

ACC

AERIAL EVENTS

2019 Demo Team and Heritage Flight

SUPPORT MANUAL

Compliance with this support manual is mandatory



ACC/A3TA

As of 13 Feb 19

CHANGES

Changes from 2018 Support Manual

1. General: Numerous changes throughout the manual to reflect AETC's F-35 is now a single-ship demonstration team, as well as Heritage Flight qualified.
2. Introduction: ACC plans to add the F-5 to the Heritage Flight Program.
3. Chap 1: Show's Demo Team/Heritage Flight Project Officer must be available for direct coordination with the demo team 45 days prior to the show rather than 30 days.
4. Chap 1: POC names and/or contact information has been updated.
5. Chap 2: 30 days prior to show send demo team a draft flying schedule and lodging location.
6. Chap 3: Added requirement for a truck or two minivans to transport the demo team from the airport to show site/lodging and back.
7. Chap 4: Updated the number of required rooms for the F-22 and F-35 Demo teams.
8. Chap 4: Added a note about lodging in states that have legalized marijuana.
9. Chap 4: Added a note about the air show/military base providing temporary membership to 24-hour fitness centers if the hotel has no fitness center or it's not availability during the air show, or the on-base fitness center is closed.
10. Chap 5: Changed vehicle requirements for the F-22 and F-35 Demo Teams.
11. Chap 5: Golf carts are now required at staged sites too.
12. Chap 6: Added the minimum ACN requirement for Single-Wheel Weight Bearing.
13. Chap 6: Added requirement to ensure there is an operational control tower and crash, fire and rescue at the divert location where the arresting gear is located.
14. Chap 6: Added requirements for installing and certifying Mobile Aircraft Arresting Systems.
15. Chap 6: Added the F-22 and F-35 requirements for pyro.
16. Chap 6: Added airspace requirements for the F-35 Demo and updated F-22 airspace requirements.
17. Chap 6: Updated weather requirements for A-10 High Show.
18. Chap 6: Updated requirements for Igloo-type water coolers at staged locations.
19. Chap 7: Updated name and contact information for the new FAA National Air Show Coordinator.
20. Chap 7: Updated altitude requirements for the A-10 and F-22 demos and added the F-35 demo requirements for NOTAMs and TFRs.
21. Chap 8: Added requirement to notify ACC or AETC, as applicable, if the airfield where the arresting gear or MAAS is located will be uncontrolled at any time when ACC/AETC aircraft are flying.
22. Chap 9: Updated F-22 oil sample requirements.
23. Chap 9: Updated the fuel types for demo aircraft and added fuel type for the F-5 warbird.

24. Chap 9: Updated requirements/specifications for various pieces of Ground Support Equipment, to include nomenclature and types of equipment, and deleted the requirement for a Gaseous Oxygen cart for the F-35.
25. Chap 9: Added guidance for finding help sourcing Ground Support Equipment.
26. Chap 10: Added required parking space dimensions for the F-35.
27. Chap 11 and 12: Makes the Demo Team Public Affairs POC the primary POC for all Public Relations/Media and Public Appearance issues. ACC Aerial Events and Public Affairs and AETC Aerial Events are now alternate POCs.
28. Chap 13: Added a website link to finding a recruiter in the area.
29. Chap 14: Updated music licensing fees for BMI, ASCAP, and SESAC for 2019.
30. Chap 15: Added fuel, oil and other requirements for the F-5.
31. Atch 1: Updated the checklist to match updates in Chaps 1-15.
32. Atch 3: Changed the name from "Release of Liability" to "Confirmation of Insurance Coverage".
33. Atch 4: Added in the F-5 as a Vietnam era warbird.
34. Atch 5: Added the F-22 and F-35 to the Pyrotechnics Procedures.

Chapter	Name
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4.....	Housing
5.....	Transportation
6.....	Operations
7.....	FAA Waiver/NOTAMs
8.....	Air Traffic Control
9.....	Maintenance
10.....	Security
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15.....	Warbird Requirements Summary
Attachments	
1.....	Air Show Director Planning and Response Sheet
2.....	Air Show Information Sheet
3.....	Confirmation of Insurance Coverage
4.....	Heritage Flight Narration Script
5.....	F-22/F-16/A-10/F-35 Pyrotechnics Procedures

INTRODUCTION

PURPOSE

1. Congratulations on receiving an Air Combat Command (ACC) F-22, F-16 or F-22 and/or Air Education and Training Command (AETC) F-35 Single-Ship Demonstration Team and/or United States Air Force (USAF) Heritage Flight (HF) provided by ACC, AETC, and the Air Force Heritage Flight Foundation (AFHFF) to support your event. The purpose of this manual is to help ensure your event is a resounding success. We look forward to working with you in this endeavor.
2. This manual provides support requirements for both the Single-Ship Demonstration Teams and the AFHFF warbird pilots. Requirements unique to one demo team or unique to the warbird pilots will be listed separately.

NOTE: The USAF Heritage Flight Team consists of the Military and AFHFF Civilian pilots, maintenance, etc. Unless stated otherwise, any reference to “THE TEAM” includes both.

HISTORY OF USAF HERITAGE FLIGHT PROGRAM (USAFHFP)

1. The USAFHFP is a coordinated USAF and AFHFF aerial performance, which will be scheduled as a package deal at air shows and open houses where an ACC F-22, F-16 or A-10 / AETC F-35 Single-Ship Demo Team and/or ACC/AETC HF Team is scheduled to perform, unless there are extenuating circumstances where a warbird or warbird pilot is not available for a show.
2. In 1997, the Air Force celebrated its' 50th Anniversary as a separate branch of the military. In support of the celebration, ACC started flying dissimilar formation flights consisting of ACC Single-Ship Demonstration Pilots flying F-15, F-16, and A-10 aircraft in formation with approved Civilian Warbird Pilots flying A-1's, A-36's, P-40's, P-51's, P-47's, P-38's, and F-86's. The response was an overwhelming favorite during air shows, so ACC designed and approved a formal program, the USAF HF Program, to continue these flights throughout future air show seasons. In 2019, the USAFHFF plans to add the F-5 to the list of approved warbirds.
3. Over the years, the program has included the A-10, F-16, F-15C, F-15E, F-4, F-22 and the F-35 active duty aircraft. In 2010, the AFHFF was formed to keep this popular program flying. In 2013, due to funding concerns, the USAF cancelled all support for the program and the AFHFF increased its commitment to the program and kept it alive by flying HFs with warbirds only. ACC aircraft did not participate. Today, ACC funds the program. Currently, the F-35, F-22, F-16 and A-10 Single-Ship Demonstration Teams are the only active duty participants of the USAFHFP.

- 4.** USAF HFs may only be conducted by ACC/AETC Single-Ship Demonstration Pilots and trained and approved AFHFF warbird pilots. This program and these pilots are also endorsed by the FAA.

CHAPTER 1 – GETTING STARTED

PURPOSE

1. The mission of THE TEAM is to connect with the American public, recruit and retain personnel, display USAF airpower to the public, and enhance community and international relations for the United States of America. Your assistance is vital for mission accomplishment.

2. Our support for your air show/open house is directly related to how effective we are in accomplishing our mission. Public outreach, *specifically, firm interviews and community events, as well as children's hospital visits, school visits, etc.*, is central to our mission accomplishment. We appreciate your diligent efforts in supporting THE TEAM and its mission. Lack of this support will be weighed when generating future schedules.

3. This support manual is applicable to all air shows/open houses; however, for OCONUS air shows and Trade Shows, if ACC or AETC is directed to support one at a location where our ACC or AETC team has to deploy with additional support equipment, or where they will be flying another Major Command's (MAJCOM's) aircraft, expect additional requirements, such as additional people/lodging/rental cars, airlift and air refueling support, passports and visas, etc. Also, for these shows, some of the requirements in this Support Manual are not applicable, such as Trade Shows not having to fund lodging and other costs associated with the lodging facility, or possibly no JOAPS lab requirement, if the team can deploy with a portable lab and a technician, etc. The ACC or AETC, as applicable, Overseas Scheduler (See Mailing Addresses/Contact Information later in this chapter for contact information) will discuss these requirements with you prior to committing a demo and/or HF team to your show.

REQUEST PROCEDURES

You are required to fill out a DD Form 2535 on line via the SAF/PA web site at: <https://www.airshows.pa.hq.af.mil/PublicSite/Index.cfm?fwa=home>. You should then print it out, have it signed by FAA/local Flight Standards District Office (FSDO) (or your country's equivalent agency), and mail a copy or e-mail a scanned copy to SAF/PA. (Note: Until further notice, SAF/PA cannot receive Fax's).

For 2019, ACC/AETC plans to announce the 2020 Demo/Heritage Flight Schedules at the International Council of Air Shows (ICAS) Convention in Dec 2019, so your requests need to be in by 1 Jul 19. We will follow this same schedule for the oncoming years.

OPEN HOUSE/AIR SHOW COMMITTEE MEMBERS

1. **Air Show Director** – The Air Show Director must read every section of this support manual and fully understand the contents and requirements. *He/she will also sign the agreement forms at Attachments 1 and 3 and send them, along with a filled out Attachment 2, to the appropriate demo/HF team no later than (NLT) 30 days prior to your event.* Lack of signed forms may jeopardize ACC's/AETC's ability to support your event. If you are missing one or two items from Attachment 1, please send it anyway. You can call the scheduled team later and pass on the additional information. **COMPLIANCE WITH THIS SUPPORT MANUAL IS MANDATORY.** Failure to fulfill the requirements outlined in this support manual will severely limit your chances to receive ACC, AETC and AFHFF support in the future and could cause cancellation of the currently scheduled support.
 - a. If you are scheduled for an ACC F-22, F-16 and/or A-10 and/or an AETC F-35 Single-Ship Demonstration and/or a HF, coordinate with the applicable team's Superintendent or Team Chief 30 days prior to show start date if you are unable to meet any requirements in this support manual. The Demo pilot will decide if this will be acceptable.
 - b. For a HF, if you are unable to meet any warbird requirements, you must also coordinate with the AFHFF NLT 30 days prior to show start date.

2. **Host-Site Single-Ship Demonstration/Heritage Flight Project Officer** – We recommend naming one individual as your Host-Site Demo/HF Project Officer and allowing him/her to be the Demo Team's or applicable MAJCOM's (ACC or AETC) aerial events personnel sole source of contact with your Air Show / Open House staff. Experience has shown that having one focal point for funneling information between the show site, HQ ACC or AETC, and THE TEAM reduces the chances of miscommunication. Your POC must be in contact with THE TEAM when building the air show/event flying schedule and before making changes to it.
 - a. ***Your Demo/HF Project Officer must read this manual*** and be acquainted with the respective areas of responsibility. He or she should be able to discuss all details of your air show/open house and THE TEAM's operational requirements. Details will include, but are not limited to, your schedule of events, FAA waivers, airfield/show site diagrams, housing and transportation requirements, public relations (PR) requests, maintenance equipment requirements, etc.
 - b. ***Your Demo/HF Project Officer*** must be readily available for direct coordination with the Demo Team and the AFHFF at least *45 days prior* to the air show.

3. **Air Force Recruiter** – We recommend you put an Air Force recruiter on your air show/open house committee. Recruiting quality candidates for military service is the primary mission of THE TEAM. It is essential that local recruiters take an active role in coordinating activities to enhance recruiting efforts and be part of your committee.

Recruiters must work closely with the host-site Public Relations/Publicity Representative to gain maximum benefit from THE TEAM's visit. The ACC/AETC Aerial Events, Demo Teams and AFHFF POCs are listed below. Please keep them in the loop during your planning. You can find a local recruiting squadron by going to www.Airforce.com.

- 4. Host-Site Public Relations (PR)/Publicity Representatives** – He or she is responsible for coordinating THE TEAM's participation at all receptions, dinners, public relations visits, and media interviews. Coordination with the ACC Aerial Events Media Coordinator or AETC Aerial Events POC listed below, and local USAF Recruiting Representatives will greatly facilitate Air Force recruiting and retention support. An effective publicity campaign is crucial to a successful air show/open house. The Host-Site Public Relations/Publicity Representatives should write or distribute, as applicable, all pre-show publicity, and arrange for media interviews, PR commitments, and live coverage of the air show/open house.

MAILING ADDRESSES/CONTACT INFORMATION

When corresponding with ACC or AETC Aerial Events, the ACC or AETC Team scheduled to support your air show/open house, the AFHFF, or the warbird pilot(s) scheduled to support your show, send all letters, e-mails, and packages to the applicable POC listed below. Due to the possibility of mail delays, send important information by priority mail, in sufficient time to reach them before the suspense date. In lieu of priority mail, you may fax or e-mail the information. Do not use FEDEX, as it tends to get hung up for on-base deliveries. The applicable mailing addresses, phone and fax numbers, and e-mail addresses are:

ACC

HQ ACC Aerial Events Office (Mail)

HQ ACC/A3TA Aerial Events Branch
205 Dodd Blvd, Ste. 121
Joint Base Langley-Eustis, VA
23665-2789

HQ ACC Aerial Events Office (Packages)

HQ ACC/A3TA Aerial Events Branch
204 Dodd Blvd, Bldg 602, Room 126
Joint Base Langley-Eustis, VA
23665-2789

If your event falls on an even month, or you need the ACC Media Coordinator, contact:

Mr. Steve Bultman at Comm: (757) 225-9274 or DSN: 575-9274
E-mail: Steve.Bultman.1.ctr@us.af.mil

If your event falls on an odd month or is overseas, contact
Mr. Larry Schleser at Comm: (757) 764-8175 or DSN: 574-8175
E-mail: Lawrence.Schleser.ctr@us.af.mil

For all other issues or if unable to contact one of the POCs listed above, contact ACC/A3TA at Comm: (757) 764-8346 or DSN: 574-8346.
E-mail: acc.a3ta@us.af.mil

ACC Public Affairs, contact
Ms. Michelle Clougher (ACC/PAI) at Comm: (757) 764-5936 or DSN: 574-5936
E-mail: michelle.clougher@us.af.mil, or her alternate, Ms. Kathy White (ACC/PAC), at Comm: (757) 764-5994, DSN: 574-5994,
kathleen.white@us.af.mil.

