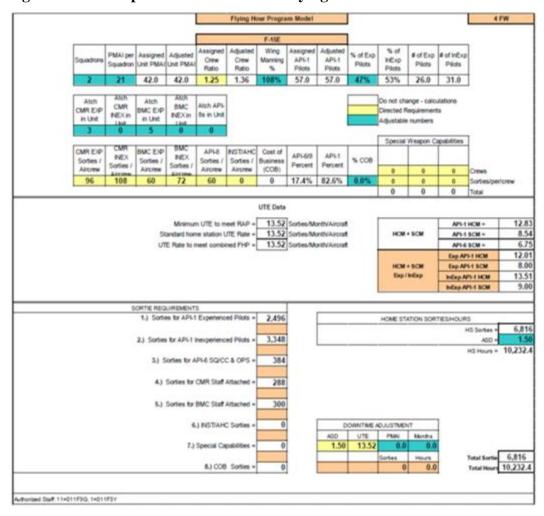
**Lead MAJCOM Methodology**—Lead major command for combat air forces and mobility air forces.

**Mission Design Series**—System by which military aircraft are identified.

**Total Force Program**—US Air Force organizations, units, and individuals that provide the capabilities to support the Department of Defense in implementing the national security strategy.

### SAMPLE COMBAT AIR FORCE FLYING HOUR MODEL

Figure A2.1. Sample Combat Air Force Flying Hour Model.



# SAMPLE MOBILITY AIR FORCE (MAF) FORCE STRUCTURE

Figure A3.1. Sample MAF Force Structure.

MDS	Squadron A55	1 1	EY10	EY11	FY12	EV13	FY14	EY15	EY16	<b>EY17</b>	FY18	EY19	FY20	
C-17	A AS - QTR 1		12	12	6	6	6	6	6	6	6	6	6	6
	AAS - QTR 2		12		6	6	6	6	6	6	6	6	6	
Planned	A AS - QTR 3		12		6	6	6	6	6	6	6	6	6	
Delivery	AAS-QTR4	12	12		6	6	6	6	6	6	6	6	6	
belivery	A AS - FY AVG	12.	12		6	6	6	6	6	6	6	6	6	
	BAS-QTR1		12		12	12	12	12	12	12	12	12	12	12
	BAS-QTR 2		12		12	12	12	12	12	12	12	12	12	16
							12	12	12	12	12			
	BAS-QTR3	42	12		12	12	12		4 10 10 10			12	12	
	B AS - QTR 4 B AS - FY AVG	12	12		12	12	12	12	12	12	12	12	12	
														40
	C AS - QTR 1		12		12	12	12	12	12	12	12	12	12	12
	C AS - QTR 2		12		12	12	12	12	12	12	12	12	12	
	C AS - QTR 3	-	12		12	12	12	12	12	12	12	12	12	
	C AS - QTR 4	12	12		12	12	12	12	12	12	12	12	12	
	C AS - FY AVG		12		12	12	12	12	12	12	12	12	12	
	DAS - QTR 1		12		12	12	12	12	12	12	12	12	12	-12
	D AS - QTR 2		12		12	12	12	12	12	12	12	12	12	
	D AS - QTR 3	72	12		12	12	12	12	12	12	12	12	12	
	DAS - QTR 4	12	12		12	12	12	12	12	12	12	12	12	
	D AS - FY AVG		12		12	12	12	12	12	12	12	12	12	
	E AS - QTR 1		12		12	12	12	12	12	12	12	12	12	12
	E AS - QTR 2		12	12	12	12	12	12	12	12	12	12	12	
	EAS-QTR3		12	12	12	12	12	12	12	12	12	12	12	
	EAS-QTR4	12	12	12	12	12	12	12	12	12	12	12	12	
	E AS - FY AVG		12	12	12	12	12	12	12	12	12	12	12	
	FAS - QTR 1		12	12	12	12	12	12	12	12	12	12	12	12
	FAS-QTR 2		12	12	12	12	12	12	12	12	12	12	12	
	FAS-QTR3		12	12	12	12	12	12	12	12	12	12	12	
	FAS-QTR4	12	12		12	12	12	12	12	12	12	12	12	
	F AS - FY AVG	1.7	12		12	12	12	12	12	12	12	12	12	
	GAS - QTR 1		12		10	10	10	10	10	10	10	10	10	10
	GAS - QTR 2		12		10	10	10	10	10	10	10	10	10	
	GAS-QTR3		12		10	10	10	10	10	10	10	10	10	
	GAS - QTR 4	12	12		10	10	10	10	10	10	10	10	10	
	G AS - FY AVG	1,60	12		10	10	10	10	10	10	10	10	10	
	HAS-QTR1		12		12	12	12	12	12	12	12	12	12	12
	HAS-QTR 2		12		12	12	12	12	12	12	12	12	12	16
	HAS-QTR3		12		12	12	12	12	12	12	12	12	12	
	HAS-QTR4	12	12		12	12	12	12	12	12	12	12	12	
	H AS - FY AVG	12	12		12	12	12	12	12	12	12	12	12	
									_					42
	AS - QTR 1		12		12	12	12	12	12	12	12	12	12	12
	AS - QTR 2		12		12	12	12	12	12	12	12	12	12	
	AS - QTR 3		12		12	12	12	12	12	12	12	12	12	
	AS - QTR 4	12	12		12	12	12	12	12	12	12	12	12	
	I AS - FY AVG		12	12	12	12	12	12	12	12	12	12	12	-
	JAS - QTR 1		9	2	12	12	12	12	12	12	12	12	12	12
	JAS - QTR 2		0		12	12	12	12	12	12	12	12	12	
	JAS - QTR 3	1.8			12	12	12	12	12	12	12	12	12	
	JAS - QTR 4	.0	0		12	12	12	12	12	12	12	12	12	
	JAS - FY AVG		0		12	12	12	12	12	12	12	12	12	
	K AS - QTR 1		0		4	12	12	12	12	12	12	12	12	12
	KAS-QTR 2		0		7	12	12	12	12	12	12	12	12	
	K AS - QTR 3		0	0	11	12	12	12	12	12	12	12	12	
	K AS - QTR 4	0	0		12	12	12	12	12	12	12	12	12	
	K AS - FY AVG		0	- 1	10	12	12	12	12	12	12	12	12	
TOTALS	QTR 1		108	110	116	124	124	124	124	124	124	124	124	124
	QTR 2		108	114	119	124	124	124	124	124	124	124	124	
	QTR 3		108	113	123	124	124	124	124	124	124	124	124	
	QTR 4	108	108		124	124	124	124	124	124	124	124	124	
AVERAGE	FY	10000	108	113	122	124	124	124	124	124	124	124	124	

