DCN 1609

BRAC 95

JOINT CROSS-SERVICE GROUP

ON

UNDERGRADUATE PILOT TRAINING

MEETING

MINUTES

UPT BOOK 15

BRAC 95

JOINT CROSS-SERVICE GROUP

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MEETING

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BRAC 95

JOINT CROSS-SERVICE GROUP

ON

UNDERGRADUATE PILOT TRAINING

MEETING MINUTES

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20	November 15, 1994
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TAB 1

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

January 21, 1994

Minutes

The first Joint Cross-Service Group on Undergraduate Pilot Training meeting was convened by Mr. Lou Finch, DUSD(R), at 1005 hours on January 21, 1994, in Room 3E752, the Pentagon. The list of attendees is attached. There was no printed agenda.

Mr. Finch opened with comments on the importance of the upcoming 1995 base closure and realignment process and the Group's task to ensure cross-service analysis of the undergraduate pilot training category. Mr. Finch introduced Mr. Mike Parmentier, the Group's study team leader, and Mr. Dan Gardner as his primary points of contact for Group operations and administration. Mr Finch pointed out that the Group's charter is contained in the January 7, 1994, memorandum from the Deputy Secretary of Defense (DepSecDef) on 1995 Base Realignments and Closures.

At Mr. Finch's request, Col Thompson gave a brief overview of BRAC timelines established by law and policy. He noted that the immediate requirement is to develop a plan of action and milestones. In the near term, the Group must conduct a non-BRAC policy review, design a capacity analysis, and determine measures of merit and common data elements to be used to analyze the installations in the category. He also observed there is a need to consider the Military Departments' data validation and certification processing times as the Group begins to develop its plan.

With regard to upcoming tasks, Mr. Finch noted the need to establish an internal control plan (ICP). He emphasized adherence to internal controls to maintain the integrity of the process. Additionally, he noted the sensitivity of the process and that in accordance with DepSecDef guidance data and analyses used to evaluate military installations for closure and realignment will not be released until the Secretary's recommendations have been forwarded to the 1995 Commission on March 1, 1995, unless specifically required by law. Group discussion followed on potential content of an ICP from the perspective of files maintenance, data gathering, review and analysis of data and alternatives. CAPT Buzzell opined that a joint working group should be formed to produce a common ICP for implementation or use as a point of departure by the Joint Cross-Service Groups. The Group consensus was that it should ask the OSD Base Closure and Utilization Directorate to weigh the value of such an approach and, if appropriate, to add the issue as an agenda item for Steering Group consideration. Col Thompson will contact the appropriate office with this suggestion.

The purpose of the non-BRAC policy review is to identify issues and make recommendations on policy affecting BRAC analysis which needs to be developed outside the BRAC process. The policy review is due to the Steering Group by February 28, 1994.

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Mr. Finch pointed out that Group must also issue BRAC 95 analysis guidance by March 31, 1994. This must include policy, measures and procedures for conducting the category's capacity analysis. The guidance must also address the measures of merit, common data and standard elements which support the DoD base closure selection criteria and are to be used for the analysis and rating of the category's installations.

Mr. Finch emphasized that timely completion of these tasks is crucial to the Military Departments' data calls and the successful outcome of the BRAC process. Therefore, the Group has the immediate task of producing a plan of action and milestones for review by both the Steering Group and Review Group. A Group discussion followed on determining the potential actions and milestones which should be included in the document. As the structure of the plan took shape and Group consensus was reached, Mr. Gardner was tasked to formalize the document for the chairman's presentation to the Steering Group.

The Group next began to consider the potential scope of the UPT category. Discussion included whether the category should include programs other than undergraduate pilot training (pre-wings training). Examples of such programs include pilot screening, undergraduate navigator training, naval flight officer training, enlisted aircrew training and graduate training (post-wings). As views were exchanged, it became apparent that the Group did not support inclusion of graduate (post-wings) follow-on training which focuses on the tactics and doctrine of operational employment of specific aircraft types. Additionally, the inclusion of rotary wing as well as fixed wing training was reviewed. The Group agreed that further discussion in this area is required. The Military Departments were asked to consolidate a proposed listing of potential category installations for review at the next meeting.

The Group turned to consideration of how to conduct a capacity analysis and what commonality might already exist with regard to measures of capacity. Group discussion suggested that many measures may be common or similar and others may need additional joint development before they are ready for Group approval. Mr. Finch observed that capacity analysis could be likened to consideration of supply versus demand with total available capacity (both used and unused) as supply and the total training requirement (all reasons) as demand. Potential savings may be achieved by reducing any excess in supply over the demand requirements.

The Group talked briefly about development of installation measures of merit and common data elements supporting the DoD base closure selection criteria. The Military Departments were asked to provide copies of previous measures of merit and any that might be under development to the Group for consideration in future meetings.

The discussions of developing capacity analysis and installation measures of merit highlighted that much time-consuming leg work and support will be required in preparation of Group meetings. The Group agreed to establish a UPT joint study team (JST) to act as the focal point for coordination of tasks required to support the Group during the base closure and realignment process. The JST is responsible to the Group for preparing standard and unbiased information and data on category installations in compliance with Group and Military Department internal controls. The JST will maintain the Group's files of all data received, including any disputes and resolutions thereof, per internal controls and law. The Group maintains (not delegated to the JST) the authorities and responsibilities chartered to it by the DepSecDef's memorandum (January 7, 1994) on 1995 Base Realignments and Closures. Group members will contact Mr. Gardner with the names of their JST representatives.

There being no further matters to discuss, the meeting was adjourned at 1130 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

January 21, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
BG Ric Shinseki, Army
LTC David Powell, Army
LTC John Finlay, IV, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell, Navy
Maj Gen Ed Tenoso, Air Force
Lt Col Mike Callaghan, Air Force
Col Paul Thompson, OSD (Base Closure)

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TAB 2

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 3, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1300 hours on February 3, 1994, in Room 3E774, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch opened with a brief update on progress to date. Mr. Gardner distributed a points of contact listing for review. Mr. Parmentier and Mr. Finch had respectively briefed the Steering Group and the Review Group on the proposed plan of action and milestones (attached) for the Joint Cross-Service Group on UPT. The Group noted that the actions prior to April 1, 1994, are important with regard to enabling the Military Departments to issue a timely data call. The Group reaffirmed the plan while noting that the proposed dates for milestones later in the year allow flexibility to react, if necessary, to future policy guidelines, Military Department schedules and the unforseen.

The Group then turned to consideration of the scope of the UPT category. The Group reiterated many of the same comments on this issue from the previous meeting with regard to the type of personnel (pilots, naval flight officers, navigators, enlisted aircrew), the type of aircraft (fixed wing, helicopter), and the type of programs (screening, undergraduate (pre-wings), and graduate training (post-wings)) which should be included in the category. The Air Force uses a contractor to conduct a pilot candidate screening program at Hondo Municipal Airport, Texas, (a civilian airport) as a means of reducing pilot trainee attrition and the associated costs in its formal UPT course. Discussion centered on whether the Air Force's screening program should be part of the category, whether the screening program is a training program, and whether it should be factored into the capacity analysis since none of the program is conducted at a DoD airfield. The Group pointed out that since the Air Force conducts screening but the Navy does not there may be a policy question that should be reviewed. The question is whether or not the DoD should conduct screening programs. The Group consensus was that the Joint Primary Aircraft Training System (JPATS) should be the training program used for reviewing policy and developing capacity and installation measures of merit for the UPT category BRAC analysis. Mr. Finch opined, and the Group agreed, that further policy review is needed before finalizing the category's scope.

A question was raised about whether the category would need to be renamed if other than pilot training functions (e.g. navigator training) are included in the category for analysis. One view is to wait until the category's scope is finalized and then determine if the included functions change the set of installations to be considered. It is possible that the set of installations might not change, or that the primary function of the installations for purposes of this BRAC analysis is undergraduate pilot training, thereby making this concern a non-issue. If the Group were to determine that the benefits of a category name change warrant action,

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the recommendation would need to be forwarded to the Steering Group and Review Group for approval. Consensus was that the category's name remain unchanged.

Next the Group discussed a draft listing (attached) of proposed installations for inclusion in the category. With regard to active and reserve installations, the Group noted that all formal undergraduate (pre-wings) flying training is conducted on active installations and, therefore, the category will be made up of active installations. The Group also noted that some installations support significant international training programs involving bilateral and multilateral agreements. An example would be the Euro-NATO Joint Jet Pilot Training (ENJJPT) course. Such programs will need further consideration when developing capacity analysis and measures of merit for installation analysis.

The Group discussed the possibility of traveling to the Military Departments' aviation training command headquarters for policy orientation and review. The timing of these proposed trips is an issue if they can not be completed by the end of February when the policy review is due. The joint study team was tasked to look at travel possibilities and report findings to the Group for review and action at the next meeting.

Mr. Finch updated the Group about the internal control plan (ICP) status and stated that the Steering Group and Review Group had approved the formation of a joint working group to develop an ICP oriented to the needs of the joint groups.

Mr. Finch also noted that the Steering Group and the Review Group had reviewed and approved forwarding to the Secretary of Defense the recommendation that the DoD base closure selection criteria not be changed. The Group reaffirmed its support of the recommendation not to change the criteria. The recommendation is in final coordination.

There being no further matters to discuss, the meeting was adjourned at 1415 hours.

Approved: Lou Finch
Chairman

[redacted]

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 3, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
LTC John Finlay, IV, Army
CPT Blake Hollis, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell, Navy
Maj Gen Glenn Profitt, Air Force
Maj Gen Ed Tenoso, Air Force
Lt Col Jerry Free, Air Force
Lt Col Len Jarman, Air Force
Lt Col Dennis Cherry, Air Force
Ms.Donna MacPherson, OSD (Comptroller)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG (Audit)

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UPT JOINT / CROSS-SERVICE GROUP AGENDA

(3 February 1994 Meeting)

1. **Membership Review**

2. **Action and Milestone Update**

3. **Study Team Recommendations:**

   - **Scope**
   - **Change Name of Group?**
   - **Installations in Category**
   - **Travel to Service Aviation Training Commands - Policy & Practice Review**

4. **Internal Control Plan Status**

5. **Base Closure Selection Criteria Status**

ACTIONS

A. Approve Existing Base Closure Selection Criteria

B. Decision on Travel to Aviation Training Commands

UPT JOINT/CROSS-SERVICE GROUP

DATE	ACTION / MILESTONE
9 Feb 94	Determination of Scope Completed Agreement on Joint Internal Control Plan
11 Feb 94	Installations in Category Determined
28 Feb 94	Review of Policies/Practices Completed
31 Mar 94	Analytical Design/Process Finalized –Measures of Merit –"Capacity" Standards
1 Apr 94	Data Call - Provide Data Elements and Measures Critical to Cross-Service Analysis to Military Departments (MILDEPs)

UPT JOINT/CROSS-SERVICE GROUP

DATE	ACTION / MILESTONE
1 Jul 94	Response to Data Call Received
1 Aug 94	Capacity Analysis Completed and Discussed Installation Measures of Merit Analysis Completed
1 Sep 94	Alternatives Provided to MILDEPs for Consideration
1 Oct 94	Review of MILDEP's Progress on Alternatives
1 Nov 94	Further Alternatives, If any, provided to MILDEP's for Consideration
1 Dec 94	Final Review of MILDEP's Progress on Alternatives
1 Jan 95	Service BRAC 95 Inputs to OSD

DETERMINE SCOPE

- Type Personnel: Pilots, NFOs / Navigators, Enlisted Aircrew

- Type Aircraft: Fixed-wing, Helo

- Flight Training Pipeline Area:
  - » 1. Screening
  - » 2. Undergraduate Training (Pre-"Wings")
  - » 3. Graduate Training (Post-"Wings")

- Type Installations: Active Installations, Reserve Installations

DRAFT

INSTALLATIONS IN CATEGORY

• ARMY:	Fort Rucker	AATC	AL
• NAVY:	Whiting Field	NAS	FL
	Corpus Christi	NAS	TX
	Pensacola	NAS	FL
	Meridian	NAS	MS
	Kingsville	NAS	TX
• AIR FORCE:	Randolph	AFB	TX
	Sheppard	AFB	TX
	Vance	AFB	OK
	Reese	AFB	TX
	Laughlin	AFB	TX
	Columbus	AFB	MS

DRAFT

TAB 3

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 10, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1315 hours on February 10, 1994, in Room BC 942, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch began with a few administrative comments and then proceeded to the business at hand. He pointed out that the file of meeting minutes is maintained and available for review at the Base Closure and Utilization Directorate. With regard to development of an internal control plan (ICP), the joint team working on the proposed ICP plans to forward a draft to OSD for consideration next week.

The Group next discussed possible travel to the Military Departments' training command headquarters for policy review. The Group noted that limited time remains for completion of policy review and, therefore, travel to the training command headquarters may not be feasible. The Group consensus was that in the interest of time representatives of the Military Departments' training command headquarters should meet with the Group at the Pentagon for discussions on training policy. The Group also briefly discussed possible visits to some or all of the potential category installations by the Group in whole or in part. Mr. Finch pointed out that the Group would need to develop the purpose and intended accomplishments of such trips and that timing would be important. Mr. Finch opined that the Group seek advice on potential legal and policy implications before proceeding further. Col Thompson will contact legal and policy offices for advice.

The Group reviewed the proposed schedule for receiving information on the Joint Primary Aircraft Training System (JPATS) and training policy. The discussion pointed out that the proposed policy meetings are not to be installation data oriented, should assume JPATS training programs and should emphasize training policy, philosophy, and requirements. The Group's Military Department members were asked to ensure that their representatives to these meetings understand the tasking.

Mr. Finch distributed copies of the OASD(ES) memorandum of February 9, 1994 (attached). He then clarified Group membership by stating that the representatives of the Director, Program Analysis and Evaluation and the Comptroller are considered members of the Group, while the DODIG representative will be an observer and provide technical assistance. He continued by highlighting the task of identifying non-BRAC policy issues as well as the source or mechanism for determining those non-BRAC policies.

The Group turned to discussion of the scope of the UPT category and whether the Air Force's Flight Screening Program (FSP) should be considered in the BRAC 95 analysis. Two papers (attached) representing the cases for and against inclusion were distributed for

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consideration. After a Group discussion of the points as presented in the papers, Mr. Finch opined that policy questions exist which could affect the determination of the category's excess capacity need to be addressed in the appropriate policy fora. He said he would begin to pave the way with appropriate policy agencies preparatory to consideration of potential policy issues which are to be articulated by the Group by the end of February. The Group tabled the issue for further consideration at future meetings.

There being no further matters to discuss, the meeting was adjourned at 1435 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 10, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
LTC John Finlay, IV, Army
CPT Blake Hollis, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell, Navy
Maj Gen Ed Tenoso, Air Force
Lt Col Len Jarman, Air Force
Mr. John Raines, OSD (Comptroller)
Mr. Joe Angello, OSD (Program Analysis and Evaluation)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG (Audit)

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UPT JOINT / CROSS-SERVICE GROUP AGENDA

(10 February 1994 Meeting)

1. Approval of Minutes - Process:

   A. January 21

   B. February 3

2. ICP Status

3. Travel Planning - Ruling on "Some" or "All" Site Visits

4. Briefing Schedule:

   A. JPATS Briefing - 17 February: Joint Syllabus, Policies/Philosophy

   B. OSD/Service Policy Briefing - 24 February: UPT "Philosophy" - Assume JPATS/No Data - (Service Aviation Training Headquarters Command Representatives)

      1. What do you do?

      2. Why do you do it?

      3. What do you do that's Service unique?

5. Review Group Position {ASD (ES) Memo of 9 FEB 94}

   A. Membership "Status"

   B. "Non- BRAC" Policy Issues -

   C. Resolve Scope: Air Force Screening - In/Out

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3300 DEFENSE PENTAGON
WASHINGTON, DC 20301-3300

ECONOMIC SECURITY

9 FEB 1994

MEMORANDUM FOR BRAC 95 STEERING GROUP

SUBJECT: Next Actions -- Recap of BRAC 95 Review Group Meeting

I want to take this opportunity to recap the recent BRAC 95 Review Group meeting in lieu of holding another Steering Group meeting.

The decision package on the selection criteria will be forwarded to SecDef as soon as we have received all coordinations (4 coordinations to go as of February 7).

At the Review Group meeting, we agreed to form a Policy Working Group, under the Steering Group, to draft appropriate BRAC policy. I would like each Military Department, the Defense Logistics Agency, Environmental Security, Comptroller and General Counsel to nominate a representative to this working group. Other members of the Steering Group may designate members also. However, I believe your issues can be dealt with in Steering Group meetings. That way we keep the working group smaller and more manageable. Please call in your nominations to Doug Hansen (614-5356) who will lead the working group.

There were three joint cross-service group issues raised at the Review Group meeting which need further attention.

- Identification of "Non-BRAC" Policy Issues: Valid concerns were raised that we not mix-up BRAC policy with "non-BRAC" policy. Non-BRAC policy involves determinations which, while necessary to sound BRAC decisionmaking, nevertheless must eminate from sources external to our BRAC process. You may recall we have a deadline of February 28th to identify issues which must be resolved external to the BRAC process. I also believe we should, at the same time, identify the source or mechanism for determining those non-BRAC policies. That will help us clarify the various roles and responsibilities.

- Testing the Interchange of Data: Dr. Jones recommended that the laboratory joint cross-service group test the interchange of data to ensure that it was in fact interchangeable. The Review Group concurred and noted that such a test would not require certified data and that it would in effect "test" the trust we have to share data. I believe this is a potential issue for other joint cross-service groups and that we should not limit the test to only the laboratory group. If it would help other groups, they should also perform such tests.

- Participation in Joint Cross-Service Groups: A number of offices have requested that they be allowed to participate in some or all of the joint cross-service groups. While these offices (PA&E, Comptroller, Environmental Security and DoDIG so far) were not designated as official members by DepSecDef, I believe they could provide valuable input to the BRAC process. Hence, I encourage joint cross-service group chairpersons to allow for their participation. The DoDIG does not want to be a "voting" member of each group but they do want to observe and to provide technical assistance on internal control plans. Perhaps other offices could also participate as "non-voting" members.

Finally, I do not envision the need for a Steering Group meeting until February 28th, or so (at which we would discuss "non-BRAC" policy issues and sources/mechanisms). If you think we need one earlier please call Doug Hansen (614-5356) with your suggestions.

Robert E. Bayer
Acting Chairman
BRAC 95 Steering Group

Air Force Pilot Screening Program

Issues: Should fight screening assets and procedures be considered in the analysis of the undergraduate flight training infrastructure?

Discussion: Yes. Flight Screening is currently being used by the Air Force, as a precommissioning activity, to filter out those individuals who do not have the necessary skills to complete undergraduate pilot training successfully. The Air Force Flight Screening program requires the individual to successfully complete 21.5 hours of flight time, which includes aerobatics, overhead traffic patterns, and recovery from unusual attitudes and spins in a high-wing, propeller driven aircraft. Individuals solo before completion of flight screening. Those individuals successfully completing screening are then eligible to proceed to jet based training at one of the Air Force's UPT bases.

The Air Force argues that flight screening reduces the UPT attrition rate, and hence, allows a smaller number of pilots to enter UPT than would otherwise be required. Simply stated, flight screening materially affects the pilot training workload. This workload, of course, is essential to projecting "excess" training capacity. Given the Department's plan to use a Joint Primary Training Aircraft System, flight screening procedures must be considered to size the training infrastructure accurately. For example, if all the Services were to employ flight screening, the reduction in aggregate workload may possibly allow a training facility to be eliminated. Likewise, if flight screening was suddenly stopped, the required training infrastructure may be inadequate. These considerations support the argument that we include flight screening as part of the Joint/Cross-Service study.

AIR FORCE POSITION
on
JOINT CROSS-SERVICE BRAC FLIGHT SCREENING ANALYSIS

Flight screening should not be a part of the UPT analysis for several reasons. The Flight Screening Program (FSP) is a precommissioning pilot training selection tool. It does not use the same equipment as UPT and is not collocated with UPT. Students who participate in FSP do not receive Aviation Career Incentive Pay or gate credit as do UPT students.

Air Force and Navy operational communities and Service Secretaries recognized the difference in the 9 Jul 93 joint service memorandum to the SECDEF. Under this memorandum, Air Force exchange students will complete Navy primary UPT at Whiting NAS, while Navy exchange students will train in the Air Force primary UPT program at Reese AFB. Regardless of who will train them, Air Force students will all screen and Navy students will not. The same memorandum depicted joint training as beginning with a common JPATS syllabus. The screening decision, as all selection decisions, was left to the individual services. Since the Flight Screening Program is unique to the Air Force, it doesn't lend itself to a cross-service BRAC analysis.

In addition, there are limited BRAC applications. The Air Force Academy airfield is used for other programs as well as FSP, and will not close. The Hondo operation is at a municipal airport under a no-rent agreement for co-use of airport facilities. It is far below the BRAC threshold (there is only one DoD direct-hire civilian). The Air Force provides some runway maintenance and leases maintenance and classroom facilities for $81,000 per year.

FSP, a low budget program, raises the entry (and therefore graduate) quality of the Air Force's JPATS program. Higher quality entrants mean lower required entries because of reduced attrition. The end result is reduced JPATS acquisition. Allied nations participating in the Euro NATO Joint Jet Pilot Training (ENJJPT) program have found the FSP useful in selecting students for the ENJJPT bomber-fighter track before they enter. The only impact of the FSP on UPT is reduced attrition that is accounted for in the overall attrition factor. Analyzing flight screening capacity is unnecessary because it doesn't affect UPT capacity.

In summary, the Air Force has made a policy decision to do flight screening. A cross-service BRAC analysis offers low return and unnecessarily complicates the UPT analysis.

TAB 4

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 17, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1305 hours on February 17, 1994, in Room 4E1037, the Pentagon. The list of attendees and agenda are attached.

Mr. Gardner began by reviewing the status of the minutes from the first three meetings and noting they had been reviewed by the study team leaders and were in Mr. Finch's office for approval. The goal is to complete review of the minutes by the study team leader and chairman by the next meeting.

Next Mr. Gardner reported that the goal of the joint team developing the internal control plan (ICP) is to complete reviews by the Military Departments, legal counsel, and DoDIG in time to allow ICP approval by March 31, 1994.

Mr. Gardner continued by noting that advice on Group travel to conduct site visits is under study.

The Group received a JPATS briefing (attached) on Joint Fixed-Wing Flying Training presented by Lt Col Free and LCDR Walker. The informational briefing provided background by reviewing current Air Force and Navy fixed-wing pilot training programs as well as their training philosophies. The briefing addressed joint fixed-wing training guidance, a projected joint training JPATS program, and interim programs to facilitate transition. With regard to the projected joint training (JPATS), the Group noted that the Navy unique Strike Lead-In training which would occur between Joint Primary-JPATS training and the Navy Fighter/Attack training, and the Air Force's Introduction to Bomber Fundamentals (IBF) training and Introduction to Fighter Fundamentals (IFF) training (both "post-wings" programs) are all conducted at pilot training installations and use capacity. Capacity analysis needs to consider these as well as other demands on the UPT category's capacity. The briefing reviewed current navigator and naval flight officer training and the projected Joint Strike/Weapon Systems Officer/Electronic Warfare Officer Training. The briefing continued with a general overview of projected JPATS implementation including planned acquisition, JPATS syllabus development, and evolving training philosophies. The Group thanked the briefers for their professional presentation and noted that much progress has been made toward joint fixed-wing training.

Mr. Finch and Mr. Gardner highlighted the upcoming meeting with representatives of the Military Departments' aviation training command headquarters and emphasized that its focus should be on policy and philosophy.

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Mr. Finch pointed out that policy review was on-going and he had hoped to address non-BRAC policy issues at this meeting, however, he believed more contact with the policy area would be helpful before the Group again considers this issue. Since non-BRAC policy issues could affect the scope of the category, Mr. Finch recommended, and the Group agreed, to defer this to a future meeting.

There being no further matters to discuss, the meeting was adjourned at 1400 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 17, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. Robert Bayer, OSD (Economic Reinvestment and Base Realignment and Closure)
Mr. Todd Weiler, Army
LTC John Finlay, IV, Army
CPT Blake Hollis, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell, Navy
CAPT Bill Roberson, Navy
Capt Scott Krajnik, Navy
LCDR Dave Walker, Navy
Maj Gen Glenn Profitt, Air Force
Maj Gen Ed Tenoso, Air Force
Lt Col Jerry Free, Air Force
Lt Col Bill Rhoden, Air Force
Maj Randy Eckley, Air Force
Ms. Donna MacPherson, OSD (Comptroller)
Mr. Fred Copeland, OSD (Comptroller)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG (Audit)

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UPT JOINT / CROSS-SERVICE GROUP AGENDA

(~~18~~ 17 February 1994 Meeting -Rm 4E1037)

1. Discussion of Minutes:

    A. January 21

    B. February 3

    C. February 10

2. ICP Status

3. Travel Planning - Ruling on "Some" or "All" Site Visits

4. JPATS Briefing - Joint Syllabus, Policies/Philosophy

5. Briefing Schedule:

    A. OSD/Service Policy Briefing - 24 February: UPT "Philosophy" - Assume JPATS/No Data - (Service Aviation Training Headquarters Command Representatives)

        1. What do you do?

        2. Why do you do it?

        3. What do you do that's Service unique?

6. Resolve Group Position:

    A. "Non- BRAC" Policy Issues

    B. Scope: Air Force Screening - In/Out

AIR EDUCATION & TRAINING COMMAND

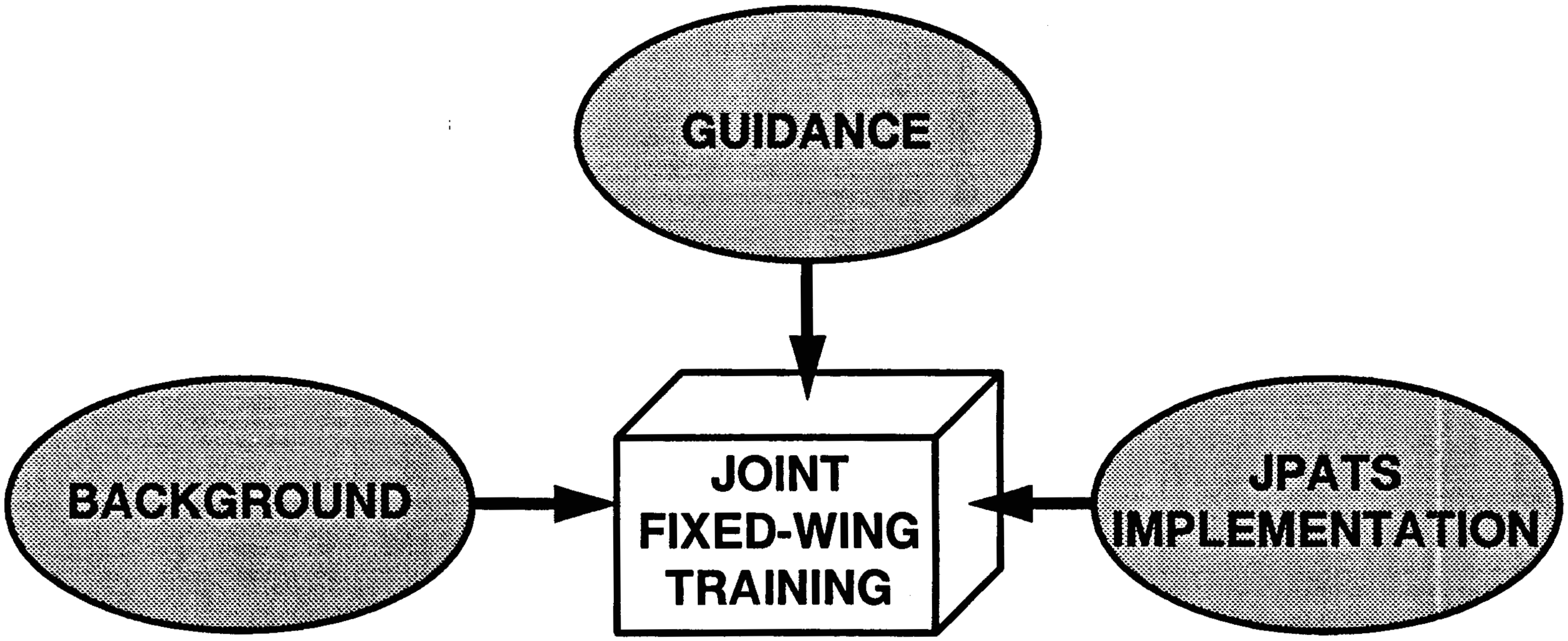
NAVAL AIR TRAINING COMMAND

JOINT FIXED-WING
FLYING TRAINING

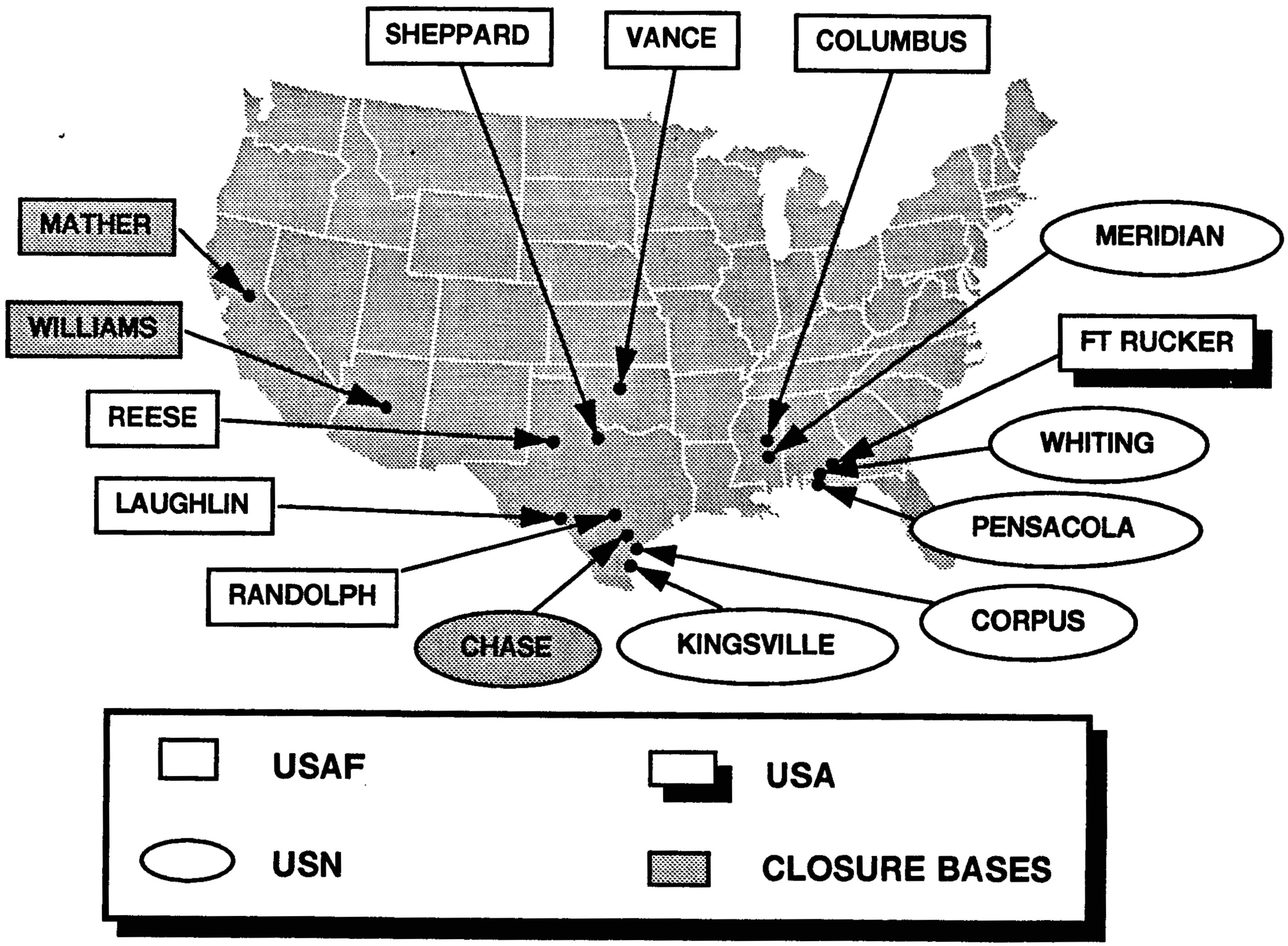
ABOVE THE BEST

JOINT TRAINING

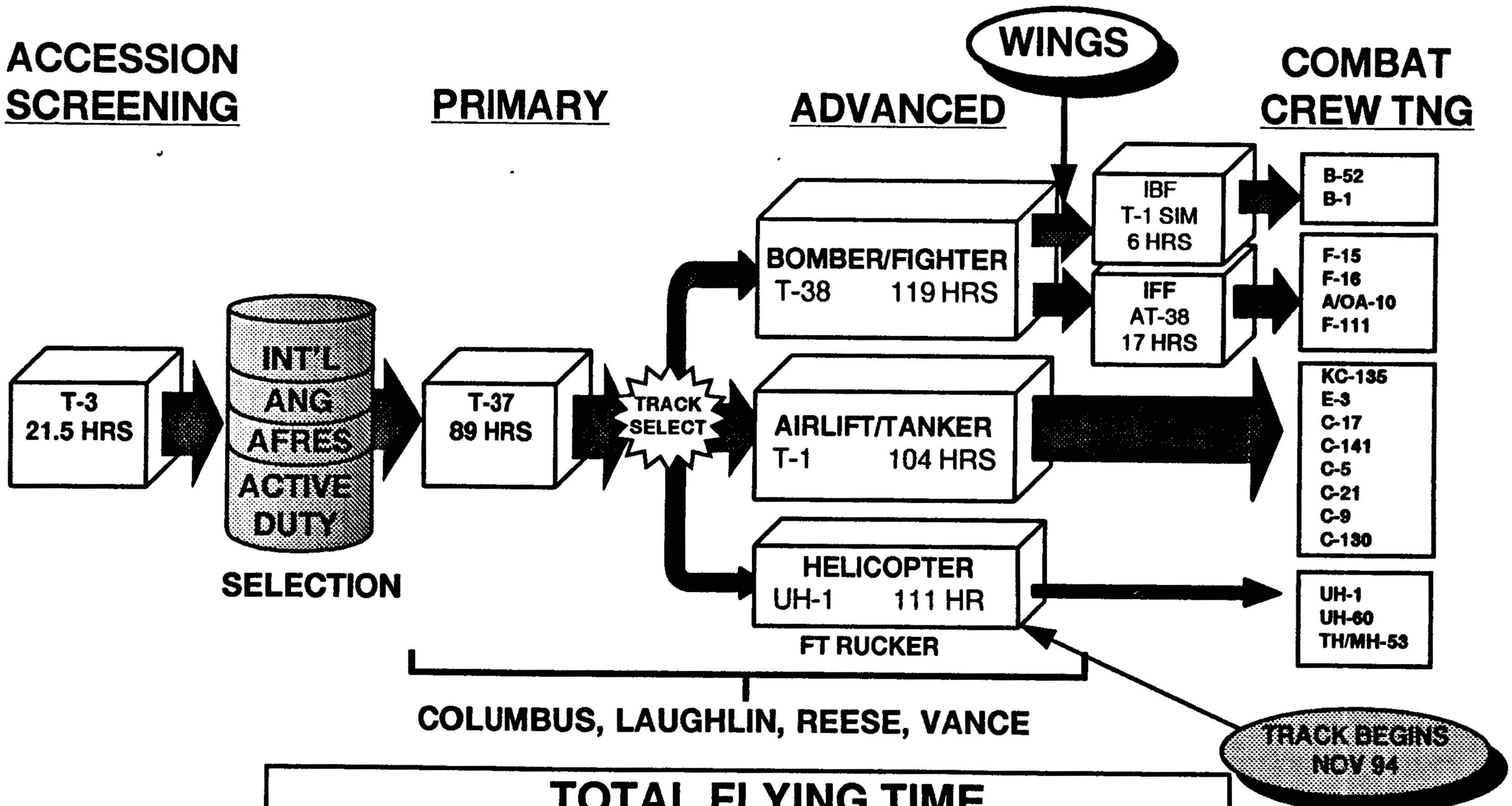
OBJECTIVE:
DESCRIBE JOINT FIXED-WING FLYING TRAINING AND JPATS IMPLEMENTATION



AIR FORCE/ARMY/NAVAL TRAINING



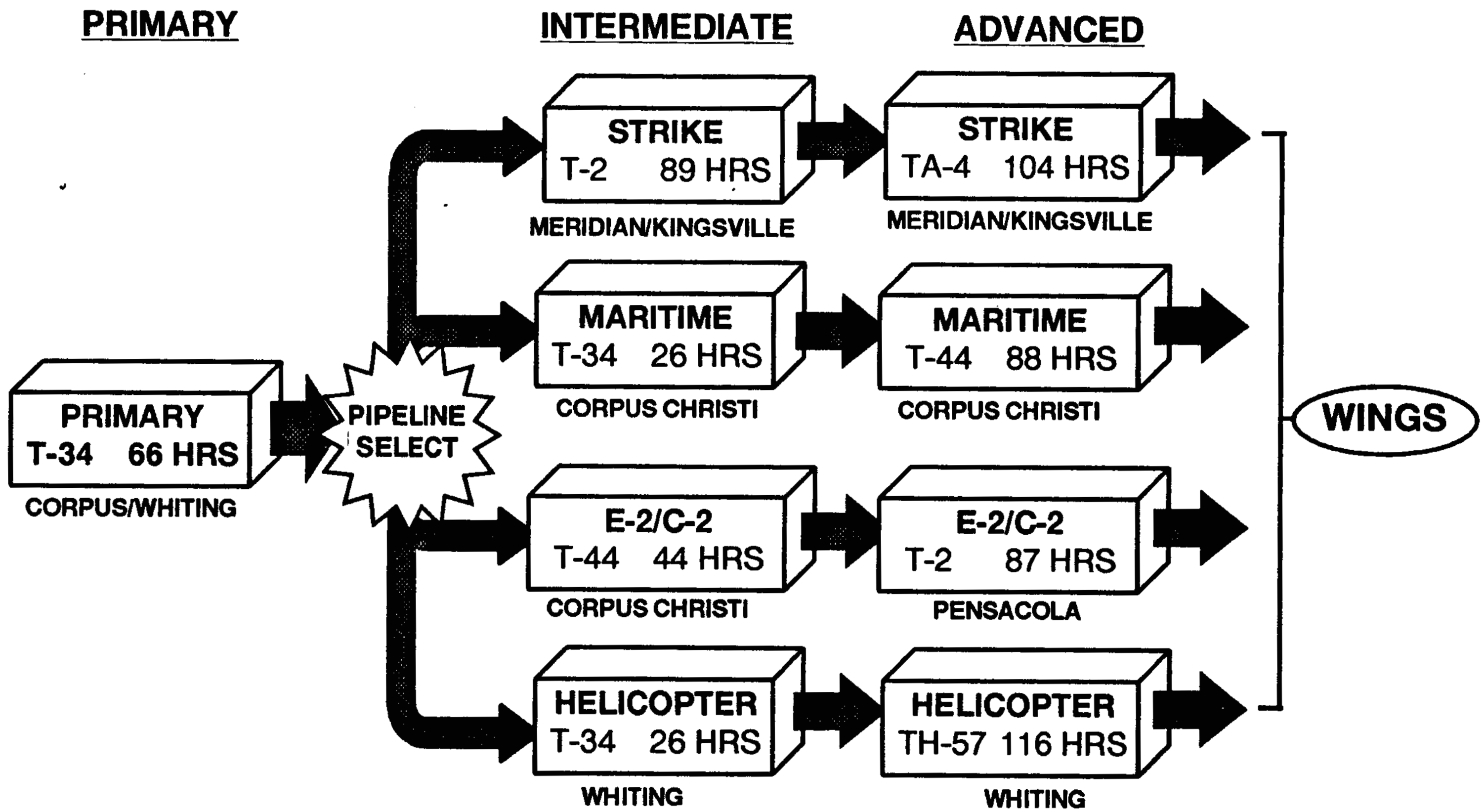
USAF PILOT TRAINING



TOTAL FLYING TIME

BOMBER/FIGHTER 208 HRS	AIRLIFT/TANKER 193 HRS	HELICOPTER 200 HRS

USN PILOT TRAINING



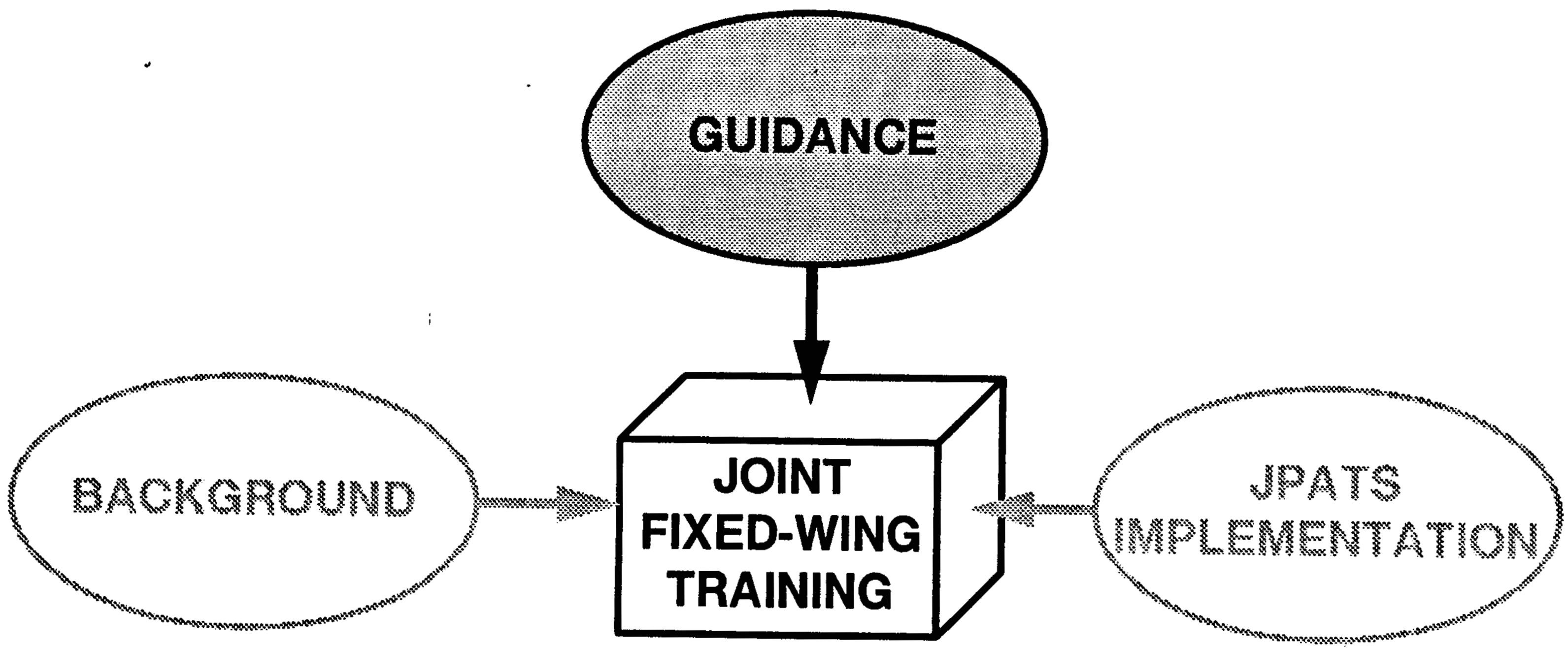
TOTAL FLYING TIME

STRIKE 259 HRS	MARITIME 180 HRS	E-2/C-2 197 HRS	HELICOPTER 208 HRS

TRAINING PHILOSOPHY

- USAF
  - ONE BASE SUPPORTS MULTIPLE TRAINING REQUIREMENTS
  - BUILDING BLOCK/LOCK STEP APPROACH
- USN
  - PIPELINE SPECIFIC TRAINING BASES
  - FLEXIBLE PROGRESSION

JOINT TRAINING

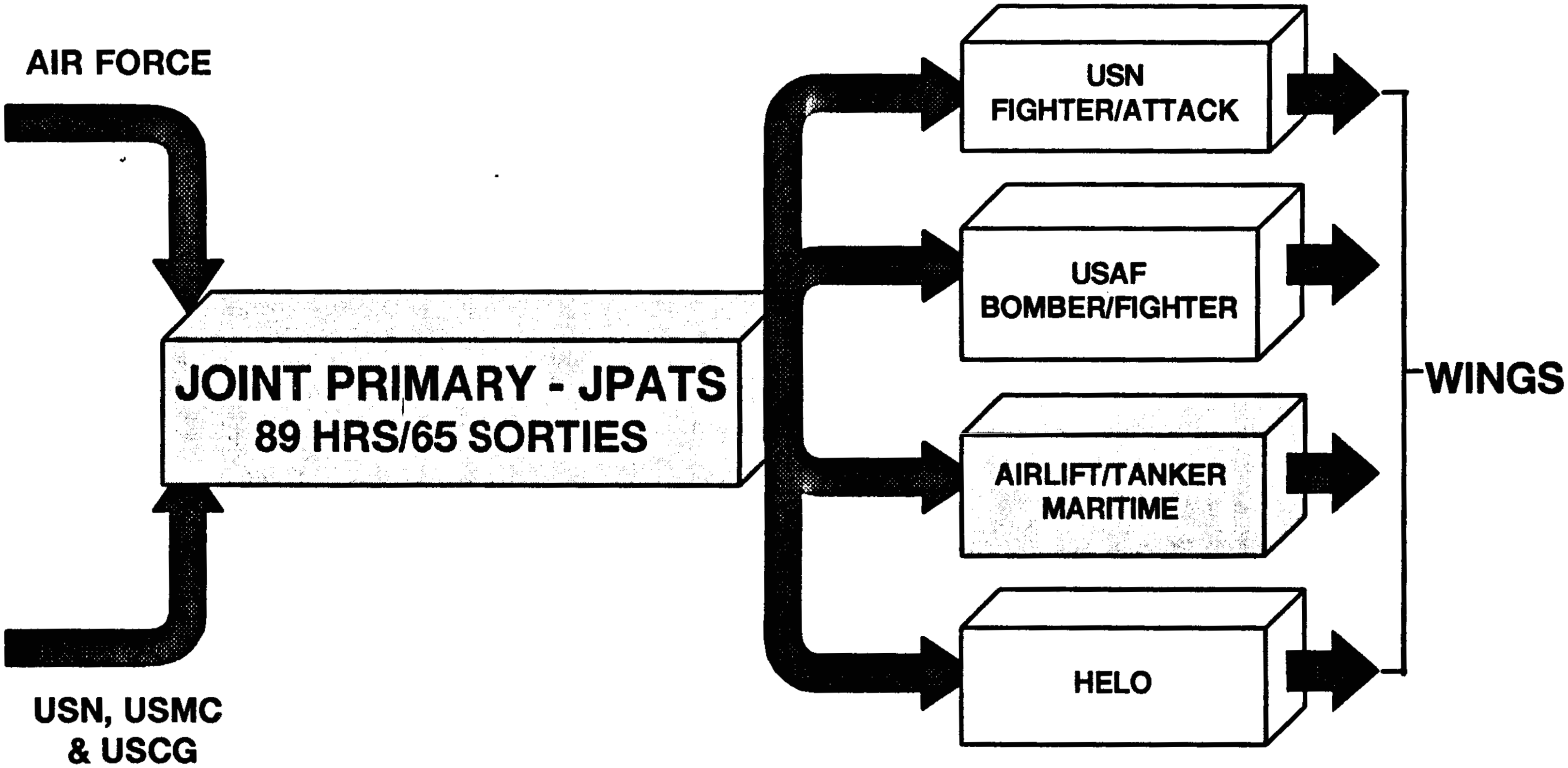


JOINT FIXED-WING TRAINING

SECDEF GUIDANCE:

- CONSOLIDATE INITIAL FIXED WING AIRCRAFT TRAINING AND TRANSITION TO A COMMON PRIMARY TRAINING AIRCRAFT
- ESTABLISH 4-TRACK FOLLOW-ON TRAINING (OPR: SECAF / OCR: SECNAV)

JOINT TRAINING PROJECTION
JPATS



TOTAL FLYING TIME

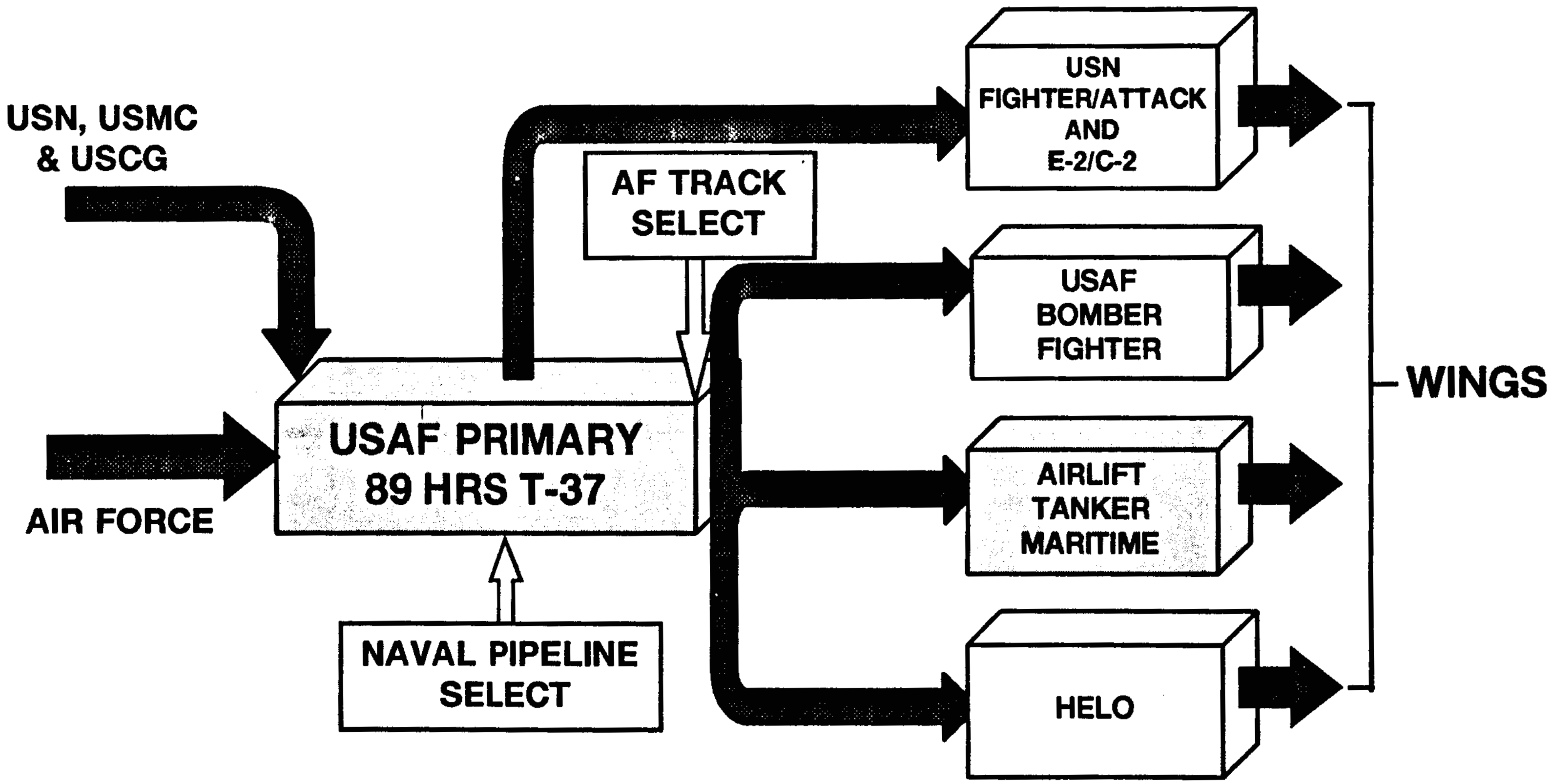
USN FTR/ATT
249 HRS

USAF A/T
193 HRS
USN MARITIME
177 HRS

USAF FTR/BMR
208 HRS

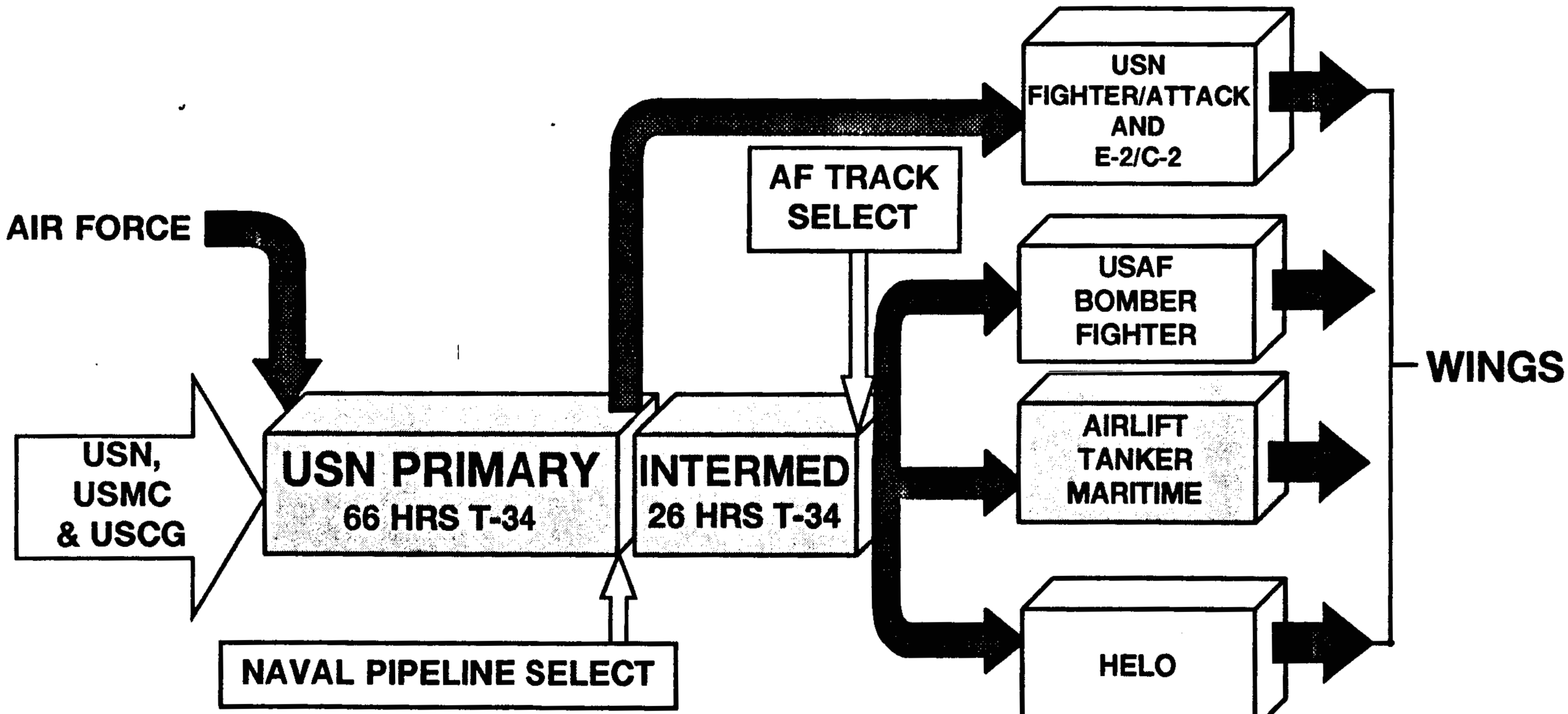
HELICOPTER
USAF 200 HRS
USN 205 HRS

INTERIM JOINT FLOW
AIR FORCE T-37 PROGRAM



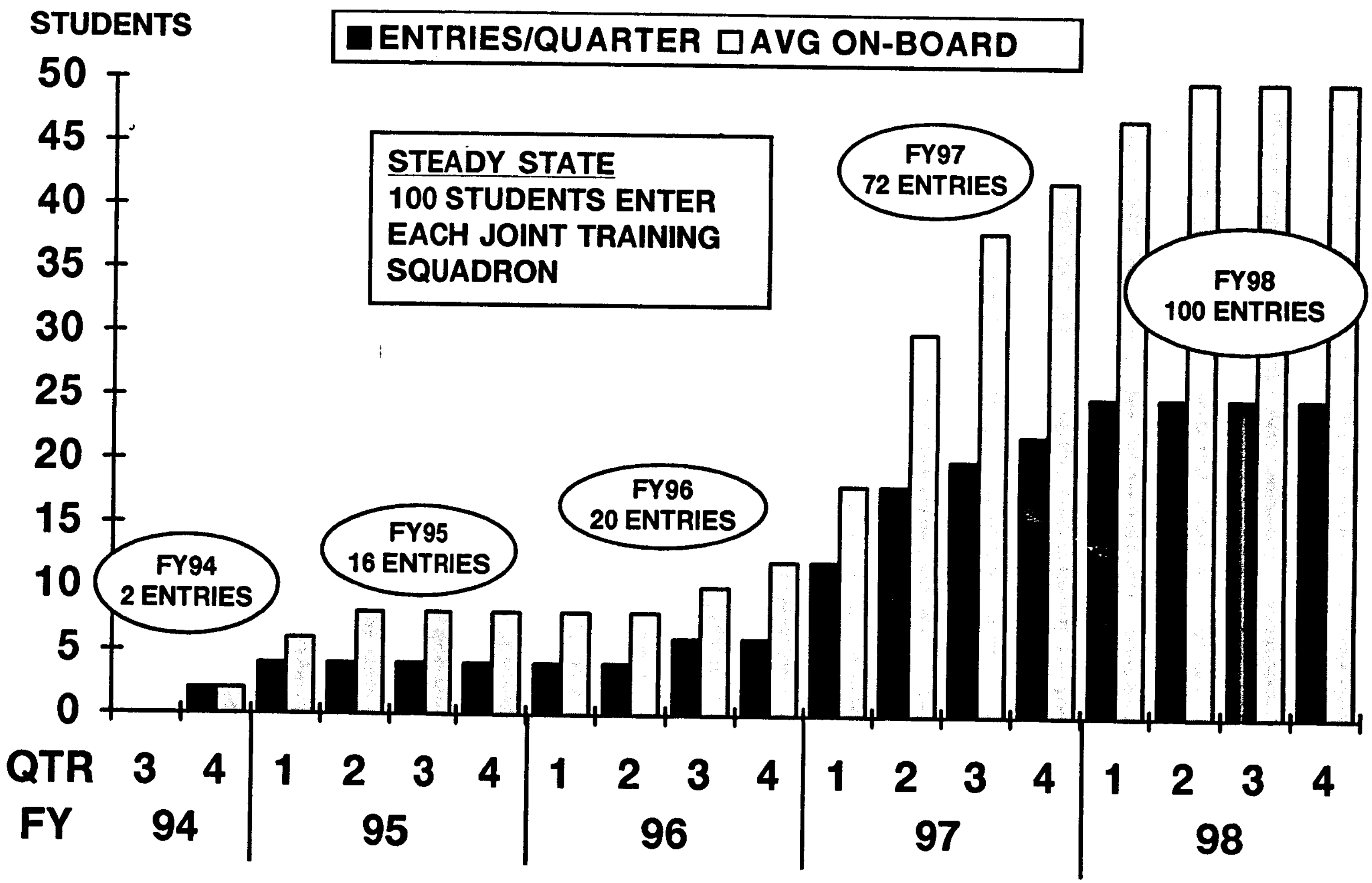
- NAVY PIPELINE SELECT AT 66 HR POINT IN PRIMARY SYLLABUS
  - STRIKE AND E-2/C-2 RETURN TO NAVY FOR TRAINING
  - MARITIME AND HELO CONTINUE TO 89 HOUR POINT
- AIR FORCE TRACK SELECT AT 89 HOUR POINT

INTERIM JOINT FLOW
NAVY T-34 PROGRAM



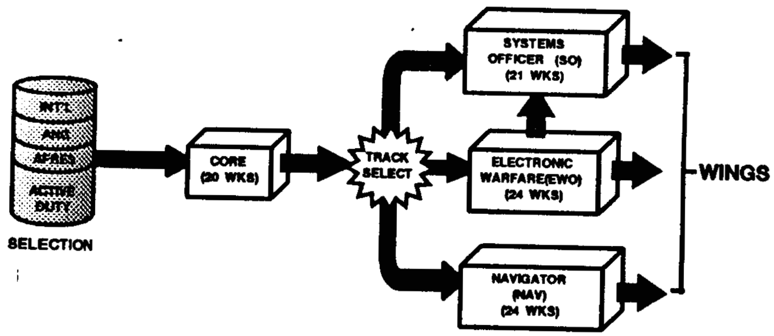
- NAVY PIPELINE SELECT AT 66 HOUR POINT
- AIR FORCE TRACK SELECT AT 92 HOUR POINT

STUDENT FLOW PLAN (PER SQUADRON)

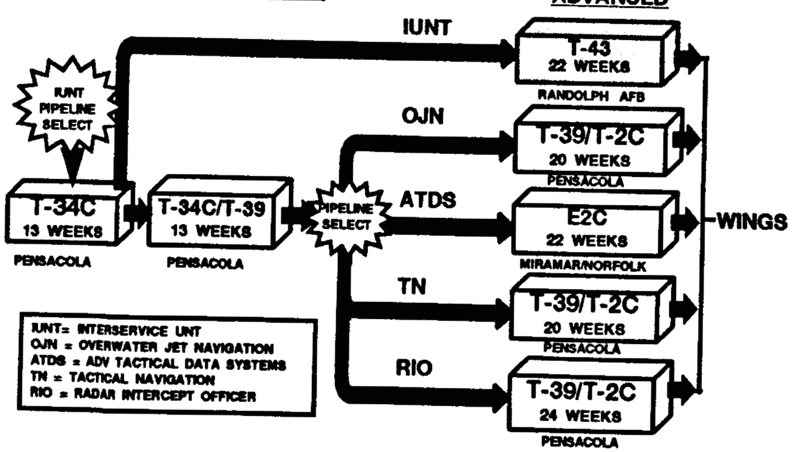


CURRENT NAV/NFO TRAINING

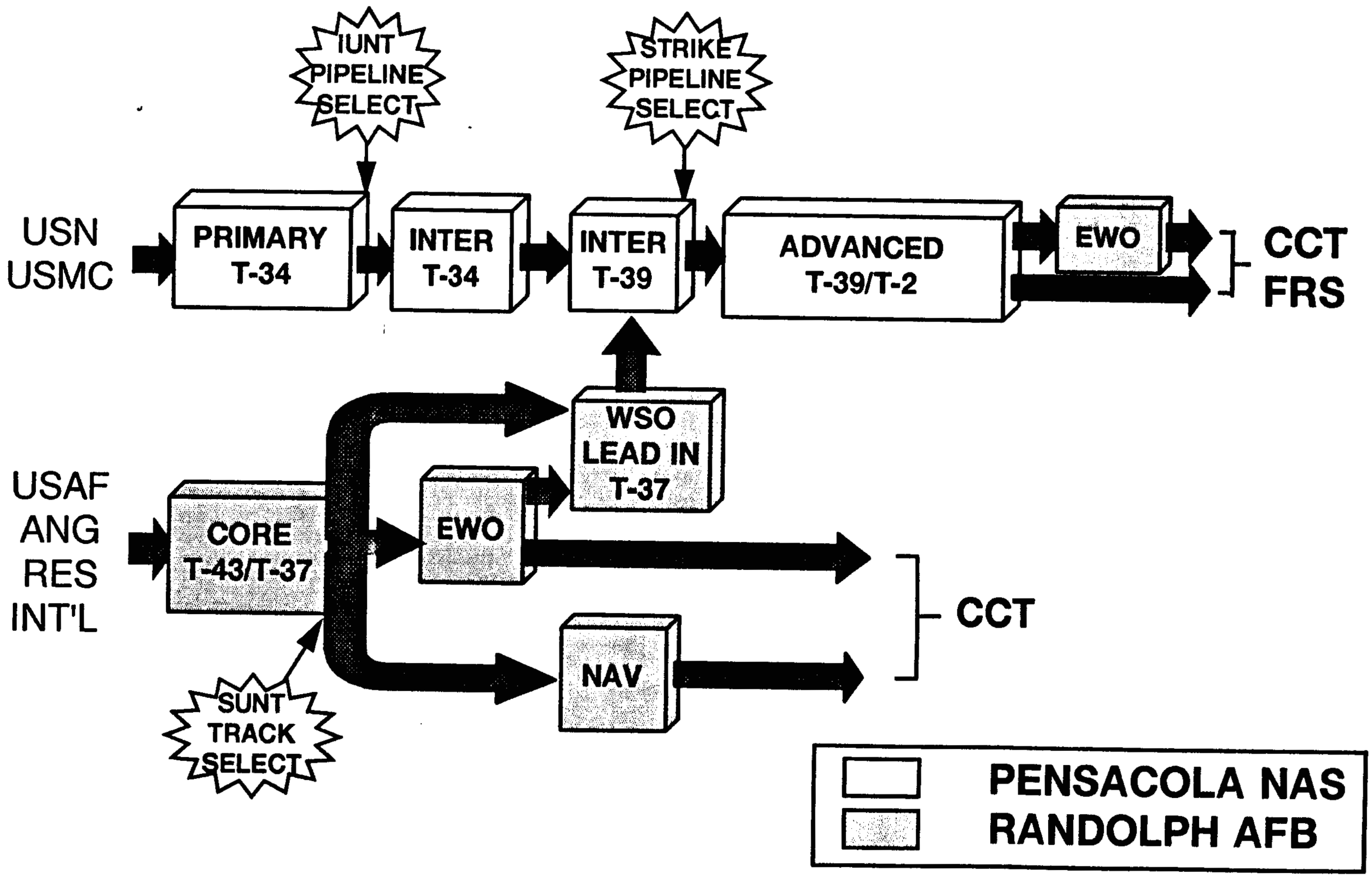
USAF NAVIGATOR TRAINING



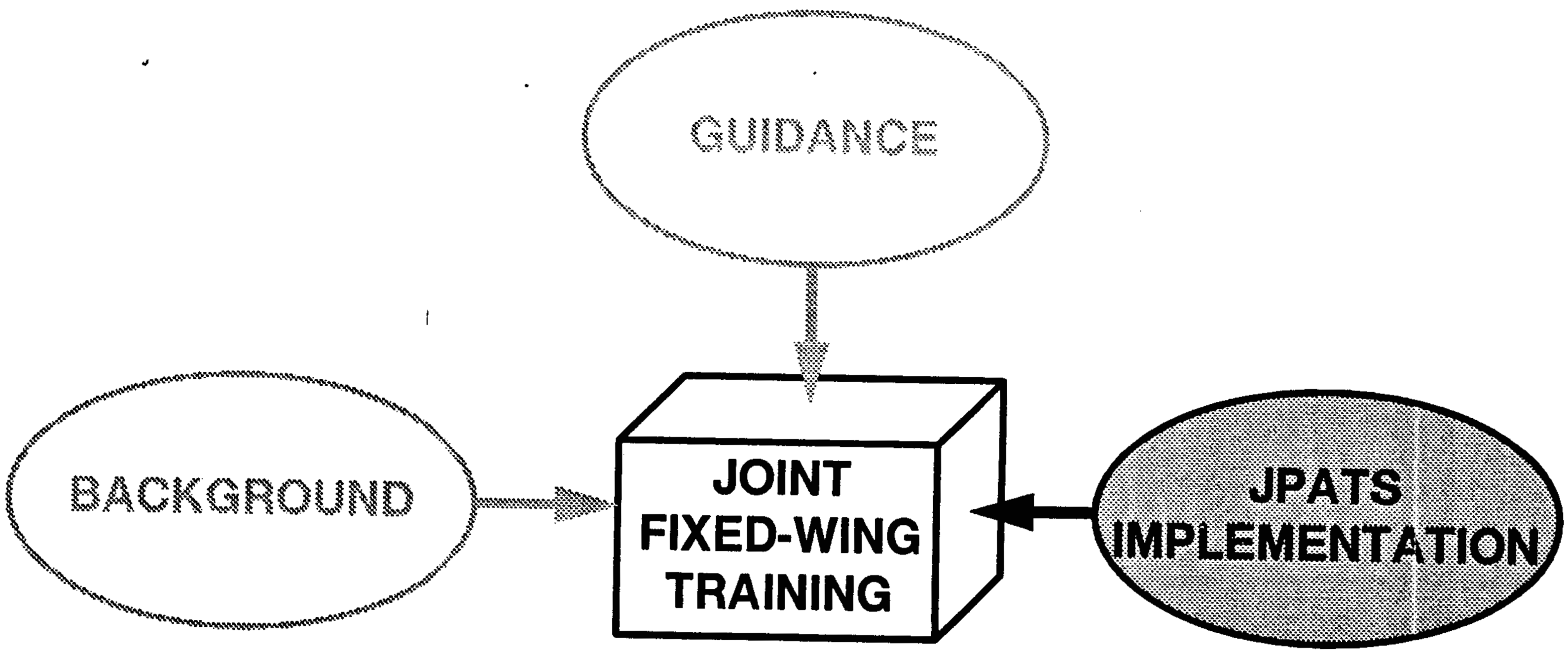
USN NFO TRAINING



JOINT STRIKE/WSO/EWO TRAINING



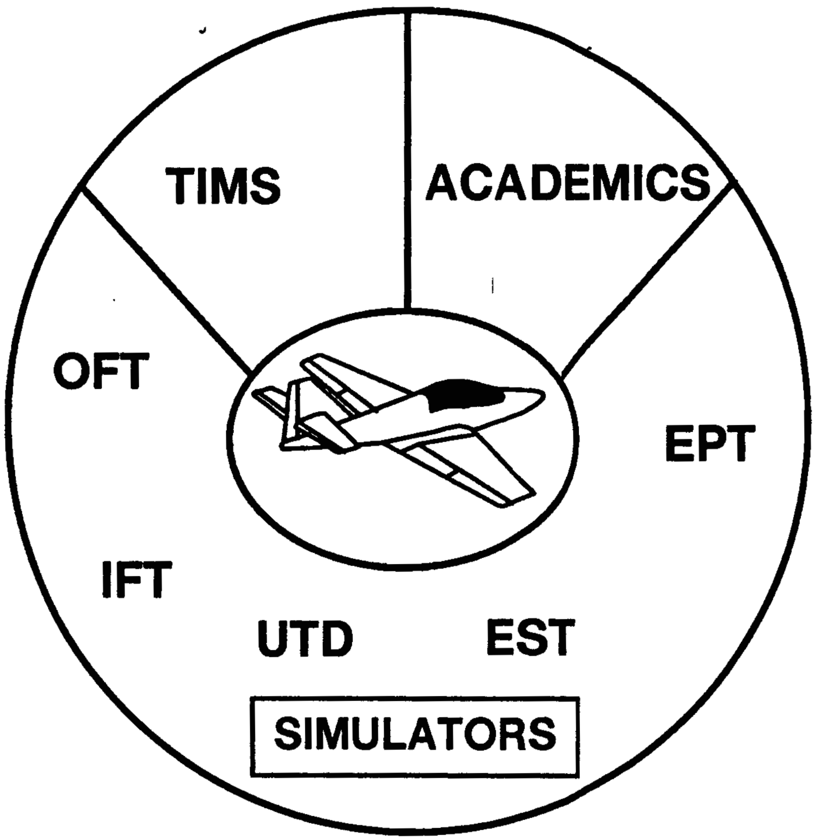
JOINT TRAINING



JPATS ACQUISITION

- AIRCRAFT CONTRACT AWARD: FEB 95
- GROUND-BASED TRAINING SYSTEM (GBTS) CONTRACT AWARD: DEC 95
- USAF JPATS BUY: 372
- USN JPATS BUY: 339

PLANNED TRAINING SYSTEM (GBTS)



- TRAINING INTEGRATION
- MANAGEMENT SYSTEM (TIMS)
- ACADEMICS
  - LECTURE (30%)
  - COMPUTER BASED
  - TRAINING (70%)
- SIMULATORS
  - EGRESS PROCEDURES TRAINER (EPT)
  - EJECTION SEAT TRAINER (EST)
  - UNIT TRAINING DEVICE (UTD)
  - INSTRUMENT FLIGHT TRAINER (IFT)
  - OPERATIONAL FLIGHT TRAINER (OFT)

BUY PROFILE
FY95 PRESIDENT'S BUDGET

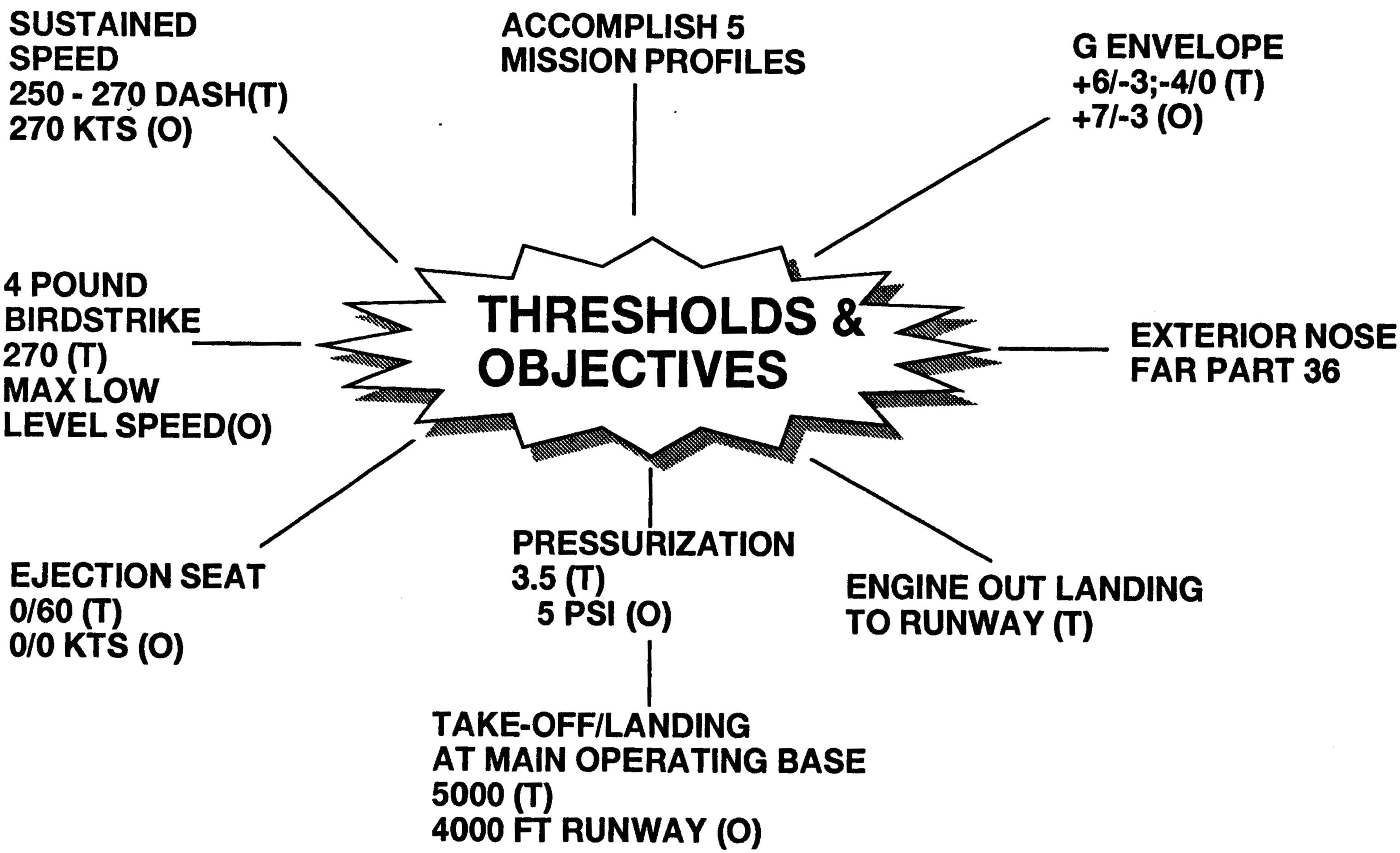
AIR FORCE

FY	95	96	97	98	99	00	01	TOTAL
QUANTITY	3	10	24	36	48	48	48	372

NAVY

FY	95	96	97	98	99	00	01	TOTAL
QUANTITY	0	0	8	18	20	48	48	339

KEY PERFORMANCE PARAMETERS



KEY PERFORMANCE PARAMETERS
THRESHOLD (T) & OBJECTIVE (O)

STEPPED TANDEM
COCKPIT

~~34-40" (T) - 32.4 41.4 "(O)~~
~~SITTING HEIGHT~~

32.8-40" (T)
31 - 40" (O)
SITTING HEIGHT

FLY FROM EITHER COCKPIT
(INTERCHANGEABLE (O))

IFR CERTIFIED
INSTRUMENTATION
SELECTABLE EADI/EHSI (T)
ALL DIGITAL (O)

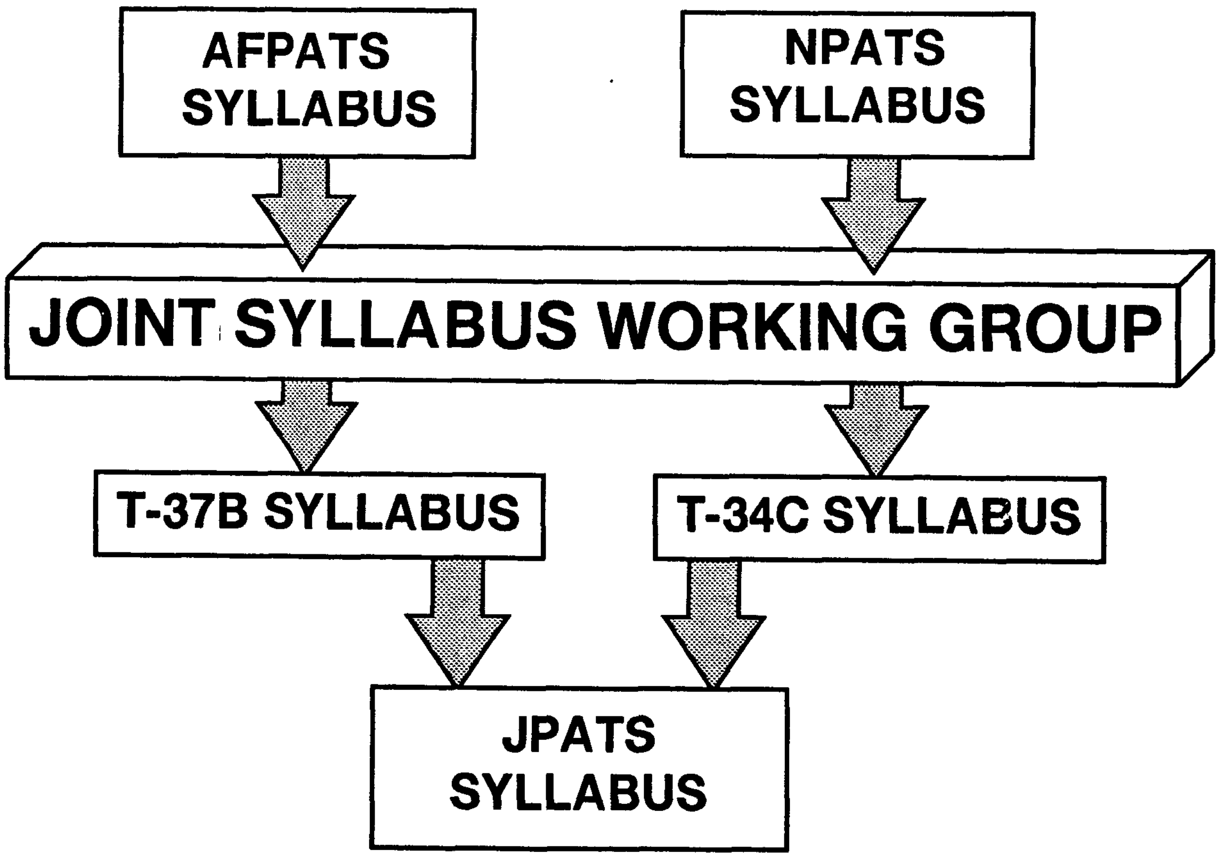
SIMULATOR WITH
VISUAL SYSTEM

JPATS SYLLABUS

JOINT DEVELOPMENT

- USAF MEMBERS
  - HQ AETC/XOR/XOT
  - HQ 19th AIR FORCE/DOT
  - 419 OPTS
- USN MEMBERS
  - CNATRA/N34B/N3141
  - TRAWING 4 REPRESENTATIVE (NAS CORPUS CHRISTI)
  - TRAWING 5 REPRESENTATIVE (NAS WHITING)

PROCESS


AFPATS SYLLABUS
NPATS SYLLABUS
JOINT SYLLABUS WORKING GROUP
T-37B SYLLABUS
T-34C SYLLABUS
JPATS SYLLABUS

USAF TRAINING PHILOSOPHY

- AIRSPACE USE - INSTRUMENT FLIGHT RULES (IFR) PROCEDURES
- AIRFIELD OPERATIONS:
  - IFR DEPARTURES
  - STANDARD OVERHEAD PROCEDURES
- EMPHASIS ON CONTACT AND FORMATION
- EMPHASIS ON DAYTIME OPERATIONS

USN TRAINING PHILOSOPHY

- AIRSPACE USE - VISUAL FLIGHT RULES (VFR) PROCEDURES
- AIRFIELD OPERATIONS:
  - VFR DEPARTURES
  - SPLIT RUNWAY OPERATIONS
  - BOX PATTERNS/CARRIER OPERATIONS
- EMPHASIS ON INSTRUMENT FLIGHT TRAINING
- NIGHT TRAINING - GEARED FOR SEA OPERATIONS

JOINT TRAINING PHILOSOPHY

- AIRSPACE USE/AIRFIELD OPERATIONS
  - INSTRUMENT FLIGHT RULES
- INCREASED EMPHASIS ON:
  - NIGHT (USAF)
  - INSTRUMENT TRAINING (USAF)
- AVERAGE SORTIE DURATION: 1.38 HRS

JPATS SYLLABUS

JPATS EVENTS/HOURS

CATEGORY	UTD	IFT	OFT	AIRCRAFT
BASIC	3/3.3	3/3.6		
CONTACT	2/2.6	2/2.6	6/7.8	32/43.4
INSTRUMENTS	3/4.2	17/23.3	3/3.9	12/16.9
FORMATION			2/2.6	11/15.4
NAVIGATION		2/2.8	4/5.2	10/13.3
TOTAL	8/10.8	24/32.3	15/19.5	65/89.0

TOTAL EVENTS = 112

PROPOSED JPATS IMPLEMENTATION

LOCATION	START TRAINING
USAF INSTRUCTOR TNG	OCT 1999
FIRST USAF UFT BASE	OCT 2000
FIRST USN UFT BASE	SEP 2001

NOTE:

ALTERNATING
CONCURRENT
} PROCUREMENT DRIVEN

CONCLUSION

- JPATS THE CORNERSTONE TO JOINT PRIMARY FIXED-WING TRAINING
- AGREEMENT ON JOINT TRAINING PHILOSOPHY
- COMMON SYLLABUS DEVELOPED JOINTLY

TAB 5

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 24, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1300 hours on February 24, 1994, in Room 4D378, the Pentagon. The list of attendees and agenda are attached.

