DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

AFMAN11-2EAV3_AFGM2025-01
16 MAY 2025

MEMORANDUM FOR DISTRIBUTION C
MAJCOMs/FLDCOMs/FOAs/DRUs

FROM: AF/A3
1720 Air Force Pentagon
Washington, DC 20330-1665

SUBJECT: Department of the Air Force Guidance Memorandum to AFMAN 11-2EA,Vol 3, *Executive Airlift (EA) Operations Procedures*

By Order of the Secretary of the Air Force, this Department of the Air Force Guidance Memorandum immediately changes AFMAN 11-2EAV3. Compliance with this memorandum is mandatory. To the extent its directions are inconsistent with other Department of the Air Force/Air Force/Space Force publications, the information herein prevails, in accordance with DAFI 90-160, *Publications and Forms Management* and DAFMAN 90-161, *Publishing Processes and Procedures*. This guidance is applicable to all civilian employees and uniformed members of the Regular Air Force (RegAF), Air Force Reserve Command (AFRC), and Air National Guard (ANG). This manual does not apply to United States Space Force (USSF).

Attachment 1 of this memorandum updates command relationships and waiver guidance, updates guidance and waiver tiering to aircrew compliments, updates aircraft operating restrictions, incorporates supplemental oxygen requirements for C-37, and consolidates Lead Command operational approvals into one table.

Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System.

This Memorandum becomes void after one year has elapsed from the date of this Memorandum, or upon incorporation by interim change to, or rewrite of AFMAN 11-2EAV3, whichever is earlier.

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Attachment 1
AFMAN 11-2EAV3 CHANGES

1.5.2. Changed. Waiver Authorities. 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. See DAFMAN 90-161 for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the OPR for non-tiered compliance items.

1.5.2.1. Changed. For AMC or AMC-gained flight operations, Tier 1 and 2 waiver authority is delegated to AMC A3/10.

1.5.2.5. Added. Aircrew responsibilities are governed by AFMAN 11-2EAV2, *Executive Airlift Aircrew Evaluation Criteria*, and are not tiered. Failure to meet standards is considered a breach of flight discipline and could lead to downgrade, loss of certification, or loss of qualification as directed by AFMAN 11-202V2, *Aircrew Standardization and Evaluation Program*.

1.5.3. Changed. Waiver Approval Process. For Tier 3 and below, units will establish local procedures. **(T-2)** Tier 2 and above waiver requests will be requested on DAF Form 679, *Department of the Air Force Publication Compliance Item Waiver Request/Approval*, through MAJCOM Stan/Eval. **(T-1)** CVAM-tasked missions under AMC A3/10 mission execution authority will use the following procedures: **(T-2)**

1.5.3.2.5. Added. A copy of all approved waivers to this AFMAN must be sent to AMC/A3V within 30 days of approval in accordance with DAFI 90-160. **(T-1)**

2.3. Changed. **Execution Authority.** OSA/EA assets routinely operate outside the normal command and control structure of their MAJCOM and normally remain under the command and control of the specific wing supporting the mission. CONUS-based OSA/EA assets are not assigned to USTRANSCOM, but rather designated in the Global Force Management Allocation Plan (GFMAP) as Service Retained, meaning the SECAF maintains command authority through the respective MAJCOM (AMC, AFRC, or ANG) to the flying unit wing commander. Geographical CCDRs (i.e., COMEUCOM and COMPACOM) retain combatant command (command authority) (COCOM) of their assigned assets and delegate OPCON to the respective service component command (i.e., USAFE-AFAFRICA and PACAF). For these units, execution authority is normally held by the AMD supporting the mission. In all cases, the PIC executes missions operating outside normal communication channels (using last known mission orders or best course of action).

2.3.1. Changed. AMC. AMC A3/10 executes operational control (OPCON) of RegAF operational units on behalf of AMC/CC. Normally, wing commanders with C2 over assigned resources hold mission execution authority for CVAM-directed missions. Unit C2 staff serve as the single point-of-contact (POC) within the wing for mission assignments from CVAM. Unit Current Operations or Squadron Operations Center (SOC) provide support to the wing commander to ensure missions are planned and executed as scheduled. During the mission planning phase, unit C2 staff serves as a liaison between the PIC and CVAM. During the execution phase, mission change requests, to include change in itinerary city pair, date, or lead DV, are passed from the on-board contact to the PIC, who assesses impact to the crew (e.g., crew rest, crew duty day, weather, airfield suitability, etc.). The PIC forwards the request to unit C2,

then to CVAM for approval. The PIC ensures the on-board contact is aware that final approval for mission changes is from CVAM.

2.3.3. Changed. ANG/AFRC. Mission validation from CVAM is received through NGB/A3XC and AFRC/A3OO respectively for all ANG and AFRC aircraft covered by this manual. When ANG/AFRC OSA units are supporting a SECAF/CSAF-directed mission, command authority flows from SECAF, is coordinated through CSAF, and then through the associated ANG/AFRC channels to the designated flying unit wing commander.

2.3.6. Added. OG/CCs serve as execution authority for local training missions and may approve transition training on positioning/de-positioning legs in coordination with the tasking agency (CVAM, AMD, MAJCOM A3, NGB A3, WHMO, etc.).

3.2. Changed. **Aircrew Complement.** Airlift squadron commanders (AS/CCs) will form aircrews in accordance with **Table 3.1** based on fragmentation order/mission directive, Crew Duty Time (CDT) and Flight Duty Period (FDP) requirements, aircrew member qualifications, and other constraints to safely accomplish the mission tasking. **(T-2)** The PAG/CC determines crew complement on Presidential Airlift Missions.

3.2.1. Changed. Once in execution, the OG/CC is waiver authority to reduce the aircrew compliment below **Table 3.1** requirements due to mission changes, aircrew illness or injury, etc. Reduction below the minimum flight crew required per FCM limitations is prohibited.

Table 3.1. Changed. **Aircrew Complement.**

Crew	**Basic**					**Augmented**			
	C-37	**C-40**	**C-32**	**VC-25**	**SAP**	**C-40**	**C-32**	**VC-25**	**SAP**
Aircraft Commander	1	1	1	1		1	1	2	
Pilot	1	1	1	1		2	2	1	
Navigator *(Note 1)*				1				2	
Flight Engineer (FE)	1 *(Note 2)*			2 *(Note 3)*				2 *(Note 4)*	
Comm. Systems Operator (CSO) *(Note 1/5)*	1	2 *(Note 6/7)*	2 *(Note 6)*	4	2 *(Note 8)*	2 *(Note 7)*	2	4	3 *(Note 8)*
Flight Attendant (FA) *(Notes 1/5/11/12)*	1	3 *(Note 10)*	5 *(Note 9)*	10	3 *(Note 8)*	4	6	10	4 *(Note 8)*
Flying Crew Chief (FCC) *(Note 1/5/13)*		2	2	2		2	2	2	

Notes:

1. Navigator, CSO(s), and FA(s) are not required on local training missions, OSTs, and depot inputs/outputs. FA(s) are required whenever passengers are carried. **Exception:** With AS/CC approval, FCCs/Mission Essential Personnel (MEPs) (to include civilian maintenance personnel) familiar with egress procedures may be carried without FA(s) on board.

2. For local training missions, airlift squadron DO (AS/DO) may authorize a mission ready pilot to occupy the flight engineer station during any phase of operation. In this case, a qualified FE (MF) will perform preflight duties and need not fly on the local. **(T-3)**

3. One is first flight engineer certified or higher.
4. Both are first flight engineer certified or higher.
5. With consideration given to weapon and safe access, OG/CC may waive CSO(s) on operational missions if the DV party does not require communications support. With concurrence of the tasking authority, OG/CC may waive FA(s) and/or CSO(s) on operational missions if there are no passengers (e.g., shadows and off-station backups). OG/CC may waive FCC(s) for stopover flights if equivalent maintenance support exists at stopover locations.
6. Minimum of 2 qualified CSOs or 1 Instructor CSO (IK) with 2 unqualified CSOs (UKs). Unit commanders will weigh the instructor and students' prior experience/proficiency when scheduling 1 IK with 2 UKs. **(T-3)** OG/CC may waive CSO requirements to 1 mission-qualified CSO (MK).
7. N/A C-40C.
8. See **paragraph 3.2.3.1** for Special Airlift Program (SAP) mission waiver authorities.
9. Normal basic crew is 5 mission-qualified FAs (MTs) (one FA must be 1st FA certified). OG/CC may waive FA requirements to 3 MTs (one FA must be 1st FA certified) for a basic crew if there are no meal requirements.
10. Minimum of 3 MTs (one FA must be 1st FA certified). OG/CC may waive FA requirements to 2 MTs (one FA must be 1st FA certified) for a basic crew if there are no meal requirements for passengers or crew.
11. Unqualified FAs (UTs) are not considered part of the crew compliment. **(T-2)** When scheduling an instructor FA (IT) with 2 students, they should be performing duties in proximity of each other.
12. AS/CC may increase the number of FAs depending on mission requirements.
13. For C-32, C-40B/C, and VC-25, the minimum required is 1 Lead FCC and 1 Assistant FCC. When required for FCC training, a third FCC may be added to the mission with prior coordination with the AS/DO. Additional seating will only be authorized for flight training FCCs. **(T-3)**

3.2.2. Changed. In accordance with AFMAN 11-202V3, augmented crews are necessary when a mission cannot be completed within a basic FDP. OG/CC is the waiver authority for additional crewmembers to join the mission en route for augmentation. If augmentees are added to the crew, the crew's FDP will be computed based on the FDP of the most limited person. **(T-3)** Augmentees must be current and qualified in the aircraft. **(T-3)** Pilots in FP Phase II training may count as augmented crewmembers, provided the FP is current and qualified. Non-mission ready (NMR) pilots requiring instructor supervision may augment provided that of the other two pilots, one is a fully qualified, Mission Ready (MR) IP and the other is a fully qualified, MR MP. NMR pilots must be under direct IP supervision during critical phases of flight. **(T-2)**

3.2.3.1. Changed. FA/CSO Crew Complements on Special Airlift Program (SAP) missions. At least one FA will be certified in the 1st FA position on the aircraft. **(T-3)** All others are at least MT or MK qualified. **(T-3)** The mission owning OG/CC, through unit C2, will coordinate with the 89 OG/CC to determine the actual FA/CSO crew complement (increased or decreased) based upon passenger loads, configuration, and mission requirements. **(T-2)** The mission owning OG/CC will maintain waiver authority over CSO/FA crew complements on all AMC SAP missions in execution. **(T-2)** FAs/CSOs follow CDT/FDP and scheduling restrictions in accordance with this manual and AFMAN 11-202V3.

3.4.1.1. Changed. A non-current but qualified pilot or a qualified NMR pilot may fly with passengers on board if under direct IP supervision. See **paragraph 3.2.2** for augmented crew exceptions.
3.7. Changed. Flight examiners administering evaluations will not be considered part of the augmented crew complement.
3.10. Changed. **Off-station/En route Ground Time.** A minimum 15-hour ground time between block-in to block-out should be planned. For missions in execution, the PIC may reduce ground time provided all AFMAN 11-202V3 crew rest restrictions are complied with or seek a waiver. **Note:** PAG/CC is the waiver authority for Presidential Airlift Missions.
3.10.1. Changed. Before reducing normal ground time consider mission preparation time, travel times, and other factors particular to the mission. It is not to be used for DV scheduling convenience.
3.10.2. DELETED
3.10.4. Changed. Flying Crew Chief (FCC) and Phoenix Raven Work-Rest Plan. For off-station missions, FCCs and Fly-Away Security (FAS) teams (including Phoenix Ravens) are responsible to the PIC. Aircrew crew rest rules do not apply. For FCC/FAS work-rest plan guidance, see DAFI 21-101, *Aircraft Equipment Maintenance Management*, DAFI 31-101, *Integrated Defense*, AFDW 31-104, *Security Forces Specialized Missions (for 89 AW missions)*, and **Chapters 7** and **13** of this manual. PAG/CC determines FCC and Raven work-rest cycle and duty day for PAG missions.
4.2. Changed. **Minimum Equipment List (MEL) Policy.** The MEL is a pre-launch document that lists the minimum equipment to operate the aircraft. Due to the multiple OSA/EA aircraft covered by this manual, aircraft-specific MELs are not published in this chapter. PICs refer to their aircraft-specific MEL or Federal Aviation Administration (FAA)-approved Master Minimum Equipment List (MMEL) for inoperative equipment before dispatch. For aircraft that have multiple FAA-approved MMELs issued, use the FAA Part 91 MMEL.
4.2.1. Changed. PICs are the authority to dispatch in accordance with the MEL. It is impractical to prepare a list that would anticipate all possible combinations of equipment malfunctions and contingent circumstances. Consider equipment with no listed exceptions in the MEL to exceed what is allowed for dispatch.
4.2.1.1. Added. A PIC who accepts an aircraft with degraded equipment/systems is not committed to subsequent operations with the same degraded equipment.
4.2.1.2. Added. PICs are not committed to operations with degraded equipment accepted by another PIC.
4.2.2. Changed. The OG/CC (or equivalent) is the waiver authority to operate with degraded equipment exceeding what is allowed for dispatch in accordance with the MEL. Waivers are granted on a case-by-case basis. A PIC prepared to operate with a degraded MEL item (exceeding what is allowed for dispatch) will initiate the waiver request. Equipment obviously required for airworthiness such as tires, primary control systems, wings, etc.; degraded equipment requiring operations without established procedures; or aircraft damage are not listed in the MEL and must be addressed by an engineering disposition (ED). **(T-1)**
4.2.5. Changed. The PIC ensures installation of all emergency equipment unless specifically exempted by mission requirements/directives or in accordance with the MEL. **(T-3)**
4.3. Changed **Flight Manual Waivers, Engineering Dispositions (ED), and Airworthiness Directives (AD).**

4.3.1. Changed. Aircraft Flight Manuals are governed by T.O. 00-5-1, *Air Force Technical Order System*, and AFI 11-215, *Flight Manuals Program.* Waivers to deviate from prescribed procedures or limitations must be coordinated through AFMC/A4F who research the waiver and recommend disposition to the approving authority. Submit waiver requests in accordance with **paragraph 1.5.3**. Waivers of this nature may require an extended response time. PAG/CC is the waiver authority for Presidential Airlift Missions.
4.4.3. Added. HQ AMC/A3VS ON-CALL PHONE 1-618-567-3053
4.6. Added. (C-37) Functional Check Flights (FCF). Due to a lack of C-37 -6 or -6CF requirements, the following conditions require a FCF in accordance with TO 1-1-300, *Functional Check Flights and Maintenance Operational Checks*, to determine safe or required operation because of aerodynamic reaction, air loading, signal propagation, etc. This list is not all inclusive; owning MXG/CCs and/or OG/CCs retain the decision to require a check flight based upon other conditions due to the scope of work performed relative to safety of operation.
4.6.1. Added. Removal, replacement, or major component overhaul of both engines and/or fuel control units.
4.6.2. Added. Removal, replacement, or major component overhaul of primary flight controls, to include rigging, actuators, and/or skins. This includes wings or horizontal/vertical stabilizer components.
4.6.3. Added. Removal, replacement, or major component overhaul of flight instrumentation, to include pitot static, compasses, attitude reference, air data computers, etc., which require flight to accomplish operational checks or calibration of accessories and/or auxiliary equipment.
4.6.4. Added. Removal, replacement, or major component overhaul of landing gear.
4.6.5. Added. Major retrofit or modification of components or as required by the FCF Maintenance Action Guidance Matrix.
5.3. Changed. **Takeoff and Landing Policy.** An aircraft commander, or above, will occupy either the left or the right seat during all takeoffs and landings. **(T-2)** The designated PIC (A-code) is not required to occupy a primary position but will be immediately available for all critical phases of flight. **(T-2)**
Table 5.2. Changed. **Minimum Runway and Taxiway Width Requirements.**

MDS Aircraft	**Minimum Runway Width**	**Minimum Taxiway Width**	**Minimum Width 180 Degree Turn**
C-37 (Note 1)	98 feet (30 meters) (Note 2)	25 feet (8 meters) (Notes 3 & 4)	75 feet (23 meters)
C-40 (Note 1)	98 feet (30 Meters)	49 feet (15 Meters)	75 feet (23 meters)
C-32 (Note 1)	98 feet (30 Meters)	49 feet (15 Meters) (Note 5)	120 feet (37 meters)
VC-25	See Note 1		
Notes: 1. PAG/CC determines minimums for Presidential Airlift Missions. 2. OG/CC may waive runway width to no lower than 75 feet (23 meters). 3. For 90 degree turns to/from a surface less than 35 feet, but no less than 25 feet, the other surface is a minimum width of 55 feet. Offset to the larger surface to keep on pavement.			

4. Minimum taxiway width for 90 degree turns (with fillets) is from a 35-foot to 35-foot taxiway. Even when fillets are available, these turns may not be possible in the given taxiway surface. Deplane a crewmember if in doubt to marshal the turn.
5. Turns from one taxiway to another taxiway when either of the taxiways is less than 70 feet wide require a fillet. The minimum fillet dimensions for a 49-foot (15-meter) to a 49-foot (15-meter) taxiway is 56 feet (17 meters), with an 81-foot (25-meter) radius from the centerline to the taxiway edge. The minimum fillet dimensions are for all taxiway widths from 49 - 70 feet. These minimum fillet dimensions require the pilot to use oversteering techniques and the aircraft will not be able to track cockpit over centerline. **CAUTION:** "Sweeping turns" with a constant arc that are less than 75 feet wide may not provide adequate maneuvering room and obstacle clearance.

5.10.5. Added. Takeoff or Landing Over Raised Arresting Cables (does not include recessed cables).
5.10.5.1. Added. When conditions permit (aircraft gross weight, runway length, weather, winds, Takeoff and Landing Data (TOLD), etc.), aircrews should make takeoffs and landings beyond approach end raised cable barriers. If necessary, aircrews may use the entire length of runway after considering the potential for damaging the aircraft operating over arresting gear barriers (account for both arrival and departure end barriers) at speeds in excess of taxi speed.
5.10.5.2. Added. Do not touch down on a raised arresting cable. Damage may occur to the cable or aircraft.
5.10.5.3. Added. If the aircraft lands prior to a raised arresting cable and rolls over it, the flight crew should contact the tower to have the cable inspected (this does not include rolling over a cable at normal taxi speeds).
5.10.5.4. Added. Do not takeoff or land over a raised arresting cable that has been reported as slack, loose, or improperly rigged by NOTAM, Automated Terminal Information Service (ATIS), ATC, etc.
5.12.1. Changed. The maximum crosswind component for autoland approaches is 25 knots (C-32) and 20 knots (C-40).
5.12.2. Changed. The maximum crosswind component for CAT II/III ILS approaches is 15 knots with autopilot engaged. **(T-0)**
5.12.3. Changed. The maximum crosswind component during manual (autopilot off) CAT II/III ILS approaches in actual CAT II/III conditions is 10 knots. On a coupled approach, if the PF deselects the autopilot prior to transitioning to visual landing cues, the 10-knot crosswind limit applies.
5.12.4. DELETED
5.18. Changed. **Operational Approvals.** MAJCOM/A3 approves operational use of Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) equipment in accordance with AFMAN 11-202V3. EA aircrews are authorized to utilize the capabilities listed in their respective FCM for which the aircraft is certified, and the aircrew is properly trained and approved in accordance with **Table 5.4**.
Table 5.4. Added. **CNS/ATM Operational Approvals.**

X: Operationally Approved	**E: Equipped, not approved**	**- : Not equipped or N/A**

	Operational Capability	**C-37A**	**C-37B**	**C-40B**	**C-40C**	**C-32A**	**Notes**

Comm/Nav Radios	8.33KHz VHF Radios	X	X	X	X	X	
	FM Immunity ILS/VOR	X	X	X	X	X	
Datalink Systems	FANS 1/A	X	X	X	X	X	1, 2
	FANS 1/A+	X	X	-	-	-	1, 3
	ATN B1 (Link 2000+)	-	E	-	-	-	1,4
	ATN B2	-	-	-	-	-	1
	[NAS] Domestic En Route CPDLC	-	-	-	-	-	1
	ACARS ATS (DCL, OCL, TWIP, D-ATIS)	X	X	X	X	X	1
	TDLS (D-ATIS, PDC, CPDLC-DCL)	X	X	X	X	X	1
Surveillance	ADS-B In	-	-	-	-	-	
	ADS-B Out Version 2	X	X	X	X	X	
	Elementary Mode S	X	X	X	X	X	
	Enhanced Mode S	X	X	X	X	X	
	TCAS II Version 7.1	X	X	X	X	X	
	IFF Mode 5	X	X	X	X	X	
Vertical Navigation	RVSM	X	X	X	X	X	5
Lateral Navigation	NAT HLA (formerly MNPS)	X	X	X	X	X	6
	RNAV 10 (RNP 10)	X	X	X	X	X	6
	RNAV 5 (B-RNAV, RNP 5)	X	X	X	X	X	6, 7
	RNAV 2 [NAS Only] Q- & T-Routes	X	X	X	X	X	6
	RNAV 1 (P-RNAV)	X	X	X	X	X	6
	RNP 4	X	X	X	X	X	6
	RNP 2	X	X	X	X	X	6
	RNP 1	X	X	X	X	X	6
	Advanced RNP (A-RNP)	X	X	X	X	X	8
	[ICAO] RNP Approach [NAS] RNAV (GPS)	X	X	X	X	X	6, 9
	LNAV/VNAV (Baro VNAV)	X	X	X	X	X	6, 10
	LPV	X	X	-	-	-	11
	LP	-	-	-	-	-	11
Special Aircrew & Aircraft Certification Required	[ICAO] RNP AR [NAS] RNAV (RNP)	-	X	X	X	X	12
	PRM ILS	X	X	X	X	X	13
	SA CAT I ILS	X	X	X	X	-	14
	CAT II ILS	X	X	X	X	X	15
	SA CAT II ILS	-	-	X	X	X	15
	CAT IIIa ILS	-	-	X	X	X	15
	CAT IIIb ILS	-	-	-	-	X	15
	CAT IIIc ILS	-	-	-	-	-	
	Extreme Latitude Navigation	X	X	X	X	X	16
	KASE Special LOC DME Rwy 15	X	X	-	-	-	17
	KASE Special RNP AR Rwy 15	-	E	-	-	-	

Other	Oceanic and Remote Areas of Operation	X	X	X	X	X	6
	ETOPS/EROPS	-	-	X	X	X	18
	EVS/EFVS	X	X	-	-	-	19
	EFVS II	E	E	-	-	-	

Notes:
1. See **paragraphs 9.3.4** and FAA AC 90-117 for datalink functionality descriptions
2. C-37A/B, C-40B/C, and C-32A are Controller Pilot Data Link Communication (CPDLC) and Automatic Dependence Surveillance-Contract (ADS-C) capable over the FANS 1/A network.
3. For PBCS operations C-37A/B meet CPDLC RCP 240 and ADS-C RSP180 performance criteria using VDL M0/A/2, or SATCOM (Inmarsat) datalink subnetworks.
4. C-37B tail numbers 1941 (S/N 5613) and 1949 (S/N 5614) only.
5. See **paragraph 9.3.1** for RVSM operations.
6. See FCM for required equipment, operations requirements, and restrictions.
7. See **paragraph 9.3.2.2** for BRNAV operations.
8. A-RNP includes RNP Scalability, Radius to Fix (RF), and Parallel Offset. See FCM for additional approved capabilities.
9. See **paragraph 6.27.9.2** for RNAV/RNP Approach procedures
10. See **paragraph 6.27.9.2.1** and **6.27.9.2.2** for LNAV/VNAV procedures
11. See **paragraph 6.27.9.2.3** for LPV procedures
12. See **paragraph 6.27.9.3** for RNP AR procedures and restrictions
13. See **paragraph 6.27.5.1** for PRM ILS procedures
14. See **paragraph 6.27.5.2** for SA CAT I ILS procedures
15. See **paragraph 6.27.6** for CAT II/III procedures
16. See **paragraph 9.5** and AFMAN 11-202V3 for extreme latitude/polar operations
17. See **paragraph 6.27.7** for C-37 Aspen approach procedures
18. See **paragraph 9.6** for EROPS procedures
19. See **paragraph 6.27.12** for EVS/EFVS operations

6.1.1. Changed. Due to the unique nature of EA missions, civilian clothing is authorized as an approved flight duty uniform, and aircrew are therefore entitled to a TDY civilian clothing allowance (CCA) in accordance with AFI 36-3012, *Military Entitlements*. OG/CCs determine clothing and equipment to be worn or carried aboard all flights commensurate with mission, climate, and the Foreign Clearance Guide (FCG).

6.10.3. Changed. Special Departure Procedure (SDP). Jeppesen® Runway Analysis (JRA) is the AMC-authorized tool for SDP planning. The JRA site is located at: https://www.milplanner.com/. The current login and password can be found in the All_Global folder in Aircrew EPubs.

6.13. Changed. **Adverse Weather.** Crews should confirm the type of aircraft the forecast turbulence applies to, or what type of aircraft reported the encounter, to gain a more accurate picture for their route of flight. Turbulence category charts are found in AFH 15-101, *Meteorological Techniques*, and turbulence reporting tables are found in the FIH. ***WARNING:*** Serious injury may occur if passengers do not have their seat belts fastened and the aircraft encounters moderate or severe turbulence.

6.15.2. Changed. If the aircraft is on a Red X, and qualified maintenance personnel are not available to clear it, the highest qualified FE on scene may, on behalf of the PIC, obtain authorization to sign off the Red X from the home station MXG/CC or designated representative

in accordance with T.O. 00-20-1. Other crew members are not authorized to clear a Red X.
6.16.3.3. En Route Aircraft Preflights. Pilots, FEs, CSOs, and FAs must be properly crew rested to accomplish aircraft preflights. **(T-3)** If the ground time exceeds 72 hours or if the aircraft has been left unattended, aircrews should accomplish an aircraft inspection/walk-around of the aircraft within 24 hours of scheduled departure, when practical. Anytime en route maintenance has been performed, the affected systems are pre-flighted and should be operationally checked as soon as possible, if practical. Thru-flight inspections are completed anytime a preflight is not required. FAs will accomplish a full preflight inspection out of home station and will complete a thru-flight inspection at en route RON locations. Pilots will ensure flight controls are checked, as needed, in accordance with the FCM. **(T-2)**
6.18.1. Added. Oxygen and Pressurization Requirements. In accordance with AFMAN 11-202V3, aircraft equipped with an Automatic Emergency Descent Mode (EDM) may operate above FL410 with oxygen immediately available to the pilots. Crews and planners will limit exposure to higher altitudes by planning all missions at or below FL410, unless approved by AS/DO.
6.18.2. Added. C-37 Oxygen Procedures. Crews may operate above FL410 up to FL500 with oxygen immediately available to both pilots under the following restrictions:
6.18.2.1. Added. Both pilots will occupy their duty positions.
6.18.2.2. Added. The EDM must be functional.
6.18.2.3. Added. The autopilot must be functional and engaged in each axis.
6.18.2.4. Added. The auto-throttles must be functional and engaged.
6.18.2.5. Added. Internal baggage door must remain closed.
6.18.2.6. Added. Flights over terrain greater than 13,000 feet MSL require one pilot to be continually on oxygen if the aircraft is above FL410.
6.18.3. Added. If all the above criteria cannot be met, one pilot will don an oxygen mask in accordance with AFMAN 11-202V3. Additionally, if the CABIN PRESSURE LOW warning message illuminates at or above FL400, activating the EDM, the crew will complete appropriate immediate actions in accordance with the QRH.
6.27.9.2. Changed. RNAV Instrument Approaches. All EA aircraft and certified aircrews are approved to perform RNAV approaches in accordance with AFMAN 11-202V3, **Table 5.4** in this manual, and FCM guidance. Aircraft require RNP as published on the IAP.
6.27.9.2.1. Changed. Lateral Navigation (LNAV) Approaches. LNAV approaches are non-precision approaches and may be flown IMC to a barometric LNAV minimum descent altitude (MDA). They may also be flown using Vertical Navigation (VNAV) procedures to a derived decision altitude (DDA) per the FCM.
6.27.9.3. Changed. Aircrews are authorized to fly RNAV (RNP), RNP AR approaches or A-RNP (RF legs) procedures as operationally approved, see **Table 5.4**. Both pilots must be trained and current in accordance with AFMAN 11-2EAV1 Ready Aircrew Program Tasking Memo (RTM) or under the direct supervision of a trained and current IP. **(T-3)** Only RNP AR procedures listed on the database approved report may be flown in IMC. **(T-2)** RNP AR procedures on operational missions should be flown to the highest RNP line of minimums suitable for existing weather conditions and should be flown with the flight director, autopilot, and auto-throttles engaged until past the FAP, the runway is in sight, and in position for a safe landing.
6.27.9.3.1. Added. C-37B and C-40 minimum final approach RNP is 0.10NM. Autopilot is required for RNP < 0.30NM.

6.27.9.3.2. Added. C-32 minimum final approach RNP is 0.30. RNP AR approaches requiring missed approach RNP < 1.0NM are prohibited.
6.27.9.3.3. Added. C-40 and C-32 require autopilot be engaged for RF legs.
6.27.14. Added. Cold Weather Altimeter Corrections. Use of the FMS or MAJCOM-approved EFB application to calculate and apply cold temperature altimeter corrections is approved for EA aircraft. **Note:** Some FMS systems temperature compensate for hot temperatures, this feature should not be used.
11.3.5. Added. Commercial Wideband Systems (CWS) and Global Wideband Systems (GWS). The CSO advises the user's communications team of any areas where CWS/GWS operations are prohibited. If required, the CSO contacts the vendor to secure temporary host nation agreements (HNA) to meet mission requirements. A temporary HNA must be secured for each country without a standing legal agreement for transmission. **(T-1)** Vendors request submission of temporary HNAs NLT 5 days prior to use to allow for adequate coordination time. Additionally, an approval is only valid for the duration specified by the vendor. If an HNA is not secured, the communications team will make every effort to plan the principal's communications requirements around the known outages.
11.5.7. Changed. Commercial Wideband and Global Wideband Operations. All EA aircraft have primary and alternate off-board communications systems. CWS and GWS override features will not be used without an approved HNA. **(T-1)** CSOs will ONLY utilize the HNA override when they have approval from the International Telecommunications Union, as coordinated through the vendor, prior to entering the affected country's airspace. **(T-1)**

BY ORDER OF THE
SECRETARY OF THE AIR FORCE

AIR FORCE MANUAL 11-2EA,
VOLUME 3

5 FEBRUARY 2020

Flying Operations

EXECUTIVE AIRLIFT (EA) OPERATIONS PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available for downloading or ordering on the e-Publishing website at **www.e-Publishing.af.mil**

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: AMC/A3V

Certified by: AF/A3T
(Maj Gen James A. Jacobson)

Supersedes: AFI11-2VIPV3, 12 February 2010

Pages: 113

This Air Force Manual (AFMAN) implements Air Force Policy Directive (AFPD) 11-2, *Aircraft Operations* and references Air Force Instruction (AFI) 11-202V3, *General Flight Rules*, as well as Air Force Tactics Techniques and Procedures (AFTTP) 3-3.C-37, *Combat Aircraft Fundamentals—C-37*, and AFTTP 3-3.C-32/C-40, *Combat Aircraft Fundamentals—C-40.* It provides guidance and procedures for the operation of C-32, C-37, C-40, and VC-25 aircraft to safely and successfully accomplish their worldwide mobility missions. This is a specialized publication intended for use by Airmen who have graduated from technical training related to this publication. This manual applies to all civilian employees and uniformed members of the Regular Air Force (RegAF), Air Force Reserve Command (AFRC), and Air National Guard (ANG). This manual requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by Title 5 United States Code, Section 552a, as amended and Executive Order 13478, Amendments to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers. The applicable System of Record Notice (SORN) F011 AF XO A, Aviation Resource Management Systems (ARMS) is available at: **http://dpclo.defense.gov/Privacy/SORNs.aspx**. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW AFMAN 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer 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 appropriate channels to AMC/A3VS (OSA/EA Branch). This publication may be supplemented at any level, but all direct supplements are 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 specified in **paragraph 1.5.2** The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This document has been substantially revised and requires complete review. This version incorporates changes mandated by the AMC/A3V standardized template and AFI 33-360, *Publications and Forms Management*. Major changes include: Addition of tier compliance items; Elimination of redundant or conflicting guidance contained in other regulations; Elimination of C-9 and C-20 References; Change of VIPSAM (Very Important Person/Special Air Missions) references to EA references; Merging of the Raven chapter into Aircraft Security chapter. Relocation of hazard avoidance, required advisory calls, stabilized approach, departure climb performance, weather alternate criteria, etc. to the AMC Supplement to the AFI 11-202V3.