F-22 Single-Ship Demonstration Team Contact Information:

1st OG Demo Team
160 E. Flightline Road, Ste 104
JBLE, VA 23665-2297
E-mail: raptor.demo@us.af.mil

Maj Paul “Loco” Lopez
Comm: (757) 764-5028 or DSN: 574-5028
Cell: (757) 272-4377
E-mail: raptor.demo@us.af.mil;
paul.lopez@us.af.mil

MSgt Emanuel Knowlton (Team Superintendent)
Comm: (757) 764-5028 or DSN: 574-5028
Cell: (757) 921-0706
E-mail: raptor.demo@us.af.mil;
emanuel.knowlton@us.af.mil

TSgt Yamil Reyes-Sanchez (Team Chief)
Comm: (757) 764-5028 or DSN: 574-5028
Cell: (757) 240-6363
E-mail: raptor.demo@us.af.mil;
Yamil.reyes_sanchez.1@us.af.mil

2Lt Samuel Eckholm (Team Public Affairs Officer)
Phone: (757) 764-5701 or DSN: 574-5701
Cell: (214) 914-6204
E-mail: samuel.eckholm.1@us.af.mil or sam.eckholm@gmail.com

F-16 Single-Ship Demonstration Team Contact Information:

F-16 Viper Demo Team
530 Houston Ave, Bldg 106
Shaw AFB, SC 29152
E-mail: viper.demo@us.af.mil

Maj John "Rain" Waters
Comm: (803) 895-9342 or DSN: 965-9342
Cell: (803) 468-5409 or (608) 320-9557
E-mail: viper.demo@us.af.mil;
john.waters.8@us.af.mil

MSgt Christopher Schneider (Team Superintendent)
Comm: (803) 895-5440/5436 or DSN: 965-5440/5436
Cell: (803) 468-4746
E-mail: viper.demo@us.af.mil;
christopher.schneider.2@us.af.mil

TSgt Ryan Hutchison (Team Chief)
Comm: (803) 895-5440 or DSN: 965-5440
Cell: (803) 607-6069
E-mail: viper.demo@us.af.mil;
ryan.hutchison.2@us.af.mil

SrA Kathryn Reaves (Team Public Affairs Representative)
Comm: (803) 895-2019 or DSN: 965-2019
Cell: (803) 468-5781
E-mail: kathryn.reaves.1@us.af.mil

A-10 Single-Ship Demonstration Flight Team Contact Information:

355 OG/A-10 Heritage Flight Team
4225 S. Flightline Rd
Davis-Monthan AFB, AZ 85707
Email: 355fw.demo.a-10@us.af.mil

Capt Cody "ShIV" Wilton
Phone: (520) 228-1935 or DSN 228-1935
Cell Phone: (520) 429-9265
Fax: N/A
E-mail: 355fw.demo.a-10@us.af.mil;
cody.wilton@us.af.mil

MSgt Derek "Exlax" Allen (Team Superintendent)
Phone: (520) 228-1953 or DSN 228-1953
Cell Phone: (520) 221-5436
Fax: N/A
E-mail: 355fw.demo.a-10@us.af.mil;
derek.allen.3@us.af.mil

TSgt Hale Bradley (Team Chief)
Phone: (520) 228-1953 or DSN 228-1953
Cell Phone: (520) 609-0552
E-mail: 355fw.demo.a-10@us.af.mil
hale.bradley@us.af.mil

SSgt Betty Chevalier (Team Public Affairs Representative)
Comm: (520) 228-1953 or DSN: 228-1953
Cell: (208) 590-5970
E-mail: betty.chevalier@us.af.mil or betty.chavalier.a10@gmail.com

AETC

HQ AETC Aerial Events Office

Mr. Joseph "Gonzo" Gonzales (AETC 19 AF/OSV)
Randolph AFB, TX
Comm: (210) 652-6892 or DSN: 487-6892
E-mail: joseph.gonzales.1@us.af.mil;
aetc.ae3v.aetcaerialeventswork@us.af.mil

F-35 Single-Ship Demonstration Team Contact Information:

F-35 Lightning Demo Team
14392 W. Spad St.
Luke AFB, AZ 85309-1863
E-mail: f35.hf@us.af.mil

Capt Andrew "Dojo" Olson
Comm: (623) 856-9037 or DSN: 896-9037
Cell: (480) 228-2481
E-mail: f35.hf@us.af.mil;
andrew.olson.6@us.af.mil

MSgt Robert Garner (Team Superintendent)
Comm: (623) 856-3837 or DSN: 896-3068
Cell: 480-228-8069
E-mail: f35.hf@us.af.mil;
robert.garner.4@us.af.mil

MSgt Thomas Hulsart (Team Chief)
Comm: (623) 856-3068 or DSN: 896-3068
Cell: 480-228-6708
Email: f35.hf@us.af.mil;
thomas.hulsart@us.af.mil

SrA Alexander Cook
Photojournalist, 56 Fighter Wing Public Affairs
Luke AFB, AZ 85309-9999
Comm: (623) 856-6463 or DSN: 896-6463
Cell: (480) 686-7699
E-mail: 56fw.pa@us.af.mil

ACC Red Horse Scheduler:

Mr. Gerard “Jerry” Wasserbauer
ACC/A7OI
Joint Base Langley-Eustis, VA
Comm: (757) 764-4185 or DSN 574-4185
E-mail: gerard.wasserbauer@us.af.mil

ACC Aerospace Ground Equipment (AGE) Managers:

ACC/A4MN
MSgt Justin Gebhardt
Comm: (757) 764-1739 or DSN 574-1739
MSgt Clifton Cromer
Comm: (757) 764-1735 or DSN 574-1735
E-mail: justin.gebhart@us.af.mil
clifton.cromer@us.af.mil

Civilian Heritage Flight Pilots Schedulers / Coordinators:

Air Force Heritage Flight Foundation

Ms. Allie Mount
Work: (310) 651-7040
Cell: (720) 363-5917
1663 18th St. 1st Fl.
Santa Monica, CA 90404
E-mail: allie@pursuitproductions.com

Mr. Tommy Williams
Cell: (817) 913-0702
E-mail: t.williamsf16@verizon.net

Civilian Heritage Flight Pilots

Contact Ms. Allie Mount or Mr. Tommy Williams at the AFHFF (see above), for civilian HF pilots' contact information. The following is a list of the current civilian AFHFF pilots who are ACC approved and qualified.

Lt Col (USAFR Ret) Greg Anders
Mr. James Beasley, Jr.
Mr. Kevin Eldridge
Mr. Dan Friedkin
Lt Col (USAF Ret) Charles Hainline
Mr. Steve Hinton
Mr. Andrew McKenna
Mr. Stuart Milson
Maj Gen (USAFR Ret) Tommy Williams

CHAPTER 2 – THINGS WE NEED TO KNOW

AIR SHOW/OPEN HOUSE INFORMATION SHEET

1. The Air Show/Open House Information Sheet (Attachment 2) contains essential information needed by the Demo Team scheduled for your show. Please send it to the applicable team, as soon as possible, but not later than **30 days prior to your air show**.
2. When filling out the information sheet, be sure to include the **full name and rank** (if applicable) of all individuals, and commercial and/or DSN (if applicable) phone numbers. If you are missing one or two items from the information sheet, please send it anyway. You can call the team later and pass on the remaining information.
3. Please verify all telephone numbers and notify the applicable Demo Team immediately of changes.
4. If unable to meet any of the warbird requirements in this Support Manual, Air Show Directors/Organizers must coordinate with the AFHFF **NLT 30 days prior** to show start.

SCHEDULE OF EVENTS

1. 30 days prior to your air show / open house, send a draft flying schedule to the demo team and the AFHFF warbird pilot(s) participating in your show.
2. 30 days prior to your air show /open house, send the demo team and the AFHFF warbird pilot(s) participating in your show their lodging location to help them with their recruiting efforts in lining up school visits, etc.
3. No-later-than one week out from the air show/open house start date, please provide the applicable Single-Ship Demonstration Team and the AFHFF POC or warbird pilot a detailed schedule of your air show. It should include:
 - a. All scheduled events and the times they will perform, from gates open to gates closed.
 - b. Scheduled or proposed public relations appearances (e.g. high school visits, hospital visits, etc.).
 - c. Names and positions held of all VIPs attending the air show.
4. Please ensure all Demo Team members and AFHFF Warbird pilots/crew chiefs are included on all access lists, in particular, those used to access the flight line, VIP area, etc. Flight line badges, along with any other locally required documentation, may be used in lieu of an access list. Also, ensure all vehicles utilized by the team

have flight line access for the purpose of driving to and from their aircraft during the show and the rehearsal.

CHAPTER 3 – MAINTENANCE PERSONNEL ARRIVAL

MAINTENANCE PERSONNEL ARRIVAL

1. The Demonstration Team maintenance support personnel will usually arrive at your air show/open house site one day before the pilots/jets. Only in extenuating circumstances will other arrangements be made. If the civilian warbird pilot brings maintenance support personnel with him, they may arrive via commercial air or via the backseat (if applicable) of the warbird. Upon arrival, all maintenance personnel require show-provided transportation arranged to pick them up from the airport, if they fly in via commercial air. A full size truck or 2 minivans will be required to transport THE TEAMS luggage and maintenance equipment to and from the airport.
2. Please ensure all Demo Team and AFHFF personnel are included on all access lists, in particular, those used to access the flight line, VIP area, etc. Flight line badges, along with any locally required documentation, may be used in lieu of an access list. Also, ensure all vehicles utilized by the team have flight line access for the purpose of driving to and from their aircraft during the show and the rehearsal.

MEETING

The senior team maintenance representative and the warbird maintenance representative, if there is one, will meet with the air show/open house director/coordinator or Host–Site Demo Team Project Officer to discuss the team’s schedule and review requirements of this manual. Please ensure a representative(s) is present who is responsible for each area covered in the support manual, or who can answer all questions and has the authority to fix all problems which may arise. Agenda items will include:

- a. Air show schedule
- b. Public relations/media commitments
- c. Hangar space / Security for aircraft
- d. Maintenance equipment
- e. Recruiting support
- f. Transportation
- g. Flight line access
- h. Fire/disaster/emergency response
- i. Lodging
- j. Fuel
- k. Music Licenses
- l. Free parking space for the AFHFF RV, if applicable
- m. Force Protection/Antiterrorism—have a representative to discuss. For a civilian air show, contact a local law enforcement, TSA, or Homeland Security representative, as appropriate, to discuss local force protection.

GROUND SURVEY OF AIR SHOW SITE

After the meeting, air show representatives will provide maintenance personnel a complete tour of the air show/open house site and flight line.

INVENTORY OF MAINTENANCE SUPPORT EQUIPMENT

Maintenance personnel will inventory maintenance support equipment after ground survey of the air show/open house site.

CHAPTER 4 – HOUSING

GENERAL

1. The air show/open house will provide lodging for THE TEAM at no expense to THE TEAM. Coordinate with the applicable Demo Team and the AFHFF POC or the civilian AFHFF pilot before making billeting arrangements. If attending a military air show (Navy, Marine, or Army), the team will not book lodging through DTS, as this is the responsibility of the air show.
2. **Room Reservations:** The following number of rooms will be reserved for each team. Please contact the applicable Demo Team and AFHFF POC or warbird pilot for further details:
 - a. ACC F-22 Demo Team – At least ten non-smoking rooms. The team may require two additional rooms for pilots who bring aircraft to the air show/open house from other bases to support the team.
 - b. ACC F-16 Demo Team – At least nine non-smoking rooms.
 - c. ACC A-10 Demo Team – At least eight non-smoking rooms.
 - d. AETC F-35 Demo Team – At least ten non-smoking rooms. The team may require two additional rooms for pilots who bring aircraft to the air show/open house from other bases to support the team.
 - e. Civilian HF Pilot – At least two non-smoking rooms per HF warbird, unless otherwise coordinated with the HF warbird pilot that he only needs one or no rooms (i.e., when he doesn't bring a crew chief or when he stages from his home base).
 - f. If marijuana is legal in your state, lodge the team in a non-smoking hotel or ensure that marijuana is not used in the hotel by other patrons during the time The Team is lodged there.
3. On occasion, THE TEAM may require up to four additional rooms due to other circumstances/requirements for your show (staging, training, etc.). If so, THE TEAM will inform the air show of the additional requirement. Room reservations and funding are the host billeting representative's responsibility. *Demo team personnel cannot sign any billeting contracts, and everyone must have their own room.*
4. Provide one non-smoking room for each HQ ACC or AETC representative and/or wing leadership representative (from the wing that owns the demonstration team) who attends the show for official air show business only. Normally this is no more than one person from HQ ACC or AETC and/or wing leadership.

5. Ensure the hotel is clean and in a quiet location, i.e., not near railroad tracks, heavily traveled thoroughfares, or heavy construction.
6. Hotel rooms for the Demo Pilot, safety observer, maintenance team chief, and civilian AFHFF pilot must have a telephone and high-speed data connections for computer equipment. Arrangements **MUST** be made beforehand with lodging locations to ensure the team will not be charged for the high speed data connections (e.g., internet) or telephone calls used for official/authorized purposes. All rooms must have air conditioning.
7. Crew integrity is required. All personnel on THE TEAM will be billeted at the same hotel/on-base quarters. THE TEAM **will not** split into enlisted/officer quarters. A crew is defined as the demo pilot, safety observer, narrator, maintenance personnel, civilian HF pilot, warbird maintenance personnel, and any headquarters or wing leadership personnel.
8. Billet the Demo Team members and the civilian AFHFF pilot/maintenance personnel with other air show participants to the maximum extent practical.
9. Reserve rooms for all ACC/AETC and civilian AFHFF personnel under the applicable ACC/AETC Single-Ship Demonstration Team (i.e., F-22, F-16, A-10 or F-35 Demo Team). Team members may change at the last minute, causing confusion, if rooms are reserved under individual names.
10. Billet THE TEAM a convenient distance from the show site (30-minute maximum driving time--Police escort required if longer drive). If THE TEAM is staging from a deployed location, billet THE TEAM near the air show rather than the staging location, unless coordinated otherwise with THE TEAM.
11. *Should THE TEAM experience delays in departing the air show/open house due to aircraft malfunction, weather, or other reasons, they may be forced to stay longer than planned. If that is the case, THE TEAM will require the rooms for as long as required at the air show's/open house's expense for only those individuals required to remain behind. Rooms may also be required for specialized maintenance personnel who may have to report to fix a broken aircraft. In any event, the team will make every effort to depart as soon as possible to minimize the expense to the air show/open house.*

ADDITIONAL REQUIREMENTS

1. Credit Cards: The hotel THE TEAM stays at must accept VISA credit cards for incidentals; Air Force regulations mandate their use for official business.

2. Telephones:

- a. Your billeting representative must coordinate with the hotel concerning local phone and 1-800, 888, 877, 866, and 855 number charges. If the **local phone and 1-800, 888, 877, 866, and 855 number charges cannot be waived, the show sponsor will be required to cover the cost for official/authorized calls.**
- b. Please provide a 1-800, 888, 877, 866, and 855 telephone number(s) for the hotel front desk (not the sales office).

3. Parking:

- a. If the hotel charges for parking, arrangements must be made to have the charges waived. If the hotel will not waive the charges, the air show/open house will be required to cover the cost.
- b. Due to the amount of gear the team has to carry, if using other than hotel parking lot/garage, the parking facility must be within one city block of the lodging facility.

4. Other:

- a. Dining facilities, decent fitness facilities, and laundry/dry cleaners should be located nearby.
- b. For civilian air shows: If the hotel fitness center doesn't offer a variety of exercise equipment, the air show must provide a temporary membership to a 24-hour fitness facility within 10 miles of the hotel at no cost to THE TEAM for the duration of their stay.
- c. For military air shows/open houses: If the fitness center on base is closed during the air show, then the base must provide a temporary membership to a 24-hour off-base fitness facility within 10 miles of the lodging facility at no cost to THE TEAM, for the duration of their stay.
- d. Team members should be able to cash personal checks at the hotel, if an ATM is not available at the hotel or nearby.

CHAPTER 5 – TRANSPORTATION

GENERAL

1. The host-site transportation representative must ensure vehicle requirements are met. If attending a military air show (Navy, Marine, or Army), the team will not book rental through DTS, as this is the responsibility of the air show.
2. Funding for vehicles and vehicle fuel for the Demo Team and the civilian AFHFF personnel is the air show's/open house's responsibility. Please ensure the vehicles have a full tank of gas upon pickup. Should extensive driving be required to support the show and vehicles need to be re-fueled, host-site transportation representatives must provide a method to refuel vehicles at no expense to the Demo Team or the civilian AFHFF personnel.
3. Demo Team personnel and HQ ACC or HQ AETC and wing leadership do not provide rental contract information to show sites. It is the air show's/open house's responsibility to provide vehicles for THE TEAM.
4. All toll fees are the responsibility of the air show. All vehicles should come equipped with E-Toll or equivalent to ensure THE TEAM is not billed for any tolls.

ACC/AETC TEAM REQUIREMENTS

1. Each Demo Team and the AFHFF will ensure all team members are qualified to operate rental or courtesy vehicles. The air show/open house is responsible for providing insurance for vehicles. (Use Attachment 3). Vehicle requirements are as follows:
 - a. **ACC F-22 Demo Team:** provide five vehicles for the team (two full-size vans/SUVs to carry maintenance tool boxes and equipment, and three mid-size sedans), unless the team notifies you that it will need less than five vehicles. The demo team may require one to two additional vehicles for F-22 pilots who bring aircraft to the air show/open house from other bases to support the team.
 - b. **ACC F-16 Demo Team:** provide five vehicles for the demo team (one full-size van/SUV to carry maintenance tool boxes and equipment, and four mid-size sedans), unless the team notifies you that it will need less than five vehicles.
 - c. **ACC A-10 Demo Team:** provide five vehicles for the demo team (one full-size van/SUV to carry maintenance tool boxes and equipment, and four mid-size sedans), unless the team notifies you that it will need less than five vehicles.
 - d. **AETC F-35 Demo Team:** provide six vehicles for the Demo team, two full sized SUVs or Mini Vans to carry maintenance tool boxes and equipment, and four mid-size sedans. The demo team may require one additional vehicle for F-35

pilots who bring aircraft to the air show/open house from other bases to support the team.