# SAMPLE MAF AIRCREW DATA

Figure A4.1. Sample MAF Aircrew Data.

Input Sheet											
	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
C-17 Section											
Number of API 1 line ACs	216	228	244	248	248	248	248	248	248	248	2
Number of API 1 LVL B Aircraft Commanders	54	57	61	62	62	62	62	62	62	62	
Number of API 1 LVL C Aircraft Commanders	162	171	183	186	186	186	186	186	186	186	1
Number of API 1 LVL B Pilots	108	114	122	124	124	124	124	124	124	124	
Number of API 1 LVL C Pilots	108	114	122	124	124	124	124	124	124	124	1
TORROW VINCIAL VINOS	.00	.114	122	124	124	124	124	124	124	124	
API 6 staff positions	21	22	25	25	25	25	25	25	25	25	
API 8 staff positions	4	4	4	4	4	4	4	4	4	4	
Airland ACs	206	218	234	238	238	238	238	238	238	238	2
Airland LVL B Pilots	98	104	112	114	114	114	114	114	114	114	1
Airland LVL C Pilots	108	114	122	124	124	124	124	124	124	124	1
Airland API 6	17	18	21	21	21	21	21	21	21	21	
Airland API 8	4	4	4	4	4	4	4	4	4	4	
In-unit requalification	18	19	20	20	20	20	20	20	20	20	
		_									
	<del>                                     </del>										
A/D continuation training	10	10	10	10	10	10	10	10	10	10	
Dual Row Airdrop Qual required	10	10	10	10	10	10	10	10	10	10	
API 6 A/D	4	4	4	4	4	4	4	4	4	4	
API 8 A/D	1		- 1			-		-	- 1	-	
PNAF Crews	0	0	0	0	0	0	0	0	0	0	
SOLL II Crews	Ů,	0	0	0	0	0	0	ő	0	o o	
SOLL II ACs	0	0	0	0	0	0	0	0	0	0	
SOLL II upgrade	0	0	0	0	0	0	0	0	0	0	
Red Flag	2	2	2	2	2	2	2	2	2	2	

# SAMPLE MAF REQUIREMENTS

Figure A5.1. Sample MAF Requirements.