Mr. Gardner began the meeting with administrative comments. This was followed by a round table Group discussion of Military Department aviation training philosophies and how they do business. Maj Gen Profitt of Air Education and Training Command (AETC) represented the Air Force. RADM Hayden of Chief of Naval Aviation Training (CNATRA) represented the Navy. BG Riggs of the U.S. Army Aviation Center (USAAVNC) represented the Army.

The general discussion included an overview of the Military Departments' training philosophies and practices with the goals of informing and orienting the Group. The Air Force conducts a pilot accession (pre-commissioning) screening program which is conducted about 12-18 months prior to UPT entry and is not a part of undergraduate pilot training. The goal of screening is to minimize attrition and involves academic testing, motor skill screening, and flight screening. Pilot candidates who pass screening then complete their officer commissioning program before entering UPT. In UPT, the Air Force trainees progress through an all-jet primary and advanced syllabus as a class at a single location. The Air Force bases different types of training aircraft at the same installation to support the UPT syllabus. The Navy screens its own and Marine pilot trainees during UPT as part of the primary training syllabus. Small groups (not a class concept) of trainees enter the pipeline at short, regular intervals and progress through the syllabus. After primary training, a majority of the trainees move to another base for more advanced UPT or undergraduate helicopter pilot training (UHPT). Army officer and warrant officer pilot candidate screening consists of an academic test and no flight screening. All Army pilot training is conducted at one location, Ft Rucker, Alabama. This includes accession, professional development, undergraduate, and all graduate pilot training. Army helicopter pilot trainees enter rotary-wing training without fixed-wing training. Army helicopter training includes syllabus options based on the pilot product needed for different missions. The Army selects and trains experienced helicopter pilots to meet its small fixed-wing aircraft pilot requirements. Air Force helicopter pilots are trained by the Army at Ft. Rucker, Alabama. Beginning in fiscal year 1995, Air Force helicopter pilots will receive a primary fixed-wing syllabus from the Air Force before attending helicopter training with the Army. Navy and Marine helicopter pilots receive primary fixed-wing training from the Navy before rotary-wing training. Navy, Marine, and U.S. Coast Guard helicopter pilots receive rotary-wing training from the Navy at NAS Whiting Field, Florida. The Group discussion indicated that the area of joint primary training seems to offer the best potential for joint progress.

[redacted]

The Group discussed whether differences in philosophy about inflight separation of aircraft during flying training operations could affect the capacity analysis. The Air Force operates mainly under instrument flight rules (IFR) in and out of its training bases which requires increased separation between aircraft, while the Navy and Army operate more predominantly under visual flight rules (VFR). The Air Force conducts training flights in its working airspace under radar monitor, while the Army and Navy more often use procedural control to maintain separation. The Navy often operates under provisions of the rules in which the military assumes responsibility for separation of aircraft (MARSA). The Group consensus was that standard assumptions could be formulated and used for capacity analysis and that there may be some training or installation imperatives that should be considered. The Group also opined that due to the high volume, often noisy and traffic pattern intense operations associated with military pilot training DoD facilities are required.

Mr. Finch next addressed preparation for the upcoming Steering Group meeting. The Group is to identify external non-BRAC policy decisions important BRAC 95 analysis of undergraduate pilot training as well as the officials or mechanisms external to the base closure process available to make the important policy calls. Mr. Gardner presented the proposed external policy decisions as listed in the agenda. The Group consensus was that the listing should be presented to the Steering Group at its next meeting.

Mr. Finch pointed out that although the Group could help identify policy issues, it is not the policy making authority. The Group may need some decisions from the policy fora in order to issue cross-service guidance and address alternatives. However, the Group needs to continue to make progress in BRAC development, while policy decisions are being pursued through non-BRAC policy mechanisms.

Mr. Gardner updated the Group that the joint working group developing the draft internal control plan was still at work and there was nothing new to present on potential installation visits. Additionally, he noted that the Group's joint study team emphasis is capacity analysis development.

There being no further matters to discuss, the meeting was adjourned at 1440 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 24, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
BG Eric Shinseki, Army
BG John Riggs, Army
LTC John Finlay, IV, Army
CPT Blake Hollis, Army
RADM Bill Hayden, Navy
CAPT Brian Buzzell, Navy
Col Dave Stockwell, Navy
Maj Gen Glenn Profitt, Air Force
Maj Gen Ed Tenoso, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Ms. Donna MacPherson, OSD (Comptroller)
Mr. John Raines, OSD (Comptroller)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG (Audit)

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(24 February 1994 Meeting -Rm 4D378)

1. Discussion of Procedures for Minutes

2. Service Aviation Training Philosophy

   A. Air Force - MGEN Profitt
   B. Navy - RADM Hayden
   C. Army - BGEN Riggs

3.. Steering Group Memo - 1 March Meeting

   A. External Policy Decisions:

      1). Flight Screening
      2). Aircraft Mix
      3). Fixed-wing for Helo Students
      4). UHPT Consolidation
      5). JPATS Syllabus Questions (e.g.-IFR vs VFR, Class Progression, etc.)

   B. Officials/Mechanisms for Policy "Calls"

4. 4 March Proposed Agenda: Service BRAC Briefings

5. ICP Status Update

6. Travel Planning - Ruling on "Some" or "All" Site Visits

7. Capacity Analysis Phase...

TAB 6

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

March 3, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1300 hours on March 3, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch opened with feedback from the Steering Group meeting (March 1, 1994). He pointed out that he had briefed a deadline of July 1, 1994, for resolution of external non-BRAC policy issues. The deadline requires that the Group monitor the progress of policy makers. He will coordinate with appropriate policy agencies. Mr. Finch also noted the need for contact with the roles and missions commission from the perspective of policy impact on base closure and realignment.

Mr. Finch next noted that the scope of the category had not yet been finalized with regard to whether or not to include the Air Force's Flight Screening Program (FSP) which is not part of the Air Force's UPT program. As noted in earlier meetings, the FSP is a pre-commissioning pilot training selection screening tool. A benefit of FSP is lower attrition and associated costs in the UPT program. The FSP is conducted at Hondo Municipal Airport, Texas, and at the United States Air Force Academy, Colorado. Mr. Finch opined that all DoD flight programs which support and facilitate selection and training of pilots to the point of the awarding of wings should be included. A brief discussion followed and the non-unanimous consensus was to include the flight screening program in the category. The joint study team (JST) will develop for Group approval a proposed final listing with rationale of the programs and installations to be included in the category. After further discussion, the Group also tasked the JST to develop a proposed position with rationale for not outsourcing UPT. Discussion turned to joint cross-service analysis and how it might be accomplished. The Group noted that this subject is also under consideration by the Steering Group. Group discussion affirmed that the Group's task of developing and documenting common capacity measures (what to measure) and standard capacity questions (how to measure) on the joint UPT category can continue without knowing every turn in the analysis process. Likewise, work can continue on the task of developing installation measures of merit/common data elements based on the DoD base closure selection criteria to support cross-service analysis of the category's installations. Both of these tasks will result in a standard document which will be transmitted to the Military Departments which will conduct data calls.

CAPT Buzzell, Col Mayfield, and COL Jones then presented general briefings on the base closure and realignment process for the Navy, Air Force, and Army respectively (slides attached). The briefings gave the Group a broad overview of the Military Departments' processes. Group discussion noted that each approach has been successful.

[redacted]

[redacted]

The Group turned to discussion of potential visits to category installations/facilities. The issue needs to be viewed from the perspective of law, Congressional interest, community sensitivity, and policy. Though the law does not address visits by a joint cross-service group (a group of senior DoD executives) to any, some, or all of the installations/facilities in a BRAC category, the purpose of the law is to provide a fair process that requires the Secretary of Defense to consider all installations equally for closure or realignment. The purpose of such visits would need to be clearly articulated, evenly executed, and carefully documented to avoid potential suspicion or the appearance of unfairness even if all the installations were to be visited. Clearly, the interest of Members of Congress and the sensitivities of communities would need to be considered before embarking on such visits. Mr. Finch opined that though no current policy exists on this subject, his sense was that unless the Group could develop and articulate the purpose of such visits and show value added to the base closure and realignment process to the Steering Group, that the Group should not plan any visits. Group members also pointed out that the closure and realignment process could be successful without such visits as demonstrated in previous years. The Group consensus was to not initiate plans for visits at this time.

Mr. Gardner then reviewed the plan of action and milestones for developing capacity analysis measures and installation analysis standard measures of merit/common data elements to support joint cross-service analysis.

There being no further matters to discuss, the meeting was adjourned at 1450 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

March 3, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
Col Mike Jones, Army
LTC John Finlay, IV, Army
CPT Blake Hollis, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell, Navy
Maj Gen Glenn Profitt, Air Force
Maj Gen Ed Tenoso, Air Force
Col Wayne Mayfield, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Ms. Donna MacPherson, OSD (Comptroller)
Mr. John Raines, OSD (Comptroller)
Mr. Fred Copeland, OSD (Comptroller)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG (Audit)

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(3 March 1994 Meeting -Rm 3E752)

1. Minutes / Status -- Scope Resolved

2. Feedback from Steering Group -- March 1st Meeting

   A. External Policy Decisions
   B. Officials/Mechanisms for Policy "Calls"
   C. Roles & Missions Commission

3. Briefings on Individual Service BRAC Processes:

   A. Air Force -- Col Wayne Mayfield
   B. Navy -- CAPT Brian Buzzell
   C. Army -- Col Mike Jones

4. Draft ICP Status Update -- Data Sharing Guidelines

5. Travel Planning -- Ruling on Some or All Site Visits - "Our Call"

6. Achieving Consensus -- Conducting the Analysis

7. Capacity Analysis Phase -- Planning, Objectives, Actions & Milestones:

   Goals: 1) Analytical Structure/Methodology & 2) Data Call Specifics

1300 March 8th	Study Team with Service BRAC Reps -- Working Meeting. Service Inputs (Data Elements, Measures, & Imperatives) Due.
1300 March 10th	Study Team with BRAC Reps -- Working Meeting
1300 March 15th	Study Team with BRAC Reps -- Working Meeting (Steering Group Meeting at 1400)
1300 March 17th	Study Team Progress Report to UPT Group
1300 March 22nd	Study Team with BRAC Reps -- Working Meeting
1300 March 24th	Final Review by UPT Group (March 25th as Backup)
1400 March 28th	Input Presented to BRAC Review Group

UPT JOINT / CROSS-SERVICE GROUP

External Policy Issues with BRAC Implications

- Flight Screening
- Training Aircraft Mix
- Fixed-Wing Training for Helo Pilots
- UHPT Consolidation -- Single Site
- Aircraft Beddown Configuration
- JPATS Syllabus Questions:
  - IFR vs. VFR
  - Class Progression

DRAFT

UPT JOINT / CROSS-SERVICE GROUP

Resolving External Policy Issues Mechanisms & Players

- Build on Roles & Missions Study Efforts
  - Draw on Service / JCS Study Teams
  - Use Existing "Joint Fixed-Wing Training" and "Consolidation of Initial Helicopter Training" Studies as an Analytical Base
- Recommended Participation:
  - Services, JCS, OSD
  - OUSD (P&R) -- Chair
- Proposed Deadline -- July 1, 1994
  - Policy Analysis Complete -- June 1, 1994

DRAFT

DEPARTMENT OF THE NAVY

BASE REALIGNMENT AND CLOSURE

BRAC-95

PROCESS

Defense Base Closure and Realignment Act of 1990 (PL 101-510 As Amended)

Act passed to establish:

- a "non-political" process to recommend bases for closure.
- a process which is deliberately designed to frustrate any one group of people from making "reasoned judgements" based on personal beliefs or experience.

Creation of an **independent** Commission

DoD process must be based on:

- CJCS approved force structure plan for FY 2001 (matches FYDP),
- SECDEF developed selection criteria, and,
- Use of certified data.

SECNAV makes recommendations to SECDEF. SECDEF forwards recommendations to Commission.

Commission reviews recommendations to ensure that they comply with Force Structure Plan and Selection criteria. Commission can add or delete recommendations.

President must approve or disapprove list in its entirety.

Congress doesn't have to formally approve the final list; they have 45 days to disapprove list in its entirety, or else President's recommendations becomes final.

DEFENSE BASE CLOSURE AND REALIGNMENT ACT OF 1990 (PL 101-510 as amended)

- Established 1991, 1993 and 1995 Defense Base Closure and Realignment Commissions
- All Activities Treated Equally
- All Decisions Based On:
  - Force Structure Plan
  - Selection Criteria
- Use Only Certified Data
- Secretary of Defense makes recommendations to Base Closure Commission by 1 March 1995
- Base Closure Commission makes recommendations to President by 1 July 1995
- President approves/forwards list to Congress. Recommendations become final unless Congress disapproves list within 45 legislative days

SELECTION CRITERIA

SECDEF required to develop selection criteria.

SECDEF had until 15 February to publish any proposed amendments to the selection criteria. Since none were published, we will continue to use these same criteria for BRAC-95 (Note that these same criteria were used in BRAC-91 and BRAC-93).

Military Value (1st four criteria) take precedence.

Return on Investment (COBRA analysis) and Impact Criteria are then analyzed as potential closure/realignment scenarios are evaluated.

SELECTION CRITERIA

Military Value Criteria:

1. The current and future mission requirements and the impact on operational readiness of the Department of Defense's total force.

2. The availability and condition of land, facilities and associated airspace at both the existing and potential receiving locations.

3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.

4. The cost and manpower implications.

Return on Investment Criteria:

5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.

Impact Criteria:

6. The economic impact on communities.

7. The ability of both the existing and potential receiving communities' infrastructure to support forces, missions and personnel.

8. The environmental impact.

DON BRAC-95 ORGANIZATION

Overall DON BRAC-95 process is under the oversight and direction of the Under Secretary of the Navy.

Under Secretary relies upon BSEC to conduct analyses and deliberations required by the Base Closure Act.

BSAT serves as staff support to the BSEC.

DON BRAC-95 ORGANIZATION

UNDER SECRETARY OF THE NAVY

BASE STRUCTURE EVALUATION COMMITTEE (BSEC) *

- ASN (I&E) - Chair
- Executive Director, BSAT - Vice Chair
- 2 Navy Flag Officers
- 2 USMC General Officers
- 2 Flag or General Officers or SES

BASE STRUCTURE ANALYSIS TEAM (BSAT) *

- Executive Director (SES)
- Judge Advocate (O-5) (BSEC Recorder)
- Broad Based Composition
  - Navy Unrestricted Line (O-5/6)
  - Navy Staff Corps (O-3/6)
  - USMC xxx (O-5/6)
  - DON Civilians
  - CNA Analysts

* BSEC and BSAT supported by OGC and NAVAUDSVC.

INSTALLATION CATEGORIZATION

We have divided DON installations into five functional categories in order to conduct analyses.

Current categorization result of BRAC-93 lessons learned.

BRAC-95
INSTALLATION CATEGORIZATION

Operational Support
- Operational Air Stations
- Reserve Air Stations
- Naval Bases
- Marine Corps Bases
- Supply Centers
- Communications
- Security Group
- Surveillance
- Naval Facilities
- Naval Satellite Op. Center
- Construction Battalion Centers
- Misc. Other Support

Industrial Support
- Weapons Stations
- Aviation Depots
- Shipyards
- Public Works Centers
- Marine Corps Log. Bases
- Supervisor of Shipbuilding
- Inventory Control Points
- Industrial Reserve Plants
- Naval Reserve Maint. Facilities

Tech Centers/Labs
- Technical Centers/Labs

Educational/Training
- Training Air Stations
- Training/Educational Centers

Personnel Support/Other
- Medical
- Dental
- Admin. Activities
- National Capital Region
- Reserve Centers

DON BRAC-95 BSAT ORGANIZATION

BRAC-95 BSAT is a matrix organization

5 analytical teams corresponding to the 5 installation categories

Functional Support teams provide expertise in specific areas for analytical teams.

DON BRAC-95

BSAT

ORGANIZATION

	ANALYTICAL ORGANIZATION				
FUNCTIONAL ORGANIZATION	Operational Support	Industrial Base	Tech Centers /Labs	Educational/ Training	Personnel Support/Other
Economic Support					
Environmental Support					
Cross Service Support					
Public Relations Support					
Response Issues Support					
Computer Systems Support					
Admin. Support					

DON BRAC-95 PROCESS

BRAC-95 incorporates lessons learned from previous BRAC rounds.

Discuss "bottom up" certification process/requirements. Emphasize responsibility to ensure accuracy and timeliness. Also emphasize reliance only on certified data - must maintain Base Structure Data Base (BSDB) integrity - no outside studies or other analytical efforts.

All USN/USMC shore activities in the U.S., its territories and possessions which have not previously closed will be evaluated.

Process must be auditable/verifiable by those outside DOD - including Commission, public, GAO and others - therefore - detailed record of meetings and NAVAUDSVC role are critical elements of process.

NAVAUDSVC - two roles - oversight of BSEC/BSAT and field audit/input.

DON BRAC-95 PROCESS

- BRAC-95 process improves on lessons learned during prior BRAC rounds
- Analyses/recommendations based only on certified data
- All activities treated equally
- Detailed Record of Meetings
- Naval Audit Service Integral Part of the Process

DON BRAC-95 PROCESS ("Snake" Chart)

Discuss policy meetings with SYSCOMs, CINCs, etc.,followed by ASNs to determine policy issues early in the process.

Any site visits will be conducted **to educate** site personnel on the BRAC process and **not to collect data**; not all sites will be visited.

Iterative process for developing data calls (starting point will be BRAC-93 data call questions, but not BRAC-93 data). Owners/operators will be provided with copies of draft military value and capacity analysis data calls.

Capacity Analysis - Determine whether excess capacity exists within a sub-category of installations.

Military Value - Develop relative ranking of installations within a sub-category in terms of current and future DON requirements.

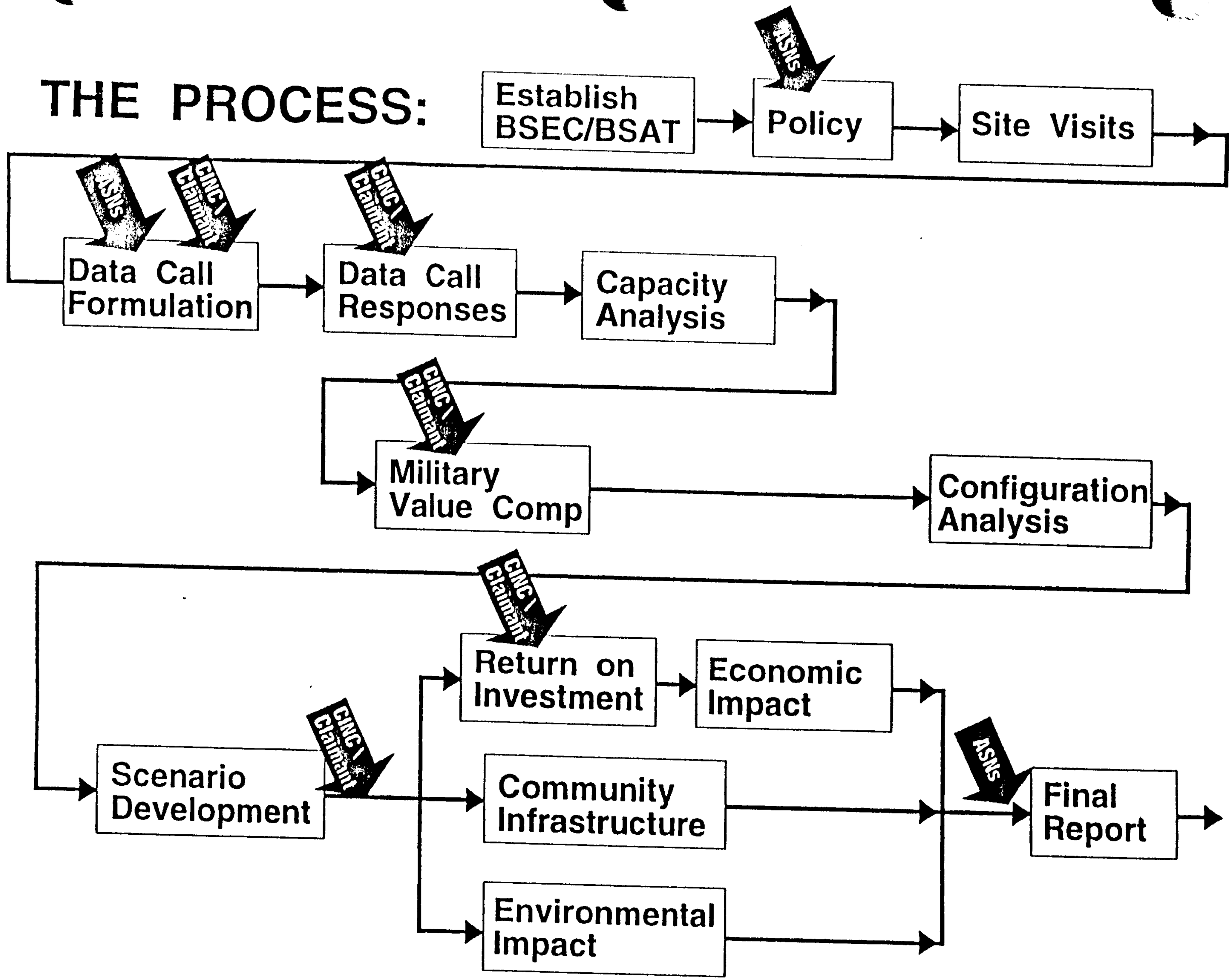
Configuration Analysis - Goal is to minimize excess capacity while maintaining at least as high an average military value for the sub-category. Also allows for consideration of other operational constraints/requirements. Output is a set of potential closure/realignment options.

Various alternative closure/realignment scenarios will be identified and then evaluated in terms of Return on Investment and Impact criteria.

Cost of Base Realignment Actions (COBRA) - standard DoD-wide tool to estimate costs, savings and return on investment.

Impact Analyses evaluates economic impact (using standard DoD-wide tool), ability of communities to absorb additional functions/personnel and environmental impact.

THE PROCESS:



Establish BSEC/BSAT
ASNs
Policy
Site Visits
ASNs
CINC \ Claimant
Data Call Formulation
CINC \ Claimant
Data Call Responses
Capacity Analysis
CINC \ Claimant
Military Value Comp
Configuration Analysis
CINC \ Claimant
Return on Investment
Economic Impact
CINC \ Claimant
Scenario Development
Community Infrastructure
Environmental Impact
ASNs
Final Report

OSD DIRECTION

Increased OSD involvement - more formal structure for identifying joint/cross service opportunities - will add complication to BRAC-95 process/analyses.

Many data calls within DON will be predicated on commonly developed data elements and units of measure defined by these working groups.

DON representation on Joint Groups - BSAT members (by direction of UNSECNAV)

OSD Direction: Increased Emphasis on Joint/Cross Service Opportunities

- Formation of 6 Joint/Cross-Service Groups
  - Depot Maintenance
    DUSD(L)
  - Laboratories
    D,DR&E
  - Undergraduate Pilot Training
    ASD(P&R)
  - Test and Evaluation
    D,T&E & D,OT&E
  - Military Treatment Facilities
    ASD(HA)
  - Economic Impact
    DASD(ER&BRAC)
- Identification of common measures/data elements by 31 March 1994

DIRECTORATE OF OPERATIONS

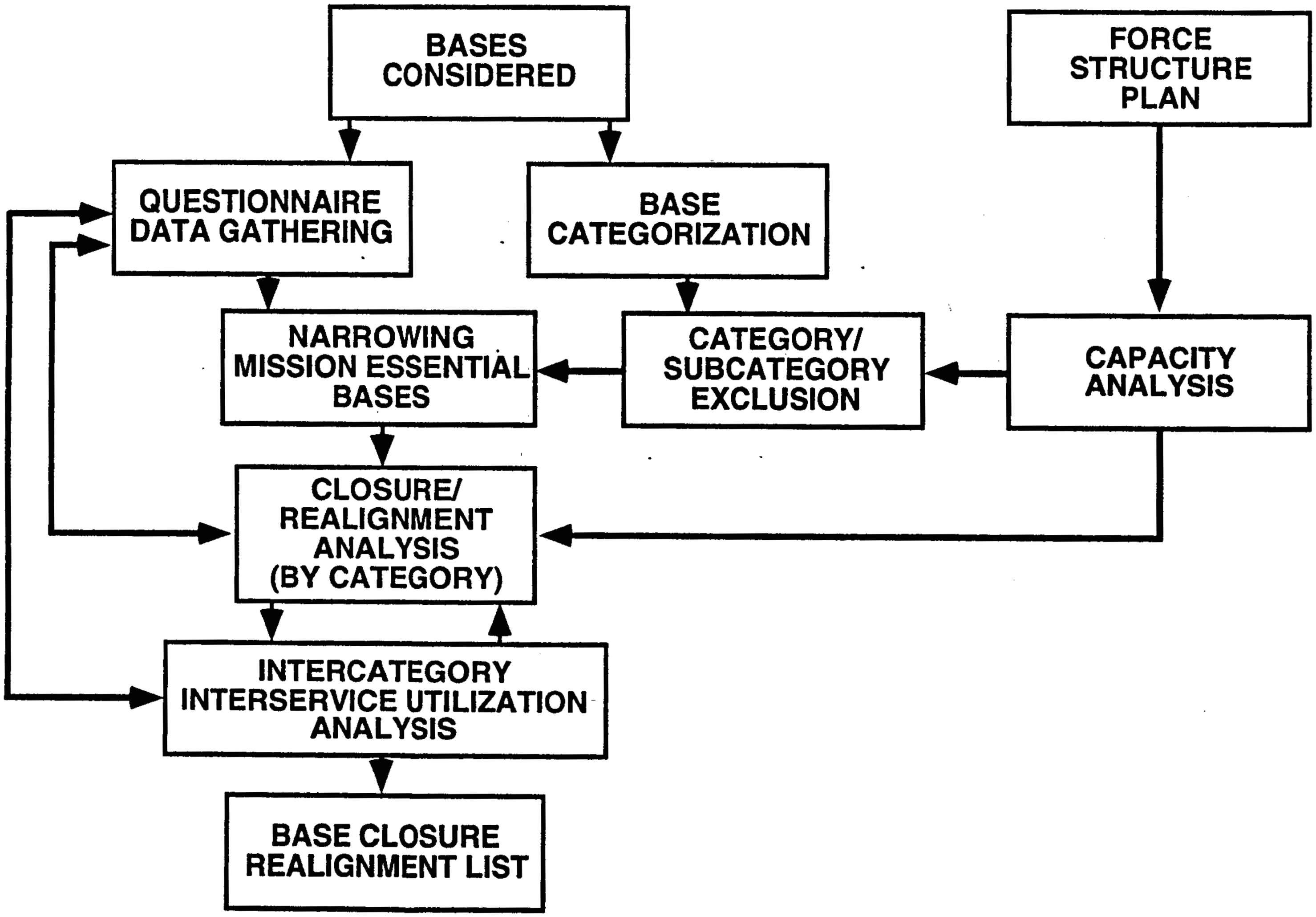
THE AIR FORCE BASE CLOSURE PROCESS

COL WAYNE MAYFIELD
HQ AF/XOOR

DIRECTORATE OF OPERATIONS

BASE CLOSURES AND REALIGNMENTS

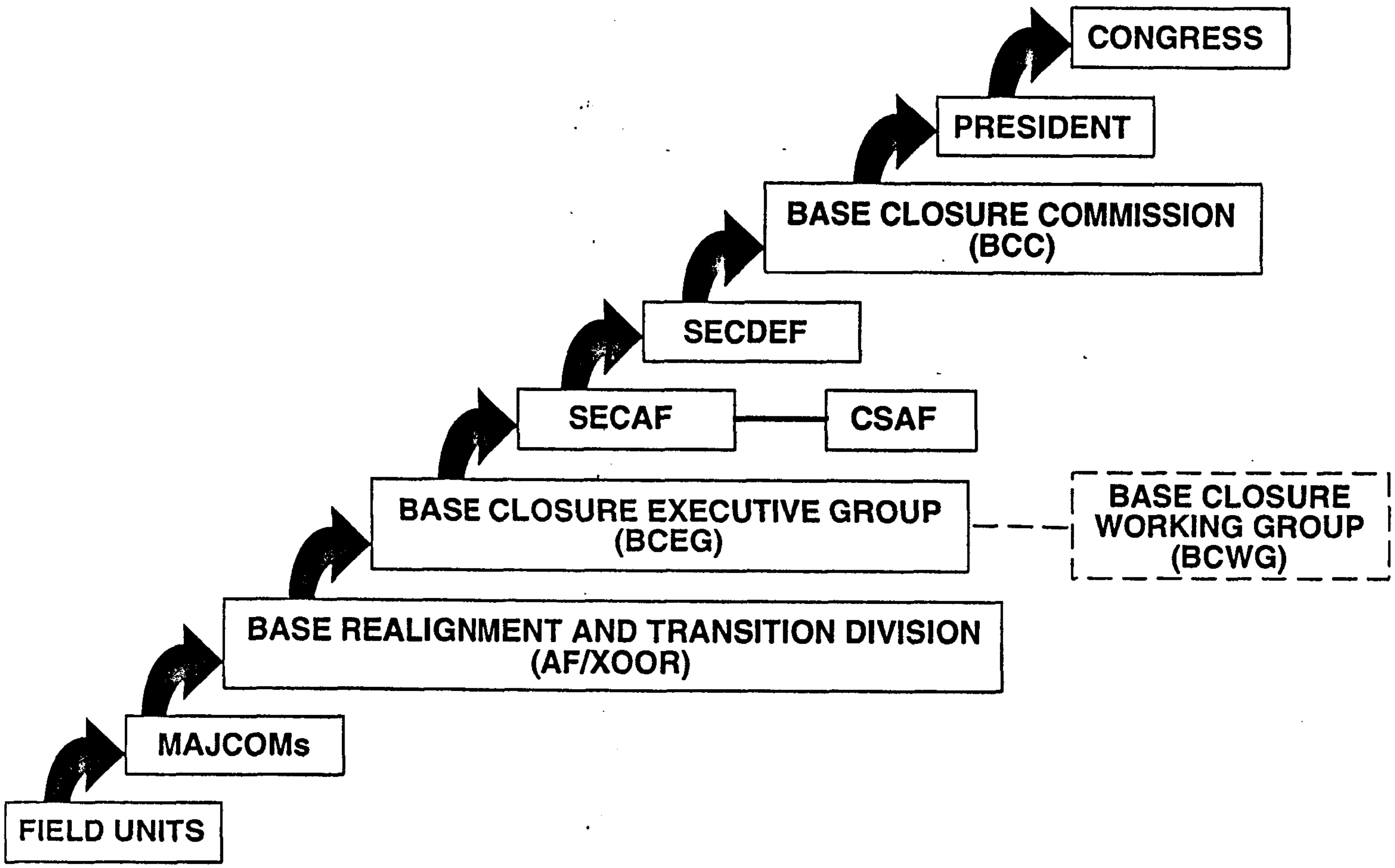
PROCESS



XOOR

DIRECTORATE OF OPERATIONS

PROCESS RELATIONSHIPS



Army BRAC Process

Commander's Intent

Purpose: Station the post-Cold War Army.
Improve infrastructure efficiency.

How: Develop operational blueprint.
Incorporate MACOM / ARSTAF input (encourage consensus).
Accommodate MACOM restructuring recommendations.
Support OSD cross-servicing initiatives.
Close / realign exess bases.
Develop adequate POM for BRAC 95.

End State: Support the Army Vision.

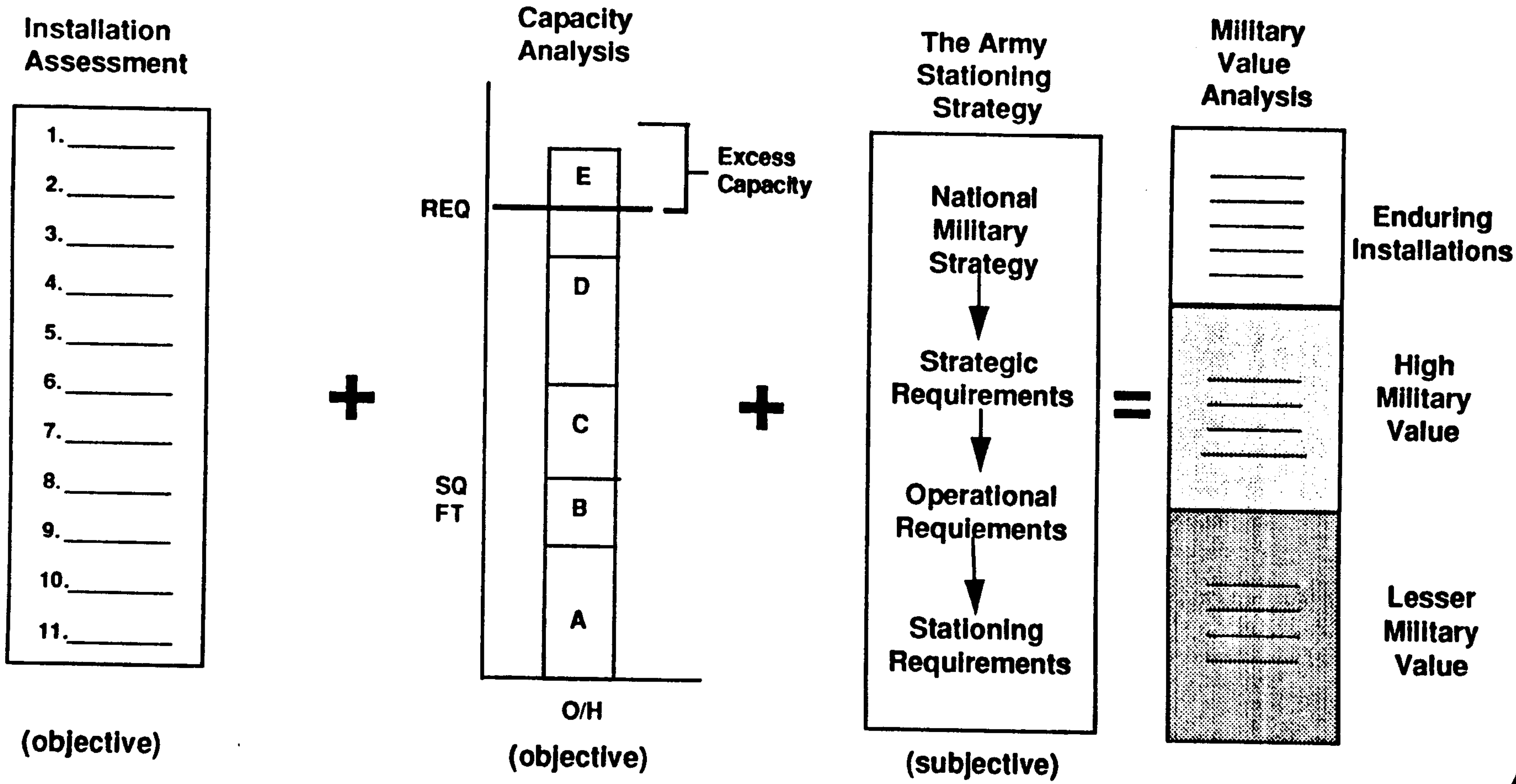
America's Army - Trained and Ready to Fight....
Serving the Nation at Home and Abroad....
A Strategic Force Capable of Decisive Victory!

2/15/94
12:28 PM

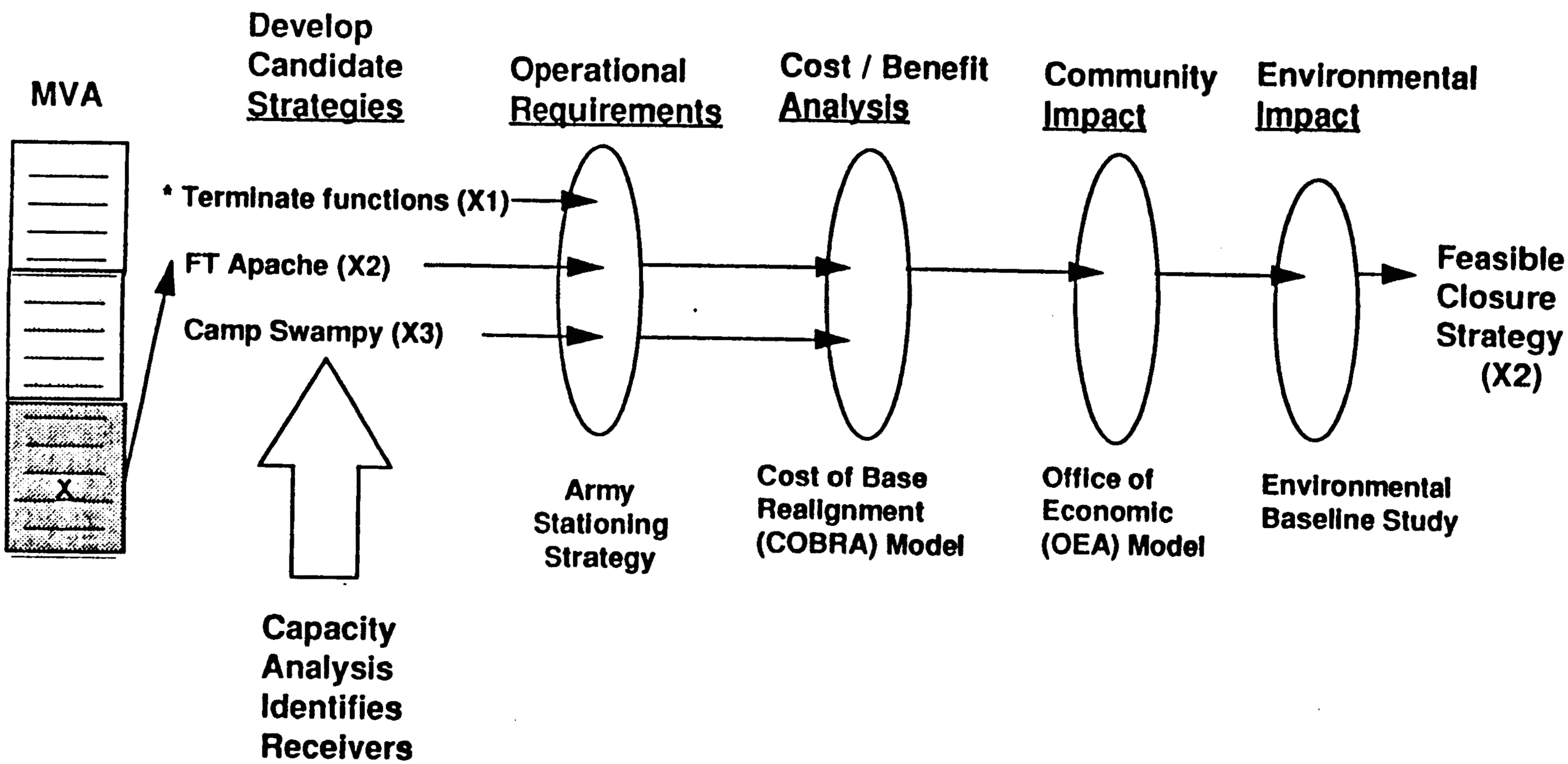
Treat All Installations Equally

Candidate Selection

DOD Criteria	
I.	Mission Requirements
II.	Land & Facilities
III.	Contingency Support
IV.	Cost & Manpower
V.	Cost Savings
VI.	Econ Impact
VII.	Receiving Potentials
VIII.	Environment



Candidate Analysis



Stationing Criteria

DoD/Services
Public/Congress

Services
Generate

DoD SELECTION CRITERIA

IN SELECTING MILITARY INSTALLATIONS FOR CLOSURE OR REALIGNMENT, DOD, GIVING PRIORITY CONSIDERATION TO MILITARY VALUE (THE FIRST FOUR CRITERIA BELOW), WILL CONSIDER:

1. THE CURRENT AND FUTURE MISSION REQUIREMENTS AND THE IMPACT ON OPERATIONAL READINESS OF DOD's TOTAL FORCE.

2. THE AVAILABILITY AND CONDITION OF LAND AND FACILITIES AT BOTH THE EXISTING AND POTENTIAL RECEIVING LOCATIONS.

3. THE ABILITY TO ACCOMMODATE CONTINGENCY, MOBILIZATION, AND FUTURE TOTAL FORCE REQUIREMENTS AT BOTH THE EXISTING AND POTENTIAL RECEIVING LOCATIONS.

4. THE COST AND MANPOWER IMPLICATIONS.

5. THE EXTENT AND TIMING OF POTENTIAL COST SAVINGS, INCLUDING THE NUMBER OF YEARS, BEGINNING WITH THE DATE OF COMPLETION OF THE CLOSURE OR REALIGNMENT, FOR THE SAVING TO EXCEED THE COSTS.

6. THE ECONOMIC IMPACT ON COMMUNITIES.

7. THE ABILITY OF BOTH THE EXISTING AND POTENTIAL RECEIVING COMMUNITIES' INFRASTRUCTURE TO SUPPORT FORCES, MISSIONS, AND PERSONNEL.

8. THE ENVIRONMENTAL IMPACT.

ARMY STATIONING CRITERIA

1. MISSION REQUIREMENT AND OPERATIONAL READINESS
2. LAND AND FACILITIES
3. CONTINGENCY, MOBILIZATION, AND FUTURE REQUIREMENTS
4. COST AND MANPOWER

ATTRIBUTES

Installation Assessment

Training Schools

I. MISSION REQUIREMENTS AND OPERATIONAL READINESS

ATTRIBUTE
Maneuver Acres
Ranges
Deployment Network
Reserve Training
Impact Area
Contiguous Maneuver Acres
General Instructional Fac
Applied Instructional Fac
Special Airspace
Information Mission Area

III. CONTINGENCY, MOBILIZATION, AND FUTURE REQUIREMENTS

ATTRIBUTE
Mobilization Capability
Buildable Acres
Encroachment

2. ~~II.~~ LAND AND FACILITIES

ATTRIBUTE
Barracks
Family Housing
Total Work Space
% Permanent Fac.
Avg Age of Facilities
Infrastructure
Environmental Capacity

4. ~~III.~~ COST AND MANPOWER

ATTRIBUTE
Cost of Living Index
Housing Cost
Locality Pay Factor
BASOP / Msn Pop.
MCA Cost Factor

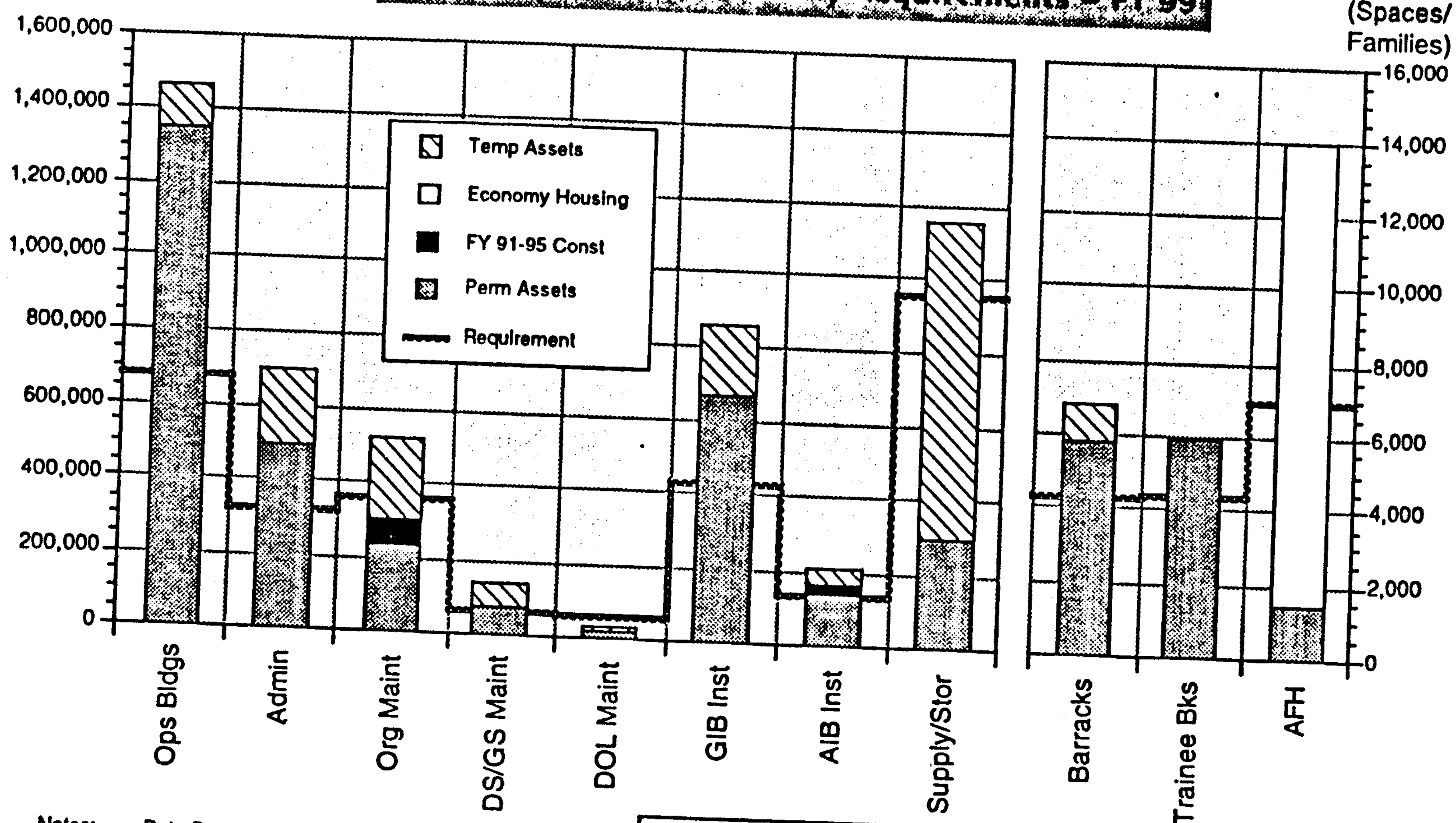
CLOSEHOLD/SENSITIVE

CLOSE HOLD/SENSITIVE

2/07/94
10:30 AM

Ft Swampy

Analysis of Essential Facility Requirements – FY 99



Notes:
- Data Sources: Jun 93 HQIFS, Jun 93 ASIP, & Nov 93 CAPCES (FY 91-95 MCA, BCA, AFH).
- Barracks capacity measured at 2 people per room; does not mean barracks have been renovated to that standard.

Jun 93 ASIP Population

- FY 93 18,500
- FY 99 16,143

FY 99 Facilities Bill

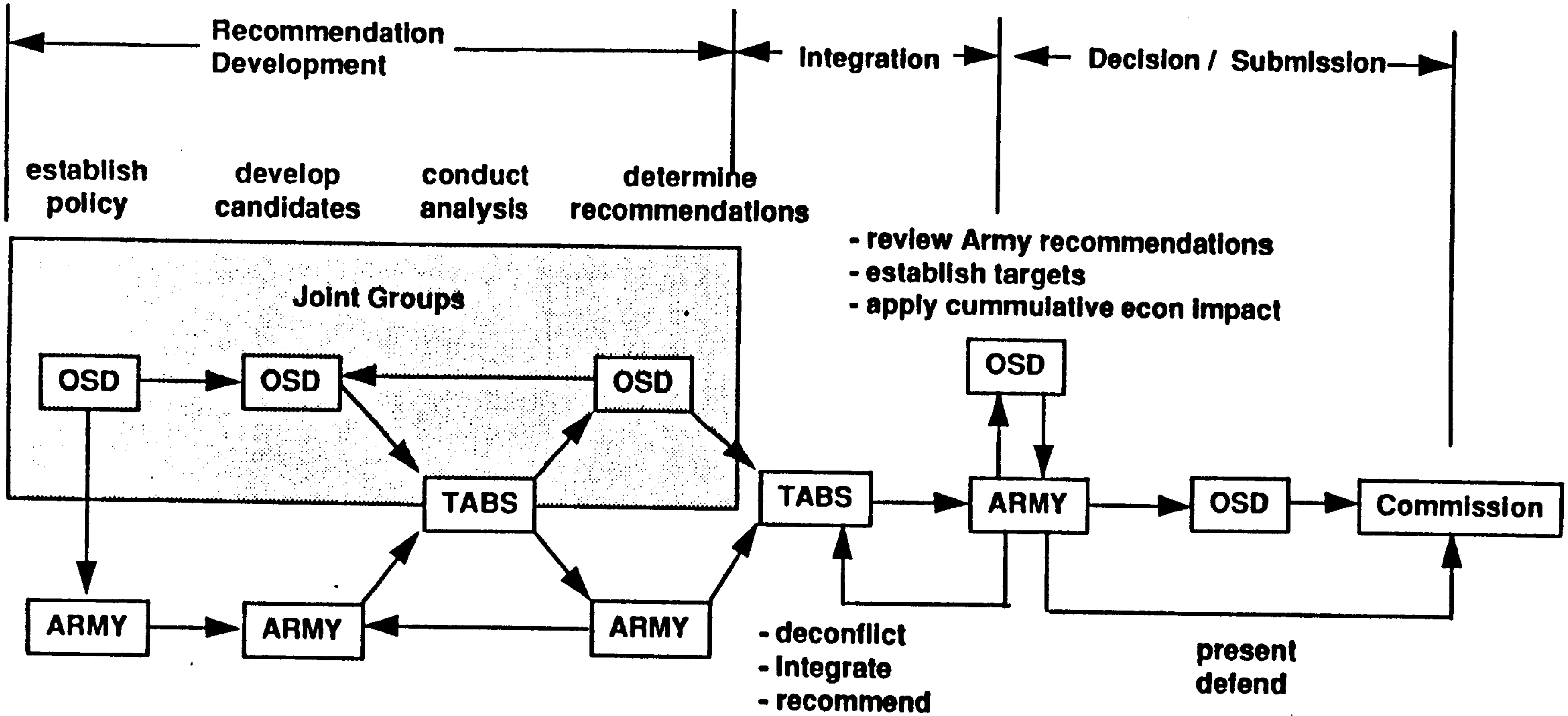
- Essential Only – $ 69.6M
- All Facilities – $302.4M

STATIONING TASK FORCE

CLOSE HOLD/SENSITIVE

1/21/94
1:10 PM

Army / OSD Coordination



STATIONING TASK FORCE

Potential Army / OSD Process Conflicts

- Determination of installations / functions to be studied
- Capacity analysis
- Installation attributes vs measures of merit by OSD
- Installations vs tenants
- Closure / realignment strategies
- Milestones

Document Separator

TAB 7

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

March 17, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1305 hours on March 17, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch began with comments on the Steering Group meeting (March 15, 1994). He noted that outsourcing policy considerations were under discussion. He continued by noting that discussions on the analytic framework of joint cross-service analysis were on-going at the Steering Group level and that further consideration of that subject is expected. Mr. Finch opined there should be no roadblocks to progress in development of the products on category, capacity, and military value factors. He pointed out that the products to be provided to the Military Departments need to be complete and with sufficient detail to result in accurate data gathering. The Group discussion of the products continued with Maj Gen Profitt articulating that time spent now on detail and completeness would result in benefits later in the process. CAPT Buzzell noted that much progress was being made by the Group's joint study team (JST) due to cooperation and the sharing of information. Mr. Gardner submitted that much had been accomplished and that much was yet to be done in the immediate days ahead in preparation for the Steering and Review groups.

Mr. Gardner led the review of JST and Group schedules and tasks. He continued by presenting the JST proposed draft rationale on the size/scope of the joint UPT category to the Group for consideration (attached). Next a draft of installations proposed for inclusion in the category was considered (attached). The Group discussion noted that while many of the proposed installations' primary function was undergraduate pilot training, some also had other sizeable missions. The Group noted that joint cross-service analysis later in the process would consider such factors including alternatives. The Group also talked about administrative format changes to the presentation. Next the Group considered draft measures of capacity and agreed that the JST should continue to refine the proposal (attached). Mr. Bayer stated his hope that the Military Departments would be able to review the proposed products before they are presented to the Steering Group. The Military Departments should review from a functional and BRAC perspective of whether the products are executable and adequate.

There being no further matters to discuss, the meeting was adjourned at 1400 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

March 17, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Robert Bayer, OSD (Economic Reinvestment and Base Realignment and Closure)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Col Mike McKean, Army
LTC John Finlay, IV, Army
CAPT Brian Buzzell, Navy
Maj Gen Glenn Profitt, Air Force
Col Don Feld, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Mr. John Raines, OSD (Comptroller)
Mr. Fred Copeland, OSD (Comptroller)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG (Audit)

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(17 March 1994 Meeting -Rm 3E752)

1. Minutes

2. Feedback from Steering Group -- March 15th Meeting

    A. Outsourcing Discussion
    B. Analytical Design Debate

3. Schedule Update

Study Team Meeting Daily

A) Scope / Rationale

B) Capacity Analysis Design

C) Capacity Data Call

D) Military Value Data Call

1300 March 24th Final Review by UPT Group (March 25th as Backup)

1400 March 28th Input Presented to BRAC Steering Group

1400 March 30th Steering Group Briefs Review Group

March 31st - "Data Call" Delivered to Services

Scope Rationale

Identified installations in category include all DoD flight programs which support and facilitate selection and training of pilots to the point of awarding "Wings"

INSTALLATIONS IN CATEGORY

Columbus	AFB	MS
Corpus Christi	NAS	TX
Fort Rucker	AATC	AL
Laughlin	AFB	TX
Kingsville	NAS	TX
Meridian	NAS	MS
Pensacola	NAS	FL
Randolph *	AFB	TX
Reese	AFB	TX
Sheppard	AFB	TX
Vance	AFB	OK
Whiting Field	NAS	FL

* Includes EFS sites at Hondo, TX and Air Force Academy

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UPT JOINT/CROSS-SERVICE GROUP STUDY TEAM

1. Mission Requirements (Undergraduate Flight Training (UFT) assumes pilot & NFO/Nav)

- Funded Undergraduate Flight Training (UFT) Throughput/Graduates
  - By syllabus for FY95 - 01
    - Attrition rate factor
    - UFT production
    - Average Daily Student Load (officers/enlisted)
  - By syllabus for FY91 - 93
    - UFT production
    - Historical UFT attrition
    - Average Daily Student Load (officers/enlisted)
- Flight Training (UFT)
  - Airspace flight hour requirements and dimensions
    - By aircraft/by syllabus
    - For specified airspace
  - Sortie/flight hour requirements
    - By aircraft/by syllabus
    - Include student & overhead

- Flight Training Ground School Facilities
  - Hours/Grad required for each type of ground facility used
    - Classrooms
    - Simulators by type
    - Labs
    - Life Support Training
    - By syllabus
  - Hours required for training other than students
  - Hours used in other ground training facilities not used for UFT

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- Training Airframes
  - Number of aircraft by type at base for use in UFT
  - For FY93 - 01

2. Facilities

- Airfields and OLFs
  - Annual Operations
    - Sorties flown FY91 - 93
      - Student
      - Training Support
      - Other
    - Airport Operations Count FY91 - 93
    - UPT/UHPT Flying Hours/day
    - FY91 - 93 Scheduled time lost due to:
      - Weather
      - Other (maintenance, safety stand down, etc.)
    - Weather Data for FY91 - 93
    - Average operations/Hour the airfield can support
      - Calculated by FAA's Airport Capacity and Delay Manual
    - Airfield Operating Hours (average hours per scheduled day)
      - Day
      - Night
    - Percentage of IFR/VFR operations - historic/projected
    - Projected (unconstrained by resources) sorties per aircraft
    - Constraints/limiting factors (even with unconstrained resources)
  - Runways/Lanes
    - Length in feet
    - Width in feet
    - Overrun (dimensions in feet)
    - Weight bearing specifications (reference IFR Supplement)

        - Lighting (all types)
        - Training aircraft compatibility with runway
        - Approach aids:
            - IFR
            - VFR
        - Constraints/Limiting factors (even with unconstrained resources)
    - Other
        - Ramp/apron space - Area in square yards, length in feet
        - Access aprons/taxiways - Area in square yards, length in feet
            - Maximum usable
            - Dimensions
            - Weight bearing specifications (reference IFR Supplement)
        - Landing Pads (helicopter) in square yards
            - Lighting
        - Constraints/Limiting factors (even with unconstrained resources)
    - Outlying Fields (OLFs)/Stage Fields/Remote Sites
        - Distance from home field in nautical miles
        - (Applicable data for items in "Annual Operations", "Runways", and "Other")
        - Constraints/Limiting factors (even with unconstrained resources)

- Ground Training
    - By type of training facility used for UFT
        - Total number of facilities
            - Design capacity (PN)
            - Size (square feet)
            - Capacity (student hours/year)
    - Simulator facilities available
        - By aircraft type
        - By simulator type
        - Total number of simulators

- Design capacity (PN)*

  (* PN - Total number of seats available for students in spaces used for academic instruction; applied instruction; and seats or positions for operational trainer spaces and training facilities other than buildings, i.e. - ranges. Design Capacity (PN) must reflect current use of facilities.)

- Capacity (student hours/year)

- By type of training facility and simulator (what is the unconstrained capacity with present equipment, physical plant, etc.)
- Constraints and limiting factors (even with unconstrained resources)

- Aircraft Parking, Maintenance, and Supply

  - Provide number of other aircraft based at installation
    - FY95 - 01
    - By squadron/organization
  - For aircraft types (and mix) at your installation project number of those aircraft that could be parked on your current parking aprons
  - For aircraft types (and mix) at your installation project number of those aircraft that could be hangared in your current hangars
  - For aircraft types (and mix) at your installation project number of those aircraft that could be maintained in your current hangars
  - Given current maintenance facilities how many aircraft of the type (and mix) stationed at your installation can you support

- Housing and Messing

  - By type of housing (BOQ, BEQ, etc.) and messing facility
    - Total number of facilities
    - Design capacity

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CAPACITY ANALYSIS

FACTORS	HISTORICAL	REQUIREMENTS				
		PROG'MED TRAINING (SYLLABI) (A)	PROG'MED GRADS (B)	REQUIRED CAPACITY (AxB)	MAX AVAILABLE CAPACITY (C)	EXCESS CAPACITY (C-(AxB))
TRAINING SORTIES	SORTIES/ GRAD •SYLLABUS •OVERHEAD	SORTIES/ GRAD •MAJCOM	GRADS/YR •PGL •PTR	SORTIES/ YR	SORTIES/ YR	SORTIES/ YR
AIRFIELD OPS	OPS/SORTIE •TRAFFIC CNT •TOT # SORTIES	OPS/GRAD •MAJCOM	GRADS/YR •PGL •PTR	OPS/YR	OPS/YR	OPS/YR
AIRSPACE	HRS/SORTIE •SYLLABUS •OVERHEAD •MX	HRS/GRAD •MAJCOM	GRADS/YR •PGL •PTR	HRS/YR	HRS/YR	HRS/YR
GROUND TRAINING	HRS/GRAD •SYLL + ATTRIT •CLASSROOMS •SIMULATORS •LIFE SPT TNG	HRS/GRAD •MAJCOM	GRADS/YR •PGL •PTR	HRS/YR	HRS/YR	HRS/YR

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TAB 8

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

March 24, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1304 hours on March 24, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch opened by commenting that the primary purpose of the meeting was to review the progress of the Group's joint study team (JST) on the products to be provided to the Military Departments. Additionally, he pointed out that chairpersons and members of the joint cross-service groups were beginning to receive calls from various levels of government and other interest groups for information on the BRAC 95 process. He recommended that members who receive such calls should refer the caller to the OSD BRAC focal point in the Office of the Deputy Assistant Secretary of Defense for Economic Reinvestment and Base Realignment and Closure for appropriate response. Mr. Finch also pointed out that the work and the products being produced are sensitive and considered to be close hold until the Secretary of Defense forwards recommendations to the Defense Base Closure Commission. He stated that all products of Group and its joint study team should be appropriately marked.

Mr. Gardner gave a status update noting that the JST had worked each day since the last Group meeting. He led the discussion of the proposed final draft of the category's scope and rationale (attached). Group discussion resulted in consensus that inclusion of naval flight officers and navigators would be more descriptive of the category. The JST was tasked to make the description reflect the results of the discussion. In light of this discussion, the Group reviewed the proposed listing of installations to be included in the category (attached) and approved the listing as presented.

Next, Mr. Gardner led discussion on progress on proposed draft capacity analysis framework (attached). The Group consensus was that the JST should continue to refine the framework and present a proposal for possible Group approval at a future meeting.

The Group next reviewed the proposed draft capacity data call (attached). Though the proposed data call is lengthy, the Group consensus was that the document was adequate and that the JST could make minor refinements up to the point of issue without further review by the Group.

Mr. Gardner gave an update on the work-in-progress on the draft measures of merit/factors/common data elements to support the DoD military value base closure selection criteria (criteria 1-4). He noted that on-base, quality of life-related facilities measures were proposed for inclusion in the data call. Additionally, the JST recommended that measures for environmental-related factors which affect military operations and viability be included in the military value data call. Following discussion, the Group accepted the update and formed the

[redacted]

consensus that the JST should continue to develop and finalize the proposed product for approval by the Group Chairman for presentation to the Steering and Review Groups for their review. The Group also noted that the joint cross-service category on UPT was unique among the joint cross-service categories in that it was largely installation oriented. Therefore to facilitate joint cross-service analyses, the Group consensus was to soon begin joint development of common measures/factors/data elements for the remaining base closure selection criteria. The thrust of the work would be on criterion 7 (community infrastructure) and criterion 8 (environmental impact); since criterion 5 (return on investment) would be determined by Cost of Base Realignment Actions (COBRA) model analyses, and criterion 6 (economic impact) analyses would result from the common tools/measures to be developed by the Joint Cross-Service Group on Economic Impact. Mr. Finch pointed out that common and comparable analyses by the Military Departments using the same common measures and guidelines established by the Group are essential for successful joint cross-service analysis.

The Group moved next to a discussion of the proposed listing of potential external policy issues with BRAC implications (attached). The dialogue included whether the proposed list was substantially a list of policy issues or if it did not also contain non-policy items reflective of how the Military Departments do business such as aircraft beddown, flying operations under instrument flight rules versus visual flight rules, and class progression. Mr. Finch opined that the listing should be refined with regard to common syllabus questions.

CAPT Buzzell pointed out that the Interservice Training Review Organization (ITRO) could be reviewing training issues which might have implications on BRAC and vice versa. Mr. Finch stated that he would make appropriate contact, and he asked the Group's representatives from the Military Departments to help monitor ITRO-related issues.

There being no further matters to discuss, the meeting was adjourned at 1425 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

March 24, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
LTC John Finlay, IV, Army
MAJ Charles Fletcher, Army
CPT Blake Hollis, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell, Navy
Maj Gen Glenn Profitt, Air Force
Maj Gen Ed Tenoso, Air Force
Col Don Feld, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Lt Col John Plummer, Air Force
Mr. Fred Copeland, OSD (Comptroller)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG (Audit)

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(24 March 1994 Meeting -Rm 3E752)

1. **Minutes**

2. **Status Update:** **(Study Team Has Met Daily Since Last Group Meeting)**

A) Scope / Rationale - FINAL

B) Capacity Analysis Design - Draft

C) Capacity Data Call - Final Draft

D) Military Value (Criteria 1-4*) Data Call - Draft

- **QOL - On Base Only**

- **Environmental Impacting Capacity (e.g.-AICUZ, Air Credits, etc.)**

3. **Schedule:**

1200 March 25th	**Draft Guidance / Non-BRAC Policy Issues Status to Mr. Hansen, Executive Secretary, BRAC 95 Steering Group**
1400 March 28th	**Input (Summary) Presented to BRAC Steering Group**
1400 March 30th	**Steering Group Briefs Review Group**

March 31st - "Data Call" Delivered to Services - Meeting(?)

TBD	**Base Closure Criteria (5-8*) Data Call**

*** Attached**

EXISTIN RITERIA

In selecting military installations for closure or realignment, the Department of Defense, giving priority consideration to military value (the first four criteria below), will consider:

Military Value

1. The current and future mission requirements and the impact on operational readiness of the Department of Defense's total force.

2. The availability and condition of land, facilities and associated airspace at both the existing and potential receiving locations.

3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.

4. The cost and manpower implications.

Return on Investment

5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.

Impacts

6. The economic impact on communities.

7. The ability of both the existing and potential receiving communities' infrastructure to support forces, missions and personnel.

8. The environmental impact.

Note: These are the selection criteria used for the 1991 and 1993 rounds of closure and are substantially the same as those used for the 1988 round of closures.