- e. **Civilian HF pilots:** provide one vehicle per warbird. I.e., if there are two warbirds, two vehicles will be required.
- f. Provide one sedan for each HQ ACC or AETC representative and/or wing leadership representative (from the wing that owns the Demo Team) who attends the air show/open house for official air show business only.
- g. *Should THE TEAM experience delays in departing the air show/open house due to aircraft malfunction, weather, or other reasons, they may be forced to stay longer than planned. If that is the case, THE TEAM will require the rental cars for as long as required at the air show's/open house's expense for only those individuals required to remain behind. Rental cars may also be required for specialized maintenance personnel who may have to report to fix a broken aircraft. In any event, THE TEAM will make every effort to depart as soon as possible to minimize the expense to the air show/open house.*

HOST TRANSPORTATION REQUIREMENTS

1. Host-site personnel are briefed to release all required vehicles to THE TEAM.
2. All vehicles assigned for team use are available for the duration of their stay, including a continued stay due to aircraft maintenance problems, weather, or other reasons, at the air show's/open house's expense.
3. Where government cars/vehicles are available, they should generally be used. These vehicles will be available for off base official use.
4. All vehicles are in place, fully serviced and fueled.
5. All vehicles are in good mechanical condition and dependable.
6. All vehicles are authorized unrestricted flight line and parking ramp access.

COURTESY CARS

If courtesy cars are used, it is essential the dealer/provider understand the limitations on advertisements. Dealers/providers may not in any way, before, during or after the team's visit, advertise that the courtesy cars were provided for use by a Demo Team or the civilian AFHFF pilot. Dealer/Air Show will provide insurance for courtesy cars at no cost to the team. Please return signed Attachment 3, Confirmation of Insurance Coverage, to the demo team.

MAPS

Please provide all vehicles with a map of the base and/or local community.

GOLF CARTS

Due to congestion in the Priority Level 3 (PL 3) parking areas (secured aircraft parking area) and show center, the Demo Team requires the use of a golf cart at the show site and at the staged location, if staging. If a golf cart is not available, please provide another independent mode of travel for the team while on the flight line.

AFHFF RV

Oftentimes, the AFHFF pilots will bring their RV to an air show/open house. They will require parking space on the ramp and approval to cook at the RV without paying a vendor fee.

CHAPTER 6 – OPERATIONS

AIRFIELD DIAGRAM

Air Show organizers must provide the participating ACC F-22, F-16, and/or A-10 and/or AETC F-35 Demo Team and AFHFF POC (or warbird pilot) with a diagram of their airfield/show site. The team should receive the airfield diagram NLT **30 days before** the date of the air show. As a minimum, your airfield diagram should depict:

- a. Show center location and coordinates.
- b. The complete aerobatic box.
- c. The entire show line and crowd line (with distance between them), and any secondary crowd lines/Demo and HF aircraft parking area.
- d. Parking locations and coordinates for arrival and the air show. Any changes to parking locations once teams have arrived need to be coordinated with the Demo or HF Pilot or Team Chief before a change is made.
- e. Magnetic (MAG) bearing of the runway, depiction of Magnetic North, and the scale of the diagram.
- f. Access routes to show center and aircraft parking.
- g. For deployed shows, THE TEAM must have a diagram of the show site, as well as the airfield from which the aircraft will deploy.
- h. Also, provide the military and the warbird pilot with a sectional chart and advise on any hazards in the local area which are not readily known to transient aircraft.

SHOW LINE

1. The show line should be an absolute straight path over the ground, located 1,500 feet in front of the crowd. If the crowd line is other than a straight line, the show line must be 1,500 feet from the closest spectator area. This line will be used as a primary reference during the single-ship demonstration and/or HF.

NOTE: Show line for non-aerobatic maneuvers (HF performance, high speed pass, etc.) must be a minimum of 500 feet from the closest spectator area.

2. All markers used to define the show line must be large, highly visible, easily identifiable, and with a stark color contrast to the surrounding terrain. For military show sites, if the markers are to be placed within 1,000' of an active runway or taxiway, check with airfield management to confirm whether the markers must be frangible to comply with airfield obstruction clearance policies. Markers must be in

place prior to the first practice performance. Furthermore, ensure you have clearly visible corner markers 500' outside the end of the crowd lines on both sides.

3. Overwater Show Line – For performances flown over water, an artificial show line must be defined by markers, as described above. In addition to being large and highly visible, the markers must also be anchored to ensure they remain in the same position throughout the air show. You will need the assistance of the Coast Guard or Lake Patrol to ensure boats do not enter the aerobatic box during the single-ship demonstration and/or HF.

SHOW CENTER

1. Show center is the location on which the demonstration/HF pilot uses to center each maneuver during the demonstration and/or the HF. If possible, locate show center in a highly visible area such as a taxiway or intersection of a runway centered along the length of the crowd line. Show center should also be aligned, if possible, with a building, road, or other identifiable object, to allow the pilot to accurately annotate any aerial photographs.
2. Show center must be marked by a large, highly visible, easily identifiable object with a stark color contrast to the surrounding terrain. It must also be easily distinguishable from all other markers on the show line. If the show line is on the runway, the marker should be placed at least 100 feet off the runway so as not to interfere with takeoff or landing.

CROWD LINE

1. The crowd line is a physical barrier, preferably **snow or FOD fencing**, to prevent spectators from moving forward during an air show. This separates the crowd from the aerobatic box and demonstration aircraft and also helps to prevent FOD from blowing onto the taxiways and runways. For military open houses, this is usually the responsibility of Civil Engineers, in coordination with Airfield Management. Civilian air shows will operate under local policy.
2. The FAA requires the aerobatic box to be void of all people not specifically required for preparation of the demonstration and/or HF.

CONGESTED AREAS

The airfield diagram must reflect the FAA IIC's determination of congested areas.

AIRCRAFT PARKING (SHOW)

1. Please coordinate parking with the senior maintenance representative when he/she arrives to discuss jet blast safety and parking.

2. The Demo/HF Teams prefer to park their aircraft as close as safety permits to the crowd line, preferably at show center, so the crowd can see the pilots and maintenance team at work.
3. Vintage HF aircraft must be parked near the ACC/AETC HF aircraft, unless otherwise coordinated with the ACC/AETC and AFHFF pilots.
NOTE: If the F-22, F-16, A-10 or the F-35 are required to stage and the warbirds are not, we request you park the warbird(s) at the show site. If the F-22, F-16 or F-35 is required to stage and you also have an A-10 in the HF, which is not required to stage, we request you park the A-10 and the warbird(s) at the show site.
4. The military Demo/HF Teams require their aircraft to be parked on a taxiway or ramp which is at least 75 feet wide. You must select an area where the pilot and maintenance personnel have unrestricted access and movement. Select an area on the spectators' side of the runway. This will preclude them from frequently crossing active runways. Ensure the parking area and taxiway have proper single-wheel weight-bearing capacity. If you are in doubt, contact the Demo/HF Team.
5. The military teams will bring two aircraft to your event. One aircraft will be the primary demo/HF aircraft and the other will be a spare. The primary and the spare aircraft will be parked together and the Demo Team will preflight both, so either aircraft may be used for the demo. The AFHFF may bring more than one warbird for the HF, but they will all be primary aircraft. They do not normally bring a second aircraft as a spare. **NOTE: SPARE AIRCRAFT ARE NOT TO BE PARKED IN THE STATIC DISPLAY AREA, AND GENERAL ACCESS WILL NOT BE PERMITTED.**

HANGARING OF AIRCRAFT

Provide hangar space for all USAF demo/HF aircraft in the event of severe weather (hail, lightning, etc.), maintenance of aircraft, or security concerns. Provide hangar space for warbird aircraft during periods of actual and forecast precipitation, in addition to the conditions noted above for the USAF demo/HF aircraft. Also, provide a tow bar and equipment to expeditiously move the warbird to the hangar. A TR-6 tow bar or similar will work for most warbirds. Contact the AFHFF pilot for detailed information about his specific aircraft's towing requirements. ***Should THE TEAM experience delays in departing the air show/open house due to aircraft malfunction, weather, or other reasons, they may be forced to stay longer than planned. If that is the case, THE TEAM will require the hangar space for as long as required at the air show's/open house's expense.***

F-35 LIFE SUPPORT GEAR

The F-35 Demo Team requires secured indoor space for pilot life support equipment near the aircraft parking location. This space must be able to be secured with limited access to only Demo Team members.

RUNWAY WEIGHT BEARING REQUIREMENTS

The minimum single wheel weight bearing (SWWB) requirement for the runway is:

- a. 65,000 pounds or ACN of 28 for the **F-22**.
- b. 30,000 pounds or ACN of 11.5 for the **F-16**.
- c. 35,000 pounds or ACN of 16 for the **A-10**
- d. 48,000 pounds or ACN of 20.5 for the **F-35**.

RUNWAY LENGTH, WIDTH AND ARRESTING GEAR REQUIREMENTS

1. **F-22:** The minimum runway length and width for the F-22 is 7,000 by 75 feet. All show sites (regardless of runway length), must have either a suitable arresting gear (BAK-12B (otherwise known as a BAK-12ER) or equivalent (BAK-6, BAK-9, BAK-13 (Navy E-28), BAK-14, BAK-15 (NI)) on site or at a 7,000 foot or greater runway, with an operational control tower and crash, fire and rescue, within 80 NM of the staging location and show site. If there isn't one within 80 NM, the show will need to have a Mobile Aircraft Arresting System (MAAS) installed to meet the above requirement. Funding of the installation will be the responsibility of the air show. Also, see the NOTE under Para 8 below.
2. **F-16:** The minimum runway length and width for the F-16 is 7,000 by 75 feet. If the runway is between 7,000 and 7,999 feet, a suitable arresting gear (BAK-12 (otherwise known as a BAK-12ER) or equivalent (BAK-6, BAK-9, BAK-13 (Navy E-28), BAK-14, BAK-15 (NI)) must be either on site or at a 7,000 foot or greater runway, with an operational control tower and crash, fire and rescue, within 80 NM of the staging location and show site, or a runway of at least 10,000 feet, with an operational control tower and crash, fire and rescue, must be within 80 NM of the staging location and the show site. If neither of these requirements can be met, the show will need to have a MAAS installed to meet the above requirement. Funding of the installation will be the responsibility of the air show. Also, see the NOTE under Para 8 below.
3. **A-10:** The minimum runway length and width for the A-10 is 5,000 feet by 75 feet.
4. **F-35:** The minimum runway length and width for the F-35 is 7,000 by 75 feet. All show sites (regardless of runway length), must have either a suitable arresting gear (BAK-12B (otherwise known as a BAK-12ER) or E-28) or barricade system (MA-1A or BAK-15; preferably the BAK-15 (NI)) on site or at a 7,000 foot or greater runway, with an operational control tower and crash, fire and rescue, within 80 NM of the staging location and show site. If there isn't one within 80 NM, the show will need to

have a MAAS installed to meet the above requirement. Funding the installation will be the responsibility of the air show. Also, see the NOTE under Para 8 below.

5. Mobile Aircraft Arresting Systems (MAAS): For technical questions on MAAS installations or to schedule an ACC Red Horse Team to install one, contact Jerry Wasserbauer in ACC/A7OI. See contact information in Chapter 1.

6. MAAS Schedule:

- a. ACC/A3TA will put together a list of air shows that will require a MAAS to be installed for the single-ship demo teams, as well as the Thunderbirds and the Blue Angels, and will forward it to the ACC and ANG Red Horse Squadrons and the Marine Expeditionary Teams to sign up for the various installations.
- b. Once all the applicable shows have been assigned a Red Horse Squadron or a Marine Expeditionary Team to install the MAAS for their air show, ACC/A3TA will inform all the applicable shows which Red Horse or Marine team will be putting the MAAS in for their show.

7. ACC/ANG BAK-12 MAAS versus Marine M-31 MAAS: The F-35 is the only ACC or AETC aircraft that is not certified to use the Marines' M-31 MAAS. Any installation required for the F-35 Demo will need to be installed by a Red Horse Squadron, which uses a portable BAK-12. Until further notice, funding the installation will be the responsibility of the air show.

8. Certifying a MAAS:

- a. While the Marine M-31 MAAS is self-certifying and does not need an aircraft to taxi and pull out the tape to certify it once it's been installed (although the Blue Angels and other aircraft elect to certify it), the BAK-12 MAAS requires a tail hook equipped aircraft to taxi over the cable at a specific speed and pull it out to certify it.
- b. The Blue Angels will certify it if they are at your show. The Thunderbirds will certify it if they are at your show if it is installed at the show site, but they will not send an aircraft to another location to certify it. ACC's F-22 and F-16 Demo Teams and AETC's F-35 Demo Team will not certify a MAAS, due to the potential for damage and the cost involved in repairing it, and due to the potential to lose the spare aircraft for their demo.
- c. Until further notice, it is the air show's responsibility to find a tail hook equipped aircraft to certify the BAK-12 MAAS after it's been installed. Aircraft with low tails are not inclined to do the certification, due to potential damage. The best aircraft for certification is the F-18, F-15 or F-15E.

NOTE: If you install a MAAS on a runway less than 8,000 feet, you will limit which aircraft can land on it to certify it, because most AF and ANG Wings will not allow their pilots to land on runways less than 8,000 feet, unless a certified arresting gear is already in place.

9. **Warbirds:** The minimum runway length and width for all AFHFF warbirds is 5,000 feet by 75 feet.

STAGING REQUIREMENTS

1. When Demo or Heritage Flight aircraft have to stage from a location other than where the air show is located, it is the air show's responsibility to coordinate with the staging location and make sure all the requirements in this Support Manual can and will be met (i.e., runway length, width, and weight bearing; arresting gear; ground support equipment; hangars; transportation to/from the air show; crash, fire and rescue; control tower in operation; runway sweeping; etc.).
2. The air show needs to ensure the aircraft are approved to operate from that staging location and have the wing, base or post commander (military staging location) or airport manager (civilian staging location) sign off on the checklist (Attachment 1) in the applicable block under Chapter 6 or provide a signed letter indicating they have approved of the aircraft staging from their base/airport.
3. The air show also needs to provide a name and contact information for a POC at the staging location and enter the POC's information in Attachment 2.

RUNWAY/TAXIWAY SWEEPERS

1. The parking area and all taxiways and runways THE TEAM uses must be absolutely free of foreign objects, which could damage our aircraft engines. **It is mandatory for all surfaces (runways, taxiways, and ramps) to be thoroughly swept before THE TEAM's arrival.**
2. If your airport maintenance facilities do not possess a vacuum sweeper, it will be necessary to make arrangements to obtain one for all military demo/HF aircraft. **We cannot emphasize the importance of this requirement enough.**
3. If a brush-style sweeper is used, ensure the **bristles are not steel**, and a thorough **foreign object damage (FOD) check of the runway is accomplished after its use.**
4. Please **restrict helicopters, Harriers, and any other aircraft capable of hovering** from hovering over taxiways, ramps, and runways intended for THE TEAM's use, unless you have a good plan for cleaning up the area afterward. **It is absolutely essential that hovering not be performed over or near our parked aircraft.**

PYROTECHNICS

1. F-22, F-16, A-10 and F-35: Pyro can only be used in conjunction with the “Wall of Fire” and only during the High-Speed Pass (F-22, F-16 and F-35) or Strafe Passes (A-10). Only ICAS-approved personnel will be permitted to utilize pyro in association with the F-22, F-16, A-10 and F-35 demonstration teams. Each year ICAS posts an approved Shooters-in-Charge (SIC) list. This list will be available on the ACC Aerial Events Web Site. Specific procedures for using pyro with the F-22, F-16, A-10 and F-35 Demo Teams are in Attachment 5 to this Support Manual.
2. If you plan to use pyrotechnics anytime during the air show, ensure they are exploded far enough away to prevent blowing foreign objects on THE TEAM's aircraft or the runways and taxiways intended for THE TEAMS. In addition, for safety considerations, we cannot permit pyrotechnic performances closer than 500 feet to the team's parked aircraft.