	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Flying Hour Cost Section									
Cost of training flying hour	\$13,003	\$13,294	\$13,579	\$13,858	\$14,135	\$14,417	\$14,706	\$15,000	\$15,30
Aging Requirement Section									
Aging Rate	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26
Rated Authorization Factors Section									
Active-duty API 1 aircrew ratio (number of aircrews authorized per PAA aircraft)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.
S API 1 Aircraft Commanders at LVL B (IP/FE)	25%	25%	25%	25%	25%	25%	25%	25%	2
LPI 1 LVL C pilot authorizations as percentage of API 1 aircraft commander authorizations	50%	50%	50%	50%	50%	50%	50%	50%	
API 1 LVL B pilot authorizations as percentage of API 1 aircraft commander	1 1								
authorizations	50%	50%	50%	50%	50%	50%	50%	50%	5
	50%	50%	50%	50%	50%	50%	50%	50%	5
SORTS Training Section	50%	50%	50%	50%	50%	50%	50%	50%	5
SORTS Training Section	50%	50%	50%	2	2	50%	50%	50%	-
SORTS Training Section PMAF Sorties Annual sorties required for PMAF Crews \$\frac{1}{2}\$ Credit in acit	2 100%	2 100%	2 100%	2 100%	2 100%	2 100%	2 100%	2 100%	10
SORTS Training Section  PNAF Sorties Annual sorties required for PNAF Crews  \$ Credit in acft Sortie duration (hours)	2	2	2	2	2	2	2	2	
SORTS Training Section  PNAF Sorties Annual sorties required for PNAF Crews % Credit in acft Sortie duration (hours) Takeoff	2 100% 5	2 100% 5	2 100% 5	2 100% 5	2 100% 5	2 100% 5	2 100% 5	2 100% 5	
PNAF Sorties Annual sorties required for PNAF Crews \$ Credit in acit Sortie duration (hours) [askeoff Annual events required for API 1 LVL B Aircraft Commanders	2 100% 5	2 100% 5	2 100% 5	2 100% 5	2 1005 5	2 1005 5	2 100% 5	2 100% 5	
SORTS Training Section  PNAF Sorties Annual sorties required for PNAF Crews  5 Credit in acft Sortie duration (hours) Takeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders	2 100% 5 12 24	2 100% 5 12 24	2 100% 5 12 24	2 100% 5 12 24	2 1005 5 12 24	2 100% 5 12 24	2 100% 5	2 100% 5	
SORTS Training Section  PMAF Sorties Annual sorties required for PMAF Crews 5 Credit in acft Sortie duration (hours) rakeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL B Pilots	22 100% 5 12 24 20	2 100% 5 12 24 20	2 100% 5 12 24 20	2 100% 5 12 24 20	2 100% 5 12 24 20	2 100% 5 12 24 20	2 100% 5 12 24 20	2 100% 5 12 24 20	
PAGE Sorties Annual sorties required for PNAF Crews Scredit in acit Sortie duration (hours) alkeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	
SORTS Training Section  PNAF Sorties Annual sorties required for PNAF Crews % Credit in acft Sortie duration (hours) aixeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL & Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 5 Aircraft Commanders Annual events required for API 6 Aircraft Commanders	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24 12	2 100% 5 12 24 20 24 12	2 100% 5 12 24 20 24	2 100% 5 12 24 20 24 12	2 100% 5 12 24 20 24	
NAF Sorties Annual sorties required for PNAF Crews  **Credit in act Sortie duration (hours) askeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 6 Aircraft Commanders	2 100% 5 12 24 20 24 127 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	1
**SORTS Training Section  **NAF Sorties  Annual sorties required for PNAF Crews  **S Credit in a cft  Sortie duration (hours)  also off  Annual events required for API 1 LVL B Aircraft Commanders  Annual events required for API 1 LVL C Aircraft Commanders  Annual events required for API 1 LVL B Pilots  Annual events required for API 1 LVL C Pilots  Annual events required for API 5 Aircraft Commanders  Annual events required for API 8 Aircraft Commanders  Annual events required for API 8 Aircraft Commanders  **S Credit in a cft  **Text	22 100% 5 12 24 20 24 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	1
SORTS Training Section  NAF Sorties  Annual sorties required for PNAF Crews  "s Credit in acft Sortie duration (hours) akeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 6 Aircraft Commanders Annual events required for API 8 Aircraft Commanders  **Credit in acft Event duration (hours)	2 100% 5 12 24 20 24 127 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	2 100% 5 12 24 20 24 12 12	1
NAF Sorties Annual sorties required for PNAF Crews  ** Credit in act Sortie duration (hours) askeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 6 Aircraft Commanders Annual events required for API 6 Aircraft Commanders ** Credit in act Event duration (hours)	2 100% 5 12 24 20 24 12 12 25% 0.25	22 100% 5 5 12 24 20 24 12 12 25% 0.25	2 100% 5 5 12 24 20 24 12 12 25% 0.25	2 100% 5 12 24 20 24 12 12 12 25%	22 100% 5 5 12 24 20 24 21 22 12 25% 0.25	22 100% 5 12 24 20 24 12 12 25% 0.25	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 21 12 25% 0.25	1