Category Scope Rationale

Installations in the UPT category include all DoD flight programs which support and facilitate selection and training of pilots, naval flight officers and navigators to the point of awarding "Wings"

INSTALLATIONS IN CATEGORY

Columbus	AFB	MS
Corpus Christi	NAS	TX
Fort Rucker	AATC	AL
Kingsville	NAS	TX
Laughlin	AFB	TX
Meridian	NAS	MS
Pensacola	NAS	FL
Randolph *	AFB	TX
Reese	AFB	TX
Sheppard	AFB	TX
Vance	AFB	OK
Whiting Field	NAS	FL

* Includes Enhanced Flight Screening sites at Hondo, TX and Air Force Academy

3/24/94

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CAPACITY ANALYSIS

FACTORS	HISTORICAL	REQUIREMENTS: PROG'MED TRAINING (SYLLABI) (A)	REQUIREMENTS: PROG'MED GRADS (B)	REQUIRED CAPACITY (AxB)	MAX AVAILABLE CAPACITY (C)	EXCESS CAPACITY (C-(AxB))
TRAINING SORTIES	SORTIES/ GRAD •SYLLABUS •OVERHEAD	SORTIES/ GRAD •MAJCOM	GRADS/YR •PGL •PTR	SORTIES/ YR	SORTIES/ YR	SORTIES/ YR
AIRFIELD OPS	OPS/SORTIE •TRAFFIC CNT •TOT # SORTIES	OPS/GRAD •MAJCOM	GRADS/YR •PGL •PTR	OPS/YR	OPS/YR	OPS/YR
AIRSPACE	HRS/SORTIE •SYLLABUS •OVERHEAD •MX	HRS/GRAD •MAJCOM	GRADS/YR •PGL •PTR	HRS/YR	HRS/YR	HRS/YR
GROUND TRAINING	HRS/GRAD •SYLL + ATTRIT •CLASSROOMS •SIMULATORS •LIFE SPT TNG	HRS/GRAD •MAJCOM	GRADS/YR •PGL •PTR	HRS/YR	HRS/YR	HRS/YR

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3/24/94

CAPACITY ANALYSIS (CONT)

FACILITY FACTORS	HISTORICAL	REQUIREMENTS: PROG'MED TRAINING (SYLLABI) (A)	REQUIREMENTS: PROG'MED GRADS (B)	REQUIRED CAPACITY (AxB)	MAX AVAILABLE CAPACITY (C)	EXCESS CAPACITY (C-(AxB))
RAMPS/ APRONS/ TAXIWAYS	AIRCRAFT/YR	AIRCRAFT/ GRAD	GRADS/YR •PGL •PTR	AIRCRAFT/YR	AIRCRAFT/YR	AIRCRAFT/YR
HANGARS	AIRCRAFT/YR	AIRCRAFT/ GRAD	GRADS/YR •PGL •PTR	AIRCRAFT/YR	AIRCRAFT/YR	AIRCRAFT/YR
MAINTENANCE	AIRCRAFT/YR	AIRCRAFT/ GRAD	GRADS/YR •PGL •PTR	AIRCRAFT/YR	AIRCRAFT/YR	AIRCRAFT/YR
SUPPLY/ STORAGE	SF/YR	SF/GRAD	GRADS/YR •PGL •PTR	SF/YR	SF/YR	SF/YR
HOUSING AND MESSING	STUDENTS/DY	N/ASTUDENTS/DY		STUDENTS/DY	STUDENTS/DY	STUDENTS/DY

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CAPACITY ANALYSIS:
DATA CALL WORK SHEET

24 March, 1994

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**********If any responses are classified, attach separate classified annex.**********

[redacted]

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PILOT TRAINING BASE LISTING:

[redacted]

Title	Location
COLUMBUS	COLUMBUS MS
CORPUS CHRISTI	CORPUS CHRISTI TX
FT RUCKER	FT RUCKER AL
KINGSVILLE	KINGSVILLE TX
LAUGHLIN	DEL RIO TX
MERIDAN	MERIDAN MS
PENSACOLA	PENSACOLA FL
RANDOLPH *	UNIVERSAL CITY TX
REESE	LUBBOCK TX
SHEPPARD	WITCHITA FALLS TX
VANCE	ENID OK
WHITING FIELD	MILTON FL

* Included under Randolph are its T-3 Screening OLFs Hondo Apt, Hondo Tx and the Air Force Academy's airfield used for USAFA screening.

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Data For Capacity Analysis

Table of Contents

Mission Requirements

a. Undergraduate Flight Training (UFT) Throughput/Graduates

1. Using the Base Force Structure as outlined in the JCS memo dated 7 February 1994, re: 1995 Base Realignments and Closures Force Structure Plan, and projected retention rates, give the projected yearly Pilot Training Rate (PTR)/Program Guidance Letter (PGL) requirements by installation for each of the next seven years.

Airfield: ______________________

Type of Pilot Training by Syllabus * (EXAMPLES)		Output Requirements, Attrition Factors, and Average Daily Student Load (ADSL) (include attrition factors used to establish entries to achieve output) (Output/Attrition Factor(%)/ADSL) By Fiscal Year							
		1994	1995	1996	1997	1998	1999	2000	2001
Strike (Intermediate/ Advanced)	USN	960/15%/240**	etc.						
	USMC								
	USCG								
	FMS								
Primary	USN								
	USMC								
	USCG								
	FMS								
	USAF								
Etc.									

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

**** Example Entry**

Mission requirements

a. Undergraduate Flight Training (UFT) Throughput/Graduates (cont.)

2. Using the Base Force Structure as outlined in the JCS memo dated 7 February 1994, re: 1995 Base Realignments and Closures Force Structure Plan and projected retention rates, give the projected yearly NFO Training Rate (NFOTR)/Program Guidance Letter (PGL) Navigator Training requirements by installation for each of the next seven years. Provide any additional sources of NFO/Nav trainees.

Airfield: ______________________________

Type of Navigator Training By Syllabus * (EXAMPLES)		Output Requirements , Attrition Factors, and Average Daily Student Load (ADSL) (include attrition factors used to establish entries to achieve output) (Output/Attrition Factor/ADSL) By Fiscal Year							
		1994	1995	1996	1997	1998	1999	2000	2001
Adv. Navigator (NAV)	USN	960/15%/240**							
	FMS								
	NOAA								
SUNT Core	USAF								
	ANG								
	AFRES								
	FMS								
Etc.									

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**
**** Example Entry**

3. Provide the historical attrition data for undergraduate pilot training by syllabus for FY 91-93:

Type of Pilot Training by Syllabus * (EXAMPLES)		Historical Attrition By Fiscal Year		
		1991	1992	1993
Strike (Intermediate/ advance)	USN	20%**		
	USMC			
	USCG			
	FMS			
Primary	USN			
	USMC			
	USCG			
	FMS			
	USAF			
Etc.				

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**
**** Example Entry**

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Mission Requirements

a. Undergraduate Flight Training Throughput/Graduates (cont.)

4. Provide the historical attrition data for undergraduate Navigator training by syllabus for FY 91-93:

Type of Navigator Training By Syllabus * (EXAMPLES)		Historical Attrition By Fiscal Year		
		1991	1992	1993
Adv Navigator (NAV)	USN	21%**		
	FMS			
	NOAA			
SUNT Core	USAF			
	ANG			
	AFRES			
	FMS			
Etc.				

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**
**** Example Entry**

5. Indicate in the table below the types of undergraduate pilot and NFO training currently conducted at your installation. Also give the number of pilots and NFOs trained in FY 1991, FY 1992, and FY 1993 at your installation.

Syllabus of Training *	Level of Training*	Graduates		
		FY 91	FY 92	FY 93
General	Primary			
Strike	Intermdiate Advanced			
SUPT	Primary			
	BF			
	AT			
Etc/				

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

6. List all other officer training (i.e., non-undergraduate pilot/NFO/Navigator training) by activity conducted at your installation. For each type training, give the actual figure for FY 1993 throughput in terms of the number of students that year, and give the projected figures for FY 94-01. Also give the average daily student load (ADSL) for each activity.

Other Officer Training (Graduates)										
Activity	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	ADSL for FY 1993

Use the following formula to calculate ADSL:

$$\frac{\text{Activity Throughput X Average Number of days each student was aboard}}{\textbf{Number of Training Days}}$$

7. List all enlisted training conducted at your installation. For each type training, give the actual figure for FY 1993 throughput in terms of the number of students that year, and the projected figures for FY 94-01. Also give the average daily student load (ADSL) for each activity.

Enlisted Training (Graduates)										
Activity	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	ADSL for FY 1993

Use the following formula to calculate ADSL:

$$\frac{\text{Activity Throughput X Average Number of days each student was aboard}}{\textbf{Number of Training Days}}$$

b. Flight Training

1. For each syllabus of undergraduate pilot and/or NFO/Navigator flight training and aircraft type required for that training, give the number of required sorties per graduate, flight time in the airspace/sortie, the dimensions, and the total number of flight hours required for each type of airspace listed that is used for training in that particular syllabus[Total flight hours = # Sorties x (Flight time per sortie)]. Also include additional types of airspace that could accommodate this training.

Note: For helicopter training, airspace dimensions are given as available airspace.

Syllabus of Training*: ______________ **Type Aircraft:** ______________

Type of Airspace	# Sorties per Graduate	Flight Time in Airspace / Sortie	Vertical Altitude (1000 ft)	Other Types of Usable Airspace	Ave Size (nm•)	Total Flight Hours per Graduate
MOA						
PAT						
AW						
ATCAA						
OWA						
OWAW						
WA						
AA						
RA						
RR						
MTR						

Key to types of airspace:
MOAs -- Military Operating Areas
WA -- Warning Areas
AA -- Alert Areas
RA -- Restricted Areas
ATCAA -- Air Traffic Control Assigned Airspace
OWAW -- Overwater Airways
RR -- Restricted Areas with Ranges
MTR -- Military Training Routes
AW-- Airways (e.g. corridors to and from training areas)
PAT -- Pattern (e.g. airspace above runways)
OWA -- Overwater Airspace
CLG -- Uncontrolled Airspace

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

Mission Requirements

b. Flight Training (cont.)

2. Give the total number of day and night sorties required for each undergraduate/graduate pilot and/or NFO/Navigator training syllabus and trainer aircraft (and level of training) for student training, overhead, and the total requirement.

Syllabus of Training * (EXAMPLES)	Level (Track) of Pilot Training *	Trainer Aircraft *	Sorties required per graduate					
			Student (syllabus)		Overhead[1]		Total	
			Day	Night	Day	Night	Day	Night
General	Primary	T-34C						
		JPATS						
Strike	Intermediate	T-2						
		T-45[2]						
	Advanced	TA-4J						
		T-45						
SUPT	Primary	T-37						
	BF	T-38						
	AT	T-1A						
Etc.								

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

3.. Indicate your training weather minimums (ceiling/visiblilty & crosswinds) by aircraft type and syllabus.

1 Overhead includes extra flights due to unsatisfactory performance, maintenance flights, incomplete flights, instructor training, flights, warm-up flights, and instrument check flights.

2 If requirements for the T-45 are still being derived, give best estimate.

Mission Requirements

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c. Flight Training Ground School

1. Provide the ground school training requirements for undergraduate/graduate Pilot and NFO/Navigator training facilities (classrooms, simulators, labs, life support facilities, etc.) by Facility Category Code Number (CCN). Include all applicable 171-*xx*, 179-*xx* CCN's and any other CCN where Undergraduate Pilot or NFO/Navigator training occurs. Ensure that the requirements for all types of simulators (cockpit (UTD), instrument (IFT), and motion-based/visual (OFT), etc.) are indicated.

Facility Category Code (CCN): ____________________

Syllabus of Training * (EXAMPLES)	Level of Training *	Facility Type(s)	Requirement (Hrs/Grad)
General	Primary		
Strike	Intermediate		
	Advanced		
SUPT	Primary		
	Bomber/ Fighter (BF)		
	Airlift/ Tanker (AT)		
Etc.			

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

2. List any additional constraints or limitations to the flight training ground school facilities that impact the training mission.

DRAFT [redacted]

d. Other Ground Training

1. By facility Category Code Number (CCN), for facilities in which student pilot or NFO/Navigator training is conducted, provide the usage requirements for **other than** student pilot or NFO/Navigator training. Include all applicable 171-xx, 179-xx CCN's. Other use made of the facilities must be derived either from course requirements and student throughput (for formal schools/courses of instruction) or that required to maintain readiness (for permanent/support personnel, reserves, etc.).

CCN: ____________

Type of Training Facility	User	Type of Training	FY 1993 Requirements		FY 2001 Requirements	
			Hrs/Student	Hrs/Yr	Hrs/Student	Hrs/Yr

2. By facility Category Code Number (CCN), provide the usage requirements for facilities in which student pilot or NFO/Navigator training **is not** conducted. Include all applicable 171-xx, 179-xx CCN's. This usage must be derived either from course requirements and student throughput (for formal schools/courses of instruction) or that required to maintain readiness (for permanent/support personnel, reserves, etc.).

CCN: ____________

Type of Training Facility	User	Type of Training	FY 1993 Requirements		FY 2001 Requirements	
			Hrs/Student	Hrs/Yr	Hrs/Student	Hrs/Yr

DRAFT

[redacted]

Mission Requirements

e. Training Airframes

1. Provide the number of aircraft (by type) that will be based at each base for use in undergraduate/graduate pilot and NFO/Navigator training programs in the Fiscal Year indicated; and the number of other aircraft **not used** for training. Project requirements if necessary.

(a) **Base**:

AIRCRAFT USED FOR TRAINING

Aircraft*	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
EXAMPLE T-34/JPATS	**25**	**25**	**25**	**25**	**25**	**20 (JPATS 4)**	**10 (JPATS 10)**	**0 (JPATS 15)**
T-2								
TA-4J								
T-34C								
T-39								
T-43								
T-44								
T-45								
TH-57								
JPATS								

AIRCRAFT NOT USED FOR TRAINING

C-12/C-21								
H-60								

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

Mission Requirements

e. Training Airframes

2. Provide the following information for each training airframe used for pilot and NFO/Navigator training:

AIRCRAFT TYPE:________________

FACTOR	VALUE
Utilization Rate (UTE Rate--sorties or hours per month)	
Average Sortie Duration (ASD) (hrs)	
Planned Turn Time (hrs) (Time from landing to takeoff)	
Min Runway Length (ft)	
Preferred Runway Length (ft)	
Min Runway Length for Touch And Go (T/G) (ft)	
Runway Width (ft)	
Required Taxiway Width (ft)	
Weight Bearing Requirement (kips)	
Apron Space Required (ft•/Aircraft)	
Hangar Space Required (ft•/Aircraft)	
Navigation Equipment On-Board (GPS?--when?)	

3. List any additional constraints or limitations to the training airframes that impact the training mission.

Facilities

a. Airfield

1. Provide the following information for the home field and each OLF that supports undergraduate flight training. (Following 20 Questions.)

Airfield/OLF Name: ______________ Location (Lat/Long and nearest town): ____________

Syllabi and Level of Training Supported: ___________________________

Ownership: ______________(Air Force/Army/Navy/Civilian)

For OLF: Distance (nm) from home field ________________

2. Complete the table below to describe the airfield's **annual operations (sorties flown) by type of aircraft.** Give best estimate of the number of sorties if exact data not available. If sortie totals are derived from estimates, list assumptions.

TYPE AIRCRAFT: ____________________

		FY 1991	FY 1992	FY 1993
Operational Sorties	Undergraduate Training Sorties			
	Graduate Training Sorties			
	Training Support Sorties*			
	Other Sorties			
	TOTAL SORTIES:			
Non-Operational Hours[3]	Standdowns			
	Maintenance			
	Other Events			

***..Training Support Sorties include maintenance flights, instructor proficiency/checkrides, etc.**

List below the "other sorties" and "other events" included in the table above:

3 Hours when the airfield was closed for flight operations.

Facilities

a. Airfield (cont.)

3. Indicate in the table below the number of undergraduate/graduate pilots and NFO/Navigators trained in FY 1991, FY 1992, and FY 1993 at your installation by syllabus, by level of training. In the blank FY column select the FY with the greatest output within the last 10 years and indicate the year and show data.

Syllabus of Training *	Level of Training *	Pilots and NFO/Navigators Trained			
		FY ___	FY 1991	FY 1992	FY 1993
Strike	Intermediate				
	Advanced				
Etc.					

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

4. Under normal operations, give the average number of daylight/night **flying hours** per day, and the number of days per year the airfield/OLF is scheduled for undergraduate pilot and/or NFO/Navigator training. (Do not include weekends.)

	FY 1991	FY 1992	FY 1993
Average hours (day/night)			
Days per year:			

Facilities

a. Airfield (cont.)

5. Enter the percentage of daylight undergraduate/graduate pilot and/or NFO/Navigator training sorties lost during each of the last three years due to weather, maintenance, operations, other military flights, commercial/civilian flights, or other reasons by aircraft type. Indicate if the sorties lost were from an undergraduate or graduate program.

Aircraft Type:____________________ **Undergraduate Training:** (Yes/No)

Factor		Percentage Lost		
		FY 91	FY 92	FY 93
Weather	Primary			
	Intermediate			
	Advanced			
	Etc.*			
Maintenance				
Operations				
Other Military Flights				
Civilian/Commercial Flights				
Other				
	Total			

* **Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

6. List the major factors in the "other" category in the above table.

7. Weather (WX): During the period of record (at least ten years), what was the yearly average:

a. Percentage of time WX at or above 200/1?

b. Percentage of time WX at or above 300/1?

c. Percentage of time WX at or above 500/1?

d. Percentage of time WX at or above 1000/3?

e. Percentage of time WX 3000/5 and above?

f. Percentage of time WX 3000/3 and above?

g. Percentage of time WX 1500/3 and above?

h. Percentage of time crosswind component to the primary runway at or below 15 knots?

i. Percentage of time crosswind component to the primary runway at or above 25 knots?

j. Mean number of days of icing in the local flying area?

Facilities

1. Airfield (cont.)

8. For each independent runway complex at home field and all OLFs, provide a breakdown of daytime and nighttime airfield usage by type of training (include overhead sorties) for undergraduate flight training over the past year. Use a separate table for each runway complex. (Note: The percentages in each column are of sorties flown and should sum to 100.) (Not applicable for helicopter training.)

Runway Complex Name: ______________

Syllabus of Training *	Level of Training * (Aircraft Type)	FY 1993 Airfield Use (Percent)	
		Day	Night
Flight Screening	T-3		
General	Primary (T-34/T-37)		
Strike	Intermediate (T-2/T-45)		
	Advanced (TA-4/T-45)		
Etc.			
	Total	100	100

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

9. Given the current mix of aircraft assigned to your air station, what is the average number of operations per hour this airfield and each OLF can support for each runway complex over a one year period (use the number of training days/year used by your service). This number should take in account reductions in operations due to weather and the times the airfield is closed to undergraduate/graduate pilot and/or NFO/Navigator training (i.e., calculations should be based on the methodology in the FAA's Airport Capacity and Delay manual). Show how this number was derived.

10. Complete the table below to describe the runway activity to each runway at the home field and all OLFs. Use the FAA Airport Operations Count (traffic count) to determine departures and arrivals:

	FY 1991	FY 1992	FY 1993
Runway ___ Traffic Count			
Runway ___ Traffic Count			

DRAFT [redacted]

Facilities

a. Airfield (cont.)

11. Give the percent of VFR and IFR flight operations (departures and arrivals) at each airfield and OLF (use the flight operations data for FY91 - FY93):

	FY 1991	FY 1992	FY 1993
VFR			
IFR			
Total	100%	100%	100%

DRAFT [redacted]

Facilities

a. <u>Airfield (cont.)</u>

12. Discuss the factors that constrain the number of available student flying hours per day (e.g., AICUZ agreements).

13. Assuming that airfield operations are not constrained by operational funding (personnel support, increased overhead costs, etc.), with the <u>present</u> equipment, physical plant, etc., what additional capacity (in flight operations (traffic count) per hour) could be gained? Provide details and assumptions for all calculations[4].

14. Assuming that airfield operations are not constrained by construction/equipment funds, what additional capacity (in flight operations (traffic count) per hour) could be gained? Provide details, estimated costs, and assumptions for all calculations[5]

15. List and explain the limiting factors that further funding for personnel, equipment, facilities, etc. cannot overcome (e.g., airspace size/availability, AICUZ restrictions, environmental restrictions, land areas).

16. Give the maximum sortie generating capacity per year of your installation given the current aircraft mix and type at your installation, and consistent with the training mission.

Syllabus of Training *	Level (Track) of Pilot Training *	Trainer Aircraft *	Maximum Sorties
General	Primary	T-34C	
		JPATS	
Strike	Intermediate	T-2	
		T-45[6]	
	Advanced	TA-4J	
		T-45	
SUPT	Primary	T-37	
	BF	T-38	
	AT	T-1A	
Etc.			

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

17. Are there any recommendations on how to increase sortie generating capacity and reduce the number of training installations? If so please explain.

---

4 Answer for each independent runway complex at the home field and all OLFs and by aircraft type.

5 Answer for each independent runway complex at the home field and all OLFs and by aircraft type.

6 If requirements for the T-45 are still being derived, give best estimate.

DRAFT [redacted]

Facilities

a. <u>Airfield (cont.)</u>

18. Give the designation, length, width, load bearing capacity, lighting configurations, and landing constraints for each runway at the home field and all OLFs.

Runway/Lane/Pad (Airfield Name & Runway Designation)	Length (ft)	Width (ft)	Load Bearing Capacity (lbs/ft•)	Lighting					Arresting gear type and location	IFR or VFR (I or V) Capable? Night (N) Capable?	Approach Aids (IFR/VFR)
				F	P	C	N	G			

F -- Full Lighting (approach, runway edge, center, and threshold)
P -- Partial Lighting (less than full)
C -- Carrier Deck Lighting Simulated (embedded)
N -- No lighting
G -- NVG Lighting

19. In the table below list the available NAVAIDS with published approaches that support the main airfield and/or OLFs. Note any additions/upgrades to be added between now and FY 1997.

Runway Designation	NAVAID	Published Approaches

Facilities

a. Airfield (cont.)

20. For the following category codes, provide the unit measure requested and any appropriate comments about the usability of the facility for undergraduate flying training.

CAT CODE	Facility Type	Unit Measure	Quantity	Comments
111	Runways Fixed Wing	SY		
111	Runways Rotor Wing	SY		
111	Landing Pads	SY		
113	Parking Aprons	SY		
113	Access Aprons	SY		
121	Direct Fueling	OL / GM		
121	Truck Fueling	OL / GM		
121	Defueling	OL / GM		
124	Fuel Storage	GA		
136-36 (USN)	Carrier Lighting	EA		
149	Arresting Gear	EA		
421 422(AF)	Ammunition Storage	CF		
425	Open Ammunition Storage	SY		

21. List any additional constraints or limitations to the airfield that impact the training mission.

DRAFT [redacted]

Facilities

b. Airspace

1. Give the number of workable blocks of airspace and type of airspace used by your installation, the average dimensions (n.mi. x n.mi. x ft), and availability in daylight hours/year of these blocks for each syllabus and level of pilot and/or NFO/Navigator training and trainer aircraft. Note that a workable block of airspace must be large enough to support the required training maneuvers/evolutions without encroaching on another block and have an ingress/egress route that does not go through other airspace blocks. (This question is not applicable to helicopter training.)

Syllabus of Training *	Level of Training *	Trainer Aircraft	# Workable Blocks of Airspace	Type of Airspace	Average Block Dimensions	Availability (Hrs/Yr)/Block
General	Primary	T-34C				
		JPATS				
Strike	Intermediate	T-2C				
		T-45				
		JPATS				
	Advanced	TA-4J				
		T-45				
Etc.						
		Total				

*** Use appropriate Navy, Air Force, or Army chart see Appendix 1.**

Key to types of airspace:

MOAs -- Military Operating Areas
WA -- Warning Areas
AA -- Alert Areas
RA -- Restricted Areas
ATCAA -- Air Traffic Control Assigned Airspace
OWAW -- Overwater Airways
RR -- Restricted Areas with Ranges
MTR -- Military Training Routes
AW-- Airways (e.g. corridors to and from training areas)
PAT -- Pattern (e.g. airspace above runways)
OWA -- Overwater Airspace
CLG -- Uncontrolled Airspace

2. If the transit corridors between training areas and air station limits the number of aircraft that can train concurrently (i.e. can't safely use all blocks) give this limitation and explain what this number is based on. Break this information out by type and level of training if appropriate.

Facilities

b. Airspace (cont.)

3. List all the Special Use Airspace (SUA) (e.g., alert areas, restricted areas, warning areas, and MOAs) and airspace-for-special-use (e.g., ranges and low level training routes) within 100 n.mi. of the installation that are used for flight training. For each airspace provide the following information (seven questions):

(a) Provide the type, name, location, size (nmi. x nmi. x ft), available times, airspace controlling activity, scheduling activity, method of scoring/recording, and proximity to airport traffic areas.

(b) Is the airspace under radar and/or communications coverage/control? If so, who provides the services?

(c) Does the Navy/Air Force/Army own the land below the training airspace under your cognizance? If not, do you control any real property interest? If so, describe the agreements and when these agreements are up for renewal?

(d) What is the distance en route?

(e) Are there any environmental limitations in or surrounding any of the training areas (air, land or sea) that impede the mission? If so, provide details.

(f) Is land, sea, or air encroachment an issue which endangers long term availability of any training areas? If so, provide details.

(g) In the event that it became necessary to increase base loading at your installation, does the airspace overlying and adjacent to your installation have the capacity to assume an additional workload? Estimate the percentage of the possible increase in usable airspace. Provide the basis/calculations for these estimates.

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Facilities

b. Airspace (cont.)

4. Is the available SUA/airspace-for-special-use within 100 n.mi. of your installation sufficient to satisfy all training requirements?

5. If deployments/detachments to other domestic locations are required to satisfy training requirements, provide the following information for each location:

(a) Where do these units/squadrons deploy?

(b) How far from your installation?

(c) Frequency?

(d) Reasons for deployment (e.g., adverse weather, airspace saturation, training, versatility, etc.)

(e) Annual costs incurred for deployments due to adverse weather?

(f) Annual costs incurred for deployments due to airspace non-availability?

(g) Annual costs incurred for deployments due to insufficient training versatility (e.g., lack of low level training routes etc.)?

6. List all airspace control measures used for flight training that do not qualify as SUA/airspace-for-special-use and describe the limitations and capabilities of those control measures.

7. For each syllabus of undergraduate/graduate pilot and/or NFO/Navigator flight training, state whether you require any specific terrain feature or overwater access for training.

Syllabus of Training *	Terrain Feature or Overwater Requirement

* Use appropriate Navy, Air Force, or Army syllabus of training list

8. List any additional constraints or limitations to the airspace that impact the training mission.

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Facilities

c. Ground Training

1. By Facility Category Code , complete the following table for all training facilities at the installation in which undergraduate pilot and/or NFO/Navigator training is conducted. Include all 171-*xx*, 179-*xx* category codes, and any other applicable category codes.

For example: in the category 171-10, a type of training facility is academic instruction classroom. If you have 10 classrooms with a capacity of 25 students per room, the design capacity would be 250. If these classrooms are available 8 hours a day for 300 days a year, the capacity in student hours per year would be 600,000.

Cat Code: ________

Type Training Facility	Total Number	Design Capacity (PN)[7]	Capacity (Student HRS/YR)

2. For the Student HRS/YR value in the preceding table, describe how that entry was derived.

3. Assuming that the ground school training facility is not constrained by operational funding (personnel support, increased overhead costs, etc.), with the present equipment, physical plant, etc., what additional capacity (in student hours) could be gained? Provide details and assumptions for all calculations.

4. Assuming that ground school training facility is not constrained by additional construction/equipment funds, what additional capacity (in student hours) could be gained? Provide details, estimated costs, and assumptions for all calculations[8]

5. List and explain the limiting factors that further funding for personnel, equipment, facilities, etc. cannot overcome.

---

7 Design Capacity (PN) is the total number of seats available for students in spaces used for academic instruction; applied instruction; and seats or positions for operational trainer spaces and training facilities other than buildings, i.e., ranges. Design Capacity (PN) must reflect current use of the facilities.

8 Answer for each independent runway complex at the home field and all OLFs and by aircraft type.

DRAFT [redacted]

c. Ground Training (cont.)

6. By Category Code , complete the following table for all training facilities at the installation in which undergraduate pilot and/or NFO/Navigator training is **not** conducted. Include all 171-*xx*, 179-*xx* category codes, and any other applicable category codes.

For example: in the category 171-10, a type of training facility is academic instruction classroom. If you have 10 classrooms with a capacity of 25 students per room, the design capacity would be 250. If these classrooms are available 8 hours a day for 300 days a year, the capacity in student hours per year would be 600,000.

Cat Code: __________

Type Training Facility	Total Number	Design Capacity (PN)[9]	Capacity (Student HRS/YR)

7. For the Student HRS/YR value in the preceding table, describe how that entry was derived.

[9] Design Capacity (PN) is the total number of seats available for students in spaces used for academic instruction; applied instruction; and seats or positions for operational trainer spaces and training facilities other than buildings, i.e., ranges. Design Capacity (PN) must reflect current use of the facilities.

DRAFT [redacted]

Facilities

c. <u>Ground Training (cont.)</u>

8. Assuming that the ground school training facility is not constrained by operational funding (personnel support, increased overhead costs, etc.), with the <u>present</u> equipment, physical plant, etc., what additional capacity (in student hours) could be gained? Provide details and assumptions for all calculations.

9. Assuming that ground school training facility is not constrained by additional construction/equipment funds, what additional capacity (in student hours) could be gained? Provide details, estimated costs, and assumptions for all calculations[10]

10. List and explain the limiting factors that further funding for personnel, equipment, facilities, etc. cannot overcome.

---

10 Answer for each independent runway complex at the home field and all OLFs and by aircraft type.

Facilities

d. Aircraft Parking, Maintenance, and Supply

1. Provide the number of other aircraft (both active and reserve operational squadrons) that are based at your installation. If a squadron has more than one type of aircraft, fill out a separate line for each type.

Squadron	Number of Aircraft (Fiscal Year)								Mission
	1994	1995	1996	1997	1998	1999	2000	2001	

2. Using the types (and mix) of aircraft currently stationed at your installation, project the maximum number of these aircraft that could be based and parked on your current parking aprons. Use your service specific regulations regarding standard measures, (NAVFAC P-80, etc.).

Aircraft Type	# of Aircraft	Comments

3. Provide the details of your calculations, including your assumptions on the minimum separation between aircraft, folding of aircraft wings and any obstructions that may limit the placement of aircraft on the parking apron spaces.

DRAFT [redacted]

Facilities

d. Aircraft Parking, Maintenance, and Supply (cont.)

4. Using the types (and mix) of aircraft currently stationed at your installation, project the maximum number of these aircraft that could be housed in your hangars. Use your service specific regulations regarding standard measures, (NAVFAC P-80, etc.).

Aircraft Type	# of Aircraft	Comments

5. Provide the details of your calculations, including your assumptions on the minimum separation between aircraft, folding of aircraft wings and any obstructions that may limit the placement of aircraft in the hangars.

6. Using the types (and mix) of aircraft currently stationed at your installation, project the maximum number of these aircraft that could be maintained at your installation based on availability of maintenance facilities (i.e., maintenance docks, wash racks, NDI facilities, etc.).

Aircraft Type	# of Aircraft	Comments

7. Provide the basis (including source data) of your calculations in enough detail so they can be reproduced.

8. Describe any maintenance backlogs that your installation currently experiences on a routine basis. List the average backlog times and the reasons for the backlogs (e.g. supply shortfall, insufficient local labor, over tasking of work stations, space limitations).

DRAFT

[redacted]

Facilities

d. <u>Aircraft Parking, Maintenance, and Supply (cont.)</u>

9. Using the types (and mix) of aircraft currently stationed at your installation, project the maximum number of these aircraft that could be supported at your installation based on availability of supply/storage facilities.

Aircraft Type	# of Aircraft	Comments

10. Provide the basis (including source data) of your calculations in enough detail so they can be reproduced.

11. List any additional constraints or limitations to the parking, maintenance, and supply facilities that impact the training mission.

DRAFT [redacted]

Features and Capabilities

b. Housing and Messing

1. Provide data on the BOQs and BEQs assigned to your current plant account. The desired unit of measure for this capacity is people housed. Differentiate between officer/enlisted/civilian, and include if billeting is for students or permanent party.

Facility Type, Bldg. # & Cat Code	Total No. of Beds	Total No. of Rooms	Total people housed

2. Provide data on the BOQs and BEQs projected to be assigned to your plant account in FY 1997. The desired unit of measure for this capacity is people housed. Differentiate between officer/enlisted/civilian, and include if billeting is for students or permanent party.

Facility Type, Bldg. # & Cat Code	Total No. of Beds	Total No. of Rooms	Total people housed

DRAFT

[redacted]

3. Provide data on the messing facilities assigned to your current plant account.

Facility Type, Bldg. # & Cat Code	Total No. of Beds	Total No. of Rooms	Total people housed

4. Provide data on the messing facilities projected to be assigned to your plant account in FY 1997.

Facility Type, Cat Code and Bldg. #	Total Sq. Ft.	Seats	Avg # Noon Meals Served

5. Based upon your installation's on and off-base housing and messing facilities, what average daily student load (ADSL) could you support from FY95 - FY01? Express the daily student load in terms of enlisted, officer, and civilian.

Type Facility	Average Daily Student Load (ADSL)						
	1995	1996	1997	1998	1999	2000	2001
BOQ							
BEQ							
On-Base Housing							
Off-Base Housing							
Messing							

6. Provide the basis (including source data) of your calculations in enough detail so they can be reproduced.

7. List any additional constraints or limitations to the housing and messing facilities that impact the training mission.

Appendix 1

Appendix 1 a

Navy pilot training syllabi with service components trained.

Syllabus of Training	
Strike	USN
	USMC
	FMS
Maritime	USN
	USMC
	USCG
	FMS
	USAF
E2/C2	USN
	USMC
	USCG
	FMS
Rotary	USN
	USMC
	USCG
	FMS

Navy NFO training syllabi with service components trained.

Adv Navigator (NAV)	USN
	FMS
	NOAA
Tact Navigator (TN/BN)	USN
	USMC
Radar Intercept Officer (RIO)	USN
	USMC
Over Water Jet Navigator (OJT)	USN
Airborne Tact Data Systems (ATDS)	USN
	USCG

Navy pilot training syllabi with levels of training and types of aircraft used.

General	Primary	T-34C
		JPATS
Strike	Intermediate	T-2
		T-45[11]
	Advanced	TA-4J
		T-45
E2/C2	Intermediate	T-44
	Advanced	T-45[2]
		T-2
Maritime	Intermediate	T-34C
		JPATS
	Advanced	T-44
Rotary	Intermediate	T-34C
		JPATS
	Advanced	TH-57

Navy NFO syllabi of training with levels of training and types of aircraft used.

General	Primary	T-34/T-2
		JPATS
General	Intermediate	T-34/T-2
NAV	Advanced	T-43
TN/BN	Advanced	T-2
	Advanced	T-39
RIO	Advanced	T-2
	Advanced	T-39
OJN	Advanced	T-2
	Advanced	T-39
ATDS	Advanced	E-2C

Navy list of aircraft used in undergraduate pilot and NFO training.

T-2
TA-4J
T-34C
T-39
T-43
T-44
T-45
TH-57
JPATS

[11] If requirements for the T-45 are still being derived, give best estimate.

Appendix 1 b

Air Force pilot training syllabi with service components trained.

Syllabus of Training	
Flight Screening	USAF
	ANG
	AFRES
	USAFA
	FMS
UPT	USAF
	ANG
	AFRES
	FMS
SUPT	USAF
	ANG
	AFRES
	FMS
	NAVY
SUPT HELO	USAF
	ANG
	AFRES
ENJJPT	USAF
	ANG
	AFRES
	NATO
BANKED REQ T-38	USAF
BANKED REQ T-1	USAF
FIXED WING QUAL TNG	USAF
	ANG
	AFRES
ROTARY WING QUAL	USAF
	ANG
	AFRES
AVIATION LEADERSHIP PROGRAM T-37	FMS
UPT T-38 ADVANCED TNG PGM	FMS

INTRO TO FTR FUND (IFF) AT-38	USAF
	ANG
	AFRES
	NATO
	FMS
INTRO TO BOMBER FUND (IBF) (NO A/C, SIMS ONLY)	USAF
	AFRES
	ANG
T-43	USAF
	FMS
PILOT INSTR TNG (PIT) T-37	USAF
	FMS
PILOT INSTR TNG (PIT) T-38	USAF
	FMS
PILOT INSTR TNG (PIT) T-1	USAF
T-1 PIT TRANSITION	USAF
PILOT INSTR TNG (PIT) AT-38	USAF
	NATO
ENJJPT PIT T-37	USAF
	NATO
ENJJPT PIT T-38	USAF
	NATO
JET CURRENCY COURSE T-38	USAF
	ANG
	AFRES
MED OFFICER FLT FAM TNG T-37	USAF

Air Force navigator training syllabi with service components trained.

Syllabus of Training	
SUNT Core Sys Off Tng	USAF
	ANG
	FMS
SUNT Core Topoff Tng	USAF
	ANG
SUNT Core Nav Tng	USAF
	ANG
	AFRES
	FMS
SUNT Core EWO Tng	USAF
	ANG
	AFRES
	USMC
SUNT Core EWO + Topoff	USAF
	ANG
Interservice UNT	USN
	FMS
	NOAA
USMC UNT	USMC
EWO Tng CAF	USAF
Nav Instr Tng T-43	USAF
	USN
Intro to Ftr Fundamentals WSO AT-38	USAF
	ANG
	FMS
IFF Instr WSO Tng AT-38	USAF

Air Force pilot training syllabi with levels of training and types of aircraft used.

Syllabus	Level of Tng	Aircraft
Screening	Accession	T-3A, T-41
UPT	Primary	T-37
	Advanced	T-38
SUPT	Primary	T-37
		JPATS
	Advanced BF	T-38
	Advanced AT	T-1A
	Advanced Helo	UH-1
ENJJPT	Primary	T-37
		JPATS
	Advanced	T-38
Banked Req	Graduate	T-38
Banked Req	Graduate	T-1A
Fixed Wing Qual	Grad Phase 2	T-37
	Phase 3 or	T-1
	Phase 3	T-38
Rotary Wing Qual	Graduate	UH-1
Aviation Ldrshp Pgm	Primary	T-37
Adv Tng Pgm	Advanced	T-38
IFF	Graduate	AT-38
IBF	Graduate	T-1A Sims Only
T-43 Pilot Tng	Graduate	T-43
PIT T-37	Graduate	T-37
PIT T-38	Graduate	T-38
PIT T-1A	Graduate	T-1A
T-1A Transition	Graduate	T-1A
IFF PIT	Graduate	AT-38
ENJJPT T -37 PIT	Graduate	T-37
ENJJPT T-38 PIT	Graduate	T-38
Jet Currency Course	Graduate	T-38
Med Off Flt Fam Tng	Graduate	T-37

Air Force navigator syllabi of training with levels of training and types of aircraft used.

Syllabus	Level of Tng	Aircraft
SUNT SO Tng	Primary	T-43
	Advanced	T-38
SUNT Topoff Tng	Advanced	T-37
SUNT Nav Tng	Primary	T-43
	Advanced	T-43
SUNT EWO Tng	Primary	T-37/T-43
	Advanced	T-43
SUNT EWO Topoff	Advanced	T-37
Interservice UNT	Advanced	T-43
USMC UNT	Primary	T-43
EWO Tng CAF	Advanced	T-43
Nav Instr Tng	Graduate	T-43
IFF WSO	Graduate	AT-38
IFF WSO Instr Tng	Graduate	AT-38

Air Force list of aircraft used in undergraduate pilot and navigator training.

T-37
JPATS
T-38
T-1A
AT-38
T-43
UH-1

Appendix 1 c

Army pilot training syllabi with levels of training and types of aircraft used.

Syllabus	Level of Tng	Aircraft
IERW	Primary	UH-1/TH-67
	Instruments	UH-1/TH-67
	Track	UH-1/OH-58
Graduate	AQC IPC MOI MTP	AH-64
	AQC IPC MOI MTP	CH-47D
	AQC SUP MOI MTP SUP (M)	OH-58D
	AQC IPC MOI MTP	AH-1
	AQC IPC MOI MTP	UH-60
	IPC MOI	OH-58A/C
	IPC NVG RWART RWIC RWQC RWIFEC MOI (CT) MOI (NVG)	UH-1
	FWMEQC FWIPC	U-21
	AQC FLT Refresher	C-12
Euro/NATO	Primary Instru ADINS ADCON C/S	UH-1
Spanish	RWQC TQO IERW NVG IPC	UH-1

Army pilot training syllabi with service components trained.

IERW	USA
	USAF
	USAF (RWQC)
	SPANISH
	EURO/NATO
	FMS
	OTHER
Graduate	USA
	SPANISH
	EURO/NATO
	FMS
	OTHER

External Policy Issues with BRAC Implications

- Flight Screening
- Training Aircraft Mix
- Fixed-Wing Training for Helo Pilots
- UHPT Consolidation -- Single Site
- Aircraft Beddown Configuration
- JPATS Syllabus Questions:
  - IFR vs. VFR
  - Class Progression
  - Etc. . .

UPT Joint / Cross-Service Group

Policy Analysis Forum

- Build on Roles & Mission Study Efforts
  - Draw on Service / JCS Study Teams
  - Use Existing "Joint Fixed-Wing Training" and "Consolidation of Initial Helicopter Training" Studies as Analytical Base
- Recommended participation:
  - Services, JCS, OSD
  - OUSD (P&R) -- Chair
  - Contractor Support (?)

Document Separator

TAB 9

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

June 2, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1405 hours on June 2, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch opened with introductory remarks, and Mr. Gardner continued with administrative comments. Mr. Gardner then presented a proposed "Step One" statement recommended by the Group's joint study team (JST). Group discussion pointed out that the statement was a description of the initial broad approach which would indicate the need to continue with more detailed analyses of undergraduate pilot training (UPT) category. The Group approved the statement as presented.

Mr. Gardner then briefly talked about the on-going discussions and work-in-progress on joint cross-service analyses and pointed out that the draft proposal was neither complete nor had it been approved by the BRAC 95 Steering Group. The Group opined that it would be difficult to finalize an approach to joint cross-service analyses for UPT before knowing the outcome of the on-going discussions and potential decisions by the Steering Group.

Next, MAJ Fletcher, Department of the Army, gave a presentation (attached) on the Army's Decision Pad (D-Pad) Model which is a weighted multi-criteria decision support model. Mr. Gardner stated that the JST recommended this model be used as a tool by decision makers to help determine functional value for the proposed joint optimization model. Group consensus was to use the D-Pad Model to aid the Group's cross-service analyses of UPT functional value. The results could also be used as a functional value input to the joint optimization model, if it is adopted.

Dr. Nickel, Department of the Navy, then briefed the Group on a proposed joint optimization model (attached) which is a mixed-integer linear program. The Group discussion included concerns about the potential usefulness and flexibility of such a model. The concepts of constrained and unconstrained analyses, data elements, multiple variables, and policy imperatives were also discussed in general terms. Mr. Finch pointed out that linear models, like other models, have advantages and disadvantages which users should be aware of and understand. The Group consensus was that the model could be used as it exists, or as a point of departure, to assist them in their analyses. The Group agreed to defer decision on the optimization model pending the outcome of the on-going joint cross-service analyses discussions.

Mr. Finch articulated that these models, or any other models, should be used as tools by decision makers to assist them in the overall base closure and realignment selection process. The process should preclude decision makers from being driven slavishly to a

[redacted]

[redacted]

mechanical conclusion and provide the ability to apply common sense and judgement to decision making.

Next, Mr. Gardner gave an overview of JST plans for the month and noted that the draft joint cross-service analyses proposal would establish a Tri-Department BRAC Team to support the Group and coordinate the preparation of data inputs for analyses. It is anticipated the Military Departments would provide the personnel, subject to the Group's approval, and that some or all of the members might come from the Group's existing JST.

There being no further matters to discuss, the meeting was adjourned at 1525 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

June 2, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
LTC John Finlay, IV, Army
MAJ Charles Fletcher, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
Dr. Ron Nickel, Navy
Maj Gen Ed Tenoso, Air Force
Col Buster Ellis, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Maj Howard Hachida, Air Force
Col Wayne Mayfield, Air Force
Lt Col Mark Bruggemeyer, Air Force
Ms. Donna MacPherson, OSD (Comptroller)
Col Paul Thompson, OSD (Base Closure)
Lt Col Tom Watson, Joint Staff (J-7)

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(2 June 1994 Meeting -Rm 3E752)

1. **Minutes**

2. **"Step One" Statement**

3. **Draft Joint Cross-Service Group Analyses Process**

   A. **Process Diagram (attached)**

   B. **Cross-Service Analysis Steps and Timelines (attached)**

4. **Army Functional Value Model - MAJ Chuck Fletcher**

5. **Navy Optimization Model - Mr. Ron Nickel**

6. **Joint Study Team Plans**

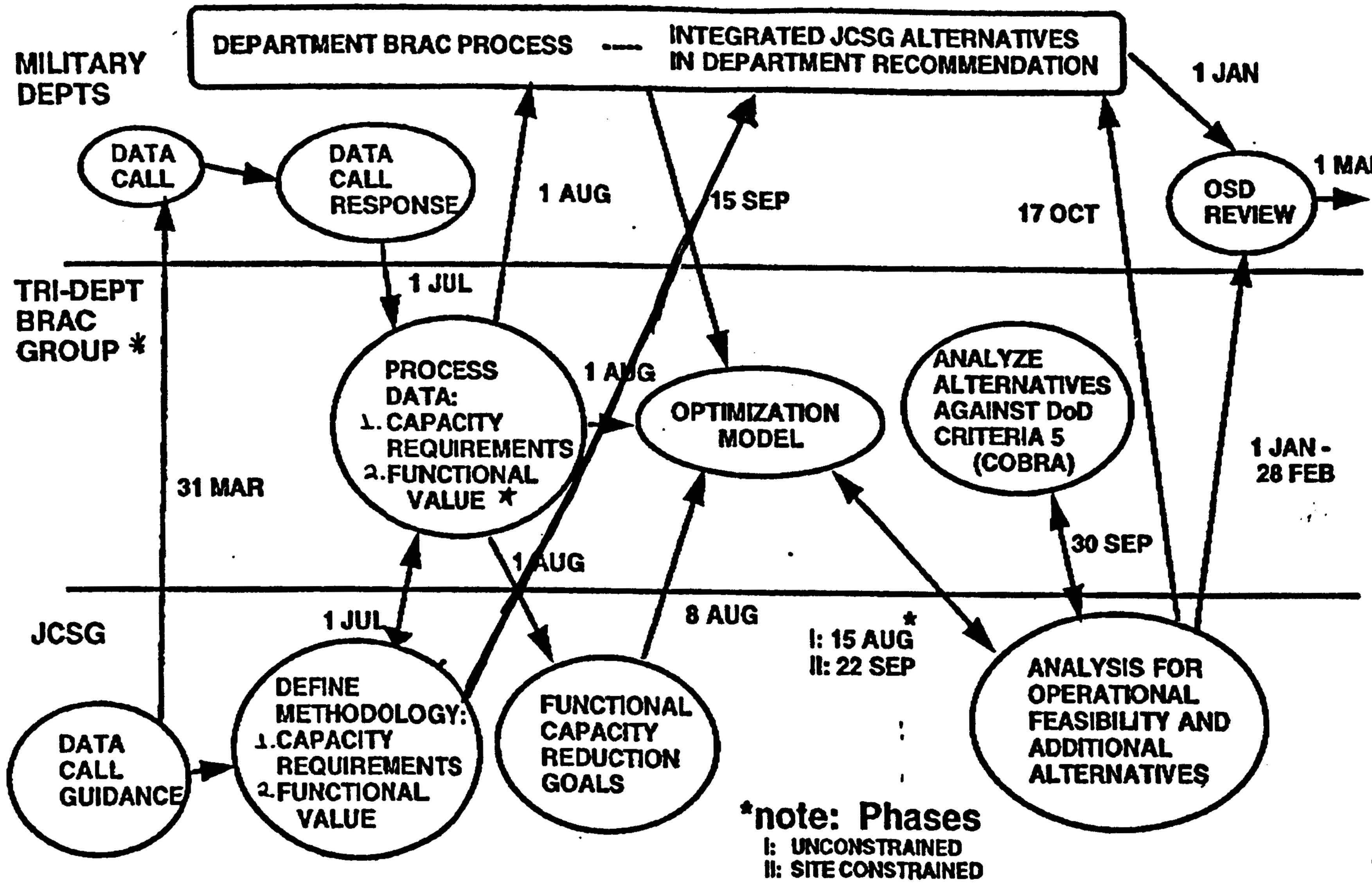
   A. **"Shift" to Tri-Dept BRAC Group**

   B. **Game Plan for June 94**

STEP ONE

"In this initial effort, the primary measure of capacity used in analyzing training air stations was the flight training workload - average onboard - of student aviators (pilots and NFO's). The historic "peak" workloads per base were totaled and this aggregate total compared to the total workload generated by the approved FY 2001 force structure requirements to determine if excess capacity exists. The certified data indicated excess capacity did exist, so the Joint Cross-Service Undergraduate Pilot Training Group evaluated facilities in the category for military value."

JOINT ANALYSIS PROCESS



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8/25/04

* Expanded Joint Study Team ?

* Army D-PAD Model

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Cross-Service Analysis Steps

What	Who	When
Issue Data Call Guidance	JCSG	April
Issue Data Call	Mil Deps	April
Determine 1) How to calculate excess capacity 2) Weights for functional measures of merit	JCSG	June
Provide Data to JCSG	Mil Deps	July
Develop Methodology for Inputs to Optimization Model 1) Excess capacity 2) Functional military value 3) Rules for model	JCSG	July
Approve Methodology for Inputs to Optimization Model	Steering Group	July

DRAFT

DRAFT

Cross-Service Analysis Steps

What	Who	When
Run Unconstrained Model	Tri Dept BRAC Gp	August
Analyze Results	JCSG	August
Provide Installation/Site Potential Closure/Military Value Info to JCSG	Mil Deps	September
Develop Inputs to Model	JCSG	September
Run Constrained Model	Tri Dept BRAC Gp	September
Analyze Results	JCSG	October
Determine Alternatives for Mil Dep Consideration	JCSG	October
Analyze Alternatives	Mil Deps	Nov - Dec

DRAFT

DECISION PAD SOFTWARE

INTRODUCTION

EXAMPLE PROBLEM

PRESENTED BY : MAJ CHUCK FLETCHER, DACS-TABS
ROOM 2A684, phone 697-1765/6

D-PAD MODEL DESCRIPTION

D-PAD MODEL

- WEIGHTED MULTI-CRITERIA DECISION SUPPORT MODEL.

ADVANTAGES:

- COMMERCIAL SOFTWARE.
- USES SIMPLE MATHEMATICAL PRINCIPALS.
- PROVIDES SENSITIVITY ANALYSIS.

D-PAD MODEL

REQUIREMENTS: CRITERIA (ATTRIBUTES)

RATING SCALES

WEIGHTS

ALTERNATIVES

D-PAD MODEL

EXAMPLE PROBLEM

CRITERIA (ATTRIBUTES) ARE DATA ELEMENTS THAT :

- ARE MEASURABLE FOR ALL ALTERNATIVES
- ARE MEASURED IN THE SAME UNITS
- ARE INDICATORS OF VALUE/UTILITY/WORTH
- CAN BE SCALED. (WE KNOW WHAT IS GOOD, WHAT IS BAD)

EXAMPLES:

- COST ($K) = INITIAL PURCHASE PRICE IN THOUSANDS OF DOLLARS, ROUNDED TO THE NEAREST THOUSAND
  DEFINITION OF 'PURCHASE PRICE' MAY BE REQUIRED

- MAXIMUM SPEED (MPH) = MAXIMUM SPEED OBTAINABLE IN MILES PER HOUR. ***PROVIDE SOURCE OF DATA***

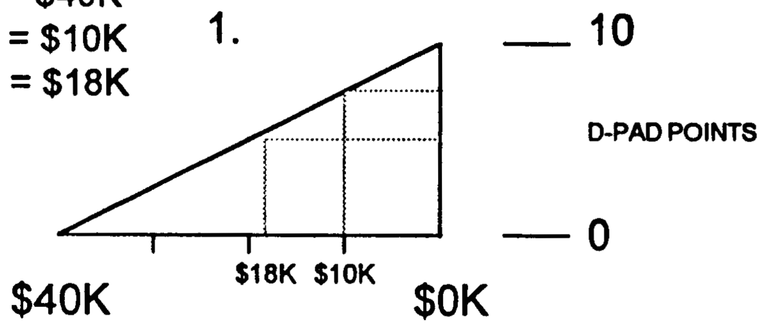
- SAFETY (Y/N) = ARE THESE SAFETY FEATURES INCLUDED?
  DRIVER SIDE AIRBAG (Y/N)
  ANTI-LOCK BRAKES (Y/N)
  PASSENGER SIDE AIRBAG (Y/N)

RATING SCALES TELL THE MODEL WHAT IS GOOD AND WHAT IS BAD.

COST($K) = 1. SCALED FROM $0 TO MAXIMUM VALUE ENTERED - OR -
2. SCALED FROM MINIMUM VALUE TO MAXIMUM VALUED,
WITH THE 'HIGH' SCORE GOING TO THE LOWEST VALUE.

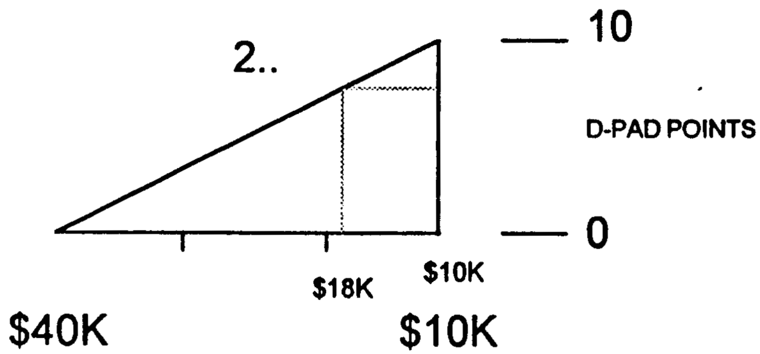
EXAMPLE: BMW = $40K
FORD = $10K
CHEVY = $18K

1.



$10K=7.5
$18K=5.5
$40K=0.0

2..

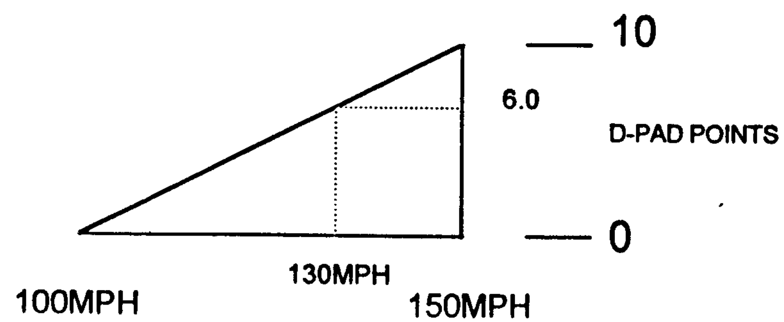


$10K=10.0
$18K=7.3
$40K=0.0

RATING SCALES (CONT) -

MAX SPEED (MPH)= SCALED FROM MINIMUM VALUE ENTERED TO MAXIMUM VALUE ENTERED, WITH THE 'HIGH' SCORE GOING TO THE MAXIMUM VALUE.

EXAMPLE: BMW = 150 MPH
FORD = 100 MPH
CHEVY = 130 MPH



150MPH =10.0
130MPH = 6.0
100MPH = 0.0

SAFETY FEATURES = SCALED EITHER 'YES' OR 'NO', WITH YES GETTING A HIGHER SCORE.
DEFAULT VALUES FOR YES = 8.0
NO = 2.0

EXAMPLE:

	DRIVER AIRBAG	ANTILOCK BRAKES	PASSENGER AIRBAG
BMW	YES	YES	YES
FORD	NO	NO	NO
CHEVY	YES	NO	NO

SCALED VALUES:

EXAMPLE:

	DRIVER AIRBAG	ANTILOCK BRAKES	PASSENGER AIRBAG
BMW	8.0	8.0	8.0
FORD	2.0	2.0	2.0
CHEVY	8.0	2.0	2.0

WEIGHTING: CRITERIA WEIGHTING OF SAFETY FEATURES:

EXAMPLE;	DRIVER AIRBAG	ANTILOCK BRAKES	PASSENGER AIRBAG
BMW	8.0	8.0	8.0
FORD	2.0	2.0	2.0
CHEVY	8.0	2.0	2.0

FOR THE SAFETY FEATURES, WE DETERMINE THAT THE DRIVERS AIRBAG IS THE MOST IMPORTANT, ANTILOCK BRAKES IS SECOND AND PASSENGER AIRBAG IS THE LEAST IMPORTANT. IF THE SAFETY FEATURES TOTAL 10 POINTS; THEN WE ASSESS THE FOLLOWING WEIGHTS TO EACH:

DRIVERS AIRBAG = 5 OR 50% OF THE TOTAL
ANITLOCK BRAKES = 3 OR 30%
PASSENGER AIR BAG = 2 OR 20%

	DRIVER AIRBAG	ANTILOCK BRAKES	PASSENGER AIRBAG	TOTAL
BMW	4.0	2.4	1.6	8.0
FORD	1.0	.6	.4	2.0
CHEVY	4.0	.6	.4	5.0

WEIGHTING: CRITERIA WEIGHTING:

OF THE THREE MAIN CRITERIA THE WEIGHTS USED ARE:

COST = 40%
SPEED = 20%
SAFETY = 40%

	COST	SPEED	SAFETY
BMW	0.0	10.0	8.0
FORD	10.0	0.0	2.0
CHEVY	7.3	6.0	5.0

WEIGHTED:		COST	SPEED	SAFETY	TOTAL	
	BMW	0.0	2.0	3.2	5.2	
	FORD	4.0	0.0	.8	4.8	
	CHEVY	2.92	1.2	2.0	6.1	** WINNER

MANEUVER INSTALLATIONS

	WEIGHT		BRAGG	CAMPBELL	CARSON
MANEUVER ACRES	75		105.5-	81.3-	333.1++
RANGES	50		7.4++	4.3	5.7+
DEPLOYMENT NETWORK	50		9.7+	8.3	6.3-
MOBILIZATION BILLETS	30		46242+	27982	17254
JOINT SYNERGY	15		4	0	5
RESERVE COMP SPT	30		6.3	4.6	5.1
MSN ESSENTIALITY	---	250	5.9	3.9	5.7
CONTIGUOUS MNV ACRES	80		99.5-	81.3-	235.9+
OPS/ADMIN FAC	35		2560.9++	1510.2	1198.0
AVN MAINT FAC	30		463.8	762.8++	166.1
VEH MAINT FAC	30		919.4	304.4-	991.0
SUP/STORAGE FAC	15		987.6+	629.1	207.6
DISTANCE TO TNG AREA	40		0.0+	0.0+	150.0--
CONSTRUCTION INV	10		$451.010	$171.490	$172.900
INFORMATION MSN AREA	10		9.4	5.2	5.9
MSN SUTIABILITY	---	250	5.9	4.4	3.4
VHA RATE	15		$117.92	$0.00	$78.53
FAM HSG COST/UNIT	15		$5,123	$4,446	$4,046
AVG CIV SALARY	15		$53,728	$54,788	$58,711
MER	20		0.050	0.082	0.075
CER	20		$1,496	$1,425+	$2,821
MCA COST	15		0.80	1.02	1.03
OPER EFFICIENCIES	---	100	9.1	8.7	7.7
TOT BUILDABLE ACRES	50		3866.0-	9000.0+	1300.0--
ENCROACHMENT	50		150.0-	124.0-	41.0+
ENVIRONMENT CAPACITY	50		9.6+	6.2	7.9
MULTI-FUNCTION	25		288.0++	116.0	107.0
INFRASTRUCTURE	25		3.3	3.9	6.0
EXPANDABILITY	---	200	5.3	4.8	5.3
% PERM FAC	35		81.0	76.0	78.0
ACOE SCORE	10		13	3	1
FAM HSG UNITS	35		20633.0+	10728.0	12328.0
UOPH UNITS	20		16.0	131.0	16.0
UEPH UNITS	35		13899.0++	7085.0	5938.0
COMMUNITY FAC	20		1208.7+	830.2	645.0
HEALTH CARE INDEX	35		8.0+	18.0	16.0
PLACES RATED RATING	10		306.0	253.0	146.0
QUALITY OF LIFE	---	200	6.3	3.7	3.3
		===			
SCORE		1000	6.2	4.7	4.8
RANK			2	6	5

JOINT CROSS-SERVICE ANALYSIS APPROACH

A PROPOSAL

Ronald H. Nickel, Ph.D.

2-3 June 1994

Outline

1. Goals
2. Data Elements
3. Problem Statement
4. Formulation
5. Policy Imperatives
6. Example
7. Solver

Goals

1. Eliminate excess DoD infrastructure.
2. Maintain a high-quality infrastructure.
3. Generate a product that can survive in the BRAC environment.

Data Elements

1. **Functional values.** The merit of performing a cross-service function at a given site or activity.
2. **Functional capacities.** The capacity of each site or activity to perform a given cross-service function.
3. **DoD cross-service functional requirements.** The future DoD requirement to perform each cross-service function.
4. **Military values.** The military department assessment of the military value of each site or activity.

Problem Statement

Find the <u>best</u> allocation of the future DoD cross-service functional requirements to the sites and activities.

Allocations are constrained by the capacity of each site or activity to perform each cross-service function.

What constitutes the best allocation?

Consolidation of cross-service functional allocations into a small set of high value sites or activities that have the capacities required to perform the work.

Given this set of site or activities, allocations of functional requirements should be based on functional value.

Formulation

$$\underset{o_s, l_{tg}}{Minimize}\ w \times \Sigma_{s \in S}\, o_s \times nmv_s - \Sigma_{t \in S} \Sigma_{g \in F}\, l_{tg} \times fv_{tg}$$

subject to capacity constraints

where

$S =$ the set of all sites or activities,

$F =$ the set of cross-service functions,

$w =$ weighting factor to assure that fv assignments are subordinate to the military value ratings;

$nmv_s = 4 - mv_s$; and

Decision variables

$o_s =$ 1 if site is to remain open; 0 otherwise;

$l_{tg} =$ amount of the DoD requirement for function g to be assigned to site or activity t.

Formulation (English Version)

Minimize $w \times$ (negative mil val) – (functional value)
subject to

constraints on capacity

Setting w = 0 allocates cross-service functional requirements to sites or activities having the highest functional values.

Setting w to a large value allocates cross-service functional requirement to high military value sites with allocations to sites with highest functional values.

Policy Imperatives

Additional variables and constraints can be used to include policy imperatives in the formulation.

Example: limit the number of sites allowed to perform a certain function.

Example

Table 1: Basic data for 15 sites covering 6 cross-service functions.

Table 2: Future DoD cross-service functional requirements.

Table 3: Results of allocating using only the functional values ($w = 0$).

Table 4: Results of allocating using the full formulation. ($w = 60000$).

Table 5: Table 4 formulation modified to constrain the number of sites doing missile work to three sites.

Table 6: Parameterization of w from 0 to 60000 using the table 4 formulation.

Table 1. Joint Cross-Service Groups Analysis Examples
Basic Data

Function	Department															Totals
	X					Y					Z					
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	
Capacities																
Air vehicles	450	7000	2500	0	0	5000	500	0	0	0	3000	1200	0	2857	0	22,507
Munitions	850	200	4500	0	0	300	0	2000	0	0	1000	0	1000	0	0	9,850
Electronic combat	3000	0	0	0	0	1000	0	0	0	0	2000	0	0	1543	20	7,563
Fixed-wing avionics	0	0	250	3500	0	0	0	400	3500	0	1000	4000	0	2000	500	15,150
Conv. missiles/rockets	0	0	200	0	3000	0	0	200	100	2000	3000	700	200	300	200	9,900
Satelites	0	0	300	4000	0	0	0	500	0	0	250	50	0	300	2200	7,600
Function FV Scores																
Air vehicles	50	70	68	0	0	57	72	0	0	0	81	92	0	86	0	
Munitions	88	71	58	0	0	54	0	88	0	0	72	0	75	0	0	
Electronic combat	67	0	0	0	0	91	0	0	0	0	52	0	0	78	77	
Fixed-wing avionics	0	0	92	94	0	0	0	78	69	0	72	93	0	66	71	
Conv. missiles/rockets	0	0	62	0	89	0	0	59	93	92	56	59	50	65	91	
Satelites	0	0	71	58	0	0	0	64	0	0	85	61	0	73	93	
Department Military Value	3	3	3	2	1	2	1	3	2	1	3	3	2	3	1	

Table 2. Functional Requirement Data

Function	Requirement	Percent excess
Air vehicles	9,463	137.8
Munitions	5,503	79.0
Electronic combat	3,234	133.9
Fixed-wing avionics	3,775	301.3
Conv. missiles/rockets	3,743	164.5
Satelites	2,480	206.5

Table 3. MAXFV Model Output

Function	X A	X B	X C	X D	X E	Y A	Y B	Y C	Y D	Y E	Z A	Z B	Z C	Z D	Z E	Retained totals	Percent excess
Retain=1, Close=0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	
Capacities																	
Air vehicles	0	7000	0	0	0	0	500	0	0	0	3000	1200	0	2857	0	14557	53.8
Munitions	850	200	4500	0	0	0	0	2000	0	0	1000	0	1000	0	0	9550	73.5
Electronic combat	3000	0	0	0	0	1000	0	0	0	0	0	0	0	1543	20	5563	72.0
Fixed-wing avionics	0	0	0	3500	0	0	0	0	0	0	0	4000	0	0	0	7500	98.7
Conv. missiles/rockets	0	0	0	0	3000	0	0	0	100	2000	0	0	0	0	200	5300	41.6
Satelites	0	0	0	0	0	0	0	0	0	0	250	0	0	300	2200	2750	10.9
Workload assigned																**Totals**	
Air vehicles	0	1906	0	0	0	0	500	0	0	0	3000	1200	0	2857	0	9463	
Munitions	850	200	453	0	0	0	0	2000	0	0	1000	0	1000	0	0	5503	
Electronic combat	671	0	0	0	0	1000	0	0	0	0	0	0	0	1543	20	3234	
Fixed-wing avionics	0	0	0	3500	0	0	0	0	0	0	0	275	0	0	0	3775	
Conv. missiles/rockets	0	0	0	0	1443	0	0	0	100	2000	0	0	0	0	200	3743	
Satelites	0	0	0	0	0	0	0	0	0	0	250	0	0	30	2200	2480	
Department average MV			2.4					1.8					2.4				
Percent change			-0.0					0.0					-0.0				

DoD average MV 2.20
Percent change 0.0

DoD weighted FVs	
Function	Wgt FV
Air vehicles	81.2
Munitions	79.6
Electronic combat	79.7
Fixed-wing avionics	93.9
Conv. missiles/rockets	90.8
Satelites	92.0

Table 4. MINNMV Model Output

Function	Department X A	X B	X C	X D	X E	Y A	Y B	Y C	Y D	Y E	Z A	Z B	Z C	Z D	Z E	Retained totals	Percent excess
Retain=1, Close=0	0	0	1	0	0	0	0	1	0	0	1	1	0	1	1	6	
Capacities																	
Air vehicles	0	0	2500	0	0	0	0	0	0	0	3000	1200	0	2857	0	9557	1.0
Munitions	0	0	4500	0	0	0	0	2000	0	0	1000	0	0	0	0	7500	36.3
Electronic combat	0	0	0	0	0	0	0	0	0	0	2000	0	0	1543	20	3563	10.2
Fixed-wing avionics	0	0	0	0	0	0	0	0	0	0	0	4000	0	0	0	4000	6.0
Conv. missiles/rockets	0	0	200	0	0	0	0	200	0	0	3000	700	0	300	200	4600	22.9
Satelites	0	0	0	0	0	0	0	0	0	0	250	0	0	300	2200	2750	10.9
Workload assigned																**Totals**	
Air vehicles	0	0	2406	0	0	0	0	0	0	0	3000	1200	0	2857	0	9463	
Munitions	0	0	2503	0	0	0	0	2000	0	0	1000	0	0	0	0	5503	
Electronic combat	0	0	0	0	0	0	0	0	0	0	1671	0	0	1543	20	3234	
Fixed-wing avionics	0	0	0	0	0	0	0	0	0	0	0	3775	0	0	0	3775	
Conv. missiles/rockets	0	0	200	0	0	0	0	200	0	0	2143	700	0	300	200	3743	
Satelites	0	0	0	0	0	0	0	0	0	0	250	0	0	30	2200	2480	
Department average MV			3.0					3.0					2.5				
Percent change			25.0					66.7					4.2				

DoD average MV 2.67
Percent change 21.2

DoD weighted FVs	
Function	**Wgt FV**
Air vehicles	80.6
Munitions	71.4
Electronic combat	64.6
Fixed-wing avionics	93.0
Conv. missiles/rockets	59.6
Satelites	92.0

Table 5. MINNMV with Policy Imperative Model Output

Function	Department X A	X B	X C	X D	X E	Y A	Y B	Y C	Y D	Y E	Z A	Z B	Z C	Z D	Z E	Retained totals	Percent excess
Retain=1, Close=0	0	0	1	0	0	0	0	1	0	0	1	1	0	1	1	6	
Capacities																	
Air vehicles	0	0	2500	0	0	0	0	0	0	0	3000	1200	0	2857	0	9557	1.0
Munitions	0	0	4500	0	0	0	0	2000	0	0	1000	0	0	0	0	7500	36.3
Electronic combat	0	0	0	0	0	0	0	0	0	0	2000	0	0	1543	20	3563	10.2
Fixed-wing avionics	0	0	0	0	0	0	0	0	0	0	0	4000	0	0	0	4000	6.0
Conv. missiles/rockets	0	0	0	0	0	0	0	0	0	0	3000	700	0	0	200	3900	4.2
Satelites	0	0	0	0	0	0	0	0	0	0	250	0	0	300	2200	2750	10.9
Workload assigned																**Totals**	
Air vehicles	0	0	2406	0	0	0	0	0	0	0	3000	1200	0	2857	0	9463	
Munitions	0	0	2503	0	0	0	0	2000	0	0	1000	0	0	0	0	5503	
Electronic combat	0	0	0	0	0	0	0	0	0	0	1671	0	0	1543	20	3234	
Fixed-wing avionics	0	0	0	0	0	0	0	0	0	0	0	3775	0	0	0	3775	
Conv. missiles/rockets	0	0	0	0	0	0	0	0	0	0	2843	700	0	0	200	3743	
Satelites	0	0	0	0	0	0	0	0	0	0	250	0	0	30	2200	2480	
Department average MV			3.0					3.0					2.5				
Percent change			25.0					66.7					4.2				

DoD average MV 2.67
Percent change 21.2

DoD weighted FVs	
Function	**Wgt FV**
Air vehicles	80.6
Munitions	71.4
Electronic combat	64.6
Fixed-wing avionics	93.0
Conv. missiles/rockets	58.4
Satelites	92.0

Table 6. Parameterization of the MINNMV Model

	Parameter w									
	0 MAXFV	300	1000	5000	7000	8000	10000	20000	40000	60000 MINNMV
Sites/activities open	15	14	13	12	11	10	9	8	7	6
Percent excess										
Air vehicles	53.8	53.8	48.5	48.5	48.5	1.0	1.0	1.0	1.0	1.0
Munitions	73.5	73.5	73.5	73.5	73.5	69.9	51.7	51.7	51.7	36.3
Electronic combat	72.0	72.0	72.0	72.0	72.0	72.0	72.0	41.1	41.1	10.2
Fixed-wing avionics	98.7	98.7	98.7	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Conv. missiles/rockets	41.6	38.9	38.9	38.9	17.6	17.6	17.6	17.6	22.9	22.9
Satelites	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
Weighted FV										
Air vehicles	81.2	81.2	81.1	81.1	81.1	80.6	80.6	80.6	80.6	80.6
Munitions	79.6	79.6	79.6	79.6	79.6	79.2	76.1	76.1	76.1	71.4
Electronic combat	79.7	79.7	79.7	79.7	79.7	79.7	79.7	72.3	72.3	64.6
Fixed-wing avionics	93.9	93.9	93.9	93.0	93.0	93.0	93.0	93.0	93.0	93.0
Conv. missiles/rockets	90.8	90.7	90.7	90.7	85.4	85.4	85.4	85.4	59.6	59.6
Satelites	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
DoD average MV	2.20	2.21	2.31	2.33	2.45	2.40	2.44	2.50	2.71	2.67

Solver

Many computer software packages are available for solving the mixed integer linear program. The example problems were solved using the AMPL/OSL package available from Scientific Press. It combines an algebraic language package from Bell Labs with a solver from IBM.

TAB 10

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

June 23, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Mike Parmentier, Acting Chairman, at 1300 hours on June 23, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Parmentier made opening comments, and Mr. Gardner then continued with administrative remarks on internal controls and meeting minutes.

Mr. Gardner led discussion on the draft analysis plan including the proposed capacity analysis matrix (attached). The Group reviewed the proposed approach for capacity analysis and noted the progress that had been made.

Next, the Group considered the proposed approach for functional value analysis. Mr. Gardner talked about the draft site-function matrix (attached). He explained that the Group's joint study team (JST) proposed grouping functions. Discussion followed on the need for the base closure and realignment analysis process to take into account other missions at an installation. The Group pointed out that other missions would be considered through the combined analyses of functional value and installation military value conducted by the Joint Cross-Service Groups and the Military Departments, respectively, during the iterative process.

The Group's discussion included proposed measures of merit and weighting of those measures for portions of the undergraduate pilot training function (matrix handout attached). Discussion ensued on whether the USAF flight screening function should be part of the proposed matrix, and whether flight screening was mainly a UPT category capacity factor instead of an installation function. The Group concluded it needed more information and background on reasons and rationale with regard to the development of this proposal before it could go further. Mr. Parmentier pointed out that the JST members need to work closely with their respective Group principals during the process development. He reiterated that the goal of the analysis process is fair and consistent treatment.

Mr. Gardner continued with general comments on proposed plans for functional value analysis and use of the optimization model.

The group agreed to the overall direction of the process as presented, but did not approve the measures of merit and their proposed weighting pending further information from the JST for Group consideration and approval at a future meeting. Mr. Parmentier directed that the JST members provide background on this subject to their Group principals before the next meeting. The JST was tasked to develop and provide the Group with rationale and reasons for the proposed weighting of the measures of merit at the next meeting. The JST was also tasked to relook the flight screening function viability with respect to modeling.

[redacted]

[redacted]

There being no further matters to discuss, the meeting was adjourned at 1415 hours.