AIRSPACE REQUIREMENTS

1. Each show must provide airspace and time for the practice demo / HF performances and aerial site survey (normally accomplished as the demo aircraft arrive at your location). The practice show will last the same amount of time as the actual show and will require the same FAA restricted airspace.
2. F-22: As a minimum, the F-22 Single-ship demonstration aerobatic maneuvers need the following airspace: Five-mile radius from show center, up to 15,000 feet AGL, and an aerobatic box of 3,000 feet wide by 4,500 feet long.
3. F-16: As a minimum, the F-16 Single-ship demonstration aerobatic maneuvers need the following airspace: Five-mile radius from show center, up to 15,000 feet AGL, and an aerobatic box of 3,000 feet wide by 6,000 feet long.
4. A-10: As a minimum, the A-10 Single-ship demonstration aerobatic maneuvers need the following airspace: Five-mile radius from show center, up to 8,000 feet AGL, and an aerobatic box 3,000 feet wide by 4,000 feet long.
5. F-35: As a minimum, the F-35 Single-ship demonstration aerobatic maneuvers need the following airspace: Five-mile radius from show center, up to 15,000 feet AGL, and an aerobatic box of 3,000 feet wide by 6,000 feet long.
6. The HF requires airspace up to a five-mile radius from show center, up to 1,500 feet AGL, and an aerobatic box of 3,000 feet wide by 3,000 feet long. If you have the F-35, F-22, F-16, or A-10 demo scheduled for your show, the TFR required for the demo will more than suffice for the HF.

NOTE: Coordinate the demo/HF aircraft arrival time and obtain 5 minutes of arrival airspace allotted for an aerial site survey of the area to observe local obstacles, run-ins, show lines, etc., from the air.

AIR SHOW PERFORMANCE SPECIFICS

1. It is critical for the Air Boss to understand there will be no takeoff or landing activity permitted during the aerial demonstration or the HF, except for those aircraft directly involved in the HF. This includes any time during takeoff, rejoin, formation passes and the landing phase of the demo aircraft or the HF. The Air Boss should not make any requests over the radio to the Demo or AFHFF pilots to allow such takeoffs or landings. The Air Boss will release the show container / takeoff clearance to the HF in its entirety, including the ACC Single-Ship Demo Team, if applicable. Actual single-ship takeoffs will be coordinated intra-flight, based on show profile. Takeoffs and landings by other aircraft, as well as excess radio chatter to make such requests, only distract the pilots and may pose an unnecessary risk to their flight profiles.
2. **Demonstration Profile:** The single-ship demonstration portion of your air show, ground and flying, lasts approximately 20 minutes / 30 minutes if USAF HF is added. It is imperative no other events be scheduled during this time, except the HF activity. e.g., NO OTHER GROUND MOVEMENT during the Demo or HF!
3. **Heritage Flight Profile:** Each performance lasts approximately 10 minutes, and consists of 3 or more formation passes, ranging from a 2 to 4-ship formation, depending on how many Demo/HF Pilots and AFHFF warbird pilots are booked for a HF at your show. The following are the 3 HF display passes:
 - a. Arcing Pass
 - b. Flat Pass
 - c. Over-the-Crowd Pass / Break-to-Land (normally includes aileron rolls as the aircraft break)
4. **THE TEAM's** takeoff must be no earlier than 1/2 hour after sunrise and no later than one hour prior to official sunset so as to ensure the demonstration and the HF are complete no later than 30 minutes prior to sunset. The demonstration pilot's takeoff is approximately five minutes after the narrator takes control of the microphone and your public address system.

PERFORMANCE NARRATION

1. **Demonstration:** Special narration of the single-ship demonstration will be handled by the Demonstration Team Narrator. Coordinate with the Single-Ship Demonstration Team Narrator as to when to pass full control of the public address

system over to him or her. Once the Narrator has control, he or she should not be interrupted unless it is an emergency situation.

2. **Heritage Flight (See Attachment 4):** The HF performance includes the song “We Remember”. The Demo Team will provide a copy of this song digitally or via a CD. A special narration script will be narrated by the Demonstration Team Narrator for the HF.
3. For demonstrations and/or HFs at foreign air or air and trade shows (other than Canada), the narration may need to be translated and/or adjusted for content. Demo Teams will coordinate with foreign air or air and trade shows if this will be required. If so, the Demo team will submit the narration to its respective MAJCOM Aerial Events who will then submit it to the host MAJCOM Public Affairs Office for their review.

COMMUNICATION

1. In the interest of providing the demonstration pilot the safest environment to operate in, the pilot and safety observer will operate on a discrete frequency for all demonstrations and practices using their own radios (not required for HF-only performance). This is to minimize the amount of third-party radio chatter which can both distract our demonstration pilot and step on required radio calls from the pilot and safety observer during the demonstration. During the demonstration, the safety observer will be the only person in direct contact with the demonstration pilot. As such, during the demonstration, all other parties must coordinate through the safety observer for any information or coordination needed regarding the demonstration pilot or the demonstration. **If necessary, please provide the safety observer with a radio for contact with the other agencies (Air Boss, ATC, etc.). If the Air Boss is not co-located with the safety observer and narrator at show center, you MUST provide them with a DIRECT link (radio, walkie-talkie, etc.) to one another during the actual demonstration. A “middle-man” is not sufficient for safety purposes during the flying operations.**
2. All ACC demonstration/HF aircraft are equipped with UHF and VHF radios.
3. Warbirds are equipped with VHF radios.
4. If not already provided, the Demo Narrator will require a podium and public address system with CD and/or MP3 player input capability. The narrator needs this equipment to narrate the performance and play accompanying music.

WEATHER LIMITATIONS

One of the following Demonstration profiles will be flown, depending on the prevailing weather conditions:

- a. High Show – 4,500-foot ceiling for the F-22 / 7,000-foot ceiling for the F-16 / 4,000 foot ceiling for the A-10, 5,000 foot ceiling for the F-35, 3 miles ground visibility and 5 miles in-flight visibility, with a discernible horizon.
- b. Low Show – 1,500-foot ceiling, 3 miles ground visibility and 5 miles in-flight visibility, with a discernible horizon.
- c. USAF HF – 1,500-foot ceiling and 3 miles ground visibility and 3 miles in-flight visibility, with a discernible horizon.

CRASH, FIRE and RESCUE

In order for our Demo Teams to fly, we require crash, fire and rescue to be stationed on the field and NOT embedded in the crowd.

ADDITIONAL INFORMATION

1. The AFHFF pilots and their aircraft operate as part of the United States Air Force Heritage Flight Program (USAFHFP). Special consideration should be paid to logistical requests required to safely launch, fly, and recover the HF. Final word on all HF operations at the air show site will be made by the Military Demo Pilot, IAW ACC's USAF HF rules and regulations.
2. The demos/HFs will be performed **no earlier than 1200 hours local** without pilot approval.
3. With the exception of the U.S. Army Golden Knights, the U.S. Navy Leap Frogs, and the Air Force Academy Jump Team, all landing zones for parachutist demonstrations must be at least 300 feet from THE TEAM's aircraft.
4. If radio-controlled model aircraft will operate during your show, they must not come within 300 feet of THE TEAM's aircraft, laterally or vertically.
5. If you plan to use a 500-foot show line for civilian performers, THE TEAM's aircraft must be parked at least 300 feet from the 500-foot show line to avoid over flight of their aircraft.
6. Prohibit other aircraft from running engines during show narration, except for warbirds preparing for HF.
7. Do not allow concessions at your air show to sell helium-filled balloons; they are a threat to safe flying operations.
8. If hot-air balloons are a part of your air show, ensure they are not inflated during THE TEAM's arrival, practice, or demonstration/HF.

9. Ensure the military Demo Team members and the civilian AFHFF pilots and maintenance personnel have access to VIP tents/chalets/other areas to sign autographs and meet VIPs. To accommodate friends and family members, we request access to these areas for team's family members and friends upon request. If unable, we require up to 20 or more reserved seats, upon request, in a covered area with water (it can be ice water in Igloo-type coolers) available for team guests, opposite show center, if possible; however, if it is easier for your show site to locate THE TEAM's seating within your main VIP seating section, please do so. This will alleviate you from having to construct a separate area just for our team, and will allow our personnel and their families to enjoy your hospitality.
10. Ensure THE TEAM has easy access to meals and water from aircraft parking ramp area during the **air show days and rehearsal days**. Provide two 5-gallon Igloo-type coolers filled with ice and water by the aircraft for the HF warbird pilot and Demo Team personnel, to include staging locations.
11. Restroom facilities will be readily accessible from the aircraft parking locations, within walking distance and restricted from general public use.
12. Do not schedule the demo/HF within 30 minutes either side of Thunderbirds or Blue Angels engine run or start of their ground show.
13. You WILL immediately notify the ACC/AETC/HF Warbird pilot(s) if you change the arrival time/window you provided them, for example via a Prior Permission Required (PPR) Number.

CHAPTER 7 – FAA WAIVER/NOTAMS

FAA WAIVER

1. A waiver from the Federal Aviation Administration is required for THE TEAM's aerobatic maneuvers for arrival maneuvers and both the rehearsal and actual air show demonstrations / HF's. (NOTE: If any of our HF pilots are non-current in the HF, you must provide an Aviation Practice Area or other protected airspace for them to practice the HF). You may submit all waiver requests on FAA Form 7711-2, Application for Certificate of Waiver or Authorization. You must initiate the waiver at least **90 days** before your scheduled show date.

<http://www.faa.gov/documentLibrary/media/form/faa7711-2.pdf>

2. Your request for waiver **must not** be issued to the "ACC F-22, F-16, A-10 or AETC F-35 Single-Ship Demonstration", or the "ACC or AETC Aerial Event Team" but must cite a representative of your organization in the "issued to" block of the waiver.
3. The ACC/AETC pilot will read and sign the waiver and all of the special provisions. Normally the pilot will review and sign the waiver after the first briefing, showing he has been briefed.

PERFORMANCE AND PRACTICE WAIVERS

1. In order for **THE TEAM** to perform at your air show, you must request a waiver to the following FAA regulations.
 - a. 91.117(a) – Aircraft speed in excess of 250 knots below 10,000 feet
 - b. 91.117(b) – Aircraft speeds in an airport traffic area
 - c. 91.119(b) – Minimum safe altitudes over congested areas (Military teams with approved maneuvers packages only)
 - d. 91.119(c) – Minimum safe altitudes over other than congested areas, except not closer than 500 feet to persons
 - e. 91.127 – Operating on or in the vicinity of an airport
 - f. 91-129 – Operations at airports with operating control towers (when appropriate)
 - g. 91-155 - Buffer zone around clouds
 - h. 91.303 – Definition of aerobatic flight

- i. 91.303(c) – Aerobatic flight within a federal airway
 - j. 91.303(e) – Aerobatic flight below an altitude of 1,500 feet above the surface
2. As a minimum, waiver time for the practice and demonstration must begin **5 minutes before scheduled takeoff and extend for 30 minutes**. Although the actual performance only lasts approximately 15 minutes, the additional time is requested to allow flexibility for possible maintenance problems or weather conditions. Once again, these are minimum times. Additional time can be requested. Please ensure the required time blocks are accurately reflected on the waiver request. You could encounter unnecessary delays trying to obtain a new waiver.
 3. Please ensure the accuracy of your waivers with the FAA National Air Show Coordinator, Mr. Kevin Raymond, (847) 294-7155, kevin.raymond@faa.gov.

NOTICE TO AIRMEN (NOTAMs)

1. Your airfield must be closed for the total time issued on the waiver **for both the practice and actual** aerial demonstration / HF. This time includes closure to airlines at commercial or joint-use airfields. If you anticipate any conflicts, contact the Single-Ship Demonstration Team and/or HQ ACC/A3TA (Aerial Events Schedulers) or HQ AETC Aerial Events POC. Suggest you post a NOTAM for plus and minus 30 minutes of demo team arrival time.
2. Ensure a NOTAM is issued at least **48 hours in advance** of **THE TEAM’s** aircraft arrival and in advance of the times specified in both practice and actual performance waivers. It is of the utmost importance to not only provide a NOTAM closing the airfield, but to include the closure requirements of 5NM from show center and 8,000 feet AGL for the A-10 demo / 15,000 feet AGL for the F-22, F-16 and F-35 demos / 1,500 feet AGL for just a Heritage Flight for rehearsal or actual show performances.

Sample NOTAM (for practice or actual performance)

Airspace surface to _____ MSL closed within 5 NM of _____

Airfield/TACAN from _____ Z to _____ Z on _____ (date).

TEMPORARY FLIGHT RESTRICTION (TFR)

1. Please ensure a TFR is in place for your airfield during rehearsal and actual show days that will cover the entire air show circle – 5NM from show center and 8,000 feet AGL for the A-10 demo / 15,000 feet AGL for the F-22, F-16 and F-35 demos / 1,500 feet AGL for just a Heritage Flight. To ensure you follow the appropriate steps in acquiring a TFR, follow the steps listed for TFRs on the following web site:

http://www.faa.gov/about/initiatives/airshow/tfr/media/Airshow_TFR_Worksheet.pdf

2. If you are unable to access this site, contact the FAA Flight Standards District Office (FSDO) which approved your DD Form 2535. The FSDO does not accept requests nor issue TFRs but can assist in directing you to the appropriate FAA Air Traffic Office which provides that service.

CHAPTER 8 – AIR TRAFFIC CONTROL

AIR TRAFFIC CONTROL

The airfield must be controlled by tower personnel whenever ACC/AETC aircraft are scheduled to operate there, including arrival and departure. If the airfield or the divert location where the arresting gear / MAAS is located, will be uncontrolled at any time when ACC/AETC aircraft are flying, you must notify ACC/A3TA or the AETC Aerial Events POC, as appropriate, immediately. ACC/A3TA or the AETC Aerial Events POC will have to request a waiver for their aircraft. If the waiver is disapproved, ACC and/or AETC will have to cancel its participation.

HAZARDS

Provide the military and warbird pilot a sectional chart and advise on any hazards in the local area which are not readily known to transient aircraft. This information must be provided to the pilots prior to their arrival at your show site.

LOCAL AIRPORTS

Make sure you contact all airports within a 5 NM radius of your airfield to ensure they are shut down during the time periods specified in the FAA waiver.

CHAPTER 9 – MAINTENANCE

GENERAL

The air show is responsible for obtaining and arranging for the required support listed in this manual, and for covering the costs involved in obtaining and transporting the equipment and materials. The show site is also responsible for any fuel and oil costs associated with AGE equipment use. In addition, if the aircraft's departure is delayed due to weather, maintenance issues, or other factors, the air show is required to provide this equipment, fuel and oil until the aircraft depart. Provide the scheduled Demo/HF Team with a filled-in copy of Attachment 1 NLT **30 days** prior to your show date.

FOREIGN OBJECT DAMAGE (FOD) CONTROL

1. FOD refers to damage to aircraft components, i.e., flight controls, tires, or engines, by foreign objects such as loose gravel, nuts, bolts, etc.
2. All aircraft are susceptible to FOD. Pieces of ice as small as 1/4", or material as soft as cloth, can damage the engines. Therefore, **make sure all surface areas where the team operates are swept and cleaned prior to their arrival, and ensure these areas remain clean during their stay. Do not use sweepers with steel bristles.**
3. **Snow fencing** will aid in preventing FOD from blowing onto the runways/taxiways when it is erected so it touches the ground. Orange, nylon FOD fencing is an acceptable alternative to snow fencing along the crowd line.