SORTS Training Section  **NAF Sorties  Annual sorties required for PNAF Crews  ** Credit in acft  Sortie duration (hours)  akeoff  Annual events required for API 1 LVL B Aircraft Commanders  Annual events required for API 1 LVL B Pilots  Annual events required for API 1 LVL C Pilots  Annual events required for API 1 LVL C Pilots  Annual events required for API 3 LVL C Pilots  Annual events required for API 4 Aircraft Commanders  Annual events required for API 8 Aircraft Commanders  So Credit in acft  Event duration (hours)  **strument Approach  Annual events required for API 1 LVL B Aircraft Commanders	22 100% 5 12 24 20 24 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	22 100% 5 5 12 24 20 24 12 12 25 6 0.25	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 12 12 12 25%	2 100% 5 12 24 20 24 21 22 12 25% 0.25	2 100% 5 12 24 20 24 12 12 12 25%	1
SORTS Training Section  PMAF Sorties Annual sorties required for PMAF Crews 5 Credit in acit Sortie duration (hours) Takeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 4 Aircraft Commanders Annual events required for API 5 Aircraft Commanders Scredit in acit Event duration (hours) Instrument Approach Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders	2 100% 5 12 24 26 24 12 12 25% 0.25	22 100% 5 12 24 20 24 17 17 25% 0.25	2 100% 5 12 24 20 24 12 12 25% 0.25	2 100% 5 12 24 20 24 12 12 25% 0.25	22 100% 5 12 24 20 24 12 12 25% 0.25	22 100% 5 12 24 20 24 12 12 25 0.25	2 100% 5 12 24 20 24 12 12 25 6,25	2 100% 5 12 24 20 24 17 17 12 25% 0.25	1
SORTS Training Section  PNAF Sorties  Annual sorties required for PNAF Crews  5 Credit in acft Sortie duration (hours) akeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 6 Aircraft Commanders Annual events required for API 8 Aircraft Commanders Annual events required for API 8 Aircraft Commanders 5 Credit in acft Event duration (hours) Instrument Approach Annual events required for API 1 LVL B Aircraft Commanders	22 100% 5 12 24 20 24 12 25% 0.25	22 100% 5 12 24 24 127 12 25% 0.25	2 100% 55 5 24 20 24 12 25% 0.25	22 100% 5 12 24 20 24 12 25% 0.25	22 100% 5 12 24 20 24 12 25% 0.25	2 1005 5 5 12 24 20 24 12 12 255 0.25	22 100% 5 12 24 20 24 12 25% 0.25	22 100% 5 5 12 24 20 24 127 25% 0.25	1
SORTS Training Section  PNAF Sorties Annual sorties required for PNAF Crews 5 Credit in acit Sortie duration (hours) akeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL B Pilots Annual events required for API 1 LVL B Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Direct Commanders Annual events required for API 3 Aircraft Commanders Annual events required for API 3 Aircraft Commanders 5 Credit in acit Event duration (hours) Instrument Approach Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders	2 100% 5 12/4 20 24 17 12/2 25% 0.25	22 100% 5 12 24 20 24 12 25% 0.25	22 100% 5 12 24 20 24 12 12 25% 0.25	22 100% 5 12 24 20 24 12 25% 0.25 12 24 22 24 20 20	22 100% 5 12 24 20 24 12 25% 0.25 12 24 24 20 20	22 100% 5 12 24 20 24 12 25% 0.25	2 100% 5 12 24 20 20 21 12 12 25 0,25	2 100% 5 12 24 20 24 12 12 25% 0.25	1
SORTS Training Section  PMAF Sorties Annual sorties required for PMAF Crews 5 Credit in acit Sortie duration (hours) Takeoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 8 Aircraft Commanders Annual events required for API 8 Aircraft Commanders 5 Credit in acit Event duration (hours) Instrument Approach Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL B Pilots Annual events required for API 1 LVL B Pilots Annual events required for API 1 LVL C Pilots	22 100% 5 127 24 20 24 122 25% 0.25 24 24 24 24 26	2 100% 5 12 24 20 24 12 12 22% 0.25 0.25	22 100% 5 12 24 20 24 12 12 22 5% 0.25 12 24 22 22% 22% 22% 24 22 22% 24 22 22% 24 22 24 22 24 24 25 26 27 27 27 27 27 27 27 27 27 27 27 27 27	22 100% 5 12 24 20 24 12 22 25% 0.25 24 20 22 22% 22% 22% 22% 24 20 24 24 20 24 24 25% 26 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	22 100% 5 12 24 20 24 12 22 25% 0.25 24 20 22 22 22 22 22 23 24 20 22 22 22 22 23 24 24 26 27 27 27 27 27 27 27 27 27 27 27 27 27	2 100% 5 12 24 20 24 12 22 25% 0.25 12 24 22 22% 22% 22% 24 24 24 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	2 100% 5 12 24 20 24 21 22 22 25% 0.23 12 24 20 22 24 22 22 24 22 22 24 22 22 24 22 24 22 24 24	2 100% 5 12 24 20 24 12 22 5 0.25 12 24 22 25 0.25	1
% Credit in acft Sortie duration (hours) Taknoff Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 8 Aircraft Commanders Annual events required for API 8 Aircraft Commanders % Credit in acft Event duration (hours) Instrument Approach Annual events required for API 1 LVL B Aircraft Commanders Annual events required for API 1 LVL C Aircraft Commanders Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots Annual events required for API 1 LVL C Pilots	2 100% 5 5 12 24 24 12 25 5 0.25 12 24 24 12 24 26 24 26 24 12 12 12 12 12 12 12 12 12 12 12 12 12	22 100% 5 12 24 24 17 25% 0.25 12 24 24 24 24 25% 25% 20 20 20 20 20 20 20 20 20 20 20 20 20	2 100% 5 12 24 24 12 25% 0.25 12 24 24 24 20 24	22 100% 5 12 24 20 20 24 12 25% 0.25	22 100% 5 12 24 24 12 25 25 0.25 12 24 24 12 22 24 22 23 24 24 24 25 25 26 26 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	22 100% 5 12 24 24 12 25 12 25 0.25 12 24 24 24 12 12 25 25 26 20 20 20 20 20 20 20 20 20 20 20 20 20	22 100% 5 12 24 20 20 20 22 12 22 25% 0.25	22 100% 5 12 24 20 20 22 12 22 25% 0.25	

