

DCN: 2491
ACTION MEMO

March 23, 2005

MEMORANDUM FOR PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE
(PERSONNEL & READINESS)

FROM: E&T JCSG COORDINATION TEAM

SUBJECT: Request to MILDEP for updated Future Force Requirements

- Candidates Recommendations should be based on force structure and approved selection criteria. We requested MilDeps provide future force education and training requirements in July 2004.
- The Force Structure Plan has been revised and accordingly, the E&T JCSG subgroups need any updated MilDep Projections of future education and training requirements.
- The attached memo requests E&T JCSG Principals to work with their Service and provide any required updates NLT 1 April 2005
- If approved, we will distribute at the 24 Mar E&T JCSG Meeting

RECOMMENDATION: Approve and sign attached memo.

Why aren't we using the Force Structure report the Joint Staff has submitted as part of BRAC?

Prepared by the E&T JCSG Coordination Team, (703) 696-6435, ext

Note ... [initials]
Tanks / acft carriers /
acft wings / etc ≠
• throughput reqmts
• qualified personnel
(AFSC / MOS / NEC)
• student loads
• PME / ranges



OFFICE OF THE UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

MAR 25 2005

PERSONNEL AND
READINESS

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE,
MANPOWER & RESERVE AFFAIRS
CHIEF OF NAVAL PERSONNEL, N1
ASSISTANT DEPUTY CHIEF OF STAFF, OPERATIONS, G3
COMMANDING GENERAL, TRAINING AND EDUCATION
COMMAND, QUANTICO, VA
CHIEF, JOINT DOCTRINE, EDUCATION AND TRAINING, J7

SUBJECT: Future Service and JCS Education and Training Requirements

The Force Structure Plan has been revised and, accordingly, E&T JCSG subgroups need any updated MilDep projections of future education and training requirements. I am requesting your collaborative efforts to secure these updates to your previous responses (Navy Response 30 Aug 2004, Air Force Response 9 Sep 2004 and Army Response 11 Sep 2004). Force structure requirements are the foundation for BRAC 2005 Candidate Recommendations to move successfully through the Department to the Commission.

Please forward your Service's updated education and training requirements by April 1, 2005. Negative replies are requested. For questions regarding this effort, please contact me or my E&T JCSG Coordination Team (Mr. Robert Howlett or Ms. Nancy Weaver) at (703) 696-6435.

Charles S. Abell
Principal Deputy Under Secretary of Defense
(Personnel & Readiness)
Chairman, Education & Training
Joint Cross-Service Group

cc: DUSD(R)
E&T JCSG Subgroup Chairmen



OFFICE OF THE UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
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PERSONNEL AND
READINESS

JUL 29 2004

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE,
MANPOWER & RESERVE AFFAIRS
CHIEF OF NAVAL PERSONNEL, N1
ASSISTANT DEPUTY CHIEF OF STAFF, OPERATIONS, G3
COMMANDING GENERAL, TRAINING AND EDUCATION
COMMAND, QUANTICO, VA
CHIEF, JOINT DOCTRINE, EDUCATION AND TRAINING, J7

SUBJECT: Future Service and JCS Education and Training Requirements

BRAC 2005 methodology for Capacity and Military Value Analyses is based on actual execution data and projections within the FYDP. Although statutory requirements for BRAC 2005 mandate that scenarios flow from the 20 Year Force Structure Plan, data call processes do not provide for E&T JCSG insight into MilDep plans and programs in the outyears. This memorandum seeks to fill that void by gathering baseline information necessary for each E&T JCSG subgroup to incorporate future requirements in their analytical framework for scenario development.

I am requesting your collaborative efforts to secure MilDep-certified education and training requirements based on projected future force structure and end strengths out to 2025. Please have completed questionnaires certified and returned to my office by August 31, 2004. For questions regarding this effort please contact my E&T JCSG Coordination Team (Mr. Robert Howlett and Colonel Nancy Weaver) at (703) 696-6435.

Charles S. Abell
Principal Deputy
Chairman, Education & Training
Joint Cross-Service Group

Attachments:

1. Flight Training Questionnaire
2. Specialized Skill Training Questionnaire
3. Professional Development Education Questionnaire
4. Ranges Questionnaire

cc: DUSD(R)
E&T JCSG Subgroup Chairmen



Education & Training Joint Cross Service Group (E&T JCSG) Flying Training – Baseline Requirements Questionnaire

This questionnaire is intended to capture undergraduate flying training program and aircraft requirements for use in BRAC 2005. It focuses on those programs that qualify entry-level aviators to be US Air Force, Navy, Marine Corps, and Army pilots or navigators. Questions are arranged in sections aligned with the major phases of each service's flight training programs (Intro Flight Training, Introductory Flight Syllabus (IFS), Primary (fixed-wing) Flight Training, and Advanced (fixed and rotary wing) Flight Training). Along with capturing the number of classes and students each service presently forecasts for training through 2025, this questionnaire identifies specific mission design series (MDS) aircraft presently used for hands-on flight instruction and seeks service input on long-range plans that would replace those aircraft.

Answers to these queries will form building blocks the BRAC 2005 Education and Training Joint Cross Service Group's (E&T JCSG) Flight Training Sub-group will use to develop options that could transform traditional service-specific flight training programs into joint, combined, or collocated programs.

Ancillary Training

Each Service conducts ancillary training (administrative, computer-based, instructor-led, or hands-on) to prepare "new-hires" for operational mission(s) they will perform following entry-level training. The E&T JCSG Flight Training Subgroup will address these training requirements as potential pre-/post-requisite courses for joint, combined, or collocated flight school(s). Please review, validate, update, and add those items your Service considers necessary/appropriate ancillary training that should be accomplished before students enter the academic phase or after students complete flying phases of Undergraduate Flight Training (UFT). If you wish to make ancillary training after UFT a pre-requisite to earning pilot, navigator, or naval flight officer wings please annotate that training as mandatory and provide rationale.