MILITARY AIRCRAFT ENGINE OIL SAMPLES

1. Each military aircraft must have engine oil samples analyzed, as per the requirements listed below. Failure to provide this service will make the aircraft unable to fly in your air show. **It is the air show's responsibility to transport the samples to the testing location.** Oil samples must be analyzed by a DOD certified Joint Oil Analysis Program (JOAP) lab technician using a DOD certified analysis machine (spectrograph). **(NOTE: The current JOAP NDI Lab Directory is now loaded on the ACC Aerial Events Web Site at <http://www.acc.af.mil/Home/AerialEvents.aspx>).**
2. **F-22:** Oil samples must be taken after the first flight of the day and analyzed and the results returned prior to the next flight, before the aircraft can fly again.
3. **F-16:** Oil samples are only required after every 25 hours of flight time. The F-16 Demo Team will take oil samples prior to departing their home station, so, except on very rare occasions (lengthy road trip of 2 or 3 weekends or an overseas deployment), they will not require any oil samples to be taken while on the road.

4. **A-10:** Oil samples must be taken after the first flight of the day and must be analyzed and the results returned prior to the third flight of the day or prior to the next day's first flight, whichever occurs first, before the aircraft can fly again. Because the A-10 may be able to do JOAP analysis enroute to or from the show site, check with them to confirm their JOAPS requirement for your particular show.
5. **F-35:** Oil samples are only required after every 30 hours of engine operating time. F-35 maintenance crews will ensure JOAP inspections are current prior to departure and should not require on-site support. However, JOAP capability should exist on site or in the nearby area to support contingencies.

ACC/AETC AIRCRAFT FUEL REQUIREMENTS

1. The F-16 and A-10 aircraft require JP-4, JP-5, JP-8, Jet-A+, or NATO-24 (Jet A ++).
2. The F-22 aircraft requires JP-5, JP-8, JP-8 + 100, JP-8/SPK Blend, Jet A or Jet A-1. (JP-4 is not authorized). Note: TS-1 (with US additives) is an approved emergency fuel, provided at least one engine per aircraft has more than 100 total cycles (TCY).
3. The F-35 aircraft requires JP-5, JP-8, Jet-A+, or NATO 24 (Jet A++). (JP-4 is not authorized)
4. All fuel must be fuel-lab certified and provided by a certified vendor.
5. Military sites – Fuel will be purchased using the DOD fuel card for each respective aircraft.
6. Civilian sites – **AF regulations only allow the military to pay the current government rate for fuel for military aircraft.** It is essential you communicate this requirement to your fuel provider. **Any additional cost for fuel above the government rate will be the responsibility of the air show.**
7. Fuel quantities—air shows/open houses need to top off the all demo/HF aircraft, including the warbirds after each demo / HF.
 - a. The F-22 requires approximately 18,000 pounds of fuel per single-ship demonstration / HF.
 - b. The F-16 requires approximately 7,000 pounds of fuel per single-ship demonstration / HF.
 - c. The A-10 requires approximately 4,500 pounds of fuel per single-ship demo / HF.
 - d. The F-35 requires approximately 18,000 pounds of fuel per single-ship demo / HF.

8. If aircraft departure from the air show is delayed due to maintenance, air shows/open houses are still required to top off demo/HF aircraft when requested, including the warbirds.

WARBIRD OIL AND FUEL REQUIREMENTS: In general, piston-driven warbirds require 100LL AVGAS or 100/130 AVGAS (very hard to find) and AeroShell W120 oil and the F-86 requires JP 5/8 or Jet A fuel and MIL-L-6081D oil.

1. F-86: **Fuel**--Approximately 250 gallons of JP 5/8 or Jet A fuel each flight and 550 gallons top off prior to departing the air show. **Oil**—F-86 pilots normally bring oil with them, as it is hard to find, but the air show needs to provide approximately 2 quarts of MIL-L-6081D. (If unable to obtain this type of oil, contact the warbird pilot before the show and let him know.)
2. P-51/A-36/P-40: **Fuel**--Approximately 40 gallons of 100LL or 100/130 AVGAS each flight and approximately 150 gallons top off prior to departing the air show. **Oil**—Approximately 2 gallons of AeroShell W120 oil.
3. P-47: **Fuel**--Approximately 60 gallons of 100LL or 100/130 AVGAS each flight and approximately 300 gallons top off prior to departing the air show. **Oil**—4-8 gallons of AeroShell W120 oil.
4. P-38: **Fuel**--Approximately 80 gallons of 100LL or 100/130 AVGAS each flight and approximately 350 gallons top off prior to departing the air show. **Oil**—4 gallons of AeroShell W120 oil.
5. A-1: **Fuel**--Approximately 80 gallons of 100LL or 100/130 AVGAS each flight and approximately 350 gallons top off prior to departing the air show. **Oil**—4-10 gallons of AeroShell W120 oil.
6. F-5: **Fuel**—Jet A+. **Oil**—Mobile Jet II.

NOTE: All the above are estimates and could vary. For example, the A-1 has a drop tank and it's usually topped off, so that could require an extra 300 gallons of fuel.

ACC/AETC AIRCRAFT MAINTENANCE EQUIPMENT REQUIREMENTS

The following maintenance equipment is **required** for the **Demo/HF aircraft**. Maintenance equipment may be obtained from any military installation which has the required equipment and is able and willing to support your show with it; however, you may be responsible for costs incurred in transporting the equipment. It is the air show's responsibility to coordinate with military installations for the use of support equipment. Please ensure all equipment is fully serviced and operational, is compatible with the specific ACC/AETC/warbird aircraft participating in your show and **is separate from**

equipment provided to the USAF Thunderbirds or USN Blue Angels, if they are also participating in your show. This equipment will not be shared with other performers. The cost of fuel for Aerospace Ground Equipment (AGE) is the responsibility of the air show. Required equipment and photos, where required, follow:

NOTE: For ACC F-22, F-16 and A-10 AGE, do not contact the Demo Teams and ask them to help you find AGE. Call the ACC AGE POC or one of the ACC Aerial Events POCs listed in Chapter One of this Support Manual. For AETC F-35 AGE, contact the Demo Team directly. Contact information for the aforementioned POCs is in Chapter One of this Support Manual.

- a. Hydraulic Servicing/Filler Cart: (Hydraulic Fluid MIL-H-83282 for F-22/F-16; MIL-PRF-83282 for A-10)



- b. Hydraulic Servicing/Filler Cart: (Hydraulic Fluid MIL-PRF-83282 for F-35)
(Contact F-35 Demo POC for details).



- c. MD-1 Military Universal Tow Bar: Must be at least 20' long. Ensure large towing lugs are positioned inward and must have access to a tow vehicle.



C1. Tow Bar, Aircraft, Land-Based (F-35): Ensure that the tow bar meets the following criteria - Weight: 239 lbs, Length: 240", Width: 16", Height: 9" (Navy has a shorter version that will not meet the length required to tow the F-35).



d. Warbird Tow Bar



e. Warbird Tow Bar and Tug



f. Nitrogen cart capable of 3,000 PSI



- g. An aircraft platform stand: C-1, B-1 (preferred), or a B-4 is required for **F-22/F-35** maintenance personnel to get to the top of the aircraft and to allow for entry to and exit from the **F-22/F-35** cockpit. Two 8 to 10 foot A-frame ladders (little giant preferred) (for maintainers and pilot to get in and out of the cockpit) and maintenance stand C-1, B-4 or a B-1 (preferred) for visitors to view the cockpit are required for the A-10. (No Photo Available for the C-1 stand).

B-1 Stand



B-4 Stand



- h. Oil Servicing Filler Cart: **F-16 and A-10** require (MIL-L-7808 Grade 3); **F-22** requires MIL-PRF-7808 Grade 4 (NATO 0-163) (preferred); however, MIL-PRF-7808 Grade 3 (NATO 0-148) and MIL-PRF-23699 (NATO 0-156) are acceptable. Mixing is acceptable. For F-35 see para i below.



- i. Oil Servicing Filler Cart: **F-35** requires (JSF P/N 2S JL00491-0001) MIL-PRF-7808 grade 4 or MIL-PRF-23699). Contact F-35 Demo Team POC for details.



- j.** Gaseous Oxygen (GOX) Cart (Military-not Medical): MIL-PRF-27210 for **F-22**.



- k.** Two 150 LB HALON or CO2 Aircraft Fire Extinguishers.
- l.** A Dash 60 Power Unit/Cart (115+/-15 vac, 400+/-30 Hz A/M 32A-60A). (F-16 only).
- m.** A Hobart A/M 32A-86D Generator (115/200 vac 259A-230/400 vac 129A 28.5 vdc 600A-270 vdc 267A) (preferred) or the Dash-60 Power Unit mentioned above readily available (within 2 hours) at their parking locations. (A-10).
- n.** High pressure liquid oxygen cart (MILITARY – not medical). (A-10 only).
- o.** A set of at least 6 light wands for towing. (F-35 only)
- p.** A 5-gallon bucket and two sets of chocks with/or close to the following dimensions - Weight: 13 lbs Length: 20" Width: 8" Height: 6". (F-22 & F-35)
- q.** Access to a diesel powered hydraulic test stand (MJ2A-1 or equivalent) readily available within 2 hours at their parking locations, if requested by the Team Superintendent/Chief. (A-10 only)

- r. Access to a diesel powered CPT cart (AF/M24T-3 or equivalent) readily available at their aircraft parking locations, if requested by the Team Superintendent/Chief. (A-10 only)
- s. Access to 115 AC electric power (standard US outlet) readily available at their parking locations if requested by the Team Superintendent/Chief).

ADDITIONAL F-35 REQUIREMENTS

1. The F-35 must have access to an enclosed hanger or other lightning-protected shelters large enough to house two F-35s. Aircraft must have clear access to the specified shelter and able to be towed from the parking location to the shelter in 20 minutes or less upon notification of inclement weather. The show location bears all responsibility for crowd control to facilitate towing the aircraft. The show location will provide immediate notification to F-35 maintenance crews if lightning is detected within 25 nautical miles.
2. F-35 maintenance crews must have access to (Portable) 115 AC electrical power readily available at their parking locations if requested by the Team Superintendent/Chief.

F-16 NOTE ON HYDRAZINE

Crash, Fire and Rescue (CFR) teams should be aware that hydrazine is used to power the F-16s Emergency Power Unit (EPU). Hydrazine is a highly toxic gas. Should CFR teams need to approach the F-16 after a crash, and hydrazine fumes are present, they should go in with respirators, get the pilot out, then cordon off the aircraft until the hydrazine dissipates, which should only be a few hours, before anyone else approaches the aircraft.

WARBIRD MAINTENANCE EQUIPMENT REQUIREMENTS (Also See Chapter 15)

1. Nitrogen and equipment for servicing aircraft tires. Require standard fitting and a minimum of 8 feet of hose for servicing tires and accumulators.
2. Oxygen and equipment to service aircraft oxygen systems. Require standard high pressure civilian fitting and a minimum of 8 feet of hose.
3. F-86 requires a 28-volt DC, 1200-amp electric power cart.
4. F-5 requires Type 5607 hydraulic fluid.
5. Tow Bar Requirements: You must be able to safely tow the aircraft. For example - split bar (tail dragger) tow bar and tug for P-51s and P-47. A TR-6 tow bar or equivalent will work for most warbirds. (See tow bar/tug pictures above)

- a. F-86: Tow bar is special to the F-86, but an FBO electric scoop-the-nose wheel type works.
 - b. P-51/A-36/P-40: Tow bar is a V type that attached to each main landing gear. See diagram above. Note: If pushing into the hangar by hand, it will take 4 to 5 people.
 - c. P-47: Tow bar for the P-47 is special. The P-47 requires a heavy duty tow bar similar to the one used for a P-51, but much longer and stronger. If pushing into the hangar by hand, it will take about 6 people.
 - d. P-38: Tow bar can be the same that you'd use to tow a Beach Baron--pulling it using the nose landing gear. If pushing it into the hangar by hand, it takes 8-10 people.
 - e. A-1: Same as one used for the P-51. If pushing into the hangar by hand, it will take 8-10 people.
 - f. F-5: Standard military jet towbar.
6. Any questions with regard to specific type of tow bar required or other maintenance support equipment, contact the AFHFF or the warbird pilot.

CHAPTER 10 – SECURITY

CROWD SECURITY

Events such as air shows and aircraft displays attract large numbers of people, all of whom may pass in close proximity to aircraft. This makes the aircraft extremely vulnerable to vandalism, damage, or destruction. Well-organized crowd control is essential to ensure the safety of spectators, security of the aircraft, and to satisfy FAA requirements. For effective crowd security, the security/law enforcement officer must:

- a. Ensure sufficient law enforcement/security personnel are posted to handle the anticipated crowd.
- b. All spectators must remain behind a crowd line (physical barrier made up of either snow fencing or FOD fencing), separating the crowd from the aerobatic box and demonstration aircraft.
- c. On a military installation, security will be set up per AFI 31-101 guidelines and Installation CC/DFC determinations. When an event takes place off of a military installation, ensure members of the security/law enforcement team are on hand early and positioned at specific intervals along the crowd line, to ensure the integrity of the intended crowd line is maintained.
- d. Brief the air show security team on all procedures for the air show.
- e. Close coordination between receiving locations, owning installations and their HQ ACC/AETC functional counterparts is required when aircraft leave their home station.

ACC F-22 AIRCRAFT SECURITY

1. Baseline F-22 security procedures, military or civilian locations:
 - a. Security for F-22 aircraft at a military installation will be in accordance with AFI 31-101, *Integrated Defense*, and the Senior Jersey Classification Guide. The F-22 is a PL 3 asset, however, it contains technologies protected by Special Access Programs, and as such, must be protected to ensure no uncleared individuals are allowed within 20 feet of the aircraft.
 - b. Aircraft commanders will assume security of parked aircraft during the Air Show/Open House. Uniformed presence is required by a knowledgeable person to answer questions for the public.
 - c. **IAW the Senior Jersey Raptor Security Classification Guide, if parked outside a permanent restricted area, stanchions and sufficient rope (500 feet) to secure a 20 foot perimeter around both aircraft must be available**

IMMEDIATELY upon arrival of the aircraft. If parked within a permanent restricted area, stanchions and rope will be available as soon as possible after arrival of the aircraft. At no time will any individuals be allowed inside the perimeter without escort by F-22 Demo Team personnel or trusted agent as identified on the EAL.

- d. Arrange for around-the-clock protection of F-22 aircraft from arrival until departure. No one is authorized to be on or around our aircraft without an F-22 demonstration team member escort. All three of the following requirements must be met.
 - 1) An armed one-person mobile security patrol dedicated to the F-22 aircraft. This individual must be in a position to prevent access to the 20-foot perimeter and be available whenever F-22 demonstration team members are NOT present.
 - 2) An armed two-person mobile security patrol in or around the aircraft parking area able to respond to aircraft. This is required, even if there is an F-22 demonstration team member present.
 - 3) Security or law enforcement personnel who may engage adversaries in the open during emergencies must carry an M-4 or the equivalent.
 - e. A sufficient light source will be available for hours of darkness. Both aircraft will be illuminated throughout the night.
 - f. Provide additional security requirements, such as hanging the aircraft, if requested by the team in response to current world situation and security force posture/ Force Protection Condition (FPCON) or severe weather.
 - g. Photography is allowed no closer than 20 feet with the aircraft shutdown. With engines running, coordinate with the F-22 demo team maintenance personnel to ensure photographers are in a safe location.
 - h. Aircraft tours inside 20 feet for US citizens must have a cleared escort with them at all times and be approved by the OG/CC or F-22 demo pilot.
2. Additional requirements for civilian and OCONUS locations:
- a. At civilian or OCONUS locations, security must meet all of the requirements above. MAJCOMs must approve use of host security or law enforcement personnel (US or foreign forces, when country-to-country agreements exist), military and civil police, or other DOD personnel to provide response for aircraft deployed away from home stations.

- b. For civilian locations, the security forces/law enforcement representative must coordinate communications capability and procedures for requesting emergency assistance from local military or civilian police, as appropriate, for the air show location.
- c. During Force Protection Condition "CHARLIE" and higher, or when security cannot be arranged at the air show location, cancel the demo team or route the aircraft to a safer location to remain overnight.