# SAMPLE MAF CALCULATION

Figure A6.1. Sample MAF Calculation.

C-17 ACTIVE-DUTY PROGRAM	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
AGING										
GING REQUIREMENT										
nexperienced Pilots	314	334	339	339	339	339	339	339	339	
Experiencing Hours	99,852	106,212	107,802	107,802	107,802	107,802	107,802	107,802	107,802	107,8
Non-experiencing Hours	1,592	1,430	1,452	1,452	1,452	1,452	1,452	1,452	1,452	1,4
PROGRAM TOTAL	101,444	107,642	109,254	109,254	109,254	109,254	109,254	109,254	109,254	109,2
SORTS TRAINING										
EVENT DRIVEN TRAINING										
PNAF										
Line Requirements	_									
API 1 Aircraft Commander Hours	55	55	55	55	55	55	55	55	55	
SUBTOTAL	55				55	55	55	56	55	
	,									
TAKEOFFS	$\overline{}$			$\overline{}$				$\overline{}$	$\rightarrow$	
Line Requirements API 1 LVL B Aircraft Commander Hours	84	0.0	90	- 00	00	90	00			
API 1 LVL C Aircraft Commander Hours	401	88 428	434	90 434	90 434	434	90 434	90 434	90 434	
API 1 LVL B Pilot Hours	219	234	238	238	238	238	238	238	238	
API 1 LVL C Pilot Hours	263	281	285	285	285	285	285	285	285	
Staff Requirements										
API 6 Aircraft Commander Hours	103	111	113	113	113	113	113	113	113	
API 8 Aircraft Commander Hours	6	6	- 6	6	- 6	- 6	- 6	- 6	6	
SUBTOTAL	1,076	1,148	1,166	1,166	1,166	1,166	1,166	1,166	1,166	1.7
INSTRUMENT APPROACH										
Line Requirements										
API 1 LVL B Aircraft Commander Hours	122	129	131	131	131	131	131	131	131	
API 1 LVL C Aircraft Commander Hours	587	627	636	636	636	636	636	636	636	
API 1 LVL B Pilot Hours	321	343	348	348	348	348	348	348	348	- 1
API 1 LVL C Pilot Hours	385	411	418	418	418	418	418	418	418	
Staff Requirements API 6 Aircraft Commander Hours	151	163	165	165	165	165	165	165	165	-
API 8 Aircraft Commander Hours	151	10.3	100	190	100	100	100	190	100	
SUBTOTAL	1,575	1,682	1,707	1,707	1,707	1,707	1,707	1,707	1,707	1,
						3,1.51				
Low Level Route										
Line Requirements										
API 1 LVL B Aircraft Commander Hours	184 441	129 314	131 318	131 318	131	131 318	131	131 318	131	
API 1 LVL C Aircraft Commander Hours Staff Requirements	441	314	318	318	318	318	318	318	318	
API 6 Aircraft Commander Hours	227	163	165	165	165	165	165	165	165	
API 8 Aircraft Commander Hours	14	9	9	9	9	9	9	9	9	
SUBTOTAL	866	615	623	623	623	623	623	623	623	
TACTICAL ARRIVAL	_									
Line Requirements	_									
API 1 LVL B Aircraft Commander Hours	550	387	393	393	393	393	393	393	393	
API 1 LVL C Aircraft Commander Hours	1,763	1,254		1,272	1,272	1,272	1,272	1,272	1,272	1,
Staff Requirements										
API 6 Aircraft Commander Hours	453	326	330	330	330	330	330	330	330	
API 6 Aircraft Commander Hours API 8 Aircraft Commander Hours SUBTOTAL	2.793	18	2.013	2.013	2.013	2,013	18 2.013	18 2,013	18 2.013	2