Approved: Mike Parmentier
Acting Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

June 23, 1994

Key Attendees

Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
LTC John Finlay, IV, Army
MAJ Charles Fletcher, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
LCDR Steve Bertolaccini, Navy
Mr. Steve Belcher, Navy
Maj Gen Ev Pratt, Jr., Air Force
Maj Gen Ed Tenoso, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Lt Col Mark Bruggemeyer, Air Force
Maj Howard Hachida, Air Force
Col Paul Thompson, OSD (Base Closure)
CAPT J. B. Renninger, Joint Staff (J-7)

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UPT JOINT / CROSS-SERVICE GROUP AGENDA

(23 June 1994 Meeting -Rm 3E752)

1. Admin "Control"

2. Minutes From 2 June Meeting

3. Draft Analysis Plan

   A. Capacity

   - Excess Capacity
   - Capacity Analysis Plan (LtCol Free)

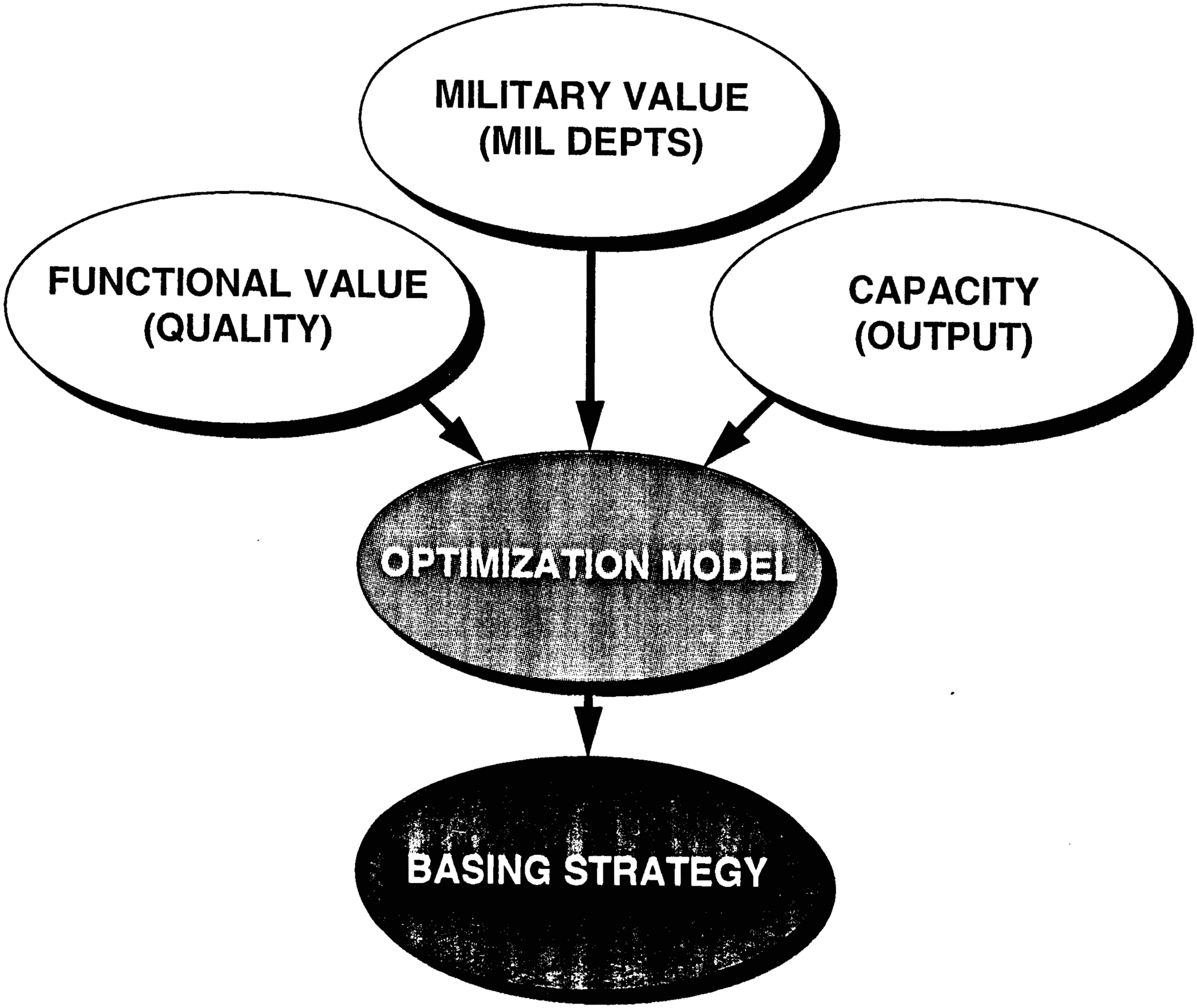
   B. Functional Value

   - Site x Function Matrix
     -- Grouped Functions
     -- Limitations (3)
   - Measures of Merit Identified
   - Weighting Process --- Approval _____
   - Develop Questions Tied to Data Calls - "In Progress"
   - Score Function x Site
   - Input Scores to D-PAD Model
   - Function Values Determined for Each Site
   - Provide Functional Values to Services

C. Services Provide Military Values (1-3) for Sites

D. Optimization Model

- Notional Model Runs by Study Team
- Unconstrained Run (No Military Values)
- Deliver Unconstrained Run To Services
- Services Provide Exclusions/Policy Imperatives
- Constrained Runs of Model
- Alternatives Generated, Reviewed, and Passed to Services


MILITARY VALUE
(MIL DEPTS)
FUNCTIONAL VALUE
(QUALITY)
CAPACITY
(OUTPUT)
OPTIMIZATION MODEL
BASING STRATEGY

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CAPACITY ANALYSIS

FACTORS	HISTORICAL	REQUIREMENTS: PROG'MED TRAINING (SYLLABI) (A)	REQUIREMENTS: PROG'MED GRADS (B)	REQUIRED CAPACITY (AxB)	MAX AVAILABLE CAPACITY (C)	EXCESS CAPACITY (C-(AxB))
TRAINING SORTIES	SORTIES/ GRAD SYLLABUS •OVERHEAD PG 6 # 5 PG 14 #2	SORTIES/ GRAD •MAJCOM PG 9 # 2	GRADS/YEAR •PGL •PTR PG 4 #1 & 2	SORTIES/ YEAR	SORTIES/ YEAR PG 19 # 16	SORTIES/ YEAR
AIRFIELD OPS	OPS/SORTIE •TRAFFIC CNT PG 17 # 10 •TOT # SORTIES PG 14 # 2	OPS/GRAD •MAJCOM PG 9 # 2 X =	GRADS/YEAR •PGL •PTR	OPS/YEAR	OPS/YEAR PG 17 # 9	OPS/YEAR
AIRSPACE BLOCK=(NM² x ALT)/AIRCRAFT	BLOCKS AVAILABLE BLOCK HOURS AVAILABLE SYLLABUS •OVERHEAD •MX PG 22 # 1	AIRSPACE BLOCK HRS / GRAD •MAJCOM PG 8 # 1	GRADS/YEAR •PGL •PTR	AIRSPACE BLOCK HRS / YEAR	# OF AREAS X HOURS AVAILABLE / YEAR = AIRSPACE BLOCK HRS / YEAR PG 22 # 1	AIRSPACE BLOCK HRS / YEAR
GROUND TRAINING	FACILITIES AVAILABLE FACILITY HOURS AVAIL/YEAR •SYLL + ATTRIT •CLASSROOMS •SIMULATORS •LIFE SPT TNG	FACILITY HRS / GRAD •MAJCOM PG 10 # 1	GRADS/YEAR •PGL •PTR	FACILITY HRS / YEAR	FACILITY HRS / YEAR PG 25 # 1 PG 27 # 8	FACILITY HRS / YEAR

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CAPACITY ANALYSIS (CONT)

FACILITY FACTORS	HISTORICAL	REQUIREMENTS: PROG'MED TRAINING (SYLLABI) (A)	REQUIREMENTS: PROG'MED GRADS (B)	REQUIRED CAPACITY (AxB)	MAX AVAILABLE CAPACITY (C)	EXCESS CAPACITY (C-(AxB))
RAMPS/ APRONS/ TAXIWAYS	TOT FT² USED # OF AIRCRAFT SUPPORTED FT² / AIRCRAFT REQ PG 28 # 1	AIRCRAFT (GRAD/YEAR) PG 28 # 1 PG 4 # 1	GRADS/YEAR •PGL •PTR PG 4 #1 & 2	AIRCRAFT	TOT FT² AVAIL / FT² / AIRCRAFT = AIRCRAFT PG 28 # 2	AIRCRAFT
HANGARS	HANGARS USED MX DOCKS/HANGAR AIRCRAFT/MX DOCK	AIRCRAFT (GRAD/YEAR)	GRADS/YEAR •PGL •PTR	AIRCRAFT	A/C / MX DOCK X MX DOCK / HANGAR X HANGAR = AIRCRAFT PG 29 # 4	AIRCRAFT
MAINTENANCE	FACILITIES USED # OF AIRCRAFT SUPPORTED AIRCRAFT / FACILITY REQ	AIRCRAFT (GRAD/YEAR)	GRADS/YEAR •PGL •PTR	AIRCRAFT	A/C / FACILITY X FACILITIES AVAILABLE = AIRCRAFT PG 29 # 6	AIRCRAFT
SUPPLY/ STORAGE	TOT FT² USED # OF AIRCRAFT SUPPORTED FT² / AIRCRAFT REQ	AIRCRAFT (GRAD/YEAR)	GRADS/YEAR •PGL •PTR	AIRCRAFT	TOT FT² AVAIL / FT² / AIRCRAFT = AIRCRAFT PG 30 # 9	AIRCRAFT
HOUSING	CAPACITY USED STUDENTS/DAY PG 31 # 1	STUDENTS/DAY PG 4 # 1		STUDENTS/DAY	STUDENTS/DAY PG 32 # 5	STUDENTS/DAY
MESSING	CAPACITY USED STUDENTS/DAY PG 32 # 3	STUDENTS/DAY PG 4 # 1		STUDENTS/DAY	STUDENTS/DAY PG 32 # 5	STUDENTS/DAY

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Function	Service	Aircraft	Fort Rucker	Whiting Field	Corpus Christi	Pensacola	Meridian	Kingsville	Randolph	Sheppard	Vance	Reese	Laughlin	Columbus
Flight Screening	USAF	T-3												
Primary Pilot	USN/USAF	T-34/T-37/JPATS	X (1)											
Int E2/C2,Adv Maritime,Adv Airlift/Tanker	USN/USAF	T-44/T-1	X (1)	X (1)										
Int & Adv Strike, Adv E2/C2	USN	T-2/T-A4/T-45	X (1)	X (1)										
Adv Bomber/Fighter	USAF	T-38	X (1)	X (1)	X (1)									
Helo	USN/USA/USAF	TH-57/TH-67/UH-1/OH-58			X (2)		X (2)	X (2)	X (2)	X (2)	X (2)	X (2)	X (2)	X (2)
Primary & Int NFO	USN/USAF	T-34/T-39	X (1)	X (1)										
Advanced NFO - Strike	USN/USAF	T-39/T-2	X (1)	X (1)					X (3)	X (3)	X (3)	X (3)	X (3)	
Advanced NFO - Panel	USN/USAF	T-43	X (1)	X (1)										
Notes:														
1 Runway length constraints														
2 Lack of outlying fields														
3 Too far from water														

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Measures of Merit	USAF Flight Screening T-3	USN/USAF Primary Pilot (Int Helo & Maritime JPATS/T-34 mix	USN/USAF Adv Maritime Inter E2/C2 Adv Airlift/Tanker T-44/T-1	USN Int & Adv Strike Adv E2/C2 T-A4/T-2/T-45	USAF Adv Fighter/ Bomber T-38	USN/USA/USAF Helo TH-57/TH-67 UH-1/OH-58
Managed Training Areas	10	5	6	6	6	7
Weather	15	14	9	7	11	6
Airspace and Flight Training Areas	30	22	24	22	22	12
Airfields	10	20	20	17	20	23
Ground Training Facilities	10	10	10	10	10	14
Aircraft Maintenance Facilities	5	5	5	5	5	5
Special Military Facilities	0	0	0	4	0	0
Proximity to Training Areas	0	0	0	3	0	0
Proximity to other Support Facilities	0	2	2	2	2	3
Unique Features	0	0	0	0	0	8
Air Quality	5	5	5	5	5	5
Encroachment	5	5	6	6	6	5
Ability for Expansion	5	4	5	5	5	4
Services (QOL)	5	8	8	8	8	8
	100	100	100	100	100	100

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	USN/USAF Primary & Inter NFO	USN/USAF Adv NFO Strike WSO Strike	USN/USAF Adv NFO Panel
Measures of Merit	T-34/T-39	T-39/T-2	T-43
Managed Training Areas	5	6	7
Weather	14	7	5
Airspace and Flight Training Areas	22	22	18
Airfields	20	17	20
Ground Training Facilities	10	10	17
Aircraft Maintenance Facilities	5	5	5
Special Military Facilities	0	4	0
Proximity to Training Areas	0	3	0
Proximity to other Support Facilities	2	2	0
Unique Features	0	0	0
Air Quality	5	5	5
Encroachment	5	6	5
Ability for Expansion	4	5	10
Services (QOL)	8	8	8
	100	100	100

TAB 11

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

July 19, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1510 hours on July 19, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch made opening comments, and Mr. Gardner continued with administrative remarks. Mr. Gardner then led the Group discussion on the analytic framework proposed by the joint study team (JST) for Group approval.

Mr. Gardner presented the proposed site/function matrix (attached) and pointed out that it frames site/function relationships and potential entering considerations and constraints for alternative analyses. Group discussion resulted in administrative changes, a change in the title to more clearly describe the matrix, and direction to further describe the notations on constraints.

Discussion continued on the potential for the BRAC 95 process to effectively consider the impact of the Joint Primary Aircraft Training System (JPATS) on the UPT category's capacity if acquisition of JPATS were to be shifted to the right (delayed) due to the tight fiscal climate. The Group noted that even if JPATS acquisition were slowed, there could be approval of significant changes in policy and procedural initiatives affecting primary training in anticipation of JPATS which would impact capacity and could be considered in the process. The Group pointed out that these concerns are still unknown factors in the on-going dynamic fiscal environment, and that the BRAC analysis process must go forward using the interim force structure plan. The final force structure plan will be issued before analysis is complete and recommendations made.

Next, the Group reviewed and discussed the proposed measures of merit for functional area matrices (attached) and the associated questions (attached) for assessing functional value. With regard to the measures of merit matrix for Strike and Advanced E-2/C-2, the Group pointed out that the rationale for proximity to training areas should be modified to reflect the attribute of the capability to have a training carrier in close proximity to a training installation. Additionally, the Group directed that the rationale for air quality be changed to show that the air quality weight represents a baseline for like aircraft. Mr. Finch also directed the JST to refine the wording of the rationale for encroachment for accuracy with respect to accepted Air Installation Compatibility Use Zone (AICUZ) terminology.

The Group approved the site/function matrix, the measures of merit and questions with the noted changes. The JST was tasked to make the changes and the Group agreed that the JST could make other minor changes with the approval of the chairman.

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Mr. Finch observed that through joint cooperation a huge amount of work had been accomplished and he expressed his personal thanks to the Group and the JST.

The Group then talked about the process for gaining access to data call information and supported an early meeting with the Steering Group for approval.

Mr. Gardner led a general discussion on integration of potential external non-BRAC policy review findings into the process. Mr. Finch opined that the Group should receive a report of review findings from the external policy arena, and that the findings could impact imperatives to be used in the joint analysis process. He will work with appropriate agencies to get needed information.

There being no further matters to discuss, the meeting was adjourned at 1630 hours.

Approved: Lou Finch
Chairman

[redacted]

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

July 19, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
CPT Blake Hollis, Army
CW5 George Conaway, Army
CAPT Brian Buzzell, Navy
Maj Gen Ed Tenoso, Air Force
Lt Col Len Jarman, Air Force
Lt Col Mark Bruggemeyer, Air Force
Col Paul Thompson, OSD (Base Closure)
CAPT J. B. Renninger, Joint Staff (J-7)
Mr. David Wyte, DoDIG

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UPT JOINT / CROSS-SERVICE GROUP AGENDA

(19 July 1994 Meeting -Rm 3E752)

1. **Admin "Control" - Notebooks**

2. **"Rules" - Site/Function Elimination Matrix**

3. **Measures of Merit for Functional Areas**

   - **Weights**

   - **Corresponding Questions**

4. **Functional Quality Questions**

   - **Summary/Rational**

   - **Questions/Rational**

5. **Data Call Access**

6. **Policy Integration Issues**

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SITE / FUNCTIO[redacted] ELIMINATION MATRIX

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FUNCTION	SERVICE	A/C	RUCKER	WHITING	CORPUS	P-COLA	MERIDIAN	KING	RAN	SHEP	VANCE	REESE	LAU	COL
FLT SCREENING	USAF	T-3												
PRIMARY PILOT	USN USAF	T-34 T-37 JPATS	X (2)											
AIRLIFT/TANKER	USAF	T-1	X (1)	X (1)										
MARITIME/ INT E-2/C-2	USN USAF	T-44	X (2)											
STRIKE/ ADV E-2/C-2	USN	T-2 TA-4 T-45	X (1)	X (1)										
BOMBER/ FIGHTER	USAF	T-38	X (1)	X (1)	X (1)									
HELO	USN USAF USA	TH-57 UH-1 TH-67 OH-58			X (2)		X (2)	X (2)	X (2)	X (2)	X (2)	X (2)	X (2)	X (2)
PRIM & INT NAV/NFO	USN USAF	T-34 T-39	X (2)											
WSO STRIKE	USN USAF	T-39 T-2							X (3)	X (3)	X (3)	X (3)	X (3)	
PANEL NAV	USN USAF	T-43	X (1)	X (1)										

(1) Runway length constraints
(2) Lack of outlying fields
(3) Too far from water

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WORKING PAPERS

MEASURES OF MERIT FOR FUNCTIONAL AREAS
(CURRENT AS OF: 07/19/94 12:47 PM)

MEASURES OF MERIT	Flight Screening	Primary Pilot	Bomber/ Fighter	Strike/ Adv E-2/C-2	Airlift/ Tanker	Maritime/ Int E-2/C-2	CORRESPONDING QUESTIONS
Managed Training Areas	5	5	6	6	6	6	pg 7/#1, 2
Weather	15	14	10	7	9	9	pg 10/#1-3
Airspace and Flight Training Areas	27	22	27	27	24	24	pgs 11-17/#1-23
Airfields	23	24	17	17	22	22	pgs 18-21/#1-4
Ground Training Facilities	10	10	10	10	10	10	pg 22/#1, 2
Aircraft Maintenance Facilities	5	5	5	5	5	5	pg 23/#1 pg 21/#3
Special Military Facilities	0	0	4	4	0	0	pgs 24-25/#1-7
Proximity to Training Areas	0	0	0	3	0	0	pg 27/#1, 2, 3, 4
Proximity to Other Support Facilities	0	2	2	2	5	5	pg 28/#1, 2, 3
Unique Features	0	0	0	0	0	0	pg 29/#1, 2
Air Quality	5	5	5	5	5	5	pg 30/#1-5
Encroachment	5	5	6	6	6	6	pgs 31-38/#1-11
Services	5	8	8	8	8	8	pgs 39-47/#1-6
TTL POINTS	100	100	100	100	100	100	

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WORKING PAPERS

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MEASURES OF MERIT	Prim & Int NFO/NAV	WSO Strike	Panel NAV	Helo	CORRESPONDING QUESTIONS
Managed Training Areas	5	6	5	8	pg 7/#1, 2
Weather	14	7	7	9	pg 10/#1-3
Airspace and Flight Training Areas	22	22	22	16	pgs 11-17/#1-23
Airfields	24	22	23	24	pgs 18-21/#1-4
Ground Training Facilities	10	17	20	10	pg 22/#1, 2
Aircraft Maintenance Facilities	5	5	5	5	pg 23/#1 pg 21/#3
Special Military Facilities	0	0	0	0	pgs 24-25/#1-7
Proximity to Training Areas	0	0	0	0	pg 27/#1, 2, 3, 4
Proximity to Other Support Facilities	2	2	0	2	pg 28/#1, 2, 3
Unique Features	0	0	0	8	pg 29/#1, 2
Air Quality	5	5	5	5	pg 30/#1-5
Encroachment	5	6	5	5	pgs 31-38/#1-11
Services	8	8	8	8	pgs 39-47/#1-6
TTL POINTS	100	100	100	100	

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9:50 AM 14 July, 1994

Questions for Assessing the Functional Quality of *Flight Screening* Training

Managed Training Areas (5 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Flight Screening . (1 pt or 20%)
   Scoring: Linear scale between 0 and 6 (0 pt for 0 fields, 1 pt for 6 fields)
   Rationale: Owning airfields and airspace have equal impact on training.
2. The number and type of special use airspace that is controlled/owned by the installation and supports primary training. (4 pts or 80%)
   Scoring: 2 pts for MOA, 2 pts for AA
   Rationale: Owning airfields and airspace have equal impact on training.

Weather (15 points)

1. Percent of time weather is better than 3000/5. (5 pt or 33%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 5 pt for 95%???)
   Rationale: This weather is the best indicator of the viability to do the flight screening mission. Higher % is better.
2. Percent of time weather is better than 1500/3. (3 pt or 20%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%???)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (4 pt or 27%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 4 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of sorties canceled/rescheduled. (1 pt or 7%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-3.
   .ficial Planning factor for lost sorties due to weather. (2 pts or 13%)
   Scoring: Linear scale between 5% and 20% (2 pts for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-3.

Airspace and Flight Training Areas (27 points)

1. Amount of airspace (MOA and AA) in nm^3 (9 pt or 34%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 9 pts for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA.
2. Average distance to airspace (12 pts or 45%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 12 pts for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   Rationale:
3. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pts or 7%)
   Scoring: Linear scale between 0 and some max (2 pts for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
4. Planned commercial hub within 100 miles. (2 pts or 7%)
   Scoring: 2 pts for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
5. Number of bisecting airways. (2 pts or 7%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (23 points)

he # of outlying/auxiliary fields usable for primary pilot training (3 pts or 13%)
Definition of usable field will be based on runway length (preliminary cutoff -- 2500 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 3 pts for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. Median distance to outlying/auxiliary fields (2 pts or 8%)
   Scoring: Linear scale between some min and max (0 pt for min distance, 2 pts for max)
   Rationale: Closer airfields are better.
3. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 30%)
   Scoring: With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
4. Condition of runways -- % of runway sq ft in adequate condition (3 pts or 13%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pts for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
5. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (2.5 pt or 11%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
6. Condition of utilities -- ave % of facilities in adequate condition (2.75 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
7. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (2.75 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.

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ndition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This is another measure of installation quality. Higher % is better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (5 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: 1 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.

as all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (5 points)

1. Amount of BOQ rooms rated "adequate" (1 pt or 20%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 20%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. What percent of the listed MWR and support facilities/programs are available? (1 pt or 20%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 1 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
4. Amount of military housing rated "adequate" (.6 pt or 12%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
5. Condition of military housing - % of "adequate" (.4 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
6. Number of children on the waiting list. (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
7. Average wait for children on the waiting list. (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

MEASURES OF MERIT FOR:

PRIMARY

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	5	The questions addressed in this area are focused toward ownership of special use airspace, air-to ground ranges, and outlying fields. In this analysis, *accessibility* to these facilities was considered more important than ownership.
Weather	14	This weight was used because students in primary flight training need better weather than students in the advanced tracks.
Airspace and Flight Training Areas	22	This area was weighted heavily due to the direct impact it has on primary flight training. Much of the training takes place in special use airspace; therefore, this area plays a large role in determining the training effectiveness of an installation.
Airfields	24	This area is weighted the heaviest due to the emphasis primary training places on pattern activities. This area plays a big role in evaluating the effectiveness of a training installation.
Ground Training Facilities	10	This weight is commensurate with the role classrooms, simulators, and other facilities play in flight training.
Aircraft Maintenance Facilities	5	Training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area looks at the local area to determine what other facilities are available The overall training infrastructure is already established and in use at each base so the impact to this area should be minimal.
Unique Features	0	N/A
Air Quality	5	Air quality plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on air quality issues.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	Quality of life plays a significant role in determining installation compatibility with the training mission and this weight will be applied to the other training functions.

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9:47 AM 14 July, 1994

Questions for Assessing the Functional Quality of *Primary* Pilot Training

Managed Training Areas (5 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support primary training. (2.5 pt or 50%)
   Scoring: Linear scale between 0 and 6 (0 pt for 0 fields, 2.5 pts for 6 fields)
   Rationale: Owning airfields and airspace have equal impact on training.
2. The number and type of special use airspace that is controlled/owned by the installation and supports primary training. (2.5 pt or 50%)
   Scoring: 1.5 pt for MOA, 0.5 pt for MTR, 0.5 for AA
   Rationale: Owning airfields and airspace have equal impact on training.

Weather (14 points)

1. Percent of time weather is better than 1500/3. (4 pt or 29%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 4 pt for 95%???)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (3 pt or 21%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%???)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (3 pt or 21%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 3 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (1 pt or 7%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
   cent of sorties canceled/rescheduled. (1 pt or 7%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (2 pt or 14%)
   Scoring: Linear scale between 5% and 20% (2 pt for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (22 points)

1. Amount of airspace (MOA and AA) in nm^3 (12 pt or 64%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 12 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA.
2. Average distance to airspace (2 pt or 9%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of MTR's available (3 pt or 14%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
4. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
5. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
   'umber of bisecting airways. (2 pt or 9%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (24 points)

1. The # of outlying/auxiliary fields usable for primary pilot training (4 pt or 17%)
   Definition of usable field will be based on runway length (preliminary cutoff -- 5000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 4 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (2 pt or 8%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (2 pt or 8%)
   Scoring: Linear scale between some min and max (2 pt for min distance, 1 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 8%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway , 2 points for 8000 ft runway)
   Rationale: Longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)

[redacted]

ationale: This measures the amount and quality of the training facilities. More quality is better.

dition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
  Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
  Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area that could support primary pilot training (1 pt or 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

uality (5 points)

he air station in an attainment or maintenance area (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (5 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: 1 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

ices (8 points)

mount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

MEASURES OF MERIT FOR
BOMBER/FIGHTER

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	10	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	27	This area was weighted higher than Primary (22%) because there is greater emphasis on area work in advanced training than there is in Primary training.
Airfields	17	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	10	This was weighted the same as Primary because the role classrooms, simulators, and other facilities play in advanced training is the same.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	4	Special credit was given to this area because it addresses the ability to handle munitions.
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area was weighted the same as Primary because the training infrastructure is already established and in use at each base.
Unique Features	0	N/A
Air Quality	5	This was weighted the same as Primary because advanced training aircraft do not have a large impact on air quality issues.
Encroachment	6	This area is slightly higher than Primary (5%) due to the higher airspeeds of the advanced training aircraft (jet aircraft).
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

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Questions for Assessing the Functional Quality of *Bomber/Fighter* Pilot Training

Managed Training Areas (6 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Bomber/Fighter training. (2 pt or 33%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2 pts for 2 fields)
   Rational: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports Bomber/Fighter training. (4 pt or 67%)
   Scoring: 1 pt for MOA, 1 pt for WA/Restricted Area, 1 pt for MTR, 1 pt for Air-to-Surface range
   Rational: Owning airfields and airspace have equal impact on training

Weather (10 points)

1. Percent of time weather is better than 3000/5. (3 pts or 30%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%?)
   Rationale: Weather requirements to best conduct training. Higher % is better.
2. Percent of time weather is better than 1500/3. (2 pts or 20%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 2 pt for 95%?)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (2.5 pts or 25%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 2.5 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (1 pt or 10%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
5. Percent of sorties canceled/rescheduled. (.5 pt or 5%)
   Scoring: Linear scale between 5% and 20% (.5 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

'ficial Planning factor for lost sorties due to weather. (1 pt or 10%)
   coring: Linear scale between 5% and 20% (1 pt for 5% and .5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (27 points)

1. Amount of airspace (MOA/WA and Restricted area) in nm^3 (12 pt or 44%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (0 pt for 0 nm^3 and 12 pt for max nm^3).
   Rationale: More airspace is better. Bomber/Fighter require more airspace than Primary pilot training.
2. Average distance to airspace (2 pt or 7%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of Air-to-Surface ranges within 75 nm (3 pt or 11%).
   Scoring: 2 pts for 1 range, 3 pts for 2 or more ranges.
   Rationale: More airspace is better.
4. Distance to nearest Air-to-Surface range (2 pt or 7%)
   Scoring: 2 pt if range is within 50 nm.
   Rationale: Closer distance is better.
5. Number of MTR's available (3 pt or 11%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
6. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 7%)
   Scoring: Linear scale between 0 and some max (2 pts for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.

ned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.

8. Number of bisecting airways. (2 pts or 7%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (17 points)

1. The # of outlying/auxiliary fields usable for Bomber/Fighter pilot training (2 pt or 12%)

Definition of usable field will be based on runway length (preliminary cutoff – 8K ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.

2. The # of usable outlying/auxiliary fields with IFR or night? capability. (1 pt or 6%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 1 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (1 pt or 6%)
   Scoring: Linear scale between some min and max(1 pt for min distance, 0 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 12%)
   Scoring: Linear scale between 8K and 12K ft (1 pt for 8K ft runway , 2 points for 12K ft runway)
   Rationale: Longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 41%)
   Scoring:
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways – % of runway sq ft in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons – % of taxiways/aprons sq ft in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities – ave % of facilities in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) – ave % of facilities in adeq cond (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max %)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max %)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)

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Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

ondition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Special Military Facilities (4 points)

1. Does installation have munitions loading pad? (2 pt or 50%)
   Scoring: 2 pt for yes, 0 pt for no
   Rationale: Munitions loading pad to handle hot cargo.
2. Does installation have weapons storage and handling facilities? (2 pt or 50%)
   Scoring: 2 pt for yes, 0 pt for no
   Rationale: Weapons storage is necessary to handle munitions for the IFF program.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area with instrument capability that could support Bomber/Fighter pilot training (1 pt or 50%)
   Scoring: .5 pts for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.

istance to other airfields. (1 pt or 50%)
Scoring: .5 pts for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.

re real estate disclosures required by local communities? (0.5 pt or 8%)
Scoring: 0.5 pt for yes, 0 pt for no
Rationale: Real estate disclosures are best.

6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

MEASURES OF MERIT FOR
STRIKE & ADV. E-2/C-2

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	7	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	27	This area was weighted higher than Primary (22%) because there is greater emphasis on area work in advanced training than there is in Primary training.
Airfields	17	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	10	This was weighted the same as Primary because the role classrooms, simulators, and other facilities play in advanced training is the same.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	4	Special credit was given to this area for this function because it addresses the ability to handle munitions.
Proximity to Training Areas	3	This credit was allotted to this area because of the desire to have a training carrier in close proximity.
Proximity to Other Support Facilities	2	This area was weighted the same as Primary because the training infrastructure is already established and in use at each base.
Unique Features	0	N/A
Air Quality	5	This was weighted the same as Primary because advanced training aircraft do not have a large impact on air quality issues.
Encroachment	6	This area is slightly higher than Primary (5%) due to the higher airspeeds of the advanced training aircraft (jet aircraft).
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

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9:39 AM 14 July, 1994

Questions for Assessing the Functional Quality of *Strike/Adv E2/C2* Pilot Training

Managed Training Areas (6 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Strike/Adv E2/C2 training. (2 pt or 33%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2 pts for 2 fields)
   Rational: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports Strike/Adv E2/C2 training. (4 pt or 67%)
   Scoring: 1 pt for MOA, 1 pt for WA/Restricted Area, 1 pt for MTR, 1 pt for Air-to-Surface range
   Rational: Owning airfields and airspace have equal impact on training

Weather (7 points)

1. Percent of time weather is better than 3000/5. (3 pts or 43%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%?)
   Rationale: Weather requirements to best conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (1 pt or 14%)
   Scoring: Linear scale between 80% and 100% (0.5 pt for 80% and 1 pt for 95%?)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (1 pt or 14%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 1 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (0.5 pt or 7%)
   Scoring: Linear scale between min% and max% (0.5 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.

ent of sorties canceled/rescheduled. (0.5 pt or 7%)
   coring: Linear scale between 5% and 20% (0.5 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

fficial Planning factor for lost sorties due to weather. (1 pt or 14%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0.5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (27 points)

1. Amount of airspace (MOA/WA and Restricted area) in nm^3 (12 pt or 44%).
   Scoring: Linear scale of airspace from 0 to max airspace (0 pt for 0 nm^3 and 12 pt for max nm^3).
   Rationale: More airspace is better. Strike/Adv E2/C2 require more airspace than Primary pilot training.
2. Average distance to airspace (2 pt or 7%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of Air-to-Surface ranges within 75 nm (4 pt or 15%).
   Scoring: 3 pts for 1 range, 4 pts for 2 or more ranges.
   Rationale: More airspace is better.
4. Distance to nearest Air-to-Surface range (1 pt or 4%)
   Scoring: 1 pt if range is within 50 nm.
   Rationale: Closer air-to-surface ranges are better.
5. Number of MTR's available (3 pt or 11%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
6. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 7%)
   Scoring: Linear scale between 0 and some max (2 pts for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.

nned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.

8. Number of bisecting airways. (2 pts or 7%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (17 points)

1. The # of outlying/auxiliary fields usable for Strike/Adv E2/C2 pilot training (2 pt or 12%)
   Definition of usable field will be based on runway length (preliminary cutoff -- 8000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (1 pt or 6%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 1 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (1 pt or 6%)
   Scoring: Linear scale between some min and max(1 pt for min distance, 0 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 12%)
   Scoring: Linear scale between 8K and 12K ft (1 pt for 8K ft runway , 2 points for 12K ft runway)
   Rationale: Longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 41%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)

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Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This is another measure of installation quality. Higher % is better.

Special Military Facilities (4 points)

1. Does installation have munitions loading pad? (2 pt or 50%)
Scoring: 2 pt for yes, 0 pt for no
Rationale: Munitions loading pad to handle hot cargo.
2. Does installation have weapons storage and handling facilities? (2 pt or 50%)
Scoring: 2 pt for yes, 0 pt for no
Rationale: Weapons storage is necessary to handle munitions for the IFF ~~program.~~

imity to Training Areas (3 points)

s there a carrier qual operating area within 100 nm of the site? (3 pts or 100%)
Scoring: Linear scale between 50 nm and 100 nm (3 pts for 50 nm or less, 0 pts for 100 nm or more)
Rationale: Strike training requires accessibility to a carrier.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area with instrument capability that could support Strike/Adv E2/C2 pilot training (1 pt or 50%)
Scoring: 0.5 pts for 1 field, 1 pt for 2 or more fields
Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
Scoring: .5 pts for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area (3 pt or 60%)
Scoring: 3 pt for yes, 0 pt for no
Rationale: Attainment and maintenance areas are best.
2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: Fewer restrictions are better.

Encroachment (6 points)

the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
Scoring: 1.5 pts for yes, 0 pt for no
Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
Scoring: 0.5 pt for yes, 0 pt for no
Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
Scoring: 0.5 pt for yes, 0 pt for no
Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
Rationale: Less waiting time for child care is better.

MEASURES OF MERIT FOR
AIRLIFT/TANKER

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	9	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	24	This area was weighted higher than Primary (22%) because there is greater emphasis on area work and approaches at other airfields in advanced training than there is in Primary training.
Airfields	22	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	10	This was weighted the same as Primary because the role classrooms, simulators, and other facilities play in advanced training is the same.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	5	This area was weighted higher than Primary (2%) because this type of training relies more on the surrounding infrastructure.
Unique Features	0	N/A
Air Quality	5	This was weighted the same as Primary because advanced training aircraft do not have a large impact on air quality issues.
Encroachment	6	This area is slightly higher than Primary (5%) due to the higher airspeeds of the advanced training aircraft.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

[redacted]

DRAFT

Questions for Assessing the Functional Quality of *Airlift/Tanker* Pilot Training

Managed Training Areas (6 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Airlift/Tanker training. (2.5 pt or 42%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2.5 pts for 2 fields)
   Rational: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports Airlift/Tanker training. (3.5 pt or 58%)
   Scoring: 1.5 pt for MOA, 1 pt for WA, 0.5 pt for MTR, 0.5 for AA
   Rational: Owning airfields and airspace have equal impact on training

Weather (9 points)

1. Percent of time weather is better than 1500/3. (3 pt or 33%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%???)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (2 pt or 22%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 2 pt for 95%???)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (2 pt or 22%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 2 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (.5 pt or 6%)
   Scoring: Linear scale between min% and max% (.5 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
5. ...rcent of sorties canceled/rescheduled. (.5 pt or 6%)
   Scoring: Linear scale between 5% and 20% (.5 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (1 pt or 11%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and .5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (24 points)

1. Amount of airspace (MOA/WA and AA) in nm^3 (14 pt or 58%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 14 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA. Airlift/Tanker require more airspace than Primary pilot training.
2. Average distance to airspace (2 pt or 8%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale:
3. Number of MTR's available (3 pt or 12.5%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
4. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 8%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
5. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
6. ...umber of bisecting airways. (2 pt or 8%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (22 points)

1. The # of outlying/auxiliary fields usable for Airlift/Tanker pilot training (2 pt or 9%)
   Definition of usable field will be based on runway length (preliminary cutoff – 7000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (2 pt or 9%)
   Scoring: Linear scale between some min and max (2 pt for min distance, 1 pt for max)
   Rationale: Closer outlying fields are better.
4. Runway length of longest runway at main airfield. (2 pt or 9%)
   Scoring: Linear scale between 6000 and 10000 ft (1 pt for 5000 ft runway, 2 points for 10000 ft runway)
   Rationale: longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max %)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max %)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max %)

[redacted]

Rationale: This measures the amount and quality of the training facilities. More quality is better.
Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max %)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (5 points)

1. Number of other airfields in the area with instrument capability that could support airlift/tanker pilot training (4 pt or 80%)
   Scoring: 2 pts for 1 field, 4 pts for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 20%)
   Scoring: .5 pts for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Air Quality (5 points)

's the air station in an attainment or maintenance area (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

mount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max %)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max %)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max %)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

MEASURES OF MERIT FOR
MARITIME / INT E-2 & C-2

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	9	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	24	This area was weighted higher than Primary (22%) because there is greater emphasis on area work and approaches at other airfields in advanced training than there is in Primary training.
Airfields	22	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	10	This was weighted the same as Primary because the role classrooms, simulators, and other facilities play in advanced training is the same.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	5	This area was weighted higher than Primary (2%) because this type of training relies more on the surrounding infrastructure.
Unique Features	0	N/A
Air Quality	5	This was weighted the same as Primary because advanced training aircraft do not have a large impact on air quality issues.
Encroachment	6	This area is slightly higher than Primary (5%) due to the higher airspeeds of the advanced training aircraft.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

[redacted]

DRAFT

Questions for Assessing the Functional Quality of *Maritime/Int E2/C2* Pilot Training

Managed Training Areas (6 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Maritime/Int E2/C2 training. (2.5 pt or 42%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2.5 pts for 2 fields)
   Rationale: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports Maritime/Int E2/C2 training. (3.5 pt or 58%)
   Scoring: 1.5 pt for MOA, 1 pt for WA, 0.5 pt for MTR, 0.5 for AA
   Rationale: Owning airfields and airspace have equal impact on training

Weather (9 points)

1. Percent of time weather is better than 1500/3. (3 pt or 33%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%???)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (2 pt or 22%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 2 pt for 95%???)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (2 pt or 22%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 2 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (.5 pt or 6%)
   Scoring: Linear scale between min% and max% (.5 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.

ercent of sorties canceled/rescheduled. (.5 pt or 6%)
   Scoring: Linear scale between 5% and 20% (.5 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

6. Official Planning factor for lost sorties due to weather. (1 pt or 11%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and .5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (24 points)

1. Amount of airspace (MOA/WA and AA) in nm^3 (14 pt or 58%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 14 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA. Maritime/Int E2/C2 require more airspace than Primary pilot training.
2. Average distance to airspace (2 pt or 8%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of MTR's available (3 pt or 12.5%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
4. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 8%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
5. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.

Number of bisecting airways. (2 pt or 8%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (22 points)

1. The # of outlying/auxiliary fields usable for Maritime/Int E2/C2 pilot training (2 pt or 9%)
   Definition of usable field will be based on runway length (preliminary cutoff -- 5000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (2 pt or 9%)
   Scoring: Linear scale between some min and max (2 pt for min distance, 1 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 9%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway , 2 points for 8000 ft runway)
   Rationale: longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)

[redacted]

Rationale: This measures the amount and quality of the training facilities. More quality is better.

Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. *Level of maintenance operations at site (3 pt or 60%)*
Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (5 points)

1. Number of other airfields in the area with instrument capability that could support Maritime/Int E2/C2 pilot training (4 pt or 80%)
Scoring: 2 pts for 1 field, 4 pts for 2 or more fields)
Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 20%)
Scoring: .5 pts for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
Rationale: Closer airfields are better.

Air Quality (5 points)

Is the air station in an attainment or maintenance area (3 pt or 60%)
Scoring: 3 pt for yes, 0 pt for no
Rationale: Attainment and maintenance areas are best.

2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
Scoring: 1.5 pts for yes, 0 pt for no
Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
Scoring: 0.5 pt for yes, 0 pt for no
Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
Scoring: 0.5 pt for yes, 0 pt for no
Rationale: It is best if all clear zones have been acquired.

Services (8 points)

Amount of BOQ rooms rated "adequate" (2 pt or 25%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
Rationale: More "adequate" billeting space is better.

2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
Rationale: More "adequate" billeting space is better.
5. *What percent of the listed MWR and support facilities/programs are available?* (2 pt or 25%)
Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
Rationale: Less waiting time for child care is better.

MEASURES OF MERIT FOR
NFO/NAV PRIMARY & INTERMEDIATE

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	5	The questions addressed in this area are focused toward ownership of special use airspace, air-to ground ranges, and outlying fields. In this analysis, *accessibility* to these facilities was considered more important than ownership.
Weather	14	This weight was used because students in primary flight training need better weather than students in the advanced tracks.
Airspace and Flight Training Areas	22	This area was weighted heavily due to the direct impact it has on primary flight training. Much of the training takes place in special use airspace; therefore, this area plays a large role in determining the training effectiveness of an installation.
Airfields	24	This area is weighted the heaviest due to the emphasis primary training places on pattern activities. This area plays a big role in evaluating the effectiveness of a training installation.
Ground Training Facilities	10	This weight is commensurate with the role classrooms, simulators, and other facilities play in flight training.
Aircraft Maintenance Facilities	5	Training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area looks at the local area to determine what other facilities are available. The overall training infrastructure is already established and in use at each base so the impact in this area should be minimal.
Unique Features	0	N/A
Air Quality	5	Air quality plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on air quality issues.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	Quality of life plays a significant role in determining installation compatibility with the training mission and this weight will be applied to the other training functions.

Questions for Assessing the Functional Quality of *Primary NFO/NAV* Training

Managed Training Areas (5 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support primary NFO/NAV training. (2.5 pt or 50%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2.5 pts for 2 fields)
   Rationale: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports primary training. (2.5 pt or 50%)
   Scoring: 1.5 pt for MOA, 1 for AA
   Rationale: Owning airfields and airspace have equal impact on training

Weather (14 points)

1. Percent of time weather is better than 1500/3. (4 pt or 29%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 4 pt for 95%???)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (3 pt or 21%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%???)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (3 pt or 21%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 3 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (1 pt or 7%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
5. ercent of sorties canceled/rescheduled. (1 pt or 7%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (2 pt or 14%)
   Scoring: Linear scale between 5% and 20% (2 pt for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (22 points)

1. Amount of airspace (MOA and AA) in nm^3 (13 pt or 59%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 13 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA.
2. Average distance to airspace (4 pt or 18%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 4 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
4. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
5. Number of bisecting airways. (2 pt or 9%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

'ields (24 points)

1. he # of outlying/auxiliary fields usable for primary Nav/NFO training (4 pt or 17%)
   Definition of usable field will be based on runway length (preliminary cutoff -- 5000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 4 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. Median distance to outlying/auxiliary fields. (3 pt or 12%)
   Scoring: Linear scale between some min and max (3 pts for min distance, 1 pt for max)
   Rationale: Closer airfields are better.
3. Runway length of longest runway at main airfield. (3 pt or 12%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway, 3 points for 8000 ft runway)
   Rationale: longer runway is better for safety reasons
4. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
5. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
6. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
7. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
8. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. *Level of maintenance operations at site* (3 pt or 60%)

[redacted]

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Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
Rationale: Higher level of maintenance is better.

2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area that could support primary NFO/NAV training (1 pt or 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

oachment (5 points)

s the existing AICUZ study encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: 1 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.

Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.

What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.

6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

[redacted]

MEASURES OF MERIT FOR
WSO / STRIKE

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	7	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	22	This area was weighted the same as Primary because of the direct impact it has on advanced flight training.
Airfields	22	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	17	This was weighted more than Primary because of the greater role classrooms, simulators, and other facilities play in advanced training.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area was weighted the same as Primary because the training infrastructure is already established and in use at each base.
Unique Features	0	N/A
Air Quality	5	This was weighted the same as Primary because air quality plays a role in determining installation compatibility with the training mission; however, advanced aircraft do not have a large impact on air quality issues.
Encroachment	6	This area is slightly higher than Primary (5%) due to the higher airspeeds of the advanced training aircraft.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

Questions for Assessing the Functional Quality of *WSO/Strike* Training

Managed Training Areas (6 points)

1. The number and type of special use airspace that is controlled/owned by the installation and supports WSO./Strike training. (6 pt or 100%)
   Scoring: 2 pts for MOA, 2pts for WA/Restricted Area, 1 pt for MTR, 1 pt for AA
   Rationale: NFO/WSO training require special use airspace.

Weather (7 points)

1. Percent of time weather is better than 3000/5. (2 pt or 29%)
   Scoring: Linear scale between 80% and 100% (0.5 pts for 80% and 2 pt for 95%???)
   Rationale: Weather requirements to best conduct training. Higher % is better.
2. Percent of time crosswinds are greater than 25 knots. (1 pt or 14%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
3. Percent of sorties canceled/rescheduled. (2 pts or 29%)
   Scoring: Linear scale between 5% and 20% (2 pts for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-2.
4. Official Planning factor for lost sorties due to weather. (2 pts or 28%)
   Scoring: Linear scale between 5% and 20% (2 pt for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-2.

Airspace and Flight Training Areas (22 points)

Amount of airspace (MOA/WA and AA) in nm^3 (10 pt or 45%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA/WA and .8 AA) (0 pt for 0 nm^3 and 10 pt for max nm^3). Weighted airspace for each site = amount of MOA/WA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA/WA is slightly better than AA.
2. Average distance to airspace (3 pt or 14%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 3 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of MTR's available. (4 pt or 18%)
   Scoring: Linear scale from 0 to max (0 pts for 0 and 4 pts for max)
   Rationale: MTRs are required for training...more is better.
4. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
5. Planned commercial hub within 100 miles. (1 pt or 5%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
6. Number of bisecting airways. (2 pt or 9%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (22 points)

1. Runway length of longest runway at main airfield. (5 pts or 23%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway, 5 pts for 8000 ft runway)
   Rationale: Longer runway is better for safety reasons
Number of primary runways that can support concurrent ops and crosswind rnways at main field. (7 pts or 32%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
3. Condition of runways -- % of runway sq ft in adequate condition (3 pt or 14%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
4. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (3 pt or 14%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
5. Condition of utilities -- ave % of facilities in adequate condition (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
6. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (17 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (5 pt or 29%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (2 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (5 pt or 3029
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (2 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (2 pt or 12%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area that could support NFO/NAV training (1 pt or 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)

Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
[redacted] Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.

[redacted] s all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

[redacted]

MEASURES OF MERIT FOR
PANEL NAVIGATOR

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	5	This area was weighted the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	7	This area was weighted significantly lower than Primary (14%) because the crew and aircraft are fully qualified to fly in instrument conditions.
Airspace and Flight Training Areas	22	This area was weighted the Primary (22%) because of the unique airspace needs of this mission.
Airfields	23	This area was weighted about the same as Primary (24%) because it also plays a big role in evaluating a training installation.
Ground Training Facilities	20	This area was weighted higher than Primary (10%) due to the higher emphasis on classroom and simulator activities.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	0	N/A
Unique Features	0	N/A
Air Quality	5	This was weighted the same as Primary because air quality plays a role in determining installation compatibility with the training mission; however, advanced aircraft do not have a large impact on air quality issues.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

[redacted]

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Questions for Assessing the Functional Quality of *Panel Navigator* Training

Managed Training Areas (5 points)

1. The number and type of special use airspace that is controlled/owned by the installation and supports Panel Nav training. (5 pts or 100%)
   - Scoring: 5 pts for MTR
   - Rationale: MTRs are the primary special use airspace utilized.

Weather (7 points)

1. Percent of time weather is better than 3000/5. (2.5 pt or 36%)
   - Scoring: Linear scale between 80% and 100% (1 pt for 80% and 2.5 pts for 95%???)
   - Rationale: Weather requirements to best conduct training. Higher % is better.
2. Percent of time crosswinds are greater than 25 knots. (2.5 pts or 36%)
   - Scoring: Linear scale between min% and max% (2.5 pts for min% and 0 pt for max%)
   - Rationale: Max aircraft crosswind limits. Lower % is better.
3. Percent of sorties canceled/rescheduled. (1 pt or 14%)
   - Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0.5 pt for 20%)
   - Rationale: This area captures weather attrition not covered by questions 1-2.
4. Official Planning factor for lost sorties due to weather. (1 pt or 14%)
   - Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0.5 pt for 20%)
   - Rationale: This area captures weather attrition not covered by questions 1-2.

Airspace and Flight Training Areas (22 points)

1. Number of MTR's available. (8 pts or 36%)
   - Scoring: Linear scale from 0 to max (0 pts for 0 and 8 pts for max)
   - Rationale: MTRs are required for training...more is better.
2. [illegible]rcent of flight ops experiencing ATC delays of 15 minutes or greater. (6 pt or [illegible]7%)
   - Scoring: Linear scale between 0 and some max (6 pt for 0 % delays and 0 pts for max % delay)
   - Rationale: Fewer ATC delays is better.
3. Planned commercial hub within 100 miles. (4 pts or 18%)
   - Scoring: 4 pts for no and 0 pt for yes.
   - Rationale: Commercial hub will impact training. No hub is better.
4. Are there any planned changes to the major air traffic structures in the region that will affect installation operations? (2 pts or 9%)
   - Scoring: 2 pts for no and 0 pt for yes.
   - Rationale: Fewer changes in the current airspace structure is better.
5. Are current operations affected by major air traffic structures within 50 nm of the airfield? (2 pts or 9%)
   - Scoring: 2 pts for no and 0 pt for yes.
   - Rationale: Less impact on major air structures is better.

Airfields (23 points)

1. Runway length of longest runway at main airfield. (6 pts or 26%)
   - Scoring: Linear scale between 7000 and 10000 ft (1 pt for 7000 ft runway, 6 pts for 10000 ft runway)
   - Rationale: Longer runway is better for safety reasons
2. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pts or 30%)
   - Scoring:
     - With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
     - With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
     - With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
     - With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   - Rationale: More runways improve quality of training for safety reasons and flexibility
3. Condition of runways – % of runway sq ft in adequate condition (3 pt or 14%)
   - Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pt for 100%)
   - Rationale: This indicates the quality of the runway. Higher quality is better.
4. Condition of taxiways/aprons – % of taxiways/aprons sq ft in adequate condition (3 pts or 13%)
   - Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pt for 100%)
   - Rationale: This indicates the quality of the taxiways. Higher quality is better.
5. Condition of utilities – ave % of facilities in adequate condition (2 pt or 9%)
   - Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   - Rationale: This indicates the quality of the utilities. Higher quality is better.
6. Condition of other facilities (e.g., term, admin) – ave % of facilities in adeq cond (2 pts or 9%)
   - Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   - Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (20 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (5.5 pt or 27%)
   - Scoring: Linear scale between 0 and max (0 pt for 0 %, 5.5 pts for max%)
   - Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (2.5 pt or 13%)
   - Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.5 pt for 100%)
   - Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (5.5 pt or 27%)
   - Scoring: Linear scale between 0 and max (0 pt for 0 %, 5.5 pt for max%)
   - Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (2.5 pt or 13%)
   - Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.5 pt for 100%)
   - Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (2.5 pt or 13%)
   - Scoring: Linear scale between 0 and max (0 pt for 0 %, 2.5 pt for max%)
   - Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (1.5 pt or 7%)
   - Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   - Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   - Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   - Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   - Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   - Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   - Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   - Rationale: This is another measure of installation quality. Higher % is better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area (3 pt or 60%)
   - Scoring: 3 pt for yes, 0 pt for no
   - Rationale: Attainment and maintenance areas are best.
2. There are no critical air quality regions within 100 km of air station (1 pt or 20%)
   - Scoring: 1 pt for yes, 0 pt for no
   - Rationale: No critical air quality regions are best.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   - Scoring: 1 pt for yes, 0 pt for no
   - Rationale: Fewer restrictions are better.

[redacted]

achment (5 points)

the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max %)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max %)
   Rationale: More "adequate" billeting space is better.
dition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max %)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

[redacted]
DRAFT
WORKING PAPERS

MEASURES OF MERIT FOR
HELICOPTER

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	8	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	9	This area was weighted significantly lower than Primary (14%) due to the lower weather requirements for helicopter training.
Airspace and Flight Training Areas	16	This area was weighted significantly lower than Primary (22%) because much of the helicopter training can take place in uncontrolled airspace.
Airfields	24	This was weighted the same as Primary (24%) due to the similar infrastructure needs for helicopter training.
Ground Training Facilities	10	This area was weighted the same as Primary (10%) due to the similar emphasis on classroom and simulator activities.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area was weighted the same as Primary because the training infrastructure is already established and in use at each base.
Unique Features	8	This was weighted higher than Primary (0) due to availability of unique features to support helo training (ITAS - Instrumented Training Airway System, training barge)
Air Quality	5	This was weighted the same as Primary because air quality plays a role in determining installation compatibility with the training mission; however, helicopters do not have a large impact on air quality issues.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

[redacted]

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9:05 AM 14 July, 1994

Questions for Assessing the Functional Quality of *Helicopter* Pilot Training

Managed Training Areas (8 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Helicopter training. (6 pt or 75%)
   - **Scoring:** Linear scale between 0 and max (0 pt for 0 fields, 6 pts for max fields)
   - **Rationale:** Owning airfields has more impact on helo training than owning airspace.
2. The number and type of special use airspace that is controlled/owned by the installation and supports Helicopter training. (2 pts or 25%)
   - **Scoring:** 2 pts for MOA and or AA
   - **Rationale:** Owning airfields has more impact on helo training than owning airspace.

Weather (9 points)

1. Percent of time weather is better than 1000/3. (4 pts or 44%)
   - **Scoring:** Linear scale between 80% and 100% (1 pt for 80% and 4 pt for 95%???)
   - **Rationale:** USN weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 500/1. (3 pt or 33%)
   - **Scoring:** Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%???)
   - **Rationale:** USA weather requirements to conduct training. Higher % is better.
3. Percent of sorties canceled/rescheduled. (1 pt or 11%)
   - **Scoring:** Linear scale between 5% and 20% (1 pt for 5% and 0 pts for 20%)
   - **Rationale:** This area captures weather attrition not covered by questions 1-2.
4. Official Planning factor for lost sorties due to weather. (1 pt or 11%)
   - **Scoring:** Linear scale between 5% and 20% (1 pt for 5% and 0 pts for 20%)
   - **Rationale:** This area captures weather attrition not covered by questions 1-2.

Airspace and Flight Training Areas (16 points)

1. Amount of special use airspace (MOA and AA) in nm^2 (2 pt or 13%).
   - **Scoring:** Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^2 and 2 pt for max nm^2). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   - **Rationale:** More airspace is better. MOA is slightly better than AA.
2. Average distance to airspace (1 pt or 6%)
   - **Scoring:** Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 1 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^2 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   - **Rationale:** Closer airspace is better.
3. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (3 pts or 19%)
   - **Scoring:** Linear scale between 0 and some max (3 pt for 0 % delays and 0 pts for max % delay)
   - **Rationale:** Fewer ATC delays is better.
4. Planned commercial hub within 100 miles. (2 pts or 13%)
   - **Scoring:** 2 pts for no and 0 pt for yes.
   - **Rationale:** Commercial hub will impact training. No hub is better.
5. Are there any planned changes to the major air traffic structures that supports flight training at your installation that will negatively impact on UPT? (2 pts or 13%)
   - **Scoring:** 2 pts for no and 0 pt for yes.
   - **Rationale:** Fewer changes in the current airspace structure is better.
6. Are installation operations currently affected by the major air traffic structures within 50 nm of the airspace and airfields? (2 pts or 13%)
   - **Scoring:** 2 pts for no and 0 pt for yes.
   - **Rationale:** Less impact on major air structures is better.
7. Availability of required specific terrain features or overwater access to support helo training (4 pts or 25%)
   - **Scoring:** 3 pts for terrain, 1 pt for overwater access
   - **Rationale:** Helo training requires specific terrain feature to train effectively.

Airfields (24 points)

1. The # of outlying/auxiliary fields usable for Helicopter pilot training (5 pt or 21%) Definition of usable field - should support emergency procedures for TH 57/67
   - **Scoring:** Linear scale between 0 and some max (0 pt for 0 fields, 5 pts for max # fields)
   - **Rationale:** More runways improve quality of training for safety reasons and flexibility
2. The # of usable outlying/auxiliary fields with night/night vision goggle capability. (4 pts or 17%)
   - **Scoring:** Linear scale between 0 and some max (0 pt for 0 fields, 4 pts for max # fields)
   - **Rationale:** More runways improve quality of training for safety reasons and flexibility
3. Median distance to outlying/auxiliary fields. (3 pts or 13%)
   - **Scoring:** Linear scale between some min and max (3 pt for min distance, 1 pt for max)
   - **Rationale:** Closer airfields are better.
4. Number of lanes that can support UHPT. Must be able to support emergency procedures for TH-57/67. (4 pts or 17%)
   - **Scoring:** Linear scale between 0 and some max (0 pts for no lanes, 4 pts for max lanes)
   - **Rationale:** More lanes are better for safety reasons; less congestion
5. Condition of runways -- % of runway sq ft in adequate condition (2 pts or 8%)
   - **Scoring:** Linear scale between 0 and 100 (0 pts for 0%, 2 pts for 100%)
   - **Rationale:** This indicates the quality of the runway. Higher quality is better.
6. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (2 pts or 8%)
   - **Scoring:** Linear scale between 0 and 100 (0 pt for 0 %, 2 pts for 100%)
   - **Rationale:** This indicates the quality of the taxiways. Higher quality is better.
7. Condition of utilities -- ave % of facilities in adequate condition (2 pts or 8%)
   - **Scoring:** Linear scale between 0 and 100 (0 pt for 0 %, 2 pts for 100%)
   - **Rationale:** This indicates the quality of the utilities. Higher quality is better.
8. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (2 pts or 8%)
   - **Scoring:** Linear scale between 0 and 100 (0 pt for 0 %, 2 pts for 100%)
   - **Rationale:** This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   - **Scoring:** Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   - **Rationale:** This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   - **Scoring:** Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   - **Rationale:** This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   - **Scoring:** Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   - **Rationale:** This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   - **Scoring:** Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   - **Rationale:** This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   - **Scoring:** Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   - **Rationale:** This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
   - **Scoring:** Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   - **Rationale:** This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   - **Scoring:** 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)

[redacted]

Rationale: Higher level of maintenance is better.
Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max %)
Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area that could support Helicopter pilot training (1 pt or 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Unique Features (8 points)

1. Identify unique features (functions, equipment, etc.) possessed by the installation that support UHPT (8 pts or 100%)
   Scoring: Linear scale between 0 and some max (0 pts for 0 features, and 8 pts for max features)
   Rationale: If there is a unique feature already at a base to support training in a given function it should be recognized.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.

There are no critical air quality regions within 100 km of air station (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: No critical air quality regions are best.
There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: Fewer restrictions are better.

Encroachment (5 points)

1. Has the existing AICUZ study been completed and encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: .5 pt for having completed the study and 1 pt for being encoded.
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max %)
   Rationale: More "adequate" billeting space is better.

Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max %)
Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max %)
Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
Rationale: Less waiting time for child care is better.

TAB 12

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

August 11, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1440 hours on August 11, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Gardner began with administrative comments. He then noted that the Group's analytical framework had been approved by the BRAC 95 Steering Group (July 28, 1994). As discussed at earlier meetings, the analytical framework includes the D-Pad model and the optimization model as tools to aid the development of alternatives. The Steering Group also authorized access to certified data from the Military Departments. Mr. Finch directed that a copy of the framework be attached to the minutes for the record (attached).

The Group then discussed the prospective near-term schedule. The Group's joint study team (JST) has begun receiving data to support both the functional value analysis and capacity analysis. These analyses must be complete before the unconstrained analysis can begin.

The Group next reviewed security and control procedures and pointed out that the Group and its JST was operating under the joint internal control plan, and that physical security/controlled access for work space and data storage was being provided at the Center for Naval Analysis (CNA). Mr. Gardner asked that membership lists be updated.

Mr. Gardner led discussion on functional value procedures and status including questions proposed by the JST for resolution to support functional value determination. The Group discussed the proposal (handout attached) and challenged the points and questions noting they concern functional value development and are not strictly data call oriented as could be inferred by the title of the handout. The Group questioned and discussed rationale for each proposed modification. Discussion on the eighth question, which is airspace oriented, centered on whether an upper limit (cap) should be placed on training airspace for functional value development. The Group debated whether higher was better when considering the undergraduate flying training function, the operational capabilities of training aircraft, training syllabus requirements, and application of military experience and judgement. Subsequently, the Group agreed that 45,000 feet altitude above mean sea level (MSL) should be the upper limit for which credit is given for training airspace. Airspace above that altitude would not affect the undergraduate flying training function. The Group further agreed that the JST refine the proposal by changing the title, as agreed, to more accurately reflect the purpose of the paper, to include the rationale discussed for each modification, and to attach the refinement to the minutes (attached).

[redacted]

Next, Mr. Gardner and Mr. Wyte, DoDIG, briefly talked about data validation and spot check plans.

The Group again noted the bleak fiscal climate which could delay or stop acquisition of the Joint Primary Aircraft Training System (JPATS) and, thus, affect BRAC analysis. However, Departmental decision on this issue could be months away. The Group concluded that it must proceed with the BRAC process using the interim force structure plan.

Next, the members received, for their consideration, a copy of an extract (attached) from the *Congressional Budget Office (CBO) Papers, Easing the Burden: Restructuring and Consolidating Defense Support Activities*, dated July 1994. The papers include a chapter on consolidating pilot training. The Group was reminded that the CBO study presented in the papers was produced outside the BRAC process and does not meet data requirements for BRAC analysis as established by law, and, therefore, is not certified.

Mr. Finch noted that the Group needs decisions on training policies which are external to the BRAC process from the appropriate policy offices. Additionally, the Navy and Air Force have collaborated and presented their combined view on joint fixed-wing training to the policy offices in the Office of the Under Secretary of Defense for Personnel and Readiness. Mr. Finch pointed out that these views do not currently represent official Departmental policies, but they are undergoing review for potential approval. If adopted by the Department, these policies could impact BRAC analysis. Mr. Finch envisioned a future briefing to the Group oriented toward policy and notional basing structure with regard to the joint training perspective.

There being no further matters to discuss, the meeting was adjourned at 1600 hours.

Approved: Lou Finch
Chairman

8/11/94

Addendum to UPT Joint Cross-Service Group's Meeting Notes

It was agreed as a point of order that the DoD "Flip Charts" for IFR and VFR are recognized as certified data by the Group.

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

August 11, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
CPT Blake Hollis, Army
CW5 George Conaway, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
Maj Gen Ev Pratt, Jr., Air Force
Lt Col Jerry Free, Air Force
Lt Col Len Jarman, Air Force
Col Paul Thompson, OSD (Base Closure)
Mr. Fred Copeland, OSD (Comptroller)
Mr. David Wyte, DoDIG
Mr. Donald Stockton, DoDIG

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UPT JOINT / CROSS-SERVICE GROUP AGENDA

(11 August 1994 Meeting -Rm 3E752)

1. Near-term Schedule

    A. Functional Values

    B. Capacity Analysis

    C. Unconstrained Optimization Model Run

2. Security Procedures -- Current Member List(s)

3. Functional Value Procedures/Status

    A. Data Call Modifications (Attached)

    B. Validation/Spot Check Plans - DoDIG

4. JPATS DRB Status and Implications

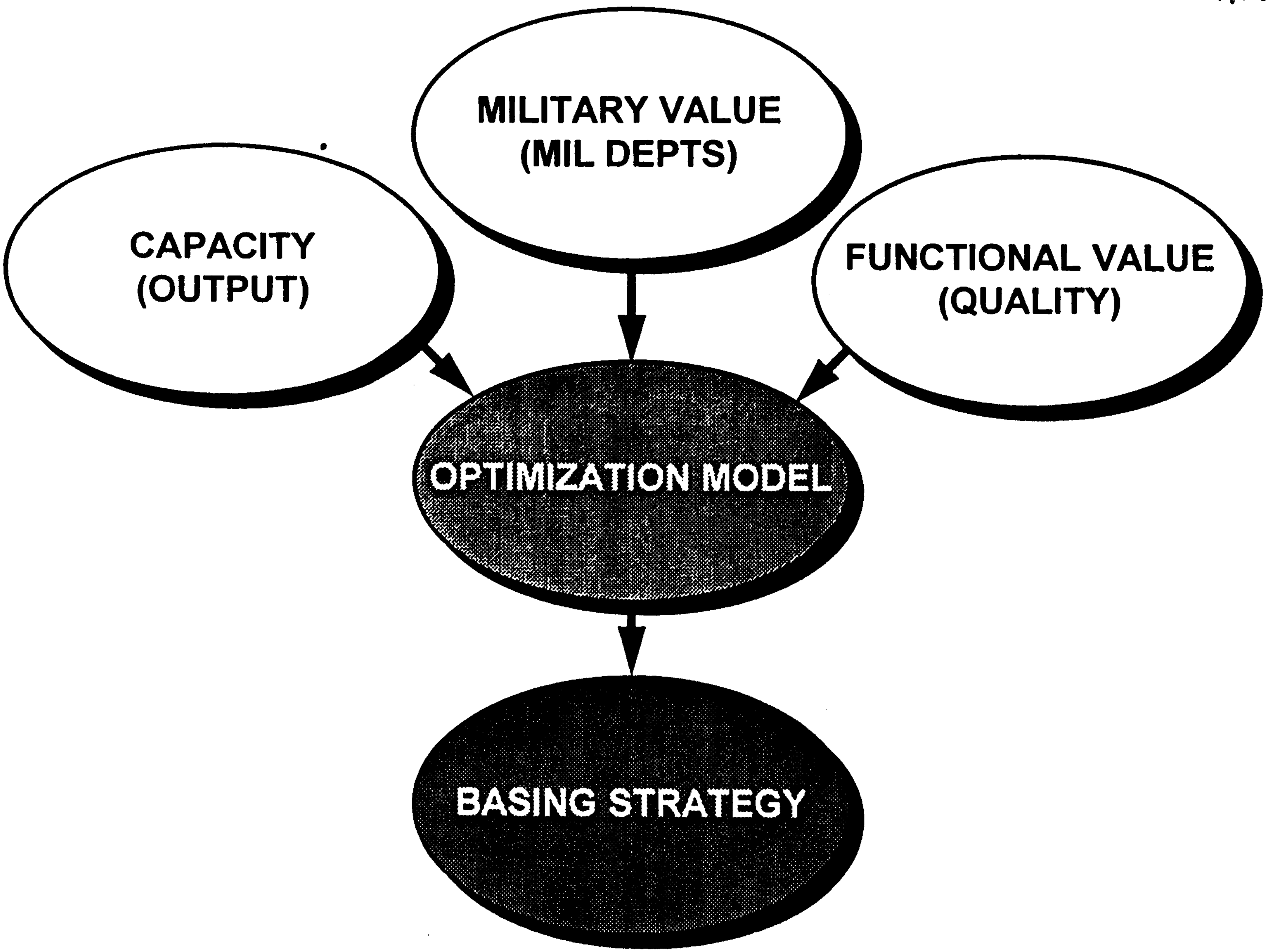
5. CBO Report on UPT/UHPT Consolidation - Handout

6. Policy Integration Issues

[redacted]

UNDERGRADUATE PILOT TRAINING JOINT CROSS-SERVICE GROUP

Briefing to Steering Group 7/28/94



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CAPACITY ANALYSIS

FACTORS	HISTORICAL	REQUIREMENTS: PROG'MED TRAINING (SYLLABI) (A)	REQUIREMENTS: PROG'MED GRADS (B)	REQUIRED CAPACITY (AxB)	MAX AVAILABLE CAPACITY (C)	EXCESS CAPACITY (C-(AxB))
TRAINING SORTIES	SORTIES/ GRAD SYLLABUS •OVERHEAD PG 6 # 5 PG 14 #2	SORTIES/ GRAD •MAJCOM PG 9 # 2	GRADS/YEAR •PGL •PTR PG 4 #1 & 2	SORTIES/ YEAR	SORTIES/ YEAR PG 19 # 16	SORTIES/ YEAR
AIRFIELD OPS	OPS/SORTIE •TRAFFIC CNT PG 17 # 10 •TOT # SORTIES PG 14 # 2	OPS/GRAD •MAJCOM PG 9 # 2 X =	GRADS/YEAR •PGL •PTR	OPS/YEAR	OPS/YEAR PG 17 # 9	OPS/YEAR
AIRSPACE BLOCK=(NM² x ALT)/AIRCRAFT	BLOCKS AVAILABLE BLOCK HOURS AVAILABLE SYLLABUS •OVERHEAD •MX PG 22 # 1	AIRSPACE BLOCK HRS / GRAD •MAJCOM PG 8 # 1	GRADS/YEAR •PGL •PTR	AIRSPACE BLOCK HRS / YEAR	# OF AREAS X HOURS AVAILABLE / YEAR = AIRSPACE BLOCK HRS / YEAR [redacted]	AIRSPACE BLOCK HRS / YEAR
GROUND TRAINING	FACILITIES AVAILABLE FACILITY HOURS AVAIL/YEAR •SYLL + ATTRIT •CLASSROOMS •SIMULATORS •LIFE SPT TNG	FACILITY HRS / GRAD •MAJCOM PG 10 # 1	GRADS/YEAR •PGL •PTR	FACILITY HRS / YEAR	FACILITY HRS / YEAR PG 25 # 1 PG 27 # 8	FACILITY HRS / YEAR

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Undergraduate Pilot Training
Joint Cross-Service Group

Methodology for Calculating Excess Capacity

[redacted]

CAPACITY ANALYSIS (CONT)

FACILITY FACTORS	HISTORICAL	REQUIREMENTS PROG'MED TRAINING (SYLLABI) (A)	REQUIREMENTS PROG'MED GRADS (B)	REQUIRED CAPACITY (AxB)	MAX AVAILABLE CAPACITY (C)	EXCESS CAPACITY (C-(AxB))
RAMPS/ APRONS/ TAXIWAYS	TOT FT² USED # OF AIRCRAFT SUPPORTED FT² / AIRCRAFT REQ PG 28 # 1	AIRCRAFT (GRAD/YEAR) PG 28 # 1 PG 4 # 1	GRADS/YEAR •PGL •PTR PG 4 #1 & 2	AIRCRAFT	$\frac{\text{TOT FT}^2\text{ AVAIL}}{\text{FT}^2\text{ / AIRCRAFT}}$ = AIRCRAFT PG 28 # 2	AIRCRAFT
HANGARS	HANGARS USED MX DOCKS/HANGAR AIRCRAFT/MX DOCK	AIRCRAFT (GRAD/YEAR)	GRADS/YEAR •PGL •PTR	AIRCRAFT	$\frac{\text{A/C}}{\text{MX DOCK}} \times \frac{\text{MX DOCK}}{\text{HANGAR}} \times$ HANGAR = AIRCRAFT PG 29 # 4	AIRCRAFT
MAINTENANCE	FACILITIES USED # OF AIRCRAFT SUPPORTED AIRCRAFT / FACILITY REQ	AIRCRAFT (GRAD/YEAR)	GRADS/YEAR •PGL •PTR	AIRCRAFT	$\frac{\text{A/C}}{\text{FACILITY}} \times$ FACILITIES AVAILABLE = AIRCRAFT PG 29 # 6	AIRCRAFT
SUPPLY/ STORAGE	TOT FT² USED # OF AIRCRAFT SUPPORTED FT² / AIRCRAFT REQ	AIRCRAFT (GRAD/YEAR)	GRADS/YEAR •PGL •PTR	AIRCRAFT	$\frac{\text{TOT FT}^2\text{ AVAIL}}{\text{FT}^2\text{ / AIRCRAFT}}$ = AIRCRAFT [redacted]	AIRCRAFT
HOUSING	CAPACITY USED STUDENTS/DAY PG 31 # 1	STUDENTS/DAY PG 4 # 1		STUDENTS/DAY	STUDENTS/DAY PG 32 # 5	STUDENTS/DAY
MESSING	CAPACITY USED STUDENTS/DAY PG 32 # 3	STUDENTS/DAY PG 4 # 1		STUDENTS/DAY	STUDENTS/DAY PG 32 # 5	STUDENTS/DAY

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Undergraduate Pilot Training Joint Cross-Service Group

Methodology for Calculating Functional Value

MEASURES OF MERIT FOR FUNCTIONAL AREAS
(CURRENT AS OF: 07/27/94 02:41 PM)

MEASURES OF MERIT	Flight Screening	Primary Pilot	Bomber/ Fighter	Strike/ Adv E-2/C-2	Airlift/ Tanker	Maritime/ Int E-2/C-2	CORRESPONDING QUESTIONS
Managed Training Areas	5	5	6	6	6	6	pg 7/#1, 2
Weather	15	14	10	7	9	9	pg 10/#1-3
Airspace and Flight Training Areas	27	22	27	27	24	24	pgs 11-17/#1-23
Airfields	23	24	17	17	22	22	pgs 18-21/#1-4
Ground Training Facilities	10	10	10	10	10	10	pg 22/#1, 2
Aircraft Maintenance Facilities	5	5	5	5	5	5	pg 23/#1 pg 21/#3
Special Military Facilities	0	0	4	4	0	0	pgs 24-25/#1-7
Proximity to Training Areas	0	0	0	3	0	0	pg 27/#1, 2, 3, 4
Proximity to Other Support Facilities	0	2	2	2	5	5	pg 28/#1, 2, 3
Unique Features	0	0	0	0	0	0	pg 29/#1, 2
Air Quality	5	5	5	5	5	5	pg 30/#1-5
Encroachment	5	5	6	6	6	6	pgs 31-38/#1-11
Services	5	8	8	8	8	8	pgs 39-47/#1-6
TTL POINTS	100	100	100	100	100	100	

MEASURES OF MERIT	Prim & Int NFO/NAV	WSO Strike	Panel NAV	Helo	CORRESPONDING QUESTIONS
Managed Training Areas	5	6	5	8	pg 7/#1, 2
Weather	14	7	7	9	pg 10/#1-3
Airspace and Flight Training Areas	22	22	22	16	pgs 11-17/#1-23
Airfields	24	22	23	24	pgs 18-21/#1-4
Ground Training Facilities	10	17	20	10	pg 22/#1, 2
Aircraft Maintenance Facilities	5	5	5	5	pg 23/#1 pg 21/#3
Special Military Facilities	0	0	0	0	pgs 24-25/#1-7
Proximity to Training Areas	0	0	0	0	pg 27/#1, 2, 3, 4
Proximity to Other Support Facilities	2	2	0	2	pg 28/#1, 2, 3
Unique Features	0	0	0	8	pg 29/#1, 2
Air Quality	5	5	5	5	pg 30/#1-5
Encroachment	5	6	5	5	pgs 31-38/#1-11
Services	8	8	8	8	pgs 39-47/#1-6
TTL POINTS	100	100	100	100	

MEASURES OF MERIT FOR:

PRIMARY

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	5	The questions addressed in this area are focused toward ownership of special use airspace, air-to ground ranges, and outlying fields. In this analysis, *accessibility* to these facilities was considered more important than ownership.
Weather	14	This weight was used because students in primary flight training need better weather than students in the advanced tracks.
Airspace and Flight Training Areas	22	This area was weighted heavily due to the direct impact it has on primary flight training. Much of the training takes place in special use airspace; therefore, this area plays a large role in determining the training effectiveness of an installation.
Airfields	24	This area is weighted the heaviest due to the emphasis primary training places on pattern activities. This area plays a big role in evaluating the effectiveness of a training installation.
Ground Training Facilities	10	This weight is commensurate with the role classrooms, simulators, and other facilities play in flight training.
Aircraft Maintenance Facilities	5	Training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area looks at the local area to determine what other facilities are available The overall training infrastructure is already established and in use at each base so the impact to this area should be minimal.
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	Quality of life plays a significant role in determining installation compatibility with the training mission and this weight will be applied to the other training functions.