Course Title	Not Required	Mandatory	Prerequisite	Post UFT
Aircraft Marshalling				
Aircraft Servicing				
Anti-hijacking Procedures				
Aviation Medicine				
Chemical / Biological Defense Training				
"Dunker" Training				
Life Support Equipment				
Protection from Terrorism				
Swimming				
Terminal Procedures (TERPs)				
Aircrew Chemical Defense Training				
Emergency Nuclear Airlift Training				
Combat Tactics Training				
Combat Intelligence Training				
Communications Procedures				
Hazardous Cargo				
Immunizations				
Law of Armed Conflict				
Passport				
Small Arms Training				
Survival Escape and Evasion Training				

USAF Intro Flight Training (IFT)

A Federal Aviation Administration approved program that exposes USAF pilot and navigator candidates to the flight rules in the Code of Federal Regulations (CFRs) and fundamentals of flight. It provides pilot candidates 50 and navigator candidates 25 hours of hands-on flying. Training is performed via contract at general aviation locations across the United States. The course is designed/intended to increase candidate's probability of success in the Primary Flight Training program.

Intro Flight Training – Forecasted Student Production

Please complete the chart below by filling in the number of classes and students presently forecasted to attend IFT for each year indicated.

Pilot IFT (50-hour program)

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Classes										
#Students										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Classes										
#Students										

Navigator IFT (25-hour program)

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Classes										
#Students										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Classes										
#Students										

Intro Flight Training -- Academic Requirements

The IFT is a contract program that includes a ground school to teach students CFRs necessary to confer a private pilot's license. Please provide significant academic program milestones with a brief description of the course object for each.

Intro Flight Training – Aircraft Requirements

IFT uses the available Cessna 172 aircraft configured to industry standard for each program. Please outline any long-range plans your service has to acquire aircraft to make this an "in-house" training program. If your service does not intend to acquire/own aircraft for IFT prior to 2025, please state so.

Intro Flight Training -- Flying Requirements

The IFT is a contract flying training program that provides student pilot candidates 50 hours of flight and navigator student candidates 25 hours of flight. Pilot candidates who successfully complete the program earn a private pilot's license. Please provide significant flight training program milestones with a brief description of the course object for each. Include the number of flights and main learning objectives for each mission.

USN Introductory Flight Syllabus (IFS)

A Federal Aviation Administration approved program that exposes pilot and navigator candidates to fundamentals of flight. The program provides USN/USMC pilot candidates 25 and navigator candidates 15 hours of hands-on flying. Training is performed via contract at general aviation locations across the United States to increase the probability of success in Primary flight training.

Introductory Flight Syllabus – Forecasted Student Population

Please complete the chart below by indicating the number of classes and students presently forecasted to attend IFS for each year indicated.

Naval Aviator IFS (25-hour program)

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Classes										
#Students										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Classes										
#Students										

Naval Flight Officer (NFO) IFS (15-hour program)

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Classes										
#Students										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Classes										
#Students										

Intro Flight Syllabus – Aircraft Requirements

IFS uses the available Cessna 172 aircraft configured to industry standard for each program. Please outline any long-range plans your service has to acquire aircraft to make this an "in-house" training program. If your service does not intend to acquire/own aircraft for IFT prior to 2025, please state so.

Introductory Flight Syllabus -- Academic Requirements

The IFS is a contract program that includes a ground school to teach students CFRs necessary to confer a private pilot's license. Please provide significant academic program milestones with a brief description of the course object for each.

Intro Flight Syllabus -- Flying Requirements

The IFS is a contract flying training program that provides student pilot candidates 25 hours of flight and navigator student candidates 15 hours of flight. Pilot candidates who successfully complete the program earn a private pilot's license. Please provide significant flight training program milestones with a brief description of the course object for each. Include the number of flights and main learning objectives for each mission.

Primary Flight Training

Primary flight training expands on IFT by teaching new aviators basic flying skills and starts the process of establishing a level of discipline necessary for the combat missions students will perform in the future. Students fly T-34 (51 sorties in 92 flight hours), T-37 (68 sorties in 89 flight hours), and T-6 (59 sorties in 82.4 flight hours) aircraft in a 28-week program to learn basic contact, instrument, 2-ship formation, and air navigation procedures. By 2010 the T-6 Texan II will be the lone aircraft dedicated to Primary Flight Training. Students who successfully complete this phase of training are "Track (AF) or Pipe (DoN) selected" (based on demonstrated knowledge and flying skills) and move into Advanced Flight Training programs.

Primary Flight Training – Forecasted Student Population

Please complete the chart below by indicating the number of classes and students presently forecasted to attend PFT for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Classes										
#Students										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Classes										
#Students										

Primary Flight Training – Aircraft Requirements

PFT employs the USAF T-6 and T-37 and USN T-34 aircraft. Please provide any specific configuration(s) required to meet course objectives through 2025. For instance, does the T-6 require instruments, instrument displays, RADAR, Navigation equipment, and/or a mission computer to meet course objectives? If yes, please provide those requirements. (Note: to avoid the mistaken impression this is an acquisition drill, ONLY list equipment that your service has identified as required for flight training in the current and future years defense budget process). Also, outline formal or informal plans currently in place that would acquire other type aircraft to perform any portion of PFT out to 2025.

Primary Flight Training -- Academic Requirements

The Primary Flight Training (PFT) academic/classroom phase builds on instruction from IFT or IFS. It is intended to make each student aware of life support, flight operations, and mission planning information essential to successfully complete the PFT flying phase. Find below significant milestones for the PFT academic phase. Provide a brief description of the learning objective(s) for each milestone and indicate which (if any) milestones must occur prior to a student entering the flying phase.

Aerodynamics

- / Flying Fundamentals
- / Basic Aircraft Performance

Life Support / Physiology

- / Crew Resource Management (CRM)
- / Water Survival
- / Swimming
- / Land Survival
- / Mishap Prevention
- / Safety

Operations Procedures

- / Flight Rules & Regulations / Checklist Use
- / Ground Operations / Preflight
- / Emergency Procedures

/ Local Area Procedures / Training Course Rules
/ Contact/Familiarization
/ Aviation Weather
/ Instrument Flight
/ Air Navigation
/ Formation

Mission Planning Devices

Engineering T-6, T-34, & T-37 Aircraft
/ Engines & systems
/ Ejection and Egress Systems

Cockpit Trainer (CPT) / Operations Flight Trainer (OFT)

Primary Flight Training -- Flying Requirements

The Primary Flight Training (PFT) flight phase builds on skills learned in IFT or IFS. It is designed to teach students basic aircraft maneuvers essential to military flight operations. Find below significant milestones for the PFT flight phase. Please provide a brief description of the objective and indicate which milestones must occur prior to a student advancing to the next (advanced) phase of instruction.