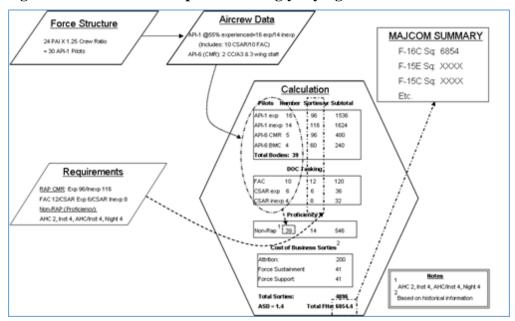
# SAMPLE MAF SUMMARY

Figure A7.1. Sample MAF Summary.

UNDING CATEGORIES	FY10	FYH	FH12	PY13	FY14	FY15	FY96	FYST	FY18	FYY9	FY20
MAC MARK											
Ferry	432	452	410	496	496	496	436	416	496	416	
Training Total	34,371	36,012	34,555	35,071	35,071	36,071	35,071	35,071	35,071	35,071	Ж,
WC	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1
JAIATT	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	- 5
AM TOTAL	41,647	43,308	41,887	42,411	42,411	42,411	42,411	42,411	42,411	42,411	42
WCF											
Channel	58,490	53,991	59,824	60,771	60,771	60,771	60,771	60,771	60,771	60,771	64
SAAM	29,247	26,995	29,912	30,386	30,386	30,386	30,386	30,386	30,386	30,386	
JCS Exercise	9,748	8,399	9,970	10,129	10,129	10,129	10,129	10,129	10,129	10,129	10
WCF TOTAL	97,488	89,565	99,706	101,286	101,286	101,296	101,286	101,286	101,286	101,286	101
PROGRAM TOTAL	139,135	133,293	141,593	143,697	143,697	143,697	143,697	143,697	143,697	143,697	143,0
C-17 ACTIVE-DUTY											
UNDING CATEGORIES	FYII	FMI	FM2	FY13	FY14	FY15	FMI	FY17	FY18	FY19	FY20
AM											
		400		-11				414	-12		
Ferry	432	452	488	496	496	496	496	496	496	496	
Training Total	23,423	24,471	22,210	22,542	22,642	22,542	22,542	22,542	22,542	22,542	22
WC	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	- 1
JA/ATT (See comment)	5,544		5,544	5,544	5,544	5,544	5,544	5,544	5,544	5,544	
AM TOTAL	30,699	31,767	29,542	29,882	29,882	29,882	29,882	29,882	29,882	29,882	29
WCF											
Channel	48,184	43,114	48,168	48,931	48,931	48,901	48,901	48,931	48,931	48,931	41
		21.567	24,004	24,466	24,466 8,166	24,466	24,466	24,466	24,466	24,466	24
SAAM	24,092					8.166	8.155	8.155	8,155	8 166	
JCS Exercise	8,030	7,186	8,028	8,166							
JCS Exercise WCF TOTAL	8.030 80,304	7,186 71,857	80,280	81,552	81,552	81,552	81,552	81,552	81,552	81,552	81
JCS Exercise WCF TOTAL	8,030	7,186									· ·
	8.030 80,304	7,186 71,857	80,280	81,552	81,552	81,552	81,552	81,552	81,552	81,552	81
ACS Exercise WCF TOTAL PROGRAM TOTAL C-17 ASSOCIATE	8.030 80,304	7,186 71,857	80,280	81,552	81,552	81,552	81,552	81,552	81,552	81,552	81
ACS Exercise WCF TOTAL PROGRAM TOTAL C-17 ASSOCIATE FLYING HOURS UMONG CATEGORES	8 030 86,306 111,005	7.186 71.857 103,624	109,822	81,552 111,434	81,512 111,434	81,552 111,434	81,552 111,434	81,567 111,434	81,552 111,434	81,552 111,434	111/
ACS REMOTES WEST TOTAL ROGRAM TOTAL C-17 ASSOCIATE FLYING HOURS MADING CATEGORES ALL Fory	5 0.06 89,366 111,005	7 100 71,857 103,624	99,280 109,822 FY12	81,552 111,434 FY13	81,552 111,434	81,552 111,434	81,502 111,434	91,552 111,434	81,552 111,434 FY18	81,553 111,434	
ACS Exercise ACS TOTAL ROGRAM TOTAL  -17 ASSOCIATE -11 ASSOCIATE -11 ASSOCIATE -12 ASSOCIATE -13 ASSOCIATE -14 ASSOCIATE -15 ASSOCIATE -15 ASSOCIATE -16 ASSOCIATE -17 ASS	8 030 86,306 111,005	7.186 71.857 103,624	109,822	81,552 111,434	81,512 111,434	81,552 111,434	81,552 111,434	81,567 111,434	81,552 111,434	81,552 111,434	111/