Chapter 1

GENERAL INFORMATION

1.1. General. This AFMAN provides policy for operating the C-37, C-32, C-40 and VC-25 aircraft. It is an original source document for many areas but, for efficiency, restates minimal information found in Flight Crew Manuals (FCM), flight information publications (FLIP), and other Air Force directives and supplements. **Note:** FCM is a general term used to refer to applicable aircraft specific Technical Orders (T.O.) and manufacturer-provided publications.

1.1.1. When guidance in this manual conflicts with another basic/source document, that document takes precedence. For matters where this manual is the source document, waiver authority is in accordance with **paragraph 1.5** For matters where this manual repeats information in another document, follow waiver authority outlined in the basic/source document.

1.1.2. Unit commanders, transportation and base operations passenger manifesting agencies, and agency directors involved with or supporting C-37, C-32, C-40 and VC-25 operations are responsible to ensure current copies (electronic or hard copy) of this manual are available to appropriate personnel.

1.2. Applicability. This manual applies to individuals, aircrews, units and agencies operating C-37, C-32, C-40 and VC-25 aircraft performing Special Air Missions (SAM), EA Missions, Command Support Missions (CSM), Distinguished Visitor Guard Missions (DVG), Distinguished Visitor (DV) Missions including Presidential Airlift Missions tasked through the White House Military Office (WHMO), and DV Missions tasked through the Special Airlift Missions Administration (HAF/A3M CVAM), referred to as CVAM throughout this manual, Theater Air Mobility Divisions (AMD), and the Joint Operational Support Airlift Center (JOSAC). These operational missions are referred to collectively as EA Missions in this manual. Additionally, this manual applies to training, i.e., non-operational missions.

1.3. Key Words Explained.

1.3.1. “Will,” “shall,” and "must" indicate a mandatory requirement.

1.3.2. "Should" indicates a preferred, but not mandatory method of accomplishment.

1.3.3. "May" indicates an acceptable or suggested means of accomplishment.

1.3.4. "**Note**" indicates operating procedures, techniques, etc., considered essential to emphasize.

1.3.5. **“*CAUTION*”** indicates operating procedures, techniques, etc., which could result in damage to equipment if not carefully followed.

1.3.6. **“*WARNING*”** indicates operating procedures, techniques, etc., which could result in personal injury or loss of life if not carefully followed.

1.4. Roles and Responsibilities.

1.4.1. Major Command (MAJCOM). MAJCOMs will provide guidance and approve waivers (as required), where specified throughout this instruction.

1.4.2. Pilot in Command (PIC). The pilot in command PIC is the aircrew member designated by competent authority, regardless of rank, as being responsible for, and is the final authority for the operation of the aircraft. The PIC will ensure the aircraft is not operated in a careless, reckless, or irresponsible manner that could endanger life or property **(T-3)**. The PIC will ensure compliance with this publication and the following: **(T-3)**

1.4.2.1. HAF, MAJCOM, and Mission Design Series (MDS)-specific guidance

1.4.2.2. FLIP and Foreign Clearance Guide (FCG)

1.4.2.3. Air Traffic Control (ATC) clearances

1.4.2.4. Notices to Airmen (NOTAMs)

1.4.2.5. Aircraft T.O.; and,

1.4.2.6. Combatant Commander's instructions and other associated directives.

1.4.3. Aircrew. Individuals designated on the flight authorization are responsible to fulfill specific aeronautical tasks regarding operating USAF aircraft as specified in this AFMAN or by other competent, supplemental authority.

1.5. Deviations and Waivers. Do not deviate from policies in this manual except when the situation demands immediate action to ensure safety. The PIC is vested with ultimate mission authority and responsible for each course-of-action taken.

1.5.1. Deviations. The PIC shall report deviations or exceptions taken without a waiver through command channels to their Chief, Major Command (MAJCOM) Stan/Eval who in turn notifies AMC/A3V (Lead Command) as appropriate **(T-2)**.

1.5.2. Waiver Authorities. 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. See AFI 33-360 for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor's commander for non-tiered compliance items.

1.5.2.1. For flight operations conducted by the Air Forces Transportation (AFTRANS) component of United States Transportation Command (USTRANSCOM), the Tier 2 waiver authority is delegated to AMC A3/10.

1.5.2.2. Unless otherwise directed or provided for in this manual, the Presidential Airlift Group Commander (PAG/CC) is the waiver authority for Presidential Airlift Missions.

1.5.2.3. For all other operations, Tier 2 waiver authority is delegated to the MAJCOM/A3 by the respective MAJCOM/CC.

1.5.2.4. Due to the unique nature of Operational Support Airlift (OSA)/EA Missions, waiver authority for specific areas of this manual is delegated to the unit's wing, group (or equivalent), or squadron commander. Areas in which waiver authority is delegated to below wing level are specifically annotated in this manual. If a waiver is approved, the waiver authority informs the next higher level in the chain of command and the MAJCOM Stan/Eval with mission execution authority within 5 duty days.

1.5.3. Waiver Approval Process. For Tier 3 and below, units establish local procedures. Tier 2 and above waiver requests to AMC A3/10 will be requested on AF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*, through AMC/A3VS (**AMC.A37VS@us.af.mil**) **(T-1)**. CVAM-tasked missions under AMC A3/10 mission execution authority should use the following procedures:

1.5.3.1. Prior to execution, waivers are processed with an AF Form 679 with routing through AMC/A3V to AMC A3/10 for approval or further elevation.

1.5.3.2. In-execution missions, defined as within 24 hours of initial scheduled takeoff, waiver requests with the 618 Air Operations Center (AOC) are initiated with the procedure below; plan at least a 1-hour waiver process time.

1.5.3.2.1. The PIC, through locally established channels, calls 618 AOC and provides relevant details as required by AOC waiver checklist: 1) nature of request; 2) individual crew member qualification; 3) mission leg(s) requiring the waiver; 4) the governing directive of waiver request to include volume chapter, or paragraph.

1.5.3.2.2. AOC Duty Officer connects the PIC (or designated rep) to the on-call A3V SME. The SME recommendation will be documented in the waiver checklist.

1.5.3.2.3. AOC Duty Officer will then link the Senior with the respective Operations Group (OG)/CC (or designated rep) for a conference call on inputs and overall recommendation.

1.5.3.2.4. The Senior then links OG/CC (or designated rep) with AMC/A3X for waiver approval/disapproval or further elevation.

1.5.4. Operational Command Waiver Prerogative. MAJCOM commanders may unilaterally authorize any deviation from air traffic rules (this manual, the CFRs, etc.), without prior approval from the appropriate authority, if doing so is "essential to the defense of the United States" or for urgent military emergencies/contingencies when sufficient time to obtain prior approval is not available. For the purposes of this manual, flying MAJCOMS are: Air Combat Command (ACC), Air Education and Training Command (AETC), AFDW, Air Force Global Strike Command (AFGSC), Air Force Material Command (AFMC), AFRC, Air Force Special Operations Command (AFSOC), AMC, Defense Intelligence Agency (DIA), National Guard Bureau (NGB), Pacific Air Forces (PACAF), and United States Air Forces in Europe & Air Forces Africa (USAFE-AFAFRICA). Commanders, Air Force Forces (COMAFFORs) in the grade of O-8 or higher in Combatant Commands (CCMDs) are considered MAJCOM commanders only for forces under their operational control.

1.5.5. Waiver Periods. Per AFI 33-360, waivers are the expression of a specific commander accepting risk, Tier 1, 2, and 3 waivers automatically expire 90 days after a change of command unless the new commander renews the waiver.

1.5.5.1. Long-term waivers affect multiple aircraft/missions or theater-unique circumstances and are enduring in nature. List MAJCOM-approved waivers in the MAJCOM supplement (see **paragraph 1.6**). MAJCOM Stan/Eval send AMC/A3V (Lead Command) copies of MAJCOM-approved long-term waivers, as appropriate.

1.5.5.2. Short-term waivers are for specific missions or timeframes. Units shall use the waiver approval process in **paragraph 1.5.3.2** to secure approval for short-notice waivers **(T-1)**.

1.5.6. Nothing in this manual is to be interpreted as prohibiting a commander from withholding waiver authority, to include waiver authority delegated by this manual.

1.6. Supplement Procedures. This manual is a basic directive. Each user MAJCOM or operational theater may supplement this manual according to AFPD 11-2 and AFI 33-360. Stipulate unique MAJCOM procedures (cannot be less restrictive than this basic document) and publish MAJCOM-approved waivers in the MAJCOM supplement. Forward proposed supplements (attach AF Form 673, *Request to Issue Publication*) to AMC/A3V for mandatory coordination prior to approval.

1.7. Combined Command Operations. Plan and conduct all operations that include forces from multiple MAJCOMs using provisions in this manual. On-loan aircrew require owning MAJCOM A3 approval and advance training prior to performing MAJCOM/theater-unique procedures.

1.8. Aircrew Operational Reports. The reporting requirements in this manual are exempt from licensing in accordance with AFI 33-324, *The Air Force Information Collections and Reports Management Program.*

Chapter 2

COMMAND AND CONTROL

2.1. General. The Mobility Air Forces (MAF) command and control (C2) network consists of the following C2 centers: 618 AOC Tanker Airlift Control Center (TACC), Combined Air Operations Center (CAOC), PACAF or USAFE-AFAFRICA Air and Space Operations Centers, ANG Readiness Center, AFRC Command Center, theater AOCs, AMD, JOSAC, CVAM, Unit Command Posts (CP), Air Mobility Control Centers (AMCC), Contingency Response Groups (CRG), Contingency Response Elements (CRE), and Special Tactics Teams (STT). C2 centers are action agents for the MAF commander with execution authority (operational control) over mobility missions/forces.

2.2. Tasking Authority.

2.2.1. AMC. CVAM is responsible for tasking and scheduling CONUS-based EA Aircraft (C-32, C-37, C-40) other than Presidential Aircraft. All requirements involving movement of EA Aircraft are coordinated with CVAM, through unit C2 staff.

2.2.2. USAFE-AFAFRICA/PACAF. Tasking is in accordance with command/local supplements.

2.2.3. ANG/AFRC. CVAM serves as the conduit for tasking ANG and AFRC aircraft covered by this manual.

2.2.4. PAG/Presidential Support. WHMO is responsible for tasking Presidential Aircraft.

2.3. Execution Authority. OG/CCs serve as execution authority for local training missions and may approve transition training on positioning/de-positioning legs in coordination with the tasking agency (CVAM, AMD, MAJCOM A3, NGB A3, WHMO, etc.).

2.3.1. AMC. AMC A3/10 executes operational control (OPCON) of RegAF operational units of behalf of AMC/CC. CVAM is responsible for tasking and scheduling CONUS-based EA Aircraft (C-32, C-37, C-40) other than Presidential Aircraft. Unit C2 staff serve as the single point-of-contact (POC) within the wing for mission assignments from CVAM. Unit Current Operations or Squadron Operations Center (SOC) provide support to the wing commander to ensure missions are planned and executed as scheduled. During the mission planning phase, unit C2 staff serves as a liaison between the PIC and CVAM. During the execution phase, mission changes (to include change in itinerary city pair, date, or lead DV) are passed from the on-board contact to the PIC, who assesses impact to the crew (crew rest, crew duty day, weather, airfield suitability, etc.). PIC forwards the request to unit C2, then to CVAM for approval. PIC ensures the on-board contact is aware that final approval is from CVAM.

2.3.2. USAFE-AFAFRICA/PACAF. Execution approval is in accordance with command/local supplements.

2.3.3. ANG/AFRC. Mission validation from CVAM is received through NGB/A3XC and AFRC/A3OO for all ANG and AFRC aircraft covered by this manual.

2.3.4. PAG/Presidential Support. PAG/CC serves as mission execution authority for all missions conducted on Presidential Aircraft. Report non-operational PAG flights that are "atypical" in any respect, including those that have any unique aspects or that may attract

public or media interest, concern, or criticism, at least ten days in advance, if feasible, through the AMC chain of command and approved by AMC/CC or AMC/CV following coordination with AMC A3/10, public affairs (PA), and judge advocate (JA) as necessary **(T-1)**.

2.3.5. Off-Station Trainer (OST). The wing commander (WG/CC) is mission approval authority for unit OSTs (may be delegated no lower than the squadron commander (SQ/CC)). PAG/CC is approval authority for OSTs conducted on Presidential aircraft. Commanders carefully review proposed OST itineraries to weigh costs/benefits and minimize impact and maximize benefit to the unit's aircrew training program. Forward approved OST itineraries to the appropriate office (AMD, MAJCOM/A3T, NGB/A3XE, CVAM, or WHMO) before mission departure. PAG/CC forwards itineraries to both the 89AW/CC and WHMO Director. **Exception:** Approval authority for AFRC OSTs to other than approved local training bases is AFRC/A3O.

2.4. Mission Clearance Decision. The PIC has final responsibility for safe conduct of the mission and possesses full authority for all mission operational decisions. Conduct all flights with the priorities of **SAFETY** *first*, passenger **COMFORT** *second* and schedule **RELIABILITY** *third***.**

2.4.1. Mission Confirmation. Prior to the first leg of each mission, the PIC reviews the mission itinerary, landing locations, and other applicable mission requirements with the on-board contact and resolves any itinerary discrepancies before departure with the C2 agency and mission execution authority.

2.4.2. Reroutes and Diverts. PICs may reroute or divert their missions if required due to emergency situations, adverse weather, or other unforeseen circumstances. Attempt to coordinate mission diversions in advance with the C2 agency, tasking agency, and dispatch function (if applicable). Before directing an aircraft to an alternate airfield, the C2 agency should ensure the PIC is provided existing and forecast weather, NOTAM, Airfield Suitability and Restriction Report (ASRR) information, and airfield security/Phoenix Raven requirements. If the planned alternate becomes unsuitable while en route, the PIC coordinates with the C2 agency for other suitable alternates. The C2 agency will coordinate with customs and ground service agencies to prepare for arrival **(T-2)**. The PIC is the final authority on the suitability of an alternate airfield **(T-2)**. In the event of an airborne diversion, the PIC coordinates all required clearances, aircraft servicing requirements and aircraft security arrangements. Contract Dispatch/Flight Management, Unit CP, SOC and AMD assist the PIC when requested.

2.4.3. Mission Changes. Reroutes or other itinerary changes requested by the DV while en route are approved by the C2 agency and the mission tasking authority. If the itinerary changes by 1 hour or more, an itinerary change message must be coordinated by the aircrew/C2 to all affected agencies **(T-2)**. Itinerary changes of less than 1 hour that affect diplomatic clearance windows are coordinated with affected agencies.

2.5. Operational C2 Reporting. The PIC or Communications Systems Operator (CSO) will report standard Command MAF movement information (departure, arrival, or diversion) to appropriate C2 agencies **(T-1)**. The PIC will establish a POC with the local C2 agency, U.S. Embassy, U.S. Consulate, or fixed base operator (FBO) before entering crew rest **(T-1).**

2.5.1. Unusual Circumstances. PICs will immediately notify the C2 agency and tasking agency of any unusual occurrences **(T-1).** This includes maintenance problems, aircraft malfunctions, security and operational concerns. PICs should not wait until arrival to send message if in flight communications are available. However, non-secure communications media should not be used to transmit sensitive information.

2.5.2. Crew Location. PIC must notify the C2 agency of aircrew location and telephone number during each crew rest and any time the crew will leave the immediate vicinity of the aircraft **(T-3)**.

2.5.3. Commercial Dispatch Services (CDS)/Integrated Flight Management (IFM) Controlled Missions. The Dispatcher/Flight Managers (FM) are a C2 conduit authorized for EA missions. Contract Dispatchers/Flight Managers provide the PIC with flight plans, flight following, flight support and act as a C2 link to the C2 agency and ATC. Communication is accomplished via digital data link, radio, and landline connectivity between MAJCOM C2 with mission execution authority and the aircraft. For critical C2 communications, voice communications via Satellite Communications (SATCOM), Defense Switched Network (DSN), High Frequency (HF) communications, etc. are the primary method. The C2 agency will determine communications security (COMSEC) requirements for CLOSE HOLD missions **(T-1)**.

2.5.4. HF Communications. HF is a means of access to the military worldwide C2 network. During transoceanic flights, pilots will set one HF radio to the ATC frequency and use Selective Calling (SELCAL) if available **(T-1)**.

2.5.5. Electronics management. OG/CC shall develop procedures for management of flight crew mission computers/Electronic Flight Bags (EFBs) **(T-2)**. Aircrews will not leave government-issued electronics in unsecured locations in accordance with AMC's EFB Concept of Employment (CONEMP) policy **(T-2).**

2.5.6. AERO H-INMARSAT (SATCOM) voice is a backup for the controller to pilot datalink communications (CPDLC) and C2 communications (datalink and VHF/HF voice). Certain C2 agencies and ATC units may be selected in the AERO H/I directory. AERO H-INMARSAT voice may not be used for routine communications with ATC or for personal use. Also, due to its high cost, other communications options should be considered before using the satellite voice. It should be used for ATC communication only as a backup to CPDLC or as otherwise instructed. AERO H-INMARSAT voice may be required as a backup to CPDLC on certain routes.

2.5.7. DV Messages. On aircraft without CSOs, airborne unclassified messages originated by DV passengers may be transmitted at the discretion of the PIC.

2.6. Mission Commander (MC). For complex missions and multi-sortie events, OG/CC (or equivalent) may direct designation of a mission commander to act as overall authority for mission execution. When so designated, the mission commander exercises command authority over all mission personnel. Mission commanders will inform the appropriate mission execution authority through the appropriate C2 staffs of any factors that may affect mission accomplishment **(T-2)**.

2.6.1. Mission Planning. Unit C2 staff serve as the single POC within the wing for mission assignments from tasking agency. Unit Mission Operations, Current Operations and unit SOC ensure missions are planned and coordinated with the tasking, dispatch and flight management

agencies, as applicable. During the mission planning phase, these agencies are the link between the PIC, C2 agency and MAJCOM with mission execution authority.

2.6.2. For all multi-ship operations, (e.g., funeral runs and summits), OG/CC will ensure, through the unit C2, that an appropriate level of ground/flight supervision is provided for the entire mission **(T-2)**. Emphasis should be placed on who is the overall mission commander for the operation.

2.7. C2 Agency Telephone Numbers. Units should publish a listing of telephone numbers to assist crews in coordinating mission requirements through appropriate C2 agencies.

2.8. Close Watch Missions. All EA Missions are Close Watch missions and receive special C2 attention. PICs will promptly notify the appropriate C2 agency of delays, aborts, or other events that effect on-time departure and provide the local C2 (CP, flight management, dispatch, etc.) the estimated time in commission (ETIC), planned Estimated Time of Departure (ETD), and Estimated Time of Arrival (ETA) as soon as safety allows **(T-2)**. Local C2 agent will notify the C2 agency and mission execution authority when delays are anticipated or occur **(T-2)**.

2.9. En route Maintenance Support. PICs will promptly notify the appropriate C2 agency of any required en route maintenance requirements **(T-2)**. The C2 agency then notifies the mission execution authority when delays are anticipated or occur.

Chapter 3

AIRCREW MANAGEMENT

3.1. General. This chapter provides guiding principles to form/manage mobility aircrews. Commanders at all levels shall follow this policy to form aircrews and to develop aircrew-related work/rest schedules that optimize efficiency of mobility forces engaged in worldwide operations **(T-2)**.

3.2. Aircrew Complement. SQ/CCs shall form aircrews based on fragmentation order/mission directive, Crew Duty Time (CDT) and Flight Duty Period (FDP) requirements, aircrew member qualifications, and other constraints to safely accomplish the mission tasking **(T-2)**. **Table 3.1** summarizes crew position requirements for different aircraft and crew types.

3.2.1. The minimum aircrew member complement for a local training flight is aircraft dependent and contained in **Note 1** of **Table 3.1**.

Table 3.1. Aircrew Complement.

Crew	Basic					Augmented			
	C-37	**C-32**	**C-40**	**VC-25**	**SAP**	**C-32**	**C-40**	**VC-25**	**SAP**
Aircraft Commander	1	1	1	1		1	1	2	
Pilot	1	1	1	1		2	2	1	
Navigator *(Note 1)*				1				2	
Flight Engineer (FE)	1 *(Note 11)*			2 *(Note 10)*				2 *(Note 8)*	
Comm. Systems Operator (CSO) *(Note 1)*	1	2 *(Note 2)*	2 *(Note 2/3)*	4	2 *(Note 2)*	2	2 *(Note 2/3)*	4	3 *(Note 2)*
Flight Attendant (FA) *(Notes 1 & 7)*	1	5 *(Note 4/7)*	3 *(Note 5/7)*	10	3 *(Note 7)*	6 *(Note 7)*	4 *(Note 7)*	10	4 *(Note 7)*
Flying Crew Chief (FCC) *(Note 1)*		2 *(Note 6)*	2 *(Note 6)*	2		2 *(Note 6)*	2 *(Note 6)*	2	

Notes:
1. CSO(s), Navigator, and FA(s) are not required on local training missions, OSTs, and depot inputs/outputs. OG/CC may waive FCC(s) for stopover flights if equivalent maintenance support exists at stopover locations. OG/CC may waive CSO(s) on operational missions if the DV party does not require communications support; consideration has to be given to weapon and safe access. **Exception:** FA(s) are on board when passengers are carried. With SQ/CC approval, FCCs/Mission Essential Personnel (MEPs) (to include civilian maintenance personnel) familiar with egress procedures may be carried without FA(s) on board.

2. Minimum of 2 qualified CSOs or 1 Instructor CSO (IK) with 2 unqualified CSOs (UKs). Unit commanders will weigh the instructor and students' prior experience/proficiency when scheduling 1 IK with 2 UKs **(T-3)**. OG/CC may waive CSO requirements to 1 mission-qualified CSO (MK).

3. CSOs are not necessary for the C-40C.

4. Normal basic crew is 5 mission-qualified FAs (MTs) (one FA must be 1st FA certified). OG/CC may waive FA requirements to 3 MTs (one FA must be 1st FA certified) for a basic crew if there are no meal requirements.

5. Minimum of 3 MTs (one FA must be 1st FA certified). OG/CC may waive FA requirements to 2 MTs (one FA must be 1st FA certified) for a basic crew if there are no meal requirements.

6. For C-32, VC-25 and C-40B/C, the minimum required is 1 Lead FCC and 1 Assistant FCC. When required for FCC training, a third FCC may be added to the mission with prior coordination with the AS/DO. Additional seating will only be authorized for flight training FCCs **(T-3)**.

7. Unqualified FAs (UTs) are not considered part of the crew compliment. When scheduling an instructor FA (IT) with 2 students, they should be performing duties in proximity of each other.

8. Both are first flight engineer qualified or higher.

9. SQ/CC may increase the number of FAs depending on mission requirements.

10. One is first flight engineer qualified or higher.

11. For locals, SQ/DO may authorize a fully qualified pilot to occupy the flight engineer station during any phase of operation. In this case, a qualified FE (MF) will perform preflight duties and need not fly on the local **(T-3)**.

Exception: The PAG/CC will determine crew complement on Presidential Airlift Missions **(T-3)**.

3.2.2. Augmented crews are necessary when a mission cannot be completed within a basic FDP. OG/CC is the waiver authority for additional crewmembers to join the mission en route for augmentation. If augmentees are added to the crew, the crew's FDP will be computed based on the FDP of the most limited person **(T-3)**. Augmentees must be current and qualified in the aircraft **(T-3)**. **Exception:** Crewmembers in mission qualification training under the supervision of an instructor may count for augmentation purposes. For pilots, this is limited to FP Phase II training, provided the FP is current and qualified. In all other cases, non-mission ready (NMR) pilots requiring instructor supervision may augment provided that of the other two pilots, one is a fully qualified, Mission Ready (MR) IP and the other is a fully qualified, MR MP.

3.2.3. For all passenger missions, do not schedule crew complements that exceed the maximum seating capacity specified for a particular aircraft configuration **(T-3)**. If not specified, do not schedule additional crewmembers that will displace scheduled passengers **(T-3)**. Exceptions to this policy are granted by unit C2 in coordination with mission tasking authority concurrence. ANG and AFRC coordinate passenger manifests with NGB/A3XC, AFRC/A3OO, CVAM or JOSAC, as appropriate. USAFE-AFAFRICA/PACAF coordinate

passenger manifests with AMD. **Note:** C-37 passenger loads are limited to 12 passengers unless otherwise approved by mission tasking authority.

3.2.3.1. FA/CSO Crew Complements on Organic MAF DV missions. For planning, the normal FA/CSO crew complement for basic and augmented FDP organic AMC missions includes 3 FAs and, if required, 2 CSOs. At least one FA is 1st FA certified on an aircraft and at least one CSO will be MK qualified **(T-3)**. All others are at least MT or MK qualified **(T-3)**. The organic AMC (KC-10/C-17/KC-135) OG/CC, through unit C2, will determine the actual FA/CSO crew complement (increased or decreased) based upon passenger loads, configuration, and mission requirements **(T-3)**. The organic AMC (KC-10/C-17/KC-135) OG/CC will maintain waiver authority over CSO/FA crew complements on all organic AMC missions **(T-2)**. FAs/CSOs follow Crew Duty time (CDT)/FDP and scheduling restrictions in accordance with this manual, AFI 11-202V3, and MAJCOM Supplements.

3.2.3.2. On CVAM-directed missions, CVAM is the approval authority for additional crewmembers. This authority may be delegated to the SQ/DO or designated representative for certain passenger loads and certain DVs. USAFE-AFAFRICA and PACAF units will coordinate with the DV and C2 for additional crewmember requests **(T-2)**.

3.2.4. The PAG/CC will determine crew complement on Presidential Airlift Missions **(T-3)**.

3.3. Aircrew Member Qualification. An aircrew member will be qualified, or in qualification training, to perform duties as a primary aircrew member **(T-2)**.

3.3.1. Senior Officer Flying. Senior officers (colonel selects and above) assigned or attached to operational EA squadrons, fully qualified in the MDS-specific aircraft and crew position, maintaining basic mission capable (BMC) or MR status, without reduced requirements or Form 8 restrictions are authorized to perform pilot duties on EA aircraft (e.g., PAG/CC, PAG/CD, or OG/CD).

3.3.2. Senior Leader Flying. The Chairman of the Joint Chiefs of Staff, the Vice Chairman of the Joint Chiefs of Staff, the Air Force Chief of Staff, the Air Force Vice Chief of Staff, Combatant Commanders, MAJCOM Commanders/Vice Commanders, Wing/CC/CV and OG/CC are the only senior officers authorized to perform pilot duties on EA Aircraft except as outlined in **paragraph 3.3.1** They must be rated Air Force pilots **(T-1)**. Senior leaders who complete a Senior Officer Course (culminating in a restricted AF Form 8, *Certificate of Aircrew Qualification*) or orientation for a Senior Staff Familiarization flight may occupy a primary crew position when under direct instructor supervision. Refer to AFI 11-401, *Aviation Management*, for procedures and requirements governing senior leader flying. Senior officers who complete the Senior Officer Course must adhere to the restrictions listed in their AF Form 8 **(T-2)**.

3.3.2.1. Crewmembers who complete the Senior Officer Course will log "FP/FN" for Flight Authorization Duty Code on the Air Force Technical Order (AFTO) Form 781, *ARMS Aircrew/Mission Flight Data Document* **(T-2)**.

3.3.2.2. Crewmembers who complete a Senior Staff Familiarization flight will log "OP/ON" for Flight Authorization Duty Code on the AFTO Form 781 **(T-2)**. Refer to AFI 11-401 and AFMAN 11-202V1, *Aircrew Training*.

3.4. Pilots. An instructor pilot (IP) must supervise non-current or unqualified pilots regaining currency or qualification (direct IP supervision during critical phases of flight) **(T-2).**

3.4.1. Missions with Passengers. To occupy a pilot's seat with passengers, pilots must have a current AF Form 8 for the MDS-specific aircraft **(T-2)**.

3.4.1.1. A non-current but qualified pilot or a qualified NMR pilot may fly with passengers on board if under direct IP supervision.

3.4.1.2. A qualified aircraft commander (AC) upgrade candidate on an initial or requalification operational mission evaluation (OME) and a qualified pilot (FP or higher) may occupy either pilot seat with passengers onboard, if under supervision of a qualified evaluator pilot (EP) during all phases of flight.

3.4.1.3. A basic qualified (valid AF Form 8 in MDS-specific aircraft) senior officer who has completed a Senior Officer Course may occupy either pilot seat with passengers on-board with another qualified pilot (non-critical phases of flight) or under direct IP supervision during critical phases of flight.

3.4.2. See **Chapter 8** for upgrade training, touch-and-go, and simulated emergency procedures guidance.

3.5. Navigators. PAG/CC determines navigator crew complement on all flights.

3.6. Flight Engineers, Communications System Operators, Flight Attendants. A non-current or unqualified FE, CSO, or FA may serve as a primary aircrew member on any mission when supervised by a current and qualified instructor or flight examiner in their respective crew position (direct supervision for critical phases of flight).

3.7. Flight Duty Period. A PIC with a basic crew may seek OG/CC approval to extend the tactical duty day by as much as 2 hours to a maximum of 16 hours. Flight examiners administering evaluations will not be considered part of the augmented crew complement **(T-3)**.

3.8. Off-station/En route Crew Rest. The minimum en route crew rest period is 12 hours before legal for alert or scheduled report time when self-alerting. Except during emergencies or as authorized by unit with mission execution authority, C2 agents are not to disturb an aircrew member in crew rest. When necessary to interrupt aircrew members' crew rest period, re-enter that aircrew in a subsequent minimum 12 hour crew rest period after they complete official duties.

3.9. Post-Mission Crew Rest (PMCR). For HHQ and attached aircrew members, PMCR begins upon return from TDY to their home base, not the base they are attached to or operating from.

3.10. Off-station/En route Ground Time. A minimum 15-hour ground time between block-in to block-out should be planned. OG/CC is waiver authority for missions in planning phase to no less than 12 hours from block-in to block-out. For missions in execution, the PIC may waive to no less than 12 hours from block-in to block-out to accommodate special CVAM/AMD/DV requests, provided all AFI 11-202V3 restrictions are complied with. Do not execute more than 3 consecutive 12-hour to 12-hour crew rests **(T-3)**. **Note:** PAG/CC is the waiver authority for Presidential Airlift Missions.

3.10.1. Before reducing normal ground time consider mission preparation time and other factors peculiar to the mission. OG/CC is the waiver authority for reduced crew rest to less than 12 hours from block-in to block-out. It is not to be used for DV scheduling convenience.

3.10.2. Ground time reduction will ensure aircrew is afforded 8 hours of uninterrupted sleep plus adequate time for transportation and meals **(T-1)**.

3.10.3. PIC will notify the tasking agency and C2 of all modifications to ground time **(T-3)**.

3.10.4. Flying Crew Chief (FCC) and Phoenix Raven work-rest cycles are governed by AFI 21-101, *Aircraft Equipment Maintenance Management*, AFI 31-101, *Integrated Defense*, approved supplements, and **Chapters 7** and **13** of this manual, respectively. PAG/CC determines FCC and Raven work-rest cycle and duty day for PAG missions.

3.11. Alerting Procedures. Self-alerting procedures are normally used for all EA Missions. The PIC sets the crew reporting time and location. Home-station departure show time is normally 2+00 prior to scheduled takeoff time. PICs may change the home station reporting time as necessary if approved by unit Current Operations or SOC. While off station, the time the first crew member arrives at the aircraft, base ops, or FBO will be considered the report time and will be used to begin CDT/FDP. Normally, off-station crew reporting time is 2 hours prior to scheduled departure time. The PIC may establish reporting times as required for mission accomplishment (e.g. scheduled mission departure time changes, de-icing, aircraft pre-positioning, customs, etc.).

3.12. Stage Management. EA missions may require stage crews. When a stage crew is needed due to flight duty period limitations, maintenance difficulties, etc., commanders ensure unit validates the requirement and assists in determining transportation requirements, in place times, mission-specific details, etc.