Basic / Familiarization

/ Contact
/ Precision Aerobatics
/ Landings

Instrument Flight Rules

/ Basic and Advanced
/ Basic Instrument & Radio Instrument (BI & RI)

Formation

Air Navigation

/ IFR and VFR Navigation
/ Low-level Air Navigation (AF Only)

Night Familiarization

Advanced Flight Training

The Air Force conducts advanced flight training in four combat / combat support mission oriented tracks:

- 1) Airlift / Tanker Track. A 24-week program in T-1A aircraft (61 sorties in 104 flight hours) that focuses on transition (takeoff, visual and instrument patterns, and landings), stall, visual and instrument flight rules, low level air navigation, formation, airdrop, and air refueling training (assignment dependent).
- 2) Fighter / Bomber Track. A 24-week program in T-38 aircraft (96 sorties in 118.7 flight hours) that focuses on contact, instrument flight rules, high- and low-level air navigation, 2- and 4-ship formation.
- 3) Multi-engine Turboprop Track. A 26-week program in TC-12 and T-44 aircraft (60 sorties in 111 flight hours) that focuses on transition (takeoff, visual and instrument patterns, and landings), visual and instrument flight rules, and low-level air navigation.
- 4) Rotary wing Helicopter Track. A 28-week program in UH-1 aircraft (112 flight hours) that focus on transition (takeoff, visual patterns, and landings), instrument flight rules, low-level air navigation, and remote operations procedures.

In addition, AF conducts a "one track" Euro-NATO Joint Jet Pilot Training (ENJJPT) using the T-6 (FY??), T-37 (93 sorties), and T-38 (109 sorties) aircraft to qualify students from United States and participating NATO countries for the fighter/attack mission (actual assignment for USAF students subject to AF needs).

The Department of the Navy conducts advanced flight training in five combat / combat support mission oriented tracks:

- 1) Maritime Track. A 22-week program in the T-44/TC-12 aircraft (42 sorties in 87.8 flight hours, 41 sorties for USMC) that focuses on transition (takeoff, visual and instrument patterns, and landings), visual and instrument flight rules, formation, and low-level air navigation.
- 2) TACAMO (uses USAF airlift/tanker program). A 24-week program in T-1A aircraft (61 sorties in 104 flight hours) that focuses on transition (takeoff, visual and instrument patterns, and landings), stall, visual and instrument flight rules, low level air navigation, formation, airdrop, and air refueling training (assignment dependent).
- 3) Rotary Wing Helicopter. Two courses. A 26-week program in the TH-57 aircraft (69 sorties in 113.6 flight hours) that focuses on transition (takeoff, visual patterns, and landings), instrument flight rules, formation, low-level air navigation, and night tactical operations or a 15-week program (39 sorties in 60 hours) for tilt-rotor pilots.
- 4) E-2/C-2 Track. A 2-part program. Part 1 is a 16-week program in the T-44/TC-12 aircraft (28 sorties, 50.3 flight hours) that focuses on day and night transition (takeoff, visual patterns, and landings) and instrument flight rules. Part 2 is a 33-week program in the T-45 aircraft (78 sorties in 93.9 flight hours) that focuses on transition (takeoff, visual patterns, and landings), instrument flight rules, formation, and carrier landings. Total training is 49 weeks long and has 106 sorties and 144.2 hours.
- 5) Advanced Strike Track. A 50-week program in the T-45 aircraft (125 sorties in 157.5 hours) that focuses on contact, instrument flight rules, high- and low-level air navigation, formation, weapons employment, air combat maneuvers, and carrier landings.

USN E-2 / C-2 Track

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Classes										
#Students										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Classes										
#Students										

USN Advanced Strike Track

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Classes										
#Students										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Classes										
#Students										

Advanced Flight Training – Aircraft Requirements

AFT uses the USAF T-1, CT-12, and T-38 as well as USN T-4 and T-3 aircraft. Please provide any specific configuration(s) required to meet course objectives through 2025. For instance, does the T-1 require instruments, instrument displays, RADAR, Navigation equipment, and/or a mission computer to meet course objectives? If yes, please provide those requirements. (Note: to avoid a mistaken impression this is an acquisition drill, ONLY list equipment that your service has identified as required for flight training in the current and future years defense budget process). Also, outline formal or informal plans currently in place that would acquire other type aircraft to perform any portion of AFT out to 2025.

Advanced Flight Training -- Academics

The Advanced Flight Training (AFT) academic/classroom phase builds on instruction from primary flight training. It is designed to teach each student life support, flight operations, and mission planning material essential to successfully complete the combat-oriented advanced flying phase. Find below significant milestones for the AFT academic phase. Please provide a brief description of learning objective(s) for each milestone and indicate which milestones must occur prior to a student entering AFT flying.

High Altitude Life Support / Physiology

- / Crew Resource Management
- / Centrifuge (indicate which tracks require centrifuge training)
- / Mishap Prevention
- / Meteorology

Engineering T-1, CT-12, T-38, T-44, and T-45

- / Aircraft engines and systems
- /Cockpit Orientation

Operational Transition / Aerodynamics

- / Course Rules / Flight Procedures

Flight Planning / Mission Planning / PFPS

Advanced Instruments / Air Navigation

- / En route High-level Navigation
- / Low-level Navigation

Advanced Formation

Small Arms Qualification

Advanced Flight Training -- Flying Training Phase I

The Advanced Flight Training (AFT) flight phase builds on skills learned in PFT. It is designed to teach students advanced aircraft maneuvers specifically aligned to military flight operations for one of nine tracks. Find below significant milestones for the AFT flight phase. Please provide a brief description of the objective and indicate which milestones must occur prior to a student advancing to the next phase of instruction.