ACC F-16 and A-10 AIRCRAFT SECURITY

1. For military installations:

- a. Security for ACC aircraft at a military installation will be in accordance with AFI 31-101, *Integrated Defense*, and Installation CC/DFC determinations. Close coordination between receiving locations, owning installations and their HQ ACC functional counterparts is required when aircraft leave their home station.
- b. Aircraft commanders will assume security of parked aircraft during the Air Show/Open House. Uniformed presence is required by a knowledgeable person to answer questions for the public.

2. For civilian locations:

- a. Security for aircraft will be equivalent to the basic standard (based on assigned protection level) when aircraft are away from home station.
- b. MAJCOMs must approve use of host security or law enforcement personnel (US or foreign forces, when country-to-country agreements exist), military and civil police, or other DOD personnel to provide response for aircraft deployed away from home stations.
- c. Arrange for around-the-clock protection of F-16/A-10 aircraft from arrival until departure through their local civilian law enforcement agency. No one is authorized to be on or around our aircraft without an F-16 / A-10 Demo Team member escort.
- d. Throughout all periods at civilian airports, when F-16 / A-10 Demo Team personnel are not present, the following requirements must be met.
 - 1) A security patrol must provide constant observation of the F-16 / A-10 aircraft. All four of the following requirements must be met.
 - a) As a minimum, lock aircraft entry points and hatches.

- b) An armed one-person mobile security patrol dedicated to the F-16/A-10 aircraft.
 - c) An armed two-person mobile security patrol in or outside the aircraft parking area able to respond to aircraft.
 - d) Security or law enforcement personnel who may engage adversaries in the open during emergencies must carry an M-4 or the equivalent.
- 2) Provide additional security requirements, such as hangaring the aircraft, if requested by the team in response to current world situation and security force posture/ Force Protection Condition (FPCON).
 - 3) The security forces/law enforcement representative must coordinate communications capability and procedures for requesting emergency assistance from local military or civilian police, as appropriate, for the air show location.
 - 4) During Force Protection Condition “CHARLIE” and higher, or when security cannot be arranged at the air show location, cancel the demo team or route the aircraft to a safer location to remain overnight.

AETC F-35 AIRCRAFT SECURITY

1. Baseline F-35 security procedures, military or civilian locations:
 - a. Security for F-35 aircraft at a military installation will be in accordance with AFI 31-101, *Integrated Defense*, and the F-35 Security Classification Guide (SCG). The F-35 is considered PL 3 asset, however, it contains technologies protected by Special Access Programs, and as such, must be protected to ensure no uncleared individuals are allowed within 20 feet of the aircraft.
 - 1) The F-35 will require a parking space 90’ long by 120’ wide to accommodate for the size of 2 aircraft parked next to each other with a 20’ cordon.
 - b. Aircraft commanders will assume security of parked aircraft during the Air Show/Open House. Uniformed presence is required by a knowledgeable person to answer questions for the public.
 - c. **IAW the F-35 SCG Table 1, if parked outside a permanent restricted area, stanchions and sufficient rope (500 feet) to secure a 20 foot perimeter around both aircraft must be available IMMEDIATELY upon arrival of the aircraft. If parked within a permanent restricted area, stanchions and rope will be available as soon as possible after arrival of the aircraft. At no time will any individuals be allowed inside the perimeter without escort by F-35 Demo Team personnel or trusted agent as identified on the EAL.**

- d. Arrange for **DEDICATED** around-the-clock protection of F-35 aircraft from arrival until departure. No one is authorized to be on or around our aircraft without an F-35 Demo Team member escort. All three of the following requirements must be met.
 - 1) An armed one-person mobile security patrol dedicated to the F-35 aircraft. This individual must be in a position to prevent access to the 20-foot perimeter and be available whenever F-35 Demo Team members are NOT present.
 - 2) An armed two-person mobile security patrol in or around the aircraft parking area able to respond to aircraft. This is required, even if there is an F-35 Demo Team member present.
 - 3) Security or law enforcement personnel who may engage adversaries in the open during emergencies must carry an M-4 or the equivalent.
 - e. A sufficient light source will be available for hours of darkness. Both aircraft will be illuminated throughout the night.
 - f. Provide additional security requirements, such as hangaring the aircraft, if requested by the team in response to current world situation and security force posture/ Force Protection Condition (FPCON) or severe weather.
 - 1) Any hangers possessing F-35s are PL III restricted areas. If other military/civilian aircraft are required to share the same hanger space as F-35s, then a 20 foot cordon must be placed around the F-35s with 24-hour dedicated security inside the hanger, IAW Paragraph 1a of this section.
 - g. Photography is allowed no closer than 20 feet with the aircraft shutdown. With engines running, coordinate with the F-35 Demo Team maintenance personnel to ensure photographers are in a safe location.
 - h. Aircraft tours inside 20 feet for US citizens must have a cleared escort with them at all times and be approved by the OG/CC.
2. Additional requirements for civilian and OCONUS locations:
- a. At civilian or OCONUS locations, security must meet all of the requirements above. MAJCOMs must approve use of host security or law enforcement personnel (US or foreign forces, when country-to-country agreements exist), military and civil police, or other DOD personnel to provide response for aircraft deployed away from home stations.

- b. For civilian locations, the security forces/law enforcement representative must coordinate communications capability and procedures for requesting emergency assistance from local military or civilian police, as appropriate, for the air show location.
- c. During Force Protection Condition “CHARLIE” and higher, or when security cannot be arranged at the air show location, cancel the F-35 Demo Team or route the aircraft to a safer location to remain overnight.

WARBIRD SECURITY

See Chapter 15 for requirements for securing and hangaring the warbird.

CLASSIFIED SECURITY

For air shows conducted at both military and civilian locations, request the Open House Director or Air Show Director provide a secure location for the Demo Team to store classified information, if required, and inform the Demo Team of who the Open House or Air Show point of contact will be for this function. The Demo Team will pre-coordinate storage of any classified materials with the appropriate agency(s).

CHAPTER 11 – PUBLIC RELATIONS / MEDIA

ADVANCE PUBLICITY AND PUBLIC RELATIONS MATERIAL

1. A successful air show begins with an organized public relations plan and publicity campaign. ACC and AETC Aerial Events Offices and the Air Force Heritage Flight Foundation (AFHFF) are prepared to help shape your plan to maximize media and community relations events for THE TEAM. (Note: THE TEAM refers to any combination of ACC or AETC Demo Teams and the AFHFF).
 - a. All public relations coordination for the Demo Teams will be handled by the Demo Team's Public Affairs POC or the Team Superintendent listed in Chapter 1 of this Support Manual.
 - b. In addition, as a backup for ACC Demo Teams, you can also contact the ACC Aerial Events office (ACC/A3TA), Mr. Steve Bultman (ACC/A3TA), Ms. Michelle Clougher (ACC/PAI) or Ms. Kathy White (ACC/PAC).
 - c. As a backup for the F-35 Demo Team, you can also contact Mr. Joseph Gonzales (AETC 19 AF/OSV).
 - d. Your AFHFF point of contact is Ms. Allie Mount or Mr. Tommy Williams.
 - e. Contact information for all the above POCs can be found in Chapter 1 of this support manual.

2. An ACC F-22, F-16, and/or A-10 and/or AETC F-35 Aerial Events Team is coming to your event to:
 - a. Represent the U.S. Air Force, Air Combat Command/Air Education and Training Command, demonstrating the capabilities and professionalism of the finest air and space force in the world;
 - b. Strengthen and grow public trust and confidence in the U.S. Air Force;
 - c. Inspire and recruit America's best to join the service;
 - d. Retain the quality force we currently have and remind those who are wearing the uniform just how important their service is to the Air Force and the United States.

3. With these goals in mind, the remainder of this chapter provides some guidelines to follow in order to support THE TEAM's public relations effort.

NOTE: ACC/AETC requires local AF Public Affairs offices to facilitate media opportunities for the ACC/AETC Team when the air shows are hosted at an Air Force base.

DEMO TEAM PUBLIC RELATIONS/PUBLICITY MATERIAL AVAILABLE

1. Before beginning your show's publicity campaign, please contact the offices or personnel listed above for Advanced Publicity and Public Relations Material. They will ensure you receive a media kit which includes b-roll footage and interviews of THE TEAM, as well as other information and images useful to local media outlets. ACC and AETC want to put media material in your hands early to help you promote your show.
2. Also, for additional media on the AFHFF and/or the HF warbird pilots, contact Ms. Allie Mount or Mr. Tommy Williams, or the individual warbird pilot, once he has been made known to you or he has made contact with you.
3. Additional information on the Demo Team can be found at the ACC Aerial Events Web site at <http://www.acc.af.mil/aerialevents/> . Additional information on the civilian AFHFF and its HF pilots can be found at the AFHFF Web site at <http://www.airforceheritageflight.org/>).
4. You will be getting an email from ACC/A3TA for the ACC F-22, F-16 and A-10 Demos or from AETC 19 AF/OSV for the F-35 Demo providing you with military demo and civilian HF pilots' names, bios, and aircraft links approximately 2 months prior to your show. The aforementioned web sites contain fact sheets, biographies, schedules and a variety of other information, as well as links to the various Single-Ship Demonstration Teams' Web sites, where you'll find additional information on the team members, photographs and a variety of images. All information and images are public domain, so please feel free to use them in all of your marketing/media products (posters, air show programs, newspaper/magazine advertisements, billboards, flyers, news articles, etc.). Also, please ensure your local media outlets are aware of these Web sites and encourage them to use them in advertisements, articles, public service announcements, etc. **We also recommend you contact the applicable ACC or AETC Single-Ship Demonstration Team for additional photos of their aircraft and team members for your program.**
5. Advertisements cannot imply any type of product endorsement by the Department of Defense, the U.S. Air Force, or the Demo Team (per Title 18 of the U.S. Code, Section 709).
6. Local Air Force Public Affairs offices and recruiters have a good working relationship with local media outlets and can be helpful in distributing these materials.

7. Please ensure you use only the current year's publicity material provided for this year's air show/open house.
8. Include the Single-Ship Demonstration and/or the HF, as applicable, in your air show/open house program, website, and brochure.

PUBLIC RELATIONS INFORMATION NEEDED BY THE DEMO TEAMS

To enable THE TEAM to maximize its time at your show, please e-mail the following information about your show and local area to the applicable Demo Team and Cc all the other points of contact listed in Para 1 above at least **30 days** prior to the team's arrival:

- a. Name and theme of your air show/open house (supported charity or cause, if you have one).
- b. Air show/open house information (Web site address, schedule and other basic info).
- c. Brief history of your city/local area.
- d. List of local schools, children's and veteran's hospitals, etc.
- e. Media list w/complete contact information.

MEDIA OPERATIONS

1. The Demonstration Teams and the civilian HF pilots are available for telephone interviews prior to and after their arrival. After arrival, they are available for radio, television and print interviews. They may do in-station interviews when they have the time to do this. A good rule-of-thumb is 30 minutes of driving time.
2. The applicable Demo Team will let you know when they will be available and when you can expect them to arrive in your local area.
3. The AFHFF or the warbird pilot will let you know when the HF warbird pilot will be available and when you can expect them to arrive in your local area.
4. After their arrival, THE TEAM is available for interviews whenever they are not flying/maintaining the aircraft, eating, sleeping or supporting the local recruiter. In other words, they are available and want to engage the media – it's their job.
 - a. They are professionally trained to work with the media and will endeavor to promote your event every time they are interviewed.
 - b. Please encourage media coverage of the practice sessions and air show.

PUBLIC RELATIONS CHECKLIST



Have you:

1. Been in touch with the applicable F-22, F-16, A-10 or F-35 Demo Team PA representative and/or HQ ACC Aerial Events, Mr. Steve Bultman (ACC/A3TA), Ms. Michelle Clougher (ACC/PAI), or Ms. Kathy White (ACC/PAC) for ACC's Demo Teams, or Mr. Joseph Gonzales (AETC 19 AF/OSV) for the F-35 Demo Team?

YES [] NO []

2. Been in touch with AFHFF: Ms. Allie Mount or Mr. Tommy Williams.

YES [] NO []

3. Received the media kit from ACC or AETC Demo Team?

YES [] NO []

4. Distributed media kit material to media outlets?

YES [] NO []

5. Contacted with your local recruiter for support? ACC Aerial Events (Mr. Steve Bultman) or AETC Aerial Events (Mr. Joseph Gonzales) can put you in touch with your local recruiter.

YES [] NO []

6. Provided a media contact list to the applicable F-22, F-16, A-10 or F-35 Demo Team, or ACC Aerial Events and/or Ms. Michelle Clougher for ACC Demo Teams, or Mr. Joseph Gonzales for the F-35 Demo Team? (at least 30 days prior to the event)

YES [] NO []

7. Invited the media to cover THE TEAM's arrival and air show?

YES [] NO []

8. Included the single-ship demonstration and HF in the air show program?

YES [] NO []

CHAPTER 12 – PUBLIC APPEARANCES

GENERAL

1. ACC and AETC Aerial Events Offices and the Air Force Heritage Flight Foundation (AFHFF) are prepared to help shape your plan to maximize public appearances for THE TEAM. (Note: THE TEAM refers to any combination of ACC F-22, F-16, and A-10 or AETC F-35 Demo Teams, and the AFHFF).
2. All public appearance activities for the AETC F-35 HF Team will be handled by the Demo Team Public Affairs POC or Team Superintendent POC listed in Chapter 1 of this Support Manual.
3. Public appearances of military members of the ACC Single-Ship Demonstration Teams can also be coordinated by either the ACC Aerial Events Public Relations representative, Mr. Steve Bultman, ACC Aerial Events (ACC/A3TA), and/or Ms. Michelle Clougher (ACC/PAI).
4. All public appearances of the AFHFF civilian warbird pilots must be coordinated with AFHFF Ms. Allie Mount or Mr. Tommy Williams; or with the individual HF civilian warbird pilot, once he has been made known to you or has contacted you.
5. See Chapter 1 of this Support Manual for contact information for above listed offices or individuals.
6. The above guidance does not preclude TV, radio and newspaper interviews scheduled the week of the show. The military pilot and civilian warbird pilots may approve last minute appearances at their discretion.
7. **Please do not** commit the ACC or AETC Demo Team or a civilian HF pilot(s) to an activity or event unless it has been coordinated with the team or for ACC Demos, with the ACC Aerial Events Public Relations representative, Mr. Steve Bultman, ACC Aerial Events, and/or Ms. Michelle Clougher; and in the case of the civilian HF pilot, with the AFHFF: Ms. Allie Mount or Mr. Tommy Williams, or with the individual HF warbird pilot.
8. Air Force Recruiting Representatives will be allowed to participate in the planning and participation of all public appearances.
9. The air show/open house committee should plan for a 5-minute block in which THE TEAM is given the opportunity to introduce team members at social events and/or exchange gifts, if necessary. Please inform the Demo Team's point of contact (Team Superintendent or Team Chief) if a formal presentation and/or gift exchange is planned at any social event. This will allow the military pilot the opportunity to recognize key individuals appropriately during his presentation.

AVAILABILITY

1. Due to crew rest and THE TEAM's preparation, the military pilot or the civilian warbird pilot may not be available for public appearances on the day of your air show, except for post-show receptions. However, other team members may be available, so please use them to the maximum extent possible.
2. All public relations commitments must be within a maximum of **30 minutes** driving time from the hotel and/or show site.

REQUIRED INFORMATION

Please provide the Demo Team Public Relations representative with the following information for each public relations event.

- a. Name of Event – Visits to schools (medical schools, universities, high schools), hospitals, golf matches, buffets, dinners, interviews, etc. THE TEAM likes to make as much contact with children as possible. Please attempt to schedule visits at high schools, summer camps, and youth organizations first.
- b. Location of Event – THE TEAM needs a complete street address, to include zip code.
- c. Date/Time of Event.
- d. Host/Hostess/Sponsor – Please identify the individual or organization sponsoring the event and include their work, home and cell phone numbers.
- e. Description – A brief description of what the event sponsor/host would like THE TEAM to do while at the event, such as provide the audience with an introduction to the USAF, and/or encourage students to stay in school, study hard, etc. An estimate of how many will be present at the event is also required.
- f. VIPs/Dignitaries Attending – THE TEAM needs to know who is attending any event, such as the mayor, civic dignitaries, military officials, etc.
- g. Driving Time – Because of THE TEAM's tight schedule, they need to know how long it will realistically take to drive from the hotel to the public relations events. Please err on the liberal side when estimating driving times, allowing for traffic, stop lights, parking, etc.
- h. Event Site – Request the show site PA representative provide an escort from the hotel to the event and back.