3.13. Wing Standby/Alert Duty. OG/CCs and unit C2 with mission execution authority determine standby/alert crew status and initiate scheduling and per-departure procedures as required in **paragraph 6.35** The maximum time an aircrew member may remain on wing standby/alert (soft alert) is 72 hours **(T-2).**

3.13.1. EA standby/alert crews should perform standby/alert duty at home. Alert crewmembers quartered off base may be required to perform alert duty on base if travel time between quarters and the alert aircraft jeopardizes alert reaction time. Assigning quarters on base must be coordinated through the SQ/DO **(T-3)**.

3.13.2. The primary method of contact is the telephone. Commanders ensure alerting organization has an operable and reachable contact phone number **(T-1)**.

3.13.3. Commanders will not require crewmembers to perform any other duties during standby/alert **(T-1)**. At their discretion, standby/alert crewmembers are permitted to perform up to 4 hours of on-base duties each 24-hour standby/alert period; they are not limited to staying at home for their entire duty period. Although not limited to staying at home, standby/alert aircrew must be capable of proceeding directly to the unit immediately upon notification (publish response times in unit supplements/operating instructions) **(T-3)**.

3.13.4. Schedulers ensure standby/alert crews have the most flexible crew complement for the maximum applicable CDT/FDP to include an Augmented FDP. Notify unit C2 and the tasking authority if any part of a crew complement cannot be manned at the applicable manning level.

3.13.5. The tasking authority (through unit C2), determines the aircraft alert requirements unless previously specified. Normal alert response time for EA aircraft is 3 hours. CVAM may lower the response time to 2 hours (alert to takeoff) depending on world events. Tasked units will ensure an alert crew is available for that MDS **(T-3)**.

3.13.6. Standby/alert crewmembers will not fly local missions while on alert, but may immediately upon expiration of alert period. OG/CC or equivalent (with tasking authority/C2 concurrence) may waive this requirement. EA or contingency missions may be flown following the local if crew rest and CDT/FDP limitations per this manual are followed **(T-3)**.

3.13.7. Post standby/alert crew rest waiver procedures are the same as PMCR. On completion of standby/alert duty, aircrew members may be dispatched on a mission.

3.13.8. Standby/alert duty and pre-departure crew rest may be concurrent if notification is provided at least 12 hours prior to mission reporting.

3.13.8.1. If started, complete post-standby/alert crew rest before the start of pre-departure crew rest **(T-3)**.

3.13.8.2. If an aircrew member is dispatched on a mission, PMCR is computed from the time the member assumed alert **(T-3)**.

3.14. Orientation and Incentive Flights. Refer to DoDI 4515.13, *Air Transportation Eligibility*, AFI 11-401, and the appropriate MAJCOM supplement.

Chapter 4

AIRCRAFT OPERATING RESTRICTIONS

4.1. Objective. Redundant systems may allow crews to safely perform some missions when a component/system is degraded. The PIC is the final authority in determining the overall suitability of an aircraft for the mission and ensures a detailed explanation of the discrepancy is entered in the AFTO Form 781A, *Maintenance Discrepancy and Work Document*. Use the following maintenance identifiers to effectively communicate aircraft status **(T-3)**:

4.1.1. Mission Essential (ME). The PIC designates an item, system or subsystem component essential for safe aircraft operation as ME.

4.1.2. Mission Contributing (MC). The PIC designates an item, system or subsystem component, which is not currently essential for safe aircraft operation as MC. These discrepancies should be cleared at the earliest opportunity. If circumstances change or mission safety would be compromised, re-designate as ME **(T-3)**. Do not delay a mission to clear a MC discrepancy.

4.1.3. Open Item (OI). The PIC designates discrepancies not expected to adversely impact the current mission or any subsequent mission as an OI. These items are normally cleared at home station.

4.2. Minimum Equipment List (MEL) Policy. The MEL is a pre-launch document that lists the minimum equipment/systems to operate the aircraft. It is impractical to prepare a list that would anticipate all possible combinations of equipment malfunctions and contingent circumstances. Consider equipment/systems with no listed exceptions as grounding items.

4.2.1. Due to the multiple OSA/EA aircraft covered by this manual, aircraft-specific MELs are not published in this manual. PICs refer to their standalone aircraft MEL or Federal Aviation Administration (FAA)-approved Master Minimum Equipment List (MMEL) for inoperative systems before dispatch. For aircraft that have multiple FAA-approved MMELs issued, use the FAA Part 91 MMEL.

4.2.2. Waivers to operate with degraded equipment are granted by the OG/CC (or equivalent) on a case-by-case basis. The PIC determines the need for a waiver after coordinating with the lowest practical level of command. A PIC who accepts an aircraft with degraded equipment/systems is not committed to subsequent operations with the same degraded equipment. PICs are not committed to operations with degraded equipment accepted by another PIC.

4.2.3. The PIC accounts for the possibility of additional failures during continued operation with inoperative systems or components. The MEL is not intended for continued operation over an indefinite period with systems/subsystems inoperative.

4.2.4. PICs operating with waiver(s) for degraded equipment will coordinate mission requirements (e.g., revised departure times, fuel requirements, maintenance requirements, etc.) with the controlling C2 agency and/or flight manager **(T-3)**.

4.2.5. The PIC ensures installation of all emergency equipment unless specifically exempted by mission requirements/directives **(T-3)**.

4.2.6. If beyond C2 communication capability or when it is necessary to protect the crew or aircraft from a situation not covered by this chapter and immediate action is required, the PIC may deviate according to **paragraph 1.5** Report deviations (without waiver) through channels to MAJCOM/A3 within 48-hours **(T-1)**. OG/CCs submit a follow-up written report upon request.

4.2.7. Maintenance Delay. If a maintenance condition exists that prevents or delays an EA departure, the PIC advises C2 centers immediately. Depending on DV desires and the urgency of their schedule, the PIC, the on-board contact and unit C2 coordinates a new departure time. For CVAM-tasked missions, AF/CVAM, unit C2, and/or MAJCOM C2 with mission execution authority, in conjunction with the PIC may assist in arranging substitute transportation, if available, and acceptable to the DV.

4.3. MEL Waivers, Engineering Dispositions (ED), and Airworthiness Directives (AD). A PIC prepared to operate with a degraded MEL item (exceeding what is allowed for dispatch) will request a waiver in accordance with **paragraph 1.5.3**. OG/CC is the waiver authority for all missions. Deviations must be approved by OG/CC (or equivalent) prior to departure **(T-3)**. PAG/CC is the waiver authority for Presidential Airlift Missions.

4.3.1. The PIC determines governing source document (e.g. AFI, AFMAN, Flight Manual, Maintenance T.O., etc.) to ascertain the waiver authority for other-than-MEL waivers. Use C2 channels to notify the appropriate waiver authority in accordance with **paragraph 1.5.3**. Waivers of this nature may require an extended response time.

4.3.2. In accordance with AFI 11-215, *Flight Manuals Program*, engineering dispositions (ED) are requested when aircraft are damaged and/or established maintenance technical order procedures cannot be followed or do not exist. The on-site maintenance authority is responsible for requesting EDs. Most EDs allow maintenance to repair the aircraft and return it to unrestricted status; dispositions of this nature do not concern aircrews. However, EDs affecting aircrew operations require MEL waiver authority approval. All ED information shall be added into the aircraft maintenance forms (AFTO Form 781, *ARMS Flight and Mission Data Report*,) **(T-1)**.

4.3.2.1. PICs will coordinate dispositions containing flight restrictions, prohibitions, additional operating limits, or modified/nonstandard operating procedures with the appropriate MEL waiver authority. **(T-1)**.

4.3.2.2. PICs will not accept dispositions appearing incomplete, in error, or unsafe **(T-2)**. Prior to rejecting a disposition, the PIC will contact the appropriate MEL waiver authority **(T-2)**. The waiver authority will attempt to resolve the issue **(T-1)**. **Note:** Deviations from the flight manual requires approval in accordance with the flight manual.

4.3.3. ADs are legally enforceable rules issued by the FAA. They are issued when an unsafe condition exists in a product and that condition is likely to exist or develop in other products of the same type design. ADs apply to aircraft maintained using civil standards in accordance with AFPD 62-6, *USAF Airworthiness*.

4.3.3.1. The aircraft's Systems Group (SG) is responsible for bringing ADs to the attention of the appropriate maintenance and operations units. When an AD is released the aircraft shall be in compliance with the directive **(T-2)**.

4.3.3.2. PICs shall coordinate new ADs containing flight restrictions, prohibitions, additional operating limits, etc. with the appropriate MEL waiver authority. **(T-2)**.

4.4. Technical Assistance Service. The PIC may request (at any time in the decision process) technical support from their home unit Stan/Eval, MAJCOM/A3 staff, and maintenance representatives to include commercial derivative engineering support.

4.4.1. BOEING SUPPORT: 1-800-721-0422

4.4.2. GULFSTREAM SUPPORT: 1-800-810-GULF (4853) Press 9 for In-Flight Emergencies

4.5. One-Time Flights. If an aircraft has a condition beyond the immediate or final repair capability of an en route facility, temporary repairs may be made to allow a one-time flight to a pre-selected facility capable of final repair. Reference T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies and Procedures,* for downgrade procedures.

4.5.1. After the maintenance release is obtained, PICs will send their recommendations to C2 centers **(T-3)**.

4.5.2. MAJCOM/A3/DO with mission execution authority is approval authority for one-time flight conditions with passengers on board. OG/CC is approval authority for one-time, flight conditions without passengers on board. Operations Group Stan/Eval (OGV) notifies parent MAJCOM Stan/Eval of actions at the earliest opportunity **(T-1)**.

Chapter 5

OPERATIONAL PROCEDURES

5.1. Checklists. Fanfold Checklists, Flight Operations Manuals (FOM) and Quick Reaction Checklists (QRC) are authorized. AF Forms 847 are processed through MAJCOM Stan/Eval to AMC Stan/Eval (Lead Command) for revision approval.

5.2. Duty Station. Only one pilot or the FE may be absent from their duty station at a time, except as required when entering or exiting the flight deck. **(C-37)** The FE duty station is the jump seat.

5.3. Takeoff and Landing Policy. An aircraft commander, or above, occupies either the left or the right seat during all takeoffs and landings **(T-2)**. The designated PIC (A-code) is not required to occupy a primary position, but will be on the flight deck for all critical phases of flight **(T-2)**.

5.3.1. Conditions permitting, a qualified and current pilot certified as an AC, IP, or EP accomplishes all takeoffs, approaches, and landings from the left seat under the following conditions:

5.3.1.1. Aircraft emergencies, unless conditions prevent compliance **(T-2)**.

5.3.1.2. When making an actual Category (CAT) II or III ILS approach. If the weather forecast indicates the chance for CAT II/III operations, the PIC should consider seat rotation changes **(T-2)**.

5.3.1.3. When operating to or from airfields requiring airfield-related waivers **(T-1)**. **Exception:** On OMEs transiting an airfield requiring a waiver, the OG/CC determines if an AC is required for the landing, taxi, or takeoff. This does not apply to airfield suitability waivers (weight bearing capacity, tire pressure, pavement conditions, etc.) **(T-1)**.

5.3.2. Only missions where the individual is certified as an AC and designated as PIC on the flight orders are credited as missions in command **(T-2)**.

5.3.3. FPs may accomplish takeoffs and landings on any mission at the discretion of the PIC while adhering to the guidance in **paragraph 5.3.1** **(T-3)**. **Exception:** The PAG/CC will determine takeoff and landing policy for designated Presidential Aircraft.

5.4. Landing Gear and Flap Operating Policy. Unless the FCM directs otherwise, the pilot flying normally commands gear and flap operations and the pilot monitoring normally activates the systems. The pilot monitoring will acknowledge the command prior to system activation **(T-2)**. Exceptions should be thoroughly briefed beforehand.

5.5. Outside Observer/Jump Seat Duties. Available crewmembers will assist in clearing during taxi operations and any time the aircraft is below 10,000 feet above ground level (AGL) **(T-2)**. When possible, the jump seat should be occupied prior to the approach briefing.

5.6. Seat Belts.

5.6.1. During the descent, the fasten seat belt sign should be turned on at no later than 10,000 feet AGL to alert the cabin crew that the passengers need to be seated for landing.

5.6.2. All crewmembers will have seat belts and shoulder harnesses fastened during taxi, takeoff, and landing (unless crew duties do not permit) **(T-2)**. Crewmembers performing instructor, instructor candidate, or flight examiner duties are exempt from the seat belt

requirements if not occupying a primary crew position; however, they will have a seat available with an operable seat belt **(T-2)**.

5.7. Aircraft Lighting. Crews ensure aircraft lighting is in accordance with AFI 11-202V3, AFMAN 11-218, *Aircraft Operations and Movement on the Ground*, local directives, and applicable FCMs.

5.8. Portable Electronic Device (PED) Usage on OSA/EA Assets. The PIC is the final authority for the use of any PED and the use of any wireless equipment onboard the aircraft. Travel teams are responsible for providing their own AMC-approved devices while onboard EA assets and operating them in accordance with this manual. Any reference to wireless in these procedures is restricted to AMC/A3V-approved devices.

5.8.1. Aircrew performing primary duties will not utilize personally-owned PEDs during critical phases of flight to include engine start, taxi, takeoff, landing, or flight operations under 10,000 feet AGL **(T-2)**. The use of PEDs to complete aircrew duties may be necessary under certain circumstances, but at no time will compromise safety of flight **(T-2)**.

5.8.2. Passengers may use personal or government-issued PEDs during any phase of flight provided all laptops and any PED greater than two pounds are stored for critical phases of flight **(T-2)**. **Exception:** The primary DV may use a laptop during taxi, takeoff, and landing using the provisions in **paragraph 6.23.1**

5.9. Transportation of Pets. Transporting pets (dogs and cats) on aircraft is coordinated through unit OG/CC (or equivalent) for approval with C2 agencies (CVAM, AMD, etc.). Other pets or animals are normally prohibited. Waiver authority is the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD AT&L). Units are responsible for developing guidance regarding handling of pets during flight.

5.10. Runway, Taxiway, and Airfield Requirements.

Table 5.1. Minimum Runway Length.

MDS Aircraft Type	Minimum Runway Length
C-32/C-37/C-40	5000 feet or 1525 meters
VC-25	See Note
Note: PAG/CC determines runway minimums for Presidential Airlift Missions, regardless of aircraft.	

5.10.1. If operationally necessary, the unit OG/CC may approve use of runways shorter than specified. Approval requires careful evaluation of aircraft and crew capabilities. If operations are approved, a qualified and current AC, IP, or EP makes the landing and takeoff from the left seat. OGVs inform MAJCOM/Stan Eval of all OG/CC waivers granted.

5.10.2. Do not takeoff if computed critical field length exceeds runway available (Use the greater of accelerate-and-stop or accelerate-and-go distance for the C-37) **(T-1)**. Intersection departures where less than 5000 feet of runway length is available are prohibited **(T-1)**.

5.10.3. Minimum runway for a normal landing distance is based on a threshold crossing height of 50 feet.

5.10.3.1. Compute landing distance with no-reverse thrust **(T-1)**. **Exception:** C-37B landing distance on wet or contaminated runways will be computed using maximum reverse thrust.

5.10.3.2. **(C-37)** Minimum runway may be reduced to landing ground roll plus 1000' when approved by OG/CC. Reported weather must be equal to or greater than circling minimums. Pilots should plan to touchdown approximately 500 feet from the approach end of the runway and a normal visual glide path will be used (i.e. 2.5 to 3 degrees) **(T-2).**

Table 5.2. Minimum Runway and Taxiway Width Requirements.

MDS Aircraft Type	Minimum Runway Width	Minimum Taxiway Width	Minimum Width 180 Degree Turn
C-37 (Note 4, 5)	98 feet (30 meters)	25 feet (8 meters) (Notes 1 & 2)	75 feet (23 meters)
C-32/C-40 (Note 5)	98 feet (30 Meters)	49 feet (15 Meters) (Note 3)	120 feet (C-32) 75 feet (C-40)
VC-25	See Note 5	See Note 5	See Note 5

Notes:
1. For 90 degree turns to/from a surface less than 35 feet, but no less than 25 feet, the other surface is a minimum width of 55 feet. Offset to the larger surface to keep on pavement.
2. Minimum taxiway width for 90 degree turns (with fillets) is from a 35 foot to 35 foot taxiway. Even when fillets are available, these turns may not be possible in the given taxiway surface. Deplane a crewmember if in doubt to marshal the turn.
3. C-32 aircraft require fillets when turning from one 49 foot (15 meter) wide taxiway to another.
4. OG/CC may waive runway width to no lower than 75 feet (23 meters).
5. PAG/CC determines minimums for Presidential Airlift Missions.

5.10.4. Other Airfield Requirements. Consult with MAJCOM Airfield Suitability Branch for suitability guidance **(T-3)**. Airfield certification requirements are detailed in the ASRR.

5.11. Runway Assessment and Condition Reporting, Runway Condition Reading (RCR), and Runway Surface Condition (RSC). Federally obligated airports report runway conditions using the Runway Condition Assessment Matrix (RCAM). Numerical Runway Condition Codes (RwyCC) have replaced RCR, RSC, and Mu readings at these airfields and are reported by airfield operations via field condition (FICON) NOTAM when applicable (>25% overall surface contamination). Regardless of the method of runway surface condition reporting, comply with latest FCM guidance when calculating takeoff and landing data (TOLD).

5.11.1. USAF aircrew shall continue to utilize the runway condition reading (RCR) provided at USAF airfields **(T-0)**. Crews may use the RCAM provided in the Flight Information Handbook (FIH) to convert a reported RCR to RwyCC for use in FCM TOLD calculations. C-32 and C-40 crews utilize the matrix provided in the FOM/FCIF to convert RCR to RwyCC for TOLD calculations.

5.11.2. When operating from airports reporting RwyCC and FCM guidance does not utilize the new RwyCCs, aircrew will:

5.11.2.1. Use the RCAM provided in the FIH to associate RwyCC and/or Pilot Reported Braking Action (PRBA) with RCR and/or runway surface condition anytime an RwyCC or PRBA is reported to the pilot **(T-2)**.

5.11.2.2. Use the most conservative RCR value for all runway segments in either the RCAM, FCM, or FOM **(T-2)**.

5.11.3. Aircrew should use the new PRBA terms defined in the RCAM when providing a pilot report. (Good, Good to Medium, Medium, Medium to Poor, Poor, or Nil)

5.11.4. C-37B operations on wet or contaminated runways require a correction to effective runway length to ensure a screen height of 35 feet is met on takeoff with an engine failure. The PIC will ensure applicable performance data is referenced when operating on wet or contaminated runways **(T-3)**.

5.12. Wind Restrictions. Consider airfields unusable for takeoff and landing when winds (including gusts) are greater than established in **Table 5.3**

Table 5.3. Wind Restrictions.

MDS Aircraft	Maximum Wind Any Direction	Maximum Tailwind Component	Maximum Crosswind Component
C-37/VC-25	50 knots	10 knots	FCM limit
C-32/C-40	50 knots	15 knots	FCM limit

5.12.1. The maximum crosswind component during manual (autopilot off) CAT II and CAT III ILS approaches (in actual CAT II/III conditions) is 10 knots. The 10-knot crosswind limit applies to manual landings when the PF will transition to visual landing cues below CAT I ILS minimums **(T-2)**. When conducting a manual landing and transitioning to visual landing cues at/above CAT I ILS minimums, use FCM crosswind limits.

5.12.2. The maximum crosswind component for VC-25 (autopilot on) CAT II and CAT III approaches is 15 knots.

5.12.3. The maximum crosswind component for (autoland) CAT II and CAT III approaches is 25 knots (C-32) and 20 knots (C-40).

5.12.4. The maximum crosswind component for C-37 (autopilot on) CAT II approaches is 15 knots.

5.12.5. Reference **Chapter 8** for CAT II and CAT III training restrictions.

5.13. Aircraft Taxi and Taxi Obstruction Clearance Criteria and Foreign Object Damage (FOD) Avoidance.

5.13.1. In accordance with AFMAN 11-218, aircraft may taxi without marshallers/wing walkers at home station along fixed taxi lines which have been measured to ensure a minimum of 10 feet clearance from any obstruction and the obstruction is permanent. Adjacent aircraft are also considered a permanent obstruction, provided the aircraft is parked properly in its designated spot and is not moving. Aerospace Ground Equipment (AGE) and vehicles are considered a permanent obstruction, provided it is parked entirely within a designated area. Areas are designated by permanent markings such as painted boxes or lines on the ramp or another suitable means.

5.13.2. When taxi clearance is doubtful, use one or more wing walkers. If wing walkers are unavailable, deplane one or more crewmembers to maintain obstruction clearance and provide marshalling using AFMAN 11-218 signals. Use wing walkers, deplaned crewmembers or a crewmember on interphone positioned at the cabin door(s) to act as an observer while maneuvering on narrow taxiways **(T-3)**. Observers should be in a position to see wing walkers at all times (through door or windows) and communicate with the pilot.

5.13.3. Make every effort to minimize the potential for engine FOD. Crews should:

5.13.3.1. Carefully review airfield layout paying particular attention to taxi routes, turn requirements and areas for potential FOD.

5.13.3.2. Minimize power settings during all taxi operations.

5.13.3.3. Where possible, avoid 180° turns. If it becomes necessary to accomplish a 180° turn on a narrow runway, the turn should be accomplished at an intersection of a link taxiway or at a designated turn around pad.

5.13.3.4. Where possible, avoid taxi operations that position an engine over an unprepared or un-swept surface. If unavoidable, leave the engine in idle (to the maximum extent possible) until the engine is over an improved surface.

5.14. Bird/Wildlife Aircraft Strike Hazard (BASH) Programs and Bird Watch Condition (BWC). PAG/CC is waiver authority for Presidential Airlift Missions scheduling during BASH Phase II and Presidential Airlift Missions operating with BWC MODERATE or SEVERE.

5.15. Traffic Alerting and Collision Avoidance System (TCAS). The PIC will document all pertinent information surrounding an resolution advisory (RA) event on an AF Form 651, *Hazardous Air Traffic Report (HATR),* and submit to the nearest Air Force Safety Office **(T-2)**. The investigating Safety Office determines if the event is, in fact, reportable and notifies the individual or unit submitting the HATR of this determination and/or pending actions.

5.16. Reduced Power Takeoffs. Accomplish in accordance with applicable FCM.

5.17. Hand-held GPS. All EA Aircraft have integrated GPS. As a backup, aircrews are authorized to carry an approved handheld GPS unit for additional situational awareness. Use of a handheld GPS unit as an instrument flight rules (IFR) navigation aid is prohibited. **Note:** GPS receiver integration with EFB will be in accordance with the AMC EFB CONEMP **(T-1)**.

5.17.1. Before using the hand-held GPS in-flight, aircrew members must receive training and aircraft is capable of supporting the hand-held GPS equipment **(T-2)**.

5.17.2. Do not use the hand-held GPS to update navigation equipment unless the hand-held GPS position can be confirmed by another aircraft source (e.g., radar, TACAN, VOR, or navigator).

5.18. Area Navigation (RNAV) and Required Navigation Performance (RNP) Operations. EA aircrews are authorized to perform IFR RNAV operations listed in their respective FCM for which the aircraft is certified and the aircrew is properly trained. See **paragraph 6.27.9** for RNAV procedures.

5.19. Use of RNAV System on Conventional Routes and Procedures. All EA aircraft possess a suitable RNAV systems as defined in FAA Advisory Circular (AC) 90-108, *Use of Suitable RNAV Systems on Conventional Routes and Procedures,* and may be used as a substitute or alternate means of navigation on conventional routes and procedures in accordance with AFI 11-202V3 and FCM guidance.

5.20. Human Remains (HR). MAJCOM/A3 with mission execution authority authorizes transport of HRs on EA Aircraft.

Chapter 6

AIRCREW PROCEDURES

Section 6A—Pre-mission

6.1. Aircrew Uniform. Uniform wear is in accordance with AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, T.O. 14-1-1, *Aircrew Flight Equipment Clothing and Equipment*, AFI 11-202V3, and OG/CC-prescribed policy based on mission and location requirements. EA aircrews are authorized to wear civilian attire and non-fire retardant uniforms while performing aircrew duties (this approval meets the waiver requirement of AFI 11-301V1, *Aircrew Flight Equipment (AFE) Program*).

6.1.1. OG/CCs determine clothing and equipment to be worn or carried aboard all flights commensurate with mission, climate, and the Foreign Clearance Guide (FCG). Flight crew uniform is directed by unit OG/CC or equivalent as specified in local or MAJCOM supplement to this manual.

6.1.2. Aircrew follow locally published guidance on uniforms for local flights, FCFs, and Ferry Flights. Crew chiefs and maintenance personnel are authorized to wear the utility uniform.

6.1.3. While on temporary duty (TDY), EA crew members' clothing and dress should present a neat, conservative appearance and should be appropriate for the country and/or hotel/facilities being visited while off duty. Crewmembers will not wear clothing with profane or obscene statements, pictures, or logos at any time **(T-3)**. Male crewmembers are not authorized to wear earrings.

6.1.4. Ravens and Raven augmentees will wear the same type clothing, military or civilian, as the rest of the aircrew **(T-3)**. For stateside and overseas missions scheduled to Remain Overnight (RON) at civilian airports or overseas missions transiting U.S. military bases where civilian clothing is necessary for travel, civilian clothing is worn while performing sentry duties **(T-3)**. The Raven Non-Commissioned Officer in Charge (NCOIC) coordinates duty uniform requirements with the PIC prior to mission departure.

6.2. Personal Requirements.

6.2.1. Shot Record. Crewmembers must maintain worldwide shot requirements and carry their shot records on all outside continental United States (OCONUS) missions **(T-3)**.

6.2.2. Driver's License. A valid state driver's license is required on each TDY where use of U.S. government general purpose vehicles may be necessary **(T-3)**. Crews coordinate with the local airfield manager before driving on the flight line.

6.2.3. A reflective belt or suitable substitute should be worn on flight lines during hours of darkness or periods of reduced visibility. **Exception:** Not applicable for PAG.

6.3. Pre-Mission Actions.

6.3.1. Pre-Deployment Briefing. Prior to deployments, the operations officer, mission commander or designated representative should assemble the crew and brief description and purpose of the mission, tentative itinerary, aircraft configuration, special equipment, fuel load,

clothing required, anticipated housing and messing facilities, sufficient money to defray individual's anticipated expenses, personal equipment/field equipment requirements, special clearance requirements and flying safety.

6.3.2. Review Tasking and Itinerary. When mission confirms, PIC contacts the DV mission contact. Inform the on-board contact officer that excessive carry-on baggage cannot be stowed in the passenger compartment. Confirm on-board communication requirements. Comply with the Raven-required locations list for en route aircraft security. If required, WG/CC directs a cross-functional review, i.e., Mission Assessment Group (MAG), to assess security risks against operational requirements outlined in **Chapter 7.**

6.3.2.1. Flight Itinerary. Planners confirm itinerary times and prepare a flight itinerary. Itinerary leg times are block-to-block times (door closed to door open) and include time for taxi, takeoff, climb, descent, approach, and landing. After completion of planned computer flight plan (CFP), current operations/CDS/IFM will notify C2 if CFP + taxi block times are in excess of scheduled block times **(T-3)**. Reference local supplement for unit standards and guidance for programmed (AviSource, GDSS, etc.) vs. CFP block times. Notify C2 and re-compute departure times to meet "hard" block times if requested. In all cases, ensure forecast winds, payload and drag factors are accurately assessed.

6.3.2.2. DoD and USAF policy guidance requires protection of DV foreign travel itineraries. For unclassified missions operating outside the United States, U.S. possessions, or Canada, do not include the name of the DV in unclassified messages or emails. Make every effort to keep DV itinerary and trip itinerary separate to enhance operations security (OPSEC). See local supplement for security measures to transmit itinerary, hotel reservations and DV messages.

6.3.2.3. Itinerary Coordination. Use the following procedures when confirming and planning itinerary details:

6.3.2.3.1. Preposition for DV pickups. Crews plan to preposition for DV pickups two hours prior to the scheduled departure time (or as directed by local supplement/directives). PICs may request to preposition the night prior to an early morning pickup depending on aircraft and crew availability. Early preposition may also be requested to allow adequate crew rest prior to an extended crew duty day. Coordinate request for early preposition with unit C2.

6.3.2.3.2. Configurations. Aircraft configuration requirements originate with the mission execution authority through unit C2. If the using agency requests a change in the configuration shown on the mission printout, the contact officer must coordinate with CVAM/AMD **(T-2)**. PICs cannot accept aircraft configuration changes directly from the using agency **(T-1)**. Advise the contact officer to coordinate with the mission execution authority and notify unit C2 of the pending request.

6.3.2.3.3. Manifest Information. The PIC coordinates with the contact when manifested passengers are not present at departure time. PICs designates a crewmember to review manifests for accuracy prior to mission departure. PICs will not depart without primary DV onboard unless authorized by C2 **(T-3)**.

6.3.2.3.4. PIC confirms the aircraft tail number with the contact officer, obtains the contact officer's home/cell telephone number, and provides him/her with the PIC's

home/cell telephone number. Notify unit C2 if the contact's name or phone number is different from the one listed with the SOC/CP printout.

6.3.2.3.5. Cabin Service. PIC determines if meal/beverage service is desired, and arranges for the lead FA to call the contact officer directly to coordinate menus and other cabin service requirements.

6.3.2.3.6. Advance Per Diem. Normally, advance per diem is not paid to crewmembers, they are expected to use their government travel cards. When the mission requires an advance that is too large to reasonably collect from an ATM, the squadron administration section assists in arranging advance per diem payments. On missions where substantial cash payments are anticipated for aircrew transportation and other incidental official crew expenses, the PIC designates a transportation officer to receive an additional advance and be responsible for these payments **(T-1)**. Refer to the Joint Travel Regulation (JTR) for information about per diem rates and procedures to follow when applying for special per diem allowances.

6.3.2.4. Planners and PICs review the FCG for areas of operation (to include classified portion), and obtain necessary diplomatic clearances where required. Ensure the planned itinerary can be flown in compliance with the provisions of the FCG. If not, obtain an exception to the FCG through the Defense Attaché Office (DAO) or State Department channels or coordinate an itinerary change.

6.3.2.4.1. Messages. Advance notice and/or diplomatic clearance messages are necessary for all missions to destinations OCONUS, including flights to Alaska, Hawaii, and Puerto Rico. Exact requirements and addressees for each country are found in the FCG and classified FCG. See local supplement for additional unit guidance on message formats and procedures.

6.3.2.4.2. En Route Support. PICs are ultimately responsible to ensure en route support at all destinations. If applicable, ensure CDS/IFM/AMD/CAOC arrange en route support. For most OCONUS missions, arrange support by tasking the local Defense/Air Attaché by e-mail or Aircraft and Personnel Automated Clearance System (APACS) message. For all CONUS missions (and as necessary for foreign missions), the PIC confirms destination support through CDS/IFM/AMD (as applicable). When a mission or portion of a mission is canceled or changed, the PIC is responsible for advising affected support agencies or attachés. TACC is available for EA support (USAFE-AFAFRICA/PACAF support provided by AMD and AFCENT support provided by CAOC).

6.3.2.4.2.1. Parking, Servicing, and Aircrew Requirements. Crews should consider the following when planning missions into certain locations:

6.3.2.4.2.1.1. Guard and Reserve Facilities. On missions to CONUS civil airports with a military facility (ANG/AFRC) capable of providing support, use the military facility; however, there are exceptions. If the mission is scheduled to arrive or depart outside the normal operating hours of the military facility (nights, weekends, or holidays) use a civilian facility (terminal, FBO ramp, etc.) provided necessary support can be provided. If the using agency requests use of a civilian facility in preference to an available military facility, use the

civilian facility. If the DV party has a requirement to use the military facility, make arrangements to use the military facility. In general, avoid requiring ANG/AFRC units to work overtime in support of EA Missions unless the using agency has a specific need to use the military facility or suitable support cannot be obtained from civilian sources.

6.3.2.4.2.1.2. Contract Servicing Agents. When planning to use civilian facilities for parking or servicing, refer to the Worldwide Merchant Directory for the AIR Card via **https://aircardsys.com**. Use the government fuel contractor unless they are unable to provide the required services. If the mission requires parking away from the contracted fueling ramp, attempt to arrange trucking of fuel/servicing at the parking spot; do not plan to taxi to the contracted fuel ramp solely for refueling. Use approved government credit card if purchasing fuel from other than the designated government contract vendor.