Familiarization / Contact

Instrument

Formation

Air Navigation

Low level

Emergency Procedures

Mission Familiarization

Co-pilot Duties

Night Familiarization

FCLP

Advanced Flight Training -- Flying Training Phase II

Operational Navigation

Weapons and Delivery

Tactical Formation

Night Formation

Advanced Combat Maneuvers

CQ

OOCP

EP

FCF

Rotary-wing / Helicopter – Aircraft Requirements

Rotary wing/Helicopter training uses the USAF UH-1N, USA TH-67, and USN T-57 aircraft. Please provide any specific configuration(s) required to meet course objectives through 2025. For instance, does the TH-67 require instruments, instrument displays, RADAR, Navigation equipment, and/or a mission computer to meet course objectives? If yes, please provide those requirements. (Note: to avoid a mistaken impression this is an acquisition drill, ONLY list equipment that your service has identified as required for flight training in the current and future years defense budget process). Also, outline formal or informal plans currently in place that would acquire other type aircraft to perform any portion of rotary wing flight training out to 2025.

Rotary-wing / Helicopter -- Academics

The Rotary wing / Helicopter Track Advanced Flight Training (AFT) academic/classroom phase builds on instruction from primary flight training. It is designed to teach each student life support, flight operations, and mission planning material essential to successfully complete the combat-oriented advanced flying phase exclusive to rotary and tilt rotor aircraft. Find below significant milestones for the Rotary wing academic phase. Please provide a brief description of learning objective(s) for each milestone and indicate which milestones must occur prior to a student entering the flying phase.

Aerodynamics

Physiology

/ Water Survival / Swimming

/ Land Survival

/ Aviation Medicine

Crew Resource Management

Engineering UH-1N, TH-67, TH-57

/ Aircraft Engines / Systems

Flight Rules & Regulations

/ Course Rules/Flight Procedures

Instruments / Air Navigation

/ Aviation Weather

/ Basic Instruments-Radio Instruments

/ Global Positioning System

/ Mission Planning/CFPS / PFPS

Operational Procedures

/ Remote Operations

/ Mountain Operations

/ Night Vision Devices

/ Shipboard Operations

Visual Flight Rules (VFR) Navigation

/ Low-Level Operations/Navigation

/ Formation Procedures

/ Tactical Flight Procedures

Rotary-wing / Helicopter -- Flying Training

The Rotary wing / Helicopter Advanced Flight Training (AFT) flight phase builds on skills learned in PFT. It is designed to teach students advanced aircraft maneuvers specifically aligned to military flight operations for helicopter and tilt rotor aircraft. Find below significant milestones for the Rotary wing AFT

flight phase. Please provide a brief description of the objective and indicate which milestones must occur prior to a student completing the course of instruction and earning his/her wings.

Contact Maneuvers

VFR Navigation

Day Remote Operations

Night Vision Goggle (NVG) Remote Operation

Single-Ship Low-Level Ops

Low-Level Navigation

Formation/Formation Low-Level Ops

Cruise Formation

Power Recovery Auto-rotations

NVG Low-Level Ops

Night Tactical

Instruments

Day / Night Navigation

Shipboard Operations / Deck Landing

Education & Training Joint Cross Service Group (E&T JCSG) Specialized Skill Training – Baseline Requirements Questionnaire

This questionnaire is intended to capture Specialized Skill Training (SST) requirements for each military service. SST is a category of institutional training that provides officer and enlisted personnel with new or higher-level skills in military specialties or functional areas to match specific job requirements. The focus of this inquiry is limited to three sub-categories of Specialized Skill Training: Initial Skill Training, Skill Progression Training, and Functional Training. (Recruit Training, One-Station Unit Training (Army), and Officer Accession Training are not SST) Each requirement is service determined and based on the required number of personnel to accomplish the designated service’s mission. Answers to these queries will form the building blocks the BRAC 2005 Education and Training Joint Cross Service Group’s (E&T JCSG) Specialized Skill Training Sub-group will use to develop transformational options and planning scenarios.

Initial Skill Training

Initial Skill Training is instruction in a specific skill leading to the award of a military occupational specialty or rating/classification at the lowest level; completion qualifies the individual for a position in the job structure (AFSC, MOS, NEC). Please complete the chart below providing your service requirement for each year indicated.

Service Component	FY06			FY07			FY08			FY09		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY10			FY11			FY12			FY13		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY14			FY15			FY16			FY17		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY18			FY19			FY20			FY21		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY22			FY23			FY24			FY25		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Skill Progression Training

Skill Progression Training is instruction for personnel after Initial Skill Training, and usually some experience working in their specialty, designed to increase job knowledge and proficiency and to qualify individuals for more advanced job duties. Please complete the chart below providing your service requirement for each year indicated.

Service Component	FY 06			FY 07			FY 08			FY 09		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY 10			FY 11			FY 12			FY 13		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY 14			FY 15			FY 16			FY 17		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY 18			FY 19			FY 20			FY 21		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY 22			FY 23			FY 24			FY 25		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Functional Training

Functional Training is instruction for personnel in various military occupational specialties who require specific, additional skills or qualifications without changing their primary specialty or skill level. Please complete the chart below providing your service requirement for each year indicated.

Service Component	FY06			FY07			FY08			FY09		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY10			FY11			FY12			FY13		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY14			FY15			FY16			FY17		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY 18			FY 19			FY 20			FY 21		
	Input	Output	Load									
Active												
Reserve												
National Guard												

Service Component	FY 22			FY 23			FY 24			FY 25		
	Input	Output	Load									
Active												
Reserve												
National Guard												

**Education & Training Joint Cross Service Group (E&T JCSG)
Professional Development Education – Baseline Requirements
(Service Questions)**

This questionnaire is intended to capture Professional Development Education (PDE) requirements for each military service and the Department of Defense. Each requirement is service determined and based on the required number of personnel to accomplish the designated services mission. The focus of this inquiry is limited to three major categories of development education: Professional Military Education, Advanced Academic Degrees, and Other Full Time Education. Specific requests encompass twelve education activities: Resident Senior Service College, Resident Intermediate Service College, Non-resident Senior Service College, Non-resident Intermediate Service College, Advanced Academic Masters Degrees (excludes degrees granted from PME), Advanced Academic Ph.D. Degrees, service Judge Advocate General education, service Chaplain education, service Supply/Logistics education, Army Management Staff College, and selected defense schools listed below.