- i. Site Requirements – Forward to the Demo Team Public Relations representative, as far in advance of the visit as possible. For example, a children’s hospital may have a requirement to have a listing of all attendees a specific time in advance of the visit.

PUBLIC APPEARANCE CHECKLIST



Have you:

1. Coordinated all Single-Ship Demo/HF Team public appearances with the Demo Team PA representative or Demo Team Superintendent. For ACC Demo teams, you can also contact (as a backup) HQ ACC Aerial Events, Mr. Steve Bultman (ACC/A3TA) and/or Ms. Michelle Clougher (ACC/PAI) or Mr. Joseph Gonzales for the F-35 Demo?

YES [] NO []

2. Coordinated all HF warbird pilot public appearances with the AFHFF: Ms. Allie Mount. or Mr. Tommy Williams.

YES [] NO []

3. Ensured commitments are within a 30-minute drive?

YES [] NO []

4. Sent the Demo Team and/or ACC Aerial Events (for ACC Demo Teams) all the required information?

YES [] NO []

5. Planned a 5-minute block for team to make introductions at social events?

YES [] NO []

6. Informed Demo Team Superintendent or Team Chief and applicable MAJCOM (A3TA or AETC) Aerial Events office, on the specifics regarding visiting VIPs, Dignitaries and Military Officers (O-6 and above) attending social events?

YES [] NO []

7. Planned for escort to/from event?

YES [] NO []

CHAPTER 13 – AIR FORCE RECRUITING

GENERAL (Recruiting support is not required for Canadian or overseas air shows not held on a U.S. base)

1. Recruiting is at the heart of THE TEAM. Therefore, it is essential that air show project officers work closely with the local recruiting squadron commanders, flight chiefs, and community recruiters to get the most out of the team's visit. (Note: THE TEAM refers to any combination of ACC F-22, F-16, and A-10 or AETC F-35 Demo Teams and the AFHFF). Until further notice, the HQ ACC Aerial Events Office will also do the initial coordination of the recruiting activities for AETC's F-35 HF Team.
2. Air Force Recruiting Service (AFRS) Marketing will work with THE TEAM POC and identify the local Recruiter/Flight Chief/Squadron Commander for each air show. The local recruiting squadron POC will contact the air show project manager and nearest public relations representative to coordinate their participation. The local recruiting squadron will then update HQ AFRS when all plans have been finalized.
3. Air shows can locate the nearest Air Force recruiter by going to <https://www.airforce.com/find-a-recruiter>. Note: Mr. Steve Bultman (ACC/A3TA) or Mr. Joseph Gonzales (AETC 19 AF/OSV) can also be contacted for contact information for local recruiting squadrons. See Chapter 1 for those individual's contact information.
4. Local Recruiting Service personnel, along with the HQ ACC Aerial Events office, will set up/coordinate public appearances in the local community and schools with support and attendance from THE TEAM.

REQUIRED AIR SHOW SUPPORT

Air Show/Open House Project Managers must provide full support to Air Force Recruiting to include as a minimum:

- a. Ensure a local U.S. Air Force Recruiting person is on the air show/open house committee.
- b. Provide at no cost a minimum of 60 x 40 foot display space in a prime location near show center and, when possible, near a USAF aircraft (such as a B-1), if applicable, to help draw a large crowd. The display space will be utilized for the recruiting display booth (which will now have a 20 foot long trailer), Raptor SUV, Inspire Tour, etc., and will be shared with the AETC and AF Special Operations Recruiters. The Recruiters or their squadron marketers will inform the air show POC if they do not require the full space. If a national asset is approved by HQ AFRS, then a display space large enough to accommodate the asset is required.

This asset will require a minimum of a 60 x 40 foot and a maximum of 100 x 100 foot display space, depending on which asset is available.

- c.** Allow AF recruiting personnel to utilize their own tent, table and chairs.
- d.** Invite AF recruiting personnel to all official functions in which THE TEAM is participating.
- e.** Schedule a minimum of 6 minutes into the show itinerary for recruiting personnel to conduct an enlistment ceremony at show center before or after THE TEAM performs.
- f.** Provide free access and parking to the air show/open house for Delayed Enlistment Program personnel and recruiters (number and names will be provided by the recruiter in advance) so they can be sworn in and meet with the demonstration/HF teams and HF warbird pilots.
- g.** Provide at least six free PA announcements during the show to inform the crowd where to find the AF recruiting booth.
- h.** Display the local recruiter's name, address and phone number along with AIRFORCE.COM and 1-800-43-USAF prominently in your air show brochure and the event web site.
- i.** Work with local recruiting personnel to properly utilize THE TEAM personnel at the recruiting booth during the air show.

CHAPTER 14 - MUSIC LICENSING RIGHTS

GENERAL

1. The music industry has increased its concern to ensure they are paid when copyrighted music is played. Therefore, the United States Air Force requires any U.S. air show -- civilian or military -- hosting an Air Force aircraft performance which includes music (except for as noted in paragraph 3 below), must secure the necessary music licenses for broadcast of pre-recorded copyrighted music over public address speaker systems.
2. On behalf of all U.S. air shows, the International Council of Air Shows (ICAS) has negotiated a rate of \$200 per public air show day from BMI; a rate of \$150 per day from ASCAP; and \$116 for a one to two-day air show weekend, \$168 for three to four days, and \$221 for five to seven days from SESAC. These rates are not controlled or negotiated by the USAF and are subject to change. (Note: This rate applies only to music broadcast over the public address system during the air show portion of the program and does not provide the show with the right to use pre-recorded music at concerts or other non-air show special events held in conjunction with the air show.) Each event organizer should secure music licenses from BMI, ASCAP and SESAC and provide proof of licenses to the teams **NLT 30 days prior** to the event to allow for rescheduling.
3. No music license is required for the song "We Remember", which is played during the HF performance.

CONTACTS TO OBTAIN LICENSES

1. For BMI licenses, contact Kim Monaghan, Senior Director Customer Relations, General Licensing, BMI, 10 Music Square East, Nashville, Tennessee 37203, Phone: 615-401-2871, E-mail: kmonaghan@bmi.com. Visit their website at www.bmi.com.
2. For ASCAP licenses, contact Pam Gibson, Senior Business Development Specialist, ASCAP, PO Box 331608, Nashville, Tennessee 37203-7515. Phone: 888-653-1024, E-mail: pgibson@ascap.com. Visit their website at www.ascap.com.
3. For SESAC licenses, contact Hardy Link, Director, Licensing Sales, SESAC, Inc., 35 Music Square East, Nashville, Tennessee 37203, Phone: 615-963-3528/615-320-0055, E-mail: hlink@sesac.com. Visit their website at www.sesac.com.

CHAPTER 15 – WARBIIRD REQUIREMENTS SUMMARY

GENERAL: All the Heritage Flight (HF) warbird and civilian warbird pilot requirements are included in the prior chapters. This Chapter will summarize those critical requirements that are specific to the warbirds/warbird pilots, such as those pertaining to housing, transportation, maintenance, runway, hangar support, ground support equipment, fuel, oil and similar requirements. You need to read the entire Support Manual to ensure you are familiar with all the requirements that are for the ACC/AETC Demo Teams AND the warbird pilots.

NOTE: If unable to meet any of the HF warbird requirements in this Support Manual, Air Show Directors/Organizers must coordinate with the AFHFF **NLT 30 days prior** to show start.

1. **HOUSING:** At least two non-smoking rooms per HF warbird.
2. **TRANSPORTATION:** Provide one vehicle per warbird (with flightline access/pass for each vehicle). I.e., if there are two warbirds, two vehicles will be required.
3. **PARKING:** Provide parking space on the ramp and approval to cook at the RV without paying a vendor fee, if the AFHFF pilots bring their RV.
4. **FOOD AND WATER:** Ensure HF warbird pilot/crew chief has easy access to meals and water from aircraft parking ramp during air show and rehearsal days. Provide two 5-gallon Igloo-type coolers filled with ice and water by the aircraft for staged shows for the HF warbird and military aircraft, if the HF warbird is staging from the same location as the military aircraft. If staging from a different location, at least one 5-gallon Igloo-type cooler should suffice for the warbird pilot/crew chief.
5. **OPERATIONS:**
 - a. Park warbirds near the ACC/AETC aircraft, unless otherwise coordinated with the ACC/AETC and AFHFF pilots.
 - b. Provide hangars and tow bars to tow the warbirds to the hangars—15-minute response time.
 - c. Minimum runway length and width for all AFHFF warbirds is 5,000 feet by 75 feet.
 - d. The HF requires airspace up to a five-mile radius from show center, up to 1,500 feet AGL, and an aerobatic box of 3,000 feet wide by 3,000 feet long. If you have the F-35, F-22, F-16, or A-10 demo scheduled for your show, the TFR required for the demo will more than suffice for the HF. See Chapter 6 for HF Profiles.

- 6. WARBIRD OIL AND FUEL REQUIREMENTS:** In general, piston-driven warbirds require 100LL AVGAS or 100/130 AVGAS (very hard to find) fuel and AeroShell W120 oil. The F-86 requires JP 5/8 or Jet A fuel and MIL-L-6081D oil.
- a. F-86: **Fuel**--Approximately 250 gallons of JP 5/8 or Jet A fuel each flight and 550 gallons top off prior to departing the air show. **Oil**—F-86 pilots normally bring oil with them, as it is hard to find, but the show needs to provide approximately 2 quarts of MIL-L-6081D oil. (If unable to obtain this type of oil, contact the warbird pilot before the show and let him know).
 - b. P-51/A-36/P-40: **Fuel**--Approximately 40 gallons of 100LL or 100/130 AVGAS fuel each flight and approximately 150 gallons top off prior to departing the air show. **Oil**--Approximately 2 gallons of AeroShell W120 oil.
 - c. P-47: **Fuel**--Approximately 60 gallons of 100LL or 100/130 AVGAS fuel each flight and approximately 300 gallons top off prior to departing the air show. **Oil**—4 to 8 gallons of AeroShell W120 oil.
 - d. P-38: **Fuel**--Approximately 80 gallons of 100LL or 100/130 AVGAS fuel each flight and approximately 350 gallons top off prior to departing the air show. **Oil**--4 gallons of AeroShell W120 oil.
 - e. A-1: **Fuel**--Approximately 80 gallons of 100LL or 130/130 AVGAS fuel each flight and approximately 350 gallons top off prior to departing the air show. **Oil**—4 to 10 gallons of AeroShell W120 oil.
 - f. F-5: **Fuel**--Jet A+ Fuel. **Oil**—Mobile Jet II.
 - g. NOTE: All the above are estimates and could vary. For example, the A-1 has a drop tank and it's usually topped off, so that could require an extra 300 gallons of fuel.

7. WARBIRD MAINTENANCE EQUIPMENT REQUIREMENTS:

- a. Nitrogen and equipment for servicing aircraft tires. Require standard fitting and a minimum of 8 feet of hose for servicing tires and accumulators.
- b. Oxygen and equipment to service aircraft oxygen systems. Require standard high pressure civilian fitting and a minimum of 8 feet of hose.
- d. F-86 requires a 28 volt DC, 1200 amp electric power cart.
- e. F-5 requires Type 5606 hydraulic fluid.
- d. Tow Bar Requirements: You must be able to safely tow the aircraft within 15 minutes. For example - split bar (tail dragger) tow bar and tug for P-51s and P-47.

A TR-6 tow bar or equivalent will work for most warbirds. (See tow bar/tug pictures in Chapter 9).

- 1) F-86: Tow bar is special to the F-86, but an FBO electric scoop-the-nose wheel type works.
 - 2) P-51/A-36/P-40: Tow bar is a V type that attached to each main landing gear. See diagram above. Note: If pushing into the hangar by hand, it will take 4 to 5 people.
 - 3) P-47: Tow bar for the P-47 is special. The P-47 requires a heavy duty tow bar similar to the one used for a P-51, but much longer and stronger. If pushing into the hangar by hand, it will take about 6 people.
 - 4) P-38: Tow bar can be the same that you'd use to tow a Beach Baron-- pulling it using the nose landing gear. If pushing it into the hangar by hand, it takes 8-10 people.
 - 5) A-1: Same as one used for the P-51. If pushing into the hangar by hand, it will take 8-10 people.
 - 6) F-5: Standard military jet towbar.
- 8. SECURITY OF WARBIRDS:** The Air Show/Open House Director should contact the AFHFF or the HF pilot for specific requirements for securing and hanging the warbird.
- 9.** Compliance with the Support Manual is mandatory without specific written guidance from the warbird pilot(s) participating in your event to deviate from the Support Manual. **All shows will contact the scheduled warbird pilot NLT Monday prior to a weekend show (or Thursday prior to a midweek show the following week) to ensure completion/compliance and to discuss any additional requests or needs.** Any unresolvable disputes should be forwarded to Mr. Tommy Williams, AFHFF, at (817) 913-0702 or the Chief, ACC Aerial Events Branch, at (757) 876-2848. Failure to comply with the minimums above and information contained in the Support Manual regarding HF warbird support may prevent Heritage Flight support for your show.

ATTACHMENT 1

AIR SHOW/OPEN HOUSE DIRECTOR PLANNING AND RESPONSE SHEET
DUE 30 DAYS PRIOR TO AIR SHOW/OPEN HOUSE

FROM: (Air Show Director)

TO: (Appropriate Single-Ship Demonstration/Team)

Cc: ACC Aerial Events (ACC/A3TA) or AETC Aerial Events (AETC 19 AF/OSV)

SUBJECT: Air Show Support for ACC/AETC Single-Ship Demonstration Team and ACC/AETC HF Team / AFHFF Pilot

I have reviewed the support manual and checklist below and completed all appropriate items for the ACC or AETC Single-Ship Demonstration / AFHFF pilot.

Chapter 2 – Things We Need To Know

- Air Show Information Sheet
- Schedule of Events

Chapter 3 – Maintenance Personnel Arrival/Meeting

- Have arranged for required vehicles for transporting teams from airport to show/lodging and back, as required
- Meeting – Date/Time _____, Place _____
- Ground survey of air show site
- Inventory of maintenance support equipment

Chapter 4 – Housing

- Met the specific requirements for the number of rooms for the scheduled demo/HF Team and warbird pilot
- Hotel _____, Phone Number _____
- No more than 30-minute driving time from show site (Police escort if longer drive)
- Accepts VISA cards
- Local phone and high speed internet and 1-800 number charges waived or costs defrayed
- Parking charges waived or costs defrayed
- Parking within one city block of lodging facility
- Dining facilities and laundry/dry cleaners nearby
- Complimentary fitness facility or temporary membership at nearby 24-hour fitness center if one not available at lodging facility

- Fitness Facility name: _____, Phone Number_____.
- Team members can cash personal checks, if nearby ATM is not available
- Clean and quiet
- Non-smoking rooms with air condition
- HQ ACC/AETC and wing senior leadership rooms
- Demo Team and AFHFF warbird pilots all billeted together

Chapter 5 – Transportation

- For Demo Team: Met the requirements for the number of fully fueled and serviced vehicles listed in Chapter 5 for the scheduled Demo Team and warbird pilot and other approved personnel listed in Chapter 5
- Confirmation of Insurance for courtesy/non-rental vehicles
- Authorized unrestricted flight line, parking ramp, and on/off base use
- Maps of base/local area provided
- Golf cart or other independent mode of travel
- Parking for AFHFF RV, if applicable

Chapter 6 – Operations

- Have contacted the Demo Team and AFHFF POC
- Met all requirements to support F-22, F-16, A-10 and/or F-35, and HF warbird aircraft
- Airfield diagram
- Show line
- Show center
- Crowd line
- Aircraft parking
- Hangar space for USAF aircraft and warbirds
- Storage of F-35 Life Support Gear
- Weight-bearing requirements
- Runway length, width and arresting gear requirements
- Staged location requirements
- Runway/taxiway sweepers
- Pyrotechnic requirements
- Properly dimensional and marked aerobatic box diagram
- Time allotted for performance length
- Narration
- Communications equipment
- Weather limitations
- Demonstration not scheduled within 30 minutes of Blue Angels or Thunderbirds pre-show start time (as applicable)

- Prohibitions on balloons
- Prohibitions on other aircraft doing engine run-ups
- VIP Tickets/Chalet request/requirements
- Water/restroom requirements
- Crash, Fire and Rescue stationed on the field and not embedded in crowd
- Will immediately notify pilot/crew if previously provided arrival time changes
- Demo/HF not scheduled prior to 1200, without prior coordination with the demo pilot.
- 5 minutes of arrival airspace provided to ACC Team for an aerial site survey
- Staging location approved by Military Installation Commander or Airfield Manager, as applicable. Required letter from military installation commander or airfield manager of staging location approving the F-22/F-16/A-10/F-35 Demo/Heritage Flight jets and civilian Heritage Flight warbirds to stage from their military installation or civilian airfield, as applicable OR FILL IN/SIGN BELOW: air show name and dates, signature of military installation commander/airfield manager, date, military or civilian position, printed name and title and phone number of authorizing official—FILL IN BELOW.