6.3.2.4.2.2. Border Clearance. Missions entering or departing the United States normally use a regular or special foreign clearance base, a civil international airport of entry (AOE) or a landing rights aerodrome as specified in the FCG. Military inspectors at special foreign clearance bases are only authorized to clear aircraft participating in the special projects listed for each base in the FCG. When aircraft not participating in the approved special projects require clearance, the special foreign clearance base commander must obtain advance approval from U.S. border clearance officials in order to clear the aircraft **(T-2)**. Aircraft are not authorized to transit a special foreign clearance base for clearance unless advance approval is confirmed. If the mission requires, arrangements can be made to use any suitable CONUS airfield, but the PIC coordinates border clearance inspections with all appropriate government agencies in advance.

6.3.2.4.2.3. Security Support. Standard APACS message formats include security support. If Ravens are assigned to the mission, the Raven NCOIC can assist in arranging support. However, security support arrangements are the PIC's responsibility. If additional aircraft security support and/or threat suppression is necessary, the PIC should contact the applicable tasking agency for assistance.

6.3.2.4.2.4. Aircrew Billeting. Crew integrity is a mission requirement. PICs have to know where all crewmembers are at all times. Itinerary changes are common and often require immediate action by crewmembers. To provide crew control, all crewmembers should be billeted at the same facility at en route stops. The mission contact officer/escort and the CP controller has to know the location of the crew and how to contact them. Crew integrity does not require the whole crew to be billeted together. "Billeted at the same facility" means billeted on the same base or at the same hotel complex; however, if the whole crew is not together, the PIC and enlisted aircrew coordinator (EAC) each require a room phone. When government quarters are available, but not suitable, the PIC uses an AF Form 2282, *Statement of Adverse Effect - Use of Government Facilities*, to justify the non-use. The aircrew may arrange for billeting rooms themselves or seek assistance in arrangements from support agencies through an APACS message.

6.3.3. PIC or designated representative obtains required customs forms.

6.3.4. PIC releases available seats to passenger terminal. Refer to **paragraph 6.33.1** for restrictions regarding Space Available travel on EA aircraft.

6.3.5. Crews ensure the correct aircraft navigation database is loaded or is carried, as appropriate.

6.3.6. Refer to **paragraph 6.35** for EA pre-mission duties required for Standby and Alert Procedures.

6.3.7. Other Pre-mission planning factors:

6.3.7.1. For EA units without a designated SOC, crewmembers contact the on-call Current Ops mission planner through command post. For units with a SOC, they serve as a POC between current operations, mission execution authority and crewmembers. Contact unit SOC for coordination with current operations or mission execution authority during mission planning and itinerary changes.

6.3.7.2. All EA Missions are considered "FOR OFFICIAL USE ONLY" and crewmembers will not discuss the mission or any DV information with anyone without a need to know **(T-1)**. Unclassified missions may be designated "CLOSE HOLD." In this case, certain mission details are restricted from normal release to military/non-military agencies/contracted dispatch. Crews clarify the applicable restrictions with unit C2 centers and mission execution authority prior to any mission planning or coordination activities.

6.3.7.3. PIC pre-arranges the pre-departure weather briefing (DV weather package, etc.) in accordance with local supplement. Provide all details needed to prepare the weather briefing. Do not request (DV weather package, etc.) for "CLOSE HOLD" missions.

6.3.7.4. EA aircrews pre-arrange special communications support as follows:

6.3.7.4.1. Prior to transiting an area of responsibility (AOR) with special communication requirements, the PIC should contact the unit Intelligence or Tactics office for AOR communication plan and as applicable, ATO integration.

6.3.7.4.2. CSOs need to coordinate with Commercial Satellite Service Providers via the Government Network Operations Center (GNOC) in accordance with **Chapter 11** of this manual for accessibility to the Executive Airlift Communications Network (EACN).

6.3.7.4.3. Crews notify the contact officer of aircraft capabilities and the costs associated with the respective systems.

6.3.7.4.4. Arrange for spare parts as required. PICs on extended overseas missions to areas where support facilities are limited may request certain spares be issued for a particular trip. Coordinate requirements with C2 agencies and maintenance control personnel.

6.4. Publication Requirements. As a minimum, the PIC will ensure the aircraft has a minimum of 3 (three) AMC A3/10-approved EFBs with current and complete flight manuals and FLIP (**T-2)**. All should be readily available in the cockpit during all phases of flight. All other crew positions must carry the appropriate abbreviated checklists or an updated EFB **(T-2)**. All crewmember EFBs should be properly charged at the beginning of each duty day. Any additional individual aircrew publications requirements are specified in local supplements.

Section 6B—Pre-Departure

6.5. Global Decision Support System (GDSS) Account. Pilots should obtain a GDSS account in order to download ASRR Giant Reports for mission airfields. Although EA missions are tracked in GDSS, it is generally not used as the source document in EA mission scheduling.

6.6. Mission Kits. Crews carry mission kits (hard or electronic copy) on all operational missions. Mission kits should contain all forms and publications necessary for safe and efficient conduct of the mission. Squadron Stan/Eval determines and publishes the contents of the mission kit/mission computer by specific MDS aircraft type. Refer to MAJCOM or local supplement for additional mission kit contents. **Note:** The PAG/CC determines the contents for PAG mission kits.

6.7. Route Navigation Kits. The PIC and navigator, if applicable, are jointly responsible for the contents of route navigation kits. Kit contents are determined by the mission itinerary. Include all publications, charts and forms required to fly the mission and comply with all FLIP and FCG requirements. PICs verify the currency of route navigation publications prior to departure from home station. Use of the National Geospatial-Intelligence Agency (NGA)-produced application is considered a complete Route Navigation Kit.

6.8. Briefing Requirements.

6.8.1. Pre-mission Briefings. Before departing home station, the PIC schedules and conducts a pre-mission briefing. The PIC briefs crewmembers on all aspects of the mission using Stan/Eval-developed and approved briefing guides, and may omit items that do not apply. As a minimum, at least one person from each crew position attends the pre-mission briefing. If Ravens are assigned, the team leader is included in the pre-mission brief, and addresses force protection issues.

6.8.1.1. The necessity of pre-mission briefings for short notice, standby/alert or one day missions is at the PIC's discretion. In this case, ensure all required information has been passed to the appropriate crewmembers.

6.8.1.2. PICs use the following checklist as a guide for home station pre-mission briefings:

6.8.1.2.1. Mission Requirements. Mission number, aircraft number, DV name and title, passenger load, itinerary, departure time and crew reporting.

6.8.1.2.2. Intelligence. Political/military situation, airfield threat/security situation, terrorist or other threat advisories.

6.8.1.2.3. Tactics. If required in accordance with Intelligence briefing and/or AOR guidance, review applicable AOR/airfield procedures and AFTTPs with crew members.

6.8.1.2.4. Special Requirements. Honors arrivals/departures, press, special FCG requirements, and special immunizations.

6.8.1.2.5. Personal Requirements. Aircrew uniform/civilian clothing, passports, shot, records, FCIF review, billeting arrangements, protective/survival gear.

6.8.1.2.6. Normal Procedures. Cockpit discipline, communication with DV party, (only PIC briefs contact officer on mission details, block times, adverse weather, etc.), aircraft cleanliness, student responsibilities, aircrew transportation (transportation

officer), aircrew baggage security, un-manifested packages, sabotage/stowaway surveillance, hijacking, aircraft security and surveillance for narcotics.

6.8.1.2.7. Emergency Procedures. As a minimum, discuss general communication and provide scenario discussion for Emergency Procedures pertaining to the mission. The PIC and FA (1st FA for multi-FA crew) will verbally agree on the "Signal to Brace" call and "Signal to Evacuate" call during the pre-mission crew brief **(T-3)**.

6.8.1.2.8. Crew Duties and Responsibilities. Designate EAC and review duties (supervision, crew location during crew rest, communication on mission changes). Designate crewmember responsible for passports, trip/NAV/Crypto kits, etc. FA duties include cabin service requirements, crew meals and crew payment arrangements. Raven duties include duty schedule, review aircraft access policies and brief FCG firearms restrictions. FCC duties include fuel loads, aircraft configuration and en route maintenance. If transiting a threat environment, review and assign specific lookout doctrine and combat entry and exit checklist duties to appropriate crew members. **Note:** PAG/CC determines specific crew duties and responsibilities for Presidential Airlift Missions.

6.8.1.2.9. Crew Conduct. Review personal conduct in foreign areas and personal article security on aircraft.

6.8.2. En Route Briefings. PIC conduct crew briefings en route as required. Prior to entering crew rest, the PIC briefs the crew on the requirements for the next mission leg. Route and leg briefings should be conducted for every leg prior to departure with applicable crewmembers or a designated representative for each crew specialty. PICs should keep onboard contacts informed of mission specifics, changes, problems, etc. Use the following checklist as a guide for en route briefings:

6.8.2.1. Crew contact procedures during crew rest.

6.8.2.2. Departure time.

6.8.2.3. Crew reporting time and place (transportation arrangements).

6.8.2.4. Fuel load.

6.8.2.5. Uniform changes, if applicable.

6.8.2.6. FA cabin service requirements.

6.8.2.7. Aircraft security requirements.

6.8.3. CP Briefings. At show time, the PIC or designated crew representative should contact the Unit CP or AMD prior to departure for any last minute changes, aircraft status or crew/passenger messages.

6.8.4. NOTAM information is permitted from the following sources: U.S. Military services, any FAA approved source (Dispatch Services, Jeppesen, ARINC Direct, etc.) or any host nation civil or military source.

6.8.5. Intelligence and Tactics. PIC receives an updated intelligence briefing and if appropriate, update the crew on changed intelligence reports and associated tactics.

6.9. Call Signs.

6.9.1. For operational missions, the mission execution authority assigns call signs. If no call sign has been assigned, units assign static call signs.

6.9.2. For OPSEC and tactical purposes, the PIC may coordinate for call sign change with applicable C2. All call sign changes are accomplished in accordance with AFI 17-210, *Radio Management*.

6.10. Departure Planning. Detailed departure planning information is contained in AFI 11-202V3, AFMAN 11-217, *Flight Procedures*, and MAJCOM Supplements. Regardless of the type of departure flown (IFR/VFR), aircrews will review the following (as appropriate): IFR Departure Procedure, instrument approach plate, NOTAMS, GDSS Giant Report and suitable terrain charts **(T-2).**

6.10.1. VFR Departures. The PIC must thoroughly review all available resources to include properly updated terrain charts, FLIP, base operations, local TERPS specialist (USAF base) or other terminal instrument procedures (TERPS) authorities (Naval Flight Information Group (NAVFIG) in Washington, D.C., DSN 288-3486, commercial (202) 433-3486; Army's TERPS office, DSN 656-4410, commercial (703) 806-4410; FAA office in Oklahoma City, OK, commercial (405) 954-4787)) **(T-2).** ***WARNING:*** Detailed information about obstacles below the obstacle clearance surface (OCS) is not published and is generally not available.

6.10.1.1. Refer to FLIP for host nation VFR requirements before flying VFR outside of CONUS.

6.10.1.2. When departing VFR, maintain VFR cloud clearances until obtaining an IFR clearance and reaching the Minimum IFR Altitude (MIA).

6.10.2. IFR Departures. IFR departures require detailed planning to ensure obstacles and high terrain are avoided. Pilots adhere to screen height/departure end of runway (DER) requirements for IFR departure planning. **Note:** DER crossing restrictions can be found in AFMAN 11-217.

6.10.3. Special Departure Procedure (SDP). Jeppesen Runway Analysis (JRA) is the AMC-authorized tool for SDP planning. The JRA site is located at: **https://www.milplanner.com/**. The current login and password can be obtained from OGV or kept in a local read file.

6.10.3.1. Due to the increased aircraft performance and margin of safety, C-37B crews are authorized to use C-37A SDPs until a separate C-37B database is established. In addition to Jeppesen SDPs, C-37A/B crews are authorized to use Aircraft Performance Group (APG) SDPs via ARINC Direct. Crews are prohibited from commingling Jeppesen and AGP SDP data, to include pairing Jeppesen Special Engine Failure Procedures contained in the Company Charts tab (labeled "CO") of Jeppesen FD Pro with AGP performance data.

6.10.3.2. C-32A and C-40 pilots will not use the JRA website or Jeppesen Special Engine Failure Procedures contained in the Company Charts tab (labeled "CO") of Jeppesen FD Pro **(T-2)**. Pilots will only use Aerodata Engine Failure Procedures (EFPs) from these sources: Aerodata's Desktop Tool; Takeoff and Landing Report (TLR) products provided by dispatch; from Aerodata retrieved via datalink at the aircraft; or procedures contained in the respective aircraft onboard performance tool (OPT) application **(T-2)**.

6.11. Minimum Takeoff Weather.

Table 6.1. Takeoff Runway Visual Range (RVR) Minimums.

Mission	Visibility	Remarks
Operational *(Note 1)*	RVR (Runway Visual Range) 600 (180 meters)	When less than RVR 1600, but equal or greater than RVR 600, the crew may take off if mission priority dictates, provided the runway has a minimum of 2 functioning RVR readouts (minimum RVR 600 on all functioning readouts), visible runway centerline markings, and runway centerline lighting is operational. When 3 transmissometers are installed, all are controlling.
All Others *(Note 2)*	RVR 1600 (490 meters)	For runways with more than one operating RVR readout, RVR must read 1600 minimum on all **(T-2)**.

Notes:
1. If the runway has only one functional RVR readout, no centerline markings, or no centerline lighting, the minimum RVR is 1600 **(T-2)**.

2. In the absence of RVR readouts, reported visibility cannot be any lower than 1/2SM (800 meters) **(T-2)**.

6.12. Alternate Planning. For those missions flight managed by commercial dispatchers, Flight Managers provide a route of flight to the primary alternate if greater than 75 miles from the destination. This route of flight is only for providing an accurate fuel plan and is not part of the route of flight filed with ATC.

6.13. Adverse Weather. Crews should confirm the type of aircraft the forecast turbulence applies to, or what type of aircraft reported the encounter, to gain a more accurate picture for their route of flight. Turbulence category charts are found in Air Force Weather Agency Technical Note AFWA/TN 98/002, *Meteorological Techniques.* ***WARNING:*** Serious injury may occur if passengers do not have their seat belts fastened and the aircraft encounters moderate or severe turbulence.

Section 6C—Preflight

6.14. Hazard Identification and Mitigation. After the entire crew is assembled at the aircraft, the PIC briefs primary mission hazards facing the crew during takeoff and climb-out.

6.15. AFTO Forms 781 Series.

6.15.1. In accordance with T.O. 00-20-1, when authorized by the home station MXG/CC and contracted logistics support (CLS) agreement, certified FCCs are authorized to clear Red X write-ups.

6.15.2. If a situation is encountered where the aircraft is on a Red X and qualified maintenance personnel are not available to clear it, the highest qualified FE on scene may, on behalf of the PIC, obtain authorization to sign off the Red X from the home station MXG/CC or designated representative, in accordance with T.O. 00-20-1. Other crew members are not authorized to clear a Red X. **Exception:** The FE may clear Red Xs for engine covers, pitot covers, gear pins and SPR drains when qualified maintenance personnel are not available, unless prohibited by the home station MXG/CC or OG/CC.

6.16. Aircraft Servicing and Ground Operations. Refer to **Chapter 10** for FE procedures and **Chapter 13** for FCC procedures.

6.16.1. Auxiliary Power Unit (APU) Usage. For fuel conservation, use ground power units when practical. Mission requirements may require prolonged APU usage.

6.16.2. Aircraft Refueling. Aircrew members qualified in ground refueling may perform refueling duties. Flight engineers acting as refueling supervisors and panel operators will comply with T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, and refueling job guide **(T-2)**. Aircrews will only refuel in cases when maintenance support is not readily available or for training **(T-2)**.

6.16.3. Aircrew FCM Preflight/Thru-flight Inspection Requirements.

6.16.3.1. The aircrew FCM preflight inspection remains valid until either another maintenance preflight is performed or at the end of the current CDT.

6.16.3.2. When a new aircrew assumes a pre-flighted spare or quick turn, a thorough visual inspection will be performed **(T-3)**.

6.16.3.3. En Route Aircraft Preflights. Pilots, FEs, FCCs, CSOs, and FAs will accomplish aircraft preflights following crew rest **(T-2)**. If the ground time exceeds 72 hours or if the aircraft has been left unattended, aircrews should accomplish an aircraft inspection/walk-around of the aircraft within 24 hours of scheduled departure, when practical. Anytime en route maintenance has been performed, the affected systems are pre-flighted and should be operationally checked as soon as possible, if practical. Thru-flight inspections are completed anytime a preflight is not required. FAs only need to accomplish a thru-flight inspection at en route stops. Pilots will ensure flight controls are checked, as needed, in accordance with the FCM **(T-2)**.

6.16.4. Fire Protection and Crash Rescue.

6.16.4.1. The aircraft engine fire extinguisher system fulfills the minimum requirements for fire protection during engine start.

6.16.4.2. A fireguard is required for all engine starts. A crewmember or ground controller may act as fireguard. The primary responsibility of the fireguard is to ensure crew egress.

6.16.5. Aircrew and Maintenance Engine Runs. A mixture of aircrew and maintenance personnel do not normally accomplish engine runs. When an aircrew member is required to start or run up engines for maintenance purposes, the following procedures apply:

6.16.5.1. Maintenance personnel will accomplish all necessary inspections and preparations for the engine run **(T-2)**. These actions include but are not limited to:

intake/exhaust inspections, access panel security servicing and AFTO Form 781 documentation.

6.16.5.2. Aircrew use the pilot and flight engineer checklists, and complete all appropriate checklist steps. Deviate from the flight crew checklist only when maintenance requires less than all engines to be started.

6.16.6. Crew Station Times. Crewmembers are normally at their duty stations with all checklists accomplished up to the point of engine start not later than 30 minutes prior to departure. Crewmembers should be prepared to depart as expeditiously as is safely possible if the DV arrives early.

6.17. Aircraft Recovery Away from Main Operating Base. Refer to **Chapter 13** for procedures.

6.18. Aircrew Flight Equipment (AFE) Requirements. The minimum quantity of oxygen aboard an aircraft before takeoff must be sufficient to accomplish the planned flight from the equal time point (ETP) to recovery, should oxygen be required **(T-0).**

6.19. Fall Protection. Crew members are prohibited from climbing onto the upper fuselage or wing surfaces unless there is an operational necessity. When operational conditions dictate that aircrew members must climb onto upper fuselage or wing surfaces, they will do so only when conditions are dry and while wearing a maintenance safety harness and properly attached lanyard **(T-1)**. **Exception:** MDS aircraft that do not have the ability to anchor the maintenance safety harness and lanyard are exempt from the harness requirement until a suitable alternative is available, but still must have an operational need and the wing must be dry **(T-1)**. PICs will ensure no other personnel (excluding qualified OPS/maintenance personnel) have access to, or be allowed to, climb onto the fuselage or wings **(T-1)**.

6.20. Fleet Service. PIC or designated representative ensures required fleet service items are aboard the aircraft early enough to permit inventory prior to engine start. Document appropriately.

6.21. Cargo Documentation. Although, not normally carried on EA Aircraft, if carried, proper cargo or mail documentation will accompany each load **(T-2)**.

Section 6D—Departure

6.22. On Time Takeoffs. A delay is charged any time the DV and passengers are ready to move at the scheduled departure time and the aircraft is not ready for departure or cannot depart due to maintenance or operational reasons.

6.22.1. The DV party should expect departure any time after stations time (30 minutes prior to scheduled takeoff time), or any time the crew has agreed (explicitly or by loading the party, closing the door and implying readiness for departure) to depart early. If the party arrives prior to stations time (see **paragraph 6.16.6**) and the crew is not ready, a delay is not charged. When the crew indicates they are ready (e.g., boarding party, closing door, removing stairs, starting engines, etc.), further delay would constitute an EA delay.

6.22.1.1. The simplest definition of an EA delay is a failure to block out when the DV is ready at the scheduled time due to maintenance or operational reasons, thus delaying the DV. To promote the credibility of reliability rate, credit a delay when the mission blocked

out “early” or "on-time" but could not takeoff due to maintenance or operational reasons, thus delaying the DV.

6.22.1.2. A delay is credited when the mission blocked out and took off "on-time" but air aborted or diverted to an airport other than the next scheduled stop due to maintenance or operational reasons, thus delaying the DV.

6.22.2. Right side engines may be started prior to final on-load of all passengers, baggage and gear in order to expedite overall engine start process. The PIC ensures the right side of the aircraft is safe, clear and all right side aircraft baggage doors are closed/secure. The left side engines will not be started until all passengers, baggage and gear are on board, left side aircraft baggage doors are closed/secured and the area around the aircraft is safe and clear **(T-3)**.

6.23. Cabin Security Procedures for Takeoff and Landing. The following procedures should be followed prior to all takeoffs and landings:

6.23.1. The FA should ensure all carry-on luggage, equipment and supplies are secured as soon as possible after boarding passengers. Ensure all passenger carry-on baggage is stowed to prevent a hazard during unforeseen events on takeoff or landing (e.g. aborted takeoff, emergency landing, low-level wind shear, turbulence, etc.). Passengers may retain and use portable handheld devices (iPads and smaller) during taxi, takeoff and landing provided the device is in Airplane Mode. **Exception:** The primary DV, or one designated staff member, may use a portable laptop computer during taxi, takeoff, and landing. No other use of carry-on equipment or raised tables is permissible during take-off and/or landing as they pose an unacceptably high risk of blocking emergency exit routes. After considering extenuating circumstances (e.g., potential wind shear/turbulence, combat departure/arrival, aircraft malfunctions, etc.), the PIC may direct that all carry-on baggage be stowed to include the DV compartment. Notify the PIC when excessive carry-on baggage (topside) precludes safe stowage.

6.23.2. The FA (1st FA) coordinates with the PIC for the anticipated taxi time prior to commencing any cabin service prior to takeoff.

6.23.3. The FA (1st FA) should notify the cockpit crew that the cabin is secure prior to being seated for takeoff or landing. The cockpit crew should confirm the cabin security report prior to takeoff and landing. At the PICs discretion, if conditions warrant (e.g., immediate takeoff clearance), the pilots may alert the passengers and crew using the PA system.

Section 6E—En Route

6.24. Flight Progress. Another pilot or primary crewmember verifies waypoint data inserted into the flight management system (FMS). Check both the coordinate information and the distances between waypoints against the flight plan. For operations in international/territorial airspace and oceanic flight procedures, see **Chapter 9**.

6.25. In-Flight Meals. EA aircrew members normally eat the same meals the party is being served by the flight attendants. Aircrew members should notify the flight attendants as early as possible in mission planning regarding any special food allergies or dietary needs. The FA should notify the entire aircrew of any DV party members’ food allergies. Refer to local menu database for inflight meal options.

Section 6F—Arrival

6.26. Night and Marginal Weather Operations. A visual approach at night should be backed up with any and all available resources (VASI/PAPI, FMC solution or enhanced vision system (EVS)) in order to maximize the situational awareness of the aircrew.

6.27. Instrument Approach Procedures. DoD/NGA, National Aeronautical Charting Office (NACO) or MAJCOM-approved FLIP procedure can be flown by EA aircrews without requiring a TERPS review. Commercially-produced paper or electronic terminal procedures from non-US Government providers (e.g. Jeppesen) are authorized for EA aircrew after a validation, in accordance with AFMAN 11-230, *Instrument Procedures* and AFI 11-202V3. Non-U.S. Government standard terminal arrival (STAR) procedures do not require a review.

6.27.1. Foreign Terminal Instrument Procedures (FTIP). The use of FTIP based on DoD Accepted (formerly special accredited) sources is authorized without an FTIP review or comparison evaluation. Aircrews will check the current *DoD Accepted Host Nation List* (located on EPubs->All_Global->Airspace and Datalink) prior to using any foreign FTIP **(T-1).**

6.27.2. Aircraft Category. EA aircraft fall into multiple approach categories. If it is necessary to maneuver at speeds in excess of the upper limit of a speed range for a category, the minimums for the next higher category should be used.

6.27.3. If the ceiling is below the value depicted for published DoD or NACO precision approach, but visibility is at or above authorized minimums, comply with AFI 11-202V3 fuel requirements before initiating en route descent, penetration, or approach.

6.27.4. For Precision Approach Radar (PAR) approaches, visibility is no lower than RVR 2400 (730 meters) or 1/2 mile (800 meters) with no RVR readout available.

6.27.5. Category I ILS Procedures. Decision altitude for precision approaches is as published, but no lower than 200 feet height above touchdown (HAT). For ILS Special Authorization (SA) CAT I approach comply with **paragraph 6.27.5.2**

6.27.5.1. ILS Precision Runway Monitor (PRM) Approaches. Both pilots must be certified to conduct an ILS PRM approach **(T-2)**. Refer to AFI 11-2EAV1, *EA Aircrew Training*, for certification procedures. Comply with the following operational procedures:

6.27.5.1.1. Two operational VHF communication radios are required.

6.27.5.1.2. The approach is briefed as an ILS/PRM approach.

6.27.5.1.3. TCAS II equipped aircraft will fly the ILS PRM approach in TA/RA mode **(T-0).**

6.27.5.1.4. All breakouts from the approach shall be hand flown **(T-2)**. Autopilots shall be disengaged when a breakout is directed **(T-2)**.

6.27.5.1.5. Should a TCAS Resolution Advisory (RA) be received, the pilot immediately responds to the RA. If following an RA requires deviating from an ATC clearance, the pilot advises ATC as soon as practical. If an ATC breakout and a TCAS RA are received simultaneously, or shortly after one another, turns will be in

accordance with ATC breakout instructions while vertical corrections will be in accordance with the TCAS system **(T-0).**

6.27.5.2. ILS SA CAT I Approaches. EA aircrew authorized for CAT II operations, and flying operationally certified CAT II aircraft equipped with an operable CAT II or better heads up display (HUD), may fly SA CAT I approaches.

6.27.5.2.1. Use of HUD to decision altitude (DA) or decision height (DH) is mandatory **(T-2)**.

6.27.5.2.2. The HUD must be operated in the same mode used for CAT II or CAT III operations **(T-2)**.

6.27.6. ILS CAT II/III Procedures. Special aircraft certification and aircrew training required. Refer to AFMAN 11-217 and appropriate FCM for CAT II/III ILS information.

6.27.6.1. CAT II minimum RVR. Touchdown zone RVR must be equal to or greater than the specified minimums on the instrument approach procedure (IAP) (no lower than 1200 ft (350 meters)) **(T-0).** When applicable, midpoint and rollout RVR must be greater than or equal to 600 ft (180 meters) **(T-0). Exception:** Aircrew authorized for CAT II operations, flying operationally certified CAT III aircraft equipped with an operable autoland or HUD approved to touchdown capability, may fly CAT II approaches to minimum touchdown RVR 1000 when noted on the procedure.

6.27.6.2. CAT II minimums are based on a HAT no lower than 100 ft. In some cases this may result in an RA setting of less than 100 ft.

6.27.6.3. For CAT II ILS approaches, use the lowest published radar altitude. CAT II approaches without radio altimeter (RA) setting for DH are authorized. In this case IAP statement "RA NA" denotes irregular terrain changes that affect RA. Utilize barometric DH and inner marker if approved on the IAP. If inner marker is inoperative, CAT II approaches are not authorized.

6.27.6.3.1. If the crew receives a CAT II unsafe annunciation above 300'AGL, they may elect to continue to the normal CAT I minimums to the same runway (no lower than 200' DH).

6.27.6.3.2. If a CAT II unsafe annunciation is received below 300'AGL, the crew immediately commences a go-around, unless visual cues are sufficient to complete the approach to landing.

6.27.6.4. CAT I ILS procedures are used when unable to use alternate FCM guidance for local barometric DA(H) procedures.

6.27.6.5. CAT IIIA minimum touchdown and midpoint RVR of 700 ft (200 meters). Rollout RVR must be greater than or equal to 600 ft (180 meters) **(T-0).**

6.27.6.6. CAT IIIB minimum RVR of 150 ft (50 meters).

6.27.6.7. Use Surface Movement Guidance and Control System (SMGCS) lighting (if available) at destination and taxi route.

6.27.7. **(C-37)** Aspen Approach Procedures. For certified aircrew, the most current LOC DME 15 IAP must be obtained from OGV, MAJCOM Stan/Eval, or Jeppesen Government &

Military Aviation Division (peter.giusti@jeppesen.com, 303-217-6399), in that order **(T-2).** OGVs are responsible to ensure a copy of the FAA approval is maintained on board each aircraft flying into Aspen utilizing the Special Approach. See FCIF for current Aspen procedures.

6.27.8. Non-Directional Beacon (NDB) Procedures. NDB approaches may be flown during day, night or instrument meteorological conditions (IMC) after compliance with any airfield restrictions in GDSS/GDSS2/ASRR. Back up each approach with available navaids/GPS to include loading the NDB coordinates in the FMS.

6.27.9. RNAV Procedures. All EA C-32, C-37, C-40 and VC-25 aircrews are authorized to fly pure GPS, RNAV and RNAV(GPS) instrument departures and arrivals, day or night, IMC or visual meteorological conditions (VMC). Comply with procedures and temperature corrections in accordance with AFI 11-202V3 and FIH.

6.27.9.1. Equipment. Aircraft require operable RNAV Inertial Navigation/Reference System (INS/IRS) and/or GPS-updated FMC/FMS equipment to ensure sufficient receiver autonomous integrity monitoring (RAIM) or appropriate level of actual navigation performance (ANP) is available in accordance with FCM procedures prior to initiating the approach. IAP notes such as "DME/DME RNP 0.3 N/A" or "GPS Required" state that GPS signal and aircraft equipment need to be operational to start the approach. For aircraft where the MEL/MMEL does not allow the approach, or if the required approach RAIM/ANP is not available, the approach is not authorized.

6.27.9.2. RNAV Instrument Approaches. All EA aircraft and certified aircrews are approved to perform RNAV approaches in accordance with AFI 11-202V3 and FCM guidance. Aircraft require RNP as published on the IAP. The PM monitors lateral cross track, vertical velocity trends in accordance with FCM guidance and report alerts [required navigation performance (RNP), RAIM or loss of GPS signal] to the PF. The PF executes a missed approach if excessive deviations occur.

6.27.9.2.1. Lateral Navigation (LNAV) Approaches. LNAV approaches are non-precision approaches and may be flown IMC to a barometric LNAV minimum descent altitude (MDA). They may be also be flown using Vertical Navigation (VNAV) procedures to a derived decision altitude (DDA) = LNAV MDA(H) +60ft. The PM monitors lateral track error in accordance with FCM guidance and provide trends to the PF.

6.27.9.2.2. VNAV Approaches. VNAV procedures are classified as approaches with vertical guidance (APV). APVs provide course and glide path deviation information not required to meet the precision approach standards. VNAV approaches may be flown IMC to a VNAV DA(H). In accordance with FCM guidance C-32, C-37, and C-40 aircraft are authorized descent to published barometric VNAV DA (corrected for temperature) in World Geodetic System 1984 (WGS-84) compliant airspace only. Use of remote altimeter settings to VNAV DA(H) minimums is prohibited. The PM monitors lateral/vertical track error in accordance with FCM guidance and provide trends for PF.

6.27.9.2.3. LPV Approaches. LPV approaches are APVs which take advantage of the improved accuracy of space-based augmentation systems (SBAS). Only properly

certified pilots and aircraft may use the LPV line of minima **(T-0).** Pilots will not use the LP line of minima unless the FCM includes LP as an approved approach type **(T-0). Note:** LP is not a fail-down mode for LPV; an SBAS receiver may not support LP even if it supports LPV.

6.27.9.3. Aircrews are not authorized to fly RNAV (RNP), RNP AR and A-RNP (RF legs) approaches until aircraft equipment is certified, aircrews are trained and operational approval is issued from AMC A3/10. This does not affect the capability to fly RNAV, RNAV (GPS), GPS or "OR GPS" approaches.

6.27.9.4. WGS-84 compliance. Individual country compliance with the WGS-84 means that the country's NAVAID and obstacle database conforms to the same U.S. grid standard that today's updated avionics use to determine position. U.S. National Airspace System (NAS)/Canadian Domestic Airspace is WGS-84 compliant. WGS-84 compliance is one of several items which are monitored to determine if a country's published RNAV(GPS) and overlay terminal procedures are authorized for use by USAF aircrews. PICs check **www.jeppesen.com** to determine compliance if a country's WGS-84 status is in doubt. On the Jeppesen home page, type "WGS-84 Status Report" in the search field to access the compliance list. Only those procedures that are WGS-84 compliant may be flown using FMC/FMS guidance.