Answers to these queries will become part of the information used by the PDE sub-group in developing transformational options and planning scenarios.

Professional Military Education

Please complete the chart below providing your service requirement for Resident Senior Service College (SSC) graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing your service requirement for Resident Intermediate Service College (ISC) graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing your service requirement for Non-Resident Senior Service College (SSC) graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing your service requirement for Non-Resident Intermediate Service College (ISC) graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

#Graduates										
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Please complete the chart below providing your service requirement for Joint PME Phase I graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing your service requirement for Joint PME Phase II graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Advanced Academic Degrees

Please complete the chart below providing your service requirement for Advanced Academic Masters Degrees for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing your service requirement for Advanced Academic PhD Degrees for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing your service requirement for DoD Military Graduate Law Degrees for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Other Full Time Education

Please complete the chart below providing your service's requirements for Judge Advocate General School graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing your service's requirements for Chaplain School graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing your service's requirements for Supply/Logistics School graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing Army requirements for Army Management Staff College graduates for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
#Graduates										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
#Graduates										

Please complete the chart below providing the DOD requirements for the following schools for each year indicated.

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
DAC										
DAU										
DCAI										
DEOMI										
DINFOS										
DIILS										
DISAM										
DLAMP										
DPI										
DRMI										
DSS										
DSMC										
IRMC										
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
DAC										
DAU										
DCAI										
DEOMI										
DINFOS										
DIILS										
DISAM										
DLAMP										
DPI										
DRMI										
DSS										

DSMC										
IRMC										

**Education & Training Joint Cross Service Group (E&T JCSG)
Ranges – Future Requirements**

Training

- Ground

Project future Ground forces:

Army AC, ARNG & USAR Units	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
# BCT/UA – Total Maneuver										
Heavy										
Light (Incl ABN & AASLT)										
STRYKER										
FCS UA										
Army AC, ARNG & USAR Units	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
# BCT/UA – Total Maneuver										
Heavy										
Light (Incl ABN & AASLT)										
STRYKER										
FCS UA										
Army AC, ARNG & USAR Units	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
# BCT/UA – Total Support (sum of below)										
Sustain UA										
Aviation UA										
Strike UA										
Protect UA										
R&S UA										
Army AC, ARNG & USAR Units	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
# BCT/UA – Total Support (sum of below)										
Sustain UA										
Aviation UA										
Strike UA										
Protect UA										
R&S UA										
Army AC, ARNG & USAR Units ; # Battle Command	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
UEx										
UEy										
Army AC, ARNG & USAR Units ; #	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25



OFFICE OF THE UNDER SECRETARY OF DEFENSE

4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

AUG 30 2004

PERSONNEL AND
READINESS

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE,
MANPOWER & RESERVE AFFAIRS
CHIEF OF NAVAL PERSONNEL, N1
COMMANDING GENERAL, TRAINING AND EDUCATION COMMAND,
QUANTICO, VA
DEPUTY CHIEF OF STAFF, ARMY G3

SUBJECT: Unmanned Aerial Vehicle Initial (UAV) Training Requirements

The 23 July 2004, ISG minutes made site selection for an Unmanned Aerial Vehicle (UAV) basic qualification training base(s) part of the BRAC process. I asked the BRAC 2005 Education and Training Joint Cross Service Group (E&T JCSG) Flight Training Subgroup to lead this effort. The proposed Basing Discriminator Matrix attached to this memorandum will focus our search to help discover the base most suited for UAV initial qualification training.

To meet expectations for placing UAV initial training activities at the best possible base, E&T JCSG needs MilDeps to validate and, where applicable, expand on proposed beddown criteria. "BRAC Certified" criteria will be the single most valuable tool necessary to complete this historic task.

E&T JCSG members fully appreciate the complexity of UAV decisions at hand. Our aim is to capture criteria necessary to find the optimal installation for UAV initial flight training. As always Service experts will be involved in the analysis and will have a chance to review and comment on E&T JCSG's recommendations at the ISG and Infrastructure Executive Council levels. CAPTAIN Gene Summerlin, USN, E&T JCSG, Chairman, Flight Training Subgroup, (703) 602-6431, gene.summerlin@navy.mil or Mister Earl Gene Peay, (703) 695-9534, earl.peay@hqda.army.mil are the points of contact for questions on this initiative, please forward names of your Service's POC to them by 15 September, 2004.

Charles S. Abell
Chairman, JCSG
Education and Training

Attachment:

1. UAV Basing Discriminators Matrix
2. UAV Student Forecast

cc: DUSD(R)
E&T JCSG Members
JCS J-7

UAV BASING DISCRIMINATORS FOR USAF/USN/USMC/USA

CATEGORY	Desired	Min Required	Unacceptable
AIRFIELD			
MOB*	5,000 x 150 foot runway	3,000 x 150 feet	< 3000 x 150 feet
AIRSPACE/RANGE			
MOB**	W/I 20 NM	W/I 21-50 NM	More Than 50 NM Away
WEATHER			
Ceiling & Visibility	1,000 & 3 SM	1,000 & 3 SM	1,000 & 3 SM
MOB	≥ 244 days/year	≥ 200 days/year	< 200 days/year
Range	≥ 244 days/year	≥ 200 days/year	< 200 days/year
ENVIRONMENTAL			
Pollutant Emissions	Attainment	Non-attainment w/Mitigation	Non-attainment w/o Mitigation
Noise Emissions	Noise ≤ XX DNL no residential development	Noise 'XX' to 'YY' DNL with residential development	Noise ≥ YY DNL with residential development
TEMPO			
	Unimpeded	Able to meet training/syllabus requirements w/alterations	Unable to meet training/syllabus requirements
CURRENT MISSION(S)			
	Compatible	Relocateable	Incompatible/not moveable

* RUNWAY CONSIDERATIONS. UAV training may be accomplished using simulators that preclude requirement for actual flights and therefore not require a runway/airspace. If your service advocates UAV initial training MUST include actual flights, what is the minimum runway length required for vehicles your service plans to operate?