ACS Exercise MCF TOTAL  ROGRAM TOTAL  -17 ASSOCIATE LYING HOURS  ANDRIG CATEGORES  ALI Ferry Total JANATT (See comment)	6.036 86,366 111,005	7 100 71,657 103,624	60,260 109,822 FY12 0 12,345	81,502 111,434	81,502 111,434	61,502 111,434 FYIS	81,502 111,434 FY16 0 12,521 0	81,952 111,434 FFTF 6	81,502 111,434 FY18	81,502 111,434 FFT9 0 12,529 0	111, FY20
ACS Exercise ACS TOTAL ROGRAM TOTAL  -17 ASSOCIATE LYING HOURS  ANDRIG CATEGORE S  MI Fory Total JANATT (See comment)	5 0.06 89,366 111,005	7 100 71,857 103,624	99,280 109,822 FY12	81,552 111,434 FY13	81,552 111,434	81,552 111,434	81,502 111,434	91,552 111,434	81,552 111,434 FY18	81,553 111,434	FY20
ACS Exercise ACS TOTAL ROGRAM TOTAL	6.036 86,366 111,005	7 100 71,657 103,624	60,260 109,822 FY12 0 12,345	81,502 111,434	81,502 111,434	61,502 111,434 FYIS	81,502 111,434 FY16 0 12,521 0	81,952 111,434 FFTF 6	81,502 111,434 FY18	81,502 111,434 FFT9 0 12,529 0	FY20
ACS Exercise ACS TOTAL  ROGRAM TOTAL  -17 ASSOCIATE  LYING HOURS  ANDING CATEGORES  MI  Fory Total ANATT (See comment) AM TOTAL  MCF	5 0.0% 86,364 111,005 FY10 0 10,546	7 100 71,657 103,624	60,260 109,822 FY12 0 12,345	81,502 111,434	81,502 111,434	61,502 111,434 FYIS	81,502 111,434 FY16 0 12,521 0	81,952 111,434 FFTF 6	81,502 111,434 FY18	81,502 111,434 FFT9 0 12,529 0	FY20
ACS Exercise ACS TOTAL  ROGRAM TOTAL  C-17 ASSOCIATE  LYING HOURS  MEMORY CATEGORIES  AM  Fery Training Total JAIATT (See comment) AM TOTAL  ACCEPTANCE  ACCEPTANC	6 0.000 86,300 111,005 111,005 0 0 10,041 0 10,041	7, 186 73,857 103,624 103,624 FVII 6 11,541 6 11,541 10,877	90,360 109,822 FY12 0 12,345 11,664	81,502 111,434 111,434 11,434 11,539 11,540	81,552 111,434 FY14 0 12,539 11,640	81,502 111,434 FY15 0 12,529 0 12,529	81,502 111,434 FY16 0 12,529 11,560	81,932 111,424 111,424 6 12,529 11,540	81,502 111,434 FY18 0 12,529 0 12,009	81,502 111,434 111,434 6 12,529 11,840	FY20 111,
ACS Exercise ACS TOTAL  ROGRAM TOTAL  -17 ASSOCIATE LYING HOURS  IMDING CATEGORES  MA Ferry Total ANATT (Sine comment) ANAT (OFF Channel SAMA	6 0.0% 86,364 111,005 FY18 6 10 10 541 10 10 10 10 10 10 10 10 10	7, 100 71,857 103,624 103,624 FY11 0 0 11,541 10,877 5,438	90,369 909,822 9712 0 12,345 0 11,545 11,656 5,829	81,502 111,434 FY13 B 12,509 11,640 11,640 11,640 5,300	91,502 111,434 FYI4 0 0 12,09 11,640 11,640 11,640	91,502 111,434 FYIS 0 0 12,509 11,640 11,640 5,500	81,522 111,434 F976 0 0 12,529 11,520 11,520 5,520	81,502 111,434 FYIT 6 12,529 12,539 11,840 5,330	91,502 111,434 FYI8 0 0 0 12,529 11,840 11,840 5,300	81,502 111,434 111,434 6 12,579 11,509 11,509	FY20
ACS Exercise WCF TOTAL  ROGRAM TOTAL  C-17 ASSOCIATE FLYING HOURS  UMDING CATEGORIES AM	6 0.000 86,300 111,005 111,005 0 0 10,041 0 10,041	7, 186 73,857 103,624 103,624 FVII 6 11,541 6 11,541 10,877	90,360 109,822 FY12 0 12,345 11,664	81,502 111,434 111,434 11,434 11,539 11,540	81,552 111,434 FY14 0 12,539 11,640	61,522 111,434 FYIS	81,502 111,434 FY16 0 12,529 11,560	81,932 111,424 111,424 6 12,529 11,540	81,502 111,634 FY18 0 0 12,539 11,840	81,502 111,434 111,434 6 12,529 11,840	111, FY20

# AIR FORCE SINGLE FLYING HOUR MODEL: F-16C EXAMPLE

Figure A8.1. F-16C Example of AF Singly Flying Hour Model.