6.27.10. Changes to Weather during Arrivals**.** If the reported weather decreases below minimums after starting a descent, receiving radar vectors for an approach, or established on any segment of an approach prior to the missed approach point (MAP), the approach may be continued to the MAP and either execute a missed approach or continue to land if conditions in below are met. **Exception:** Do not continue a CAT II/III ILS if the weather is reported to be below CAT II/III minimums.

6.27.10.1. Do not descend below DH/DA/MDA until sufficient visual reference with the runway environment has been established and in a position to execute a safe landing **(T-2). Exception:** EVS Operations follow guidance in **paragraph 6.27.12**

6.27.10.2. Do not descend below 100 ft. above the threshold elevation (THRE) or touchdown zone elevation (TDZE) using the approach lights as a reference unless the red termination bars or the red side row bars are visible and identifiable (N/A on CAT III approaches) **(T-2).**

6.27.10.3. If the approach is continued, sufficient fuel must be available to complete the approach and missed approach and proceed to a suitable alternate with normal fuel reserve **(T-1)**.

6.27.10.4. The PIC has final responsibility for determining when the destination is below designated minimums and for initiating proper clearance request.

6.27.11. Holding. An aircraft may hold at a destination that is below landing minimums, but forecast to improve to or above minimums provided:

6.27.11.1. The aircraft has more fuel remaining than that required to fly to the alternate and hold for the appropriate holding time and the weather at the alternate is forecast to remain at or above alternate filing minimums for the period, including the holding time.

6.27.11.2. Destination weather is forecast to be at or above minimums before excess fuel is consumed.

6.27.12. Enhanced Vision System (EVS) Operations. EA aircraft equipped with FAA and MAJCOM-certified EVS systems are approved for use in day, night, or IMC in accordance with the applicable flight manuals. Other aircraft are not authorized for EVS operations until the aircraft equipment is certified, aircrews are trained, and AMC A3/10 has issued operational approval. For the C-37A/B, refer to the FCM for operational procedures and limitations. For straight-in instrument approach procedures other than Category II or Category III ILS, operating below the published MDA or continuing an approach below the published DH is authorized if:

6.27.12.1. A current and qualified EVS pilot, in accordance with AFI 11-2EAV1, occupies the left seat;

6.27.12.2. The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal maneuvers and the descent rate allows touchdown to occur within the touchdown zone of the runway of intended landing;

6.27.12.3. The pilot determines that the enhanced flight visibility observed by use of a certified EVS is not less than the visibility prescribed in the standard instrument approach procedure being used;

6.27.12.4. The following visual references for the intended runway are distinctly visible and identifiable to the pilot using the enhanced flight vision system:

6.27.12.4.1. The approach light system (if installed); or

6.27.12.4.2. Both the runway threshold and the touchdown zone.

6.27.12.4.2.1. The runway threshold is identified by at least one of the following:

6.27.12.4.2.1.1. The beginning of the runway landing surface;

6.27.12.4.2.1.2. The threshold lights; or

6.27.12.4.2.1.3. The runway end identifier lights.

6.27.12.4.2.2. The touchdown zone is identified by at least one of the following:

6.27.12.4.2.2.1. The runway touchdown zone landing surface;

6.27.12.4.2.2.2. The touchdown zone lights;

6.27.12.4.2.2.3. The touchdown zone markings; or

6.27.12.4.2.2.4. The runway lights.

6.27.12.5. At 100 feet above the touchdown zone elevation of the runway of intended landing and below that altitude, the flight visibility is sufficient for the following to be distinctly visible and identifiable to the pilot without reliance on the enhanced flight vision system to continue to a landing:

6.27.12.5.1. The lights or markings of the threshold; or

6.27.12.5.2. The lights or markings of the touchdown zone.

6.27.13. Missed Approach. Prior to starting any instrument approach, ensure proper sequencing of waypoints to the missed approach waypoint if lateral path is followed. Additionally, pilots confirm their aircraft can accomplish the missed approach (to include holding) and meet or exceed all climb gradients specified in the missed approach procedure. If unable to meet required climb gradients, pilots coordinate alternate missed approach procedures with ATC that ensure terrain clearance, prior to commencing the approach. Do not initiate the approach if one engine inoperative (OEI) performance does not permit safe obstacle clearance on the missed approach.

6.28. Unscheduled Landings. Notify the airfield selected for an emergency diversion as soon as possible to allow maximum time to prepare the required assistance or services. Air Route Traffic Control Centers (ARTCC) and C2 centers assist the PIC as necessary in notifying the appropriate agencies.

6.29. Over-Flying Scheduled En Route/Refueling Stops. Before offering to over fly scheduled refueling stops, the PIC has to consider all consequences that may arise. Consider coordination with the contact, final arrival airport, diplomatic clearance over flight windows, and greeting parties. Optimally the option of over-flying refueling stops should be coordinated with the contact and C2 through appropriate channels prior to departing home station.

6.30. Insect and Pest Control. See AFI 11-202V3. Spray the aircraft for the times in **Table 6.2** unless longer periods are specified for the country being transited:

Table 6.2. Spray Times.

MDS Aircraft	C-37	C-32	C-40	VC-25
Spraying Time	15 Sec	65 Sec	45 Sec	118 Sec

Section 6G—Post Fight

6.31. Maintenance. Complete the AFTO Form 781 after each flight. After landing, crewmembers debrief maintenance personnel on the condition of the aircraft, engines, avionics equipment and all installed special equipment as required. Crewmembers are also responsible for documenting cosmetic faults on the aircraft to ensure maintenance is aware of the flaw. See local maintenance debrief policies in local supplement of this manual.

6.32. Mission Debriefing. Hold immediately after the mission if practical. Include the following:

6.32.1. Aircrews attend the operations and maintenance debriefings as directed by unit or mission commander. Maintenance debrief should be conducted as soon as possible after flight.

6.32.2. Intelligence debriefings are accomplished as soon as practical after mission recovery, normally within 30 minutes.

6.32.3. Aircrew Debrief. Mission critiques and debriefings are perhaps the most important learning tool available to aircrews and will be done after each mission **(T-3)**. All crewmembers will attend, and the entire mission will be reviewed **(T-3)**.

Section 6H—Miscellaneous

6.33. Passenger Restrictions. The PIC will seek approval from the on-board contact officer to transport passengers other than those of the official party on missions transporting (e.g. space available passengers, emergency leave, medevac, etc.) **(T-2)**.

6.33.1. Space Available Passengers. For other than revenue and White House missions, PICs are authorized to release space available seats on mission legs when no official passengers are aboard (positioning and de-positioning legs). PICs are encouraged to release maximum space available seats subject to the following restrictions:

6.33.1.1. Revenue Missions. These are missions for which the using agency (typically a government agency other than DoD) is reimbursing DoD for use of the aircraft. Space available passengers on revenue missions are approved in advance by USAF/CVAM/AMD/JOSAC (as appropriate) and the using agency contact officer through unit C2 agencies. This is essential to ensure proper funding and reimbursement. Consult CVAM/AMD/JOSAC to determine mission revenue status if in doubt. Congressional Delegations (CODEL) are not revenue missions.

6.33.1.2. White House Support Missions. Space available passengers are generally not permitted aboard White House support mission aircraft without express permission of CVAM. This is normally due to the security status of the aircraft, which may include positioning and de-positioning legs. When it is necessary to move aircrew members or support personnel on White House support mission aircraft, the WHMO is advised and permission obtained through the unit C2 and CVAM. On de-positioning legs space available passengers are usually permitted if the aircraft is no longer required to maintain an upgraded security status.

6.33.1.3. Billing. Space available passengers on revenue missions may be subject to being billed commercial first-class airfare by the using agency for the applicable route, depending on that agency's policy. If the DV or on-board contact officer releases seats, the PIC has to ensure that any additional financial liability for the passengers is specified by the using agency on-board contact officer. PIC will ensure passengers understand and agree to any reimbursement conditions prior to boarding **(T-2)**.

6.33.1.4. Anti-hijacking Inspections. Board space available passengers only after anti-hijacking inspections are completed. If a space available seat release is anticipated at an en route station, the local passenger service facility is advised of the inspection requirement. Procedures for anti-hijacking inspections by the aircrew at stations without a military passenger service facility are specified in **Chapter 7**. The PIC has final authority for accepting space available passengers.

6.33.2. Passenger Boarding. On all missions operating without security guards, the (1st) FA will ensure that all passengers are listed on the passenger manifest prior to boarding the aircraft **(T-2)**. **Exception:** The flight engineer is responsible for greeting and checking passengers on the C-37. Passengers are greeted and checked at the bottom of the steps. The PIC or the mission escort officer must clear any passengers not listed on the manifest prior to entering the aircraft **(T-2)**. This task is completed at the beginning of each mission and any time passengers have to re-board the aircraft.

6.33.3. No Show Passenger Baggage. Unclaimed passenger baggage and untagged baggage is subject to search and seizure. Under no circumstances is unidentified baggage allowed on the aircraft. Tagged but no-show passenger baggage or baggage of passengers removed from flight is downloaded prior to departure. Aircrew will not accept unaccompanied baggage except in accordance with AMCI 24-101V14, *Passenger Service* **(T-1)**.

6.34. Classified Equipment and Material. The PIC ensures the protection of classified materials aboard their aircraft. The CSO, if available, is responsible for supporting the PIC with these duties. Unless specified in MAJCOM or local supplement, the PIC and CSO ensure the Identification Friend or Foe (IFF) equipment is set to zero before leaving the aircraft.

6.35. Standby/Alert Mission Pre-departure Procedures. Standby/Alert missions include any mission where the scheduled departure time is less than 12 hours after original notification. Procedures for standby/alert missions vary depending on the type mission, type of aircraft and time available between notification and departure. Procedures also vary depending on time of day (i.e., duty hours or non-duty hours). The following general procedures apply in most cases:

6.35.1. Normally, the standby/alert PIC is notified of a standby/alert mission by current operations, SOC, or aircrew scheduler (USAFE-AFAFRICA/PACAF: AMD notifies unit). When notified, the following is covered:

6.35.1.1. The mission number, departure spot, expected departure time, DV name and position and number of passengers. If the mission is supporting another EA aircraft, a mission symbol S-7 may be provided. If a mission number is not provided, use the mission call sign plus the static two or three digit suffix number, e.g. SAM 70, in place of the mission call sign plus the three digit mission number suffix.

6.35.1.2. The itinerary details which are available. It may be required to confirm times, airports, preferred FBOs, etc.

6.35.1.3. Fuel load requirements.

6.35.1.4. Threat assessment, tactics and airfield security information as applicable.

6.35.1.5. Specify aircrew uniform or civilian clothes and other miscellaneous requirements.

6.35.2. For immediate launches overseas during duty hours, the SOC or aircrew scheduler arranges for passports, shot records and navigation kits (as applicable) to be delivered to the aircraft. In addition, the SOC or aircrew scheduler arranges an intelligence briefing and/or intelligence package pick-up. After duty hours, the PIC designates who picks up passports, shot records, navigation kits, intelligence package (as applicable) and confirms who handles pre-launch paperwork. Normally, the duty scheduler (during duty hours), SOC or the CP/AMD (after duty hours) orders a weather briefing, intelligence briefing and computer flight plans, if required. Current North Atlantic Track (NAT) messages are always available at the CP. For missions departing immediately, the duty scheduler (during duty hours) or the CP/AMD (after duty hours) files a flight plan for the first mission leg. The crew arranges desired dispatch/mission operations service for subsequent legs**.** The duty scheduler assists in obtaining CFPs when requested. During duty hours, the SOC coordinates with mission operations to prepare and dispatch diplomatic clearance and advance notice messages. After

duty hours, the CP/AMD controller arranges to handle messages. If the PIC has adequate crew rest and notice prior to departure, he/she may accomplish pre-launch flight planning.

6.35.3. The SOC and aircrew schedulers notify the rest of the crewmembers. They are briefed on the mission/aircraft numbers, departure time, where the aircraft is/projected to be spotted, required fuel load, general itinerary and number of days away, and any items the PIC has designated for briefing.

6.35.4. Reporting.

6.35.4.1. The PIC normally reports to base operations/squadron/CP to pick up the dispatch flight plan, weather briefing and intelligence package, files a flight plan (if necessary) and then reports to the aircraft. For immediate launches, one of the other pilots normally reports directly to the aircraft. For all other launches, one of the other pilots normally picks up passports/shot records, crew orders, navigation kits and intelligence packages (as applicable), then reports to the aircraft for pre-launch preparation.

6.35.4.2. FEs/FCCs report directly to the aircraft to monitor fueling, reconfiguration and accomplish preflight inspections. Keep the CP advised of any aircraft problems.

6.35.4.3. CSOs pick up applicable crypto kits and report to the aircraft for preflight. They act as the crew monitor and notify the CP and PICs if crewmembers do not report within a reasonable time.

6.35.5. Immediate Launch Clearances. Pilots should ask clearance delivery for a full route clearance if the CP, IFM/CDS, SOC or aircrew scheduler files the flight plan.

Chapter 7

AIRCRAFT SECURITY

7.1. General. Due to the unique operational requirements and limitations for these missions, this guidance includes some security considerations that commanders may approve, after a risk assessment, during mission planning and execution. AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking),* AFI 31-101 and their MAJCOM supplements contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed aircrew members or missions to the public **(T-2)**.

7.2. Security. The OG/CC or above may direct the use of security personnel above and beyond the requirements of AFI 31-101. The waiver approval authority for EA Raven team composition, security, and Raven team support requirements is the WG/CC exercising authority over EA aircraft. For AMC, AMC/A4S tracks missions through the Threat Working Group (TWG) and is provided a copy of approved waivers for Raven required missions prior to execution.

7.2.1. Protection Level (PL)-1. Presidential, WHMO, Office of the Secretary of Defense (OSD)-designated aircraft require continuous security protection at home station, en route operating locations, and contract maintenance facilities. Units define Raven requirements for PL-1 missions in local guidance. Secure Presidential, Vice Presidential, First Lady, and Foreign Head of State aircraft in accordance with AFI 31-101.

7.2.2. PL-2/PL-3. When not designated as PL-1 aircraft, the C-32 aircraft is designated PL-2 resource. All other EA aircraft are designated PL-3 resources. See AFI 31-101 for PL-2/PL-3 security requirements. Units define Raven requirements for PL-2/PL-3 missions in local guidance.

7.3. Procedures. Unless otherwise prescribed, aircraft supporting EA missions retain their PL status as defined in AFI 31-101. In accordance with **paragraph 6.3.2**, all EA missions will comply with the Phoenix Raven Location List for en route aircraft security **(T-1)**. If not transiting a Raven-required location, each wing retains the authority to designate an aircraft transporting a senior official as a "security required" mission. Units outline specific pre-mission, en route, and post-mission responsibilities of Raven team members in local guidance.

7.3.1. Security Forces assist PICs in coordinating advance security support with local military and civilian authorities. They assure local security efforts are smoothly integrated into the total security system to protect the aircraft. For CONUS, or non-Raven required locations, security support may be a combination of DoD, U.S. law enforcement or host nation personnel. During mission execution, the PIC coordinates with the assigned senior Security Forces members to ensure the aircraft is afforded adequate protection.

7.3.2. During mission planning for Raven or security required locations, WG/CC's direct a cross-functional review, i.e., MAG, to assess security risks against operational requirements and modify/waive mission specific procedures as outlined in this chapter. These decisions/waivers are documented during mission planning and are included the risk mitigation actions. At no time should security risks be "assumed" by C2 agents when coordinating EA support.

7.3.3. Team Composition. Security Forces team composition for EA missions is determined, in part, by the size and design of the aircraft being supported, the need for 360 degree

surveillance and the planned ground time. **Table 7.1** outlines the number of Security Forces members required for each aircraft supporting a basic VIPSAM mission. Use of Raven Apprentices is outlined in AFI 31-101 and MAJCOM supplements.

Table 7.1. Security Forces Members.

AIRCRAFT	NON-Raven REQUIRED LOCATION	INCREASED PROTECTION LEVEL BASED ON MISSION	Raven REQUIRED LOCATION	NOTES
C-32	4	4	4	1, 2, 3
C-40	N/A	2	3	2, 3, 4
C-37	N/A	2	2	2, 3, 4

Notes: 1. Aircraft is always PL-2 unless upgraded to PL-1

2. Security support (e.g., tail guards) may be arranged in advance and provided by host

3. Protect in accordance with AFI 31-101 if PL is upgraded based on mission

4. Increase team sizes when extended ground times exceed 12+45

7.3.4. The standard Security Forces "duty day", is outlined in AFI 31-101. Upon tasking, mission planners may conduct a risk assessment and in accordance with **paragraph 7.2**, recommend to modify/waive this standard up to a maximum of 16 hours of duty time if; the ground time is less than 12 hrs, but has consecutive "security required" locations with short intervening flights, or if the ground time exceeds 12 hours but has a short en route flight time and no consecutive "security required" locations. Do not plan back-to-back extended duty days for a single team. PICs determine what, if any, security forces duties or functions are performed at stops not designated as "security required".

7.3.5. Security Forces are designated as Mission Essential Personnel (MEP) and travel on board the aircraft. They do not have an in-flight security or flight deck denial mission unless specifically tasked. During missions with extended ground times, this may present an operational challenge for airframes with limited seating. Upon tasking, mission planners may conduct a risk assessment and in accordance with **paragraph 7.2**, recommend to pre-position a portion of the security forces personnel via commercial air. If approved, a minimum of one Security Forces team (first shift) travel onboard the aircraft, as tasked from home station. This decision may be used in combination with other options as outlined in **paragraph 7.3.4** The wing executing the mission remains responsible for the pre-positioning team and coordinating travel/visa processing/lodging/logistics details prior to mission execution and coordinate with the local DAO.

7.3.6. The unique nature of EA missions may result in ground times at Raven or security-required locations that may restrict the operational mission, but may be mitigated by other

means. Upon tasking, mission planners may conduct a risk assessment and recommend to modify/waive the entire Raven or security requirement. Exercising this option should only be considered as a last resort to meet operational requirements and the risk approval authority/level for this decision is the MAJCOM A3 or COMAFFOR exercising command authority over the mission. In all cases the decision/waiver is documented and shows the mitigation actions, e.g., armed aircrew to stay at the aircraft throughout the ground time. For AMC missions, submit the waiver in accordance with established TWG procedures.

7.4. Additional Requirements.

7.4.1. PIC Authority. The PIC ensures that adequate aircraft security measures are provided at all times.

7.4.2. Advance Security Support Arrangements. The PIC ensures security support has been coordinated at en route stations in advance. If security requirements cannot be met prior to departure, the airfield may be deemed unsuitable for RON by the unit. Units may use risk assessment teams and MAG to integrate MAJCOM and AOR Intel/TWG recommendations to determine suitability. Home station CP and unit C2 assists the PIC for alert missions or en route diversions.

7.4.3. Briefings. PICs will obtain threat assessment and security capability evaluation briefings before departing home station **(T-2)**. Unit C2 provides the PIC with pertinent updates en route.

7.4.4. Baggage Security. Baggage should be screened in accordance with passenger processing procedures by transportation representatives. If not under constant surveillance, monitoring or custody of cleared personnel, the PIC may direct an additional inspection at their discretion. Verify baggage identification against passenger manifest. Aircrew members secure their own baggage. The PIC ensures baggage security requirements are explained to the mission contact.

7.4.5. Fuel Security. Only PL-1 Presidential aircraft require secure fuel. For other EA missions, use fuel obtained from large capacity, high use sources not pre-designated for EA aircraft.

7.4.6. Flight Line Photography. There are no restrictions on exterior photography of EA aircraft. Interior photography is also allowed with the exception of the VC-25 and en route aircraft. Interior photos of the VC-25 are coordinated with WHMO through the PAG/CC. Interior photos of en route EA aircraft are at the discretion of the PIC and the principle DV. Care is taken to remove all classified materials from sight prior to authorizing any photography. Specific airfields may have restrictions regarding the photography of aircraft.

7.4.7. Raven manifest changes for Presidential Support aircraft are approved by the PIC. Manifest changes for all other aircraft are approved by the mission contact officer or PIC. Ravens board the aircraft only after all passengers and other aircrew members have boarded.

7.5. En Route Security.

7.5.1. Aircraft Access Control. Positive control of access to EA aircraft is mandatory.

7.5.1.1. Ravens control access, after coordination with the PIC, to Presidential Support and certain other EA missions and accompany these aircraft during the missions.

7.5.1.2. When Ravens or security is not required and do not accompany aircraft, the aircrew is responsible for controlling access. At USAF installations, a passenger service representative normally assists in boarding passengers. The passenger service representative should be at the aircraft prior to passenger arrival and remain at the aircraft until loading is complete. Monitor all servicing and support personnel. Do not allow unidentified personnel onboard or around the aircraft. Escort unofficial visitors on board the aircraft and keep them under surveillance until they depart.

7.5.2. Use of aircraft sealing devices. EA aircraft should be sealed (at the discretion of the PIC) during all RONs and during any ground time when aircrew or Raven security teams are absent from the aircraft and the aircraft cannot be locked. Seal doors and hatches according to local wing directives. Aircraft with an onboard ground security system meet the intent of this paragraph.

7.6. Detecting Unauthorized Entry.

7.6.1. Suspected Unauthorized Entry. If the aircraft is suspected of being tampered with or subjected to unauthorized entry, the PIC will take the following actions:

7.6.1.1. Notify the local security authorities and request a thorough inspection of the aircraft for sabotage, explosive devices and pilferage **(T-2)**.

7.6.1.2. Notify CP and C2 centers. Advise them of any requirements for assistance and give them the estimated revised departure time **(T-2)**.

7.6.1.3. If there are indications that sabotage is a definite possibility or if security inspections may delay the DV party, notify the mission contact officer **(T-2)**. Establish suitable departure time and if necessary, coordinate suitable alternate transportation through current operations or SOC **(T-2)**.

7.6.1.4. Monitor the security check of the aircraft. When cleared by security authorities, conduct a thorough preflight inspection **(T-2)**. Look for broken wiring, damaged components, foreign devices, etc. **(T-2)**.

7.6.1.5. If both the security authorities and the PIC are assured aircraft is safe to fly, notify the OG/CC. Depart only with the OG/CC approval. Safety and aircraft security take priority over minimizing DV inconvenience.

7.6.2. Security awareness is crucial to effective mission accomplishment. Aircrews should always remain vigilant to their surroundings, especially at high threat, low security locations. During preflight activities, aircrews will inspect all accessible areas, to include aircraft wheel wells, and cargo compartments for personnel or other unfamiliar devices **(T-2)**. Report any suspicious items to host security forces **(T-2)**. Aircrews will maintain a heightened security posture throughout all pre-takeoff activities **(T-2)**.

7.7. Preventing and Resisting Hijacking.

7.7.1. General Hijacking Guidance. A hijacking could create a serious international incident and jeopardize the safety of passengers and crew. High level DVs traveling aboard EA aircraft increase potential severity of any hijacking incident. Expect the National Military Command Center (NMCC) to become involved in resolving hijack crises. Military C2 is central POC if a hijacking threatens the EA aircraft or passengers at any location. The PIC is the coordinating authority for anti-hijacking procedures. The PIC has first-hand knowledge of the situation and

should take every opportunity to keep command authorities apprised of the situation. Use military C2 channels to contact NMCC, who in turn relays instructions to the PIC.

7.7.2. The FAA Administrator is vested with exclusive responsibility for the direction of law enforcement activity in aircraft hijacking situations involving all aircraft (civil and military) in-flight in the United States.

7.7.3. In taking action during an aircraft hijacking situation, military forces act under military command within the scope of their duties.

7.7.4. In the event an aircraft involved in an aircraft hijacking situation is carrying documents, equipment or material that the DoD has determined to be highly sensitive, the DoD provides the FAA and where appropriate, the FBI, with all pertinent information. Where possible, the FAA consults and cooperates with DoD prior to directing any law enforcement activity.

7.7.5. Should preventive efforts fail, any actual attempt to hijack a military aircraft is resisted in a manner appropriate to the situation. Resistance may vary from dissuasion to direct confrontation, including the use of weapons. Ravens are authorized to use weapons to subdue a hijacker. In the case of an aircraft carrying passengers, the primary concern is the safety of the passengers.

7.7.6. Since air piracy may be committed by political terrorists or by individuals to whom the threat of death is not a deterrent but a stimulus, ordinary law enforcement procedures may be ineffective. Thus, successful conclusion of a hijacking situation and apprehension of the hijackers may require use of specialized law enforcement techniques and procedures.

7.7.7. Delaying actions have been most successful in overcoming hijackings without loss of life or property.

7.8. Preventive Measures. Commanders at all levels must ensure preventive measures are taken to minimize access to the aircraft by potential hijackers **(T-1)**. When EA aircraft are operating away from home station, the PIC will ensure provisions of AFI 24-602, Volume 1, *Passenger Movement*, and AFI 13-207 and supplements are complied with **(T-1)**.

7.8.1. Preventive measures include the following:

7.8.1.1. The host station passenger processing or manifesting facility should conduct anti-hijacking inspections.

7.8.1.2. Do not board passengers until the PIC is fully satisfied with inspection results.

7.8.1.3. In the absence of qualified passenger service representatives, the PIC ensures the anti-hijacking inspection of passengers and baggage is accomplished.

7.8.2. Medical facility commanders are responsible for anti-hijacking inspection of patients. When patients are delivered to the aircraft by civilian sources, the aircrew will perform required inspections prior to loading **(T-2)**.

7.8.3. During Exercises or contingencies in support of combat operations involving the movement of large groups of personnel, the unit being supported should manifest passengers and perform anti-hijacking inspections.

7.8.4. Passengers will not carry weapons or ammunition on their person or in hand-carried baggage aboard an aircraft **(T-2)**. **Exception:** Special agents, guards of the Secret Service or

State Department, Personal Security movement of large groups of personnel, the unit being supported should manifest passengers and perform anti-hijacking inspections.

7.8.5. If weapons require clearing, ask the individual to:

7.8.5.1. Move to a safe, clear area at least 50 feet from any aircraft, equipment or personnel before unholstering or unslinging their weapons.

7.8.5.2. Clear weapons in accordance with their organization's standard safety procedures.

7.9. Initial Response. When an act of air piracy involves an Air Force installation or aircraft within the United States, response is according to the following guidelines until such time as FAA assumes active direction of anti-hijacking efforts. Resist all attempts to hijack a military aircraft. Resistance may vary from simple discussion through deception and subterfuge, to direct physical confrontation, including the prudent use of weapons. To counter a hijacking, actual or threatened, delay movement of the aircraft to provide time for ground personnel and the aircrew to establish communication and execute coordinated resistance actions.

7.10. In-Flight Resistance. After airborne, success in thwarting a hijacking depends on the resourcefulness of the aircrew. Many variables of a hijacking preclude use of any specific counter-hijacking procedure. Some key factors should be evaluated before deciding a course of action to be taken, including the nature of the threat, danger to life or crippling damage to the aircraft in-flight, destination indicated by the hijacker and the presence of sensitive material onboard. Some counter-hijacking actions the aircrew may consider are:

7.10.1. Engage the hijackers in conversation to calm him or her and to evaluate what course of action might be effective.

7.10.2. Dissuade the hijacker.

7.10.3. Use facts or subterfuge to convince the hijacker intermediate stops are necessary.

7.10.4. Propose more favorable alternatives, such as landing in a neutral, rather than a hostile, country.

7.10.5. Exploit any reasonable opportunity to incapacitate or overcome the hijacker physically, including the prudent use of firearms.

7.10.6. Never give up control of the aircraft to a hijacker.

7.11. Communications between Aircrew and Ground Agencies. Crews facing a hijacking threat will notify ground agencies by any means available as soon as practical and follow up with situation reports as circumstances permit **(T-2)**. Detailed guidance is contained in AFI 13-207.

7.11.1. Crews will transmit an in-the-clear notification of hijacking to ATC **(T-1)**. If an in-the-clear transmission is not possible, set transponder to 7500. If unable to set the transponder, or if not under radar control, transmit a radio message indicating transponder change to 7500.

7.11.2. Aircrews will not use the covert signals to communicate the presence of a hijacking situation **(T-1)**. Code words, covert notification actions, and further transponder changes are not used.

7.12. Forced Penetration of Unfriendly Airspace. Follow the procedures outlined in AFI 13-207. Consider the presence of classified documents and equipment aboard the aircraft. When a

landing in an unfriendly nation is imminent, attempt to dispose of or destroy the equipment or material.

7.13. Arming of Crewmembers. Aircrews are armed on all overseas missions unless Ravens are a part of the crew (not required for a CONUS depot input for OCONUS units). Load and unload weapons at approved clearing barrels if available. Units will establish which crewmembers will be armed in their supplement to this manual **(T-2)**. All crewmembers should know who is armed. Arm aircrews on CONUS missions only when directed by current operations or SOC in accordance with the Operations Order (OPORD) or Operation Plan (OPLAN). Unit commanders ensure crewmembers are trained in weapon issue, loading, safety, firing, transfer and receipt procedures. Comply with AFI 31-117, *Arming and Use of Force by Air Force Personnel.* Crewmembers will be armed before preflight, onload, or offload duties and until completion of all offload duties **(T-2)**. If an armed crewmember leaves the crew en route, transfer the weapon to another authorized crewmember using AF Form 1297, *Temporary Issue Receipt*. Do not use a hand to hand transfer of loaded weapons to another crewmember. Place the weapon on a flat surface.

7.13.1. Standby/Alert Launches. Do not delay the mission to pick up weapons. If it appears there is an unacceptable wait to get weapons, proceed to the aircraft and notify the CP.

7.13.2. Crew Rest. When crew RON, secure weapons in accordance with AFMAN 31-129, *USAF Small Arms and Light Weapons Handling Procedures*. If stored on the aircraft, use the aircraft gun box with approved lock.

7.13.3. Wearing of Weapons. Wear weapons in holster, concealed at all times to prevent identifying armed crewmembers. Do not wear weapons off the flight line except to and from the C2 center, armories and other facilities associated with aircrew activities. When OCONUS, units comply with the Foreign Clearance Guide restrictions for carrying weapons outside the aircraft.

7.13.4. Weapons Storage In-flight. When no passengers are onboard, weapons may be stored in the gun box in-flight after a satisfactory stowaway check. Crewmembers will rearm before landing **(T-2)**. Crewmembers ensure they are reissued the same weapon until mission termination at home station**.** Secure weapons in accordance with AFMAN 31-129.

7.14. Force Protection. Crews should be alert to the possibility of terrorist activities at all times. Reference AFTTP 3-4, *Airman's Manual;* CJCS Guide 5260, *A Self-Help Guide to Antiterrorism;* DoDI O-2000.16, Volume 1; AFI 10-245, *Antiterrorism Program Implementation*, and applicable AFTTPs for Force Protection measures. The following considerations may help crewmembers avoid becoming victims of terrorism when operating OCONUS:

7.14.1. Personal Security. Crews should realize their conduct can make them a target for individuals dissatisfied with U.S. foreign involvement in their national affairs. Local foreign nationals may or may not condone a military presence. Crew conduct is watched and judged.

7.14.2. Hotel Security. When billeted in commercial hotels, crews need to be aware of the following:

7.14.2.1. Always assume rooms are monitored and do not view or discuss classified material.

7.14.2.2. Sanitize crew lists when recording room numbers.

7.14.2.3. At no time should the crew orders be given to hotel registration clerks.

7.14.2.4. Orders, itineraries or other mission related materials should not be left in clear view in hotel rooms.

7.14.2.5. Avoid home station addresses on hotel registrations and baggage tags.

7.15. Protecting Classified Material on Aircraft. The PIC will ensure the protection of classified materials aboard their aircraft **(T-2)**. The CSO, if available, is responsible for supporting the PIC with these duties. See requirements in AFI 16-1404, *Air Force Information Security Program*, as a minimum, ensure the IFF equipment is set to zero before leaving the aircraft.

Chapter 8

TRAINING AND OPERATING LIMITATIONS

8.1. Passengers on Training Missions.

8.1.1. Qualification Training. Initial qualification or upgrade training (AC upgrade training allowed) for pilots will not be conducted on missions with passengers onboard **(T-2)**. Mission certification training, non-current but qualified, qualified NMR, OMEs, and line training missions (LTM) may be conducted on missions with passengers onboard only if the pilot in training is qualified in accordance with **paragraph 3.4.1** **Exception:** Not applicable for MEPs.