Questions for Assessing the Functional Quality of *Primary* Pilot Training

Managed Training Areas (5 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support primary training. (2.5 pt or 50%)
   Scoring: Linear scale between 0 and 6 (0 pt for 0 fields, 2.5 pts for 6 fields)
   Rationale: Owning airfields and airspace have equal impact on training.
2. The number and type of special use airspace that is controlled/owned by the installation and supports primary training. (2.5 pt or 50%)
   Scoring: 1.5 pt for MOA, 0.5 pt for MTR, 0.5 for AA
   Rationale: Owning airfields and airspace have equal impact on training.

Weather (14 points)

1. Percent of time weather is better than 1500/3. (4 pt or 29%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 4 pt for 95%)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (3 pt or 21%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (3 pt or 21%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 3 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (1 pt or 7%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.

Percent of sorties canceled/rescheduled. (1 pt or 7%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Official Planning factor for lost sorties due to weather. (2 pt or 14%)
   Scoring: Linear scale between 5% and 20% (2 pt for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (22 points)

1. Amount of airspace (MOA and AA) in nm^3 (12 pt or 64%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 12 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA.
2. Average distance to airspace (2 pt or 9%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of MTR's available (3 pt or 14%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
4. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
5. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes
   Rationale: Commercial hub will impact training. No hub is better.
6. Number of bisecting airways. (2 pt or 9%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (24 points)

1. The # of outlying/auxiliary fields usable for primary pilot training (4 pt or 17%) Definition of usable field will be based on runway length (preliminary cutoff -- 5000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 4 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (2 pt or 8%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (2 pt or 8%)
   Scoring: Linear scale between some min and max (2 pt for min distance, 1 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 8%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway , 2 points for 8000 ft runway)
   Rationale: Longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max %)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max %)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max %)

Rationale: This measures the amount and quality of the training facilities. More quality is better.
dition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
coring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
ationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max %)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area that could support primary pilot training (1 pt or 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Air Quality (5 points)

e air station in an attainment or maintenance area for CO, ozone, and PM-10? t or 60%)
coring: 3 pt for yes, 0 pt for no
Rationale: Attainment and maintenance areas are best.

2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better..

Encroachment (5 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: 1 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max %)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max %)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max %)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

Undergraduate Pilot Training Joint Cross-Service Group

Policy Imperatives for Optimization Model

[redacted]

SITE / FUNCTION CONSTRAINT MATRIX

FUNCTION	SERVICE	A/C	RUCKER	WHITING	CORPUS	P-COLA	MERIDIAN	KING	RAN	SHEP	VANCE	REESE	LAU	COL
FLT SCREENING	USAF	T-3												
PRIMARY PILOT	USN USAF	T-34 T-37 JPATS	X (2)											
AIRLIFT/TANKER	USAF	T-1	X (1)	X (1)										
MARITIME/ INT E-2/C-2	USN USAF	T-44	X (2)											
STRIKE/ ADV E-2/C-2	USN	T-2 TA-4 T-45	X (1)	X (1)										
BOMBER/ FIGHTER	USAF	T-38	X (1)	X (1)	X (1)									
HELO	USN USAF USA	TH-57 UH-1 TH-67 OH-58			X (2)		X (2)	X (2)	X (2)	X (2)	X (2)	X (2)	X (2)	X (2)
PRIM & INT NAV/NFO	USN USAF	T-34 T-39	X (2)											
WSO STRIKE	USN USAF	T-39 T-2								X (3)	X (3)	X (3)	X (3)	
PANEL NAV	USN USAF	T-43	X (1)	X (1)										

(1) Runway length constraints based on model design series of training aircraft (FY 2001 requirements)

(2) Lack of suitable outlying fields (one or more for indicated fixed-wing programs, two or more for helo)

(3) Too far from water (greater than 200 NM to working area)

[redacted]

TO BE VERIFIED UPON RECEIPT OF CERTIFIED DATA

Undergraduate Pilot Training
Joint Cross-Service Group

Documentation and Data
Call Security

Undergraduate Pilot Training Joint Cross-Service Group

- Stored at CNA
- Secured Space
- Controlled Access
- Official Minutes

[redacted]

MEASURES OF MERIT FOR FUNCTIONAL AREAS

MEASURES OF MERIT	Flight Screening	Primary Pilot	Bomber/ Fighter	Strike/ Adv E-2/C-2	Airlift/ Tanker	Maritime/ Int E-2/C-2	CORRESPONDING QUESTIONS
Managed Training Areas	5	5	6	6	6	6	pg 7/#1, 2
Weather	15	14	10	7	9	9	pg 10/#1-3
Airspace and Flight Training Areas	27	22	27	27	24	24	pgs 11-17/#1-23
Airfields	23	24	17	17	22	22	pgs 18-21/#1-4
Ground Training Facilities	10	10	10	10	10	10	pg 22/#1, 2
Aircraft Maintenance Facilities	5	5	5	5	5	5	pg 23/#1 pg 21/#3
Special Military Facilities	0	0	4	4	0	0	pgs 24-25/#1-7
Proximity to Training Areas	0	0	0	3	0	0	pg 27/#1, 2, 3, 4
Proximity to Other Support Facilities	0	2	2	2	5	5	pg 28/#1, 2, 3
Unique Features	0	0	0	0	0	0	pg 29/#1, 2
Air Quality	5	5	5	5	5	5	pg 30/#1-5
Encroachment	5	5	6	6	6	6	pgs 31-38/#1-11
Services	5	8	8	8	8	8	pgs 39-47/#1-6
Total Points	**100**	**100**	**100**	**100**	**100**	**100**	

[redacted]

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MEASURES OF MERIT	Prim & Int NFO/NAV	WSO Strike	Panel NAV	Helo	CORRESPONDING QUESTIONS
Managed Training Areas	5	6	5	8	pg 7/#1, 2
Weather	14	7	7	9	pg 10/#1-3
Airspace and Flight Training Areas	22	22	22	16	pgs 11-17/#1-23
Airfields	24	22	23	24	pgs 18-21/#1-4
Ground Training Facilities	10	17	20	10	pg 22/#1, 2
Aircraft Maintenance Facilities	5	5	5	5	pg 23/#1 pg 21/#3
Special Military Facilities	0	0	0	0	pgs 24-25/#1-7
Proximity to Training Areas	0	0	0	0	pg 27/#1, 2, 3, 4
Proximity to Other Support Facilities	2	2	0	2	pg 28/#1, 2, 3
Unique Features	0	0	0	8	pg 29/#1, 2
Air Quality	5	5	5	5	pg 30/#1-5
Encroachment	5	6	5	5	pgs 31-38/#1-11
Services	8	8	8	8	pgs 39-47/#1-6
Total Points	**100**	**100**	**100**	**100**	

[redacted]

MEASURES OF MERIT FOR:
FLIGHT SCREENING

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	5	The questions addressed in this area are focused toward ownership of special use airspace, and outlying fields. In this analysis, *accessibility* to these facilities was considered more important than ownership.
Weather	15	This weight was used because students in flight screening need better weather than students in the primary/advanced tracks.
Airspace and Flight Training Areas	27	This area was weighted heavily due to the direct impact it has on flight screening. It is important that special use airspace is in close proximity to the flight screening base due to the limited range and speed of flight screening aircraft.
Airfields	23	This area is weighted heavily due to the emphasis flight screening places on pattern activities.
Ground Training Facilities	10	This weight is commensurate with the role classrooms, simulators, and other facilities play in flight screening.
Aircraft Maintenance Facilities	5	Flight Screening aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	0	N/A
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, flight screening aircraft do not have a large impact on encroachment issues.
Services	5	Quality of life plays a less significant role in determining installation compatibility with the flight screening mission due to the transient nature of the student population, and the significant number of civilian employees (flight instructors).

Questions for Assessing the Functional Quality of *Flight Screening* Training

Managed Training Areas (5 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Flight Screening . (1 pt or 20%)
   Scoring: Linear scale between 0 and 6 (0 pt for 0 fields, 1 pt for 6 fields)
   Rationale: Owning airfields and airspace have equal impact on training.
2. The number and type of special use airspace that is controlled/owned by the installation and supports primary training. (4 pts or 80%)
   Scoring: 2 pts for MOA, 2 pts for AA
   Rationale: Owning airfields and airspace have equal impact on training.

Weather (15 points)

1. Percent of time weather is better than 3000/5. (5 pt or 33%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 5 pt for 95%)
   Rationale: This weather is the best indicator of the viability to do the flight screening mission. Higher % is better.
2. Percent of time weather is better than 1500/3. (3 pt or 20%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (4 pt or 27%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 4 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of sorties canceled/rescheduled. (1 pt or 7%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-3.

fficial Planning factor for lost sorties due to weather. (2 pts or 13%)
   Scoring: Linear scale between 5% and 20% (2 pts for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-3.

Airspace and Flight Training Areas (27 points)

1. Amount of airspace (MOA and AA) in nm^3 (9 pt or 34%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 9 pts for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA.
2. Average distance to airspace (12 pts or 45%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 12 pts for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   Rationale:
3. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pts or 7%)
   Scoring: Linear scale between 0 and some max (2 pts for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
4. Planned commercial hub within 100 miles. (2 pts or 7%)
   Scoring: 2 pts for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
5. Number of bisecting airways. (2 pts or 7%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

elds (23 points)

e # of outlying/auxiliary fields usable for primary pilot training (3 pts or 13%)
   Definition of usable field will be based on runway length (preliminary cutoff – 2500 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 3 pts for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.

2. Median distance to outlying/auxiliary fields (2 pts or 8%)
   Scoring: Linear scale between some min and max (0 pt for min distance, 2 pts for max)
   Rationale: Closer airfields are better.
3. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 30%)
   Scoring: With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
4. Condition of runways -- % of runway sq ft in adequate condition (3 pts or 13%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pts for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
5. Condition of taxiways/aprons – % of taxiways/aprons sq ft in adequate condition (2.5 pt or 11%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
6. Condition of utilities -- ave % of facilities in adequate condition (2.75 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
7. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (2.75 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.

2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
ndition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (5 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: 1 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
hat is the percent incompatible land use for APZ II? (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (5 points)

1. Amount of BOQ rooms rated "adequate" (1 pt or 20%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 20%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. What percent of the listed MWR and support facilities/programs are available? (1 pt or 20%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 1 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
4. Amount of military housing rated "adequate" (.6 pt or 12%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
5. Condition of military housing - % of "adequate" (.4 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
6. Number of children on the waiting list. (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
verage wait for children on the waiting list. (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

[redacted]

MEASURES OF MERIT FOR:
PRIMARY

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	5	The questions addressed in this area are focused toward ownership of special use airspace, air-to ground ranges, and outlying fields. In this analysis, *accessibility* to these facilities was considered more important than ownership.
Weather	14	This weight was used because students in primary flight training need better weather than students in the advanced tracks.
Airspace and Flight Training Areas	22	This area was weighted heavily due to the direct impact it has on primary flight training. Much of the training takes place in special use airspace; therefore, this area plays a large role in determining the training effectiveness of an installation.
Airfields	24	This area is weighted the heaviest due to the emphasis primary training places on pattern activities. This area plays a big role in evaluating the effectiveness of a training installation.
Ground Training Facilities	10	This weight is commensurate with the role classrooms, simulators, and other facilities play in flight training.
Aircraft Maintenance Facilities	5	Training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area looks at the local area to determine what other facilities are available The overall training infrastructure is already established and in use at each base so the impact to this area should be minimal.
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	Quality of life plays a significant role in determining installation compatibility with the training mission and this weight will be applied to the other training functions.

[redacted]

[redacted]

Questions for Assessing the Functional Quality of *Primary* Pilot Training

Managed Training Areas (5 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support primary training. (2.5 pt or 50%)
   Scoring: Linear scale between 0 and 6 (0 pt for 0 fields, 2.5 pts for 6 fields)
   Rationale: Owning airfields and airspace have equal impact on training.
2. The number and type of special use airspace that is controlled/owned by the installation and supports primary training. (2.5 pt or 50%)
   Scoring: 1.5 pt for MOA, 0.5 pt for MTR, 0.5 for AA
   Rationale: Owning airfields and airspace have equal impact on training.

Weather (14 points)

1. Percent of time weather is better than 1500/3. (4 pt or 29%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 4 pt for 95%)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (3 pt or 21%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (3 pt or 21%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 3 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (1 pt or 7%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
5. Percent of sorties canceled/rescheduled. (1 pt or 7%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (2 pt or 14%)
   Scoring: Linear scale between 5% and 20% (2 pt for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (22 points)

1. Amount of airspace (MOA and AA) in nm^3 (12 pt or 64%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 12 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA.
2. Average distance to airspace (2 pt or 9%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of MTR's available (3 pt or 14%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
4. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
5. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
6. Number of bisecting airways. (2 pt or 9%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (24 points)

1. The # of outlying/auxiliary fields usable for primary pilot training (4 pt or 17%) Definition of usable field will be based on runway length (preliminary cutoff – 5000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 4 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (2 pt or 8%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (2 pt or 8%)
   Scoring: Linear scale between some min and max (2 pt for min distance, 1 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 8%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway , 2 points for 8000 ft runway)
   Rationale: Longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)

[redacted]

Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

ount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area that could support primary pilot training (1 pt or 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.

stance to other airfields. (1 pt or 50%)
Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better..

Encroachment (5 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: 1 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.

hat is the percent incompatible land use for APZ II? (0.5 pt or 10%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.

5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

MEASURES OF MERIT FOR
BOMBER/FIGHTER

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	10	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	27	This area was weighted higher than Primary (22%) because there is greater emphasis on area work in advanced training than there is in Primary training.
Airfields	17	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	10	This was weighted the same as Primary because the role classrooms, simulators, and other facilities play in advanced training is the same.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	4	Special credit was given to this area because it addresses the ability to handle munitions.
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area was weighted the same as Primary because the training infrastructure is already established and in use at each base.
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	6	This area is slightly higher than Primary (5%) due to the generally larger AICUZ footprint of the advanced training aircraft (jet aircraft).
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

Questions for Assessing the Functional Quality of *Bomber/Fighter* Pilot Training

Managed Training Areas (6 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Bomber/Fighter training. (2 pt or 33%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2 pts for 2 fields)
   Rational: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports Bomber/Fighter training. (4 pt or 67%)
   Scoring: 1 pt for MOA, 1 pt for WA/Restricted Area, 1 pt for MTR, 1 pt for Air-to-Surface range
   Rational: Owning airfields and airspace have equal impact on training

Weather (10 points)

1. Percent of time weather is better than 3000/5. (3 pts or 30%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: Weather requirements to best conduct training. Higher % is better.
2. Percent of time weather is better than 1500/3. (2 pts or 20%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 2 pt for 95%)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (2.5 pts or 25%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 2.5 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (1 pt or 10%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
5. Percent of sorties canceled/rescheduled. (.5 pt or 5%)
   Scoring: Linear scale between 5% and 20% (.5 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (1 pt or 10%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and .5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (27 points)

1. Amount of airspace (MOA/WA and Restricted area) in nm^3 (12 pt or 44%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (0 pt for 0 nm^3 and 12 pt for max nm^3).
   Rationale: More airspace is better. Bomber/Fighter require more airspace than Primary pilot training.
2. Average distance to airspace (2 pt or 7%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of Air-to-Surface ranges within 75 nm (3 pt or 11%).
   Scoring: 2 pts for 1 range, 3 pts for 2 or more ranges.
   Rationale: More airspace is better.
4. Distance to nearest Air-to-Surface range (2 pt or 7%)
   Scoring: 2 pt if range is within 50 nm.
   Rationale: Closer distance is better.
5. Number of MTR's available (3 pt or 11%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
6. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 7%)
   Scoring: Linear scale between 0 and some max (2 pts for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
7. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
8. Number of bisecting airways. (2 pts or 7%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (17 points)

1. The # of outlying/auxiliary fields usable for Bomber/Fighter pilot training (2 pt or 12%)

Definition of usable field will be based on runway length (preliminary cutoff -- 8K ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (1 pt or 6%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 1 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (1 pt or 6%)
   Scoring: Linear scale between some min and max(1 pt for min distance, 0 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 12%)
   Scoring: Linear scale between 8K and 12K ft (1 pt for 8K ft runway , 2 points for 12K ft runway)
   Rationale: Longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 41%)
   Scoring:
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)

[redacted]

Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Special Military Facilities (4 points)

1. Does installation have munitions loading pad? (2 pt or 50%)
   Scoring: 2 pt for yes, 0 pt for no
   Rationale: Munitions loading pad to handle hot cargo.
2. Does installation have weapons storage and handling facilities? (2 pt or 50%)
   Scoring: 2 pt for yes, 0 pt for no
   Rationale: Weapons storage is necessary to handle munitions for the IFF program.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area with instrument capability that could support Bomber/Fighter pilot training (1 pt or 50%)
   Scoring: .5 pts for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pts for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

[redacted]

MEASURES OF MERIT FOR
STRIKE & ADV. E-2/C-2

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	7	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	27	This area was weighted higher than Primary (22%) because there is greater emphasis on area work in advanced training than there is in Primary training.
Airfields	17	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	10	This was weighted the same as Primary because the role classrooms, simulators, and other facilities play in advanced training is the same.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	4	Special credit was given to this area for this function because it addresses the ability to handle munitions.
Proximity to Training Areas	3	This credit was allotted to this area because of the capability to conduct carrier operations close to the Training Air Station.
Proximity to Other Support Facilities	2	This area was weighted the same as Primary because the training infrastructure is already established and in use at each base.
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	6	This area is slightly higher than Primary (5%) due to the generally larger AICUZ footprint of the advanced training aircraft (jet aircraft).
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

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Questions for Assessing the Functional Quality of *Strike/Adv E2/C2* Pilot Training

Managed Training Areas (6 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Strike/Adv E2/C2 training. (2 pt or 33%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2 pts for 2 fields)
   Rational: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports Strike/Adv E2/C2 training. (4 pt or 67%)
   Scoring: 1 pt for MOA, 1 pt for WA/Restricted Area, 1 pt for MTR, 1 pt for Air-to-Surface range
   Rational: Owning airfields and airspace have equal impact on training

Weather (7 points)

1. Percent of time weather is better than 3000/5. (3 pts or 43%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: Weather requirements to best conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (1 pt or 14%)
   Scoring: Linear scale between 80% and 100% (0.5 pt for 80% and 1 pt for 95%)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (1 pt or 14%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 1 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (0.5 pt or 7%)
   Scoring: Linear scale between min% and max% (0.5 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
5. Percent of sorties canceled/rescheduled. (0.5 pt or 7%)
   Scoring: Linear scale between 5% and 20% (0.5 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (1 pt or 14%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0.5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (27 points)

1. Amount of airspace (MOA/WA and Restricted area) in nm^3 (12 pt or 44%).
   Scoring: Linear scale of airspace from 0 to max airspace (0 pt for 0 nm^3 and 12 pt for max nm^3).
   Rationale: More airspace is better. Strike/Adv E2/C2 require more airspace than Primary pilot training.
2. Average distance to airspace (2 pt or 7%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of Air-to-Surface ranges within 75 nm (4 pt or 15%).
   Scoring: 3 pts for 1 range, 4 pts for 2 or more ranges.
   Rationale: More airspace is better.
4. Distance to nearest Air-to-Surface range (1 pt or 4%)
   Scoring: 1 pt if range is within 50 nm.
   Rationale: Closer air-to-surface ranges are better.
5. Number of MTR's available (3 pt or 11%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
6. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 7%)
   Scoring: Linear scale between 0 and some max (2 pts for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
7. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
8. Number of bisecting airways. (2 pts or 7%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (17 points)

1. The # of outlying/auxiliary fields usable for Strike/Adv E2/C2 pilot training (2 pt or 12%)
   Definition of usable field will be based on runway length (preliminary cutoff -- 8000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (1 pt or 6%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 1 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (1 pt or 6%)
   Scoring: Linear scale between some min and max(1 pt for min distance, 0 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 12%)
   Scoring: Linear scale between 8K and 12K ft (1 pt for 8K ft runway , 2 points for 12K ft runway)
   Rationale: Longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 41%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

[redacted]

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2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or [illegible]%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Special Military Facilities (4 points)

1. Does installation have munitions loading pad? (2 pt or 50%)
   Scoring: 2 pt for yes, 0 pt for no
   Rationale: Munitions loading pad to handle hot cargo.
2. Does installation have weapons storage and handling facilities? (2 pt or 50%)
   Scoring: 2 pt for yes, 0 pt for no
   Rationale: Weapons storage is necessary to handle munitions for the IFF program.

Proximity to Training Areas (3 points)

1. Is there a carrier qual operating area within 100 nm of the site? (3 pts or 100%)
   Scoring: Linear scale between 50 nm and 100 nm (3 pts for 50 nm or less, 0 pts for 100 nm or more)
   Rationale: Strike training requires accessibility to a carrier.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area with instrument capability that could support Strike/Adv E2/C2 pilot training (1 pt or 50%)
   Scoring: 0.5 pts for 1 field, 1 pt for 2 or more fields
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pts for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

[redacted]

MEASURES OF MERIT FOR
AIRLIFT/TANKER

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	9	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	24	This area was weighted higher than Primary (22%) because there is greater emphasis on area work and approaches at other airfields in advanced training than there is in Primary training.
Airfields	22	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	10	This was weighted the same as Primary because the role classrooms, simulators, and other facilities play in advanced training is the same.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	5	This area was weighted higher than Primary (2%) because this type of training relies more on the surrounding infrastructure.
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	6	This area is slightly higher than Primary (5%) due to the generally larger AICUZ footprint of the advanced training aircraft.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

[redacted]

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Questions for Assessing the Functional Quality of *Airlift/Tanker* Pilot Training

Managed Training Areas (6 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Airlift/Tanker training. (2.5 pt or 42%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2.5 pts for 2 fields)
   Rational: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports Airlift/Tanker training. (3.5 pt or 58%)
   Scoring: 1.5 pt for MOA, 1 pt for WA, 0.5 pt for MTR, 0.5 for AA
   Rational: Owning airfields and airspace have equal impact on training

Weather (9 points)

1. Percent of time weather is better than 1500/3. (3 pt or 33%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (2 pt or 22%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 2 pt for 95%)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (2 pt or 22%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 2 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is [redacted]r.
4. [redacted]rcent of time crosswinds are greater than 25 knots. (.5 pt or 6%)
   [redacted] **Scoring**: Linear scale between min% and max% (.5 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
5. Percent of sorties canceled/rescheduled. (.5 pt or 6%)
   Scoring: Linear scale between 5% and 20% (.5 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (1 pt or 11%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and .5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (24 points)

1. Amount of airspace (MOA/WA and AA) in nm^3 (14 pt or 58%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 14 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA. Airlift/Tanker require more airspace than Primary pilot training.
2. Average distance to airspace (2 pt or 8%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale:
3. Number of MTR's available (3 pt or 12.5%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.
4. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or [redacted])
   [redacted] **Scoring**: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
5. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
6. Number of bisecting airways. (2 pt or 8%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (22 points)

1. The # of outlying/auxiliary fields usable for Airlift/Tanker pilot training (2 pt or 9%)
   Definition of usable field will be based on runway length (preliminary cutoff -- 7000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (2 pt or 9%)
   Scoring: Linear scale between some min and max (2 pt for min distance, 1 pt for max)
   Rationale: Closer outlying fields are better.
4. Runway length of longest runway at main airfield. (2 pt or 9%)
   Scoring: Linear scale between 6000 and 10000 ft (1 pt for 5000 ft runway , 2 points for 10000 ft runway)
   Rationale: longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

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\mount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
Rationale: Higher level of maintenance is better.

2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
Rationale: More "adequate" hangar space is better.

3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This is another measure of installation quality. Higher % is better.

ximity to Other Support Facilities (5 points)

Number of other airfields in the area with instrument capability that could support airlift/tanker pilot training (4 pt or 80%)
Scoring: 2 pts for 1 field, 4 pts for 2 or more fields)
Rationale: More available airfields are better.

2. Distance to other airfields. (1 pt or 20%)
Scoring: .5 pts for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
Scoring: 3 pt for yes, 0 pt for no
Rationale: Attainment and maintenance areas are best.

2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.

3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
Scoring: 1.5 pts for yes, 0 pt for no
Rationale: Having an existing AICUZ study in the zoning ordinance is best.

hat is the percent incompatible land use for clear zones? (2 pts or 33%)
Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.

3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.

4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.

5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
Scoring: 0.5 pt for yes, 0 pt for no
Rationale: Real estate disclosures are best.

6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
Scoring: 0.5 pt for yes, 0 pt for no
Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
Rationale: More "adequate" billeting space is better.

2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
Rationale: More "adequate" billeting space is better.

3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
Rationale: More "adequate" billeting space is better.

4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
Rationale: More "adequate" billeting space is better.

5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
Rationale: More MWR facilities are better to enhance quality of life.

6. Amount of military housing rated "adequate" (.6 pt or 8%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
Rationale: More "adequate" housing is better.

7. Condition of military housing - % of "adequate" (.4 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
Rationale: More "adequate" housing is better.

8. Number of children on the waiting list. (0.5 pt or 6%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
Rationale: Fewer children on waiting list is better.

9. Average wait for children on the waiting list. (0.5 pt or 6%)
Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
Rationale: Less waiting time for child care is better.

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MEASURES OF MERIT FOR MARITIME / INT E-2 & C-2

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	9	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	24	This area was weighted higher than Primary (22%) because there is greater emphasis on area work and approaches at other airfields in advanced training than there is in Primary training.
Airfields	22	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	10	This was weighted the same as Primary because the role classrooms, simulators, and other facilities play in advanced training is the same.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	5	This area was weighted higher than Primary (2%) because this type of training relies more on the surrounding infrastructure.
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	6	This area is slightly higher than Primary (5%) due to the generally larger AICUZ footprint of the advanced training aircraft.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

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Questions for Assessing the Functional Quality of *<u>Maritime/Int E2/C2</u>* Pilot Training

Managed Training Areas (6 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Maritime/Int E2/C2 training. (2.5 pt or 42%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2.5 pts for 2 fields)
   Rationale: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports Maritime/Int E2/C2 training. (3.5 pt or 58%)
   Scoring: 1.5 pt for MOA, 1 pt for WA, 0.5 pt for MTR, 0.5 for AA
   Rationale: Owning airfields and airspace have equal impact on training

Weather (9 points)

1. Percent of time weather is better than 1500/3. (3 pt or 33%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (2 pt or 22%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 2 pt for 95%)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (2 pt or 22%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 2 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is r.

ercent of time crosswinds are greater than 25 knots. (.5 pt or 6%)
   Scoring: Linear scale between min% and max% (.5 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.

5. Percent of sorties canceled/rescheduled. (.5 pt or 6%)
   Scoring: Linear scale between 5% and 20% (.5 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (1 pt or 11%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and .5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (24 points)

1. Amount of airspace (MOA/WA and AA) in nm^3 (14 pt or 58%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 14 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA. Maritime/Int E2/C2 require more airspace than Primary pilot training.
2. Average distance to airspace (2 pt or 8%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 2 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of MTR's available (3 pt or 12.5%).
   Scoring: Linear scale from 0 to max (0 pt for 0 MTR's and 3 pt for max MTR's)
   Rationale: MTRs are required for training...more is better.

Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.

5. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
6. Number of bisecting airways. (2 pt or 8%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (22 points)

1. The # of outlying/auxiliary fields usable for Maritime/Int E2/C2 pilot training (2 pt or 9%)
   Definition of usable field will be based on runway length (preliminary cutoff -- 5000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. The # of usable outlying/auxiliary fields with IFR or night? capability. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 2 pt for max # fields)
   Rationale: This capability will help reduce congestion at the home field.
3. Median distance to outlying/auxiliary fields. (2 pt or 9%)
   Scoring: Linear scale between some min and max (2 pt for min distance, 1 pt for max)
   Rationale: Closer airfields are better.
4. Runway length of longest runway at main airfield. (2 pt or 9%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway , 2 points for 8000 ft runway)
   Rationale: longer runway is better for safety reasons
5. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
6. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
7. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
8. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
9. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

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mount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (5 points)

mber of other airfields in the area with instrument capability that could pport Maritime/Int E2/C2 pilot training (4 pt or 80%)
Scoring: 2 pts for 1 field, 4 pts for 2 or more fields)
Rationale: More available airfields are better.

2. Distance to other airfields. (1 pt or 20%)
   Scoring: .5 pts for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.

hat is the percent incompatible land use for clear zones? (2 pts or 33%)
Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
Rationale: The lower amount of incompatible land use is better.

3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

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MEASURES OF MERIT FOR
NFO/NAV PRIMARY & INTERMEDIATE

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	5	The questions addressed in this area are focused toward ownership of special use airspace, air-to ground ranges, and outlying fields. In this analysis, *accessibility* to these facilities was considered more important than ownership.
Weather	14	This weight was used because students in primary flight training need better weather than students in the advanced tracks.
Airspace and Flight Training Areas	22	This area was weighted heavily due to the direct impact it has on primary flight training. Much of the training takes place in special use airspace; therefore, this area plays a large role in determining the training effectiveness of an installation.
Airfields	24	This area is weighted the heaviest due to the emphasis primary training places on pattern activities. This area plays a big role in evaluating the effectiveness of a training installation.
Ground Training Facilities	10	This weight is commensurate with the role classrooms, simulators, and other facilities play in flight training.
Aircraft Maintenance Facilities	5	Training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area looks at the local area to determine what other facilities are available. The overall training infrastructure is already established and in use at each base so the impact in this area should be minimal.
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	Quality of life plays a significant role in determining installation compatibility with the training mission and this weight will be applied to the other training functions.

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Questions for Assessing the Functional Quality of *<u>Primary NFO/NAV</u>* Training

Managed Training Areas (5 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support primary NFO/NAV training. (2.5 pt or 50%)
   Scoring: Linear scale between 0 and 2 (0 pt for 0 fields, 2.5 pts for 2 fields)
   Rationale: Owning airfields and airspace have equal impact on training
2. The number and type of special use airspace that is controlled/owned by the installation and supports primary training. (2.5 pt or 50%)
   Scoring: 1.5 pt for MOA, 1 for AA
   Rationale: Owning airfields and airspace have equal impact on training

Weather (14 points)

1. Percent of time weather is better than 1500/3. (4 pt or 29%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 4 pt for 95%)
   Rationale: USAF weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 1000/3. (3 pt or 21%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: USN weather requirements to conduct training. Higher % is better.
3. Percent of time crosswinds are less than 15 knots. (3 pt or 21%)
   Scoring: Linear scale between min% and max% (0 pt for min% and 3 pt for max%)
   Rationale: Max crosswinds for majority of student training. Higher % is better.
4. Percent of time crosswinds are greater than 25 knots. (1 pt or 7%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
5. Percent of sorties canceled/rescheduled. (1 pt or 7%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.
6. Official Planning factor for lost sorties due to weather. (2 pt or 14%)
   Scoring: Linear scale between 5% and 20% (2 pt for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-4.

Airspace and Flight Training Areas (22 points)

1. Amount of airspace (MOA and AA) in nm^3 (13 pt or 59%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^3 and 13 pt for max nm^3). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA.
2. Average distance to airspace (4 pt or 18%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 4 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
4. Planned commercial hub within 100 miles. (1 pt or 4%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
5. Number of bisecting airways. (2 pt or 9%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (24 points)

1. The # of outlying/auxiliary fields usable for primary Nav/NFO training (4 pt or 17%)
   Definition of usable field will be based on runway length (preliminary cutoff – 5000 ft)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 4 pt for max # fields)
   Rationale: More outlying fields improve capacity and quality of training.
2. Median distance to outlying/auxiliary fields. (3 pt or 12%)
   Scoring: Linear scale between some min and max (3 pts for min distance, 1 pt for max)
   Rationale: Closer airfields are better.
3. Runway length of longest runway at main airfield. (3 pt or 12%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway , 3 points for 8000 ft runway)
   Rationale: longer runway is better for safety reasons
4. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pt or 29%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
5. Condition of runways -- % of runway sq ft in adequate condition (2 pt or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
6. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (1.5 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
7. Condition of utilities -- ave % of facilities in adequate condition (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
8. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (1.75 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.75 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)

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Rationale: This measures the amount and quality of the training facilities. More quality is better.

ondition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area that could support primary NFO/NAV training (1 pt or 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Air Quality (5 points)

the air station in an attainment or maintenance area for CO, ozone, and PM-? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (5 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: 1 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

rvices (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

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MEASURES OF MERIT FOR
WSO / STRIKE

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	6	This area was weighted about the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	7	This area was weighted less than Primary (14%) due to the increased proficiency of the students, and a more weather-capable aircraft.
Airspace and Flight Training Areas	22	This area was weighted the same as Primary because of the direct impact it has on advanced flight training.
Airfields	22	This area was weighted lower than Primary (24%) because there is less emphasis on pattern work in advanced training than there is in Primary training.
Ground Training Facilities	17	This was weighted more than Primary because of the greater role classrooms, simulators, and other facilities play in advanced training.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area was weighted the same as Primary because the training infrastructure is already established and in use at each base.
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	6	This area is slightly higher than Primary (5%) due to the generally larger AICUZ footprint of the advanced training aircraft.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

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Questions for Assessing the Functional Quality of *WSO/Strike* Training

Managed Training Areas (6 points)

1. The number and type of special use airspace that is controlled/owned by the installation and supports WSO./Strike training. (6 pt or 100%)
   Scoring: 2 pts for MOA, 2pts for WA/Restricted Area, 1 pt for MTR, 1 pt for AA
   Rationale: NFO/WSO training require special use airspace.

Weather (7 points)

1. Percent of time weather is better than 3000/5. (2 pt or 29%)
   Scoring: Linear scale between 80% and 100% (0.5 pts for 80% and 2 pt for 95%)
   Rationale: Weather requirements to best conduct training. Higher % is better.
2. Percent of time crosswinds are greater than 25 knots. (1 pt or 14%)
   Scoring: Linear scale between min% and max% (1 pt for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
3. Percent of sorties canceled/rescheduled. (2 pts or 29%)
   Scoring: Linear scale between 5% and 20% (2 pts for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-2.
4. Official Planning factor for lost sorties due to weather. (2 pts or 28%)
   Scoring: Linear scale between 5% and 20% (2 pt for 5% and 1 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-2.

Airspace and Flight Training Areas (22 points)

Amount of airspace (MOA/WA and AA) in nm^3 (10 pt or 45%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA/WA and .8 AA) (0 pt for 0 nm^3 and 10 pt for max nm^3). Weighted airspace for each site = amount of MOA/WA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA/WA is slightly better than AA.
2. Average distance to airspace (3 pt or 14%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 3 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^3 times distance to airspace in nm) for all MOA/WA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Number of MTR's available. (4 pt or 18%)
   Scoring: Linear scale from 0 to max (0 pts for 0 and 4 pts for max)
   Rationale: MTRs are required for training...more is better.
4. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (2 pt or 9%)
   Scoring: Linear scale between 0 and some max (2 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
5. Planned commercial hub within 100 miles. (1 pt or 5%)
   Scoring: 1 pt for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
6. Number of bisecting airways. (2 pt or 9%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: Bisecting airways reduce training effectiveness in areas.

Airfields (22 points)

1. Runway length of longest runway at main airfield. (5 pts or 23%)
   Scoring: Linear scale between 5000 and 8000 ft (1 pt for 5000 ft runway, 5 pts for 8000 ft runway)
   Rationale: Longer runway is better for safety reasons

mber of primary runways that can support concurrent ops and crosswind nways at main field. (7 pts or 32%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
3. Condition of runways -- % of runway sq ft in adequate condition (3 pt or 14%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
4. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (3 pt or 14%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
5. Condition of utilities -- ave % of facilities in adequate condition (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
6. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (17 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (5 pt or 29%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (2 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (5 pt or 3029
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (2 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (2 pt or 12%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (1 pt or 6%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

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ximity to Other Support Facilities (2 points)

mber of other airfields in the area that could support NFO/NAV training (1 pt r 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (6 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
'hat is the percent incompatible land use for clear zones? (2 pts or 33%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? ? pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
mount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

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MEASURES OF MERIT FOR
PANEL NAVIGATOR

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	5	This area was weighted the same as Primary (5%) because *accessibility* to these facilities was considered more important than ownership.
Weather	7	This area was weighted significantly lower than Primary (14%) because the crew and aircraft are fully qualified to fly in instrument conditions.
Airspace and Flight Training Areas	22	This area was weighted the Primary (22%) because of the unique airspace needs of this mission.
Airfields	23	This area was weighted about the same as Primary (24%) because it also plays a big role in evaluating a training installation.
Ground Training Facilities	20	This area was weighted higher than Primary (10%) due to the higher emphasis on classroom and simulator activities.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	0	N/A
Unique Features	0	N/A
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

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Questions for Assessing the Functional Quality of *Panel Navigator* Training

Managed Training Areas (5 points)

1. The number and type of special use airspace that is controlled/owned by the installation and supports Panel Nav training. (5 pts or 100%)
   Scoring: 5 pts for MTR
   Rationale: MTRs are the primary special use airspace utilized.

Weather (7 points)

1. Percent of time weather is better than 3000/5. (2.5 pt or 36%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 2.5 pts for 95%)
   Rationale: Weather requirements to best conduct training. Higher % is better.
2. Percent of time crosswinds are greater than 25 knots. (2.5 pts or 36%)
   Scoring: Linear scale between min% and max% (2.5 pts for min% and 0 pt for max%)
   Rationale: Max aircraft crosswind limits. Lower % is better.
3. Percent of sorties canceled/rescheduled. (1 pt or 14%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0.5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-2.
4. Official Planning factor for lost sorties due to weather. (1 pt or 14%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0.5 pt for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-2.

Airspace and Flight Training Areas (22 points)

1. Number of MTR's available. (8 pts or 36%)
   Scoring: Linear scale from 0 to max (0 pts for 0 and 8 pts for max)
   Rationale: MTRs are required for training...more is better.
2. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (6 pt or 27%)
   Scoring: Linear scale between 0 and some max (6 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
3. Planned commercial hub within 100 miles. (4 pts or 18%)
   Scoring: 4 pts for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
4. Are there any planned changes to the major air traffic structures in the region that will affect installation operations? (2 pts or 9%)
   Scoring: 2 pts for no and 0 pt for yes.
   Rationale: Fewer changes in the current airspace structure is better.
5. Are current operations affected by major air traffic structures within 50 nm of the airfield? (2 pts or 9%)
   Scoring: 2 pts for no and 0 pt for yes.
   Rationale: Less impact on major air structures is better.

Airfields (23 points)

1. Runway length of longest runway at main airfield. (6 pts or 26%)
   Scoring: Linear scale between 7000 and 10000 ft (1 pt for 7000 ft runway, 6 pts for 10000 ft runway)
   Rationale: Longer runway is better for safety reasons
2. Number of primary runways that can support concurrent ops and crosswind runways at main field. (7 pts or 30%)
   Scoring:
   With 0 crosswind runways: 2 pts for first runway, 4 pts for 2 parallel runways, 6 pts for 3 parallel runways without crosswind runways.
   With 1 crosswind runway: 3 pts for first primary runway, 5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 non-parallel crosswind runways: 3.5 pts for first primary runway, 5.5 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   With 2 parallel crosswind runways: 4 pts for first primary runway, 6 pts for 2 parallel runways, 7 pts for 3 parallel runways.
   Rationale: More runways improve quality of training for safety reasons and flexibility
3. Condition of runways -- % of runway sq ft in adequate condition (3 pt or 14%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pt for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
4. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (3 pts or 13%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 3 pt for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
5. Condition of utilities -- ave % of facilities in adequate condition (2 pt or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
6. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (2 pts or 9%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pt for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (20 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (5.5 pt or 27%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 5.5 pts for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (2.5 pt or 13%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (5.5 pt or 27%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 5.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (2.5 pt or 13%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2.5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (2.5 pt or 13%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
6. Condition of training facilities (other) - % of "adequate" sq ft. (1.5 pt or 7%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1.5 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no

[redacted]

Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
ere have been no restrictions or delays due to air quality considerations (1 pt or 20%)
Scoring: 1 pt for yes, 0 pt for no
Rationale: Fewer restrictions are better.

Encroachment (5 points)

1. Is the existing AICUZ study encoded in local zoning ordinances? (1.5 pts or 25%)
   Scoring: 1.5 pts for yes, 0 pt for no
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (2 pts or 33%)
   Scoring: Linear scale from 0 to max (2 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 17%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 8%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 8%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

ces (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

MEASURES OF MERIT FOR
HELICOPTER

MEASURES OF MERIT	WEIGHT	RATIONALE
Managed Training Areas	8	This area was weighted about the same as Primary (5%) because ownership of these facilities was considered more important than accessibility.
Weather	9	This area was weighted significantly lower than Primary (14%) due to the lower weather requirements for helicopter training.
Airspace and Flight Training Areas	16	This area was weighted significantly lower than Primary (22%) because much of the helicopter training is conducted in uncontrolled airspace.
Airfields	24	This was weighted the same as Primary (24%) due to the similar infrastructure needs for helicopter training.
Ground Training Facilities	10	This area was weighted the same as Primary (10%) due to the similar emphasis on classroom and simulator activities.
Aircraft Maintenance Facilities	5	This was weighted the same as Primary because training aircraft are not difficult to maintain and do not require an extensive training infrastructure.
Special Military Facilities	0	N/A
Proximity to Training Areas	0	N/A
Proximity to Other Support Facilities	2	This area was weighted the same as Primary because the training infrastructure is already established and in use at each base.
Unique Features	8	This was weighted higher than Primary (0) due to requirement of unique features to support helo training (ITAS - Instrumented Training Airway System, HLT (Helicopter Landing Trainer - afloat platform))
Air Quality	5	This has been baselined due to like aircraft.
Encroachment	5	Encroachment plays a role in determining installation compatibility with the training mission; however, training aircraft do not have a large impact on encroachment issues.
Services	8	This area was weighted the same as Primary because quality of life plays a significant role in determining installation compatibility with the training mission.

Questions for Assessing the Functional Quality of *Helicopter* Pilot Training

Managed Training Areas (8 points)

1. The # of outlying/auxiliary fields that are controlled/owned by the installation and support Helicopter training. (6 pt or 75%)
   Scoring: Linear scale between 0 and max (0 pt for 0 fields, 6 pts for max fields)
   Rationale: Owning airfields has more impact on helo training than owning airspace.
2. The number and type of special use airspace that is controlled/owned by the installation and supports Helicopter training. (2 pts or 25%)
   Scoring: 2 pts for MOA and or AA
   Rationale: Owning airfields has more impact on helo training than owning airspace.

Weather (9 points)

1. Percent of time weather is better than 1000/3. (4 pts or 44%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 4 pt for 95%)
   Rationale: USN weather requirements to conduct training. Higher % is better.
2. Percent of time weather is better than 500/1. (3 pt or 33%)
   Scoring: Linear scale between 80% and 100% (1 pt for 80% and 3 pt for 95%)
   Rationale: USA weather requirements to conduct training. Higher % is better.
3. Percent of sorties canceled/rescheduled. (1 pt or 11%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pts for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-2.

ficial Planning factor for lost sorties due to weather. (1 pt or 11%)
   Scoring: Linear scale between 5% and 20% (1 pt for 5% and 0 pts for 20%)
   Rationale: This area captures weather attrition not covered by questions 1-2.

Airspace and Flight Training Areas (16 points)

1. Amount of special use airspace (MOA and AA) in nm^2 (2 pt or 13%).
   Scoring: Linear scale of weighted airspace from 0 to max airspace (MOA and .8 AA) (0 pt for 0 nm^2 and 2 pt for max nm^2). Weighted airspace for each site = amount of MOA airspace + .8(amount of AA airspace)
   Rationale: More airspace is better, MOA is slightly better than AA.
2. Average distance to airspace (1 pt or 6%)
   Scoring: Linear scale from 0 to max weighted average airspace size times distance (0 pt for min and 1 pt for max). Weighted average airspace size times distance for each site = Sum (airspace size in nm^2 times distance to airspace in nm) for all MOA or AA divided by the Sum of all airspace size.
   Rationale: Closer airspace is better.
3. Percent of flight ops experiencing ATC delays of 15 minutes or greater. (3 pts or 19%)
   Scoring: Linear scale between 0 and some max (3 pt for 0 % delays and 0 pts for max % delay)
   Rationale: Fewer ATC delays is better.
4. Planned commercial hub within 100 miles. (2 pts or 13%)
   Scoring: 2 pts for no and 0 pt for yes.
   Rationale: Commercial hub will impact training. No hub is better.
5. Are there any planned changes to the major air traffic structures that supports flight training at your installation that will negatively impact on UPT? (2 pts or 13%)
   Scoring: 2 pts for no and 0 pt for yes.
   Rationale: Fewer changes in the current airspace structure is better.

re installation operations currently affected by the major air traffic structures thin 50 nm of the airspace and airfields? (2 pts or 13%)
   Scoring: 2 pts for no and 0 pt for yes.
   Rationale: Less impact on major air structures is better.

7. Availability of required specific terrain features or overwater access to support helo training (4 pts or 25%)
   Scoring: 3 pts for terrain, 1 pt for overwater access
   Rationale: Helo training requires specific terrain feature to train effectively.

Airfields (24 points)

1. The # of outlying/auxiliary fields usable for Helicopter pilot training (5 pt or 21%)
   Definition of usable field - should support emergency procedures for TH 57/67
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 5 pts for max # fields)
   Rationale: More runways improve quality of training for safety reasons and flexibility
2. The # of usable outlying/auxiliary fields with night/night vision goggle capability. (4 pts or 17%)
   Scoring: Linear scale between 0 and some max (0 pt for 0 fields, 4 pts for max # fields)
   Rationale: More runways improve quality of training for safety reasons and flexibility
3. Median distance to outlying/auxiliary fields. (3 pts or 13%)
   Scoring: Linear scale between some min and max (3 pt for min distance, 1 pt for max)
   Rationale: Closer airfields are better.
4. Number of lanes that can support UHPT. Must be able to support emergency procedures for TH-57/67. (4 pts or 17%)
   Scoring: Linear scale between 0 and some max (0 pts for no lanes, 4 pts for max lanes)
   Rationale: More lanes are better for safety reasons; less congestion
5. Condition of runways -- % of runway sq ft in adequate condition (2 pts or 8%)
   Scoring: Linear scale between 0 and 100 (0 pts for 0%, 2 pts for 100%)
   Rationale: This indicates the quality of the runway. Higher quality is better.
6. Condition of taxiways/aprons -- % of taxiways/aprons sq ft in adequate condition (2 pts or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pts for 100%)
   Rationale: This indicates the quality of the taxiways. Higher quality is better.
7. Condition of utilities -- ave % of facilities in adequate condition (2 pts or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pts for 100%)
   Rationale: This indicates the quality of the utilities. Higher quality is better.
8. Condition of other facilities (e.g., term, admin) -- ave % of facilities in adeq cond (2 pts or 8%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 2 pts for 100%)
   Rationale: This indicates the quality of the facilities. Higher quality is better.

Ground Training Facilities (10 points)

1. Amount of training facilities (classrooms) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
2. Condition of training facilities (classrooms) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
3. Amount of training facilities (trainers) rated "adequate" in sq ft. (3 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 3 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
4. Condition of training facilities (trainers) - % of "adequate" sq ft. (1 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.
5. Amount of training facilities (other) rated "adequate" in sq ft. (1.5 pt or 15%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: This measures the amount and quality of the training facilities. More quality is better.

Condition of training facilities (other) - % of "adequate" sq ft. (.5 pt or 5%)
Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
Rationale: This measures the amount and quality of the training facilities. More quality is better.

Aircraft Maintenance Facilities (5 points)

1. Level of maintenance operations at site (3 pt or 60%)
   Scoring: 1 pt for O-level, 2 pt for I-level, 2.5 pt for Depot level, 3 pt for Depot level for aircraft type (TMS)
   Rationale: Higher level of maintenance is better.
2. Amount of hangars rated "adequate" in sq ft (1.5 pt or 30%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 1.5 pt for max%)
   Rationale: More "adequate" hangar space is better.
3. Condition of hangars - % of hangars in "adequate" condition (.5 pt or 10%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .5 pt for 100%)
   Rationale: This is another measure of installation quality. Higher % is better.

Proximity to Other Support Facilities (2 points)

1. Number of other airfields in the area that could support Helicopter pilot training (1 pt or 50%)
   Scoring: .5 pt for 1 field, 1 pt for 2 or more fields)
   Rationale: More available airfields are better.
2. Distance to other airfields. (1 pt or 50%)
   Scoring: .5 pt for 1 field less than 30 miles, 1 pt for 2 or more fields less than 30 miles
   Rationale: Closer airfields are better.

Unique Features (8 points)

1. Identify unique features (functions, equipment, etc.) possessed by the installation that support UHPT (8 pts or 100%)
   Scoring: Linear scale between 0 and some max (0 pts for 0 features, and 8 pts for max features)
   Rationale: If there is a unique feature already at a base to support training in a given function it should be recognized.

Air Quality (5 points)

1. Is the air station in an attainment or maintenance area for CO, ozone, and PM-10? (3 pt or 60%)
   Scoring: 3 pt for yes, 0 pt for no
   Rationale: Attainment and maintenance areas are best.
2. Is the air station in a moderate non-attainment area or better area for CO, ozone, and PM-10? (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Moderate and marginal non-attainment (as well as attainment and maintenance) are better than Serious, Severe, and Extreme non-attainment.
3. There have been no restrictions or delays due to air quality considerations (1 pt or 20%)
   Scoring: 1 pt for yes, 0 pt for no
   Rationale: Fewer restrictions are better.

Encroachment (5 points)

1. Has the existing AICUZ study been completed and encoded in local zoning ordinances? (1 pts or 20%)
   Scoring: .5 pt for having completed the study and 1 pt for being encoded.
   Rationale: Having an existing AICUZ study in the zoning ordinance is best.
2. What is the percent incompatible land use for clear zones? (1.5 pts or 30%)
   Scoring: Linear scale from 0 to max (1.5 pts for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
3. What is the percent incompatible land use for APZ I? (1 pt or 20%)
   Scoring: Linear scale from 0 to max (1 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
4. What is the percent incompatible land use for APZ II? (0.5 pt or 10%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pts for max).
   Rationale: The lower amount of incompatible land use is better.
5. Are real estate disclosures required by local communities? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: Real estate disclosures are best.
6. Has all clear zone acquisition been completed? (0.5 pt or 10%)
   Scoring: 0.5 pt for yes, 0 pt for no
   Rationale: It is best if all clear zones have been acquired.

Services (8 points)

1. Amount of BOQ rooms rated "adequate" (2 pt or 25%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, 2 pt for max%)
   Rationale: More "adequate" billeting space is better.
2. Condition of BOQ rooms - % of "adequate" (1 pt or 12%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, 1 pt for 100%)
   Rationale: More "adequate" billeting space is better.
3. Amount of BEQ rooms rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" billeting space is better.
4. Condition of BEQ rooms - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" billeting space is better.
5. What percent of the listed MWR and support facilities/programs are available? (2 pt or 25%)
   Scoring: Linear scale from 0 to 100 (0 pt for 0 and 2 pt for 100).
   Rationale: More MWR facilities are better to enhance quality of life.
6. Amount of military housing rated "adequate" (.6 pt or 8%)
   Scoring: Linear scale between 0 and max (0 pt for 0 %, .6 pt for max%)
   Rationale: More "adequate" housing is better.
7. Condition of military housing - % of "adequate" (.4 pt or 5%)
   Scoring: Linear scale between 0 and 100 (0 pt for 0 %, .4 pt for 100%)
   Rationale: More "adequate" housing is better.
8. Number of children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Fewer children on waiting list is better.
9. Average wait for children on the waiting list. (0.5 pt or 6%)
   Scoring: Linear scale from 0 to max (0.5 pt for 0 and 0 pt for max).
   Rationale: Less waiting time for child care is better.

Approved 8/11/94

~~PROPOSED~~ MODIFICATIONS FOR ASSESSING FUNCTIONAL VALUE

1. Helo: Airspace and flight training areas (Q1 MoM) - Recommend including warning areas and restricted areas. Rationale: Certified data indicated usage by training air stations of those areas.

2. Helo: Airspace and flight training areas (Q10 - MV) - Recommend only using flight training areas within 30NM vice 100NM. Rationale: Time and distance limitations [30NM at 90kts = 20 min. enroute to area] to maximize training value.

3. Helo: Airfields (Q4 MoM) - Recommend change question to read "Number of simultaneous helicopter operations that can be safely supported at outlying fields that can support UHPT." Rationale: To capture the amount of helicopter ops at outlying fields that support helicopter ops in common terms.

(<u>Note</u> - Army emergency and night vision goggle procedures training and qualification require hard/lighted pads [lanes]. These procedures cannot be performed at Navy outlying fields as currently configured for UHPT. This dissimilarity will be addressed by the COBRA model runs).

4. All Training Air Stations: Capacity Data Call, housing and messing - Provide total number of BOQ/BEQ rooms and the percentage that are adequate/permanent. Rationale: Amplifying data required to complete the intended analysis.

5. Airfields: (Q2 MoM for all functions less helicopter) - Recommend change question to read "Number of outlying/auxiliary fields with IFR capability." Rationale: To delineate the higher order of magnitude.

6. Strike Training; Special Military Facilities: (Q3 MV) - Recommend change question to read "Can the installation load training munitions, to include forward firing training munitions, on training aircraft?" Rationale: Clarification required to make the data received meaningful.

7. Primary and Primary NFO/NAV Training; Airfields: (Q1 MoM) - Recommend change question to limit "# of outlying/auxiliary fields" to those within 50NM. Rationale: Time and distance limitations.

8. For all calculations of Special Use Airspace in cubic nautical miles for airspace it was agreed to an airspace altitude cap of 45,000 ft. Rationale: 1) No rational utilization of the higher airspace by UPT aircraft, 2) similar special use airspace capped at 45,000 ft., and 3) all other airspace altitude ceilings limited to lower levels by external factors.

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PROPOSED DATA CALL MODIFICATIONS

Refine per Group discussion of Aug 11, 1994

1. Helo: Airspace and flight training areas (Q1 MoM) - Recommend including warning areas and restricted areas.

2. Helo: Airspace and flight training areas (Q10 - MV) - Recommend only using flight training areas within 30NM vice 100NM. [90kts @ 20 min. enroute to area = 30NM]

3. Helo: Airfields (Q4 MoM) - Recommend change question to read "Number of simultaneous helicopter operations that can be supported at outlying fields that can support UHPT."

4. All Training Air Stations: Capacity Data Call, housing and messing - Provide number of BOQ/BEQ rooms that are adeqiate/permanent.

5. Airfields: (Q2 MoM for all functions less helicopter) - Recommend change question to read "Number of outlying/auxiliary fields with IFR capability."

6. Strike Training; Special Military Facilities: (Q3 MV) - Recommend change question to read "Can the installation load munitions on training aircraft?"

7. Primary and Primary NFO/NAV Training; Airfields: (Q1) - Recommend change question to limit "other airfields to 50NM."

8. What altitude do we cap Special Use Areass? Is bigger better? Should cubic airspace be equated to training function? Affects all calculations.

[redacted] DRAFT

[redacted]

PROPOSED MODIFICATIONS FOR ASSESSING FUNCTIONAL VALUE

1. Helo: Airspace and flight training areas (Q1 MoM) - Recommend including warning areas and restricted areas. Rationale: Certified data indicated usage by training air stations of those areas.

2. Helo: Airspace and flight training areas (Q10 - MV) - Recommend only using flight training areas within 30NM vice 100NM. Rationale: Time and distance limitations [30NM at 90kts = 20 min. enroute to area] to maximize training value.

3. Helo: Airfields (Q4 MoM) - Recommend change question to read "Number of simultaneous helicopter operations that can be safely supported at outlying fields that can support UHPT." Rationale: To capture the amount of helicopter ops at outlying fields that support helicopter ops in common terms.

(Note - Army emergency and night vision goggle procedures training and qualification require hard/lighted pads [lanes]. These procedures cannot be performed at Navy outlying fields as currently configured for UHPT. This dissimilarity will be addressed by the COBRA model runs).

4. All Training Air Stations: Capacity Data Call, housing and messing - Provide total number of BOQ/BEQ rooms and the percentage that are adequate/permanent. Rationale: Amplifying data required to complete the intended analysis.

5. Airfields: (Q2 MoM for all functions less helicopter) - Recommend change question to read "Number of outlying/auxiliary fields with IFR capability." Rationale: To delineate the higher order of magnitude.

6. Strike Training; Special Military Facilities: (Q3 MV) - Recommend change question to read "Can the installation load training munitions, to include forward firing training munitions, on training aircraft?" Rationale: Clarification required to make the data received meaningful.

7. Primary and Primary NFO/NAV Training; Airfields: (Q1 MoM) - Recommend change question to limit "# of outlying/auxiliary fields" to those within 50NM. Rationale: Time and distance limitations.

8. For all calculations of Special Use Airspace in cubic nautical miles for airspace it was agreed to an airspace altitude cap of 45,000 ft. Rationale: 1) No rational utilization of the higher airspace by UPT aircraft, 2) similar special use airspace capped at 45,000 ft., and 3) all other airspace altitude ceilings limited to lower levels by external factors.

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CBO PAPERS

EASING THE BURDEN: RESTRUCTURING AND CONSOLIDATING DEFENSE SUPPORT ACTIVITIES

July 1994

CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515

One approach to achieving economies would rely heavily on organizational changes, perhaps similar to those discussed in the bill proposed by Senator David Boren and Representative Dave McCurdy or to the changes in a bill proposed by Senator Daniel Patrick Moynihan. Another approach to restructuring would remain agnostic on detailed organizational changes, but would scale back resources devoted to intelligence activities on the assumption that some of its missions--such as those focusing on economic, environmental, and antinarcotics matters--are not central to U.S. security or are being handled effectively by other parts of the U.S. government or the private sector.

Either way, the CBO alternative assumes that another 5 percent cut in spending could eventually be achieved by organizational restructuring or by eliminating certain missions. A cut of that size would result in a total reduction of perhaps 25 percent since 1990 and save $1 billion per year once the personnel reductions were fully made. CBO assumes, though, that most of the cuts in spending would not occur until the next decade, after the current round of cuts has been completed.

Cutting the intelligence community even more raises a number of concerns. Key U.S. security concerns of the post-Cold War world include stopping the proliferation of weapons of mass destruction, predicting the possible onset of ethnic and regional conflict in time to attempt to avert it diplomatically or with preventive deployments of forces, and tracking the activities of terrorist groups and other extremist political organizations. These concerns are often best addressed preventively, if possible, rather than through the use of military deterrence or military force. Thus, a redundant organizational structure that ensures a competitive dynamic to intelligence work may represent a wise insurance policy, and a relatively cheap one, compared with the spending a new arms race or war might entail.

Pilot Training

The United States invests substantial resources in training its military personnel, in the conviction that well-trained fighting forces are most likely to win wars quickly with the lowest loss of life. Each of the military departments maintains a large and sophisticated training establishment to achieve that goal. A number of military experts believe that some of these separate organizations could be consolidated. For example, Senator Nunn has suggested that training might present a number of areas for consolidation, including pilot training. Consolidation can save money and might produce a more coordinated fighting force at a time when the services expect to work more closely together than ever before.

Former Senator Barry Goldwater's irritation about duplication in U.S. air power--that the United States was the only country with four air forces--also seems applicable to organizations for training pilots. Each of the three military departments operates its own schools, facilities, and programs. (Marine Corps and Navy pilots train in the same facilities.) Though operational skills may vary from service to service, Senator Nunn suggested that basic flying skills are similar.

DoD also recognizes this overlap. For example, the Air Force and Navy are developing and buying a common trainer aircraft--the Joint Primary Aircraft Training System (JPATS). And consolidating fixed- and rotary-wing (helicopter) pilot training was one of the few suggestions proffered by Senator Nunn that was endorsed by former Chairman of the Joint Chiefs of Staff Colin Powell. But service plans call for an almost glacial pace in integrating training for fixed-wing pilots: only after substantial deliveries of the JPATS toward the end of this decade will small numbers of students train together. Study results on consolidation of rotary-wing training have yet to emerge from the Pentagon.

Fixed-wing flight training could be consolidated without waiting for JPATS deliveries. Indeed, consolidation would reduce the need to buy JPATS immediately, since having Air Force pilots train initially in the Navy's primary trainer--the T-34--would substantially reduce the use of the Air Force's T-37 primary trainer. The Air Force could then keep its T-37s longer and JPATS procurement could be deferred at least until after the turn of the century. Deferring JPATS would result in savings of about $200 million in 1995 and about $1.3 billion for the 1995-1999 period, though the trainer would still need to be bought in the long term. Rotary-wing training could also be fully consolidated among all of the services. This step would require the Navy to give up its current practice of assigning students to a helicopter track based on their performance during an initial phase of fixed-wing training. Changing this practice, however, would reduce the total number of JPATS that DoD would need to buy by about 120 planes.

Merging the individual services' programs for fixed-wing as well as for helicopter training might also increase the efficiency of the DoD's infrastructure by reducing overhead, since all training of a particular type would be conducted on one or two bases. In addition, it would permit the services to close three or four additional bases, eventually saving about $200 million each year after initial closure costs. Moreover, joint training might lead to the adoption of the best practices from each service and foster interservice cooperation--increasingly important in a period when DoD is stepping up its reliance on joint operations.

Nonetheless, consolidating pilot training may have disadvantages. Some savings would be offset by higher costs. Such costs would include increased travel costs, higher maintenance costs for the older T-34 and T-37 aircraft, and one-time costs of base closure. Moreover. delaying purchases of JPATS means that the military would forgo the advantages of a new trainer for some years. These advantages include having an ejection seat in training aircraft, a digital cockpit common to aircraft that pilots will later fly, the ability to train at higher altitudes, and a cockpit designed to accommodate smaller female pilots.

Adopting common rotary-wing training--without a fixed-wing introduction--would be unattractive to all services except the Army. Proponents of initial fixed-wing training for all pilots believe actual flying is a better way to screen candidates and to allocate fledgling pilots to fixed-wing aircraft rather than to the less demanding helicopter track. The Navy and the Coast Guard--which receives its initial training from DoD--also have expressed concerns that helicopter pilots would no longer be able to operate fixed-wing aircraft at a later date, or serve a stint as fixed-wing instructors. For its part, the Marine Corps is concerned that helicopter pilots need an initial period of fixed-wing training to fly the V-22 aircraft--the planned replacement for a portion of the Marines' transport helicopter fleet--which takes off like a helicopter and flies like a fixed-wing aircraft.

CONCLUSION

CBO chose the preceding alternatives because they demonstrate one or another of the characteristics described earlier. The options considered were also selected because they represent promising functional changes. Of course, some of the ideas discussed in this paper may be abandoned as further study is devoted to them. Perhaps they save too little, or up-front costs are too daunting. Perhaps they face insurmountable institutional or political barriers or produce undesirable consequences.

Nor is the set of alternatives considered exhaustive. Defense experts have offered a number of other options and will no doubt uncover other functional areas that could benefit from restructuring in the future. Indeed, many creative ideas may emerge from the new roles and missions commission.

CHAPTER V

CONSOLIDATING PILOT TRAINING

The Department of Defense emphasizes keeping military personnel trained to high levels in the conviction that well-trained fighting forces are most likely to win wars quickly with the lowest loss of life. Training takes place both in institutional or classroom settings and in operational units (for example, in air wings or battalions or on ships). Classroom or individual training is designed to provide operational forces with personnel who are ready to carry out their duties effectively.

DoD trains almost 200,000 students in classrooms on an annual basis, equal in number to about five large state universities. Each of the services relies on large administrative agencies to provide this classroom or individual training, which includes both beginning and advanced training as well as refresher training that continues throughout the military service member's career. DoD trains its personnel in a wide variety of skills, including how to provide basic first aid, operate and repair weapons, exercise military leadership, and a myriad of other skills that contribute to a successful fighting force.

A number of experts believe that large segments of this training could be consolidated. For example, Senator Sam Nunn suggested that both basic and advanced training might be areas for consolidation. Many people believe that consolidation could both save money at a time when funds for defense are increasingly difficult to find and produce a more coordinated fighting force at a time when the services are emphasizing joint operations more than ever before. This chapter considers an illustrative option that would consolidate undergraduate pilot training for the four services.

RATIONALES FOR CONSOLIDATING PILOT TRAINING

Former Senator Barry Goldwater's remark that the United States is the only nation with four air forces has been repeated so often that it has almost become a cliché. But consider the current program for training pilots, in which each of the three military departments operates its own schools, facilities, and programs. (Marine Corps and Navy pilots train in the same facilities.) In 1992, Senator Nunn suggested that undergraduate fixed-wing pilot training might be consolidated, arguing that basic piloting skills should be the same regardless of whether, for example, students later went on to fly fighters for the Navy or the Air Force. At the same time, he noted that consolidation would also be justified for basic helicopter training for the same reasons. In fact, Senator Goldwater, himself a helicopter pilot, strongly advocated consolidating helicopter training to then Secretary of Defense Caspar Weinberger in 1983, suggesting that "as long as the thing stays up and hovers or goes where you want it to, there is no difference whether you are over water or land. . . . [Hence, separate Navy and Army helicopter training programs are] not only expensive and redundant, but a complete waste of equipment and personnel."[1]

As further evidence of the potential for consolidation, Senator Nunn observed that the Air Force and Navy had decided to develop and buy a common trainer aircraft--the Joint Primary Aircraft Training System (JPATS). Consolidating pilot training was also one of the few suggestions by Senator Nunn that was endorsed in the report on roles and missions by the former Chairman of the Joint Chiefs of Staff, General Colin Powell.[2] In March 1993, then Secretary of Defense Les Aspin called on the services to develop a plan to carry out the recommendations in the JCS report.

Despite these recommendations, current service plans call for the Navy and Air Force each to exchange (rather than consolidate) one squadron of primary aviation students and their instructors by 1998. By that time, this program would affect only 200 students each year, less than 10 percent of the total undergraduate pilot trainees at that time. The current plan envisions gradually expanding the program as the JPATS trainer aircraft are delivered between 1998 and 2010. Based on initial estimates, the services did not anticipate that adopting joint primary fixed-wing pilot training would yield any significant savings. After more than a year, the most recent evaluation of the contentious issue of consolidating helicopter training throughout the services--the 18th study effort conducted over the last 30 years--remains in limbo with no study results reported thus far. Despite this very gradual and cautious approach to joint training adopted so far by the services, they may now be ready to consider moving more quickly because of the precipitous drop in pilot training requirements.

1. Letter of Senator Barry Goldwater to Secretary Weinberger, May 3, 1983.

2. See Chairman of the Joint Chiefs of Staff, *Report on the Roles, Missions, and Functions of the Armed Forces of the United States* (February 1993), pp. III-18 to III-20. The JCS report proposed that the services develop a training consolidation plan for full implementation by the year 2000. The plan called for consolidating initial fixed-wing training with a gradual transition to a common primary training aircraft; consolidating follow-on training into four tracks (Navy fighter/attack, Air Force fighter/bomber, Navy and Air Force tanker/transport/maritime patrol, and helicopter); and studying whether it saves money to move Navy, Marine Corps, and Coast Guard helicopters from Whiting Field Naval Air Station in Florida to the Army's base at Fort Rucker in Alabama.

Pilot Requirements Have Dropped in the Last Decade

With the drawdown in force structure, all the services need far fewer pilots than previously. Collectively, total flight training loads--a measure of training that takes into account the length of a course--dropped from 7,500 in 1983 to 3,840 in 1995, a reduction of almost 50 percent.[3] Undergraduate flight training loads, which make up the bulk of flight training, dropped by similar percentages, from almost 5,500 to 2,700 in the same period.[4] Over the last decade, the services have reduced the number of bases on which flight training is conducted from 15 to 12, reducing capacity to train students by about 20 percent.[5] Consolidating flight training could reduce the number of flight training bases, which clearly has not kept pace with the precipitous drop in the need to train pilots.

Based on current estimates of their "steady-state" requirements in 1997--when the drawdown is currently scheduled to be completed--the services believe they will need to train about 2,700 new pilots each year, about the same as today's level. (Total flight training requirements--including navigators and advanced training as well as undergraduate training--are also projected to be at today's level.) Based on the amount of training conducted in the past at the 12 flight training bases in use today, the services together have almost twice as much capacity to train pilots as they will need.

Even without consolidation, this drop in the number of pilots to be trained suggests that the services need far fewer flight training bases than exist today. The Navy, in fact, included one flight training base in its 1993 recommendation for base closure that the 1993 Defense Base Closure and Realignment Commission deleted. Consolidation, however, could well permit the services to close additional bases, since after consolidation some bases otherwise would be only partially used. As part of the ongoing review of base infrastructure for the 1995 Defense Base Closure and Realignment Commission, DoD is looking at consolidating pilot training and options for closure.

3. Department of Defense, *Military Manpower Training Report, FY 1989* (May 1988), Table VI-1 and data from the Department of Defense for 1995. These figures are measured in terms of average student year--which takes into account differences in training length, as well as student attrition during the course.

4. Department of Defense, *Military Manpower Training Report, FY 1985* (February 1984), p. VI-4 and data from the Department of Defense for 1995.

5. Based on peak student loads in the last decade, CBO estimated that the 15 original flight training bases could train about 8,700 pilots and navigators annually. With the closing of Chase Naval Air Station in Texas, Mather Air Force Base in California, and Williams Air Force Base in Arizona by the base closure and realignment commissions, capacity to provide flight training will drop by about 20 percent to 6,900.

Undergraduate Flight Training Is Similar

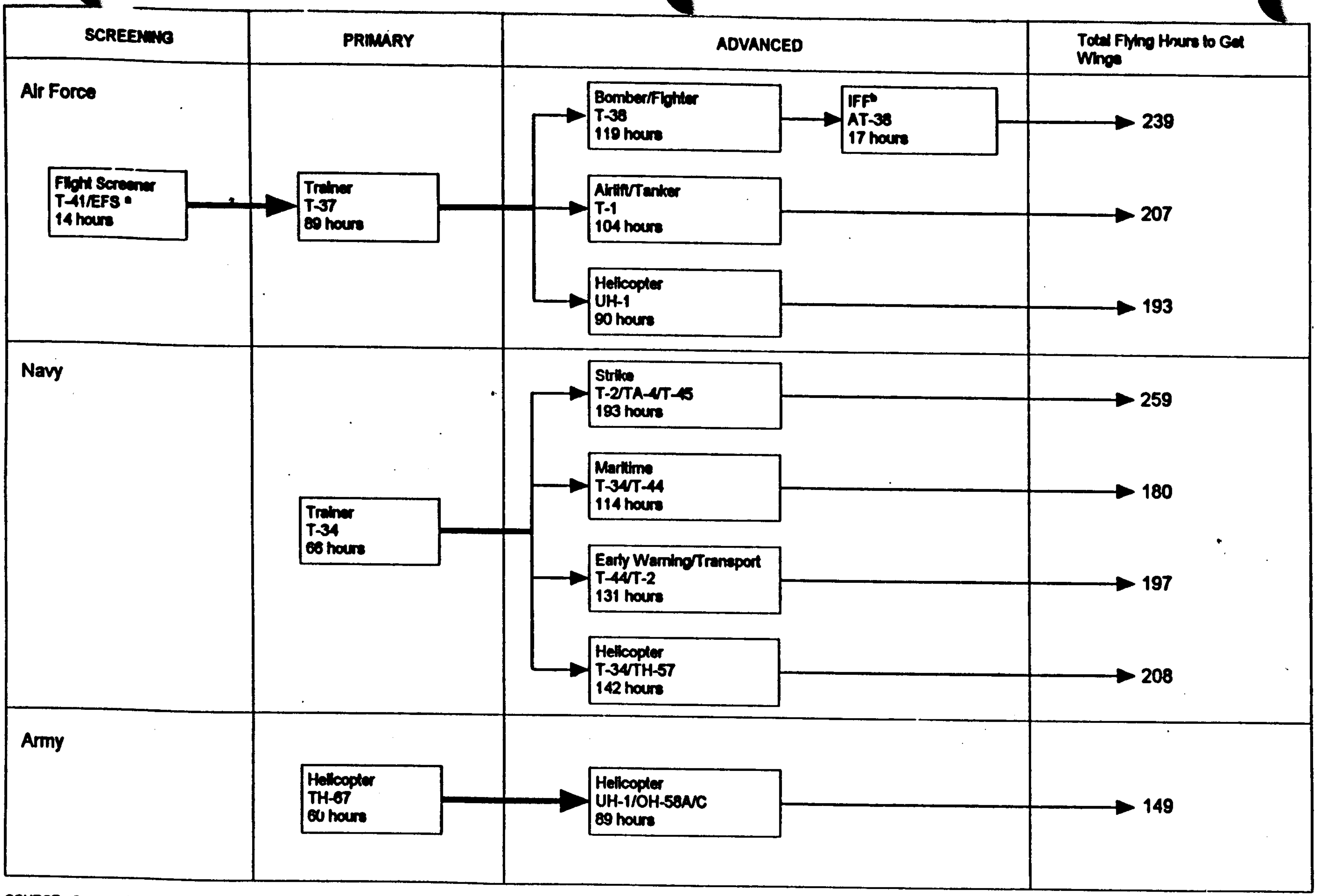
What opportunities exist to consolidate flight training and what would be gained? According to DoD's 1992 Trainer Aircraft Master Plan, undergraduate training systems among the services "resemble each other to a remarkable degree" even though the services use a variety of different trainer aircraft.[6] All Army pilots and more than one-third of Navy and Marine Corps pilots learn to fly rotary-wing helicopters, and almost all Air Force pilots train to operate fixed-wing aircraft. All the services rely on a primary phase of general or "core" training, followed by specialized training in a particular type of aircraft. At the end of training, pilots earn their "wings" and generally are assigned to a special squadron where they may receive additional training on the specific aircraft that they will fly in a unit. (Army helicopter pilots are assigned to an operational squadron immediately after receiving their wings.) Consolidating fixed-wing training and consolidating rotary-wing training in this primary phase could yield significant savings.