** This is in reference to air vehicles in excess of 300 lbs ramp weight.

Mean Sea Level (MSL)
 Military Operating Area (MOA)
 Main Operating Base (MOB)
 Nautical Mile (NM)
 Statute Mile (SM)

UNMANNED AERIAL VEHICLES TRAINING PROGRAMS

Student Throughput Requirements (FY05-FY25)

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Predator										
Global Hawk										
FPASS										
X-45A/C										
Raven										
Shadow										
Hunter										
UCAR										
Hunter										
Fire Scout										
Neptune										
X-46/47										
BAMS										
Dragon Eye										
Pioneer										
Hunter										
Dragon Warrior										

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
Predator											
Global Hawk											
FPASS											
X-45A/C											
Raven											
Shadow											
Hunter											
UCAR											
Hunter											
Fire Scout											
Neptune											
X-46/47											
BAMS											
Dragon Eye											
Pioneer											
Hunter											
Dragon Warrior											

AIR FORCE	ARMY	NAVY	MARINE CORPS
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PERSONNEL AND
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OFFICE OF THE UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000



MAY 29 2003

MEMORANDUM FOR Assistant Secretary of the Air Force (MR)
Chief Naval Pers, N1
Army Assistant DCS Operations, G-3
Director, TECOM
JCS J-7

SUBJECT: Education and Training Joint Cross Service Group Functional Area
Guidance

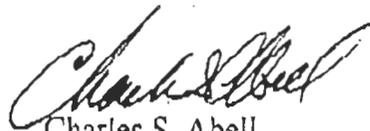
The Infrastructure Steering Group (ISG) has for review my March 31, 2003, initial report of the E&T JCSG that included our guiding principles, functions to be analyzed, and organizational structure. While awaiting subsequent ISG direction, we should proceed in establishing the functional area subgroups that will be tasked to conduct analyses IAW the BRAC 2005 process. I would like for you to designate functional area experts who will participate as members of each subgroup. Service/organization leadership has been specified below for each of the four E&T JCSG subgroups. Please provide names and e-mail addresses of your subgroup participants to Ms. Cheryl Black, my Confidential Assistant at black.cheryl@osd.mil.

- Specialized Skill Training subgroup [Air Force lead]
- Professional Development Education subgroup [J7 and Army lead]
- Flight Training subgroup [Navy lead]
- Collective Training subgroup [DUSD(R) and USMC lead]

Also attached is a copy of USD(AT&L) memorandum dated May 23, 2003, which requests E&T JCSG suggestions regarding transformational options and nominations of private and public organizations that may provide additional ideas within our functional area. To respond to the ISG, within the next several days you should convene your respective subgroup to discuss potential responses to the AT&L memo. This meeting can also serve as an initial meeting for securing nondisclosure agreements for new participants and establishing subgroup structure and roles.

Deliberative Document
FOUO -- Do NOT

I intend to schedule a meeting of our E&T JCSG during the second week of June 2003 to discuss our possible responses to the AT&L memo. Please be prepared to offer recommendations that time.



Charles S. Abell
Principal Deputy
Chairman, Education and Training JCSG

Attachment:

As stated

cc:

ASD, RA
DUSD(Readiness)
DUSD(MC&FP)
ADUSD(MPP)
E&T JCSG Members



OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, DC 20301

JUL 2 2003



MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE,
MANPOWER & RESERVE AFFAIRS
CHIEF OF NAVAL PERSONNEL, N1
ASSISTANT DEPUTY CHIEF OF STAFF, OPERATIONS, G3
COMMANDING GENERAL,
TRAINING AND EDUCATION COMMAND,
QUANTICO, VA
CHIEF, JOINT DOCTRINE, EDUCATION AND TRAINING, J7

SUBJECT: Education and Training Joint Cross-Service Group (E&T JCSG) Update

At our June 11, 2003 meeting, I noted that the Infrastructure Steering Group (ISG) had accepted our March 31, 2003 report (Attachment 1) with the exception of the leads proposed for the four Subgroups. We also discussed transformational options and potential outside organizations that might be contacted to provide assistance in the BRAC process. I forwarded our Group's input to the ISG on June 26, 2003 (Attachment 2).

The Secretary recently approved the ISG's proposal and our Subgroup leads are now: Specialized Skill Training - Air Force, Professional Military Education - Joint Staff, Flight Training - Navy, and Ranges (to include simulation centers) - Army. We now need to press on and get the Subgroup process started, incorporating our approved guiding principles and those functions to be analyzed and excluded from analyses for each Subgroup. Toward that end, I am asking that you take the following actions as soon as feasible:

1. Identify your respective Subgroup chairman.
2. Provide both a primary and alternate member for each Subgroup.
3. Subgroup chairs should schedule their initial meetings to include: the BRAC Office's briefing "BRAC Process Primer for Joint Cross-Service Groups" and develop initial subgroup objectives and schedules.
4. Submit non-disclosure statements for both Subgroup chairs and members to the BRAC office.

Finally, I would like the Navy to provide a nominee to represent our Group on the Joint Process Action Team for Cost of Base Realignment Actions (COBRA) validation and to provide subsequent support to the JCSG on COBRA (Attachment 3).



I have asked Mr. Dan Gardner, Director of Readiness and Training, (703) 695-2618, Room 1C757, dan.gardner@osd.mil to be my point of contact/collection point, at least temporarily, for all E&T JCSG actions. If you have additional questions please contact Dan.



Charles S. Abell
Chairman, JCSG
Education and Training

Attachments:
As stated

cc: DUSD(R)
E&T JCSG Members
JCS J-7



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PERSONNEL AND
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JUL 29 2004

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE,
MANPOWER & RESERVE AFFAIRS
CHIEF OF NAVAL PERSONNEL, N1
COMMANDING GENERAL, TRAINING AND EDUCATION COMMAND,
QUANTICO, VA

SUBJECT: Joint Strike Fighter (JSF) Initial Flying Training Basing Requirements

A 19 May 2003, USD (AT&L) memorandum made site selection for the Joint Strike Fighter (JSF) initial training base(s) part of the BRAC process. The BRAC 2005 Education and Training Joint Cross Service Group (E&T JCSG) is leading this effort and a fully vetted Basing Discriminator Matrix with "BRAC Certified" criteria is key to our success.