8.1.2. Mission certification training, evaluations, off station trainers and line development missions may carry passengers only if the aircrew in training is qualified or supervised in accordance with **paragraph 3.6**

8.1.3. Touch-and-go landings and multiple practice approaches are prohibited with passengers onboard **(T-2). Exception:** Not applicable for MEPs.

8.1.3.1. When approved by the MAJCOM, civilian employees, under direct contract to the DoD and engaged in official direct mission support activities, considered "mission essential" may be onboard when touch-and-go landings are performed providing the mission is a designated training flight and an IP or EP is in command. This includes Aircrew Training System (ATS) contractor instructors flying in an official capacity under the requirements of the current ATS contract.

8.1.3.2. Unit-authorized maintenance specialists and/or civilian contractors are approved to fly on the aircraft, to include touch-and-go landings, for the purpose of conducting in-flight maintenance inspections. However, the maintenance/contractor personnel should be deplaned after completion of the in-flight inspection.

8.1.4. Passengers are not permitted when performing tactical maneuvers for training or currency. This restriction does not preclude performing tactical maneuvers when operationally directed or required.

8.2. Touch-and-Go Landing Limitations. Practice touch-and-go landings only on designated training, evaluation and currency missions or at the end of an operational mission in accordance with **paragraph 8.3** Observe passenger restrictions in **paragraph 8.1.3**

8.2.1. Touch-and-go landings may be performed by:

8.2.1.1. Instructor pilots, instructor pilot candidates on initial or re-qualification instructor evaluations and flight examiner pilots from either seat.

8.2.1.2. Any pilot from either seat provided that an instructor pilot, instructor pilot candidate on initial or re-qualification instructor evaluation or flight examiner pilot is in the other seat.

8.2.2. Wind and Runway Restrictions. Comply with wind restrictions, RCR and crosswind limits and runway requirements in **Chapter 5** of this manual. Do not exceed the normal or recommended zone of FCM takeoff and landing crosswind component charts.

8.2.3. Weather. The minimum reported weather required to perform touch-and-go landings is 300 foot ceiling and RVR 40 (3/4-mile or 1200 meters visibility without RVR).

8.2.4. Do not place the throttles in reverse during a touch-and-go landing.

8.2.5. Practice rejected takeoffs are prohibited.

8.2.6. Stop-and-go-landings are not authorized.

8.2.7. Minimum Runway for Touch and Go Landings. The minimum runway for touch and go landings is per the FCM or **Table 8.1**, whichever is greater. For all aircraft, ensure aircraft performance assures the greater of the takeoff or landing distance, corrected for configuration, pressure altitude (density altitude if appropriate), temperature, RCR/RSC and crosswinds per FCM.

Table 8.1. Minimum Runway Length for Touch and Go Landings.

MDS Aircraft Type	Minimum Runway Length
C-37	5,000‘/1667m (NOTES 1, 2)
C-32/C-40	6,000‘/1829m (NOTE 1)
VC-25	(NOTE 1)
Notes: 1. The PAG/CC specifies minimum runway requirements for Presidential Aircraft operations. 2. C-37 partial flap touch and go landings require a minimum of 7000‘.	

8.3. Training on Operational Missions. Crews may perform multiple approaches and touch-and-go landings on operational CVAM/C2 directed missions provided the following requirements are met:

8.3.1. Normal touch-and-go limitations apply and MEPs are briefed of the activity.

8.3.2. All transition training will be accomplished during the first 12 hours of the FDP **(T-1)**. **Exception:** ANG and AFRC crews may conduct transition training as long as the FDP does not exceed 16 hours. FDP begins when the crew member first reports for duty of any kind, to include their civilian job.

8.3.3. Pre-mission coordination requirements. Activity must be pre-approved by CVAM/C2 and OG/CC prior to the mission and unit training will be charged to the unit after the completion of the first landing **(T-2)**. As part of pre-mission planning, IPs coordinate with the OG/CC and CVAM/C2 approval through their unit SOC and obtain training mission number(s) and approval for the airfield where the training may take place.

8.3.4. Upon initial arrival at the training location, close out the current line on the AFTO Form 781 and log the training time on the next line using the appropriate training mission symbol and number.

8.4. Simulated Emergency Flight Procedures.

8.4.1. Do not perform simulated engine-out approach training in the aircraft. **Exception:** PAG/CC may approve simulated engine-out training on a case by case basis. This authorization is not intended to replace the use of the FTD.

8.4.2. **(PAG)** The minimum weather for simulated engine-out approaches/landings and no-flap approaches is published circling minimums (use 600/2 if circling minimums are not published) during daylight, and 1000/2 or circling minimums, whichever is higher, at night.

8.5. Prohibited Flight Maneuvers. Practice of the following maneuvers are prohibited in flight and may only be accomplished in the simulator:

8.5.1. Stall and approach to stalls including initial buffet or stick shaker.

8.5.2. Dutch roll.

8.5.3. Unusual Attitudes.

8.5.4. Emergency descent.

8.5.5. Compound emergencies.

8.5.6. Tactics maneuvers (except MAJCOM-approved maneuvers listed in **Chapter 16** of this manual).

8.5.7. Bank angles greater than 45 degrees (except MAJCOM-approved tactics maneuvers).

8.5.8. Simulated jammed stabilizer demonstration approaches.

8.5.9. Rudder force reversal.

8.5.10. Simulated runaway trim malfunctions.

8.5.11. Simulated engine-out takeoffs.

8.5.12. Aborted takeoffs.

8.5.13. No-flap landings or flap settings:

8.5.13.1. **(C-37)** : Do not practice No Flap landings.

8.5.13.2. **(C-32)** : Do not practice landings with less than flaps 25.

8.5.13.3. **(C-40)** : Do not practice landings with less than flaps 15.

8.5.13.4. **(VC-25)** : Do not practice landings with less than flaps 25.

8.5.14. No-flap approaches (except C-37 and VC-25).

8.5.15. No-slat landings.

8.5.16. Split flap landings.

8.5.17. Landing with inoperative hydraulic system.

8.5.18. Rudder boost-off landing.

8.5.19. Simulated two engine out flight.

8.6. Briefing Requirements. Use OGV-approved MAF and MDS-specific briefing/debriefing guides.

8.7. Operating Limitations.

8.7.1. Planned Go-Arounds and Visual Low Approaches. Initiate a planned go-around or missed approach not later than:

8.7.1.1. Precision approach - DH (or 200-feet HAT, whichever is higher).

8.7.1.2. Non-precision approach - MAP.

8.7.1.3. Visual approach or VFR pattern - 100 feet AGL.

8.7.1.4. Restricted Low Approach w/ Men and Equipment on Runway - 500 feet AGL.

8.7.2. Multiple full-stop landings - Compute brake energy prior to each subsequent takeoff.

8.8. CAT II/III ILS and EVS Approach Training. CAT II/III training and evaluations may be conducted at any ILS facility where signal output is accurate and stable enough to achieve the desired training.

8.8.1. Weather. No lower than 200-foot ceiling and 1/2-mile visibility (RVR 24) or Category I minimums, whichever is greater.

8.8.2. Winds. Maximum crosswind component is in accordance with **paragraph 5.12**

8.8.3. When a CAT II DH is not published, DH is based on HAT of 100 feet.

8.9. Tactical Training. Accomplish tactical training, including tactical descents, arrivals and departures in accordance with AFI 11-2EAV1, **Chapter 16** of this manual, applicable AFTTPs, and local guidance. Observe aircraft operating limits at all times.

Chapter 9

NAVIGATION PROCEDURES

9.1. Navigation Databases.

9.1.1. Flight Planning Navigation Database. Flight plans created using commercial flight planning tools (e.g., Jetplan or ARINC Direct) use their own commercial navigation databases. Pilots are responsible for ensuring the accuracy of flight plan waypoints against current aeronautical charts, terminal instrument procedures, or FLIP documents. These flight plans may be saved and uploaded into the FMS via datalink communications or manually entered into FMS.

9.1.2. Aircraft Navigation Database. The FMS uses a commercial navigation database. This database is normally stored by unit maintenance and is uploaded into the FMS each 28 day period prior to flight.

9.2. Computer Flight Plans.

9.2.1. Aircrews provided with winded flight plans should load planned winds from the CFP into the FMS or download the most current winds provided in the dispatched flight plan. For remote/oceanic routing (formerly Class II Navigation routing), aircrews load planned winds in the FMS. Small changes (less than 30 degree direction change and/or 15 knots wind speed) need not be entered for every leg.

9.2.2. In addition to reviewing Area Planning Europe-Africa-Middle East (AP/2), all aircrews planning to operate in Atlantic Oceanic airspace conduct a detailed review of the airspace operations manual, NAT Ops Bulletins, and the associated flight information region (FIR) Oceanic NOTAMS. In the event that conflicting information is discovered between FLIP and the respective airspace manual, the manual takes precedence.

9.2.3. During mission planning for all oceanic sectors, crews will calculate an ETP **(T-2).** Guidance on calculating an ETP can be found on the Aircrew Standardization/Evaluation AF Portal web page in the flight planning section. See **paragraph 14.5**

9.3. Navigation Capability / Airspace Requirements.

9.3.1. Reduced Vertical Separation Minimum (RVSM). Airspace where RVSM is applied is considered special qualification airspace. Both the operator and the specific aircraft type must be approved for operations in these areas **(T-2)**. All EA aircraft are approved for unrestricted use in RVSM airspace. Always refer to the appropriate Area Planning (AP) publication for specific theatre RVSM requirements. In addition to the requirements established in the applicable AP publication, always comply with the following when operating in RVSM airspace:

9.3.1.1. Both primary altimeters, at least one autopilot, the altitude advisory system, and the transponder, must be fully operational **(T-2)**. Request a new clearance to avoid this airspace should any of this equipment fail.

9.3.1.2. Engage the autopilot during level cruise, except when circumstances such as the need to re-trim the aircraft or turbulence require disengagement.

9.3.1.3. Crosscheck the altimeters before or immediately upon coast out. Record readings of both altimeters.

9.3.1.4. Continuously crosscheck the primary altimeters to ensure they agree within 200 feet.

9.3.1.5. Limit climb and descent rates to 1,000 feet per minute when operating near other aircraft to reduce potential TCAS advisories.

9.3.1.6. Immediately notify ATC if any of the required equipment fails after entry into RVSM airspace and coordinate a plan of action.

9.3.1.7. Document in AFTO Form 781 malfunctions or failures of RVSM required equipment, including the failure of this equipment to meet RVSM tolerances.

9.3.1.8. In the North Atlantic Region, North Atlantic High Level Airspace (NAT HLA) airspace is a subdivision of RVSM airspace. Refer to the NAT HLA Manual and FLIP AP/2 for detailed requirements when operating in NAT HLA airspace.

9.3.2. Performance Based Navigation (PBN). Both the operator and the specific aircraft type require approval for operations in defined airspace. PBN airspace is being incorporated around the world to increase air traffic capacity by decreasing separation requirements between routes. EA aircraft are approved for en route RNP, but limited to operational time restrictions based on navigation equipment. These limitations are annotated in local supplement and updated by unit Stan/Eval when appropriate.

9.3.2.1. Document (in AFTO Form 781) malfunctions or failures of RNP required equipment, including the failure of this equipment to meet RNP tolerances.

9.3.2.2. Basic Area Navigation Airspace (BRNAV). Both the operator and the specific aircraft type require approval for operations in these areas. BRNAV navigation accuracy criteria is RNP-5. Aircraft with integrated GPS have no BRNAV restrictions. Without GPS, aircraft require auto updates every two hours (as required) to maintain actual centerline within +/- 5 NM of ATC cleared route.

9.3.2.2.1. Minimum equipment to operate in BRNAV airspace is one INS/IRS capable of updates or an FAA approved GPS with RAIM or equivalent system. Flights entering BRNAV airspace after long overwater flight should be especially aware of BRNAV tolerances and update accordingly.

9.3.2.2.2. Aircraft unable to maintain BRNAV tolerances are required to advise ATC immediately and take appropriate coordinated action.

9.3.2.2.3. Document (in the aircraft forms) malfunctions or failures of BRNAV required equipment, including the failure of this equipment to meet BRNAV tolerances.

9.3.3. FM Immunity (FMI). EA aircraft are equipped with dual FMI VHF navigation receivers, considered fully compliant, and follow normal procedures. Refer to the applicable Area Planning series for more information concerning FMI operations.

9.3.4. CPDLC Operations. Refer to applicable FLIP, FAA, Global Operational Datalink (GOLD) Manual, and MDS guidance for CPDLC operations. Specific operations and procedures are approved by MAJCOM/A3 with mission execution authority. Verify

equipment and ensure appropriate code is annotated on the flight plan in accordance with FLIP General Planning (GP).

9.4. Navigator Procedures (VC-25). Use local supplement to describe duties (if applicable).

9.4.1. Navigator Station (if applicable). The navigator who prepares or accepts the flight plan will remain on duty at the navigator's station during departure and briefs the relieving navigator **(T-2)**.

9.4.2. The navigator ensures all required fuel computations are accurate and complete, and, in addition, will ensure ramp fuel load is compatible with mission requirements **(T-2)**.

9.5. High Latitudes/Grid Navigation/Polar Routes. Operations when flying north of 70 degrees latitude require provisions for conversion of heading systems from magnetic to true, or operations with Grid procedures. Consider provisions for INS/IRS failure. Refer to the FCM for specific procedures.

9.5.1. Use of Polar Routes is authorized. Ensure aircraft MEL, performance capability and navigation capability exists for the entire route. Utilize all IFM/CDS functions and review polar route navigation procedures in FLIP (Arctic Control Area, NavCanada, Alaska Supplements, etc.). Follow MDS-specific guidance for alternate planning and extended range operations (EROP), if applicable. Ensure alternates qualify and are suitable for use. Comply with all cold weather/polar operations manual restrictions (fuel temperature, cold weather operations, etc.).

9.5.2. INS/IRS Operation. Set compasses to computed grid heading in order to have a current grid heading available should INS/IRS fail. If INS/IRS fail, aircraft are directed by grid heading until exiting the grid area.

9.5.3. En route requirements with INS/IRS inoperative:

9.5.3.1. Navigators. Comply with FLIP (Arctic Control Area or other applicable procedures). Check aircraft's grid heading each 30 minutes during the first hour after grid entry. Thereafter, heading checks are necessary every hour. When entering grid operation, apply convergence to the true heading. Establish the aircraft on computed true heading references. When exiting grid, apply variation to obtain magnetic headings to the flight plan to verify the accuracy of the courses measured and conversion data used. This ensures the validity of initial entry headings and provide precise target headings for exit.

9.5.3.2. Determine the precession information for gyros after each heading check. Do not reset the gyros unnecessarily. When precession is one degree or less do not reset the gyros since the error may be in the observation.

9.5.3.3. If a grid heading can't be determined at the regular time interval by celestial, use the previous precession information to determine heading changes.

9.6. EROPS Procedures (C-32 and C-40). An EROPS area of operation is considered to be any geographical area where, at any point on the planned route, the aircraft is more than 60 minutes from an adequate airport at the single-engine drift-down speed and altitude in still air. An EROPS area of operation may also be considered to apply to over-land areas having suitable alternates within 60 minutes (at the single-engine drift-down speed and altitude in still air), but are considered not usable for political, military, security or performance considerations.

9.6.1. Mission Planning. The EROPS area of operation is considered and factored into route planning considerations. Use of appropriate extended range flight planning tools is authorized. Identify, review for suitability, and include adequate airfields contained in FMC/FMS database. Verify weather, airfield, aircraft systems, instrument approach, passenger handling, maintenance support, fire and rescue support, operations hours and NOTAMs determine suitability.

9.6.2. Units will publish specific EROPS guidance in local supplement to enhance operational safety **(T-3)**. As a minimum, the PIC must have a qualified alternate planned for CAT I fuel, and a contingency plan for weather, suitability and MEL/MMEL (e.g. loss of APU, fire detection, generator, etc.) **(T-2)**. The PIC has the ultimate responsibility for safety.

9.6.3. C-32 and C-40 aircraft are considered 180 minute EROPS compliant. To maintain that standard, the unit OG/CC (or equivalent) evaluates the MEL situation with unit Stan/Eval and direct as to how the route should be planned and how the aircraft should be operated. OG/CC (or equivalent) approves any EROPS waiver, or approve a new route conforming to reduced EROPS limits (120, 90, 60 minutes). Unit OGV passes waiver approval to CP, AMD, CDS or IFM to the crew for go/no-go.

9.7. CDS/IFM. All EA aircraft are authorized to utilize MAJCOM-approved CDS/IFM (this includes AFMC contracted services as part of aircraft procurement/sustainment if coordinated with the Lead Command). PIC is overall responsible for monitoring accuracy and completeness of flight planning.

9.7.1. Certified Dispatchers are authorized to mission plan, obtain/transmit weather information, obtain/transmit diplomatic clearance messages, compute flight plans, electronically file and flight follow EA aircraft. PIC verifies dispatch release via signature, verbal communication or datalink. At locations with MAF C2, PIC should confirm actions with CP or AMD. Secure Launch and CLOSE HOLD missions may require modification of planning factors. OG/CC or equivalent informs PIC if mission is not to be dispatched.

9.7.2. Messages.

9.7.2.1. Standard Mission. CDS Dispatchers are authorized to send official APACS messages.

9.7.2.2. CLOSE HOLD. Units may further restrict CDS activities to accommodate sensitive missions. In such cases, the unit performs flight planning and dispatch services.

9.7.3. Diplomatic Clearances. Dispatchers may obtain diplomatic clearances. PICs are responsible for overall border clearance, approval authority for flight plans and country clearance. Verify flight plan annotates appropriate diplomatic clearances for border clearance and safe passage.

9.7.4. Datalink.

9.7.4.1. HF and VHF Datalink. Use of HF and VHF datalink is approved for en route dispatch and C2 capability. Dispatchers notify the PIC of updated alternates and weather prior to obtaining clearances (departure, oceanic, approach). In any case, PICs, Navigators or FEs should update en route alternate weather prior to oceanic entry point via any means (HF or datalink). MDS specific EROPS may dictate further oceanic restrictions. OG/CCs (or equivalent) are waiver authority for dispatch relief for EROPS. In these cases,

dispatchers should contact crew by any/all means for all planning problems or changes. If not able to contact the crew, CDS/IFM notifies ARTCC, unit C2, CP or AMD to pass information to the aircraft.

9.7.4.2. CPDLC. MAJCOM authorized users may use flight following and oceanic clearance release procedures via ATC datalink. Ensure appropriate ATS log on procedures are followed. Initiate HF communication (typically 15-45 minutes prior to entry) and establish log on communication. Ensure log on is accepted and advise ATC via HF voice if communication is not established. Minimize the use of free text messages. Maintain log of ATC datalink communications and retain with post mission paperwork at unit Stan/Eval in accordance with unit procedures.

Chapter 10

FLIGHT ENGINEER PROCEDURES

10.1. General: This chapter contains flight engineer procedures not contained in the flight manual, other portions of this manual or other publications.

10.2. Responsibilities. The FE (VC-25, First FE) is responsible for the condition of the aircraft and keeps the PIC informed at all times of changes in aircraft status. FEs supervises or perform aircraft servicing and maintenance at en route stations as required to maintain aircraft in a mission-capable condition. VC-25 FEs supervise the crew chief on missions and lend assistance when required. At the end of each flight, the FE polices the flight deck if there is no CSO onboard.

10.3. AFTO Forms 781 Series. See **paragraph 6.15** for Red X clearing procedures when away from home station.

10.4. Aircraft Servicing and Ground Operations. The flight engineer is qualified and authorized to accomplish these duties when maintenance personnel are not available. This policy is designed for support of the aircraft and its mission while away from home station. The applicable refueling and de-fueling checklists are used during all refueling and de-fueling operations. If ground support personnel are not available, the PIC designates other crewmembers to assist the flight engineer. A flight engineer may assist the normal maintenance function when critical taskings dictate their use, provided this action does not impact crew duty and crew rest limits specified in **Chapter 3** of this Manual. ***WARNING:*** Do not load/off-load cargo containing explosives, oxygen, flammable gases or liquids during fuel servicing operations.

10.4.1. Fuel Servicing Operations. Unless servicing JP-4, simultaneous servicing of fuel while loading passengers or cargo, performing maintenance, aircrew members performing inspections, or operating aircraft systems is considered to be a normal fuel servicing operation. If refueling/defueling with JP-4, concurrent servicing operations are required in accordance with T.O. 00-25-172. Aircrew members qualified in ground refueling may perform fuel servicing duties. Aircrews only refuel in cases when maintenance support is not readily available and the mission would be delayed.

10.4.2. When aircrew members are required to refuel, the flight engineer acts as the refueling team supervisor. Flight engineers comply with T.O. 00-25-172 and FCM.

10.4.2.1. Designate a current and qualified aircrew member to remain on the flight deck to monitor interphone (as available) and be prepared to broadcast a request for emergency assistance on a radio tuned to the appropriate agency with ready access to an emergency response team anytime aircrew members are in the aircraft and fuel servicing is being conducted. The PA may be used to direct passenger evacuation in an emergency.

10.4.2.2. With passengers on board a current and qualified crew member continuously monitors passengers during fuel servicing operations.

10.4.2.3. A current and qualified crew member, usually the Flight Attendant, shall brief passengers on emergency egress, exits, prohibitions and hazards, if they have not been previously briefed during the mission **(T-2)**. If fuel servicing is in progress, the briefing is given immediately after boarding.

10.4.2.4. When authorized, passengers may board or exit the aircraft for the express purpose of loading for departure or off-loading upon arrival. Boarding or exiting must be on the opposite side of fuel servicing operations **(T-2)**. Once onboard, except for emergencies, passengers shall not deplane once fuel servicing commences **(T-2)**.

10.4.2.5. Passengers are not required to ground themselves.

10.4.2.6. The PIC or designated maintenance/aircrew representative advises flight attendants when to evacuate passengers.

10.4.2.7. Use of HF radios is prohibited.

10.4.2.8. Avoid refueling with JP-8+100 while transiting airfields with JP-8+100 capabilities. AMC aircraft are not allowed to operate on JP-8+100, except in emergency conditions. All JP-8+100 locations are required to maintain a clean JP-8 capability to support transient aircraft. If inadvertent refueling with JP-8+100 occurs comply with the following:

10.4.2.8.1. De-fuel the aircraft prior to flight.

10.4.2.8.2. Make an AFTO Form 781 entry stating "Caution: Aircraft refueled using JP-8+100, preventative measures must be taken when de-fueling."

10.5. Aircraft Recovery Away from Main Operating Base. The PIC is responsible for ensuring the aircraft is turned to meet subsequent mission taskings. If qualified maintenance specialists are unavailable, the aircrew is responsible for turning the aircraft to meet subsequent mission taskings.

10.5.1. The PIC is responsible for the recovery items including:

10.5.1.1. Parking and receiving.

10.5.1.2. Aircraft servicing, including AGE usage.

10.5.1.3. Supervision of minor maintenance within local capability.

10.5.1.4. Minor configuration changes to meet mission tasking.

10.5.1.5. Securing the aircraft before entering crew rest.

10.5.1.6. Coordinating aircraft security requirements.

10.5.1.7. Documenting AFTO 781-series forms.

10.5.2. In all cases where aircrews service the aircraft without qualified maintenance specialist assistance, comply with the appropriate maintenance T.O.

10.5.3. Aircrews are not qualified to accomplish the required ground inspections. In those instances where maintenance personnel are not available, the aircrew entering a red dash symbol in the AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance Document*, updating current status and enter a red dash symbol and a discrepancy that reflects that the applicable maintenance inspection (e.g., preflight, thru-flight, basic post-flight) is overdue.

10.6. Certifications.

10.6.1. Taxi Certification. FEs may taxi aircraft with PAG/CC or OG/CC approval. FEs require instruction from a qualified IP in accordance with the AFM, AFMAN 11-218, AFI 11-

2EAV1, MAJCOM Supplements and local directives. A qualified EP certifies the FE on an AF Form 8 as a ground phase item or it may be in conjunction with an annual FE evaluation annotated on the AF Form 8.

10.6.1.1. Limitations. FEs are only authorized to taxi the aircraft with another taxi qualified crew member in the other seat. FEs are only authorized to taxi across runways at home station with a qualified pilot in the other seat. The conditions for taxi cannot be any worse than wet RCR and at least 1200 RVR (1/4 mile visibility).

10.6.1.2. PAG/CC determines taxi procedures and restrictions for PAG FEs.

10.6.2. Engine Run Certification. FEs are authorized instruction from a qualified IP or certified FE on engine run procedures in accordance with the AFM, AFMAN 11-218, MAJCOM Supplement and local directives at the discretion of the PAG/CC or OG/CC. Training is documented on the Letter of Xs.

10.7. Towing Operations. The FE (or FCC as applicable) is normally on headset for all pushback operations away from home station. All pushback/towing operations performed en route by C-37 aircrews is in accordance with AFMAN 11-218, unit OG/OGV-approved checklist inserts, and the Gulfstream Aerospace Corporation Operational Information Supplement (GAC-OIS-06), , *Pushback Operations with Engines Running or Not Running*.

10.8. Local TOLD Card. The FE will complete the entire TOLD card, including the landing portion, prior to departure as required by the FCM or directed by the PIC **(T-3)**. FEs confirm accuracy of (C-37) FMS computed performance data and complete manual TOLD card when required by the FCM or directed by the PIC.

10.9. Monitoring Primary Radios. The FE monitors the primary radio for flight clearances, altitudes, heading changes and radio frequencies. The FE is not required to copy departure clearances.

10.9.1. For sorties without a CSO onboard, the FE monitors the local C2 frequency and report take-off times, block times and aircraft status as applicable.

10.9.2. For sorties on the alert aircraft without a CSO onboard, the FE monitors the local C2 frequency and report when transiting from each location as applicable.

Chapter 11

COMMUNICATION SYSTEMS OPERATOR (CSO) PROCEDURES

11.1. General. This chapter outlines procedures for CSOs not in the FCM, other Air Force directives or elsewhere in this volume.

11.2. Responsibilities. CSO is responsible for inspecting, operating and maintaining all communications and electronic equipment aboard the aircraft while on a mission. Monitor and safeguard all classified material. Only CSOs are authorized access to the aircraft safe.

11.2.1. Assure communications resources are available to meet the user's communications requirements.

11.2.2. Distribute message traffic aboard the aircraft. CSOs cannot serve as a courier for classified message traffic received during ground operations.

11.3. Pre-Mission Procedures.

11.3.1. Review planned mission itinerary and coordinate with the user's communications agency to determine mission requirements to include planned Video Teleconferences and secure calls. Following coordination with the user's communications agency, contact the GNOC, if applicable, to ensure ground communications infrastructure is operational and properly configured to support user requirements. Review satellite coverage documents and determine if host nation agreements restrict connectivity. Coordinate for waivers as needed.

11.3.1.1. CSO or FAs/PIC for aircraft without CSOs brief the established Wi-Fi policy to the user's contact during mission planning to include the prohibition of operating carry on wireless access point (WAP) equipment (transmitting Wi-Fi) while systems above Collateral SECRET are operating. **Exception:** Systems capable of processing information above Collateral SECRET are prohibited unless waived by the cognizant authority for those devices. User parties provide such waivers to the unit prior to mission execution.

11.3.2. Determine crypto kit requirements and advise the COMSEC Responsible Officer (CRO). Arrange with the PIC if special arrangements are necessary to safeguard COMSEC material during a mission.

11.3.3. Notify Squadron Operations Center (or equivalent) of all special communication system support requirements, if the special request was denied by a support agency. SOC coordinates availability with MAJCOM tasking authority and applicable agencies.

11.3.4. Review applicable FLIP and the Foreign Clearance Guide to determine if there are any special communication reporting during en route travel or on arrival into all destinations as required.

11.4. Pre-Flight Procedures.

11.4.1. Pick-up or arrange delivery of crypto kits.

11.4.2. Brief user contact or communications team lead of communications system status, limitations, available circuits and set agreement for coordinating system degradations or requirement changes.

11.4.3. Wi-Fi operational testing and pre-flight is conducted following completion of normal CSO pre-flight checklist procedures. Aircraft servicing, transmission restrictions and maintenance may limit availability of communications systems for initial and subsequent pre-flights during a mission.

11.4.4. CSOs brief the onboard contact that devices capable of processing information above Collateral SECRET are prohibited while carry-on Wi-Fi is enabled and to coordinate with the CSO prior to activating user provided carry on WAP.

11.4.5. CSOs will turn off all aircraft installed devices capable of processing information above Collateral SECRET prior to the onboard contact activating carry-on Wi-Fi **(T-0)**. Those devices include:

11.4.5.1. Ultra High Frequency (UHF) SATCOM When loaded above Collateral SECRET

11.4.5.2. Secure Terminal Equipment (STE) (Remove KSV-21 Cards)

11.4.5.3. Crisis Management System (CMS) (data path deactivated)

11.4.5.4. Power down all hard drives above Collateral SECRET.

11.4.6. Once active Wi-Fi has been tested operationally during pre-flight, the CSO coordinates with the senior travel team communicator to determine communication system priorities (i.e., Wi-Fi vs. classified processing). If classified operations above Collateral SECRET are required, the CSO will disable carry-on Wi-Fi transmissions **(T-0)**. **Note:** Aircraft equipped with integrated Wi-Fi systems and a current Authority to Operate (ATO) from the cognizant authority are cleared to operate the integrated Wi-Fi concurrently with the CMS. CSOs may continue to operate all other aircraft integrated systems regardless of classification while operating integrated Wi-Fi. The requirement to power down UHF SATCOM and remove KSV-21 cards from the STEs does not apply to integrated Wi-Fi operations. AMC A3/10, in conjunction with AMC A6 ensure current ATOs are distributed to OGVs for airframes with integrated wireless systems.

11.5. In-Flight Procedures.

11.5.1. Customer related communications issues are relayed to the GNOC as soon as possible after immediate troubleshooting efforts. The GNOC assists the CSO with troubleshooting while coordinating notifications to appropriate agencies as necessary. The CSOs or GNOC may utilize any means deemed necessary to resolve the issue to include “Slack Chat,” “BBSN Chat,” or any other commercially provided capability. The CSO reports system security incidents, classified message incidents, vulnerabilities and virus attacks to the information systems security officer (ISSO) via the GNOC.

11.5.2. Transmit departure and arrival messages and other C2 communications as directed by the tasking C2 agency, locally generated procedures and the PIC.

11.5.2.1. Departure and Arrival Messages. Refer to local supplement for specific message content. As a minimum, the message contains the call sign, the time of block departure, Estimated Time of Block-in/Block-out (ETB) to next station, maintenance status, DV code, total number of official passengers, total “Space-A” passengers and if applicable, the reason for a late takeoff/block-in. Request customs, agriculture and immigration, as needed.

11.5.2.2. En Route Notifications. In the absence of unit specific or destination airfield guidance, a minimum "Two Hour Out" report is sent to the next destination to update appropriate agencies of the DV/user's arrival time. All requests for aircraft servicing and any other special requests should be made at this time. For flights less than 2 hours in length, make requests prior to take-off and update appropriate agencies of any arrival time changes. Refer to the IFR Supplement or FCG or DAO to ensure 2 hours is adequate notification for servicing requests.

11.5.3. Provide arrival airfield weather reports or landing forecasts as requested.

11.5.4. Relay DV messages and arrange passenger phone service, as required. Ensure passengers utilizing phone systems are aware of the classification level of the system being utilized and that circuits are subject to monitoring.

11.5.5. Receive and distribute message traffic. Deliver all message traffic and requests marked for the appropriate classification level and delivered to passengers immediately after receipt.

11.5.6. The CSO reports violation of published Wi-Fi operations guidance to the PIC, with additional notifications to the GNOC as required.

11.5.7. Commercial Wideband Operations. The override feature will not be used for convenience but for legitimate needs of the principle (DV) that cannot be met by alternate communications systems. The principle will be the sole approving authority for utilizing the override feature while airborne.