There are, however, some differences in flight training among the services. The length of undergraduate flight training varies from 39 weeks for Army helicopter pilots to a year and a half for Navy strike pilots. Syllabus length is also measured by the number of practice flight hours that students receive. The number of hours varies by the type of aircraft, the complexity of the training, and the amount of on-the-job training that students receive in operational squadrons. For undergraduate training, syllabus flight hours vary from 149 hours for an Army helicopter student to 259 hours for a Navy strike pilot (see Figure 1). All trainees in both the Navy and the Air Force participate in a primary phase of fixed-wing training; Navy student pilots fly first in the relatively simple T-34 prop aircraft, and Air Force students primarily in the T-37 jet trainer. When the new JPATS trainer is delivered starting in 1998, the Navy and Air Force are anticipating that this primary phase will be the same length and in the same aircraft.

At the end of this primary phase, pilots are selected for further training in either a particular type of fixed-wing aircraft--including the most demanding strike or fighter track--or a helicopter. Navy (and Marine Corps) students who receive higher grades for their performance during initial training are eligible for follow-on training in one type of fixed-wing aircraft--strike, maritime patrol, or E-2 command and control or C-2 transport tracks. Those who get lower grades are assigned to the rotary-wing, or helicopter, track.

6. Department of Defense, "1992 Trainer Aircraft Master Plan" (1992), p. 24.

(Numb g hours in each aircraft)



SOURCE: Congressional Budget Office based on Department of Defense data.

a. EFS is the Enhanced Flight Screener that is replacing the T-41.

b. IFF is Identification, Friend or Foe.

Almost all Air Force pilots fly fixed-wing aircraft. Until this year, the Air Force simply preselected its few helicopter pilots, rather than following the Navy practice of using primary training as a screen for selection.

All helicopter students also receive a primary phase of training that is similar among the services. Air Force and Navy helicopter trainees, however, receive about 25 percent more hours altogether than Army helicopter pilots (see Figure 1). Part of this difference may be explained by variations in requirements for instrument training among the services and part may reflect the Navy and Air Force practice of relying on initial fixed-wing training as a way to select those pilots who will be assigned to the more demanding fixed-wing versus the helicopter track.

Such flight training is expensive. The cost of this lengthy, complex, and capital-intensive training ranges from almost $300,000 to produce an Army helicopter pilot to almost $1 million to produce a Navy strike pilot. These figures include not only the cost of the training itself but also a proportionate share of overhead training-base costs and the salaries of those military personnel who conduct or undergo the training. Overhead costs per student would be lower if training were consolidated on fewer bases.

Investment in New Trainer Aircraft Would Be High

The Department of Defense is in the process of developing, procuring, and fielding several new aircraft to be used for undergraduate pilot training. The Air Force and Navy are developing a new trainer aircraft, the JPATS. Consolidating undergraduate training among the services would allow DoD to delay as well as reduce the size of the JPATS purchase. The JPATS will take the place of the Air Force's T-37 dual engine, side-by-side, jet trainer and the Navy's T-34 prop trainer. The Navy and Air Force plan to buy more than 700 aircraft. The cost of the Air Force's program, including purchase of 372 airplanes, totals about $4 billion. The Navy plans to buy almost the same number of aircraft but has not as yet provided a detailed cost estimate to the Congress.

By February 1995, the Air Force and Navy plan to select the JPATS from among competing designs offered by several contractors. DoD's request for proposal calls for an aircraft that is close to current commercial models but could require some adjustments in design to accommodate DoD's requirement for an ejection seat and a cockpit configured to accommodate smaller female pilots.

The Army is buying 137 TH-67 or New Training Helicopters--a variation of a commercial helicopter--to replace its current trainer, the UH-1, an old Vietnam-vintage helicopter. The new TH-67 is similar to the single-engine, dual-seat TH-57B/C helicopter currently used for Navy training.

CONSOLIDATING UNDERGRADUATE PILOT TRAINING NOW

Both fixed- and rotary-wing training are candidates for consolidation. Navy and Air Force fixed-wing pilots could train together for at least a portion of their undergraduate curriculum. All undergraduate training for Army, Marine Corps, Navy, Air Force, and Coast Guard rotary-wing, or helicopter, pilots might also be combined.

Air Force and Navy Could Adopt a Common Core in Fixed-Wing Training

Fixed-wing flight training could be consolidated without waiting for delivery of the new JPATS trainer. Capitalizing on similarities in the skills learned during the initial phase of fixed-wing flight training, this option assumes that all Navy and Air Force fixed-wing pilots would undergo common core training using the T-34 aircraft. That step would maximize training in the T-34 aircraft, which is cheap to operate and should be available in roughly sufficient numbers to train both Navy and Air Force pilots at least through the middle of the next decade.[7] Based on a service life of 18,000 hours, large-scale retirements of T-34 aircraft might begin around 2004. But according to informal conversations with the Navy, T-34s could last considerably longer since they have no structural problems. One service could conduct this initial phase of primary training at two bases compared with the four bases used now.

Under this option, the Air Force and Navy would no longer train all pilots--including those who are selected to become helicopter pilots--in fixed-wing aircraft. Instead, both services would assign students to either a fixed-wing or a helicopter track based on initial flight aptitude and other tests, as was the Air Force practice until this year. This option would enable DoD to delay the purchase of the JPATS since the services could continue to rely on the T-34 trainer for at least another decade, as well as reduce the number of JPATS aircraft bought.

7. The Navy currently has 322 T-34 aircraft in its inventory, including some 40 aircraft that need only standard repairs to be flyable. Based on projected student loads and flying each aircraft 720 hours annually, there would be sufficient aircraft available to train both Navy and Air Force fixed-wing students in a common core syllabus of 66 hours--the length of the Navy's primary phase.

Each service could then conduct its own specialized training that would vary by mission and service (for example, fighter/strike or airlift/tanker). During this phase, Navy and Air Force fixed-wing students would continue training in mission-specific aircraft. (The services are currently also considering consolidating specialized follow-on, navigator, and advanced training, but these consolidations are not examined in this option.) Both services would use the JPATS for this primary training when it becomes available; in the interim, both the Air Force and the Navy would use the T-34 aircraft. By relying on the T-34 aircraft for most of primary training, the Air Force would fly its T-37 aircraft far less and would no longer face pressure to buy the JPATS to replace the T-37 aircraft, of which large-scale retirements would begin by 2005. Eventually, probably toward the end of the first decade of the 21st century, the services would need to buy the JPATS to replace the T-34 aircraft used for joint core training.

Services Could Conduct Helicopter Training Jointly

The Navy, Air Force, and Coast Guard's basic helicopter training could also be consolidated under one service and in one location. As with fixed-wing training, this option assumes that primary helicopter training is largely comparable among the services. Instead of the Navy conducting its primary training in the T-34, all Navy and Army students would train in either the Navy's TH-57 or the Army's TH-67 helicopter in one location. The two aircraft are similar, since both helicopters are derivatives of the same commercial model, and aircraft from one service could be transferred to the training base that is selected. Because the number of helicopter students is so much lower than anticipated before the drawdown, DoD is unlikely to need to purchase any additional helicopters to accommodate the Navy pilots who currently train in the T-34 fixed-wing trainer.

After this initial phase of consolidated training, pilots receive additional training in the use of instruments and the specific combat skills required for their mission. For example, Army helicopter pilots must rely primarily on visual cues to fly low--"nap of the earth"--and must learn to pop up and down quickly to avoid enemy fire. Navy pilots, however, rely heavily on instruments to distinguish between sea and sky when flying at night over water, and must learn to land on carriers. This follow-on training could be collocated at one base in order to maximize use of training space and fully exploit common maintenance crews.

To carry out that consolidation of helicopter training, the Navy, Marine Corps, Coast Guard, and Air Force would have to preselect those to be trained as fixed wing and as helicopter pilots without the benefit of reviewing initial student flying performance. If it no longer provided fixed-wing training to its helicopter pilots, however, the Navy could buy about 120 fewer JPATS aircraft, reducing its purchase by about one-third and probably saving more than $500 million.[8] This consolidation would probably entail some rearrangement of the syllabus so that common types of training (for example, familiarization and aerobatics) are conducted first, and service-specific training in the second phase.

ADVANTAGES AND DISADVANTAGES OF CONSOLIDATION

Consolidating both fixed-wing and helicopter training would result in significant total savings of $1.3 billion between 1995 and 1999 from delaying the research and development and purchase of JPATS aircraft (see Table 10). Purchase of JPATS aircraft could be delayed because the T-34, the Navy's current trainer, would take over most of the Air Force's fixed-wing training, thus relieving pressure on the Air Force's current trainer, the T-37, the aircraft closest to the end of its service life. Since the T-34 has many remaining years of service life and the Navy has a sufficient inventory, purchasing the JPATS would not be necessary until the first decade of the next century. In addition, at that time, DoD would need to purchase about 120 fewer JPATS aircraft altogether because personnel designated as helicopter pilots would no longer initially train in fixed-wing aircraft.

Operating and Support Costs Could Be Lower

Consolidating fixed-wing and helicopter training could also increase the efficiency of the current training infrastructure by reducing training overhead, since all training of a particular type would be conducted at one or two bases. Consolidation would permit the services to close three and possibly four flight training bases, eventually saving about $180 million each year after initial closedown costs based on recent experience (see Table 10).[9] In addition,

8. Since the JPATS aircraft has not yet been selected, there is considerable uncertainty about likely unit costs. Based on a similar option that would eliminate fixed-wing training for all Navy helicopter students, the DoD Inspector General estimated savings from buying fewer JPATS could total $700 million assuming a unit cost of $5 million per aircraft; see Department of Defense, Office of the Inspector General, *Acquisition of Common Aircraft for Navy and Air Force Undergraduate Pilot Training*, Report No. 92-063 (March 27, 1992), p. 26.

9. CBO estimated the number of flight training bases that could be closed by comparing the maximum flying hours and student loads experienced during the 1980s with estimates of future training requirements. CBO did not make detailed estimates of flight training capacity.

conducting the initial primary training jointly with a common syllabus could lead to adopting "best practices" from each service. Consolidation could also foster interservice cooperation, which is increasingly important when joint operations are the most likely way for the United States to respond to crises.

Such savings could be partially offset by higher costs resulting if additional students moved between the primary and later phases of training. Moreover, the Air Force and Navy could face higher maintenance costs as the older T-34 and T-37 aircraft continued in service. The Navy also argues that using the T-34 for initial training of its helicopter pilots is cost-effective because the T-34 may cost about $100 less per hour to operate than the Army's new TH-67 helicopter. Although substituting helicopter for T-34 flight hours would be more costly, this additional cost could be partly offset by the economies realized from centralizing and shortening helicopter training. The current Navy syllabus could be shortened by eliminating flight hours that are not relevant to helicopter pilots. Moreover, the higher costs of training in the

TABLE 10. COSTS AND SAVINGS FROM CONSOLIDATING UNDERGRADUATE PILOT TRAINING (In millions of dollars)

	1995	1996	1997	1998	1999	1995-1999	Long-Term Annual Savings[a]
Acquisition Savings[b]	160	230	270	300	330	1,290	0
Support Savings[c]	-40	-60	60	130	220	310	190
Total	120	170	330	430	550	1,600	190

SOURCE: Congressional Budget Office based on data from the Department of Defense.

NOTE: Minus signs indicate costs. Figures in the 1995-1999 period are in current dollars.

a. Includes annual operating and support savings after the consolidations have been fully implemented, expressed in 1995 dollars.

b. Includes savings from delaying research and development and procurement of new Joint Primary Aircraft Training System aircraft.

c. Includes savings from closing three flight training bases and savings or costs from training Air Force pilots in the lower-cost T-34 airplane, and Navy pilots in the higher-cost TH-57 or TH-67 helicopters.

TH-67 total less than $1 million annually. The cost to train Air Force fixed-wing pilots would also be lower because the T-34 costs about $200 less per flying hour than the T-37, saving about $10 million annually.

Some additional one-time costs of $10 million to $20 million could accrue when the Navy or Army is required to move helicopters to the common helicopter training base. These one-time costs, however, are far lower than either the short-term savings in the next five years from the delay of JPATS or the long-term savings from the smaller JPATS purchase and base closures. In addition, base-support costs per student would fall as the remaining bases operate closer to their capacity.

However, delaying purchase of JPATS would mean that the Air Force and Navy would not reap the advantages of using a new trainer until a later date. These advantages include having an ejection seat operable at ground level, a digital cockpit common to aircraft that pilots will later fly, the ability to train at higher altitudes, cockpit redesign to accommodate smaller female pilots, and tandem or back-to-front seating.[10] The Air Force also considers the T-34 aircraft unacceptable for its training needs.

Selecting Fixed-Wing Pilots Could Be More Difficult

The Navy, Air Force, Marine Corps, and Coast Guard would all object to adopting common helicopter training because they prefer that their helicopter pilots receive initial training in a fixed-wing aircraft. This preference reflects the Navy's belief that an initial period of fixed-wing training improves its ability to select the highest-quality pilots for such training, as well as Marine Corps and Coast Guard interest in developing pilots who can fly either fixed- or rotary-wing aircraft. The Coast Guard might have more of a problem with giving up training in both fixed- and rotary-wing aircraft because a higher proportion of Coast Guard pilots than pilots in the services fly both types of aircraft. Consolidation, however, is likely to save additional funding and could more than offset any additional costs the Coast Guard might need to incur to provide additional training at a later date to those pilots who need fixed-wing skills.

The Marine Corps has a somewhat similar concern--that helicopter pilots will need an initial period of fixed-wing training to fly the V-22 aircraft, which may be purchased soon and takes off like a helicopter but flies like a fixed-

10. In the mid-1980s, the Air Force argued that it must have side-by-side seating in its T-46 trainer, a plane that was subsequently canceled, but it apparently dropped this argument with the JPATS program.

wing aircraft. Additional training, with the associated costs, could be provided for those helicopter pilots who make a transition at a later date to a fixed-wing aircraft.

Most problematic to the Navy would be giving up the opportunity to use initial fixed-wing training to select those most qualified for strike aircraft, the most demanding training requiring the highest-quality students. A recent study by the Center for Naval Analyses (CNA) suggests that relying solely on preflight aptitude tests to select strike students could slightly reduce the quality of pilots available for fixed-wing assignments. A drop in quality could then increase attrition in follow-on training, thereby raising total costs. (At the same time, it could presumably also increase the quality of helicopter pilots, reducing attrition in that pipeline.) If the Navy wanted to maintain the current quality of fixed-wing students, the number of students entering initial flight training would need to be greater to offset any increase in attrition. A larger pipeline and higher attrition would increase training costs.

Although the CNA study estimated that assigning students based solely on initial test scores would be slightly less accurate than the current practice of relying on initial flight performance, the difference in the quality of students appears to be small.[11] To offset any potential drop in the quality of strike pilots, however, the Navy could adopt selection procedures to maximize the number of high-quality students assigned to the strike track, where quality is most important. For example, the Navy could assign all high-quality students to strike aircraft training even if they voiced a preference for other, less demanding fixed-wing aircraft. (Some Navy student pilots already do not get their first or even their second choice in specialization.)[12] The Navy could also choose to train students with slightly lower initial aptitude scores in strike aircraft, since the quality of students is currently quite high. Alternatively, the Navy could increase its intake of students by a small amount to offset any potential drop in quality, which would slightly increase costs.[13]

Despite these potential drawbacks, consolidation is likely to result in considerable savings, reduce the size of the support infrastructure, and

11. See John H. Noer, "Primary Flight Training, UHPT, and Pipeline Selection," CRM 93-182 (Center for Naval Analyses, Alexandria, Va., January 1994). The study estimates that the mean score of student strike pilots selected after initial flight training would be 62.6 compared with mean scores of 58.9 for students selected without first reviewing their flight performance, a difference of three points. In both cases, the standard deviation is estimated to be quite large--6.8 points for students selected after flight training compared with a 9.2 point deviation for those selected without flight training, suggesting considerable uncertainty in either case (see Table 19, p. 51).

12. Ibid, pp. 23-24 and 63.

13. Ibid, p. 57.

increase cooperation among the services, which is becoming more essential as DoD draws down military forces and lives within a limited budget.

TAB 13

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

September 22, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1300 hours on September 22, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch opened the meeting with general comments on the joint Navy and Air Force briefing on joint fixed-wing training which the Group was receiving at this meeting. He pointed out that the briefing was based on a study external to the BRAC process and that the briefing was policy and philosophy oriented. Mr. Finch continued by pointing out that the external study did not use certified data and, therefore per law and internal controls, BRAC recommendations regarding actions at specific installations could not be developed using data from the study. He further noted that the briefing used a notional, non-base specific approach with regard to basing philosophy. Additionally, he continued, the briefing should be useful in getting an operator's view on joint fixed-wing training policy and philosophy.

The Joint Fixed-Wing Training briefing (attached) was developed from a joint Navy and Air Force study directed by the Secretary of Defense (SecDef). SecDef guidance was to consolidate initial fixed-wing aircraft training, transition to a common primary training aircraft, and establish four-track, follow-on training. The Navy and Air Force briefers pointed out that since the Departments were already conducting some joint training and were moving in that direction in other syllabi, it was natural that they look at Navigator, Weapon Systems Officer, Naval Flight Officer, and Electronic Warfare Officer training as well. They also noted that the study did not include helicopter training. The briefers first talked about the philosophy of training. Key points included that the Navy and Air Force were already doing some joint fixed-wing pilot training and that they were using a "walk before you run" approach. Since SecDef's direction to use a Joint Primary Aircraft Training System (JPATS), the Navy and the Air Force have agreed on a joint syllabus for JPATS which has accommodated the Departments' cultural differences in primary pilot training--that being a Navy emphasis on instrument flying and an Air Force emphasis on contact flying. The briefers believed that both Departments would benefit from the joint syllabus. With regard to JPATS and the on-going acquisition issue, the Navy and Air Force are moving to joint primary fixed-wing training with or without JPATS. In the opinion of the briefers, however, acquisition of JPATS makes the establishment of joint fixed-wing training more efficient. It reduces the number of aircraft types used for primary pilot training, introduces a more efficient and common airframe, and allows for a truly joint syllabus. There are other joint opportunities potentially in follow-on airlift/tanker/maritime track training. The briefing pointed out that large cost savings do not come from the establishment of joint training, but rather benefits are derived from the quality of training and "jointness". The major savings come from the reduction of infrastructure and the elimination of the costs to operate installations that are not needed as you consolidate joint training. However, flying operations

[redacted]

considerations and base operational capabilities drive the potential amount of excess infrastructure. With regard to perspectives on capacity, the briefers pointed out that it was an operator's view, back-of-the-envelope approach. They also stated their study looked at existing infrastructure, existing base capabilities, and aircraft operational compatibility and requirements. Mr. Finch thanked the Departments for the briefing.

Mr. Finch pointed out that alternatives developed by the Group should make operational sense. He continued that the path of the Group's methodologies must make sense. He then reiterated that the analytical models are mechanical tools with mechanical outputs for use in development of alternatives for further consideration. He observed that the models, as set, do not have constraints for operational compatibility of aircraft types, for example. The Group agreed methodology needed to be reviewed. Mr. Finch directed the joint study team (JST) to review methodology and to propose recommendations.

The Group next talked about the costs of alternatives. Mr. Finch opined that the current methodology uses surrogates for cost. He continued that the Group is not starting with a clean sheet of paper in that there are existing bases, infrastructure, and capabilities. While current tools and methodology may seem good, they don't directly look at the costs of moving functions around. The Group agreed that more work was needed in this area and that common sense should prevail. The Chair tasked the JST to review and propose options for costing with respect to the optimization model.

Next, Mr. Gardner reviewed data security and internal control procedures.

The Group then began an initial review of an incomplete draft preliminary functional value output. The Group challenged the output and consensus was that it did not show a distribution of the set that might be expected or seem reasonable. The Army pointed out that D-PADS output is only one part of a larger, overall analysis. The Chair pointed out that the output purports to give a relative ranking, but questioned whether it made sense. The Air Force argued the need to insure that data was correct. The Army also noted that the model gives more credit for having more functions. That is, the more discriminated functions at a location, the more credit is given to that location. The display is a linear description, of a non-linear world. The Chair tasked the Principals to scrutinize the inputs to determine if the data points made sense. The Air Force questioned the data provided in the facilities data field. The Group agreed that the Air Force would reexamine the certified data provided by their installations to revalidate the facilities data and to correct errors, if any, per internal controls. The Group also agreed to halt further functional value development pending verification and receipt of the facilities data, as well as receipt of the Air Force's data on flight screening.

Next, Mr. Gardner led a discussion of data call issues. The Group approved the outlying field resolution (attached) as presented. The Group also agreed to delete messing as a factor in capacity analysis, as the Departments no longer provide messing for officers.

Mr. Wyte, DoDIG, gave an auditor status report. He described early audit efforts used to provide some initial feedback. He also stated that the auditors were working on a full statistical analysis of the data universe.

The Group then discussed its proposed schedule and noted that milestones could slip due to the evolving joint process.

There being no further matters to discuss, the meeting was adjourned at 1525 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

September 22, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
LTC Tom Hinkel, Army
RADM Bill Hayden, Navy
CAPT Brian Buzzell, Navy (arrived late)
Col Dave Stockwell (USMC), Navy
LCDR Steve Bertolaccini, Navy
Maj Gen Glenn Profitt, Air Force
Maj Gen Ed Tenoso, Air Force
Brig Gen Mike McCarthy, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Lt Col Howard Hachida, Air Force
Lt Col Mark Bruggemeyer, Air Force
Col Paul Thompson, OSD (Base Closure)
Mr. David Wyte, DoDIG

[redacted]

UPT JCSG / CROSS-SERVICE GROUP AGENDA

(22 September 1994 Meeting -Rm 3E752)

1. Joint Training Briefing

2. Data Security Procedural Review

3. Functional Value Review

4. Data Call Issues

   A. Outlying Field (Choctaw) Resolution

   B. Deletion of Messing from Capacity Analysis

   C. Certified Data Update Status

5. DoDIG Auditor Status Report

6. Future Schedule Discussion

- Functional Values delivered to Services	September 23
- Capacity Analysis Completed/ UPT JCSG Mtg	September 29 at 1300
-Review Group Meeting	September 29 at 1630
-Military Values due from Services (Reportedly delivered 7-14 October by Air Force)	October 3
- Optimization Model Runs, Analysis, & Review	October 17 - 26
- Present Alternatives to Steering/Review Groups	October 27/28

JOINT FIXED-WING TRAINING

TASKING

ESTABLISH JOINT TRAINING

SECDEF GUIDANCE:

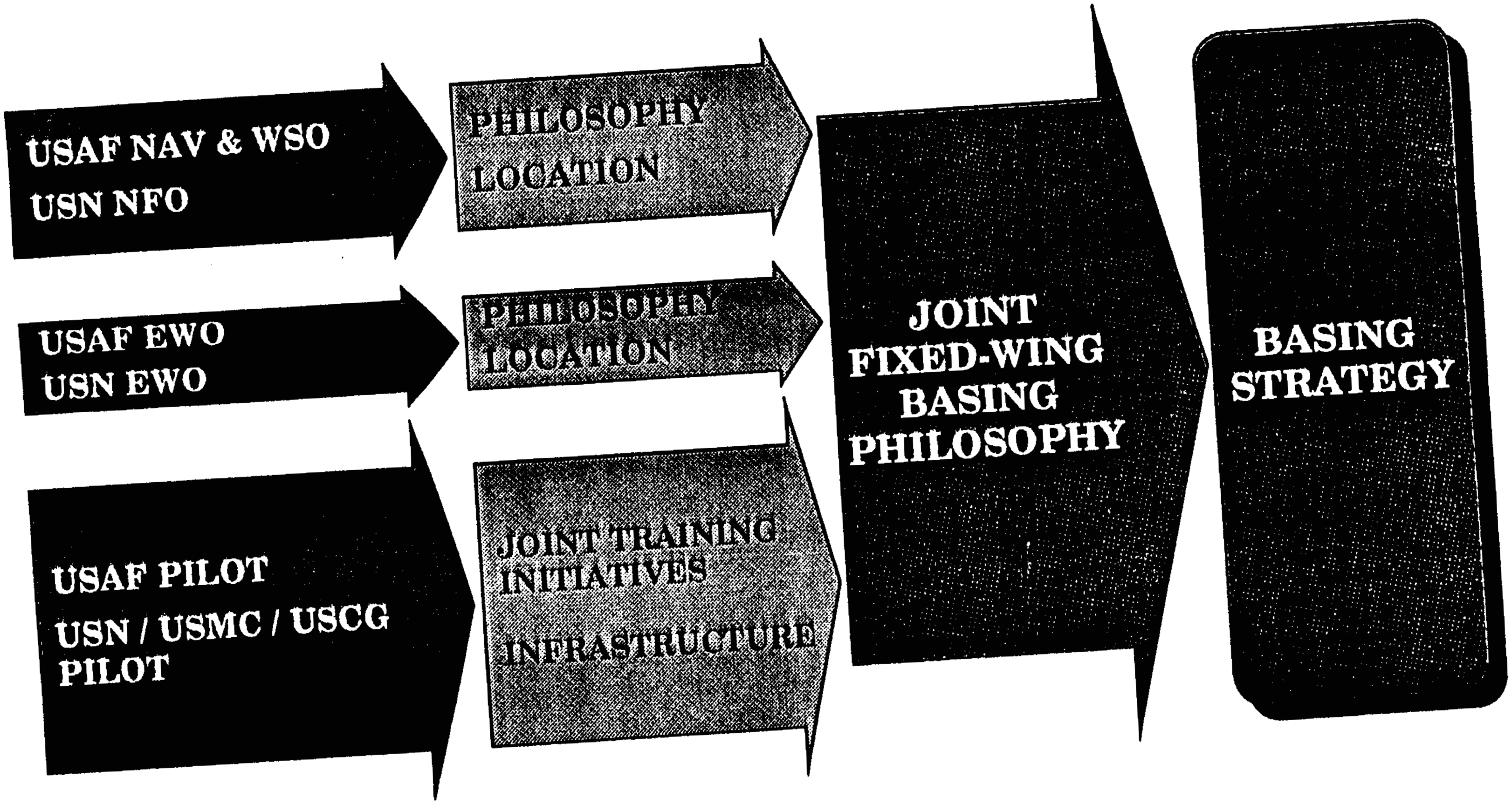
- CONSOLIDATE INITIAL FIXED WING AIRCRAFT TRAINING AND TRANSITION TO A COMMON PRIMARY TRAINING AIRCRAFT
- ESTABLISH 4-TRACK FOLLOW-ON TRAINING (OPR: SECAF / OCR: SECNAV)

NEXT STEP

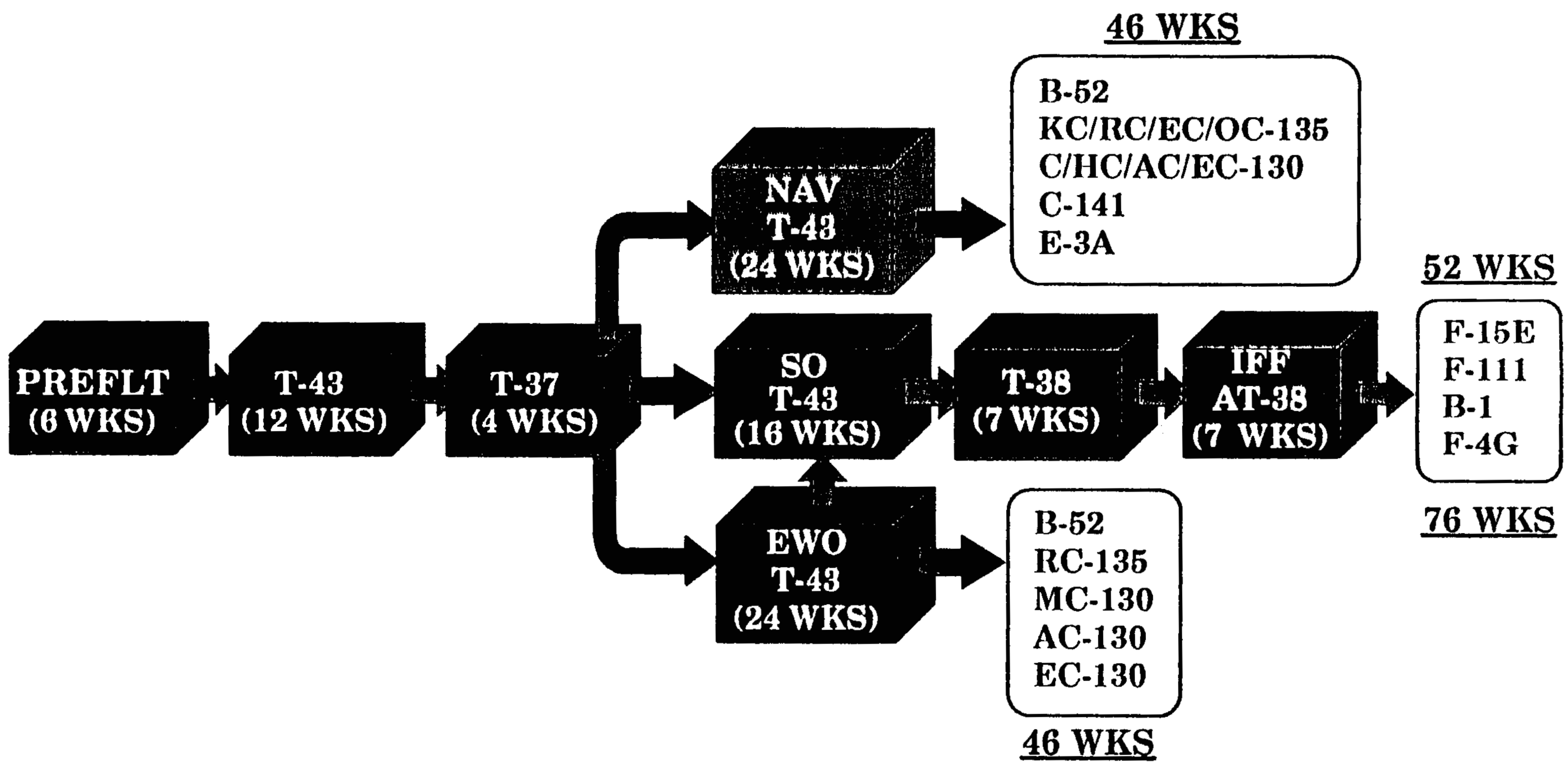
PROVIDE BRAC COMMISSION AN OPERATOR'S PERSPECTIVE ON TRAINING CONSOLIDATION AND BASE CLOSURE

- **REDUCE INFRASTRUCTURE WHERE IT MAKES SENSE**
- **ACCOMPLISHED THROUGH CONSOLIDATING FROM A JOINT PERSPECTIVE**

BUILDING THE WATCH

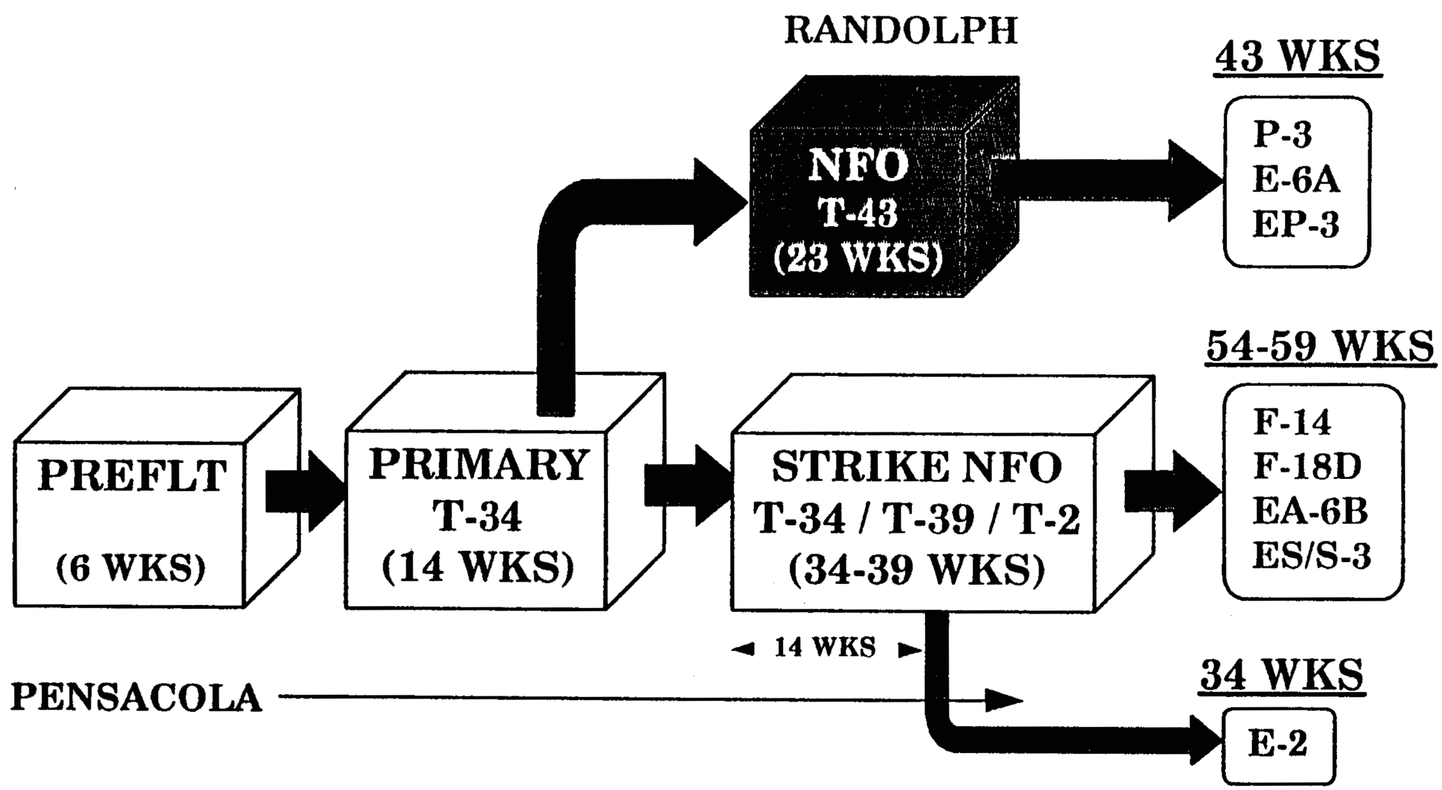


CURRENT USAF NAVIGATOR TRAINING

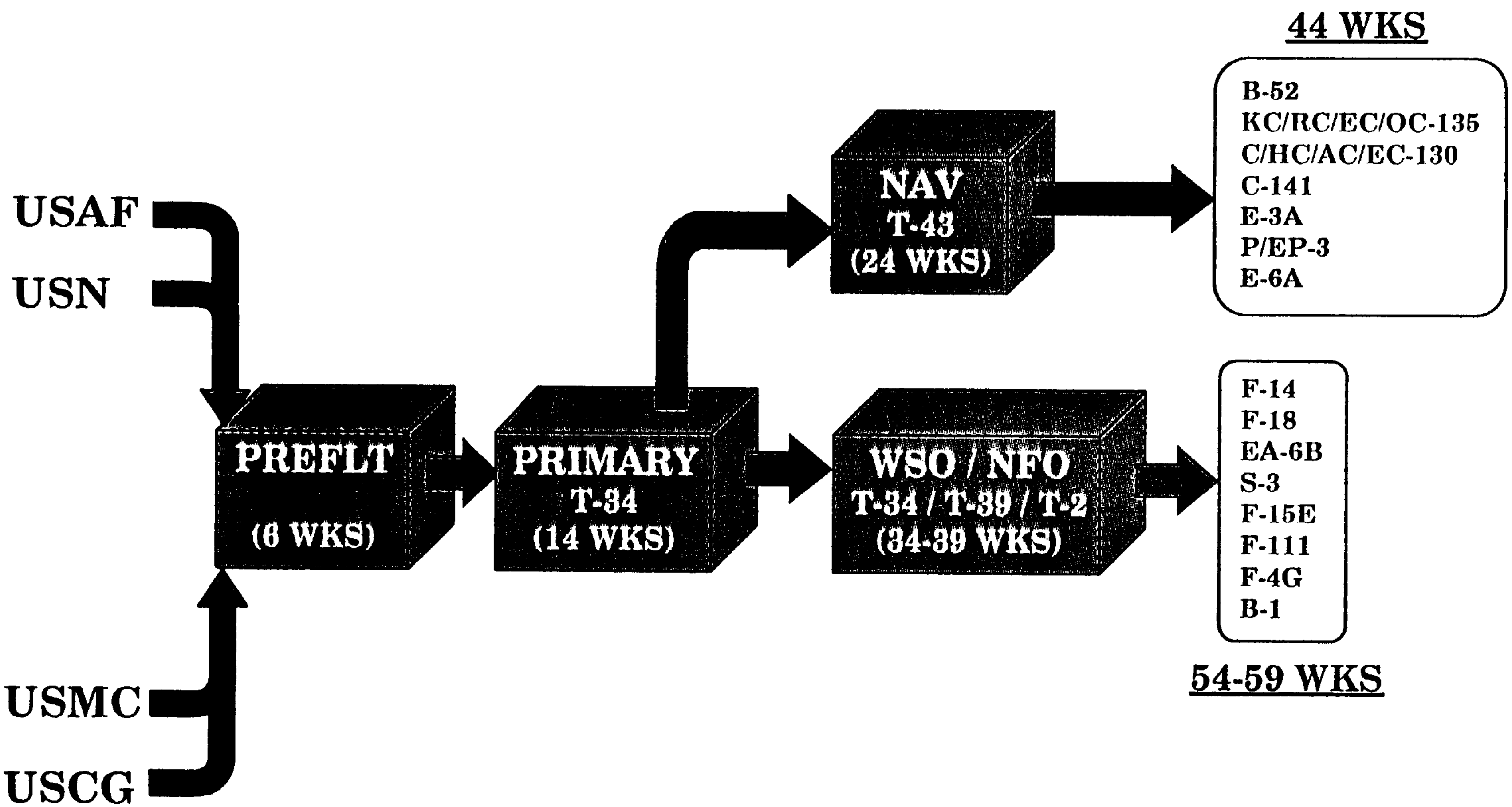


NOTE: USMC C-130 NAV TRAINING USES THE T-43

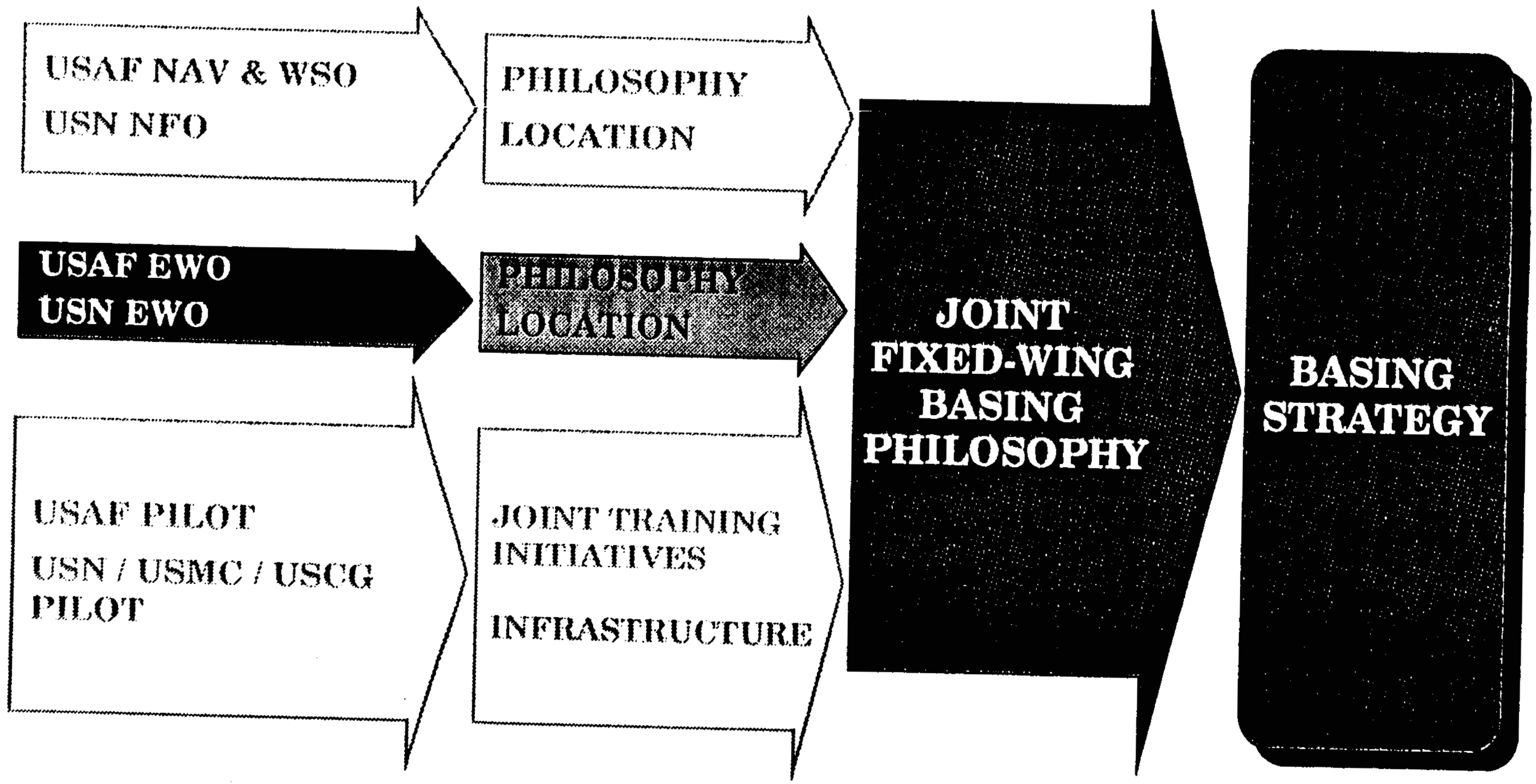
CURRENT NAVY NFO TRAINING



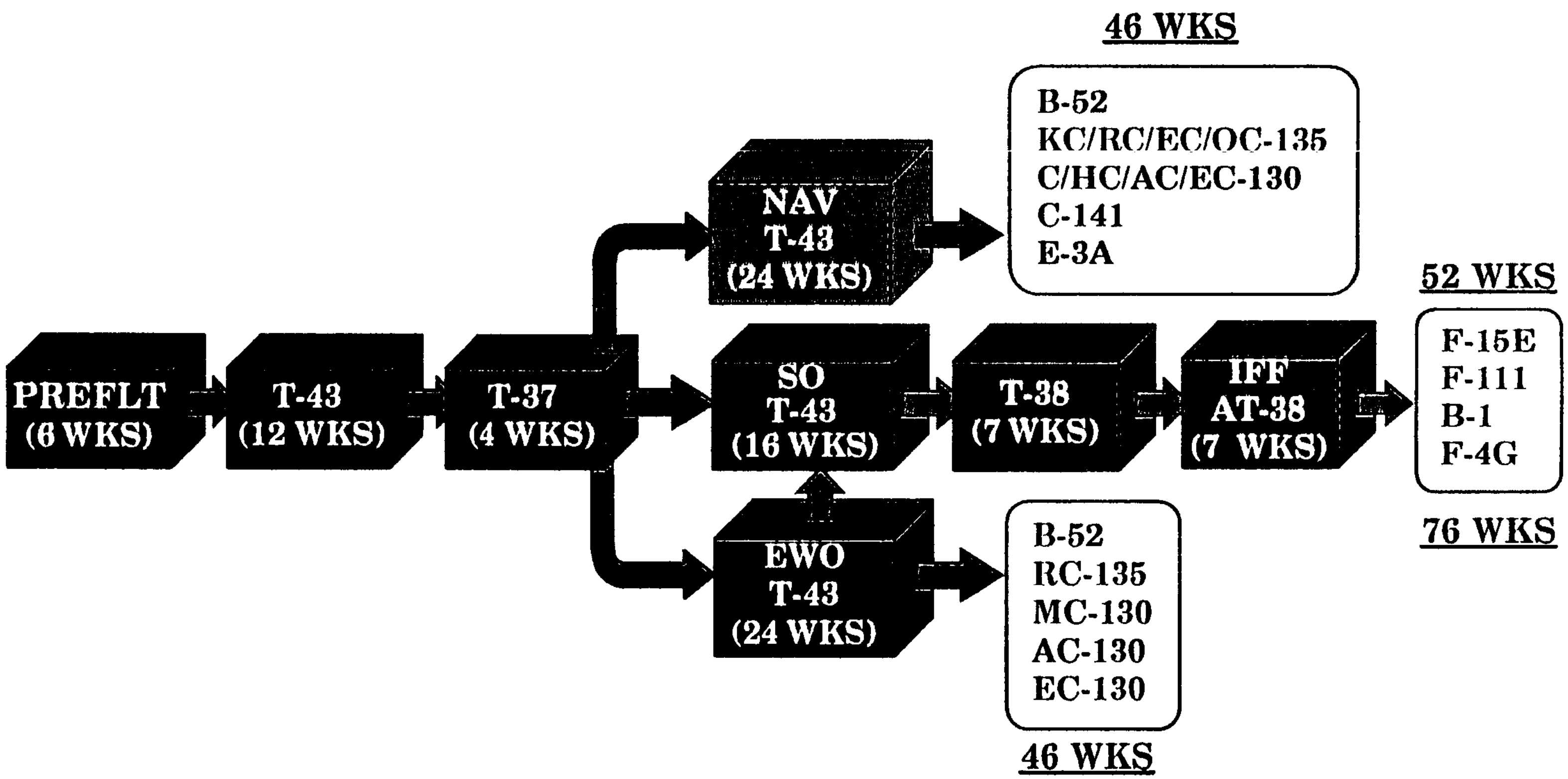
JOINT NAVIGATOR TRAINING



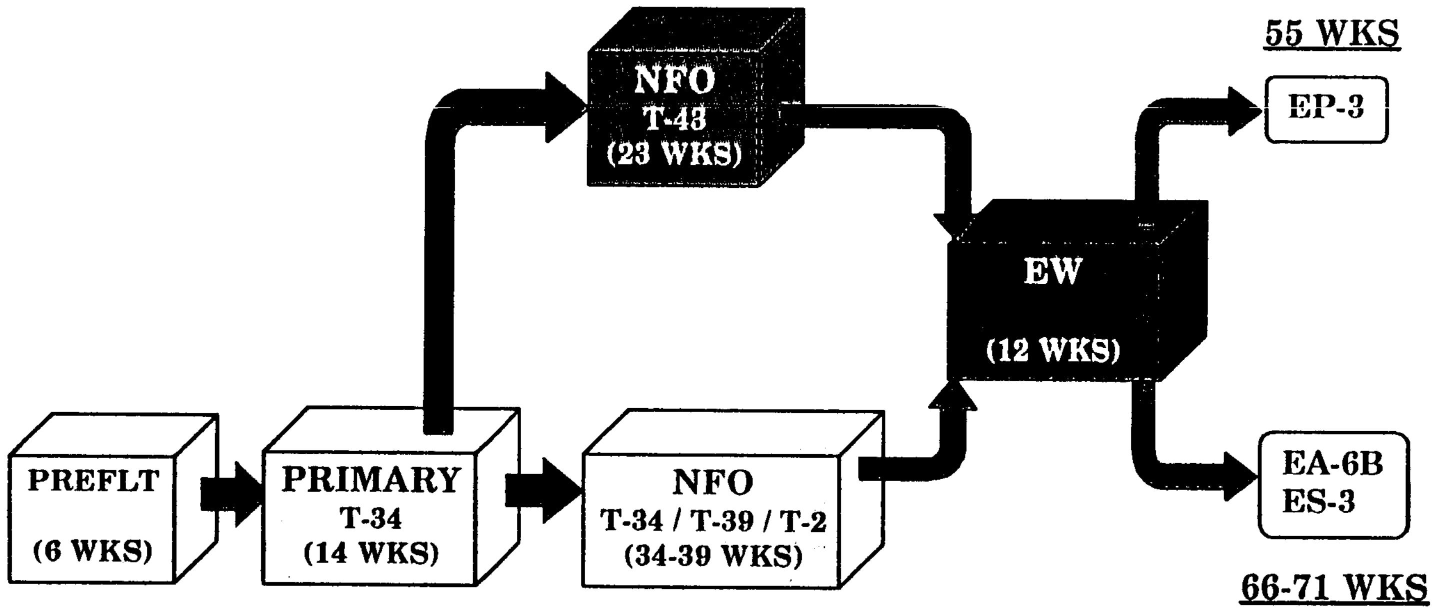
BUILDING THE WATCH



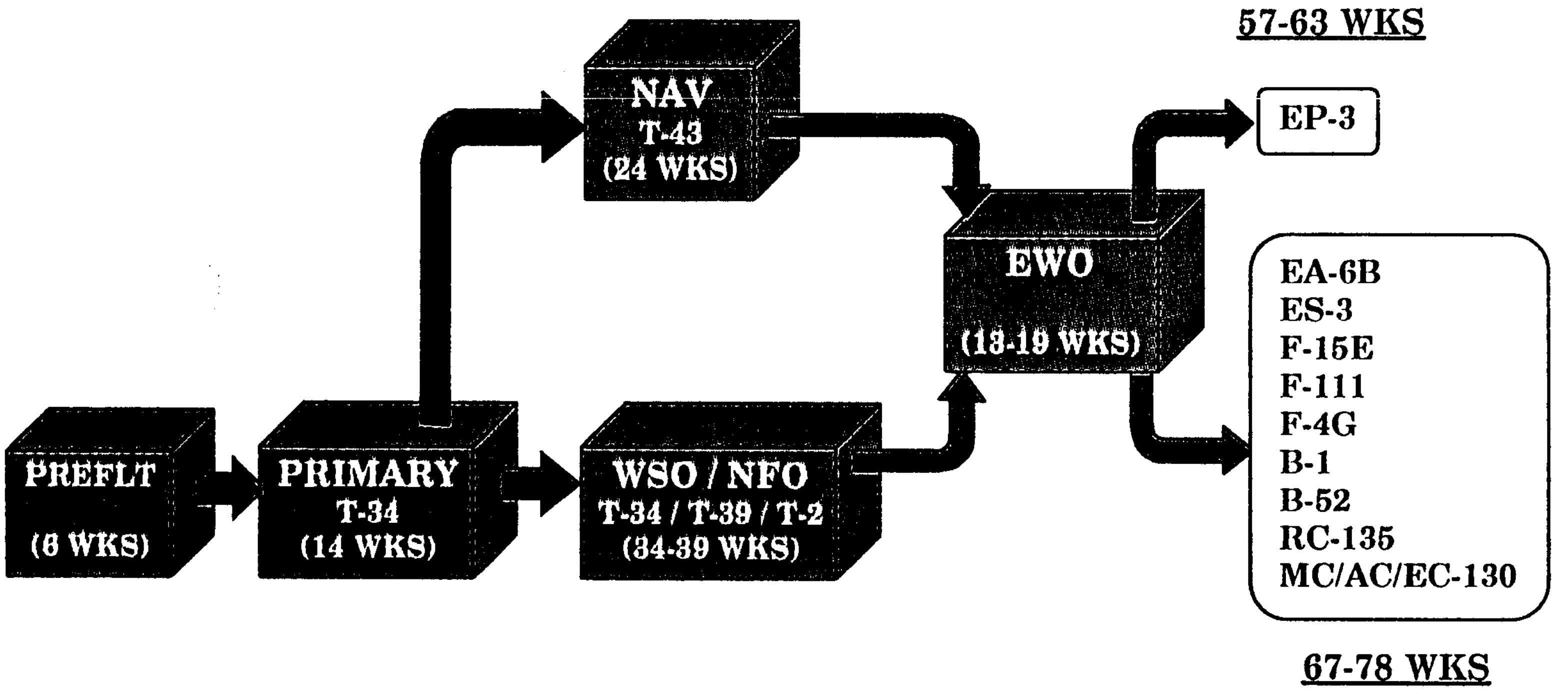
CURRENT USAF ENTRY LEVEL EWO TRAINING



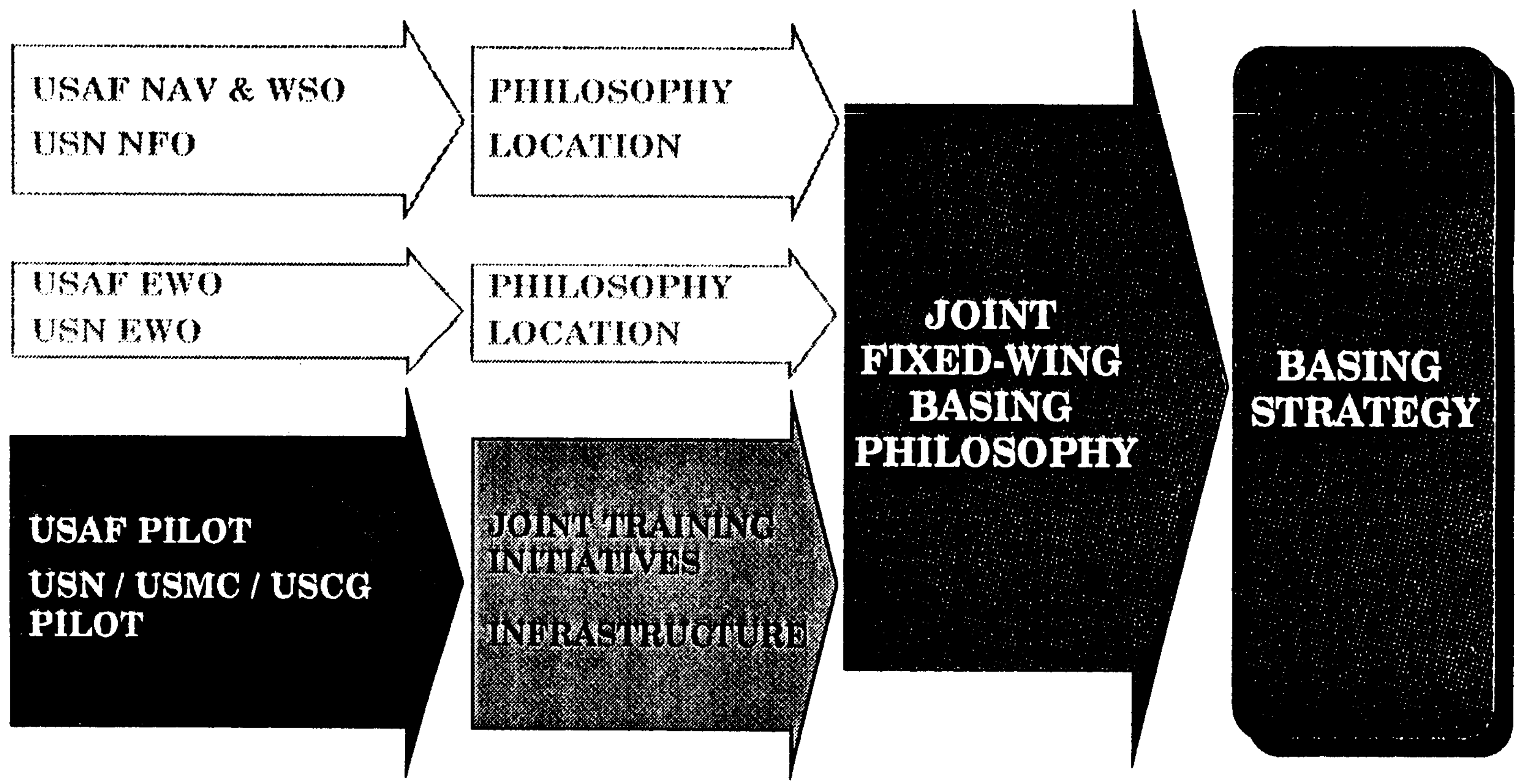
CURRENT NAVY ENTRY LEVEL EWO TRAINING



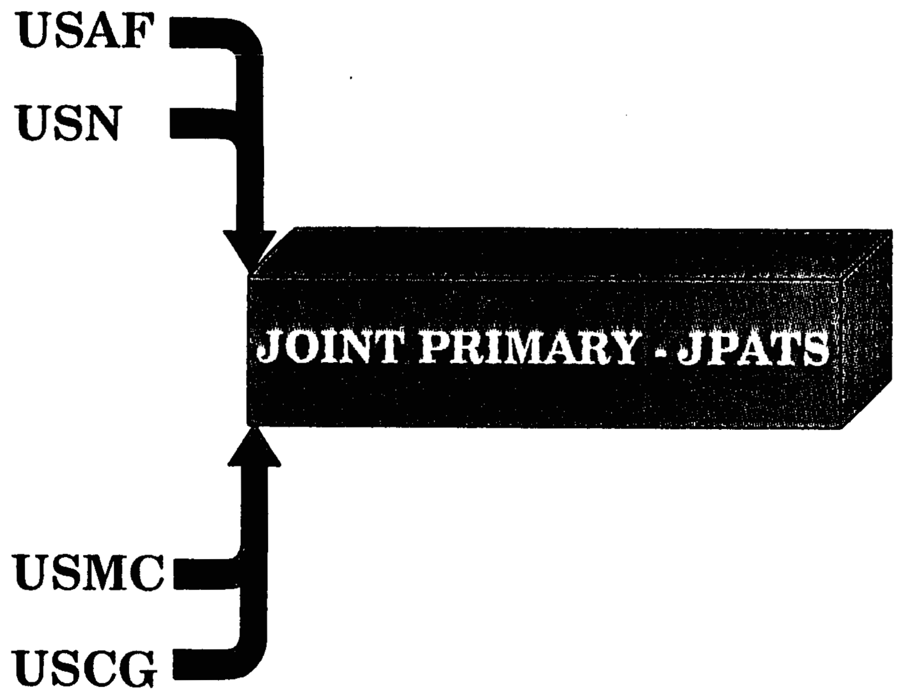
JOINT ENTRY LEVEL EWO TRAINING



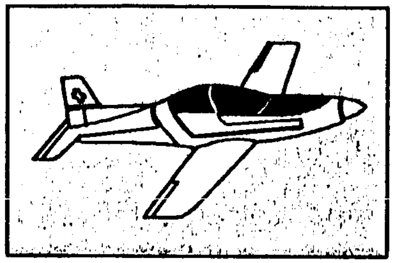
BUILDING THE WATCH

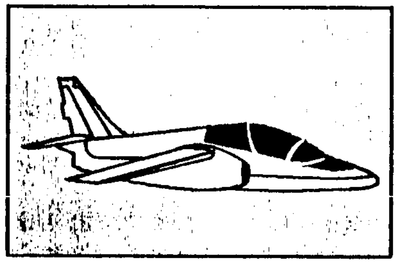


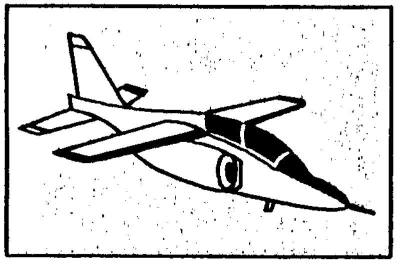
JOINT TRAINING PROJECTION WITH JPATS

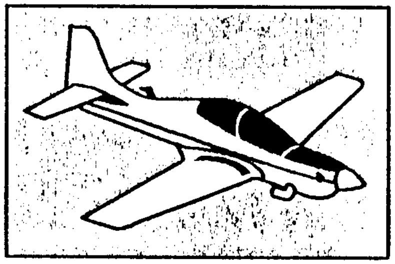


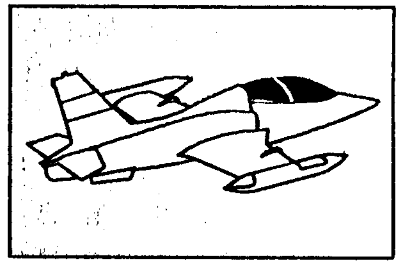
JPATS CANDIDATES

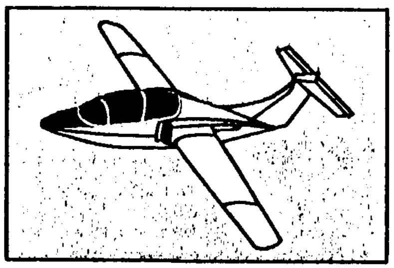

BEECH (USA) MK-II

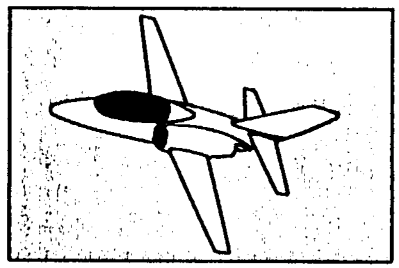

GRUMMAN/AUGUSTA (ITALY) S-211


VOUGHT/FMA (ARGENTINA) PAMPA 2000

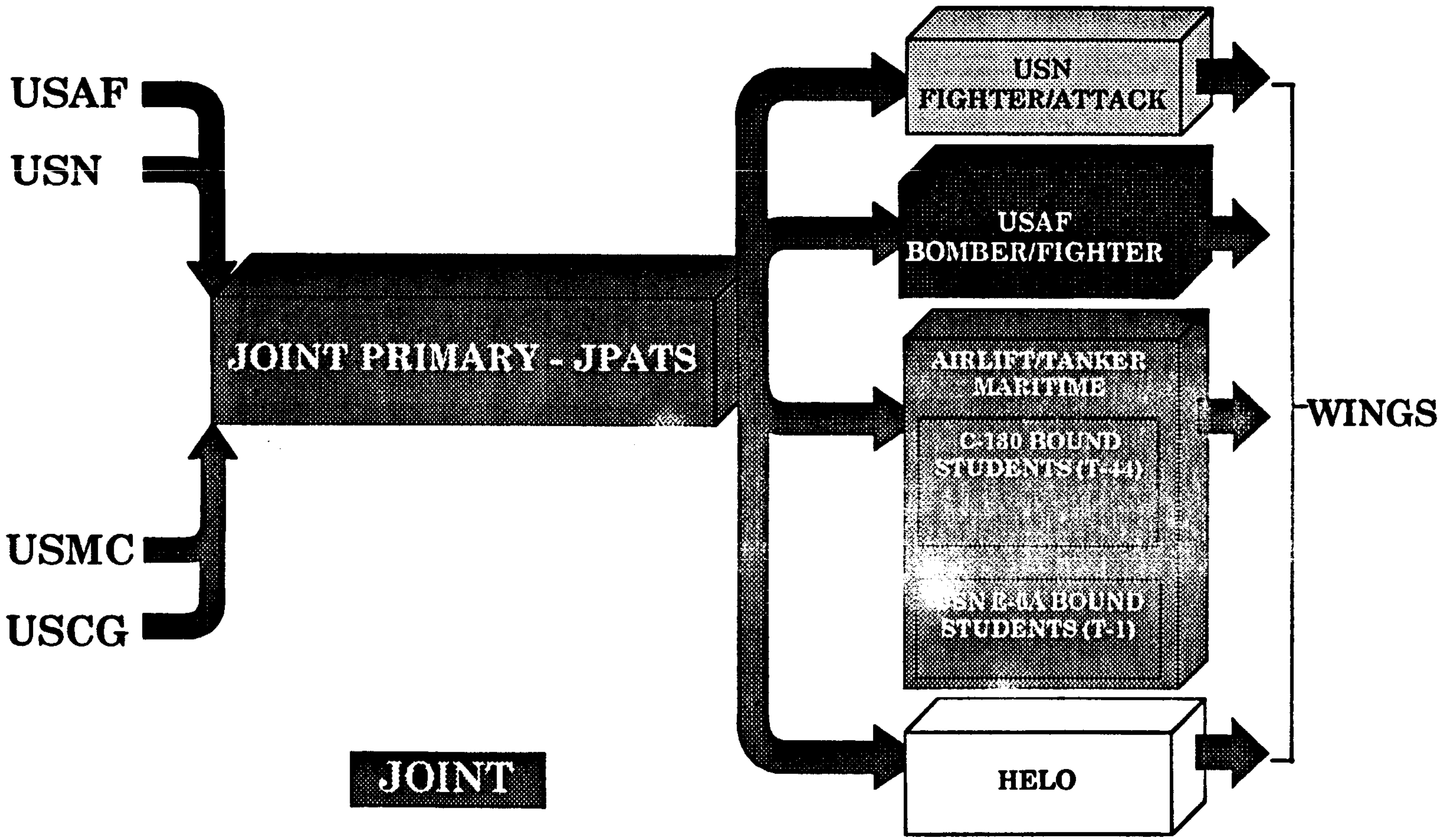

NORTHROP/EMBRAER (BRAZIL) TUCANO


LOCKHEED/AERMACCHI (ITALY) T BIRD II


ROCKWELL/MBB (GERMAN) RANGER 2000

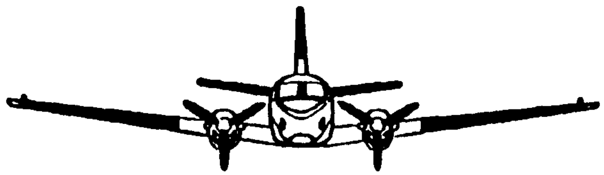

CESSNA (USA) CITATION TRAINER

OTHER JOINT OPPORTUNITIES

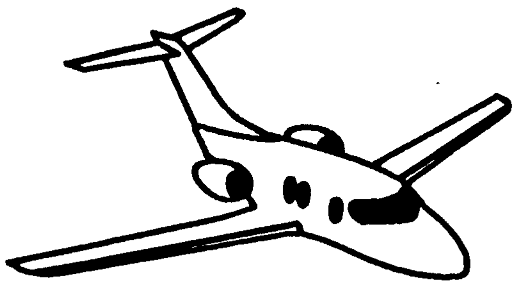


AIRLIFT/TANKER/MARITIME

- ANOTHER OPPORTUNITY FOR JOINTNESS USING THE APPROPRIATE TRAINING ASSET
- T-44 : AN EXCELLENT TRAINER FOR TURBOPROP-BOUND STUDENTS



- T-1 : AN EXCELLENT TRAINER FOR HEAVY JET-BOUND STUDENTS



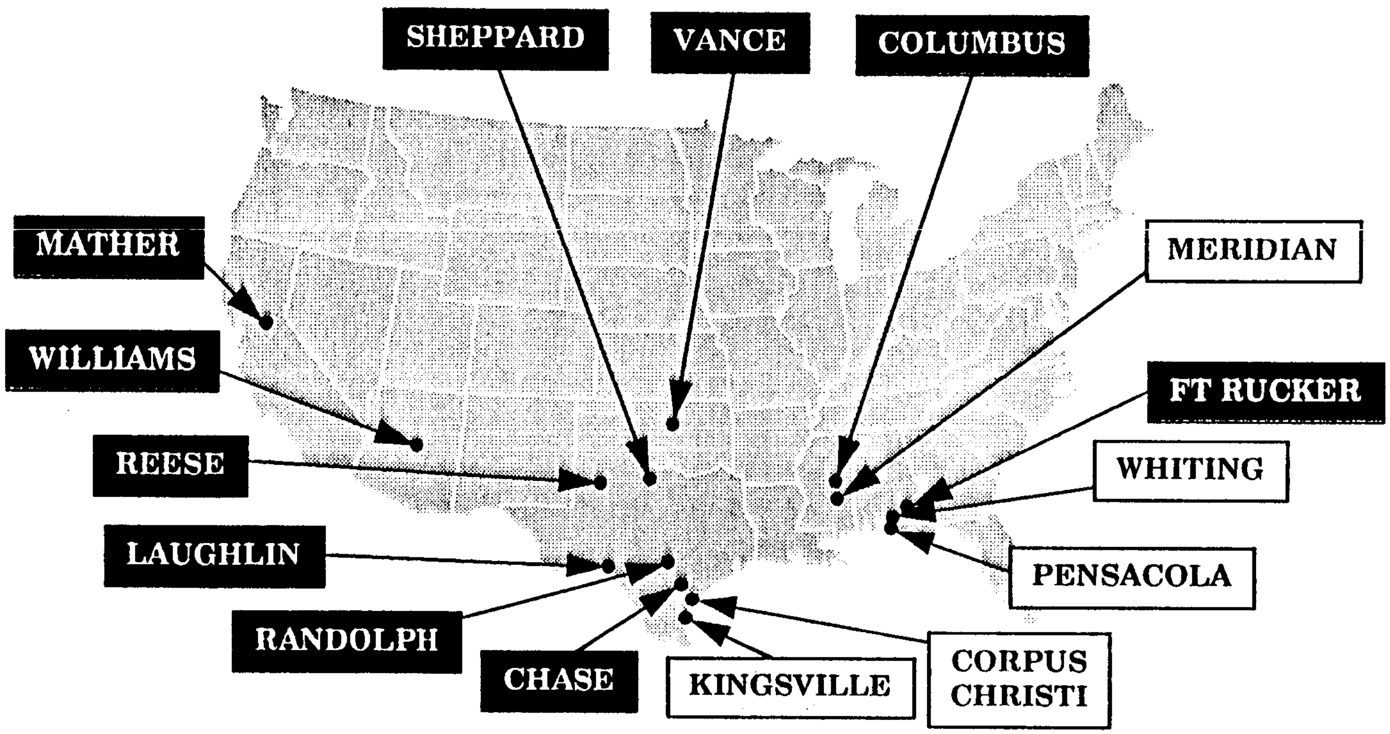
JOINT FLIGHT TRAINING

TWO STEPS TO CONSOLIDATE JOINT FIXED-WING FLIGHT TRAINING:

STEP 1: • ESTABLISH JOINT TRAINING
- IMPROVED QUALITY TRAINING
- BIG DIVIDENDS IN JOINTNESS
- LIMITED SAVINGS

STEP 2: • CONSOLIDATE INFRASTRUCTURE IN SUPPORT OF BRAC
- MAJOR SAVINGS
- OPERATOR'S PERSPECTIVE IMPORTANT

CURRENT TRAINING STRUCTURE



CLOSURE BASES — COST TO CLOSE $299M — ANNUAL SAVINGS $157M

AIR FORCE — NAVY — ARMY

TRAINING CONSOLIDATION

GREATER TRAINING EFFICIENCIES POSSIBLE THROUGH CHANGING PHILOSOPHY

CURRENT USAF BASING PHILOSOPHY	CURRENT USN BASING PHILOSOPHIES		
STUDENT	TRACK		AIRCRAFT
T-37 / T-1 / (A)T-38 (PRIMARY / ADVANCED)	T-34 / T-44 PRIMARY / MARITIME	OR	T-2 / TA-4 STRIKE
T-37 / T-1 / (A)T-38 (PRIMARY / ADVANCED)	T-34 / TH-57 PRIMARY / HELO		T-45 STRIKE