F-22/F-16/A-10/F-35 Demo/Heritage Flight jets and civilian Heritage Flight warbirds, if applicable, are authorized to stage from my base/airfield in support of the _____ Air Show/Aerial Event on the following dates:

_____.

Name/Rank/Title of Military Installation Commander or name of Airfield Manager

Military or Civilian Position/Name of Military Installation or Civilian Airfield

Signature

Date

Phone Number

Chapter 7 – FAA Waiver/NOTAMS

- FAR 91.117 (a) – Airspeed in excess of 250 knots below 10,000 feet
- FAR 91.117 (b) – Aircraft speeds in an airport traffic area
- FAR 91.119 (b) – Minimum safe altitudes over congested areas
- FAR 91.119 (c) – Minimum safe altitudes over other than congested areas, except not closer than 500 feet to persons.
- FAR 91.127 – Operating on or in the vicinity of an airport

- FAR 91.129 – Operations at airports with operating control towers (when appropriate)
- FAR 91-155 - Buffer zone around clouds
- FAR 91-303 - Definition of aerobatic flight
- FAR 91.303 (c) – Aerobatic flight within a federal airway
- FAR 91.303(e) – Aerobatic flight below an altitude of 1,500 feet above the surface
- Airspace 5 NM radius from show center
- Airspace surface to 8,000 for A-10 Demos; 15,000 feet AGL for F-22, F-16 and F-35 demos; and 1,500 feet AGL for Heritage Flight only, as applicable
- NOTAMs
- TFR

Chapter 8 – Air Traffic Control

- Airfield or divert location where the arresting gear / MAAS is located is controlled by tower when military aircraft operate, to include arrival and departure, or ACC/A3T or AETC/Aerial Events is notified immediately (waiver is required)
- Hazards
- Notification of local airports within 5 NM of airfield

Chapter 9 – Maintenance

- FOD Control
- Aircraft engine oil samples analysis arranged (as required)
- Fuel requirements, as detailed in Chapter 9 for USAF and warbird aircraft
- Maintenance equipment, as required
 - Hydraulic Servicing/Filler cart, as detailed in Chapter 9 for each USAF aircraft
 - Military universal tow bar for USAF aircraft – must be 20' long with towing lugs positioned inward. F-35 specifics as detailed in Chapter 9
 - Tow bar for warbirds
 - Tow bar tug for USAF aircraft and warbirds
 - Nitrogen cart capable of 3,000 psi
 - An aircraft platform stand, as detailed in Chapter 9 for each USAF aircraft
 - Oil servicing filler cart, as detailed in Chapter 9 for each USAF aircraft
 - Gaseous Oxygen (GOX) Cart (Military-not Medical), as detailed in Chapter 9 for F-22 and F-35
 - Two 150 LB HALON or CO2 fire extinguishers
 - Dash 60 Power Unit/Cart (115+/-15 vac, 400+/-30 Hz A/M 32A-60A (F-16 and A-10 only) or Hobart Generator 9A-10 only, preferred), as detailed in Chapter 9
 - High pressure liquid oxygen cart (MILITARY – not medical). (A-10 only)

- Set of at least 6 light wands for towing (F-35 only)
 - Access to a diesel powered hydraulic test stand (A-10 only), as detailed in Chapter 9
 - Additional requirements for F-35 as detailed in Chapter 9
 - A 5-gallon bucket and 2 sets of chocks (F-22 & F-35), as detailed in Chapter 9
 - Additional requirements for warbirds (AVGAS, nitrogen, oxygen, etc.), as detailed in Chapter 9 and Chapter 15
 - Access to 115 AC electric power, if requested by the team.
 - Equipment provided is separate from equipment provided to Thunderbirds or Blue Angels (as applicable)
- Warbird fuel, oil and maintenance equipment requirements met, as detailed in Chapters 9 and 15

Chapter 10 – Security – DUE TO DEMO TEAM POC 30 DAYS PRIOR TO EVENT

- Crowd security
- Aircraft security for USAF aircraft, as detailed for each aircraft in Chapter 10: Required Security Rep signature, date, company/agency or military organization, printed name and title and phone number—FILL IN BELOW.

All applicable security requirements IAW Chapter 10, Sections titled Crowd Control, F-22/F-16/A-10/F-35 Security of this manual will be provided/met by:

_____.
Company/Agency Name (Civilian) or Security Forces Unit (Military)

Security Representative Signature

Date

Printed Name & Title

Phone Number

Chapter 11 - Public Relations/Media

- Requirements met
- Demo/HF Team and/or USAF HF in Air Show program
- Public Relations Checklist completed

Chapter 12 – Public Appearances

- Event information provided
- 5-minute block provided for team to make introductions at socials
- Information regarding VIPs/Dignitaries/Military Officers (O-6 and above) relayed to Team's Superintendent or Team Chief
- Public Appearance checklist completed

Chapter 13 – Air Force Recruiting

- Enlistment/Reenlistment Ceremony (if applicable)
- Ensure Air Force Recruiting person is on committee
- Prime space at no cost for recruiting display. Determine size of recruiting space and provide recruiter with details (i.e. 60' x 40'). Recruiter will coordinate request for Air Force Recruiting assets based on information received.

Chapter 14 - Music License

- Obtained from all three agencies and proof forwarded to demo/HF team(s)

Chapter 15 – Warbird Requirements Summary

- All warbird requirements met for lodging, transportation, food/water, aircraft parking
- Towbar requirements met, as detailed in Chapter 9
- Hangar requirements met
- Runway and airspace requirements met
- Warbird security requirements met
- Fuel, oil, and maintenance equipment requirements met, as detailed in Chapters 9 and 15

Air Show Director Signature

Date

Air Show Director Printed Name

NOTE: Failure to comply with this support manual may result in cancellation of ACC/AETC support for this and / or subsequent shows.

ATTACHMENT 2

AIR SHOW/OPEN HOUSE INFORMATION SHEET

Air Show Title _____ Site/Location _____

Current Show Date and Estimated Takeoff Time _____

Base Operator	Command Post	Base Operations
DSN: _____	DSN: _____	DSN: _____
CMCL: _____	CMCL: _____	CMCL: _____

WG/CC Name: _____	OG/CC Name: _____
DSN: _____	DSN: _____
CMCL: _____	CMCL: _____

HOST-SITE AERIAL EVENTS TEAM PROJECT OFFICER:
NAME: _____

DSN: _____
CMCL: _____
E-MAIL: _____
FAX: _____

HOST-SITE AERIAL EVENTS TEAM MAINTENANCE REPRESENTATIVE:

NAME: _____
DSN: _____
CMCL: _____
E-MAIL: _____
FAX: _____

Air Show Director: _____	Billing/Housing Rep: _____
DSN: _____	DSN: _____
CMCL: _____	CMCL: _____
E-Mail: _____	E-Mail: _____
FAX: _____	FAX: _____

Trans Rep: _____	Air Boss: _____
DSN: _____	DSN: _____
CMCL: _____	CMCL: _____
E-Mail: _____	E-Mail: _____
FAX: _____	FAX: _____

Crash, Fire and Rescue:

DSN: _____
CMCL: _____
E-MAIL: _____
FAX: _____

Local USAF Recruiter Name: _____
DSN: _____
CMCL: _____
E-MAIL: _____
FAX: _____

Staging Location POC: _____
DSN: _____
CMCL: _____
E-Mail: _____
FAX: _____

Public Relations Representative: _____
DSN: _____
CMCL: _____
E-MAIL: _____
FAX: _____

ATTACHMENT 3

CONFIRMATION OF INSURANCE COVERAGE

- 1) All vehicles provided to ACC/AETC Demo Teams and AFHFF pilots/maintainers, are provided with insurance.
- 2) I understand ACC, AETC and AFHFF Team members may or may not be covered with their own insurance when they operate vehicles; therefore, the requirement for host-provided insurance.

Signature of Air Show Director/Event Host

Date

Printed Name of Air Show Director/Event Host

Please return this letter to the participating ACC/AETC Team upon completion

ATTACHMENT 4

Heritage Flight Narration Script

Introduction [during aircraft rejoin]

Ladies and gentlemen, I would like to take a moment to describe the unique history of what you are about to watch. In 1997, the leaders of Air Combat Command assembled a select group of retired military and civilian performers to celebrate the 50th Anniversary of the United States Air Force. [*Start Music*] From this gathering was born the Heritage Flight, a unique visual representation of the Air Force's history from the days of the Army Air Corps to the present. What started out as a one-time event has grown in popularity and demand, and now, Heritage Flights are performed at air shows and special events in the United States and around the world.

Please turn with me now and watch as this rare formation approaches from behind and to the (left/right).

[Begin after first pass]

Flying in formation today is a:

WWII era (A-36, P-38, P-40, P-47) piloted by _____

(And _____ piloted by _____)

WWII and Korean era P-51 piloted by _____

(And _____ piloted by _____)

Korean era F-86 piloted by _____

(And _____ piloted by _____)

Korean and Vietnam era A-1 piloted by _____

(And _____ piloted by _____)

Vietnam era F-5 piloted by _____

(And _____ piloted by _____)

**U.S. Air Force (F-22, F-16, F-35, A-10) piloted
by _____**

(And _____ piloted by _____)

We would like to dedicate today's Heritage Flight to all military veterans in attendance, whose sacrifices over the years have helped preserve America's Freedom. We hope you enjoy watching this rare formation of classic and current United States Air Force Aircraft, on our journey from Heritage to Horizons.

Conclusion [after the break-to-land]

Ladies and gentlemen, your United States Air Force Heritage Flight! We hope you have enjoyed watching and taking pride in this rare display of more than 70 years of air power Heritage. If you have questions, please stop by and talk with us at the Air Force recruiting booth located _____ between _____ (AM/PM) and _____ (AM/PM) or visit the Air Force Heritage Flight Foundation web site at: www.airforceheritageflight.org/.

ATTACHMENT 5**F-22 / F-16 / A-10 / F-35 Pyrotechnics Procedures**

1. The F-22, F-16, A-10 and F-35 demonstration will only utilize pyrotechnics (pyro) as a Wall of Fire and only during the High Speed Pass (F-22, F-16 and F-35) and Low Angle Strafe Passes (A-10). Only ICAS approved personnel will be permitted to utilize pyrotechnics (pyro) in association with the ACC/AETC F-22 / F-16 / A-10 / F-35 demonstration teams. Each calendar year the ICAS Pyro Safety Subcommittee identifies personnel as approved Shooters in Charge (SICs). Individuals' selection will be based on experience, judgment, and safety record. Only those SICs approved by the ICAS Pyro Safety Subcommittee will be allowed to work with ACC demonstration teams.

2. The following maximum Net Explosive Weights (NEW) will be used: (Note: All NEWs in this instruction are TNT equivalent). Only non-fragmenting explosive charges will be used:

a. For A-10 Strafe Passes, a maximum of 40 charges with a maximum NEW of one pound per charge may be initiated at one time (in series).

b. The "ending shot" for each A-10 Strafe Pass will be a maximum NEW of two pounds.

c. For the Wall of Fire pass, the maximum NEW is dependent on the length of the wall. The maximum wall length is 2000 linear feet, and the maximum NEW is 20 pounds (spread out evenly). No more than 1 pound NEW will be used for each 100 linear feet of wall. The demo pilot will fly the maneuver as a strafe pass, however the explosives will not be initiated until the aircraft exits the blast area.

d. The following items will be briefed by the ACC demonstration pilot and the SIC, in person, prior to each performance:

(1) Exact dimensions of the pyro area and the magnitude of explosives being used.

(2) Aircraft/pyro de-confliction plan.

(3) Demonstration profile and sequence of pyro (Wall of Fire during high-speed pass for F-22 / F-16 / F-35, and pop—up strafe pass, first low angle strafe pass, second low angle strafe pass (simulated bomb run) Wall of Fire pass for the A-10).

(4) Forecast wind and effects on pyro.

(5) Communications plan.

- (6) Knock-it-off (KIO) procedures.
- (7) Fire hazards and fire department response plan.
- (8) FOD potential and effects.

3. Maneuver Description – Pyro. Prior to the start of the F-22, F-16, F-35 or A-10 demonstration, the demonstration pilot or team safety observer will get a radio check with the SIC. Radio contact will only be initiated by the demonstration pilot or safety observer, and in no instance will the SIC talk to the pilot unless safety of flight becomes an issue. Following the Cuban 8 (High or Low Show) for the F-16, Split-S Reposition (High Show) or Loaded Roll (Low Show) for the F-22, the Weapons Bay Door Pass (High or Low Show) for the F-35, or immediately prior to the first strafe pass for the A-10, the demonstration pilot will make a —“next pass hot” call. This will alert the SIC to the High Speed Pass maneuver (F-22, F-16, F-35) or first “HOT” strafe run (A-10) and give the SIC permission to discharge the pyrotechnics as briefed. The second low angle strafe pass for the A-10 is a simulated bombing run and will be referred to as the bomb pass—this will be the Wall of Fire bomb pass. The pilot’s responsibility is to fly the demonstration without distraction, and radio calls between the safety observer and the SIC will be kept to the absolute minimum necessary. The turn or vertical pull initiating the aircraft reposition following the High Speed Pass (F-22, F-16, F-35) or Strafe Run (A-10) is the timing cue to discharge the —“Wall of Fire”.

4. De-confliction: Deconfliction with the aircraft will be based on altitude, timing and lateral offsets. SIC will not fire the pyro until the demonstration aircraft has exited the blast area (i.e., pulled vertical and begun a positive rate of climb, or begun the reposition turn away from the crowd line). The demonstration aircraft will turn away from the target area prior to flying over the pyro. The F-22, F-16, F-35 or A-10 will fly a ground track that is offset at least 150 feet from the aircraft pyro effect and overfly the pyro by at least 300 feet AGL. IAW AFMAN 91-201, explosives safety standards dictate a minimum of 1250 feet separation from Hazard C/D 1.1 explosive detonations to unrelated personnel. Therefore, at all Air Force Bases, pyro will be set up a minimum of 1250 feet from the crowd line. The demonstration pilot may continue the demonstration on the 500-foot show line. For all non-Air Force Base show sites, pyro will be set up a minimum of 650 feet from the crowd line, allowing the aircraft to fly on the 500-foot show line.

5. Abnormal Procedures – Pyro. Safety is paramount. If at any time safety becomes an issue, anyone on the radio may make a KIO call. Following a KIO call, the pilot will discontinue his routine and the pilot, safety observer, and SIC will acknowledge the call. If there is ever a question of timing, safety, or sequence, the SIC will not shoot the pyro.