11.6. En Route Security of Classified Material.

11.6.1. Upon arrival at aircraft and before each flight, the aircraft safe is checked for signs of tampering or penetration. Inventory or destroy (as necessary) all COMSEC materials. If any violation of the aircraft safe or its contents has taken place or if the inventory shows discrepancies, assume a compromise has taken place. If this occurs, immediately contact the Command Post and COMSEC account custodian or CRO by secure means if possible. Advise them of the situation and the mission impact. If a secure means is unavailable, identify to the COMSEC account custodian or CRO the affected line items from Standard Form (SF) 153, *COMSEC Material Report* in question. They, then, advise the controlling agency. The COMSEC account custodian or CRO advises the disposition of the material and what actions to take with it.

11.6.2. Ensure aircraft is secure while left unattended. Zeroize all COMSEC equipment and secure and account for all classified material. All superseded keying material/authenticators are destroyed if means to destroy are available. If unavailable, superseded material is secured with current materials in aircraft safes until proper destruction facilities are reached. The aircraft is always sealed (locked) and/or the alarm system activated for all missions carrying classified material. If a Raven team is present the aircraft may be unlocked and any level of classified material may be left onboard the aircraft in locked safes/security containers.

11.6.3. Securing Passenger Classified Material. Prior to leaving an aircraft, the CSO and FA conduct a walkthrough of passenger compartments**.** During a mission, if classified documents are discovered, notify the PIC and attempt to contact the document custodian. Secure the documents in the aircraft safe/security container and leave the passenger a note. If the

documents exceed the safe's capacity, safeguard the documents, then contact the party to find adequate storage. When returning to home station at the end of a mission if classified documents are left on the aircraft by a passenger, work with the home station Command Post to have the classified documents returned to the passenger (do not release classified to un-cleared personnel).

11.6.4. Simultaneous securing of weapons, cash and COMSEC is authorized in the aircraft safe to facilitate mission accomplishment and when other reasonable means are not available.

11.7. Post Mission Procedures.

11.7.1. Attend aircrew debrief as required.

11.7.2. Turn-in weapon and COMSEC kits in accordance with local procedures.

11.7.3. Forward all communications problem logs or reports, and customer comment cards to the GNOC, MAJCOM/A6, and AMC/A6OA.

Chapter 12

FLIGHT ATTENDENT (FA) PROCEDURES

12.1. General. This chapter outlines procedures for FA not in the FCM or elsewhere in this manual.

12.2. Responsibilities. The FA is the direct contact between the aircrew and the passenger. The FA primary duties are to instruct passengers in the use of emergency equipment, ensure cabin discipline and conduct emergency egress when necessary. Additionally, FAs act as the PIC's cabin representative, provide cabin service and maintain cabin cleanliness throughout the mission. On multi-FA crews, the 1st FA acts as FA supervisor and delegates working positions and additional responsibilities to each FA. Those positions include 2nd, 3rd, 4th, 5th, and 6th FA. Upon mission completion, maintenance personnel should allow FAs one hour (C-37, C-40) or two hours (C-32) of uninterrupted time to clean aircraft.

12.2.1. 1st FA. May occupy any of the following working positions as determined by mission requirements:

12.2.2. 2nd FA. Responsible for preparing main entrees and assisting in all phases of food preparation. Ensures all items necessary for the meals are topside, available and galley is prepared for meal service. Works with 3rd FA and cleans/sanitizes work area after each meal and upon mission termination. Coordinates food disposition and retrieval from cargo with 4th or 5th FA.

12.2.3. 3rd FA. Responsible for setting-up trays for meal service. Ensures all necessary items for the meal are topside and available. Responsible for preparing salads, fruit, garnishes, desserts, setting up for meal service. Works with 2nd FA and ensures galley is prepared for meal service, cleans/sanitizes area after each meal and upon mission termination.

12.2.4. 4th FA. Responsible for all passenger compartments except DV cabin. Prepare cabin compartments for each leg as directed by the 1st FA. Attends to passenger needs including comfort items, beverage service, etc. Identifies passengers with special dietary requests and ensures meals are served in a professional manner. 4th FA ensures cabin cleanliness throughout the mission. 4th and 5th FA should work together to ensure all responsibilities are completed.

12.2.5. 5th FA. Responsible for ensuring cargo/baggage is loaded, including storage of additional fleet and all food items. Assists in preparing beverage service and inventory of beverage and fleet items. Prepares beverages and assists with other duties as required. Ensures proper amounts of custom forms and fleet items are available for the mission and required custom forms are filled out prior to landing. Coordinates food disposition and retrieval from cargo with 2nd/3rd/6th FAs. **Note:** 5th FA responsibility is performed by the 4th FA on the C-40.

12.2.6. 6th FA. Responsible for preparing and serving crew meals and assist with DV meal preparation as needed. Coordinates menu options and meal timing. Ensures all items necessary for the meal are topside, available and the galley is prepared for meal service. Responsible for cleaning and sanitizing area after each meal and upon mission termination. Coordinates food disposition and retrieval from cargo with 5th FA.

12.3. 1st Flight Attendant Certification. Manages FA crew and leads all mission planning. Assigns all FA working/emergency positions. Responsible for safety and comfort of DV, passengers and crew. Coordinates with on-board contact and PIC for mission requirements, ensures passenger/crew requirements are met, and manages funds. Responsible for every facet of the FA mission. **Note:** On single-FA aircraft, all of the aforementioned duties will be performed by one FA.

12.4. Pre-mission Duties.

12.4.1. Contact the PIC, Scheduling or Current Operations for draft itinerary times and any information already received concerning cabin service requirements. Provide en route mission requirements at this time.

12.4.2. Contact the mission contact officer to determine cabin service (food, beverage, catering etc.) requirements. All food handling and preparation will be in accordance with AFMAN 48-147, *Tri-Service Food Code* **(T-3)**. Refer to local contact guide for cabin service. Cabin service will not jeopardize passenger or crew safety **(T-1)**.

12.4.3. The 1st FA on C-32, C-40 and VC-25 aircraft conducts a FA briefing to assign FA positions and duties. For unplanned emergencies, all FAs act in the position they are assigned. In planned emergencies, the FA with the highest qualification assumes command of the emergency and all FAs. It is critical that coordination between the PIC and 1st FA occur during pre-mission crew briefings to assure that clear directions for action be defined for aircrew duties during planned and unplanned emergencies. This includes, but is not limited to: egress, cabin smoke, fire and emergency passenger handling duties.

12.5. Preflight Duties.

12.5.1. Perform applicable preflight or en route checklists. On multi-FA aircraft, this preflight may be accomplished by one FA or divided into zones, as necessary. Check that applicable passenger information cards are properly distributed.

12.5.2. Upload food and fleet items and stow as necessary. If aircraft availability and maintenance scheduling allows, consideration should be given to loading non-perishable items the day prior to departure.

12.5.3. Prepare meals as required. Focus of preflight duties is directed toward passenger service to ensure completion prior to station time and not inhibited by crew meal service.

12.5.4. The 1st FA coordinates with the on board contact for receipt of the passenger manifests and ensure all flight attendants have a copy.

12.5.5. Check for proper identification and document passengers on DD Form 2131, *Passenger Manifest,* or locally developed passenger manifest. Locally developed passenger manifest includes mission number, call sign, passenger names (by leg), departure and arrival locations to include time, and signature of 1st FA. Coordinate passenger baggage loading and security in accordance with local guidance.

12.5.6. Coordinate passenger loading. Accomplish passenger briefing, if required.

12.6. Passenger Handling.

12.6.1. Coordinate with the PIC before answering questions about the mission.

12.6.2. Do not unduly alarm passengers by relaying details of abnormal conditions not readily discernible by passengers.

12.6.3. Keep the PIC informed of all passenger problems, unusual requests, etc.

12.7. Border Clearance. Customs, immigration, public health and agriculture may require certain forms for border clearance. The FA is the custodian for all boarder clearance forms and ensures adequate quantities are aboard the aircraft prior to takeoff**.** The 1st FA should be familiar with the FCG and AMC Border Clearance Guide requirements for applicable destinations and distributes forms to the crew and passengers, as necessary, for completion prior to landing. Ascertain paperwork is forwarded to applicable personnel at en route and terminating stations.

12.8. En Route and Post Flight Duties.

12.8.1. FAs provide cabin and meal service while maintaining the highest standards of safety and cabin discipline.

12.8.1.1. During periods of in-flight turbulence (or when directed by the PIC) ensure all loose items are stowed and cabin service is suspended, if necessary.

12.8.1.2. One FA should be on headset for takeoff and landing, if headset outlet is available.

12.8.2. Complete applicable border clearance requirements and forms.

12.8.3. Assist with passenger deplaning and baggage offload or transfer. Ensure passengers do not leave required baggage unattended around aircraft or personal items left on the aircraft. All passenger top-side baggage is downloaded prior to cleaning aircraft.

12.8.4. FAs are responsible for aircraft cleanliness. They are also responsible for ensuring that all food items are properly stored and aircraft is ready before departing for over-night stops. All perishable items not used are disposed of in appropriate trash containers and removed prior to leaving the aircraft. Follow host nation rules in accordance with FCG and border clearance guide. Ensure the passenger cabin, galley(s) and lavatories are cleaned.

12.8.5. Coordinate in-flight meal requirements with PIC (e.g., transportation, catering and food procurement)

12.8.6. Upon mission completion, all unused items (purchased with agency funds) become the property of the using agency. The FA follows the disposition instructions of the Contact and local procedures

12.9. Forms.

12.9.1. AF Form 4084, *Mission Planning Worksheet*. Use this form to help organize passenger service requirements. The reverse of the form is a checklist to help inventory mission supplies. Record details received from the contact officer on the front of the form. Use the reverse as a pre-mission and preflight checklist. Individual units may overprint unique requirements on this form. **Exception:** Not applicable for PAG.

12.9.2. AF Form 4085, *Mission Expense Record*. Use this form to record all expenses related to mission requirements. Maintain separate copies of the AF Form 4085 for passenger and crew meals/special requests. Ensure receipts are separated and retained for mission

contact/PIC review. If unable to get a receipt from a vendor, prepare an itemized list of purchases and sign and date it. **Exception:** Not applicable for PAG.

Chapter 13

FLYING CREW CHIEF (FCC) PROCEDURES

13.1. General. This chapter outlines duties and responsibilities of aircraft flying crew chiefs. Normally, only C-32, C-40 and VC-25 crew chiefs fly with their aircraft on all missions. Crew chiefs can be scheduled to fly on other aircraft as directed by the WG/CC. The maintenance organization coordinates with appropriate agency (SOC or equivalent) to schedule crew chiefs to each mission. Manning requirements are in accordance with **Chapter 3** of this manual. List the crew chief as an MEP on the flight authorization.

13.2. Responsibilities. The crew chief is the primary aircraft mechanic and performs maintenance to maintain a mission-ready aircraft status. After reporting for a mission, the crew chief is responsible to the PIC or EAC (as appropriate to their MDS). As a minimum, the crew chief is responsible for:

13.2.1. Performing or assist aircraft servicing at all stations.

13.2.2. Accomplishing preflight, thru-flight and post-flight inspections per T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, and applicable supplements. Assist flight engineers during preflight, as needed.

13.2.3. While TDY, managing the aircraft's en route mission support kit (MSK) and log.

13.2.4. Performing maintenance at en route stations.

13.2.5. Performing aircraft block-out and block-in procedures.

13.2.6. Ensuring inventory of aircrew flight equipment and dash-21 equipment is accomplished, as the PIC's representative.

13.2.7. Maintaining the AFTO 781 series. Inform EAC or PIC of all maintenance discrepancies entered in AFTO 781A. See **paragraph 6.15** for Red X clearing procedures when away from home station.

13.2.8. The AIR Card**.**

13.2.9. The SF 44, *U.S. Government Purchase Order - Invoice - Voucher*, and handle all aircraft related payments on aircraft.

13.2.10. Ensuring EROPS maintenance procedures and servicing are accomplished on EROPS-capable aircraft.

13.2.11. Ensuring EROPS maintenance release is properly signed off prior to each flight for EROPS capable aircraft. For C-32 and C-40 aircraft, ensure appropriate home station maintenance is updated with aircraft status after each leg (if possible).

13.3. Procedures. Attend the PIC's pre-mission aircrew briefing. Brief the flight engineers or PIC on status of the aircraft, recent maintenance history and MSK concerns. Discuss requirements for AGE and servicing requirements needed at each stop. Confirm aircraft configuration.

13.3.1. All Departures. Assure the required fuel load, as briefed by the PIC, is aboard. Ensure completion of the pre-departure checklist (if applicable) and all required MSK items are aboard aircraft. Aircraft positioning is accomplished by taxiing aircraft with qualified aircrew members or by towing aircraft by maintenance support personnel to terminal or DV spot when

required. Ensure required AGE is available and connect to aircraft as required. Assist in placing boarding steps or ramps in position and removal when tasks are complete. Ensure AFTO forms are properly completed. Assist aircraft baggage/cargo loading to ensure weight and balance criteria is properly maintained. Report any deviations to PIC (required on C-40).

13.3.2. In-flight Duties. Unless specified in AFI 21-101, AFI 11-202V3 or applicable MAJCOM supplements, FCCs will only perform inflight duties /maintenance when in the opinion of the PIC a condition exists requiring the FCC's assistance **(T-1)**.

13.3.3. All Arrivals (Intermediate or Overnight). FCCs perform scanner duties outside of the aircraft during ground operations as required by the PIC. Extend aircraft stairs (if applicable). Deplane before DV and passengers (with the flight engineer if applicable). Assist in positioning boarding steps and ramps. Ensure aircraft is safely blocked-in. Coordinate necessary ground support and equipment for departure and servicing procedures. Accomplish all servicing (if applicable to MDS) and perform required maintenance. Perform any required inspections. Ensure required AGE is available for departure.

13.3.3.1. Upon arrival at en route locations the PIC will determine how long the FCC can safely perform aircraft maintenance duties on assigned aircraft provided the FCC has not exceeded the maximum duty period authorized in AFI 21-101 or applicable MAJCOM supplements **(T-3)**.

13.3.3.2. Overnight Stops. Accomplish post-flight inspections. Perform or assist all servicing operations. Install required FOD/dust covers and plugs in accordance with the FCM.

13.3.4. If Maintenance Is Necessary. When aircraft parts are required, use available MSK parts to the maximum extent possible. Coordinate with PIC or EAC before ordering or purchasing parts from available sources. Always determine the applicable part number through the Illustrated Parts Catalog or contracted servicing partner prior to ordering and/or purchasing parts. Coordinate with the PIC to determine delivery location for all shipped parts. Ensure home station maintenance is informed and can aid in coordination for parts. Advise unit C2 (CP or AMD) of estimated ETIC for dispatch release. Typically, ETIC equals parts delivery time to aircraft plus job completion time. Communicate this time to PIC when able.

13.3.5. Upon Return to Home Station. Comply with local debriefing requirements. Replace (or back order) any used MSK items. Turn in all AF Forms 15 and AF Forms 664, *Aircraft Fuels Documentation Log*, to unit resource manager.

Chapter 14

FUEL PLANNING AND CONSERVATION

14.1. General. This chapter is designed to assist pilots, flight engineers and planners in fuel planning for missions. A fuel plan is required for all flights except local area training flights with established standard fuel loads. The Computer Flight Plan (CFP)/CDS provided flight plan and EA aircraft T.O./Performance Manuals are the primary preflight references. The planning procedures in this chapter apply to all CVAM, MAJCOM-directed and local missions. Missions should be planned at altitudes, routes, and airspeeds to minimize fuel usage.

14.2. Fuel Conservation. It is Air Force policy to conserve aviation fuel when it does not adversely affect training, flight safety or operational readiness. Aircrew and mission planners manage aviation fuel as a limited commodity and precious resource. Consider fuel optimization throughout all phases of mission planning and execution. Comply with the following whenever consistent with tech order guidance and safety.

14.2.1. Fuel Loads. Excessive ramp and recovery fuel adds to aircraft gross weight and increases fuel consumption. Do not ferry extra fuel beyond optimum requirements for safe mission accomplishment and training objectives.

14.2.2. Flight Planning. Aircrew and mission planners optimize flight plans and flight routing for fuel efficiency.

14.2.3. APU Usage. Minimize the APU usage to the maximum extent possible. Early coordination may be required to ensure external power carts and heating/cooling units are available.

14.2.4. Center of Gravity (CG). Load and maintain aircraft at an aft CG whenever possible consistent with mission requirements and Flight Manual restrictions.

14.2.5. Engine Start. Delay engine start on all departures whenever practical to minimize fuel consumption.

14.2.6. Taxi. An engine out taxi may be considered when permitted by the Flight Manual. However, due to aircrew unfamiliarity with this procedure it should only be used when situation dictates.

14.2.7. Departure Planning. Consider use of opposite direction runway to reduce taxi and/or expedite departure routing if winds allow.

14.2.8. Takeoff. Consider a rolling takeoff as well as reduced power when able. This may save fuel, engine wear and/or brakes. Clean up on schedule and don’t delay gear and flap retraction.

14.2.9. Climb/Descent. In-flight procedures such as climb/descent profiles and power settings should also be considered for efficient fuel usage.

14.2.10. Weather Deviations. Attempt to coordinate for off-course deviation early so gross maneuvering is not required.

14.2.11. Cruise techniques. Attempt to trim the aircraft and match throttle settings whenever possible. Normal cruise speeds are as follows: C-40: Mach 0.78; C-32/C-37: Mach 0.80; VC-

25: Mach 0.84. Use high speed cruise only when needed to satisfy the requirements of the DV. Do not exceed FAR or host nation aircraft speed restrictions.

14.2.12. Approach. Fly most direct routing to arrival approach consistent with mission requirements. Delay initial configuration as much as practical after considering approach complexity, weather, pilot proficiency, etc.

14.2.13. Holding. If holding is required, hold clean at the most fuel efficient altitude and request a large holding pattern. Hold at endurance or performance manual recommended holding speeds, conditions permitting.

14.2.14. Parking. Consider using shortest taxi route and avoid double blocking when able.

14.3. Fuel Planning Procedures. Aircrew should employ the following aviation fuel optimization measures without compromising flight safety or jeopardizing mission/training accomplishment:

14.3.1. Plan fuel to an alternate only when AFI 11-202V3 or this manual require the filing of an alternate.

14.3.1.1. When only one alternate is required, use the closest suitable airfield meeting mission requirements (such as special requirements for passengers) and AFI 11-202V3 weather criteria.

14.3.2. If two alternates are necessary, use the two closest suitable airfields meeting AFI 11-202V3 weather criteria. They should not be within the same terminal area, if terminal forecasts are marginal. Plan fuel to the more distant of the two.

14.3.3. Reserve and contingency fuel is calculated in accordance with AFI 11-202V3, as supplemented.

14.3.4. Fuel Tankering. Tankering fuel for convenience is prohibited. Tankering fuel may be required due to tight turn times and limited fuel availability. When transiting certain high fuel cost locations, there is a significant opportunity to avoid excessive fuel charges by tankering fuel. Consider tankering fuel if it does not negatively impact mission accomplishment.

14.4. Fuel Requirements. This section augments AFI 11-202V3 fuel requirements.

14.4.1. Required Ramp Fuel Load (RRFL). As a minimum, required ramp fuel consists of all fuel required for engine start, taxi, warm-up, APU operation, takeoff, climb, cruise, en route reserves (if required), alternate/approach/missed approach (if required), descent, approach and landing.

14.4.2. Aircraft Specific Fuel Planning. Use the following guidelines for developing a RRFL:

14.4.2.1. C-37.

14.4.2.1.1. APU, Start, Taxi, Takeoff Fuel: 500 lbs.

14.4.2.1.2. Approach and Landing Fuel: 500 lbs.

14.4.2.1.3. Minimum fuel required upon landing at destination or landing at alternate (if an alternate is required in accordance with AFI 11-202V3): 3,000 lbs. This includes the required reserve and contingency fuel in accordance with **paragraph 14.3.3**

14.4.2.2. VC-25.

14.4.2.2.1. APU, Start, Taxi, Takeoff Fuel: 2,000 lbs.

14.4.2.2.2. Alternate Fuel: 5,000 lbs. minimum.

14.4.2.2.3. Approach and Landing Fuel: 2,500 lbs.

14.4.2.2.4. Minimum fuel required upon landing at destination or landing at alternate (if an alternate is required in accordance with AFI 11-202V3): Required fuel reserve in accordance with **paragraph 14.3.3**

14.4.2.3. C-32.

14.4.2.3.1. APU, Start, Taxi, Takeoff Fuel: 900 lbs.

14.4.2.3.2. En Route Reserve Fuel: Normally use 1,500 lbs.

14.4.2.3.3. Alternate Fuel: 2,500 lbs. minimum.

14.4.2.3.4. Minimum fuel required upon landing at destination, or landing at alternate (if an alternate is required in accordance with AFI 11-202V3): 4,500 lbs. This includes the required reserve fuel in accordance with **paragraph 14.3.3**

14.4.2.4. C-40.

14.4.2.4.1. APU, Start, Taxi, Takeoff Fuel: 900 lbs. This allows for 500 pounds of APU fuel burn during preflight and 400 pounds of fuel burn during taxi-out.

14.4.2.4.2. En Route Reserve Fuel: When commercially dispatched, C-40s will use 1,200 lbs of contingency fuel instead of en route reserve **(T-2)**. This covers the requirement to plan 15 minutes of contingency fuel in **paragraph 14.3.3**

14.4.2.4.3. Alternate Fuel: 2,500lbs minimum, when an alternate is required.

14.4.2.4.4. Minimum fuel required upon landing at destination or landing at alternate (if an alternate is required in accordance with AFI 11-202V3): 3,800 lbs. This includes the required reserve fuel in accordance with **paragraph 14.3.3** If contingency fuel (normally 1,200 lbs) is not burned, C-40 PICs should plan on landing at the destination or alternate (if an alternate is required) with a minimum of 5,000 lbs of fuel (3,800 lbs reserve fuel + 1,200 lbs of contingency fuel).

14.5. Equal Time Point (ETP). First Suitable Airfield (FSAF) and Last Suitable Airfield (LSAF) are used in the ETP calculation. These are represented as the First Nearest and the Last Nearest airports in the ETP calculation. They are airports closest to the coast out and coast in waypoints that meet applicable destination alternate requirements except weather. Forecast weather conditions for LSAF/FSAF (ETA from the ETP/DF +/- 1 hour) will meet or exceed minimums for the lowest compatible approach or 500/1, whichever is greater **(T-2)**. CFPs should plan to arrive overhead at the recovery location with 0+30 minutes reserve fuel. Additional fuel (e.g. descent, approach and landing) may be required, based on mission requirements.

14.6. Planning Factors for Local Flights. When planning fuel requirements for local flights, consider planned flight training times, planned ground times between locals and planned minimum landing fuel requirements. Local training flights may be scheduled for more or less flying time with the proper coordination. IPs and EPs will initiate an approach to a full stop landing when fuel on board is equal to or less than the amount specified as the minimum fuel for landing **(T-2)**. Request priority handling from air traffic control if necessary.

14.7. Required Ramp Fuel for EROPS Capable Aircraft. Block to block fuel must be greater than or equal the fuel required to fly to the ETP, experience a loss of cabin pressure, and proceed from the ETP to a recovery field at 10,000 feet or 13,000 feet (if sufficient crew oxygen is available) **(T-2)**. If extra fuel is necessary, it is added and identified extra. **Note:** If passengers are not onboard and all crew are equipped with supplemental oxygen, flight may be planned and flown using recovery from the ETP at Single Engine Service Ceiling (up to FL 250), instead of 10,000 feet.

Chapter 15

AIR REFUELING

15.1. Air Refueling (AR) Limitations. This chapter establishes guidelines applicable to VC-25 aircraft and aircrews and is supplemental to those prescribed by the flight manual and other applicable directives. The PAG training for air refueling includes simulators and alternate USAF B-747 derivative aircraft. The use of Presidential Aircraft for air refueling training is at the Presidential Pilot's discretion.

15.2. AR Limitations. The following limitations apply.

15.2.1. AR altitudes. AR operations will be conducted above 12,000 feet mean sea level (MSL) or 10,000 feet AGL, whichever is higher **(T-2)**.

15.2.2. Refueling During Training Missions. AR should not be accomplished during training missions when:

15.2.2.1. Conditions result in marginal control of either aircraft or the boom (in the opinion of either the pilot or boom operator).

15.2.2.2. Either the tanker or the receiver has less than the full number of engines operating.

15.2.2.3. Tanker aircraft is unable to retract the landing gear.

15.2.3. Tanker Autopilot. Tanker pilots will notify receiver pilots when any axis of the autopilot is not used **(T-3)**.

15.2.4. AR Without Tanker Disconnect Capability. Without tanker disconnect capability means the boom operator cannot trigger an immediate disconnect using either the normal disconnect system or the independent disconnect system. AR (tanker or receiver) is prohibited after a known loss of tanker disconnect capability. **Exception:** Fuel emergency situations, contingency missions or when authorized in the mission directive.

15.2.5. Manual Boom Latching (also referred to as Emergency Boom Latching), Override Boom Latching and amplifier override]. Normal tanker disconnect capability and automatic disconnect limits are inoperative. Training and evaluation in Manual Boom Latching procedures may only be accomplished under the following conditions:

15.2.5.1. Direct IP supervision is required on board receiver aircraft.

15.2.5.2. Limit contacts to the minimum required.

15.2.5.3. Receiver and tanker AR systems must be fully operable.

15.2.5.4. Do not accomplish boom limit demonstrations or practice emergency separations while in contact. **Note:** The boom operator and receiver pilot must coordinate all actions as required by applicable directives and checklists when making AR contacts during the situations listed above **(T-3)**.

15.2.6. Reverse AR procedures can be accomplished for operational necessity only.

15.2.7. Practice Emergency Separations.

15.2.7.1. Prior to the actual accomplishment of a practice emergency separation, coordination between the tanker pilot, boom operator and receiver pilot is mandatory. Coordination includes information on when the separation occurs and who gives the command of execution.

15.2.7.2. Unless an actual breakaway is required, prior to calling for a Practice Emergency Separation, ensure the boom nozzle is separated from the receiver's receptacle. In this instance, the tanker boom operator calls the breakaway.

15.2.7.3. Practice emergency separations may be accomplished with passengers on board. Ensure all passengers are seated with seat belts fastened.

15.2.8. Limits Demonstration. KC-135 tanker disconnect capability is verified by a boom operator initiated disconnect prior to receivers conducting limits demonstrations.

15.2.9. For receiver pilot initial qualification or requalification, the receiver instructor/examiner pilot will be in one of the pilot seats with immediate access to the controls through all phases of the refueling from astern until post air refueling **(T-3)**.

15.2.10. If a change of receiver pilot control is made, the receiver aircraft moves back to at least the astern position except for immediate assumption of control by the instructor pilot.

15.2.11. If a tanker or receiver seat change takes place, the receiver moves back to at least 100 feet in trail of the tanker and to a point where the receiver pilot can maintain visual contact with the tanker until the seat change is complete.

15.2.12. Receiver A/R Training for Unqualified Receiver Pilots. (This includes copilots, aircraft commander upgrade candidates and aircraft commanders refueling from the right seat). In-flight training is accomplished under direct IP supervision. The following procedures apply:

15.2.12.1. The receiver pilot must inform and receive acknowledgment from the tanker **(T-3)**.

15.2.12.2. The boom operator operating the boom controls must be qualified **(T-3)**. **Note:** This restriction does not apply during Flying Training Unit (FTU) training provided the student boom operator is under direct instructor supervision.

15.2.12.3. If the tanker autopilot is off, the tanker copilot will not fly the aircraft **(T-3)**. **Note:** This restriction does not apply during FTU training provided the student receiver pilot and the student tanker copilot are under direct IP supervision.

15.2.13. Operator Fatigue. If boom operator or receiver pilot fatigue becomes a factor during AR operations, the receiver maintains no closer than the astern position until fatigue is no longer a factor (operator judgment).

15.2.14. Weather limitations.

15.2.14.1. Terminate refueling if moderate turbulence is encountered.

15.2.14.2. Discontinue refueling if in-flight visibility is insufficient to continue safe refueling operations.

15.3. Operational Reporting. Air refueling command and control reporting is in accordance with **Chapter 2** of this manual.

Chapter 16

TACTICAL EMPLOYMENT

16.1. General. Planners and aircrews should reference their respective AFTTP 3-3 volume for additional mission planning guidance. In a threat situation it is critical for crewmembers to understand their limitations and those of their equipment. These procedures are not all encompassing. Therefore, aircrews are expected to use good judgment, innovation and common sense to successfully accomplish the mission.

Section 16A—General Procedures

16.2. Airfield Requirements. AFI 13-217, *Drop Zone and Landing Zone Operations*, depicts the required markings for a landing zone (Airfield Marking Pattern 3). These markings are desirable for EA operations. However, full markings are not mandatory on hard surfaced runways that are permanently marked or lighted to make the touchdown zone and runway distances readily identifiable or if the tactical situation does not permit. The ground reception party provides communications and navigational aids based on requirements, capability, and the threat environment.

16.3. Tactical Checklists. Amplified checklists applicable to EA operations are included in the AFTTP3-3. Complete these checklists prior to entering and upon departing the threat or low level environment.

16.4. Tactics Flight Training.

16.4.1. Scope. The tactics flight training program is designed to provide EA crew members with the training necessary to confidently and successfully survive the wartime threat environment without endangering aircrews or aircraft in peacetime. AFTTP 3-3 details the approved maneuvers applicable to the EA community. However, do not attempt any maneuver that is not specifically approved by AMC A3/10.

16.4.1.1. Maneuvers identified under in **Tables 16.1** and **16.2** may be accomplished in the aircraft on a non-interference basis during operational or continuation training missions.

16.4.1.2. All maneuvers and tactical events may be flown in the aircraft when operationally directed or required.

16.4.2. Tactical Maneuvers. Accomplish tactical maneuvers in accordance with procedures outlined in AFTTP 3-3.

16.4.3. Flight Training Limitations and Restrictions:

16.4.3.1. For operational missions, see **paragraph 5.3** regarding seat restrictions. Tactical maneuver training missions will include direct IP supervision with unqualified pilots (pilots gaining initial tactical certification) in the seat **(T-2)**.

16.4.3.2. Passengers are not permitted when performing tactical maneuvers for training or currency. This restriction does not preclude performing tactical training maneuvers for currency or semi-annual training requirements on operational missions when no passengers are onboard (e.g., position/de-position legs).

16.4.3.3. Secure all loose items aboard the aircraft prior to initiation of maneuver(s).

16.4.3.4. Crew are fully briefed on all maneuvers. Consider notifying passengers prior to aggressive maneuvering on operational missions.

16.4.3.5. Complete combat entry/exit checklists and appropriate approach/departure checklists prior to initiation of maneuver(s).

16.4.3.6. Do not exceed aircraft operating or performance limits at any time.

16.4.3.7. Meet all low altitude obstacle avoidance criterion in accordance with **paragraph 6.10** of this manual. OG/CC or equivalent is waiver authority.

16.4.3.8. The final portion of all approaches is stabilized in accordance with AFI 11-202V3. Initiate go-around if not stabilized for the approach.

16.4.3.9. Minimum weather for all operational and training tactical maneuvers is VMC.

16.4.3.10. Do not fly these tactical maneuvers for training at uncontrolled fields.

16.4.3.11. Ensure aircraft operations comply with all airspace rules unless waived.

16.4.3.12. During training, pre-coordinate procedures with local ATC any time tactical maneuvers are accomplished. For frequent tactical training at a particular airfield, consider establishing a Letter of Agreement or Memorandum of Understanding. Prearranged agreements boost safety of flight and efficiency of maneuver by standardizing phraseology and dimensions for various tactical flight maneuvers between aircraft and controller.

16.4.3.13. Each unit will have a tactics training program tailored to the unit's combat taskings **(T-2)**. Using a building block approach, the tactical training program forms the base of the unit's tactics program. Each unit's tactics training program may be different due to differences between unit mission taskings and MDS capabilities and equipment.

Table 16.1. C-37 Approved Tactical Maneuvers.

Phase of Flight	Maneuver Name
Tactical Slowdown	Idle (with or without speed brakes)
Tactical Descent	Full Flap (flaps 39 degrees) Descent
Tactical Descent	Partial Flap (flaps 20 degrees) Descent
Tactical Descent	Flaps Up Descent
Tactical Approach	Hi-Speed Instrument Approaches (ILS)
Tactical Approach	Course Reversal
Tactical Approach	Abeam Approach
Tactical Approach	Curvilinear Approach
Tactical Go-Around	Low-Closed Pattern
Tactical Departure	Low Altitude High Speed Departure

Tactical Departure	Medium/High Altitude Departure
Tactical Departure	Straight Ahead Departure
Tactical Departure	Spiral Up Departure

Table 16.2. C-32/40 Approved Tactical Maneuvers.