TRAINING CONSOLIDATION

TRAINING PHILOSOPHIES ANALYZED

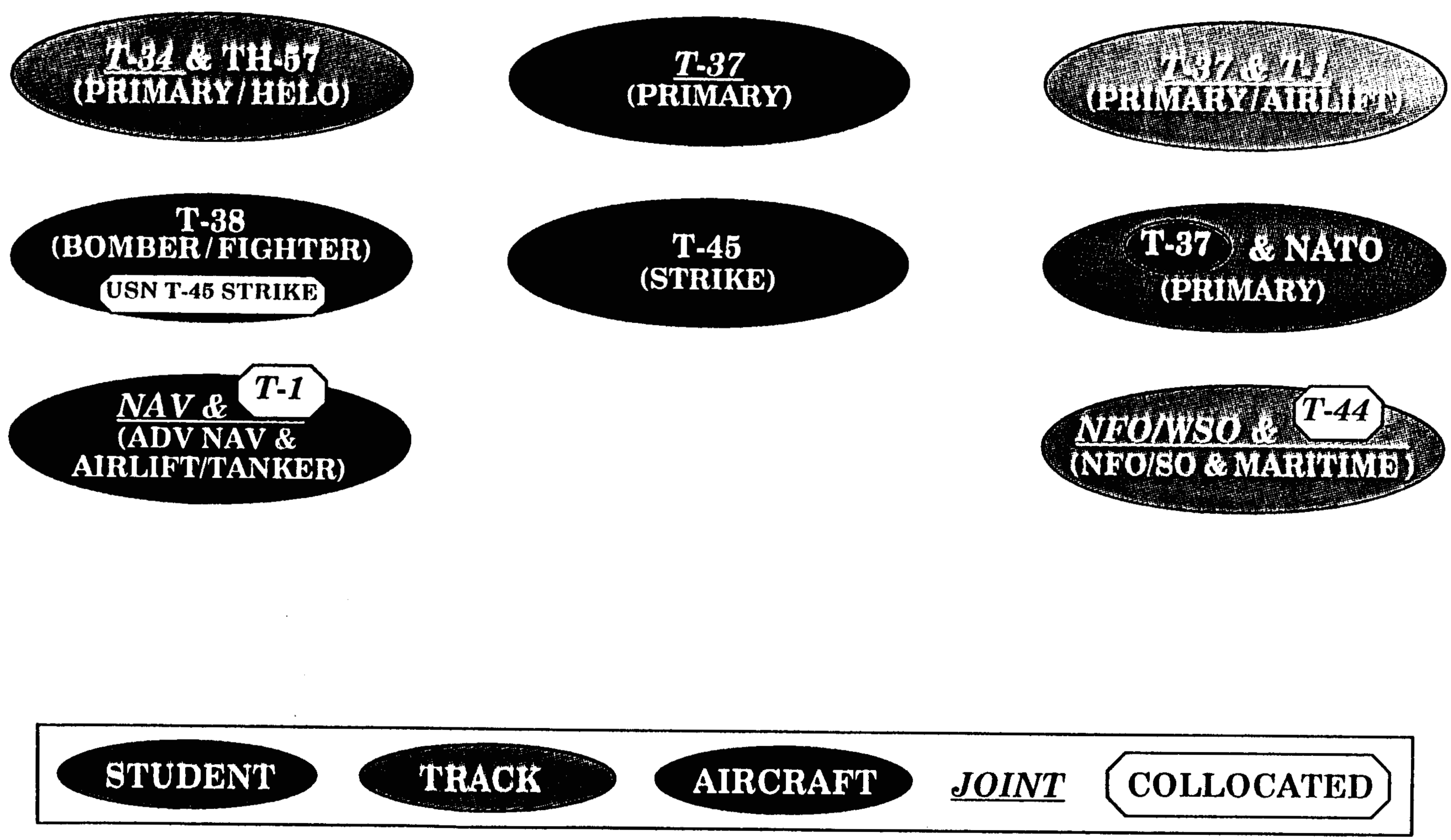
STUDENT | TRACK | AIRCRAFT | *JOINT* | COLLOCATION

BEST OPTION

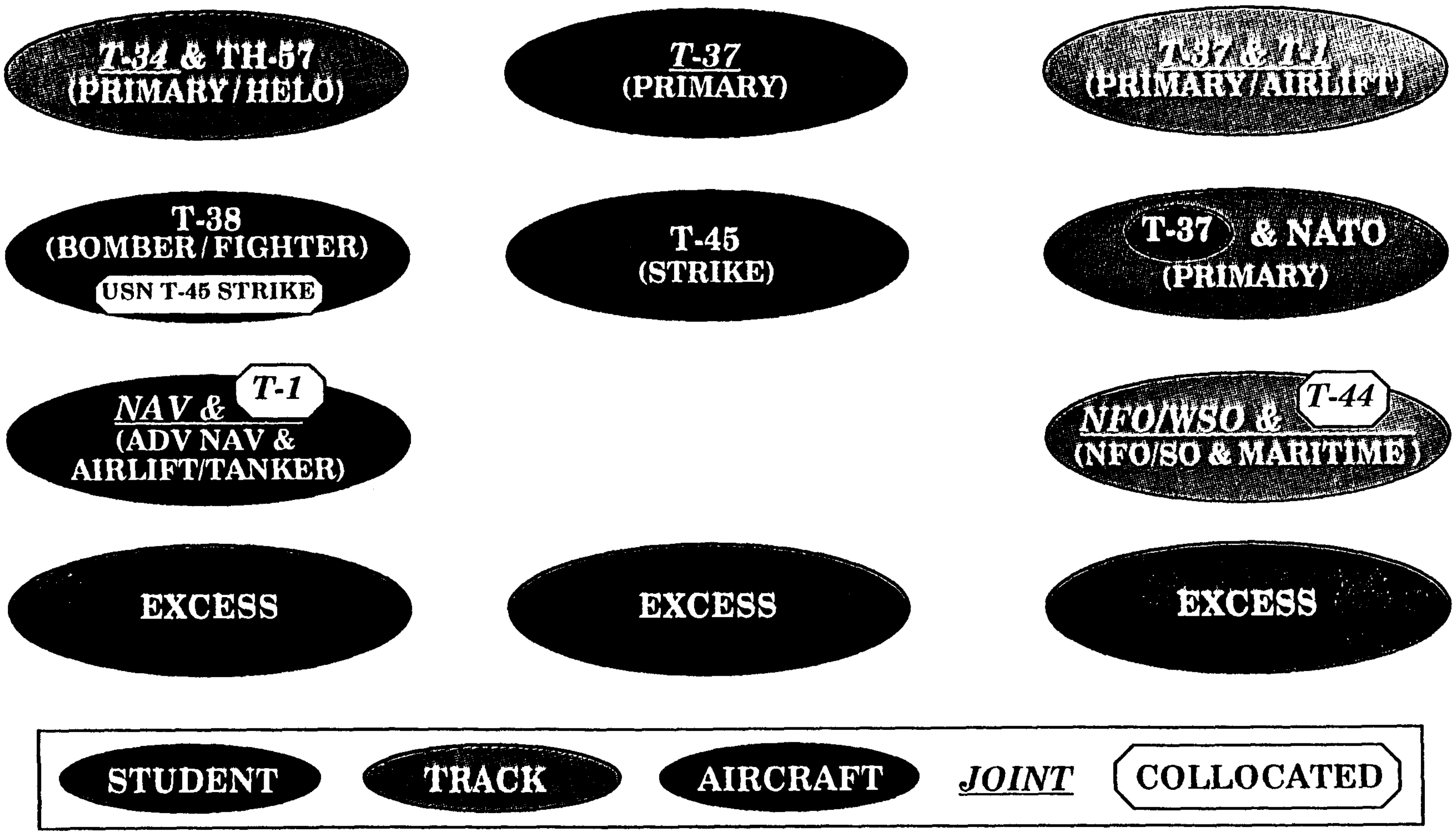
USE A COMBINATION OF ALL PHILOSOPHIES

- JOINT WHERE POSSIBLE
- SIMPLIFY LOGISTICS TAIL
- EXPLOIT PAST INVESTMENTS

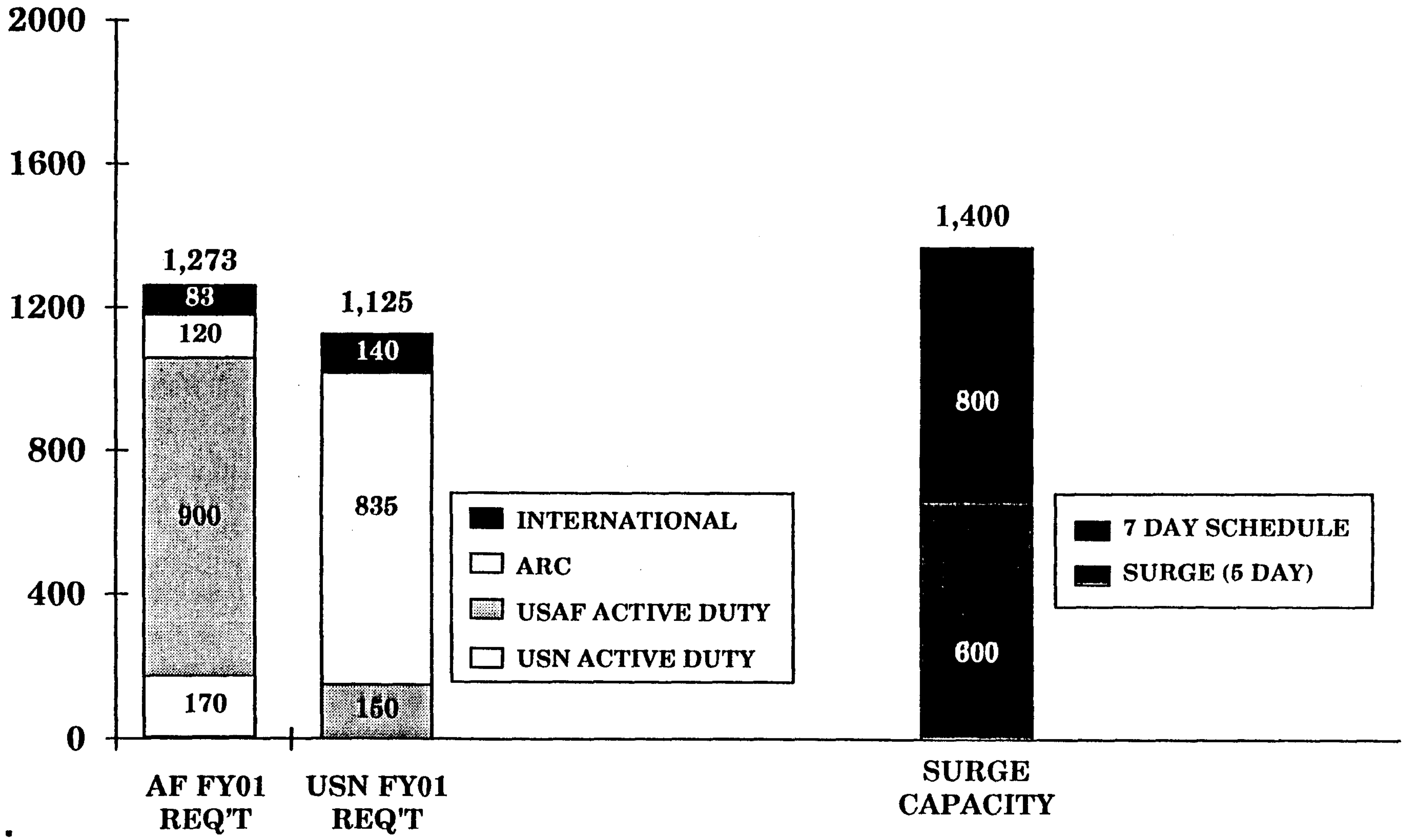
NOTIONAL BASING STRUCTURE



NOTIONAL BASING STRUCTURE



PERSPECTIVES ON CAPACITY



REQUIREMENTS / CAPACITY

- TWO MRC
- NEW PARADIGM
- COME AS WE ARE WAR
- SURGE
  - NO COCKPITS FOR INCREASED PRODUCTION
  - CCT PILOTS AND AIRCRAFT MAY BE NEEDED

ADVANTAGES

- QUALITY TRAINING
- MORE JOINTNESS
- EFFICIENT / REDUCED COST
  - REDUCED INFRASTRUCTURE (CLOSE INSTALLATIONS)
  - REDUCED NUMBER OF AIRCRAFT (UTE)
- EXPLOITS PAST INVESTMENTS

PRIMARY

RANK	SCORE	ALTERNATIVE
1	7.3	KING
2	6.9	CORPUS
2	6.9	MERIDIAN
4	6.8	COL
5	6.7	WHITING
6	6.5	VANCE
7	6.3	P-COLA
8	6.1	LAU
9	6.0	SHEPPARD
10	5.8	RANDOLPH
11	5.5	REESE

BOMBFITE

RANK	SCORE	ALTERNATIVE
1	7.2	KING
2	7.1	P-COLA
3	6.6	MERIDIAN
4	6.2	COL
5	5.9	SHEPPARD
6	5.8	RANDOLPH
7	5.5	VANCE
8	5.3	REESE
9	5.2	LAU

LFTTNKER

RANK	SCORE	ALTERNATIVE
1	7.7	KING
2	7.1	P-COLA
3	6.5	MERIDIAN
4	6.4	VANCE
5	6.3	CORPUS
6	6.0	SHEPPARD
6	6.0	COL
8	5.7	RANDOLPH
9	5.3	REESE
10	4.8	LAU

MARIE2C2

RANK	SCORE	ALTERNATIVE
1	7.5	KING
2	7.4	CORPUS
3	7.0	WHITING
4	6.8	P-COLA
5	6.5	MERIDIAN
5	6.5	COL
7	6.4	VANCE
8	6.1	SHEPPARD
9	5.5	RANDOLPH
9	5.5	LAU
11	5.2	REESE

PANELNAV

RANK	SCORE	ALTERNATIVE
1	7.5	COL
1	7.5	P-COLA
1	7.5	VANCE
4	7.2	SHEPPARD
5	7.1	KING
6	7.0	MERIDIAN
7	6.5	RANDOLPH
8	6.1	REESE
9	5.8	CORPUS
10	5.6	LAU

PRINFO

RANK	SCORE	ALTERNATIVE
1	7.2	KING
2	7.0	COL
3	6.8	CORPUS
3	6.8	MERIDIAN
5	6.6	P-COLA
5	6.6	VANCE
7	6.5	WHITING
8	6.4	LAU
9	6.1	RANDOLPH
10	5.9	SHEPPARD
11	5.7	REESE

STRKADV

RANK	SCORE	ALTERNATIVE
1	7.2	KINGSVILLE
2	7.0	P-COLA
3	6.3	MERIDIAN
4	6.1	CORPUS
5	5.9	SHEPPARD
6	5.8	COLUMBUS
7	5.2	RANDOLPH
8	5.1	VANCE
9	5.0	REESE
10	4.5	LAUGHLIN

UPTHELO

RANK	SCORE	ALTERNATIVE
1	8.7	RUCKER
2	7.3	WHITING
3	6.6	P-COLA

WSOSTRK

RANK	SCORE	ALTERNATIVE
1	7.4	KING
1	7.4	P-COLA
3	6.8	CORPUS
3	6.8	WHITING
5	6.5	MERIDIAN
5	6.5	RUCKER
7	6.4	COL
8	5.5	RANDOLPH

OUTLYING LANDING FIELD (CHOCTAW) RESOLUTION

Choctaw is a jet capable outlying landing field (OLF) situated between Pensacola NAS and Whiting Field. Owned and operated by Pensacola it is utilized by both training activities. The "study team" believed it inappropriate to give Pensacola full credit for the OLF and Whiting zero credit as both activities have ready access to the OLF. It was decided to split the functional value credit for Choctaw OLF evenly between Pensacola and Whiting. The following adjustments to the Measures of Merit were developed to address this unique case:

1. Managed Training Areas Question 1 - Deduct 0.5 fields from Pensacola/Add 0.5 field to Whiting.

2. Airfields Question 1 - Deduct 0.5 fields from Pensacola/Add 0.5 fields to Whiting. Question 2 - deduct 0.5 fields from Pensacola/Add 0.5 fields to Whiting.

3. Proximity to Other Support Facilities Question 1 - deduct half credit for Choctaw OLF (0.5 field) from Whiting.

Theses adjustments were applied as follows to the following functional areas:

Primary - 1, 2 and 3 applied.

WSO/Strike - 3 applied.

Primary NFO/NAV - 1, 2 (Q#1 only), and 3 applied.

Maritime E2/C2 - 1, 2 and 3 applied.

TAB 14

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

October 6, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1300 hours on October 6, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch began with introductory remarks and administrative comments.

The Group then began review of baseline functional value output (attached) from the D-PADS model. Discussion indicated that although some certified data changes had been incorporated in the baseline, the incorporation was not complete. Mr. Finch noted that each Military Department had updated and certified data which had been incorporated and stated that the DoDIG, together with the Military Departments' audit agencies, should audit the updated data points. The Group's DoDIG advisor agreed. The Air Force argued that they believed an anomaly existed on adequate training facilities at Reese AFB and Laughlin AFB. The Air Force stated that they were still reviewing accuracy of data as tasked at the last meeting and had not yet completed the job. Mr. Finch emphasized that time was short and that he expected the Military Departments to focus on tasks such as this. The Air Force estimated at least two more work days would be needed to complete the review. Group consensus was that progress on functional value development should continue when the Air Force provided certified information. Since he would be travelling next week, Mr. Finch authorized Mr. Gardner to transmit functional value information to the Military Departments.

Mr. Gardner then presented the joint study team's (JST) recommendation that the capacity matrix be modified. Following Group discussion of the rationale (attached), the consensus was to eliminate hangars, maintenance and supply storage facilities, and housing from the capacity matrix. The JST also recommended that sorties be dropped from the capacity matrix since airfield operations also encompasses the take-offs and landings associated with sorties. The Group talked about ensuring a common standard was used for determination of airfield operations, since traffic pattern spacing would affect the calculation for capacity. The Group challenged whether the standards to be used to derive capacity were the best ones. The JST recommended the Group use the Federal Aviation Administration (FAA) standards for airfield operations under Visual Flight Rules (VFR). Some members believed the VFR standard would overstate capacity and not consider real world limits such as periods of poor weather, safety procedures, runway downtime, operational delays, aircraft turn times, and so forth. Others pointed out that the result would be a theoretical capacity for airfield operations and only one of multiple measures and considerations. Still others opined that the VFR standard might be only one bound applied to airfield operations. The Group consensus was to eliminate sorties and use airfield operations for capacity. The group also agreed to use the FAA standard for airfield operations since it made sense as a common baseline standard and the certified data call responses from the Military Departments were

[redacted]

based on the FAA model. The FAA standards are published in FAA Advisory Circular, AC No: 150/5060.5, 23 September 1993.

Mr. Finch opined that the alternatives developed by the Group need to ensure production of quality aircrews and save money for the Department. He continued that the linear programming model in its current construct does not consider some factors believed to be important, and he offered potential model constraints for Group consideration. One might be to maximize savings by reducing bases consistent with sufficient capacity to train quality aircrews. Excursions to maximize functional value, to maximize military value, and to minimize bases could be useful. Another might be to minimize short-term costs by minimizing functional moves. Yet another might be the possibility of introducing a constraint to consider compatible functions. The Chair asked the JST to come back with options and suggestions.

Next, the Group reviewed the proposed schedule and noted that functional values would not be delivered to the Military Departments by the planned date due to the on-going data review.

There being no further matters to discuss, the meeting was adjourned at 1520 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

October 6, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
Col Mike Jones, Army
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
LCDR Steve Bertolaccini, Navy
Maj Gen Glenn Profitt, Air Force
Brig Gen Mike McCarthy, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Lt Col Howard Hachida, Air Force
Lt Col Mark Bruggemeyer, Air Force
CAPT J. B. Renninger, Joint Staff(J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. David Wyte, DoDIG

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UPT JOINT / CROSS-SERVICE GROUP AGENDA

(6 October 1994 Meeting -Rm 3E752)

1. **Functional Value Review - "Wrap-up"**

2. **Capacity Matrix Modifications**

   A. Eliminate Hangars, Maintenance and Supply Storage Facilities, and Housing: Not Appropriate Limitors. (e.g. - Housing at 200 rooms would limit assignment of student pilots to 200).

   B. Sorties Dropped - Encompassed by Airfield Ops

3. **Discussion of Potential Model Constraints**

4. **Future Schedule Discussion**

- Functional Values delivered to Services	October 7
- Capacity Analysis Completed/ Discuss Optimization Model Runs at UPT JCSG Mtg	October 13
-Military Values due from Services	October 14
- Optimization Model Runs, Analysis, & Review	October 17 - 26
- Present Alternatives to Steering/Review Groups	October 27/28

UPT BOMBFITE

RANK	SCORE	ALTERNATIVE
1	7.3	KING
2	7.2	P-COLA
3	6.7	MERIDIAN
4	6.5	COL
5	6.3	RANDOLPH
6	6.2	SHEPPARD
7	5.5	VANCE
8	5.4	REESE
9	5.2	LAU

UPT FLTSCRN

RANK	SCORE	ALTERNATIVE
1	6.8-6.9	RUCKER
2	6.4-6.5	WHITING
3	6.3-6.4	KING
4	6.0-6.1	VANCE
4	6.1-6.2	MERIDIAN
6	5.9-6.0	COL
6	5.9-6.0	SHEPPARD
8	5.9-6.0	CORPUS
9	5.6-5.7	LAU
10	5.5-5.6	REESE
11	5.4-5.6	HONDO
12	5.2-5.3	P-COLA
13	4.9-5.0	RANDOLPH
14	3.7-3.9	USAFA

UPT LFTTNKER

RANK	SCORE	ALTERNATIVE
1	7.7	KING
2	7.2	P-COLA
3	6.6	CORPUS
4	6.5	MERIDIAN
4	6.5	VANCE
6	6.4	SHEPPARD
7	6.2	COL
8	6.0	RANDOLPH
9	5.6	REESE
10	5.2	LAU

UPT MARIE2C2

RANK	SCORE	ALTERNATIVE
1	7.6	KING
2	7.5	CORPUS
3	7.2	WHITING
4	6.9	P-COLA
5	6.6	MERIDIAN
5	6.6	COL
7	6.5	SHEPPARD
7	6.5	VANCE
9	5.9	LAU
10	5.8	RANDOLPH
11	5.6	REESE

UPT PANELNAV

RANK	SCORE	ALTERNATIVE
1	7.7	SHEPPARD
2	7.6	P-COLA
2	7.6	COL
4	7.5	VANCE
5	7.2	KING
6	7.0	MERIDIAN
7	6.9	RANDOLPH
8	6.8	REESE
9	6.0	LAU
10	5.9	CORPUS

UPT PRIMARY

RANK	SCORE	ALTERNATIVE
1	7.3	KING
2	7.1	CORPUS
2	7.1	COL
4	7.0	MERIDIAN
4	7.0	WHITING
6	6.7	VANCE
7	6.5	LAU
7	6.5	P-COLA
9	6.4	SHEPPARD
10	6.2	RANDOLPH
11	5.9	REESE

UPT PRINFO

RANK	SCORE	ALTERNATIVE
1	7.3	COL
2	7.1	CORPUS
2	7.1	KING
4	7.0	MERIDIAN
5	6.9	P-COLA
6	6.8	WHITING
6	6.8	LAU
6	6.8	VANCE
9	6.5	RANDOLPH
10	6.3	SHEPPARD
11	6.2	REESE

UPT STRKADV

RANK	SCORE	ALTERNATIVE
1	7.3	KINGSVILLE
2	7.1	P-COLA
3	6.3	MERIDIAN
4	6.2	CORPUS
5	6.1	SHEPPARD
6	5.9	COLUMBUS
7	5.5	RANDOLPH
8	5.3	REESE
9	5.1	VANCE
10	4.7	LAUGHLIN

UPT UPTHELO

RANK	SCORE	ALTERNATIVE
1	8.9	RUCKER
2	7.2	WHITING
3	6.5	P-COLA

UPT WSOSTRK

RANK	SCORE	ALTERNATIVE
1	7.4	KING
2	7.2	P-COLA
3	6.9	CORPUS
3	6.9	WHITING
5	6.7	RUCKER
6	6.5	MERIDIAN
6	6.5	COL
8	5.7	RANDOLPH

TAB 15

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

October 13, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Dan Gardner, ODUSD(R), at 1305 hours on October 13, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

After Mr. Gardner's opening remarks, the Group moved to review of the functional value output (attached). Mr. Gardner pointed out that the Air Force had provided updated and certified data on Reese AFB and Laughlin AFB facilities as promised at the last meeting and that preliminary functional value had been forwarded to the Military Departments. Subsequently, the Air Force's data review indicated possible inconsistencies in responses to questions in the certified data call about available airspace within 100 nautical miles. Further investigation by the joint study team (JST) revealed that not all installations in the category had responded in the same manner, thus indicating differences in interpretation of the data call and resulting in responses that were not complete. The Group discussed the direction to be taken and whether the data should be updated and another functional value run produced. The Navy representative argued that the existing output should be used, functional value output should not be rerun, and the process should proceed in order to avoid the perception of changing data after the baseline functional value run in order to alter the outcome. The Air Force offered its concern about the reality of proceeding with known incorrect data. Mr. Gardner noted that he had been in contact with Mr. Finch, who is on travel, about this issue. Mr. Gardner then articulated the sense that since the data was not complete and that corrections would exceed sensitivity thresholds, the data about available airspace for each installation needed to be scrutinized, corrected and documented per internal controls. Group discussion continued with consensus to allow addition of the new data and to rerun the functional value output. The Acting Chair directed the Principals, with the support of their JST representatives, to initiate a thorough scrub of this data. The JST then recommended, and the Group agreed, to use *DoD Flight Information Publication (FLIP)* documents as the standard source to ensure consistency of the data for each installation in the category. The DoDIG advisor was asked to provide audit oversight of this issue, and he concurred. Mr. Gardner stated that upon completion of the scrub and rerun of functional value output, the Military Departments would be notified of any resultant corrections to functional value.

Next, the Group discussed progress on capacity analysis including capacity matrix modifications with rationale (attached) for elimination of training sorties as a measure of capacity as discussed at the previous meeting. The Group approved the rationale as presented. The JST also reported that although progress was being made toward a preliminary draft on capacity analysis, more work was needed before it could be presented to the Group for consideration.

[redacted]

[redacted]

Mr. Gardner reminded the Group of the Chair's request at the previous meeting for inputs and suggestions on potential model constraints which might improve the richness of the Group's development of alternatives.

The Group then reviewed the evolving schedule, and noted that receipt of installation values from the Military Departments, as anticipated, was important to future Group progress.

There being no further matters to discuss, the meeting was adjourned at 1425 hours.

Approved: Dan Gardner
Acting Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

October 13, 1994

Key Attendees

Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
Col Mike Jones, Army
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
LCDR Steve Bertolaccini, Navy
Mr. Steve Belcher, Navy
Maj Gen Glenn Profitt, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Lt Col Howard Hachida, Air Force
Lt Col Mark Bruggemeyer, Air Force
CAPT J. B. Renninger, Joint Staff(J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. Robert Johnson, DoDIG

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(13 October 1994 Meeting -Rm 3E752)

1. Functional Value Review - "Wrap-up"

2. Capacity Issues

A. Matrix Modifications Rationale

B. Preliminary Capacity Draft

3. Discussion of Potential Model Constraints

4. Future Schedule Discussion

-Military Values expected (NLT) from Services	**October 19**
- Capacity Analysis Completed/Discuss Optimization Model Runs at UPT JCSG Mtg	**October 19**
- Optimization Model Runs, Analysis, & Review JCSG Mtgs on 19, 20, & 21 October with mtgs the following week to be determined.	**October 19 - 26**
- Present Alternatives to Steering/Review Groups	**October 27/28**

[redacted]

DUPT FLTSCRN

RANK	SCORE	ALTERNATIVE
1	6.8-6.9	RUCKER
2	6.4-6.5	WHITING
3	6.3-6.4	KING
4	6.0-6.1	VANCE
4	6.1-6.2	MERIDIAN
6	5.9-6.0	COL
6	5.9-6.0	LAU
6	5.9-6.0	SHEPPARD
9	5.9-6.0	CORPUS
10	5.7-5.8	REESE
11	5.4-5.6	HONDO
12	5.2-5.3	P-COLA
13	4.9-5.0	RANDOLPH
14	3.7-3.9	USAFA

UPT PRIMARY

RANK	SCORE	ALTERNATIVE
1	7.3	KING
2	7.1	CORPUS
2	7.1	COL
4	7.0	MERIDIAN
4	7.0	WHITING
6	6.9	LAU
7	6.7	VANCE
8	6.5	P-COLA
9	6.4	SHEPPARD
10	6.2	RANDOLPH
11	6.1	REESE

UPT LFTTNKER

RANK	SCORE	ALTERNATIVE
1	7.7	KING
2	7.2	P-COLA
3	6.6	CORPUS
4	6.5	MERIDIAN
4	6.5	VANCE
6	6.4	SHEPPARD
7	6.2	COL
8	6.0	RANDOLPH
9	5.8	REESE
10	5.5	LAU

UPT MARIE2C2

RANK	SCORE	ALTERNATIVE
1	7.6	KING
2	7.5	CORPUS
3	7.2	WHITING
4	6.9	P-COLA
5	6.6	MERIDIAN
5	6.6	COL
7	6.5	SHEPPARD
7	6.5	VANCE
9	6.2	LAU
10	5.8	REESE
10	5.8	RANDOLPH

UPT BOMBFITE

RANK	SCORE	ALTERNATIVE
1	7.3	KING
2	7.2	P-COLA
3	6.7	MERIDIAN
4	6.5	COL
5	6.3	RANDOLPH
6	6.2	SHEPPARD
7	5.6	REESE
8	5.5	VANCE
9	5.4	LAU

UPT STRKADV

RANK	SCORE	ALTERNATIVE
1	7.3	KINGSVILLE
2	7.1	P-COLA
3	6.3	MERIDIAN
4	6.2	CORPUS
5	6.1	SHEPPARD
6	5.9	COLUMBUS
7	5.5	RANDOLPH
7	5.5	REESE
9	5.1	LAUGHLIN
9	5.1	VANCE

UPT PANELNAV

RANK	SCORE	ALTERNATIVE
1	7.7	SHEPPARD
2	7.6	P-COLA
2	7.6	COL
4	7.5	VANCE
5	7.2	KING
5	7.2	REESE
7	7.0	MERIDIAN
8	6.9	RANDOLPH
9	6.8	LAU
10	5.9	CORPUS

UPT PRINFO

RANK	SCORE	ALTERNATIVE
1	7.3	COL
2	7.2	LAU
3	7.1	CORPUS
3	7.1	KING
5	7.0	MERIDIAN
6	6.9	P-COLA
7	6.8	WHITING
7	6.8	VANCE
9	6.5	RANDOLPH
10	6.4	REESE
11	6.3	SHEPPARD

UPT WSOSTRK

RANK	SCORE	ALTERNATIVE
1	7.4	KING
2	7.2	P-COLA
3	6.9	CORPUS
3	6.9	WHITING
5	6.7	RUCKER
6	6.5	MERIDIAN
6	6.5	COL
8	5.7	RANDOLPH

UPT UPTHELO

RANK	SCORE	ALTERNATIVE
1	8.9	RUCKER
2	7.2	WHITING
3	6.5	P-COLA

[redacted]

Rationale for Elimination of Capacity Measures

Training Sorties

Training sorties do not capture maximum airfield capacity. A sortie is a training event which contains as a subset additional manuevers which include touch and go's, full stop and missed approach landings. Maximum airfield operations require a full accounting of the total number of operations. Sorties do not capture that. A better measure of an airfields' maximum generated capacity is the total number of operations (take-offs, landings, touch and go's, etc.) that can be accomplished over a set period of time.

Hangars

Hangars are not required for the parking of aircraft or for most of the required maintenance in UPT. Accordingly, hangars are not a meaningful capacity constraint.

Maintenance/Supply/Storage

All maintenance on training aircraft is accomplished by contractors. Therefore, the capacity is more a function of the contract and the contractors capabilities than the base maintenance/supply/storage facilities.

Housing and Messing

Base housing is not a capacity constraint because it ignores the availability of off-base housing and current demographics for aviators under training. Messing facilities for military officers no longer exist.

TAB 16

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

October 20, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1305 hours on October 20, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch began with administrative remarks and noted the objective of providing alternatives to the Military Departments by the end of the month would need the focus and interest of the Group and the joint study team (JST).

Mr. Gardner opened discussion on capacity analysis, and Lt Col Free presented the principles (attached) used to develop the capacity analysis. Lt Col Free pointed out that the site function exclusion table was incorporated into the capacity data formulation. The approach also deferred to the higher order of magnitude relative to function and aircraft requirement. The approach is conservative on capacity, while being liberal on development of training requirements. The Group concluded the approach was sound.

Discussion moved to the capacity summary matrix (attached). Lt Col Free pointed out that Fort Rucker numbers represented helicopter training only, and that Whiting Field figures included only fixed-wing training. The helicopter to fixed-wing relationship was normalized using a factor of 5.4 helicopter operations to one(1) fixed-wing operation. This normalized operations for comparative purposes. The Group also reviewed capacity analysis formulations (handout attached). With regard to formulation of sorties and airfield operations for primary pilot, the approved JPATS syllabus was used for the calculation since it is a common baseline of 65 syllabus sorties. Overhead sorties were added to the syllabus figure to arrive at total sorties. Overhead sorties were based on historical overhead sortie data (T-34 for Navy and T-37 for Air Force). Historical overhead sortie rates differ between the Navy and Air Force, since methods of accounting and way of doing business differ. The Group discussed ways to normalize the sortie calculation, agreed to use a rate between that of the Navy and Air Force, and adopted the following:

<u>Training Sorties</u> - The JPATS syllabus requirement of 65 sorties was accepted as the standard number of syllabus sorties. USAF overhead on primary training is 60 percent, while USN overhead is 30 percent. The Group agreed to use an average overhead value of 45 percent which leads to a total sortie requirement of 94 (65 sorties + .45 x 65).

<u>Airfield Ops</u> - Taken from the Whiting Field Capacity Analysis, Mission Requirements, paragraph B.2 and Facilities paragraphs A.2 and A.10 using the T-34 data. Operations were calculated as follows:

[redacted]

$$\text{Operations/Student} = \frac{\text{Historic Traffic Count(Fac A.10) X Sorties/Student(M.R. B.2)}}{\text{Total Sorties(Fac A.2)}} = 12.3 \text{ Ops/Sortie}$$

Total Ops = 94 Sorties X 12.3 Ops/Sortie = 1,156 operations

Next, the Group talked about capacity requirements developed from the interim Future Year Defense Program (FYDP).

The Group then reviewed the functional analysis process with respect to policy imperatives and the forthcoming optimization model output unconstrained by military value. The discussion resulted in Group agreement to use the previously agreed upon policy imperative constraints without modification.

The Group next discussed the status of previously identified external, non-BRAC policy issues. Mr. Finch stated there had been significant progress in the joint fixed-wing training policy arena, including an approved common JPATS syllabus. With regard to the other external policy issues, the Department's existing policies on flight screening, fixed-wing training for helicopter pilots, and undergraduate helicopter pilot training consolidation remain in effect until changed. Existing policies, as well as joint fixed-wing training policy initiatives which are expected to be approved by the Deputy Secretary of Defense, will be considered by the Group during development of alternatives for analyses by the Military Departments.

A general discussion ensued on plans and methodology for follow-on optimization model runs using installation military values from the Military Departments to help the Group develop reasonable alternatives. The group noted that it had not yet received the inputs.

Discussion of the future schedule noted slippage in planned events.

There being no further matters to discuss, the meeting was adjourned at 1445 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

October 20, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
Col Mike Jones, Army
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
LCDR Steve Bertolaccini, Navy
Mr. Steve Belcher, Navy
Maj Gen Glenn Profitt, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Lt Col Howard Hachida, Air Force
Lt Col Mark Bruggemeyer, Air Force
CAPT J. B. Renninger, Joint Staff (J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. Will Jarvis, OSD (Program Analysis and Evaluation)
Mr. Dave Wyte, DoDIG
Mr. Donald Stockton, DoDIG

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(20 October 1994 Meeting -Rm 3E752)

1. Capacity Analysis - Computation & Results

2. Requirements

3. BRAC 95 JCSG Functional Analysis Process

    - "Policy Imperatives"

4. External Policy Issues

5. Model "Run" Plans

    - Absent Military Values ? ? ?

6. Future Schedule Discussion

- Optimization Model Runs, Analysis, & Review JCSG Mtgs as Required	October 20 - 26
- Present Alternatives to Steering/Review Groups (?)	October 27/28
- Alternatives Presented to Services	November 1

Guiding Principles

- Site Function exclusion table
- Higher order of magnitude
- Conservative on capacity
- Liberal on training requirements

JCSG - DT COPY

20/94

	Columbus	Corpus Christi	Ft Rucker	Kingsville	Laughlin	Meridian	Pensacola	Randolph	Reese	Sheppard	Vance	Whiting Field	Hondo	USAFA	
Site Military Value															
Functions for UPT	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	DoD Requireme
Flight Screening	6.6	6.4	6.9	6.7	6.8	6.5	6.1	5.7	6.2	6.2	6.6	6.6	5.4	3.9	2,073
Primary Pilot	6.8	6.7	X2	7.0	7.0	6.8	6.4	6.7	6.0	6.3	6.8	6.6	0.0	0.0	2,493
Airlift/Tanker	6.3	6.5	X1	7.7	5.8	6.6	7.8	6.5	5.9	6.5	6.7	X1	0.0	0.0	752
Inter E2/C2, Adv Maritime	6.7	7.5	X2	7.6	6.5	6.6	7.5	6.4	5.9	6.5	6.8	7.4	0.0	0.0	309
Adv E2/C2, Strike	6.0	6.2	X1	7.3	5.4	6.3	7.6	6.0	5.7	6.2	5.3	X1	0.0	0.0	372
Adv Bomber/Fighter	6.4	X1	X1	7.3	5.5	6.8	7.8	6.8	5.6	6.3	5.5	X1	0.0	0.0	619
Helicopter	X2	X2	8.9	X2	X2	X2	6.5	X2	X2	X2	X2	7.2	0.0	0.0	1,481
Primary NFO, Inter NFO	6.9	6.7	X2	7.0	7.1	6.8	6.4	7.1	6.2	6.2	6.8	6.4	0.0	0.0	718
Adv NFO Strike	6.6	6.9	6.7	7.4	X3	6.5	7.6	6.1	X3	X3	X3	7.0	0.0	0.0	312
Adv NFO Panel	7.6	5.9	X1	7.2	6.8	7.0	7.6	6.9	7.2	7.7	7.5	X1	0.0	0.0	222

X1 - Runway length constraints | X2 - Lack of outlying fields | X3 - Too far from water

Resources	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap
Airfield Ops	784,371	752,136	7,441,016	389,136	787,572	389,136	270,072	619,768	686,547	646,988	685,390	865,392	554,664	651,630
Airspace	116,973	315,810	0	253,418	218,889	128,879	181,790	49,494	106,925	166,922	114,708	147,888	43,560	49,368
Ground Training Classroom	542,080	464,640	5,523,408	859,584	193,600	406,560	3,915,544	696,960	696,960	348,480	373,648	554,400	116,160	77,440
Ground Training Simulators	77,440	46,464	212,960	61,952	61,952	54,208	135,520	92,928	61,952	92,928	61,952	104,544	0	0
Ramps, Aprons, Taxiways	209,840	540,367	392,726	240,614	217,378	241,166	299,395	501,946	282,496	394,125	223,645	386,667	251,200	46,122

Resources per student	Flight Screening	Primary Pilot	Airlift/Tanker	Inter E2/C2, Adv Maritime	Adv E2/C2, Strike	Adv Bomber/Fighter	Helicopter	Primary NFO, Inter NFO	Adv NFO Strike	Adv NFO Panel	
Training Sorties	24	94 ~~108~~	88	50	178	132	137	33	93	13	Maximum requirements where duplicate training
Airfield Ops	526	1156 ~~1,303~~	405	496	1,393	926	1,288	248	216	39	"
Airspace	6	32	61	41	97	75	N/A	37	92	0	"
Ground Training Classroom	14	213	186	212	196	154	955	569	470	304	"
Ground Training Simulators	0	27	42	40	98	29	32	89	122	80	"
Ramps, Aprons, Taxiways	18.81	181.92	357.60	192.83	303.45	357.35	197.23	60.31	239.59	201.00	"

#Aircraft/student	0.0555	0.2274	0.2384	0.2119	0.3817	0.5105	0.2774	0.1058	0.1346	0.0402
SQ YDS/Aircraft	339	800	1,500	910	795	700	711	570	1,780	5,000
# Aircraft Required based on ramps/student	115	567	179	65	142	316	411	76	42	9

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CAPACITY ANALYSIS FORMULATIONS

PROVIDED BELOW ARE THE FORMULAS USED IN THE COMPUTATION OF CAPACITY ANALYSIS DATA. THESE FORMULAS STANDARDIZE TO THE BEST EXTENT POSSIBLE THE DATA OF ALL SERVICES.

1. TRAINING SORTIES = AIRFIELD OPERATIONS AT THE MAIN BASE DIVIDED BY TWO (TWO IS THE BASE LINE NUMBER DERIVED FROM ONE TAKE-OFF AND ONE LANDING PER SORTIE AT HOME BASE).

2. DAYLIGHT AIRFIELD OPERATIONS = (FAA AIRFIELD OPERATIONS MODEL)(WEATHER FACTOR)(242)(12) FAA MODEL IS BASED ON RUNWAY CONFIGURATION. WEATHER FACTOR IS BASED ON HISTORICAL DATA FROM EACH INSTALLATION. 242 IS THE NUMBER OF TRAINING DAYS. 12 IS THE NUMBER OF TRAINING HOURS IN ONE DAY. AIRFIELD OPERATIONS INCLUDES ALL OUTLYING FIELDS. NAVAL NUMBERS ARE BASED ON A WEATHER FACTOR INCORPORATED IN THE FAA MODEL. FOR WHITING FIELD THE RUNWAY OPERATIONS ARE BASED ON JPATS. THE HEAVIER WEIGHT OF NAVY AIRCRAFT CONSTRAINS OPERATIONS AT NAVAL AIR STATIONS RESULTING IN A LOWER AIRFIELD OPERATIONS CAPACITY.

3. AIRSPACE

FUNCTIONAL VALUE AIRSPACE = (AVAILABLE AIRSPACE WITHIN 100 NAUTICAL MILES OF THE MAIN FIELD TO INCLUDE ATCAA, BUT NOT WARNING AREAS FOR PRIMARY, PRINFO AND FLT SCREENING. ALL OTHER FUNCTIONS INCLUDE WARNING AREAS)(SQUARE NAUTICAL MILES) (ALTITUDE/6080). 6080 IS THE CONVERSION FACTOR OF FEET TO NAUTICAL MILES.

CAPACITY ANALYSIS AIRSPACE

BLOCK HOURS AVAILABLE = (BLOCKS OF CURRENTLY USED AIRSPACE) (12 HOURS PER DAY) (242 DAYS PER YEAR). BLOCKS OF AIRSPACE WERE DETERMINED BY SUMMING THE SQ NM OF CURRENTLY USED AIRSPACE AND DIVIDING IT INTO ADVANCED (200 SQ NM X 12000') AND PRIMARY (100 SQ NM X 5000') BLOCKS. (EXCEPTION: CORPUS CHRISTI WAS GIVEN CREDIT FOR W-228 BECAUSE THEY CONTROL/SCHEDULE THIS AIRSPACE) PRIMARY AND ADVANCED BLOCKS WERE DOUBLE STACKED WHERE POSSIBLE. THE CAPACITY NUMBERS REFLECT THE ADVANCED AIRSPACE BLOCKS CAPACITY. (EXCEPTIONS: NAS WHITING, HONDO, AND USAFA HAVE NO ADVANCED AIRSPACE BLOCKS; THEREFORE, PRIMARY AIRSPACE CAPACITY WAS USED)

4. GROUND TRAINING CLASS ROOM HOURS PER YEAR = DESIGN CAPACITY (IN TERMS OF STUDENTS) (8 HOURS PER DAY)(242 TRAINING DAYS) 8 HOURS IS A STANDARD TRAINING DAY. 242 IS THE STANDARDIZED TRAINING YEAR.

5. GROUND TRAINING SIMULATORS = (DESIGN STUDENT CAPACITY)(16 HRS PER DAY)(242 DAYS PER YEAR) 16 HOURS BASED ON AN AVERAGE AVAILABILITY OF SIMULATORS

6. RAMPS = (TOTAL NUMBER OF USABLE SQUARE YARDS OF PARKING SPACE)(.80) 80% IS BASED ON ACCESS REQUIREMENTS TO GET TO MAIN

TAXIWAY. (REFERENCE PENSACOLA CAPACITY ANALYSIS DATA CALL 19, FACILITIES, PARA D, QUESTION 3)

TAB 17

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

October 21, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1110 hours on October 21, 1994, in Room 3E774, the Pentagon. The list of attendees is attached.

Mr. Finch stated the purpose of the meeting was to review the results of the optimization model output which maximizes functional value unconstrained by installation military value. The joint study team (JST) presented an overview of the results (slide attached), and pointed out that this optimization output (attached) is a marriage of D-PADS functional value and the capacity analysis without regard to factors such as costs, operational considerations, or joint training initiatives. For example, the output shows primary pilot training distributed to six locations. The Tri-Department BRAC Group representative pointed out that, in a relative sense, this output shows the theoretical highest possible functional value for the category's functions based on the inputs to the model. Mr. Finch asked the Group to review the output from a "what makes sense perspective". The Group agreed that the results matched expectations given relative functional values and capacities for the sites (e.g., Flight Screening function migration, training functions relocated from Reese AFB, and all helicopter training relocated to Fort Rucker, etc.).

Next, the Group discussed its future schedule noting that it was still waiting to receive installation military value data from the Military Departments (delivery agreed to occur at same time). However, the Air Force was not yet authorized to deliver the information. The Group views installation military value data as a critical input to its methodology towards developing alternatives.

There being no further matters to discuss, the meeting was adjourned at 1145 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

October 21, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Col Mike Jones, Army
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
LCDR Steve Bertolaccini, Navy
Dr. Ron Nickel (Navy), Tri-Department BRAC Group
Mr. Steve Belcher, Navy
Maj Gen Glenn Profitt, Air Force
Brig Gen Mike McCarthy, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Jerry Free, Air Force
Lt Col Howard Hachida, Air Force
Lt Col Mark Bruggemeyer, Air Force
Lt Col Roy Rice (USAF), Tri-Department BRAC Group
CAPT J. B. Renninger, Joint Staff (J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. Will Jarvis, OSD (Program Analysis and Evaluation)
Mr. Dave Wyte, DoDIG
Mr. Donald Stockton, DoDIG

[redacted]

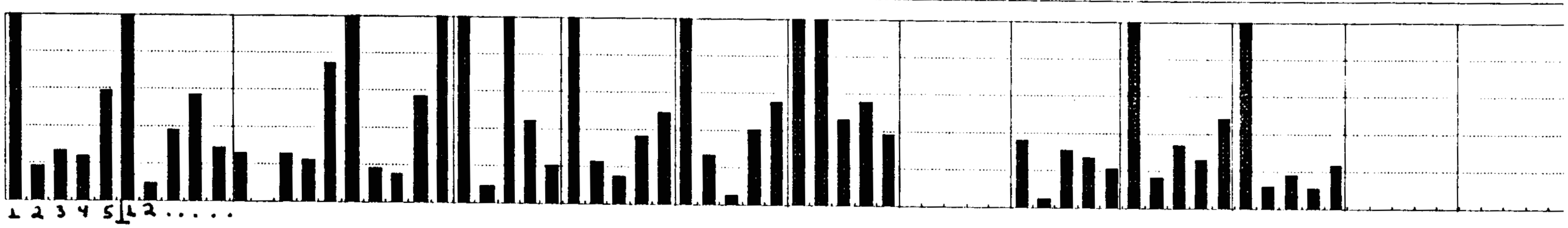
OPTIMIZATION RESULTS

- AIRFIELD OPS IS THE LIMITING FACTOR
- MAXIMIZED FUNCTIONAL VALUE RUN
- FT RUCKER CAN HANDLE ALL HELO TRAINING
- PRIMARY WAS DISTRIBUTED TO SIX BASES

Functional Value : 67946.2 **Maximize Functional Value Results**

	Columbus	Corpus Christi	Ft Rucker	Kingsville	Laughlin	Meridian	Pensacola	Randolph	Reese	Sheppard	Vance	Whiting Field	Hondo	USAFA
Flight Screening	0	0	0	0	1,353	0	0	0	0	0	0	720	0	0
Primary Pilot	679	518	X2	0	0	0	0	124	0	159	593	421	0	0
Airlift/Tanker	0	0	X1	579	0	0	173	0	0	0	0	X1	0	0
Inter E2/C2, Adv Maritime	0	309	X2	0	0	0	0	0	0	0	0	0	0	0
Adv E2/C2, Strike	0	0	X1	111	0	137	95	0	0	29	0	X1	0	0
Adv Bomber/Fighter	0	X1	X1	0	0	215	0	404	0	0	0	X1	0	0
Helicopter	X2	X2	1,481	X2	X2	X2	0	X2	X2	X2	X2	0	0	0
Primary NFO, Inter NFO	0	0	X2	0	307	0	0	411	0	0	0	0	0	0
Adv NFO Strike	0	0	0	0	X3	0	312	0	X3	X3	X3	0	0	0
Adv NFO Panel	0	0	X1	0	0	0	0	0	0	222	0	X1	0	0

X1 - Runway length constraints X2 - Lack of outlying fields X3 - Too far from water



1 Airfield Ops
2 Airspace
3 Classrooms
4 Simulators
5 Aprons

TAB 18

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 10, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1315 hours on November 10, 1994, in Room 3E774, the Pentagon. The list of attendees and agenda are attached.

Mr. Gardner began with administrative remarks and then opened the Group's discussion of the data summary matrix resource table with accompanying formulae for student resource calculation (attached). Mr. Gardner pointed out that the joint study team (JST) had checked the summary against certified data and found some differences which were corrected to reflect certified data. The DoDIG audited as a follow-up. The Group approved the corrected summary.

Next, the Group talked about plans for additional optimization model runs. Mr. Gardner observed that the Deputy Secretary's memorandum on Consolidation of Fixed-Wing Flight Training (attached) established policy and approved consolidation of joint training programs for implementation which have been factored into the Group's analyses.

The Group agreed that a new "Unconstrained" functional value (MAXFV) run be made based on corrections to the capacity matrix/resource table. The JST would then run the optimization model for minimum sites (MINSITE) with three initial rules and a five (5) percent weight on functional value applied. The three rules were: 1) flight screening would would not be performed/collocated with any other function based on the Group's combined military judgement; 2) primary and advanced NAV/NFO, advanced NFO strike, and advanced NFO panel functions would be single-sited based on the Deputy Secretary of Defense memorandum of October 24, 1994; and 3) no function would be spread or fractionalized smaller than the (notional) smallest squadron (approximately 100 students annual production) based on the Group's combined judgement. Based on the results of the MINSITE run, development of additional rules and subsequent runs would be proposed, if appropriate. The MINSITE would run with a penalty for new function moves (defined as moving a function to a site where it currently does not exist--for example, Strike from NAS Kingsville to Randolph AFB). Minimizing sites reduces long-term costs. Minimizing sites while limiting movement of new functions to new sites would reduce the one-time, short-term costs. Finally, the runs applying Military Departments' installation military values would be made with the overarching rule that average military value of the run outcome had to be greater than or equal to the beginning value. The Group directed the JST to begin the optimization runs as agreed.

The Group then discussed the projected schedule noting much work remained in developing alternatives. The format for submission of alternatives (attached) was reviewed.

[redacted]

[redacted]

There being no further matters to discuss, the meeting was adjourned at 1420 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 10, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
Brig Gen Mike McCarthy, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Roy Rice (USAF), Tri-Department BRAC Group
CAPT J. B. Renninger, Joint Staff(J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. Donald Stockton, DoDIG

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(10 November 1994 Meeting -Rm 3E774)

1. Data Summary Matrix Validation

2. Model "Run" Plans

   A. Updated "Unconstrained" Functional Value Run

   B. MINSITE w/3 Rules (5% wt on FV)

   C. MINSITE w/3 Rules "+" Additional Rules if Logical

   D. MINSITE per above w/Penalty for New Function Move

   E. MINNMV w/Rule that Avg Military Value $\geq$ Beginning Avg Mil Val.

      1) "2cd Best"

      2) "3rd Best"

3. Future Schedule Discussion

   - Optimization Model Runs, Analysis, & Review — November 10 - 17
     JCSG Mtgs as Required - Detailed Schedule Attached

   - Present Alternatives to DASD (ER & BRAC) — November 18

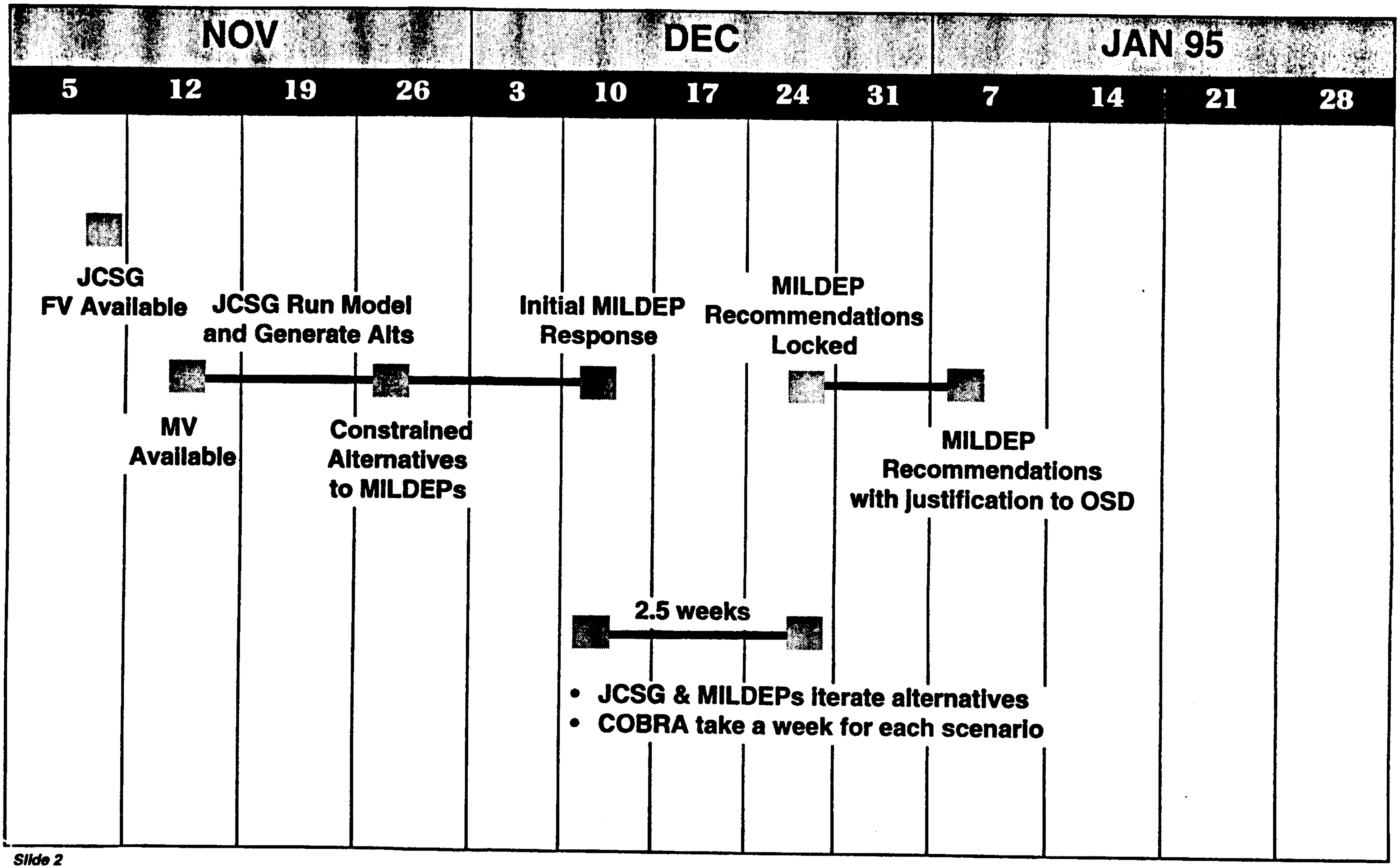
   - Alternatives Presented to Services - Format Attached — November 18

   - "Iterative Process" - Schedule Attached

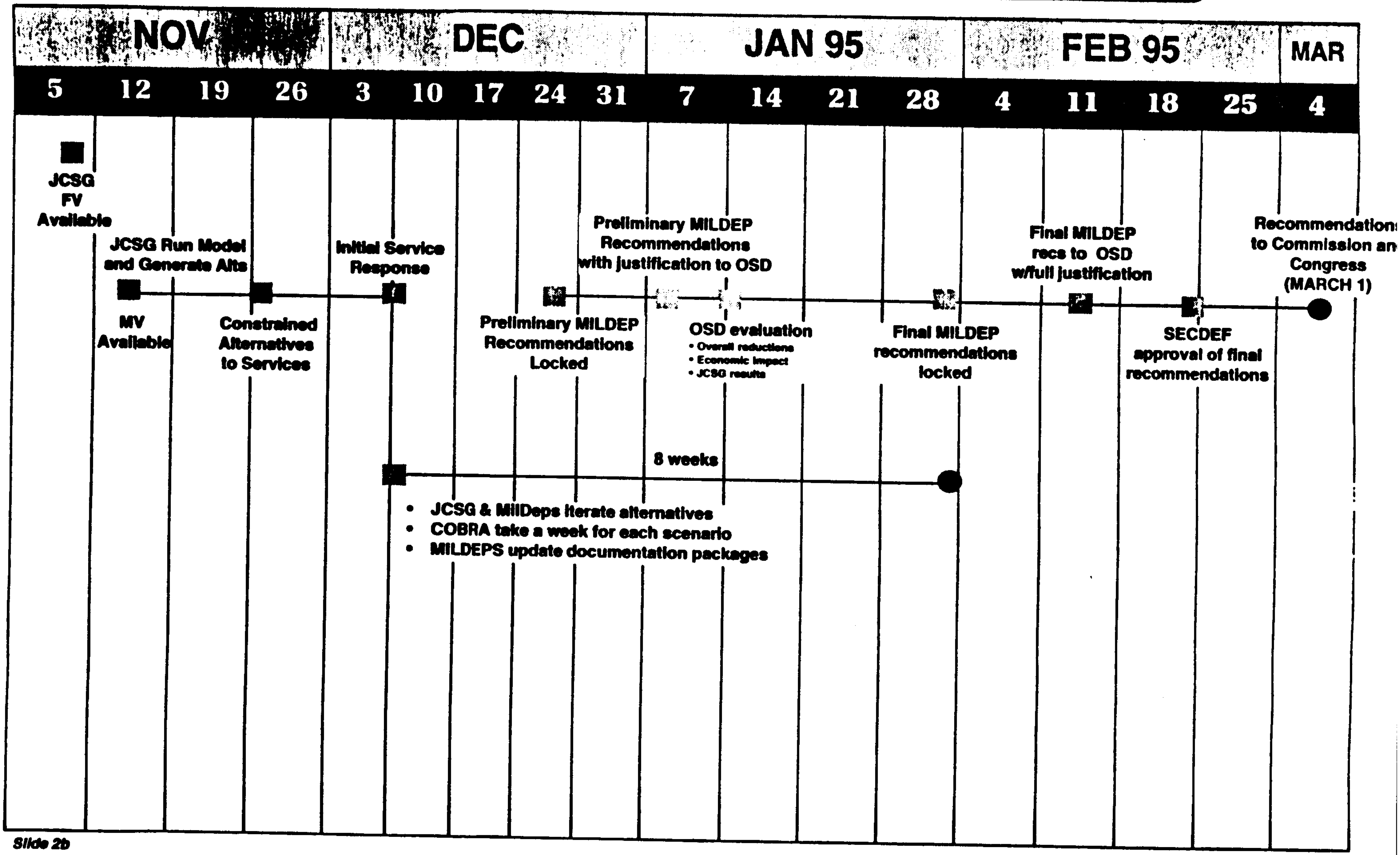
4. SECURITY

CLOSE HOLD - WORKING PAPERS

The "Time Crunch"



The "Time Crunch"
Another Approach



	Columbus	Corpus Christi	Ft Rucker	Kingsville	Laughlin	Meridian	Pensacola	Randolph	Reese	Sheppard	Vance	Whiting Field	Hondo	USAFA	
Site Military Value															
Functions for UPT	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	DoD Requireme
Flight Screening	6.6	6.4	6.9	6.7	6.8	6.5	6.1	5.7	6.2	6.2	6.6	6.6	5.4	3.9	2,073
Primary Pilot	6.8	6.7	X2	7.0	7.0	6.8	6.4	6.7	6.0	6.3	6.8	6.6	0.0	0.0	2,493
Airlift/Tanker	6.3	6.5	X1	7.7	5.8	6.6	7.8	6.5	5.9	6.5	6.7	X1	0.0	0.0	752
Inter E2/C2, Adv Maritime	6.7	7.5	X2	7.6	6.5	6.6	7.5	6.4	5.9	6.5	6.8	7.4	0.0	0.0	273
Adv E2/C2, Strike	6.0	6.2	X1	7.3	5.4	6.3	7.6	6.0	5.7	6.2	5.3	X1	0.0	0.0	372
Adv Bomber/Fighter	6.4	X1	X1	7.3	5.5	6.8	7.8	6.8	5.6	6.3	5.5	X1	0.0	0.0	619
Helicopter	X2	X2	8.9	X2	X2	X2	6.5	X2	X2	X2	X2	7.2	0.0	0.0	1,481
Primary NFO, Inter NFO	6.9	6.7	X2	7.0	7.1	6.8	6.4	7.1	6.2	6.2	6.8	6.4	0.0	0.0	718
Adv NFO Strike	6.6	6.9	6.7	7.4	X3	6.5	7.6	6.1	X3	X3	X3	7.0	0.0	0.0	312
Adv NFO Panel	7.6	5.9	X1	7.2	6.8	7.0	7.6	6.9	7.2	7.7	7.5	X1	0.0	0.0	222

X1 - Runway length constraints | X2 - Lack of outlying fields | X3 - Too far from water

Resources	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap
Airfield Ops	784,371	752,136	7,441,016	389,136	787,572	389,136	270,072	619,768	686,547	646,988	685,390	865,392	554,664	651,630
Airspace	116,973	315,810	0	253,418	218,889	128,879	181,790	49,494	106,925	166,922	114,708	147,888	43,560	49,368
Ground Training Classroom	542,080	464,640	5,523,408	859,584	193,600	406,560	3,915,544	696,960	696,960	348,480	373,648	554,400	116,160	77,440
Ground Training Simulators	77,440	46,464	212,960	61,952	61,952	54,208	135,520	92,928	61,952	92,928	61,952	104,544	0	0
Aprons	209,840	540,367	392,726	240,614	217,378	241,166	299,395	501,946	282,496	394,125	223,645	386,667	251,200	46,122

Resources per student	Flight Screening	Primary Pilot	Airlift/Tanker	Inter E2/C2, Adv Maritime	Adv E2/C2, Strike	Adv Bomber/Fighter	Helicopter	Primary NFO, Inter NFO	Adv NFO Strike	Adv NFO Panel	
Training Sorties	24	94	88	44	166	132	137	33	70	13	Maximum requirements where duplicate training
Airfield Ops	526	1,156	405	496	1,393	926	1,288	248	280	39	"
Airspace	6	32	61	21	97	75	N/A	37	53	0	"
Ground Training Classroom	14	213	186	202	196	156	955	371	144	304	"
Ground Training Simulators	0	27	42	30	98	29	32	44	53	80	"
Aprons	18.81	181.92	357.60	190.01	303.45	357.35	190.62	60.31	239.59	201.00	"

#Aircraft/student	0.0555	0.2274	0.2384	0.2088	0.3817	0.5105	0.2681	0.1058	0.1346	0.0402
SQ YDS/Aircraft	339	800	1,500	910	795	700	711	570	1,780	5,000
# Aircraft Required	113	567	179	57	142	316	397	76	42	9

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STUDENT RESOURCE CALCULATION

Reference: (a) CNO ltr 1542, ser N889JG/4U61666 dated 20 July 1994

Flight Screening (T-3)

a. Training Sorties - Taken from the Hondo Capacity Analysis, Mission Requirements, paragraph B.2.

b. Airfield Ops - Taken from the Hondo Capacity Analysis, Mission Requirements, paragraph B.2 and Facilities paragraphs A.2 and A.10. Operations were calculated as follows:

$$\text{Operations/student} = \frac{\text{Historic Traffic Count (Fac A.10) X Sorties/Student (M. R. B.2)}}{\text{Total Sorties (Fac A.2)}}$$

c. Airspace - Taken from the Hondo Capacity Analysis, Mission Requirements paragraph B.1. This number was divided by two to account for the fact that the requirement for primary airspace is half that for advanced airspace.

d. Ground Training Classrooms/Simulators - Taken from the Hondo Capacity Analysis Mission Requirements, paragraph C.1.

e. Ramp Space - Taken from the Hondo and USAFA Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up) and A.1, and Facilities paragraph D.2.

Ramps/student =

$$\frac{\text{Aircraft in DoD inventory (MR E.1 Hondo \& USAFA) X SY/Aircraft (Facilities D.2)}}{\text{DoD Pilot Training Requirement}}$$

Primary Pilot (T-34 and T-37)

a. Training Sorties - The JPATS syllabus requirement of 65 sorties was accepted as the standard number of syllabus sorties. USAF overhead on primary training is 60% while USN overhead is 30%. The JCS working group agreed to use an average overhead value of 45% which leads to a total sortie requirement of 94 (65 sorties + .45 x 65).

b. Airfield Ops - Taken from the Whiting Field Capacity Analysis, Mission Requirements, paragraph B.2 and Facilities paragraphs A.2 and A.10 using the T-34 data (see spreadsheet). Operations were calculated as follows:

$$\text{Operations/student} = \frac{\text{Historic Traffic Count (Fac A.10) X Sorties/Student (M. R. B.2)}}{\text{Total Sorties (Fac A.2)}}$$

$$= 12.3 \text{ ops/sortie}$$

Total ops = 94 sorties X 12.3 ops/sorties = 1156 operations

c. Airspace - The average block hours required were taken from the USAF Capacity Analysis data calls, Mission Requirements paragraph B.1. USAF block hour requirements were used because the current USAF syllabus more closely resembles the JPATS syllabus. This number was divided by two to account for the fact that the requirement for primary airspace is half that for advanced airspace.

d. Ground Training Classrooms/Simulators - The average Ground Training Classroom/Simulator hours required were taken from the amendments to USAF Capacity Analysis data calls, Mission Requirements paragraph C.1. USAF requirements were used because the current USAF syllabus more closely resembles the JPATS syllabus.

e. Ramp Space - Taken from the Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up) and A.1, and Facilities paragraph D.2. For USAF, SY/aircraft data for all aircraft, was taken from Randolf AFB

Ramps/student =

$$\frac{\text{Aircraft in DoD inventory (MR E.1) X SY/Aircraft (Facilities D.2)}}{\text{DoD Pilot Training Requirement}}$$

Airlift/Tanker (T-1)

a. Training Sorties - Taken from the Reese Capacity Analysis, Mission Requirements, paragraph B.2. Reese AFB was used because they are the only ones fuly functional in Airlift/Tanker training.

b. Airfield Ops - Taken from the Reese Capacity Analysis, Mission Requirements, paragraph B.2 and Facilities paragraphs A.2 and A.10 (see spreadsheet). Operations were calculated as follows:

$$\text{Operations/student} = \frac{\text{Historic Traffic Count (Fac A.10) X Sorties/Student (M. R. B.2)}}{\text{Total Sorties (Fac A.2)}}$$

c. Airspace - Taken from the Reese Capacity Analysis, Mission Requirements paragraph B.1.

d. Ground Training Classrooms/Simulators - The Ground Training Classroom/Simulator hours required were taken from the amendments to the Reese Capacity Analysis, Mission Requirements paragraph C.1.

e. Ramp Space - Taken from the Reese Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up) and A.1, and Facilities paragraph D.2. SY/aircraft data was taken from Randolf AFB which provides this data for all USAF training aircraft.

Ramps/student =

Aircraft in DoD inventory (MR E.1) X SY/Aircraft (Facilities D.2)
DoD Pilot Training Requirement

Intermediate E2/C2 and Advance Maritime (T-44)

a. Training Sorties - Taken from the Corpus Christi Capacity Analysis, Mission Requirements, paragraph B.2.

b. Airfield Ops - Taken from Corpus Christi Navy Capacity Analysis (Data Call 2), Mission Requirements, paragraph b.3. Advanced Maritime requirement was used because it was higher.

c. Airspace - Taken from the Corpus Christi Capacity Analysis, Mission Requirements paragraph B.1.

d. Ground Training Classrooms/Simulators - The Ground Training Classroom/Simulator hours required were taken from the Corpus Christi Capacity Analysis, Mission Requirements paragraph C.1.

e. Ramp Space - Taken from the Corpus Christi Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up). SY/aircraft data was taken from NAVFAC P-80 which provides this data for all USN training aircraft. Advanced Maritime PTR requirements were taken from reference (a) and intermediate E2/C2 were taken from the Corpus Christi Navy Capacity Analysis (Data Call 2), Mission Requirements, paragraph A.3.

Ramps/student =

Aircraft in DoD inventory (MR E.1) X SY/Aircraft (Facilities D.2)
DoD Pilot Training Requirements.

Advance E2/C2 and Strike (T-45)

a. Training Sorties - Taken from the Kingsville Capacity Analysis, Mission Requirements, paragraph B.2. NAS Kingsville was used because they are the only ones fully functional in T-45 training.

b. Airfield Ops - Taken from Kingsville Navy Capacity Analysis (Data Call 2), Mission Requirements, paragraph b.3.

c. Airspace - Taken from the Kingsville Capacity Analysis, Mission Requirements paragraph B.1.

d. Ground Training Classrooms/Simulators - The Ground Training Classroom/Simulator hours required were taken from the Kingsville Capacity Analysis, Mission Requirements paragraph C.1.

e. Ramp Space - Taken from the Kingsville Capacity Analysis, Mission Requirements paragraph E.1 (See also supplemental data call paragraph E.2 follow-up) and Facilities paragraph D.3. Navy PTR requirements were taken from reference (a).

Ramps/student =

$$\frac{\text{Aircraft in DoD inventory (MR E.1) X SY/Aircraft (Facilities D.2)}}{\text{DoD Pilot Training Requirement}}$$

Advance Fighter/Bomber (T-38)

a. Training Sorties - Used an average value taken from Columbus, Laughlin, Sheppard, and Vance Capacity Analysis, Mission Requirements, paragraph B.2.

b. Airfield Ops - Used an average value taken from Columbus, Laughlin, Sheppard, and Vance Capacity Analysis, Mission Requirements, paragraph B.2 and Facilities paragraphs A.2 and A.10 (see spreadsheet). Operations were calculated as follows:

$$\text{Operations/student} = \frac{\text{Historic Traffic Count (Fac A.10) X Sorties/Student (M. R. B.2)}}{\text{Total Sorties (Fac A.2)}}$$

c. Airspace - Used an average value taken from Columbus, Laughlin, Sheppard, and Vance Capacity Analysis, Mission Requirements paragraph B.1.

d. Ground Training Classrooms/Simulators - For the Ground Training Classroom/Simulator hours required, used an average value taken from the amended Columbus, Laughlin, Sheppard, and Vance data calls, Capacity Analysis, Mission Requirements paragraph C.1.

e. Ramp Space - Taken from Columbus, Laughlin, Sheppard, and Vance Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up) and A.1, and Facilities paragraph D.2. SY/aircraft data was taken from Randolf AFB which provides this data for all USAF training aircraft.

Ramps/student =

$$\frac{\text{Aircraft in DoD inventory (MR E.1) X SY/Aircraft (Facilities D.2)}}{\text{DoD Pilot Training Requirement}}$$

Helicopter

a. Training Sorties - Used an average value taken from Fort Rucker and Whiting Field Capacity Analysis, Mission Requirements, paragraph B.2.

b. Airfield Ops - Used an average value taken from Whiting Field (USN Capacity Analysis, Data Call 2, Mission Requirements, paragraph b.3) and Fort Ruckers Capacity Analysis Facilities paragraphs A.13 and A.16. Fort Rucker ops were calculated as follows:

$$\text{Operations/student} = \frac{\text{Historic Operations (Fac A.13)}}{\text{Total Sorties (Fac A.16)}}$$

c. Airspace - Not Required for Helo training.

d. Ground Training Classrooms/Simulators - For the Ground Training Classroom/Simulator hours required, used an average value taken from the Fort Rucker Capacity Analysis, Mission Requirements paragraph C.1. Fort Rucker had more extensive ground training requirements than did Whiting field.

e. Ramp Space - Taken from Whiting Field and Fort Rucker Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up) and A.1, and Facilities paragraph D.2. For USN, SY/aircraft data was taken from NAVFAC P-80 which provides this data for all USN training aircraft. Navy PTR requirements were taken from reference (a).

Ramps/student =

$$\frac{\text{Aircraft in DoD inventory (MR E.1)} \times \text{SY/Aircraft (Facilities D.2)}}{\text{DoD Pilot Training Requirement}}$$

Primary and Intermediate NFO (T-34)

a. Training Sorties - Taken from the Pensacola Capacity Analysis, Mission Requirements, paragraph B.2.

b. Airfield Ops - Taken from Pensacola Navy Capacity Analysis (Data Call 2), Mission Requirements, paragraph b.3.

c. Airspace - Taken from the Pensacola Capacity Analysis, Mission Requirements paragraph B.1. This number was divided by two to account for the fact that the requirement for primary airspace is half that for advanced airspace.

d. Ground Training Classrooms/Simulators - The Ground Training Classroom/Simulator hours required were taken from the Pensacola Capacity Analysis, Mission Requirements paragraph C.1.

e. Ramp Space - Taken from the Pensacola Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up). SY/aircraft data was taken from NAVFAC P-80 which provides this data for all USN training aircraft. Primary and Intermediate NFO PTR requirements were taken from the Pensacola Capacity Analysis (USN Data Call 2), Mission Requirements, paragraph A.3.

Ramps/student =

Aircraft in DoD inventory (MR E.1) X SY/Aircraft (Facilities D.2)
DoD Pilot Training Requirements.

Advance NFO Strike (T-39/T-2)

a. Training Sorties - Taken from the Pensacola Capacity Analysis, Mission Requirements, paragraph B.2. Used the Radar Intercept Officer (RIO) track because it is the longest.

b. Airfield Ops - Multiplied the number of required training sorties by 4 ops/sorties. Used military judgement to arrive at 4 ops/sortie - pilots are already trained and therefore don't need to practice take-offs and landings. One additional touch and go was included with each sortie.

c. Airspace - Taken from the Pensacola Capacity Analysis, Mission Requirements paragraph B.1. Summed the RIO in special use airspace.

d. Ground Training Classrooms/Simulators - The Ground Training Classroom/Simulator hours required were taken from the Pensacola Capacity Analysis, Mission Requirements paragraph C.1. Used the RIO track.

e. Ramp Space - Taken from the Pensacola Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up). SY/aircraft data was taken from NAVFAC P-80 which provides this data for all USN training aircraft. Navy PTR requirements were taken from reference (a).

Ramps/student =

Aircraft in DoD inventory (MR E.1) X SY/Aircraft (Facilities D.2)
DoD Pilot Training Requirements.