# COST OF BUSINESS ADJUSTMENT

Table A9.1. Non-Effective Sorties (post-takeoff).

Maintenance	Original intent of mission not accomplished due to
	aircraft malfunction (does not include ground aborts)
Weather	Original intent of mission not accomplished due to
	weather (does not include weather cancellation)
Air Traffic Control (ATC)	Original intent of sortie not accomplished due to air
	traffic control issues
Airspace	Original intent of sortie not accomplished due to loss
	airspace
Operations	Original intent of sortie not accomplished due to
	operations (e.g., physiological, risk mitigation).
Support	Original intent of the sortie is not accomplished due to
	lack of support aircraft (i.e., tanker no-show on air
	refueling mission; one aircraft aborts on 2V2)

**Table A9.2. Force Sustainment Sorties.** 

Vol 1 Support	Sortie launched in support of training requirements (e.g., Red Air)
Look Back	Sortie is scheduled solely to meet lookback
Individual Upgrade Training	Any sortie that requires a grade sheet (i.e., FLUG, IP, EP)
Upgrade Support	Sortie generated to support individual upgrade
Remedial Training	Any individual upgrade training mission that is re- flown; the sortie is a result of a Q2 or Q3
CC Directed	Commander directed sortie launched at the discretion of the chain of command as allowed for in the Ready Aircrew Program tasking message
CC Directed Support	Sortie launched in support of commander directed sortie
Regain Currency	

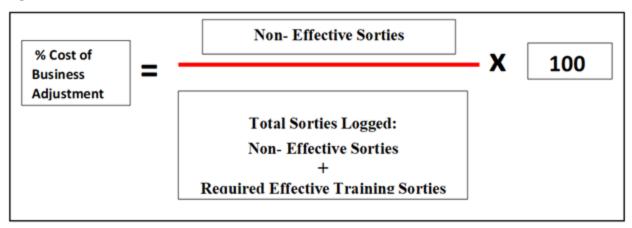
**Table A9.3. Force Support Sorties.** 

Functional Check Flight (FCF)	
Ferry flight	Flying aircraft to depot, AMARG, etc.
Non-Contingency deployment	Sorties to and from Red Flag, Airlift
	Rodeo, etc.; deployments for contingency
	operations are not included
Orientation or Incentive	Sorties to support orientation ride or

	incentive flight
Airborne Spare	Sortie generated as an airborne spare for
	non-contingency deployments
Contingency	Sortie flown in support of peacetime
	operational missions (e.g., Operation Noble
	Eagle, Counter Drug, Continuous Bomber
	Presence)
All Others (e.g., Air Show, Demonstration,	Sortie flown to and from an air show,
Distinguished Visitor Support not	demonstration, or flyby to include sorties
Operational Support Aircraft or Very	or missions flown at the event, and
Important Person)	Distinguished Visitor support

- **A9.1.** <u>Test Support.</u> Sorties flown in support of Test and Evaluation program.
- **A9.2.** The formula to calculate Cost of business factor is as follows:

Figure A9.1. Cost of Business Factor Formula.



# APPROVED FIFTH CHARACTERS FOR COST OF BUSINESS TRACKING

Table A10.1. Approved Fifth Characters for Cost of Business Tracking.

USE ONLY NON-EFFE	IF SORTIE IS ECTIVE	Non-Effective Sortie Description
Character	Description	Entire sortie must be re-accomplished due:
A	Aircraft or Weapons	Aircraft maintenance or weapons malfunctions
В	***	
С	***	
D	***	
E	***	
F	Student Non-Effective	Student non-progression.
G	***	
Н	***	
I	***	
J	***	
K	***	
L	***	
M	***	
N	***	
О	Other	Any other conditions or events are not outlined in the other fifth characters.
P	***	
Q	***	
R	Airspace	Airspace, range restrictions or availability after takeoff. Includes (but not limited to) changes in Airspace, range or lateral and vertical confines (AWACS orbits, tanker tracks, etc.)
S	Support	Cancellation of support assets after takeoff. Includes (but not limited to) red air, GCI and air-refueling

T	Training	Non-accomplishment of training objectives due to pilot or aircrew action after Take-Off
U	***	
V	***	
W	Weather	Weather conditions after Take-Off
X	***	
Y	***	
Z	***	
*** Res	served for Future Us	e