In order to meet expectations for recommending the placement of JSF initial flying training activities at the best possible base, E&T JCSG needs experts from each Service to review, validate and, where applicable, expand on criteria in the proposed matrix (atch 1) and support notes (atch 2). Inputs should be forwarded to the Flight Training Subgroup no later than 13 August 2004; names of your Service POC are needed by 2 August 2004.

E&T JCSG members fully appreciate the complexity of JSF decisions at hand. Our aim in this exercise is to capture criteria necessary to find the optimal installation for JSF initial flight training. However, while this matrix centers on attributes for flying training, it will also serve as a tool when we develop recommendations that could make JSF initial flying and maintenance training a joint, combined, or collocated enterprise on a single base.

Senior leaders from each Service will be involved in the analysis and have a chance to review and comment on E&T JCSG recommendations at ISG and Infrastructure Executive Council levels. CAPT Gene Summerlin, USN, E&T JCSG, Chairman, Flying Training Subgroup, (703) 602-6431, gene.summerlin@navy.mil or Colonel Jimmie Simmons, (703) 693-6586, simmons.jimmie@hq.navy.mil are the points of contact for questions on this initiative.

Charles S. Abell
Principal Deputy Under Secretary of
Defense (Personnel & Readiness)
Chairman, Education & Training Joint
Cross-Service Group

Attachments:

1. JSF Basing Discriminators Matrix
2. JSF Basing Discriminators Notes

cc: DUSD(R)
E&T JCSG Principal Members

JOINT STRIKE FIGHTER (JSF)
BASING DISCRIMATORS FOR USAF/USN/USMC

Above Ground Level (AGL)
Air to Air (AA)
Air to Ground (AG)
Field Carrier Landing Practice (FCLP)
Mean Sea Level (MSL)
Military Operating Area (MOA)
Main Operating Base (MOB)
Nautical Mile (NM)
Simulated Flameout (SFO)
Statute Mile (SM)

**JOINT STRIKE FIGHTER (JSF)
BASING DISCRIMATORS FOR USAF/USN/USMC**

Note	CATEGORY	Desired	Min Required	Unacceptable
1		AIRFIELD		
2	MOB	≥ 2 Parallel 9,000 x 200 foot runways	Single or 2 crossed 8,500 x 150 foot runways w/room to add parallel runway & expand two to 9,000 x 200 feet	Runway < 8,500 x 150 foot w/o capacity to extend runway or add parallel runway
3	Parking Ramp	Park ≥ 140 aircraft	Park 75 acft w/room to add 65 acft	Park < 75 aircraft
4	Arm/De-arm Pads	24 pads (12 at each end of main runway)	12 pads at one end of pri runway	No arm/de-arm capability
5	MOB Fld Elevation	< 1,000 MSL	1,000 to 3,000 MSL	> 3,000 MSL
6	Aux Field	8,500 x 150 foot < 50NM from MOB	8,500 x 150 foot 50NM from MOB	< 8,500 x 150 foot and/or > 50NM from MOB
7	Aux Fld Availability	24-hour operations	18-hour to 24-hour operations	< 18-hour operations
8	Aux Fld Elevation	Sea level to 1,000 MSL	1,000 MSL	> 1,000 MSL
9	Aux Fld to Carrier	< 600NM	600NM	> 600NM
10		AIRSPACE/RANGE		
11	MOB and/or Aux Fld	SFO pattern at both	SFO pattern at MOB or Aux	No room for SFO pattern
12	Low Level Routes	≥ 3 Routes w/Entry < 90NM from MOB	≥ 2 Routes; Entry < 90NM from MOB	No routes and/or Entry > 90NM from MOB
13		MOA		
14	Dist from MOB	< 120 NM	120 to 240 NM	> 240 NM
15	AG Range Size	> 1,600 Sq/Mi in/beside MOA	250 to 1600 Sq/Mi Not collocated with MOA	< 250 Sq/Mi 25NM x 25NM
16	AG Range Alt	Surface to 30K+ AGL	Surface to 20K AGL	
17	AA Range Size	3,200 Sq/Miles	1,800 to 3,200 Sq/Miles	< 625 Sq/Mi
18	AA Range Alt	Surface to 50K AGL	Surface to 25K AGL	
19	Range Capacity	> XX Sorties/day	XX to YY sorties/day	YY < sorties/day
20	Range Capabilities	Live weapon & electronic	No live weapon and/or electronic (inert weapon)	No inert or live weapon
		WEATHER		
21	Ceiling & Visibility	≥ 3,000 & 3 SM	≥ 3,000 & 3 SM	≥ 3,000 & 3 SM
	MOB	≥ 300 days/year	≥ 200 days/year	< 200 days/year
	Aux Field	≥ 250 days/year	≥ 200 days/year	< 200 days/year
	Range	≥ 250 days/year	≥ 200 days/year	< 200 days/year
	Density Altitude for MOB and Aux Field	< XXX ft Density Alt > 300 days/year	XXX to YYY ft Density Alt ≥ 200 days/year	> YYY ft Density Alt < 200 days/year
		ENVIRONMENTAL		
	Pollutant Emissions	Attainment	Non-attainment w/Mitigation	Non-attainment w/oMitigation
	Noise Emissions	≤ 65 DNL no residential development	Noise 66 to 75 DNL with residential development	
		TEMPO		
		Unimpeded		Unable to meet training/syllabus requirements
		CURRENT MISSION(S)		
		Compatible	Relocateable	Incompatible/not moveable