Phase of Flight	**Maneuver Name**
Tactical Descent	Clean Descent
Tactical Descent	Configured Descent
Tactical Approach	C-32/40 Level Cruise Decelerations
Tactical Approach	C-32/40 Low Altitude Max Rate Decelerations
Tactical Approach	High Speed Instrument Approach
Tactical Approach	Medium Altitude Approaches
Tactical Approach	Course Reversal
Tactical Approach	Straight-in Approach
Tactical Approach	Abeam Approach
Tactical Departure	C-32/40 Tactical Departures

Section 16B—En Route

16.5. Navigation:

16.5.1. Threats permitting, use all available aids (e.g., map reading, INS/GPS, TACAN) to remain position oriented.

16.5.2. The pilots and other crewmembers as designated by the PIC share responsibility for en route navigation, terrain avoidance and time control. During low altitude operations, a composite crosscheck is paramount for the pilots to ensure threat avoidance and navigation are not done at the expense of basic aircraft control. The attention of the other crewmembers (navigator, observers) should be focused outside the aircraft, emphasizing threat detection and situational awareness. Limit duties which distract attention from outside the aircraft to mission essential items only.

16.5.3. Maintain flight planned altitude using the best available altimeter setting, radar altimeter information or terrain.

Section 16C—Objective Area

16.6. General. Threat analysis, planning and flexibility are key factors in planning combat airland operations. See **Chapter 6** for specific mission planning procedures.

16.6.1. Any given approach offers advantages and disadvantages. The approach should avoid all threat envelopes. If this is not possible, reduce aircraft exposure time as much as possible using the proper altitude, airspeed and flight path. When more than one aircraft is involved, using multiple routes, altitudes and traffic patterns may hamper targeting efforts by the enemy. The entry, slowdown, and traffic pattern has to ensure a successful landing on the first attempt, but leave adequate margins for the unexpected.

16.6.2. Planning cannot be overemphasized. Analyze environmental factors such as altitude winds, visibility and weather phenomena and take full advantage of terrain. Also consider decision points, emergency escape plans, and alternate approaches. Decision points are times, positions or events which should commit aircrew to a specific course of action. Having emergency escape plans and alternate courses of action available enhances survival.

Section 16D—Approaches

16.7. General. Plan approaches in accordance with AFTTP 3-3 and the airfield identification procedures published in the OPORD or Special Instructions (SPINS). Where multiple options are available, select the approach which best minimizes exposure to the threat while still allowing a high probability of landing on the first approach. Remain unpredictable. Plan on intercepting the glidepath no later than three-quarters of a mile prior to the touchdown zone. Limit bank angles to 30 degrees below 1,000-feet AGL at night and below 400-feet AGL during daytime.

16.8. Low Altitude Approaches. Use these approaches primarily when a low altitude ingress is necessary, (e.g., radar surface to air missiles en route to the field). All maneuvering is done at low altitudes. Enter these approaches from any direction at en route altitude and airspeed.

16.9. High Altitude Approaches. Use these approaches when a high or medium altitude ingress is necessary, (e.g., small arms environment) and allow some reconnaissance of the field via fly over. Base initial altitude, airspeed and heading on the threat.

Section 16E—Ground Operations

16.10. Engines Running Onload/Offload (ERO) Procedures. Preparation and a thorough briefing enhance the ability to operate quickly and safely. Brief appropriate ground personnel and subsequent aircrews on unexpected hazards encountered during takeoff or landing, e.g., dust, winds, hostile activity. Accomplish the ERO in accordance with applicable FCM and AFTTPs.

16.10.1. In order to expedite DV/Passenger loading and unloading, an ERO may be required and is permitted.

16.10.2. In a tactical environment, crews should spend minimum time on the ground when accomplishing EROs.

Section 16F—Departures

16.11. General. Consider the same factors used for arrival planning. Plan the departure to minimize the time spent within the threat environment, either egressing low level or spiraling up to altitude.

16.12. Low Escape. Use this departure when a low altitude escape is necessary, e.g., radar SAM threat. Remain as low as required while accelerating to en route airspeed not to exceed 350 KCAS. Retract flaps when clear of all obstacles and at or above V_{MFR}, even if below flap retract altitude, but no lower than 400' AGL. Climb to en route altitude on departure heading.

16.13. High Escape. Use this departure when a high or medium altitude escape is necessary, e.g., small arms environment. Accelerate to the best climb speed for the conditions and spiral up to altitude remaining within the confines of the airfield boundary.

16.14. Combat Entry and Exit Checklists. As detailed in the MDS-specific AFTTP 3-3, Combat Entry and Exit Checklists should be checklist inserts for use on training and operational missions into simulated or actual threat environments. Expanded Combat Entry and Exit Checklists with detailed explanations/instructions should be included in the Aircrew Tactics Guide for in-flight reference. In the absence of specific directives, the Combat Entry Checklist is initiated prior to entering the threat environment. The Combat Entry Point is determined by theater guidance or known/suspected weapons engagement zone (WEZ). In the absence of more specific directives, initiate this checklist no later than 30 minutes prior to entering the threat environment. If the aircraft departs an airfield within a threat environment or enters the threat environment within 1 hour after takeoff, the checklist should be run prior to the line-up checklist. The Combat Exit Point is determined by theater OPORD/SPINS guidance or known/suspected WEZ.

16.15. Aircraft Defensive System (DS). Operate DS in accordance with applicable FCMs, technical instructions, AFTTPs and command guidance. Aircraft equipped with infrared countermeasures systems will operate with the system in "ON" for all OCONUS missions and for all CONUS missions carrying DV passengers **(T-2)**. In the event of a system malfunction rendering the system degraded or inoperative, the PIC may elect to continue the mission only if aircraft defensive systems are not required by theater SPINS, threat matrix, OPORD or current intelligence information. The system must be fully operational to transit a location requiring aircraft defensive systems **(T-2)**. In the event of complete or partial system failure, obtain a waiver through appropriate C2 channels (in accordance with appropriate directives). For all other flights not carrying DV passengers (proficiency, preposition or deposition legs, OST, depot maintenance delivery/pickup, space-A, etc.) the system may be left in "OFF." In all cases, system limitations contained in the operations manual must be followed **(T-2)**.

16.16. Tactical Evaluations. Evaluation of aircrew tactics should validate the unit tactics training as specified in AFMAN 11-2EAV2, *Executive Airlift Aircrew Evaluation Criteria*.

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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AF Form 673, *Request to Issue Publication*

AF Form 847, *Recommendation for Change of Publication*

AF Form 1297, *Temporary Issue Receipt*

AF Form 2282, *Statement of Adverse Effect – Use of Government Facilities*

AF Form 4084, *Mission Planning Worksheet*

AF Form 4085, *Mission Expense Record*

AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance Document*

DD Form 2131, *Passenger Manifest*

SF 44, *U.S. Government Purchase Order - Invoice - Voucher*

SF 153, *COMSEC Material Report*

Abbreviations and Acronyms

AC—Aircraft Commander

ACC—Air Combat Command

AD—Airworthiness Directive

AETC—Air Education and Training Command

AFCENT—Air Force Central Command

AFDW—Air Force District of Washington

AFE—Aircrew Flight Equipment

AFGSC—Air Force Global Strike Command

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Material Command

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSOC—Air Force Special Operations Command

AFTO—Air Force Technical Order

AFTTP—Air Force Tactics, Techniques, and Procedures

AFTRANS—Air Forces Transportation

AGE—Aerospace Ground Equipment

AGL—Above Ground Level

AMC—Air Mobility Command

AMCC—Air Mobility Control Center

AMD—Air Mobility Division

ANG—Air National Guard

ANP—Actual Navigation Performance

AOC—Air Operations Center

AOE—Airport of Entry

AOR—Area of Responsibility

APACS—Aircraft and Personnel Automated Clearance System

AP—Area Planning

APU—Auxiliary Power Unit

APV—Approach with Vertical Guidance

AR—Air Refueling

ARTCC—Air Route Traffic Control Center

ASRR—Airfield Suitability and Restriction Report

ATC—Air Traffic Control

ATS—Aircrew Training System

BASH—Bird Aircraft Strike Hazard

BMC—Basic Mission Capable

BRNAV—Basic Area Navigation Airspace

C2—Command and Control

CAOC—Combined Air Operations Center

CAT—Category

CCMD—Combatant Command

CDS—Commercial Dispatch Service

CDT—Crew Duty Time

CFP—Computer Flight Plan

CFR—Code of Federal Regulations

CG—Center of Gravity

CLS—Contracted Logistics Support

CMS—Crisis Management System

CODEL—Congressional Delegation

COMAFFOR—Commander, Air Force Forces

COMSEC—Communications Security

CONEMP—Concept of Employment

CONUS—Continental United States

CP—Command Post

CPDLC—Controller to Pilot Datalink Communications

CRE—Contingency Response Element

CRG—Contingency Response Group

CRO—COMSEC Responsible Officer

CSM—Command Support Missions

CSO—Communications System Operator

CVAM—Special Air Missions Division, Office of the Assistant Vice Chief of Staff

DA—Decision Altitude

DAO—Defense Attaché Office

DCS—Defense Courier Service

DER—Departure End of Runway

DH—Decision Height

DIA—Defense Intelligence Agency

DIRMOBFOR—Director of Mobility Forces

DoD—Department of Defense

DS—Defensive System

DSN—Defense Switching Network

DV—Distinguished Visitor

DVG—Distinguished Visitor Guard

EA—Executive Airlift

EAC—Enlisted Aircrew Coordinator

EACN—Executive Airlift Communications Network

ED—Engineering Disposition

EFB—Electronic Flight Bag

EP—Evaluator Pilot

ERO—Engines Running Onload/Offload

EROPS—Extended Range Operations

ETA—Estimated Time of Arrival

ETB—Estimated Time of Block-in/Block-out

ETD—Estimated Time of Departure

ETIC—Estimated Time In Commission

ETP—Equal Time Point

EVS—Enhanced Vision System

FA—Flight Attendant

FAA—Federal Aviation Administration

FBO—Fixed Base Operator

FCC—Flying Crew Chief

FCG—Foreign Clearance Guide

FCIF—Flight Crew Information File

FCM—Flight Crew Manual

FDP—Flight Duty Period

FE—Flight Engineer

FICON—Field Condition

FIH—Flight Information Handbook

FIR—Flight Information Region

FLIP—Flight Information Publication

FM—Flight Manager

FMI—Frequency Modulation Immunity

FMS—Flight Management System

FOM—Flight Operations Manual

FOD—Foreign Object Damage

FTIP—Foreign Terminal Instrument Procedure

FTU—Flying Training Unit

FSAF—First Suitable Airfield

GDSS—Global Decision Support System

GNOC—Government Network Operations Center

GP—General Planning

GOLD—Global Operational Datalink

GPS—Global Positioning System

HAT—Height Above Touchdown

HATR—Hazardous Air Traffic Report

HF—High Frequency

HFGCS—High Frequency Global Communications System

HLA—High Level Airspace

HR—Human Remains

HUD—Heads Up Display

IAP—Instrument Approach Procedure

ICAO—International Civil Aviation Organization

IFF—Identification Friend or Foe

IFM—Integrated Flight Management

IFR—Instrument Flight Rules

ILS—Instrument Landing System

IMC—Instrument Meteorological Conditions

INS—Inertial Navigation System

IP—Instructor Pilot

IRS—Inertial Reference System

ISSO—Information Systems Security Officer

JA—Judge Advocate

JOSAC—Joint Operational Support Airlift Center

JRA—Jeppesen Runway Analysis

JTR—Joint Travel Regulation

LNAV—Lateral Navigation

LPV—Localizer Performance with Vertical Guidance

LSAF—Last Suitable Airfield

LTM—Line Training Mission

MAF—Mobility Air Forces

MAG—Mission Assessment Group

MAJCOM—Major Command

MAP—Missed Approach Point

MC—Mission Contributing

MDA—Minimum Descent Altitude

MDS—Mission Design Series

ME—Mission Essential

MEP—Mission Essential Personnel

MEL—Minimum Equipment List

MMEL—Master Minimum Equipment List

MR—Mission Ready

MSK—Mission Support Kit

MSL—Mean Sea Level

MXG—Maintenance Group

NACO—National Aeronautical Charting Office

NAS—National Airspace System

NAT—North Atlantic Track

NCOIC—Non-Commissioned Officer in Charge

NDB—Non-Directional Beacon

NGA—National Geospatial-Intelligence Agency

NGB—National Guard Bureau

NMCC—National Military Command Center

NMR—Non-Mission Ready

NOTAM—Notice to Airmen

OCONUS—Outside the CONUS

OCS—Obstacle Clearance Surface

OEI—One Engine Inoperative

OG—Operations Group

OGV—Operations Group Standardization and Evaluation

OI—Open Item

OME—Operational Mission Evaluation

OPCON—Operational Control

OPLAN—Operation Plan

OPORD—Operations Order

OPSEC—Operations Security

OPT—Onboard Performance Tool

OPR—Office of Primary Responsibility

OSA—Operational Support Airlift

OSD—Office of the Secretary of Defense

OST—Off-Station Trainer

PACAF—Pacific Air Forces

PAG—Presidential Airlift Group

PA—Public Affairs

PAR—Precision Approach Radar

PBN—Performance Based Navigation

PED—Portable Electronic Device

PIC—Pilot in Command

PL—Protection Level

PMCR—Post Mission Crew Rest

POC—Point of Contact

PRBA—Pilot Reported Braking Action

PRM—Precision Runway Monitor

QRC—Quick Reaction Checklist

RA—Resolution Advisory

RAIM—Receiver Autonomous Integrity Monitoring

RCAM—Runway Condition Assessment Matrix

RCR—Runway Condition Reading

RNAV—Area Navigation

RNP—Required Navigation Performance

RON—Remain Overnight

RSC—Runway Surface Condition

RRFL—Required Ramp Fuel Load

RVR—Runway Visual Range

RVSM—Reduced Vertical Separation Minimum

RwyCC—Runway Condition Code

SAAM—Special Assignment Airlift Mission

SAM—Special Air Mission

SATCOM—Satellite Communication

SELCAL—Selective Calling

SDP—Special Departure Procedure

SF—Standard Form

SG—Systems Group

SMGCS—Surface Movement Guidance and Control System

SOC—Squadron Operations Center

SORN—System of Record Notice

SPINS—Special Instructions

STAR—Standard Terminal Arrival

STE—Secure Terminal Equipment

STT—Special Tactics Team

TACAN—Tactical Air Navigation

TACC—Tanker/Airlift Control Center

TCAS—Traffic Alerting and Collision Avoidance System

TDY—Temporary Duty

TDZE—Touchdown Zone Elevation

TERPS—Terminal Instrument Procedures

THRE—Threshold Elevation

TLR—Takeoff Landing Report

T.O.—Technical Order

TOLD—Takeoff and Landing Data

TWG—Threat Working Group

UHF—Ultra High Frequency

USAFE-AFAFRICA—United States Air Forces in Europe & Air Forces Africa

USTRANSCOM—United States Transportation Command

VFR—Visual Flight Rules

VHF—Very High Frequency

VIPSAM—Very Important Person/Special Air Missions

VMC—Visual Meteorological Conditions

VNAV—Vertical Navigation

VOR—Very High Frequency Omni-Directional Radio-Range

WEZ—Weapons Engagement Zone

WGS-84—World Geodetic System 1984

WHMO—White House Military Office

Terms

Advance Notice Message—A message dispatched when required by the FCG to provide advance notification to interested agencies of mission itinerary and support requirements. It may be combined with a diplomatic clearance request message.

Air Force Component Commander (AFCC)—In a unified, sub-unified or joint task force command, the Air Force commander charged with the overall conduct of Air Force air operations. Also referred to as Commander, Air Force Forces (COMAFFOR).

ARINC Direct—Commercial produced flight management system used by EA units to plan, file, and dispatch EA Missions.

Airlift—Aircraft is considered to be performing airlift when manifested passengers or cargo are carried.

Air Mobility Control Center (AMCC)—Provides global coordination of tanker and airlift for AMC and operationally reports to the TACC. Functions as the AMC agency that manages and

directs ground support activities and controls aircraft and aircrews operating AMC strategic missions through overseas locations.

Air Mobility Division (AMD)—Provides global coordination of tanker and airlift for USAFE-AFAFRICA and PACAF MAFs. Functions as the agency that manages and directs air and ground support activities and controls aircraft and aircrews operating USAFE-AFAFRICA/PACAF strategic missions through overseas locations.

Air Reserve Component (ARC)—Refers to Air National Guard and AFRC forces, both Associate and Unit Equipped.

Arrival Time—The block-in time, rather than the landing time.

Air Route Traffic Control Center (ARTCC)—The principal facility exercising en route control of aircraft operating under instrument flight rules within its area of jurisdiction. Approximately 26 such centers cover the United States and its possessions. Each has a communication capability to adjacent centers.

Air Traffic Control (ATC)—A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.

Alert Aircraft/Crew—A designated aircraft and crew capable of launching on a mission within a predetermined period of time beginning with launch notification from C2.

Augmented Crew—Basic aircrew supplemented by additional qualified aircrew members to permit in-flight rest periods as defined in **chapter 3** of this manual.

AviSource—Commercial produced Flight scheduling system produced by CAMP Systems, Inc. used by CVAM to schedule and manage OSA/EA Missions.

Bird Aircraft Strike Hazard (BASH)—An Air Force program designed to reduce the risk of bird strikes.

Block Time—Time determined by the scheduling agency responsible for mission accomplishment for the aircraft to arrive at (block in) or depart from (block out) the parking spot. "Block Time" may be defined as the time the door opens on arrival.

BLUE BARK—US military personnel, U.S. citizen civilian employees of the DoD, and the dependents of both categories who travel in connection with the death of an immediate family member. It also applies to designated escorts for dependents of deceased military members. Furthermore, the term is used to designate the personal shipment of a deceased member.

Border Clearance—Those clearances and inspections required to comply with federal, state, and local agricultural, customs, immigration, and immunizations requirements.

Class II Navigation—Includes any operation, or portion of an operation, that takes place outside the operational service volumes of ICAO standard NAVAIDs. (formerly known as a Category I route). Term is obsolete with the advent of RNAV and GPS navigation.

CLOSE HOLD—USAF term assigned to all aspects of a DV airlift when destination, passenger names, or other mission details are restricted from general release.

COIN ASSIST—Nickname used to designate dependent spouses accompanying dependent children and dependent parents of military personnel reported missing or captured who may travel space available on military aircraft for humanitarian purposes on approval of the Chief of Staff,

United States Army; Chief of Staff, United States Air Force; Chief of Naval Operations; or the Commandant of the Marine Corps.

Command Support Missions (CSM)—DV Missions supporting Combatant, Unified and Sub-unified Commanders in 4 star positions. CSMs are authorized CVAM/AMD support.

Command and Control (C2)—The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. C2 functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission.

Command and Control Center (C2 center)—Each C2 center provides supervision, guidance, and control within its assigned area of responsibility. For the purpose of this manual, C2 centers including operations centers, CPs, air mobility elements, tanker airlift control elements (TALCE), air mobility control centers, and tanker task forces.

Command and Control Information Processing System (C2IPS)—Computer-based information transmission and information handling for C2 functions associated with the Director of Mobility Forces (DIRMOBFOR), AME fixed units, and TALCE. Interfaces to and automatically updates the Global Decision Support System (GDSS).

Communications Systems Operator (CSO)—Flight crewmember responsible for inspecting, operating, and maintaining all communications and electronic equipment aboard the aircraft. See **Chapter 11** of this manual for an amplified explanation.

Contingency Mission—Mission operated in direct support of an OPORD, OPLAN, disaster, or emergency.

Critical Phase of Flight—Takeoff, air refueling, formation below minimum safe altitude, low level, airdrop, approach, and landing.

CVAM (Special Airlift Missions Administration)—Agency within HAF/A3M responsible for scheduling and committing all Air Force airlift required to support the White House or any other executive branch of the government. The single coordinating agent for AMC and AMC-gained EA Aircraft fleet and schedules AMC and AMC-gained EA Missions.

Deadhead Time—Duty time for crewmembers in passenger status, positioning or de- positioning for a mission or mission support function.

Departure Time—The block-out time, rather than the takeoff time.

Designated Courier—Officer or enlisted member in the grade of E-5 or above of the U.S. Armed Forces, or a Department of State diplomatic courier, selected by the Defense Courier Service (DCS) to accept, safeguard, and deliver DCS material as directed. A primary aircrew member should be used as a courier only as a last resort.

Diplomatic Clearance Request Message—A message dispatched to request diplomatic clearance for over-flight and/or transit of foreign territories. Message content and addresses are specified in the FCG. This message is usually combined with the advance notice message.

Direct Instructor Supervision—Supervision by an instructor of like specialty with immediate access to controls (for pilots, the instructor must occupy either the pilot or copilot seat).

Director of Mobility Forces (DIRMOBFOR)—Individual responsible for theater mobility force management. The Air Force component commander exercises operational control of assigned or attached mobility forces through the DIRMOBFOR. The DIRMOBFOR monitors and manages assigned mobility forces operating in theater. The DIRMOBFOR provides direction to the Air Mobility Division in the AOR to execute the air mobility mission and is normally a senior officer familiar with the AOR.

Dispatch—Dispatch is defined as the start of takeoff roll.

Distinguished Visitor (DV)—Passengers, including those of friendly nations, of colonel rank and higher, or equivalent status including diplomats, cabinet members, members of Congress, and other individuals designated by the DoD due to their mission or position (includes BLUE BARK and COIN ASSIST).

Distinguished Visitor/HFGCS Message (DV Message)—A classified message dispatched with the DVs name/status code and mission number. This message also establishes HFGCS priority and requests HFGCS network and support. This message is usually sent with the advance notice and diplomatic clearance request message.

Due Regard—Operational situations that do not lend themselves to International Civil Aviation Organization (ICAO) flight procedures, such as military contingencies, classified missions, politically sensitive missions, or training activities. Flight under "Due Regard" obligates the military PIC to be his or her own ATC agency and to separate his or her aircraft from all other air traffic (See *FLIP GP*, Section 7).

Enlisted Aircrew Coordinator (EAC)—The appointed NCO crewmember (not necessarily the ranking) tasked with coordinating all enlisted aircrew issues and concerns in regards to a particular mission. Enlisted crewmembers should attempt to resolve most issues and concerns with the EAC who in turn reports to the PIC.

EA Aircraft—Aircraft tasked to perform an Executive Airlift (EA) mission, sometimes described as Executive Aircraft.

EA Delay—A Executive Airlift delay occurs when the primary DV and accompanying party is ready for departure and the DV’s departure is delayed due to maintenance or operational reasons.

EA Mission (Formerly VIP Mission)—A category of operational mission that includes Special Airlift Missions (SAM), Commander Support Missions (CSM), Distinguished Visitor Guard (DVG) missions and Distinguished Visitor (DV) missions to include Presidential Airlift Missions tasked through the White House Military Office (WHMO), and DV missions tasked through CVAM, Theater Air Mobility Divisions (AMD) and the Joint Operational Support Airlift Center (JOSAC). Training missions are not included.

Equal Time Point (ETP)—The point along a route at which an aircraft may either proceed to the destination/first suitable airport, or return to the departure base/last suitable airport in the same amount of time. It may be based on all engines operating or with one engine inoperative.

Estimated Time of Arrival (ETA)—Estimated block-in time (ETB). Landing time is different than ETA.

Estimated Time of Block-in/Block-out (ETB)—estimated time aircraft door opens for arrival or close for departure.

Estimated Time of Departure (ETD)—Same as Estimated Time of Block-out. Takeoff time is different than departure time.

Estimated Time in Commission (ETIC)—Estimated time required to complete required maintenance.

Extended Range Operations (EROPS)—For twin engine aircraft, those flights conducted over a route containing a point further than 60 minutes flying time at the one-engine inoperative cruise speed (under standard conditions in still air) from a suitable en route alternate.

First Pilots—First pilots are highly experienced pilots who are qualified in accordance with Volumes 1 and 2 of this manual to taxi, takeoff, and land the aircraft from the left seat under the supervision of a current and qualified aircraft commander.

Flight Attendants (FA)—Flight crewmember to provide cabin service, instruct passengers in the use of emergency equipment, direct and control passengers under emergency conditions, and maintain cabin cleanliness. See **Chapter 12** of this manual for an amplified explanation.

Global Decision Support System (GDSS)—MAF's primary execution C2 system. GDSS is used to manage the execution of MAF airlift and tanker missions.

Ground Time—Interval between engine shut down and next takeoff time. For EA Missions this normally is defined as the interval between aircraft door open on arrival and aircraft door close on departure.

Hazardous Cargo or Materials—Articles or substances that are capable of posing significant risk to health, safety, or property when transported by air. These articles or substances are classified as explosive (class 1), compressed gas (class 2), flammable liquid (class 3), flammable solid (class 4), oxidizer and organic peroxide (class 5), poison and infectious substances (class 6), radioactive material (class 7), corrosive material (class 8), or miscellaneous dangerous goods (class 9). Classes may be subdivided into divisions to further identify hazard, e.g., 1.1, 2.3, 6.1, etc.

High Frequency Global Communications System (HFGCS)—Worldwide high frequency (HF) network tied together with high quality, dedicated, inter-site circuits to provide worldwide communication capability for high ranking government officials. When activated for a mission, the master net control station at Andrews AFB has the capability to remotely seize control of HF equipment at various locations; therefore, the airborne operator is always in contact with the operator at Andrews. HFGCS service is only provided for certain missions.

Instructor Supervision—Supervision by an instructor of like specialty. For critical phases of flight, the instructor must occupy one of the seats or stations, with immediate access to the controls.

Itinerary Change Message (Itin Change)—A message dispatched to change the original itinerary, due to changes in the scheduled mission, published in the original advance notice message or diplomatic clearance message.

L-Band SATCOM—600 BPS SATCOM system contracted through the International Maritime Satellite Organization (INMARSAT), used primarily for C2. The system consists of a satellite transceiver, a laptop computer, and a printer.

Leg Time—Time between door closed on departure to door open on arrival.

Local Training Mission—A mission scheduled to originate and terminate at home station, generated for training or evaluation, and executed at the local level.

Maintenance Status—See below

A-1—No maintenance required.

A-2 (Plus Noun)—Minor maintenance required, but not serious enough to cause delay. Add nouns that identify the affected units or systems, e.g., hydraulic, ultra-high frequency (UHF) radio, radar, engine, fuel control, generator, boom or drogue, etc. Attempt to describe the nature of the system malfunction to the extent that appropriate maintenance personnel are available to meet the aircraft. When possible, identify system as mission essential (ME) or mission contributing (MC).

A-3 (Plus Noun)—Major maintenance. Delay is anticipated. Affected units or systems are to be identified as in A-2 status above.

A-4—Aircraft or system has suspected or known biological, chemical, or radiological contamination.

Meal—Any service that involves preparation and/or cooking of cold and/or hot food items. Serving pre-packaged food and/or drink items (such as pretzels, chips, or sodas) does not constitute a meal.

Mission—Movement of aircraft from a designated point of origin to a designated destination as defined by assigned mission identifier, mission nickname, or both in the schedule, mission directive, OPORD, OPLAN, or FRAG order.

Mission Advisory—Message dispatched by C2 agencies, liaison officers, or PICs advising all interested agencies of any changes in status affecting the mission.

Mobility Air Force (MAF).—Forces assigned to mobility aircraft or MAJCOMs with operational or tactical control of mobility aircraft.

Off Station Training Flight (OST)—A training flight that originates or terminates at other than home station that is specifically generated to provide the aircrew experience in operating away from home station. Off station trainers are not be generated solely to transport passengers or cargo.

Operational Control (OPCON)—Functions of command and control involving composition of subordinate forces, authority to approve allocation of assets to specific missions, assignment of tasks, designation of objectives, and authoritative direction necessary to accomplish the mission. This is a higher authority than the command that performs specific mission functions.

Operational Missions—Missions executed at or above MAJCOM/CVAM C2 level.

Originating Station—Base from which an aircraft starts on an assigned mission. May or may not be the home station of the aircraft.

Operational Support Airlift (OSA)—Movements of high-priority passengers and cargo with time, place, or mission-sensitive requirements.

Overwater Flight—Any flight that exceeds power off gliding distance from land.

Permit to Proceed—Aircraft not cleared at the first U.S. port of entry may move to another U.S. airport on a permit to proceed issued by customs officials at the first port of entry. This permit lists the requirements to be met at the next point of landing, e.g., number of crew and passengers, cargo not yet cleared. PICs are responsible to deliver the permit to proceed to the customs inspector at the base where final clearance is performed (Heavy monetary fines can be imposed on the PIC for not complying with permit to proceed procedures).

Point of No Return—A point along an aircraft track beyond which its endurance does not permit return to its own or some other associated base on its own fuel supply.

Point of Safe Return—Most distant point along the planned route from which an aircraft may safely return to its point of departure or alternate airport with required fuel reserve.

Portable Electronic Devices (PED)—Any portable electronic device capable of connecting to a wireless network to include smartphones, blackberry devices, laptops, and handheld tablets (e.g., iPads, Kindles).

Positioning and De-positioning Legs—Positioning legs are performed to relocate aircraft for the purpose of conducting a mission. De-positioning legs are made to return aircraft from bases at which missions have terminated.

Presidential Aircraft—Any aircraft used to transport the President of the United States, or designated as a Presidential Aircraft by White House Military Office through the PAG. Presidential Aircraft require continuous security protection at home station, en route operating locations, and contract maintenance facilities. Other aircraft may be temporarily upgraded to Presidential aircraft security status for a particular mission.

Presidential Airlift Mission—A category of operational missions involving or supporting transport of the President of the United States. Does not include training missions.

Ramp Coordinator—Designated representative of the C2 center whose primary duty is the coordination of ground handling activities on the ramp during large scale operations.

Raven—Air Force Security personnel specially trained for aircraft protection.

Scheduled Takeoff Time—That time established in the mission itinerary for departure.

Special Air Mission (SAM)—Missions tasked and scheduled at the direction of CVAM.

Special Assignment Airlift Mission (SAAM)—Airlift requirements for special pick -up or delivery by AMC at points other than established AMC routes, and which require special consideration because of the number of passengers involved, the weight or size of the cargo, the urgency or sensitivity of movement, or other special factors. A SAAM can be flown by any appropriate unit and is not the same as a SAM mission.

Specifically Designated Special Air Mission (SDSAM)—Any mission specifically identified by CVAM as requiring special security procedures.

Squadron—Refers to EA fixed-wing aircraft squadrons within the MAF.

Standardization and Evaluation (Stan/Eval)—Office at HAF, MAJCOM, group, or squadron levels responsible for aircrew publications, flight standards, and aircrew evaluations.

Stations Time—Normally, 30 minutes prior to departure time. Aircrews have completed pre -flight duties/appropriate checklists, and be at their crew positions.

618 Air Operations Center Tanker Airlift Control Center (618 AOC (TACC))—Operations center that controls tanker and airlift forces worldwide through a network of computer systems. The 618 AOC (TACC) is organized into Contingency Airlift, SAAM/Channel Airlift, and Tanker Cells. The 618 AOC (TACC) contains the following functions: Mobility Management, Global Channel Operations, Operations Management, Current Operations, Global Readiness, Weather, Logistics Readiness Center, Aerial Port Control Center, International Clearances, and Flight Plans.

Training Mission—Mission executed at the wing level or below for the primary purpose of aircrew training for upgrade or proficiency, synonymous with non-operational mission. This does not include operational missions as defined in this manual.

Unescorted Entry List—Computerized lists of personnel authorized unescorted entry to Presidential, Presidential Support, and certain other OSA/EA missions to perform their duties. Unescorted Entry Lists are also categorized to indicate individuals authorized to escort personnel onto aircraft, and individuals authorized to grant escorted entry to the aircraft. Unescorted Entry List categories are published in AFI 31-101.

White House Communications Agency (WHCA)—A joint service field unit of the Defense Information Service Agency (DISA) which provides communications support for the White House.

Wireless Access Point (WAP)—An electronic device (e.g., a router) that enables the connection of a computer or other IP-based electronic device to a Local Area Network (LAN) or router using any approved protocols.