**JOINT STRIKE FIGHTER (JSF)
BASING DISCRIMINATORS FOR USAF/USN/USMC (NOTES PAGE)**

1	<p>AIRFIELD CONSIDERATIONS. The attached matrix presupposes beddown installation(s) for Joint Strike Fighter initial flight and technical qualification-training unit(s) shall meet or exceed customary capabilities of fully-functioning military installation(s) with flight and/or technical training mission(s). Further, it presumes candidate installations' infrastructure and industrial/support facilities shall meet (or exceed) traditionally accepted DoD Instruction XX-XXXX standards for flight and maintenance operations as well as base support and/or quality of life activities for personnel assigned JSF initial training duty (permanent party military/civilian, contract support, and students). Finally, this matrix makes installation(s) proximate to civil/commercial airfields where commercial or military operations would unacceptably impede operations at either installation ineligible for consideration as the initial beddown site for initial JSF flight training.</p> <p>This matrix focuses on desired and minimally acceptable criterion for infrastructure/facilities necessary to conduct unique aspects of JSF flight or maintenance training so as to narrow the myriad choices of suitable airfields SecDef and Service Secretaries may select for initial JSF (joint, combined, or collocated) training location(s). Should facilities at existing candidate installation(s) fall short of desired but satisfy minimally acceptable criterion for a discriminator (i.e. suitable to host a cadre force that would commence unique aspects of JSF training), a JCSG Flight Training Subgroup recommendation to place a portion of or all of the initial flight and/or maintenance training on that installation presumes appropriate agencies will make every effort to construct or modify "deficient" infrastructure or facilities (runways, taxiways, parking aprons, arming pads, buildings or other structures) to reach desired standard(s) to accommodate the entire population and training mission projected as the JSF initial training (flight and maintenance) "end state".</p>
2	<p>RUNWAY CONSIDERATIONS. JSF prototype aircraft presently require a 9,000 by 200 foot runway to conduct the full spectrum of normal operations. Two or more parallel runways will permit near simultaneous formation departures and recoveries as well as instrument and visual flight training and allow for emergency recoveries while other runway(s) remain open for normal takeoffs/landings. Installations with two crossing runways (one or both 8,500 by 150 foot (minimum) or both 9,000 by 200 foot (desired)) meet minimum requirements provided there is sufficient real estate in near proximity to lengthen/widen runway(s) to 9,000 by 200 feet and to construct an additional 9,000 by 200 foot parallel runway at a later date. Installation(s) with a single 8,500 x 150 ft runway meet minimum requirements provided there is a dedicated (24/7) emergency recovery runway within 50NM of the MOB and there is sufficient real estate in near proximity to lengthen/widen that runway to 9,000 by 200 feet and to construct an additional 9,000 by 200 foot parallel runway at a later date.</p>
3	<p>PARKING APRON CONSIDERATIONS. Parking ramp size must support fleet of aircraft as indicated in the matrix.</p>
4	<p>ARM/DE-ARM CONSIDERATIONS. Arm/de-arm pads must provide for traditional safety zones from people and/or facilities.</p>
5	<p>FIELD ELEVATION CONSIDERATIONS. MOB field elevation from sea level up to 1,000 AGL will more closely approximate conditions Naval Aviators will face during carrier operations. Field elevations above 3,000MSL place JSF aircraft in a portion of their operational envelope unacceptable to initial qualification training.</p>
6	<p>AUXILARY AIRFIELD CONSIDERATIONS. Aux fields reduce traffic pattern congestion/saturation at the MOB while permitting student pilots to practice multiple day/night approaches and landings. JSF initial-qualification syllabus will require some (service specific) students to perform multiple approaches to include: field carrier landing practice (FCLP), simulated emergency landings (engine flameout patterns), short takeoff/vertical landings, overhead patterns, and instrument approaches/patterns to low-approaches and touch-and-go or full-stop landings. Therefore, Aux field(s) must be appropriately configured for FCLP, meet FAA controlled airfield criteria, and house sufficient fire-fighting and aircraft-recovery equipment to serve as an alternate recovery airfield. Airfields that meet minimum criterion shall include sufficient expansion capacity to meet desired criterion at a later date.</p>
7	<p>Aux Field must be accessible at least 18 hours a day in a 24-hour period.</p>
8	<p>Aux Field elevation from sea level up to 1,000 MSL will more closely approximate conditions Naval Aviators will face when operating JSF. Elevations above 1,000 MSL will require mission training for FCLP at follow-on training.</p>
9	<p>Aux Field distance to carrier</p>
10	<p>AIRSPACE/RANGE CONSIDERATIONS. This matrix presupposes service-unique and joint/combined JSF initial flight qualification syllabi will mandate instruction in basic flight maneuvers and (air-to-air as well as air-to-ground) air combat tactics unique to JSF operations. JSF Flight instructors and their students will need sufficient protected airspace to permit them to focus on training vice divert their attention to avoid other non-participating aircraft that may unwittingly penetrate the military operating area (MOA) or airspace over ground ranges/impact areas. This category outlines desired and minimum criterion for size of airspace required over the MOB, in the MOA, over impact areas, etc., as well as associated equipment ground support necessary for JSF training.</p>

JOINT STRIKE FIGHTER (JSF)
BASING DISCRIMATORS FOR USAF/USN/USMC (NOTES PAGE)

11	JSF will require engine flameout training; MOB or Aux Field must permit Simulated Flameout pattern/training.
13	MOA needs to be equipped for ACMI/TACTS, be supersonic approved, and permit pilots to drop chaff and flares.
14	Distances from MOB to center of the primary (closest suitable) MOA for initial qualification training (based on 6NM/Min as time/distance relationship, JSF prototype will transit 120 NM in 20 min flight time equates to 40 minutes "in transit" to/from MOA during 60 minute training sortie).
15	Size of range necessary to conduct initial air-to-ground flight training. Desirable to have this airspace within confines or collocated with (share common boundary) an MOA to permit instruction in ingress/egress profiles for bombing deliveries.
16	Defines vertical limit of the top of the range airspace to conduct initial air-to-ground training
17	Size of range necessary to conduct initial air-to-air flight training. Airspace geometry should allow for 4 areas sufficient to permit simultaneous missions.
18	Defines vertical limit of the top of the range airspace to conduct initial air-to-air training
19	Number of sorties the primary range can support each day (24 hour period). Must define variables (XX and YY) values using the JSF training syllabus where XX equals max number of sorties to conduct student and IP proficient training and YY equals minimum number of sorties to conduct student training.
20	JSF ranges that permit live-fire missions and include electronic emitters to simulate enemy threats will permit students to learn the full the spectrum offensive and defensive systems aboard the aircraft.
21	WEATHER CONSIDERATIONS. Weather criteria based on initial qualification students with little or no jet aircraft experience.
22	Requires firm data regarding aircraft performance parameters to determine appropriate criteria for density altitude. This exercise assumes training syllabus will include up to 6 vertical landings (VLs). Base data on empty aircraft (no armaments on board) fueled as necessary to conduct 6 VLs plus minimum emergency divert/on deck fuel.