Advance NFO Panel (T-43)

a. Training Sorties - Taken from the Randolf Capacity Analysis, Mission Requirements, paragraph B.2.

b. Airfield Ops - Multiplied the number of sorties by 3 ops/sortie. Used military judgement to arrive at 3 ops/sortie - pilots are already trained and therefore don't need to practice take-offs and landings. One additional touch and go was included for every other sortie.

c. Airspace - All work is done in Airways and MTR's

d. Ground Training Classrooms/Simulators - The Ground Training Classroom/Simulator hours required were taken from the amendments to the Randolf Capacity Analysis, Mission Requirements paragraph C.1.

e. Ramp Space - Taken from the Randolf Capacity Analysis, Mission Requirements paragraphs E.1 (See also supplemental data call paragraph E.2 follow-up) and A.1, and Facilities paragraph D.2. SY/aircraft data was taken from Randolf AFB which provides this data for all USAF training aircraft.

Ramps/student =

$$\frac{\text{Aircraft in DoD inventory (MR E.1) X SY/Aircraft (Facilities D.2)}}{\text{DoD Pilot Training Requirement}}$$

Audit of Data Summary Sheet

On 25 October 1994, LCol Free, LCol Hinkley, and LCDR Bertolaccini audited the **Student Resource Matrix** on the Data Summary Sheet. All data points were checked against certified data and where data in the Student Resource matrix differed from the certified data the matrix was changed to reflect the certified data. The only exception was in the Advance NFO Strike category where previous totals reflected a summation of all requirements for each Advance NFO training pipeline. Since each pipeline is independent and each student only goes through one pipeline, the resources required for the pipeline with the most requirements (Radar Intercept Officer) was selected.

THE DEPUTY SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

24 OCT 1994

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
UNIFIED AND SPECIFIED COMMANDERS-IN-CHIEF
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Consolidation of Fixed-Wing Flight Training

In April 1993 the Secretary of Defense directed the Secretary of the Air Force, assisted by the Secretary of the Navy, to:

1. Consolidate initial fixed-wing aircraft training for all Services and transition to a common primary training aircraft; and

2. Combine follow-on flight training into four common pipelines (Navy fighter attack, Air Force fighter/bomber, Navy and Air Force tanker/transport/maritime patrol, and helicopter).

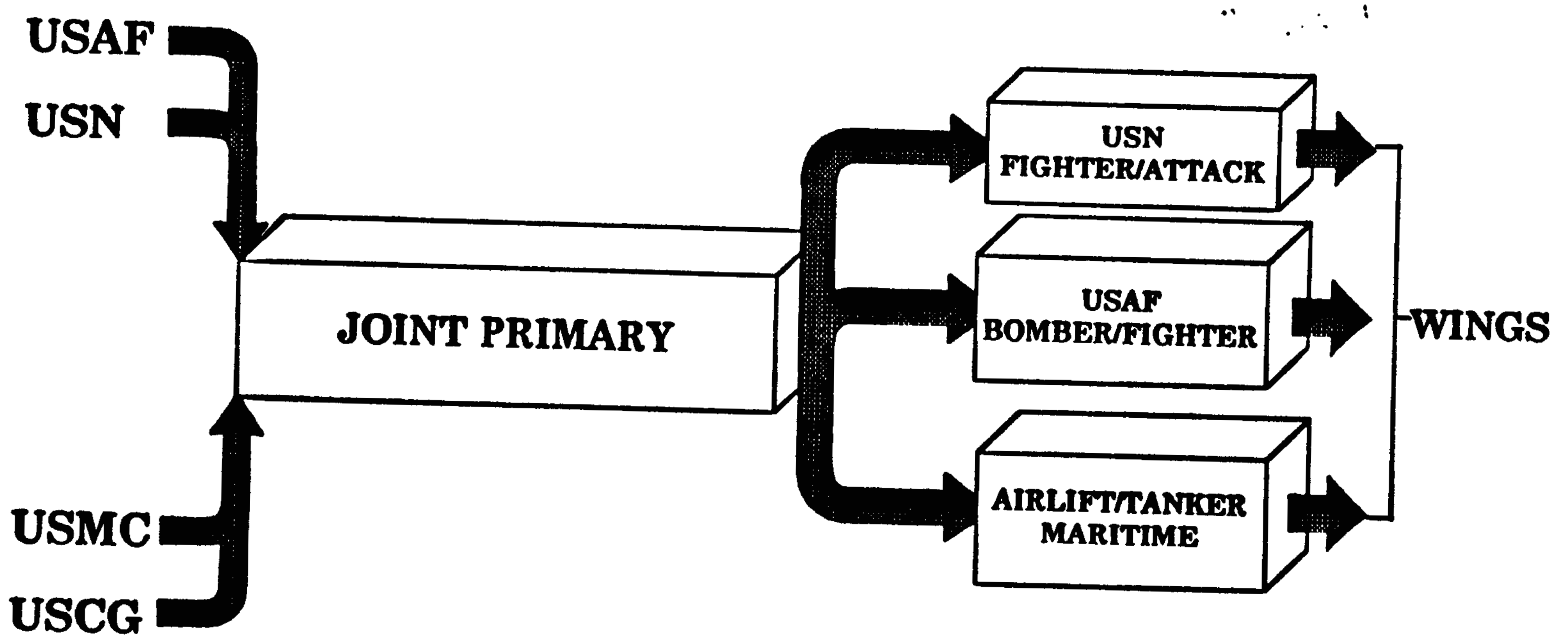
In response, the Navy and the Air Force are in the process of implementing joint fixed-wing flight training initiatives that carry out the Secretary's directive. A common pipeline for helicopter training is still under review. A schematic description of their approach is in Attachment 1.

In addition, the Navy and Air Force have proposed other joint flight training initiatives for the functions of navigator, weapon system officer, and electronic warfare officer, as illustrated in Attachment 2.

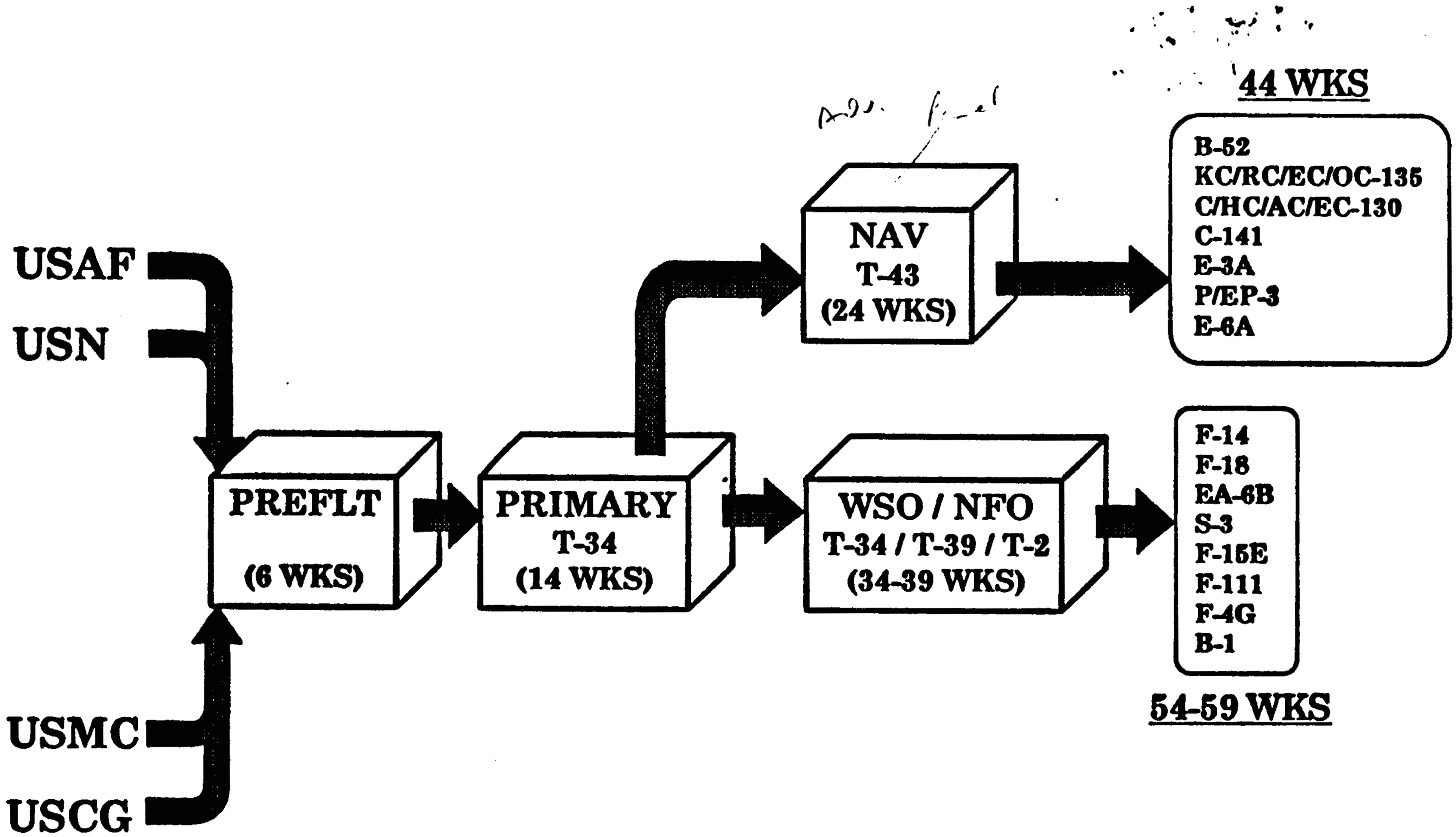
I am encouraged by the cooperation and progress we have made in bringing jointness to flight training and hope that it serves as a model in other areas where the Department might benefit from increasing "jointness." This memorandum, therefore, provides my approval for Air Force/Navy plans to implement these joint fixed-wing flight training programs, as well as for their additional joint training initiatives. The Secretaries of the Navy and Air Force, and others that may be involved, should take actions to implement these programs as soon as possible.

21146

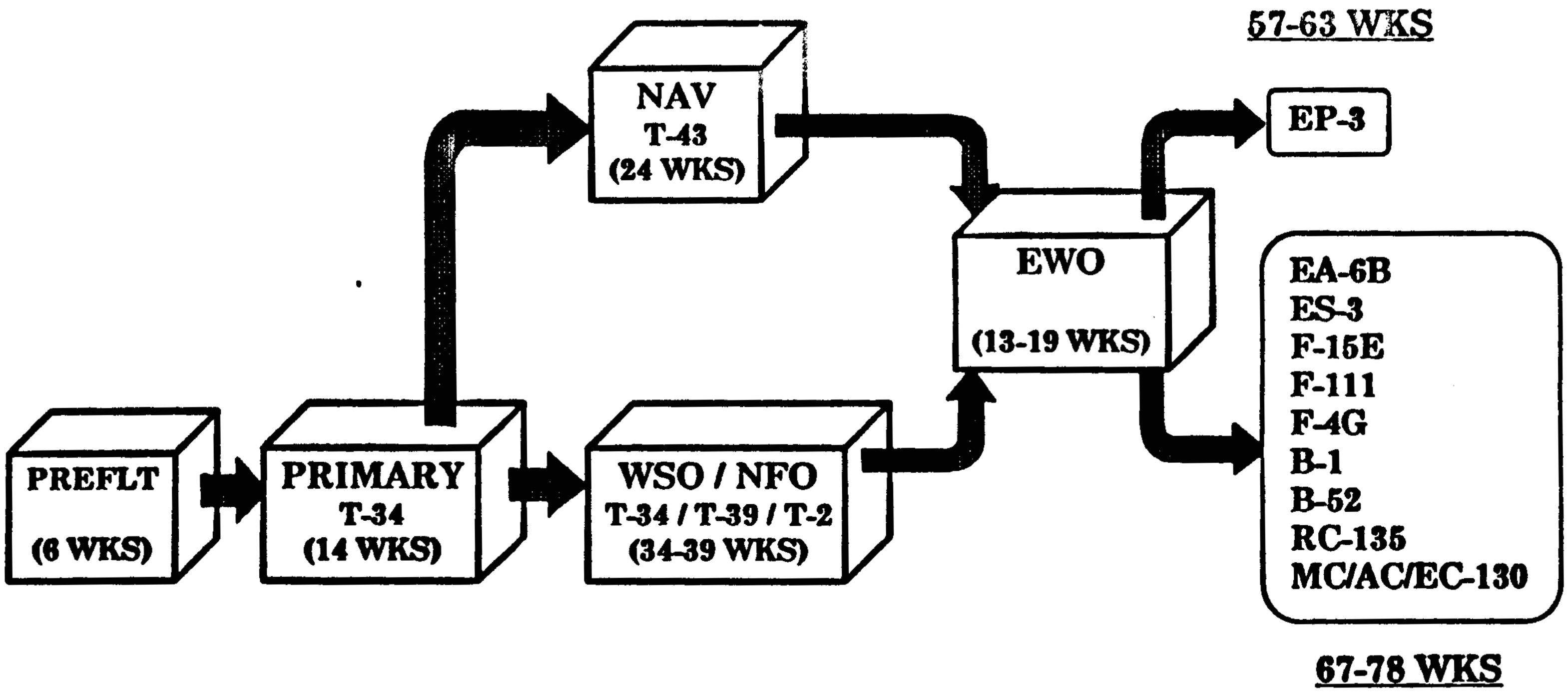
JOINT FIXED-WING TRAINING



JOINT NAVIGATOR TRAINING



JOINT ENTRY LEVEL EWO TRAINING



UPT JCSWG SCHEDULE

10 NOV Thursday	AM 1315 PM	Team Meeting: Group at 3E774: Team	Model Preparations Discussion -"Consensus Model "MinSite" Run(s)
14 NOV Monday	AM 1315 PM	Team at CNA Group at 3E774 Team	Model Run "Analysis," etc. Discussion - "Consensus" Model Run(s)
15 NOV Tuesday	AM 1300	Team at CNA Group at 3E752	Model Run "Analysis," etc. Discussion - "Consensus"

16-18 NOV Team to meet in AM with the Group meeting each PM to discuss Team's products until rational set of Alternatives produced - no later than Friday.

ATOMIC SECURITY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3300 DEFENSE PENTAGON
WASHINGTON, DC 20301-3300

21 OCT 1994

MEMORANDUM FOR BRAC 95 JOINT CROSS-SERVICE GROUP CHAIRPERSONS

SUBJECT: Format for Submission of Alternatives to Military Departments

As you begin generating alternatives for Military Department consideration, they have asked, and we agree, that a standardized format needs to be established to facilitate the review of alternatives. Attached is the format that should be used in providing your alternatives to the DoD Components. This does not preclude a Joint Cross-Service Group from providing additional backup material, if needed.

If you have questions regarding this format, please contact Mr. Bob Meyer, Director, Base Closure. He can be reached on extension 45356.

Doug

Douglas B. Hansen
Executive Secretary
BRAC 95 Steering Group

Attachment

[redacted]

BRAC 95 JOINT ANALYSIS ALTERNATIVE WORKSHEET

a. Control Number: The number will be used to assist OSD, Military Departments and JCSG's in tracking alternatives. A recommended format is: <JCSG>-#. For example, Depot Maintenance JCSG could use DM-1, DM-2, etc. or Undergraduate Pilot Training JCSG might use UPT-1, UPT-2, etc. The goal is to simplify tracking within the JCSG. Use a separate worksheet for each alternative.

b. Short Title: This heading attempts to give a name to the alternative. An example is "Realign Camp Swampy", "Disestablish Activity Y", etc. The exact definitions will be incorporated in Policy Memorandum 2 which is currently being staffed by OSD Base Closure.

c. Date: The date that the JCSG formally accepts the alternative.

d. Joint Group: Formal name of the Joint Group. (Depot Maintenance JCSG, Test & Evaluation JCSG, etc.)

e. Scenario Description/Summary: This will tell the Military Department what you are accomplishing in your alternative. Although it should be concise, fully describe what your alternative will do. A good example to follow is the DOD Recommendation in the March 1993 DOD Base Closure and Realignment Report.

f. Installations in the Scenario: Under this heading, we are looking for the losing installation(s) and Military Department(s), the activities/functions/workload that are to be relocated, and the recommended gaining installation(s) and Military Department(s). Please understand that if a JCSG does not include a gaining installation in this section, the losing Military Department will attempt to relocate the activity, function or workload where they believe it will fit without the benefit of JCSG input.

g. Rationale: Briefly describe the reasons why the alternative was selected. For alternatives that are accepted as Military Department recommendations, this rationale will be incorporated in their recommendation so it must describe the pros of your alternative. However, clarity is very important so that the Military Departments can understand your alternative.

h. Remarks: Use this section to communicate to the Military Departments other suggestions or comments regarding the alternative, as necessary.

[redacted]

TAB 19

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 14, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1315 hours on November 14, 1994, in Room 3E774, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch opened with introductory comments and turned to the joint study team (JST) to present results of optimization model runs. Mr. Gardner began with discussion of the updated "unconstrained" functional value run (attached). He noted that it closed the Reese AFB, Hondo, and Air Force Academy sites, flight screening relocated to NAS Whiting Field and Laughlin AFB, all helicopter training functions were accommodated at Fort Rucker, the primary pilot training function was spread to five sites, and NAS Kingsville gained the airlift/tanker training function. He pointed out that airfield operations was the key constraint and that only minor changes from the initial "unconstrained" functional value run were apparent.

The minimum site (MINSITE with 3 rules and 5 percent weight on functional value) run (attached) complied with the rules, closed five sites, spread primary pilot training to seven sites, and located all helicopter training at Fort Rucker. Again, airfield operations was the key constraint. Functional value total dropped 3.2 points and the outcome resulted in ten new function moves.

Mr. Finch noted concern that short-term costs would not be minimized without limiting functional moves into sites which do not already conduct that function. After discussion the Group agreed to try to limit functional moves to new sites.

Next, the Group reviewed plans for further model runs and the evolving schedule.

There being no further matters to discuss, the meeting was adjourned at 1420 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 14, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Col Dave Stockwell (USMC), Navy
Brig Gen Mike McCarthy, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Mark Bruggemeyer, Air Force
Lt Col Roy Rice (USAF), Tri-Department BRAC Group
CAPT J. B. Renninger, Joint Staff(J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG
Mr. Donald Stockton, DoDIG

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(14 November 1994 Meeting -Rm 3E774)

1. **Model "Run" Results**

   A. Updated "Unconstrained" Functional Value Run

   B. MINSITE w/3 Rules (5% wt on FV)

2. **Model Run Plans**

   A. MINSITE per above w/Penalty for New Function Move

   B. MINSITE w/3 Rules "+" Additional Rules if Logical - None Intended

   C. MINNMV w/Rule that Avg Military Value ≥ Beginning Avg Mil Val. (Anticipate Military Value PM 14 November)

      1) "2cd Best"

      2) "3rd Best"

3. **Future Schedule Discussion**

   - Optimization Model Runs, Analysis, & Review JCSG Mtgs as Required - Detailed Schedule Attached — November 14 - 17
   - Present Alternatives to DASD (ER & BRAC) — November 18
   - Alternatives Presented to Services - Format Attached — November 18
   - "Iterative Process" ~~- Schedule Attached~~ withdrawn
     Same as Nov 10, 1994 Mtl

4. **SECURITY**

CLOSE HOLD - WORKING PAPERS

maxfv100

MINSITES " 'Obj Func=' -97.0168 'Wgt Pmtr=' 0

'Number of sites restricted to ' 14

"

Sites	COLM	CORP	FTRK	KING	LAUG	MRDN	PENS	RAND	RESE	SHEP	VANC	WTFD	HNDO	UAFA
Open	1	1	1	1	1	1	1	1	0	1	1	1	0	0
FLT_SCN	0	0	-	0	1,491	0	0	0	0	0	0	582	0	0
PRI_PLT	679	534	-	0	0	0	0	205	0	0	593	484	-	-
ALFT_TKR	0	0	-	579	0	0	173	0	0	0	0	-	-	-
IE2_MAT	0	273	-	0	0	0	0	0	0	0	0	0	-	-
ADE2_STK	0	0	-	111	0	18	81	0	0	162	0	-	-	-
ADV_BMBR	0	-	-	0	0	393	0	226	0	0	0	-	-	-
HELO	-	-	1,481	-	-	-	0	-	-	-	-	0	-	-
PRINTR_NFO	0	0	-	0	14	0	0	704	0	0	0	0	-	-
ADVNFO_STK	0	0	-	0	-	0	312	0	-	-	-	0	-	-
ADVNFO_PNL	0	0	-	0	0	0	0	0	0	222	0	-	-	-

"

'Resource Utilization'

AF_OPS	1.00	1.00	0.26	1.00	1.00	1.00	1.00	1.00	0.00	0.36	1.00	1.00	0.00	0.00
ARSPC	0.19	0.07	0.00	0.18	0.04	0.24	0.19	1.00	0.00	0.09	0.17	0.13	0.00	0.00
GNDTNG_CLS	0.27	0.36	0.26	0.15	0.14	0.16	0.02	0.49	0.00	0.28	0.34	0.20	0.00	0.00
GNDTNG_SIM	0.24	0.49	0.22	0.57	0.01	0.24	0.23	0.46	0.00	0.36	0.26	0.12	0.00	0.00
RAT	0.59	0.28	0.72	1.00	0.13	0.61	0.54	0.32	0.00	0.24	0.48	0.26	0.00	0.00

"

"

'Total Functional Value = ' 73.63575

10 Nov 94

MINSITES($w_1 = 0$) ⇒ maximizes Functional Value

"unconstrained" FV run - new data

mnst95.txt

MINSITES " 'Obj Func=' 56.43237 'Wgt Pmtr=' 95
'Number of tricted to 14
"

Sites	COLM	CORP	FTRK	KING	LAUG	MRDN	PENS	RAND	RESE	SHEP	VANC	WTFD	HNDO	UAFA
Open	1	1	1	0	1	0	0	1	1	1	1	1	0	0
FLT_SCN	173	0	-	(0)	1,497	0	0	0	0	(0)	403	0	0	0
PRI_PLT	290	448	-	0	0	0	0	120	594	104	188	749	-	-
ALFT_TKR	0	243	-	0	0	0	0	0	0	0	509	-	-	-
IE2_MAT	0	273	-	0	0	0	0	0	0	0	0	0	-	-
ADE2_STK	(0)	0	-	0	0	0	0	0	0	372	(0)	-	-	-
ADV_BMBR	100	-	-	0	0	0	0	519	(0)	0	0	-	-	-
HELO	-	-	1,481	-	-	-	0	-	-	-	-	0	-	-
PRINTR_NFO	718	0	-	0	0	0	0	0	0	0	0	0	-	-
ADVNFO_STK	312	0	-	0	-	0	0	0	-	-	-	0	-	-
ADVNFO_PNL	0	0	-	0	0	0	0	0	0	222	0	-	-	-

"

'Resource Utilization'

	COLM	CORP	FTRK	KING	LAUG	MRDN	PENS	RAND	RESE	SHEP	VANC	WTFD	HNDO	UAFA
AF_OPS	1.00	1.00	0.26	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.93	1.00	0.00	0.00
ARSPC	0.52	0.11	0.00	0.00	0.04	0.00	0.00	0.86	0.18	0.24	0.34	0.16	0.00	0.00
GNDTNG_CLS	0.72	0.42	0.26	0.00	0.11	0.00	0.00	0.15	0.18	0.47	0.38	0.29	0.00	0.00
GNDTNG_SIM	0.76	0.66	0.22	0.00	0.00	0.00	0.00	0.20	0.26	0.61	0.43	0.19	0.00	0.00
RAT	1.00	0.41	0.72	0.00	0.13	0.00	0.00	0.41	0.38	0.45	1.00	0.35	0.00	0.00

"
"

'Total Functional Value = ' 70.42085

MINSITES ($w_1 = 95$)

Rule (1) - PRINTR_NFO & ADVNFO_STK

(2) - ADVNFO_PNL

(3) - min assign = 100

UPT JCSWG SCHEDULE

14 NOV Monday	AM 1315 PM	Team at CNA Group at 3E774 Team	Model Run "Analysis," etc. Discussion - "Consensus" Model Run(s)
15 NOV Tuesday	AM 1300	Team at CNA Group at 3E752	Model Run "Analysis," etc. Discussion - "Consensus"

16-18 NOV Team to meet in AM with the Group meeting each PM to discuss Team's products until rational set of Alternatives produced - no later than Friday.

TAB 20

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 15, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Dan Gardner, ODUSD(R), at 1315 hours on November 15, 1994, in Room 3E774, the Pentagon. The list of attendees and agenda are attached.

Mr. Gardner opened the discussion of optimization model run outputs. A sensitivity analysis was conducted using the optimization model to refine the potential feasible solutions based on the weights put in the model. The optimum results were 9 sites (5 closures) with 4 moves, 10 sites (4 closures) with 1 move, and 11 sites (3 closures) with zero moves. A handout prepared by the Tri-Department BRAC Group indicating these results is attached. The sensitivity analysis established "benchmarks" from which a comparison could be made once site military values are within reasonable parameters.

Then, the Group discussed plans for further model runs and the planned work schedule.

There being no further matters to discuss, the meeting was adjourned at 1400 hours.

D Gardner

Approved: Dan Gardner
Acting Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 15, 1994

Key Attendees

Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
LTC Tom Hinkel, Army
Col Dave Stockwell (USMC), Navy
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Mark Bruggemeyer, Air Force
Lt Col Roy Rice (USAF), Tri-Department BRAC Group
CAPT J. B. Renninger, Joint Staff(J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG
Mr. Donald Stockton, DoDIG

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(15 November 1994 Meeting -Rm 3E752)

1. Model "Run" Results

   A. MINSITE w/Penalty for New Function Move

2. Model Run Plans

   A. MINNMV w/Rule that Avg Military Value ≥ Beginning Avg Mil Val.
   (Anticipate Military Value ? ? ? ?)

      1) "2cd Best"

      2) "3rd Best"

3. Future Schedule Discussion

- Optimization Model Runs, Analysis, & Review JCSG Mtgs as Required - Detailed Schedule Attached	November 15 - 17
- Present Alternatives to DASD (ER & BRAC)	November 18 (?)
- Alternatives Presented to Services - Format Attached	November 18 (?)
- Anticipated Meeting of the Steering Group	November 18
- Review Group Meeting	November 22
- "Iterative Process" - Schedule Attached Same as 10 Nov Atch	

4. SECURITY

CLOSE HOLD - WORKING PAPERS

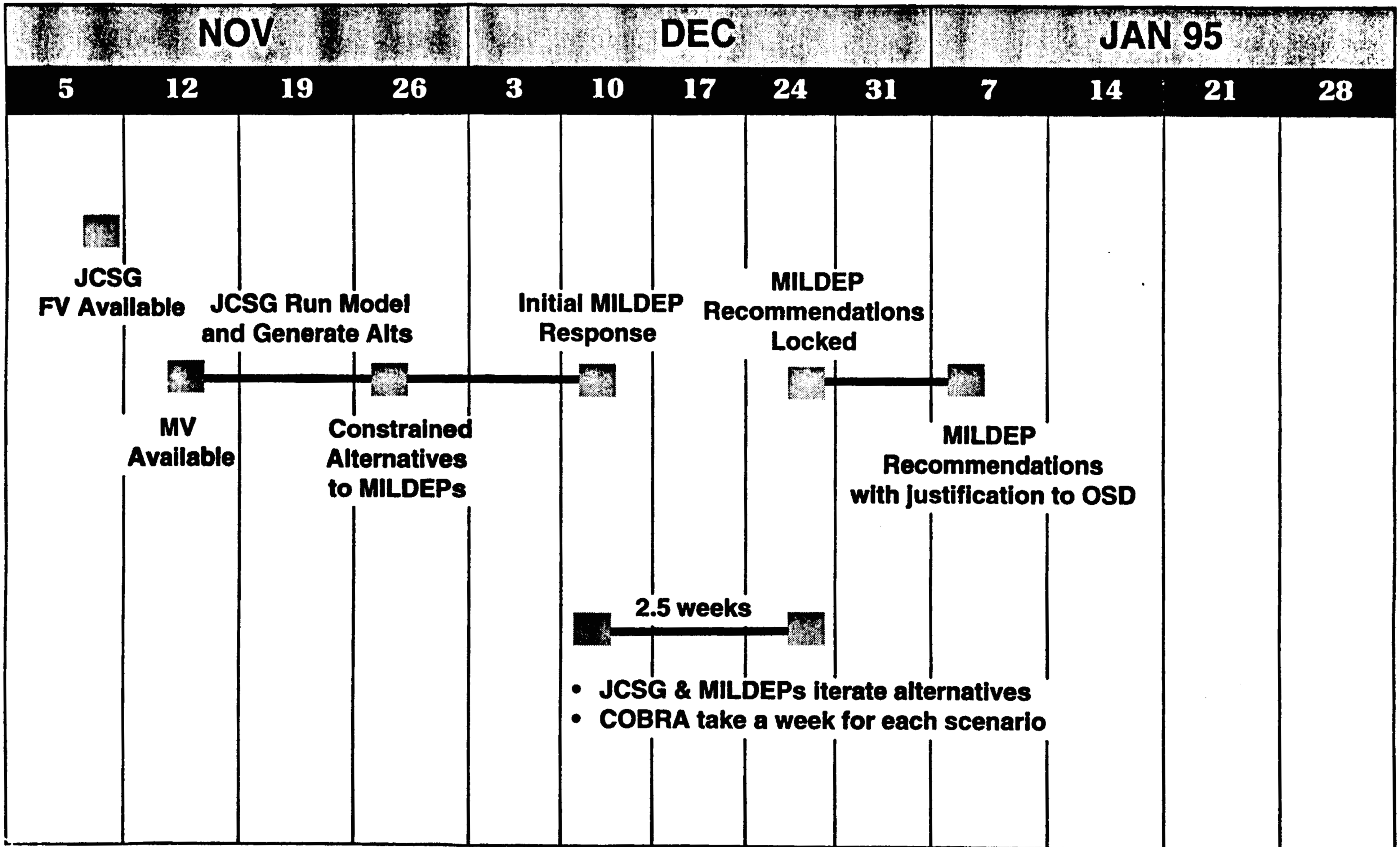
MINSITES Sensitivity Analysis

OSD Copy

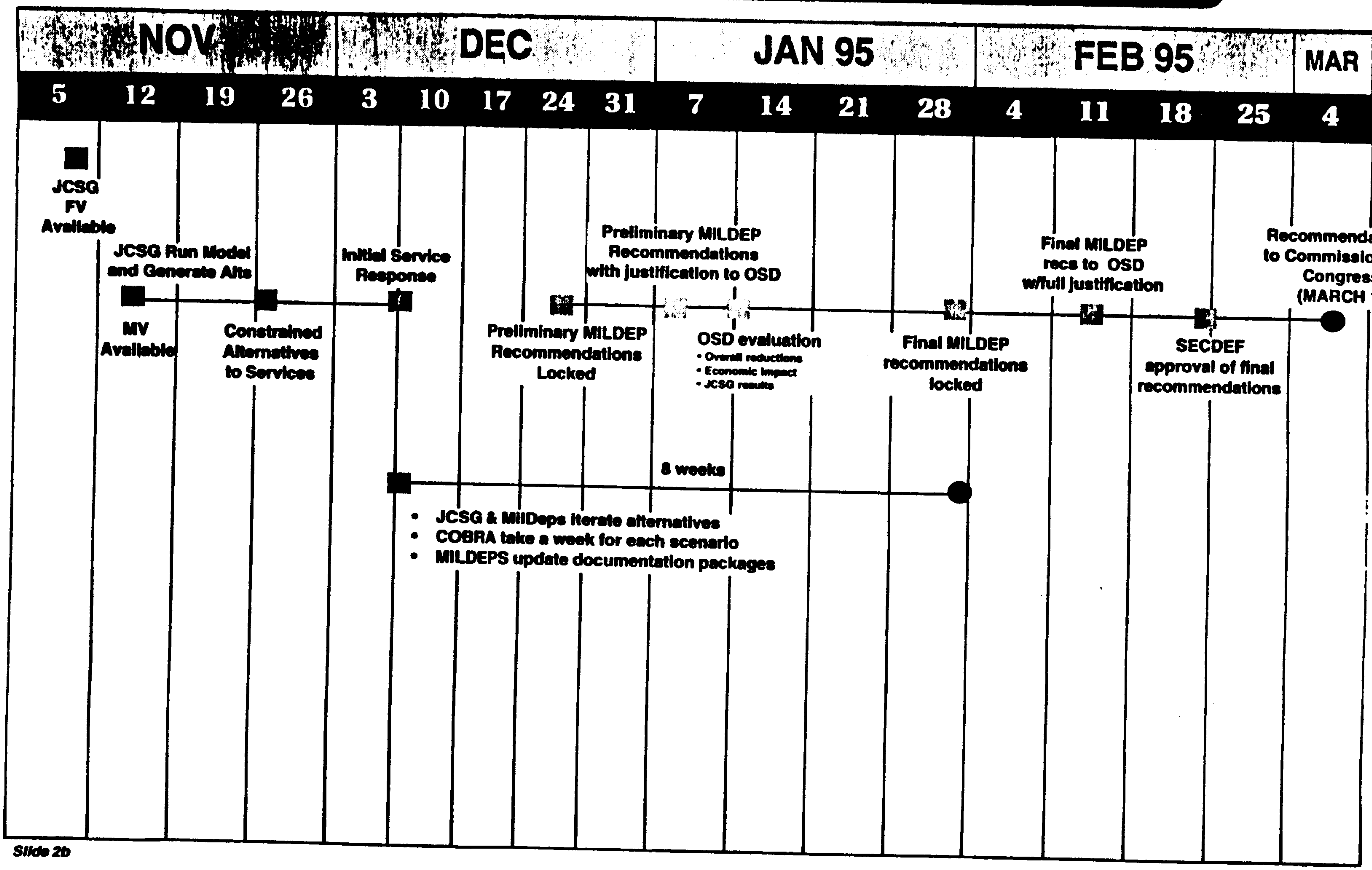
	# moves	# SITES	FV
max	4	9	68.4
	3	10	70.99
	2	10	69.6
	1	10	67.2
	0	11	68.9

Produced by Tri-Dept BRAC Team

The "Time Crunch"



The "Time Crunch"
Another Approach



11/3/94

TAB 21

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 16, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1325 hours on November 16, 1994, in Room 3E774, the Pentagon. The list of attendees and agenda are attached.

Mr. Finch began with introductory remarks and said the purpose of the meeting was to review the optimization model outputs of minimum sites with maximum military value. After a brief discussion of the military values submitted by the Military Departments, Mr. Gardner led discussion of the three optimization model outputs (attached), and pointed out that the "best" run closed 5 sites (2 large, 2 medium, and 1 small), moved all helicopter operations to Fort Rucker, conducted flight screening at 4 sites, drove 8 new moves , located primary pilot (JPATS) at 6 sites, and resulted in an average military value of 2.9 and functional value of 68.9. Airfield operations was the primary limiting resource.

The "second best" run closed 4 sites (1 large, 1 medium, and 2 small), moved all helicopter training to Fort Rucker, conducted flight screening at 2 (new) sites, resulted in 9 new moves, located primary pilot (JPATS) at six sites, and produced an average military value of 2.9 and a functional value of 72.8. Airfield operations was the only limiting resource.

The "third best" run also resulted in 4 closed sites (1 large, 2 medium, and 1 small), moved all helicopter training operations to Fort Rucker, conducted flight screening at 3 sites, created 7 new moves, located primary pilot (JPATS) at 6 sites, and produced an average military value of 2.9 and a functional value of 71.7 with airfield operations the primary limiting resource.

Then the Group briefly discussed possibilities of how to develop alternatives and the potential scope of alternatives most likely being 3 to 5 sites. The Group talked about the need to consider minimizing new functional moves and maximizing function consolidation and instructed the joint study team (JST) to emphasize these factors in its future work for the Group. Potential JPATS site and flight screening site limits were also talked about, but no decisions were reached.

There being no further matters to discuss, the meeting was adjourned at 1405 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 16, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Mark Bruggemeyer, Air Force
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG
Mr. Donald Stockton, DoDIG

[redacted]

UPT JOINT / CROSS-SERVICE GROUP AGENDA

(16 November 1994 Meeting -Rm 3E774)

1. Discussion of Military Values

2. Model "Run" Results

   A. MINNMV w/Rule that Avg Military Value $\geq$ Beginning Avg Mil Val.

      1) "2cd Best"

      2) "3rd Best"

3. Model Run Plans - Continued Use? Additional Rules?

   A. JPATS Site Limits

   B. Flight Screening Site Considerations

4. Future Schedule Discussion

- Present Alternatives to DASD (ER & BRAC)	November 21
- Alternatives Presented to Services	November 21
- Anticipated Meeting of the Steering Group	? ? ? ?
- Review Group Meeting	? ? ? ?
- "Iterative Process"	

5. SECURITY

CLOSE HOLD - WORKING PAPERS

MINNMV1.txt

best

OSD

MINNMV " 'Obj Func=' 48.23402 'Wgt Pmtr='

'Number of s ed to ' 14

"

Sites	COLM	CORP	FTRK	KING	LAUG	MRDN	PENS	RAND	RESE	SHEP	VANC	WTFD	HNDO	UAFA
Open	1	1	1	0	1	0	0	1	0	1	1	1	0	1
FLT_SCN	173	0	-	0	409	0	0	0	(0)	0	282	0	0	1,209
PRI_PLT	290	534	-	0	495	0	(0)	120	0	0	305	749	-	-
ALFT_TKR	0	0	-	0	0	0	(0)	0	(0)	297	455	-	-	-
IE2_MAT	0	273	-	0	0	0	0	0	0	0	0	0	-	-
ADE2_STK	(0)	0	-	0	0	0	0	0	0	372	0	-	-	-
ADV_BMBR	100	-	-	0	0	0	0	519	0	0	0	-	-	-
HELO	-	-	1,481	-	-	-	0	-	-	-	-	0	-	-
PRINTR_NFO	718	0	-	0	0	0	0	0	(0)	0	0	0	-	-
ADVNFO_STK	312	0	-	0	-	0	0	0	-	-	-	0	-	-
ADVNFO_PNL	0	0	-	0	0	0	0	0	0	222	0	-	-	-
"	3				1					3	1			
'Resource Utilization'														
AF_OPS	1.00	1.00	0.26	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.98
ARSPC	0.52	0.07	0.00	0.00	0.08	0.00	0.00	0.86	0.00	0.32	0.34	0.16	0.00	0.15
GNDTNG_CLS	0.72	0.36	0.26	0.00	0.57	0.00	0.00	0.15	0.00	0.56	0.41	0.29	0.00	0.22
GNDTNG_SIM	0.76	0.49	0.22	0.00	0.22	0.00	0.00	0.20	0.00	0.72	0.44	0.19	0.00	0.00
RAT	1.00	0.28	0.72	0.00	0.45	0.00	0.00	0.41	0.00	0.67	1.00	0.35	0.00	0.49

"

"

'Total Functional Value = ' 68.97424

"

'Current Avg. Military Value =' 2.714

'Avg. Military Value of this alternative =' 2.888889

11/16/94

"Best"

5 sites closed < 2 large, 2 Medium, 1 Small

Helo to Rucker

New moves = 8

Flt Screening at UAFA, Vance, Col., & Laughlin

Airfield Ops - Limiter (RAT at Col. & Vance)

Primary (JPATS) at 6 sites

MINNMV 2.CRL

2nd best

MINNMV "
'Number of s cted to ' 14 'Obj Func=' 53.25817 'Wgt Pmtr=' 95
"

Sites	COLM	CORP	FTRK	KING	LAUG	MRDN	PENS	RAND	RESE	SHEP	VANC	WTFD	HNDO	UAFA
Open	1	1	1	1	1	0	1	1	0	1	1	1	0	0
FLT_SCN	0	0	-	0	1,497	0	0	0	0	0	0	576	0	0
PRI_PLT	679	534	-	0	0	0	0	120	0	144	530	487	-	-
ALFT_TKR	0	0	-	305	0	0	323	0	0	0	124	-	-	-
IE2_MAT	0	273	-	0	0	0	0	0	0	0	0	0	-	-
ADE2_STK	0	0	-	0	0	0	100	0	0	272	0	-	-	-
ADV_BMBR	0	-	-	0	0	0	0	519	0	100	0	-	-	-
HELO	-	-	1,481	-	-	-	0	-	-	-	-	0	-	-
PRINTR_NFO	0	0	-	718	0	0	0	0	0	0	0	0	-	-
ADVNFO_STK	0	0	-	312	-	0	0	0	-	-	-	0	-	-
ADVNFO_PNL	0	0	-	0	0	0	0	0	0	222	0	-	-	-
"				3	1		2			2		1		
'Resource Utilization'														
AF_OPS	1.00	1.00	0.26	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.97	1.00	0.00	0.00
ARSPC	0.19	0.07	0.00	0.24	0.04	0.00	0.16	0.86	0.00	0.23	0.21	0.13	0.00	0.00
GNDTNG_CLS	0.27	0.36	0.26	0.43	0.11	0.00	0.02	0.15	0.00	0.48	0.36	0.20	0.00	0.00
GNDTNG_SIM	0.24	0.49	0.22	0.98	0.00	0.00	0.17	0.20	0.00	0.55	0.31	0.13	0.00	0.00
RAT	0.59	0.28	0.72	0.94	0.13	0.00	0.49	0.41	0.00	0.48	0.63	0.26	0.00	0.00
"														
"														

'Total Functional Value = ' 72.82433
"
'Current Avg. Military Value =' 2.714
'Avg. Military Value of this alternati 2.9

11/16/94

"2nd Best"

4 Sites Closed
- 1 large
- 1 Medium
- 2 Small

Helo to Rucker

New Moves = 9

Flight screening at Laughlin + Whiting

Airfield Ops - Limitor only

Primary (JPATS) at 6 sites

mnnmv>.txt   5th best   3 of 3 OSD

MINNMV " 'Obj Func=' 53.33145 'Wgt Pmtr='

'Number of s ed to ' 14

"

Sites	COLM	CORP	FTRK	KING	LAUG	MRDN	PENS	RAND	RESE	SHEP	VANC	WTFD	HNDO	UAFA
Open	1	1	1	1	1	0	0	1	0	1	1	1	1	0
FLT_SCN	0	0	-	0	1,274	0	0	0	0	0	241	0	558	0
PRI_PLT	679	534	-	0	102	0	0	0	0	104	327	749	-	-
ALFT_TKR	0	0	-	305	0	0	0	0	0	0	447	-	-	-
IE2_MAT	0	273	-	0	0	0	0	0	0	0	0	0	-	-
ADE2_STK	0	0	-	0	0	0	(0)	0	0	372	0	-	-	-
ADV_BMBR	0	-	-	0	0	(0)	0	619	0	0	0	-	-	-
HELO	-	-	1,481	-	-	-	0	-	-	-	-	0	-	-
PRINTR_NFO	0	0	-	718	0	0	0	0	0	0	0	0	-	-
ADVNFO_STK	0	0	-	312	-	0	0	0	-	-	-	0	-	-
ADVNFO_PNL	0	0	-	0	0	0	0	0	0	222	0	-	-	-
"				3	1					2	1			
'Resource Utilization'														
AF_OPS	1.00	1.00	0.26	1.00	1.00	0.00	0.00	0.92	0.00	1.00	1.00	1.00	0.53	0.00
ARSPC	0.19	0.07	0.00	0.24	0.05	0.00	0.00	0.94	0.00	0.24	0.34	0.16	0.08	0.00
GNDTNG_CLS	0.27	0.36	0.26	0.43	0.20	0.00	0.00	0.14	0.00	0.47	0.42	0.29	0.07	0.00
GNDTNG_SIM	0.24	0.49	0.22	0.98	0.04	0.00	0.00	0.19	0.00	0.61	0.45	0.19	0.00	0.00
RAT	0.59	0.28	0.72	0.94	0.20	0.00	0.00	0.44	0.00	0.45	1.00	0.35	0.04	0.00

"

"

'Total Functional Value = ' 71.71186

"

'Current Avg. Military Value =' 2.714

'Avg. Military Value of this alternative =' 2.9

11/16/94

"3RD Best"

4 sites Closed: 1 large, 2 Medium, 1 Small

Helo to Rucker

New Moves = 7

Flt Screening at Hondo, Vance, + Laughlin

Airfield Ops = Limitor (R,A,T. at Vance)

Primary at 6 sites

TAB 22

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 17, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1320 hours on November 17, 1994, in Room 3E752, the Pentagon. The list of attendees and agenda are attached.

Mr. Gardner began with the joint study team's (JST) discovery of an aberration in airfield operations. This required a normalization of heavy and small aircraft operations. All bases were normalized for small aircraft operations and the capacity matrix/resource table (attached) corrected accordingly. The optimization model was rerun, with the Chairman's prior approval, using the MINNMV formulation for "best", "second best", and "third best" outcomes. The outcomes were summarized on a display chart (copy attached) and reviewed. The Group noted that the new MINNMV run outputs varied substantially from those briefed at the previous meeting (November 16, 1994). A new MINSITE run was also produced and briefly reviewed (attached). After a short discussion, the Chairman concurred and approved the model outputs with normalized airfield operations data.

The Group then discussed limiting flight screening and primary pilot training sites as a fourth rule. The JST proposed flight screening be limited to the Air Force Academy (the function could be moved but there would be no site closure savings) and Hondo (a single function, low cost contract operation). Discussion on primary pilot training focused on economies of scale resulting in a consensus to try to minimize primary pilot sites. Following discussion, the Group agreed that constraining primary pilot training to four sites made good sense and adopted the fourth rule, which incorporated these two decisions, as presented.

Next, the Group discussed plans for further model runs, including a repeat of the MINSITE with penalty for new moves/sensitivity analysis and an unconstrained functional value run.

Mr. Gardner then described the possibility of using "freed-up assets" (airspace and outlying fields) from potential closure sites to increase the capacity of retained sites in the vicinity. Three pairs of sites fit this paradigm: NAS Pensacola/NAS Whiting, Columbus AFB/NAS Meridian, and NAS Kingsville/NAS Corpus Christi. Finally, the potential for combined-site synergism was discussed. For example, NAS Kingsville could use some of NAS Corpus Christi's excess airspace or vice-versa depending on the distribution of functions. The Group tasked the JST to pursue these possibilities.

The Group then reviewed the changing schedule.

[redacted]

There being no further matters to discuss, the meeting was adjourned at 1415 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 17, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Maj Gen Glenn Profitt, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Mark Bruggemeyer, Air Force
Lt Col Roy Rice (USAF), Tri-Department BRAC Group
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG
Mr. Donald Stockton, DoDIG

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UPT JOINT / CROSS-SERVICE GROUP AGENDA

(17 November 1994 Meeting -Rm 3E752)

1. Normalize Airfield Ops Drill

2. Model "Run" New Results

   A. MINNMV w/Rule that Avg Military Value ≥ Beginning Avg Mil Val.

      1) "2cd Best"

      2) "3rd Best"

   B. MinSite

   C. Limit Flight Screen/Primary Sites (4thRule)

2. Model Run Plans

   A. MinSite w/Penalty for New Moves/Sensitivity Analysis

   B. Functional Value

   C. Potential

      1. "Freed-Up Assets"

      2. Combined Site Synergism

3. Future Schedule Discussion

- Optimization Model Runs, Analysis, & Review JCSG Mtgs as Required	November 17-?
- Present Status Report to DASD (ER & BRAC)	November 18
- Alternatives Presented to Services - Format Attached	November (?)
- Anticipated Meeting of the Steering Group	November 18
- Review Group Meeting	November 22
- "Iterative Process"	

4. SECURITY

CLOSE HOLD - WORKING PAPERS

[redacted] y 1 of 3 /10/94 11/10/94 11/17/94 Updated

Site Military Value	Columbus	Corpus Christi	Ft Rucker	Kingsville	Laughlin	Meridian	Pensacola	Randolph	Reese	Sheppard	Vance	Whiting Field	Hondo	USAFA	
Functions for UPT	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	FV	DoD Requireme
Flight Screening	6.6	6.4	6.9	6.7	6.8	6.5	6.1	5.7	6.2	6.2	6.6	6.6	5.4	3.9	2,073
Primary Pilot	6.8	6.7	X2	7.0	7.0	6.8	6.4	6.7	6.0	6.3	6.8	6.6	0.0	0.0	2,493
Airlift/Tanker	6.3	6.5	X1	7.7	5.8	6.6	7.8	6.5	5.9	6.5	6.7	X1	0.0	0.0	752
Inter E2/C2, Adv Maritime	6.7	7.5	X2	7.6	6.5	6.6	7.5	6.4	5.9	6.5	6.8	7.4	0.0	0.0	273
Adv E2/C2, Strike	6.0	6.2	X1	7.3	5.4	6.3	7.6	6.0	5.7	6.2	5.3	X1	0.0	0.0	372
Adv Bomber/Fighter	6.4	X1	X1	7.3	5.5	6.8	7.8	6.8	5.6	6.3	5.5	X1	0.0	0.0	619
Helicopter	X2	X2	8.9	X2	X2	X2	6.5	X2	X2	X2	X2	7.2	0.0	0.0	1,481
Primary NFO, Inter NFO	6.9	6.7	X2	7.0	7.1	6.8	6.4	7.1	6.2	6.2	6.8	6.4	0.0	0.0	718
Adv NFO Strike	6.6	6.9	6.7	7.4	X3	6.5	7.6	6.1	X3	X3	X3	7.0	0.0	0.0	312
Adv NFO Panel	7.6	5.9	X1	7.2	6.8	7.0	7.6	6.9	7.2	7.7	7.5	X1	0.0	0.0	222

X1 - Runway length constraints | X2 - Lack of outlying fields | X3 - Too far from water

Resources	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap	Cap
Airfield Ops	784,371	752,136	7,441,016	389,136	787,572	389,136	270,072	619,768	686,547	646,988	685,390	865,392	554,664	651,630
Airspace	116,973	315,810	0	253,418	218,889	128,879	181,790	49,494	106,925	166,922	114,708	147,888	43,560	49,368
Ground Training Classroom	542,080	464,640	5,523,408	859,584	193,600	406,560	3,915,544	696,960	696,960	348,480	373,648	554,400	116,160	77,440
Ground Training Simulators	77,440	46,464	212,960	61,952	61,952	54,208	135,520	92,928	61,952	92,928	61,952	104,544	0	0
Aprons	209,840	540,367	392,726	240,614	217,378	241,166	299,395	501,946	282,496	394,125	223,645	386,667	251,200	46,122
* Normalized Airfield Ops	—	—	—	537,008	—	537,008	326,517	—	—	—	—	—	—	—

Resources per student	Flight Screening	Primary Pilot	Airlift/Tanker	Inter E2/C2, Adv Maritime	Adv E2/C2, Strike	Adv Bomber/Fighter	Helicopter	Primary NFO, Inter NFO	Adv NFO Strike	Adv NFO Panel	
Training Sorties	24	94	88	44	166	132	137	33	70	13	Maximum requirements where duplicate training
Airfield Ops	526	1,156	405	496	1,393	926	1,288	248	280	39	"
Airspace	6	32	61	21	97	75	N/A	37	53	0	"
Ground Training Classroom	14	213	186	202	196	156	955	371	144	304	"
Ground Training Simulators	0	27	42	30	98	29	32	44	53	80	"
Aprons	18.81	181.92	357.60	190.01	303.45	357.35	190.62	60.31	239.59	201.00	"
* Normalized Airfield Ops	—	—	—	—	1922	—	—	—	386	54	

#Aircraft/student	0.0555	0.2274	0.2384	0.2088	0.3817	0.5105	0.2681	0.1058	0.1346	0.0402
SQ YDS/Aircraft	339	800	1,500	910	795	700	711	570	1,780	5,000
# Aircraft Required	113	567	179	57	142	316	397	76	42	9

* Normalized Light/Heavy aircraft → Airfield Ops

[redacted]

Optimization Model Results

Run	Col	Corp	Ruck	Kings	Lau	Mer	Pens	Rand	Rees	Shep	Vance	Whit	Hondo	USAF	Mil Val	Func Val
Best	0	0	0	0	0	X	0	0	X	0	0	X	0	0	3	71.6
Second	0	0	0	0	0	X	X	0	X	0	0	0	0	X	2.9	71.4
Third	0	0	0	0	0	X	0	X	X	0	0	0	X	0	2.9	71.2

Average Military Value: 2.7

Maximum Functional Value: 73.192

EXCESS CAPACITY

Run	Flight Ops (Helo/FW)	Airspace (Blk/hrs)	Rmp/Apn/Tax (SY)	New Moves
Best	5,838,683 / 332,331	1,241,246	1,720,719	7
Second	5,730,620 / 224,268	1,159,427	1,485,537	9
Third	5,532,417 / 26,065	1,845,146	1,362,805	10

3 of 3

OSD

MINSITES " 'Obj Func=' 63.07463 'Wgt Pmtr=' 95

'Number of [illegible]icted to ' 14

"

Sites	COLM	CORP	FTRK	KING	LAUG	MRDN	PENS	RAND	RESE	SHEP	VANC	WTFD	HNDO	UAFA
Open	1	1	1	1	1	0	1	0	1	1	1	1	0	0
FLT_SCN	0	0	-	0	1,497	0	0	0	0	0	0	576	0	0
PRI_PLT	443	364	-	0	0	0	0	0	594	100	558	434	-	-
ALFT_TKR	0	0	-	152	0	0	500	0	0	0	100	-	-	-
IE2_MAT	0	273	-	0	0	0	0	0	0	0	0	0	-	-
ADE2_STK	0	102	-	0	0	0	0	0	0	270	0	-	-	-
ADV_BMBR	294	-	-	191	0	0	134	0	0	0	0	-	-	-
HELO	-	-	1,481	-	-	-	0	-	-	-	-	0	-	-
PRINTR_NFO	0	0	-	718	0	0	0	0	0	0	0	0	-	-
ADVNFO_STK	0	0	-	312	-	0	0	0	-	-	-	0	-	-
ADVNFO_PNL	0	0	-	0	0	0	0	0	0	222	0	-	-	-

"

'Resource Utilization'

	COLM	CORP	FTRK	KING	LAUG	MRDN	PENS	RAND	RESE	SHEP	VANC	WTFD	HNDO	UAFA
AF_OPS	1.00	1.00	0.26	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.93	0.00	0.00
ARSPC	0.31	0.09	0.00	0.26	0.04	0.00	0.22	0.00	0.18	0.18	0.21	0.12	0.00	0.00
GNDTNG_CLS	0.26	0.33	0.26	0.43	0.11	0.00	0.03	0.00	0.18	0.41	0.37	0.18	0.00	0.00
GNDTNG_SIM	0.26	0.60	0.22	0.97	0.00	0.00	0.18	0.00	0.26	0.51	0.31	0.11	0.00	0.00
RAT	0.88	0.28	0.72	1.00	0.13	0.00	0.76	0.00	0.38	0.37	0.61	0.23	0.00	0.00

"

"

'Total Functional Value = ' 72.59856

nov17sit.txt

minsites = 10

11/17/94

TAB 23

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 21, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1320 hours on November 21, 1994, in Room 3E774, the Pentagon. The list of attendees is attached.

Mr. Finch stated the purpose of the meeting was to review development of alternatives. Mr. Gardner led the discussion the optimization model outputs and proposed alternatives.

First, the Group discussed model run output (MIN PRIME) and the potential alternative (attached) which was developed by optimizing military value with a 5 percent weight on functional value, incorporating the original 3 rules plus the 4th rule limiting flight screening to Hondo and the Air Force Academy and minimizing primary pilot to 4 sites. The output also required 8 new functional moves. This proposed alternative would close the undergraduate flying training functions at three locations (NAS Meridian, Reese AFB, and NAS Whiting Field). Additionally, the potential alternative would move Navy undergraduate helicopter pilot training to Fort Rucker and use excess capacity at Fort Rucker. The Group agreed the output was a rational basis for a 3-site closure alternative.

Then the Group discussed the MIN PRIME/2 run output (attached) and potential alternative which would locate primary pilot training at four sites; retain Air Force's flight screening at Hondo, and the United States Air Force Academy; close the undergraduate flying training functions at four locations (NAS Meridian, Reese AFB, NAS Whiting Field, and Vance AFB); collocate Navy undergraduate helicopter pilot training at Fort Rucker, and require 9 new functional moves. The MIN PRIME/2 output differed from MIN PRIME as the airspace and outlying airfield capacities from NAS Whiting and NAS Meridian (closed in MIN PRIME) were added to NAS Pensacola and Columbus AFB, respectively. The MIN PRIME/2 output was an improvement over MIN PRIME as it further reduced excess capacity and closed another site.

Mr. Gardner then discussed the JST's review of "regional pairs" (attached) which highlighted additional capacity for airfield operations at retained sites generated by keeping outlying airfields (and airspace) from closed sites nearby. The Group concurred with the concept.

Then the Group talked about the output (attached) for MIN PRIME/3 with minimum moves of functions to new locations. This potential alternative limited primary pilot to four sites and required only one new functional move to a new location. However, the output gave an unusual functional distribution. In particular, it moved Air Force bomber/fighter track to Randolph AFB and airlift/tanker track to Sheppard AFB and NAS Kingsville which

[redacted]

did not meet sound military judgement. The MIN PRIME/3 output did indicate potential for reduced new functional moves.

Next, the group discussed the JST's initiative to use the MIN PRIME/2 run and its underlying rules as the baseline for further non-model analysis. The Group concurred.

The Group then considered the analysis (attached) which used MIN PRIME/2 as the baseline to potentially close undergraduate flying training functions at four sites. Potential issues noted on the attachment were discussed. An effort was made to consolidate functions and minimize new moves. The Group agreed that the product was a rational alternative to close four sites.

The Group then discussed the potential to close undergraduate flying training functions at five locations. Analysis (attached) indicated that it was possible to close training functions at five sites based on capacity analyses and reasonable functional moves. The fifth site would be NAS Corpus Christi, Texas. Two functional moves to new locations would allow this potential alternative (Advanced Bomber/Fighter Training to NAS Kingsville, and Maritime Training to Pensacola). The JST pointed out that two additional outlying airfields would be required for NAS Pensacola to achieve the needed capacity. The Group consensus was that existing outlying airfields in the NAS Pensacola/NAS Whiting area could be upgraded at minimal cost to meet the JPATS 5,000-foot runway standard.

Next, the Group considered a "regionalization" analytical excursion from the MIN PRIME/2 baseline. It proposed keeping NAS Meridian open in conjunction with Columbus AFB as a Primary Pilot (JPATS) site and closing NAS Corpus Christi. The excursion required three new outlying fields (two in the NAS Meridian/Columbus AFB area, and one at Laughlin AFB). NAS Kingsville would use a NAS Corpus Christi outlying field. The excursion resulted in creating excess capacity at several remaining sites and additional military construction (MILCON) costs with no additional site closures. Also, potential JPATS consolidation cost-savings data was not available as justification. The Group decided not to pursue the concept further.

Following Group discussion and consensus, Mr. Finch directed the JST to recast the proposed alternatives by placing emphasis on minimizing functional moves rather than on maximizing functional value in order to reduce short-term costs and to also work toward consolidating functions at single sites, or the lowest number of sites feasible.

There being no further matters to discuss, the meeting was adjourned at 1445 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 21, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Mike Parmentier, study team leader, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
Mr. Todd Weiler, Army
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Maj Gen Glenn Profitt, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Mark Bruggemeyer, Air Force
Lt Col Roy Rice (USAF), Tri-Department BRAC Group
CAPT J. B. Renninger, Joint Staff(J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG
Mr. Donald Stockton, DoDIG

[redacted]

Optimization Model Results

Run	Col	Corp	Ruck	Kings	Lau	Mer	Pens	Rand	Rees	Shep	Vance	Whit	Hondo	USAF	Mil Val	Func Val
Best	0	0	0	0	0	X	0	0	X	0	0	X	0	0	3	71.6
Second	0	0	0	0	0	X	X	0	X	0	0	0	0	X	2.9	71.4
Third	0	0	0	0	0	X	0	X	X	0	0	0	X	0	2.9	71.2
Min Prime	0	0	0	0	0	X	0	0	X	0	0	X	0	0	3	70.8
Min Prime 2	0	0	0	0	0	X	0	0	X	0	X	X	0	0	3	71.5
Min Prime 3	0	0	0	0	0	X	0	0	X	0	X	X	0	0	3	69.7

Average Military Value: 2.7 **Maximum Functional Value: 73.192**

EXCESS CAPACITY

Run	Flight Ops (Helo/FW)	Airspace (Blk/hrs)	Rmp/Apn/Tax (SY)	New Moves
Best	5,838,683 / 332,331	1,241,246	1,720,719	7
Second	5,730,620 / 224,268	1,159,427	1,485,537	9
Third	5,532,417 / 26,065	1,845,146	1,362,805	10
Min Prime	5,840,522 / 216,887	1,280,713	1,620,567	8
Min Prime 2	5,623,181 / 64,699	1,127,686	1,494,965	9
Min Prime 3	5,575,087 / 55,779	1,093,636	1,498,614	1

REGIONAL PAIRS

	FLORIDA		MISSISSIPPI		TEXAS	
	WHITING	PENSACOLA	COLUMBUS	MERIDIAN	KINGSVILLE	CORPUS
Both Open	653,921	326,517	784,371	537,008	537,008	752,136
One Closed	X	647,815	996,770	X	966,800	X

FOUR SITE ALTERNATIVE

BASE	Primary (PTR/OPS)	Airlift/Tanker (PTR/OPS)	Int E2/Mar (PTR/OPS)	Adv E2/Strike (PTR/OPS)	Bomber/Fighter (PTR/OPS)	Pri/Int NFO (PTR/OPS)	Adv NFO Strike (PTR/OPS)	NFO Panel NAV (PTR/OPS)	TOTAL (OPS available/required)
Columbus	567 655,452				369 341,694				996,270 997,146
Corpus	347 401,132		273 135,408						537,240 536,540
Kingsville				372 714,984					751,904 714,984
Laughlin	681 787,236								787,572 787,236
Pensacola	301 347,956					718 178,064	312 120,432		647,815 646,452
Randolf	238 275,128	752 304,560						222 11,988	619,768 591,676
Sheppard	359 415,004				250 231,500				646,988 646,504
TOTAL	**2493**	**752**	**273**	**372**	**619**	**718**	**312**	**222**	

POTENTIAL ISSUES
1. Primary at six sites
2. IFF not accounted for
3. Number of missions at Pensacola
4. Excess Capacity approx. zero (impact of JPATS?)

ADVANTAGES
1. No "new" moves
2. Minimizes excess capacity

FUNCTIONAL CONSOLIDATION
- All Helo's to Rucker
- 5 functions at one site
- 2 functions at two sites
- 1 function at six sites

FIVE SITE ALTERNATIVE

BASE	Primary (PTR/OPS)	Airlift/Tanker (PTR/OPS)	Int E2/Mar (PTR/OPS)	Adv E2/Strike (PTR/OPS)	Bomber/Figh (PTR/OPS)	Pri/Int NFO (PTR/OPS)	Adv NFO Strike (PTR/OPS)	NFO Panel NAV (PTR/OPS)	TOTAL (OPS available/required
Columbus	684 790,704				223 206,498				996,770 997,202
Kingsville				372 714,984	146 135,196				966,800 850,180
Laughlin	681 787,236								787,572 787,236
Pensacola	507 586,092		273 135,408			718 178,064	312 120,432		1,019,840 1,019,996
Randolf	262 302,872	752 304,560						222 11,988	619,768 619,420
Sheppard	359 415,004				250 231,500				646,988 646,504
TOTAL	**2493**	**752**	**273**	**372**	**619**	**718**	**312**	**222**	

POTENTIAL ISSUES

1. IFF not accounted for
2. Requires new OLF's

ADVANTAGES

1. Only one "new" move
2. Minimizes excess capacity

FUNCTIONAL CONSOLIDATION

- All Helo's to Rucker
- 6 functions at one site
- 1 functions at two sites
- 1 function at five sites

MINIMIZE PRIMARY SITES

BASE	Primary (PTR/OPS)	Airlift/Tanker (PTR/OPS)	Int E2/Mar (PTR/OPS)	Adv E2/Strike (PTR/OPS)	Bomber/Fighter (PTR/OPS)	Pri/Int NFO (PTR/OPS)	Adv NFO Strike (PTR/OPS)	NFO Panel NAV (PTR/OPS)	TOTAL (OPS available/required)
Columbus	808 934,048								784,371 + 150,000(1 OLF) 934,048
Meridian	515 595,340								537,008 + 150,000(1 OLF) 595,340
Kingsville				372 714,984	369 341,694				966,800 + 150,000(1 OLF) 1,056,678
Laughlin	811 937,516								787,572 + 150,000(1 OLF) 937,516
Pensacola			273 135,408			718 178,064	312 120,432		647,815 433,904
Randolf		752 304,560						222 11,988	619,768 316,548
Sheppard	359 415,004				250 231,500				646,988 646,504

TAB 24

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BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 22, 1994

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1330 hours on November 22, 1994, in Room 3E752, the Pentagon. The list of attendees is attached.

Mr. Finch stated the purpose of the meeting was to review and finalize development of alternatives to be forwarded to the Military Departments for further analyses.

Mr. Gardner led discussion of three proposed alternative scenarios and the memorandum to be sent to the Military Departments. The Group questioned whether the scenario descriptions of the alternatives were sufficient. Group consensus was that more information was preferred over less. A detailed review commenced with Group members suggesting minor changes to accommodate tone, description and detail of alternative format, as well as points of clarification to the functional scenarios.

Based on its analyses and combined military judgement and experience, the Group agreed that the three alternative scenarios should be sent to the Military Departments. Mr. Finch directed the JST to refine the alternative package as agreed upon by the Group. As a requirement set by the Chairman of the BRAC 95 Steering Group, Mr. Finch planned to brief, this afternoon, the Deputy Assistant Secretary of Defense for Installations (formerly titled the Deputy Assistant Secretary of Defense for Economic Reinvestment and BRAC) on the Group's functional closure and realignment alternatives. Additionally, Mr. Finch anticipated that the alternatives would be sent to the Military Departments tomorrow and directed that a copy of the package be attached to the minutes of this meeting (attached).

There being no further matters to discuss, the meeting was adjourned at 1455 hours.

Approved: Lou Finch
Chairman

[redacted]

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

November 22, 1994

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Mr. James Berry, OSD (Personnel and Readiness)
LTC Tom Hinkel, Army
CAPT Brian Buzzell, Navy
Maj Gen Glenn Profitt, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Mark Bruggemeyer, Air Force
CAPT J. B. Renninger, Joint Staff(J-7)
Col Paul Thompson, OSD (Base Closure)
Mr. Dave Wyte, DoDIG
Mr. Donald Stockton, DoDIG

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

PERSONNEL AND
READINESS

23 NOV 1994

MEMORANDUM FOR THE DIRECTOR ARMY BASING STUDY
EXECUTIVE DIRECTOR, BASE STRUCTURE ANALYSIS TEAM
SPECIAL ASSISTANT TO THE CSAF FOR REALIGNMENT AND TRANSITION (USAF/RT)

SUBJECT: BRAC Alternatives Developed by the Undergraduate Pilot Training (UPT) Joint Cross-Service Group

This memorandum forwards the results of the UPT Joint Cross-Service Group's efforts. It provides three UPT BRAC alternatives for consideration and assessment by the military departments, along with an illustrative scenario for each alternative. Every alternative reduces excess capacity while maintaining high average military value. In developing these alternatives, the Joint Group focused on limiting moves of functions to new sites and on consolidation of functions. Further, the Joint Group's analysis incorporated the principles of the Deputy Secretary's memorandum on "Consolidation of Fixed-Wing Flight Training," dated October 24, 1994.

In responding to these alternatives, you are requested to provide your assessments and comments in accordance with the guidelines and schedule provided by the OSD BRAC Office. We are especially interested in identifying any analytical considerations that may have been overlooked or were beyond the purview of the Joint Group (e.g., capacity requirements for graduate level courses or collateral functions at UPT sites, disruption of operations resulting from functional moves, introduction of new training systems (JPATS), etc.).

Members of the Joint Group's Study Team are available to answer your questions and provide data used in this analysis. The staff point of contact is Mr. Dan Gardner, Pentagon Rm 1C757, COMM (703) 614-9481, DSN 225-2618.

Louis C. Finch
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Chairman

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Deputy Assistant Secretary of the Army
Training and Education

Glenn A. Profitt II
Major General, USAF
Director, Plans and Operations
HQ Air Education and Training Command

Brian V Buzzell

CAPT Brian V. Buzzell
Department of the Navy
Principal Representative

Attachments: As Stated

a. OPTION NUMBER:	b. CANDIDATE INSTALLATION:	c. DATE:
1	UNDERGRADUATE PILOT TRAINING	23 NOV 1994

d. INSTALLATION CATEGORY:

e. SCENARIO DESCRIPTION / SUMMARY:

THREE SITE CLOSURE. THIS ALTERNATIVE CLOSES NAS MERIDIAN, REESE AIR FORCE BASE, AND NAS WHITING FIELD. ALL SERVICE UHPT IS CONDUCTED AT FORT RUCKER. THE DISTRIBUTION OF FUNCTIONS AT REMAINING SITES ARE LEFT TO THE SERVICES. THE ALTERNATIVE ADHERED TO RESTRICTIONS OUTLINED IN THE COVER MEMORANDUM.

THE ALTERNATIVE WAS DEVELOPED USING THE OPTIMIZATION MODEL. IT MAXIMIZED AVERAGE MILITARY VALUE, FACTORED IN FUNCTIONAL VALUE, AND REDUCED EXCESS CAPACITY OF EXISTING AIRFIELD COMPLEXES. IN THE ILLUSTRATIVE SCENARIO, MINIMUM MOVEMENT OF FUNCTIONS TO NEW SITES AND CONSOLIDATION/COLLOCATION OF FUNCTIONS AT SINGLE SITES WERE ALSO EMPHASIZED.

f. INSTALLATIONS IN SCENARIO:

INSTALLATION NAME	STRATEGY (CLOSE/GAIN/LOSE/DEACTIVATE)	COMPLETION YEAR
MERIDIAN NAS	CLOSE. STRIKE TRAINING TO MOVE AT DISCRETION OF NAVY.	NLT FY 2001
REESE AFB	CLOSE. SUPT TRAINING TO MOVE AT DISCRETION OF AIR FORCE.	"
WHITING NAS	CLOSE. MOVE HELICOPTER TRAINING TO FORT RUCKER. MOVE PRIMARY TRAINING AT DISCRETION OF DON.	"
FORT RUCKER	GAIN DON HELICOPTER TRAINING.	"

g. MAJOR ACTIVITIES AND/OR ORGANIZATIONS AFFECTED (OR POTENTIALLY AFFECTED):

UIC/SRC	DESCRIPTION:	PERSONNEL STRENGTH: OFF/WOF/ENL/CIV/NAF/OTHER	STRATEGY: DESTINATION/YEAR
	NOT ADDRESSED BY THIS GROUP.		

h. REMARKS

AN ILLUSTRATIVE SCENARIO IS ATTACHED THAT CONSOLIDATES/COLLOCATES FUNCTIONS AND ALSO REDUCES THE NUMBER OF FUNCTIONAL MOVES TO NEW SITES.

ALTERNATIVE 1 SCENARIO
THREE-SITE CLOSURE (GRADUATES PER YEAR)

While consistent with modeled results with respect to sites open and closed, this scenario was developed by the Joint Group to demonstrate a reasonable allocation of functions to the sites remaining open.

FIXED-WING UFT	PRIMARY	AIRLIFT-TANKER	MARITIME	BOMBER-FIGHTER	STRIKE	PRIMARY NFO	NFO STRIKE	PANEL NAV	AFLD OPS AVAILABLE	AFLD OPS REQUIRED
COLUMBUS	370			369					784371	769414
CORPUS	262		273						537240	438280
KINGSVILLE					372				751904	714984
LAUGHLIN	681								787572	787236
MERIDIAN										
PENSACOLA	301					718	312		647815	646452
RANDOLPH	520							222	619768	613108
REESE										
SHEPPARD	359			250					646988	646504
VANCE		752							685390	304560
WHITING										
TOTAL UPT	2493	752	273	619	372	718	312	222	5461048	4920538
ROTARY WING	UHPT									
FT RUCKER	1481								7441016	1907528
FLT SCREENING	FLT SCR									
HONDO	1037								554664	545462
USAFA	1036								651630	544936
TOTAL	2073								1206294	1090398

ASSUMPTIONS:

1. NAS Kingsville utilizes excess capacity from existing outlying airfield.
2. NAS Pensacola utilizes excess capacity from existing outlying airfield.

Note: It is possible to accomplish this alternative without using the excess capacity of outlying fields from sites identified for closure. However, in the scenario above, some of this excess capacity is used to allow more flexibility in the functional spread.

a. OPTION NUMBER:	b. CANDIDATE INSTALLATION:	c. DATE:
2	UNDERGRADUATE PILOT TRAINING	23 NOV 1994

d. INSTALLATION CATEGORY:

e. SCENARIO DESCRIPTION / SUMMARY:

FOUR SITE CLOSURE. THIS ALTERNATIVE CLOSES NAS MERIDIAN, REESE AFB, VANCE AFB, AND NAS WHITING. ALL SERVICE UHPT IS CONDUCTED AT FORT RUCKER. THIS ALTERNATIVE CAPTURED CAPACITY FROM OUTLYING FIELDS CLOSED FROM ALTERNATIVE ONE AND RESULTED IN THE CLOSURE OF AN ADDITIONAL BASE. GIVEN THE FOUR CLOSURES, THE GROUP DEVELOPED A POSSIBLE SCENARIO MINIMIZING MOVES AND CONSOLIDATING FUNCTIONS (SEE ALTERNATIVE TWO SCENARIO ATTACHED).

THE ALTERNATIVE WAS DEVELOPED USING THE OPTIMIZATION MODEL CONSTRAINED BY ALTERNATIVE ONE AND ASSUMING REDISTRIBUTION OF EXCESS AIRFIELD OPERATIONS CAPACITY AS DESCRIBED ABOVE, SHARED AIRSPACE BETWEEN RANDOLPH AFB AND NAS CORPUS CHRISTI, AND ADDING MINOR MILCON FOR RAMP SPACE AT COLUMBUS AFB. IT MAXIMIZED AVERAGE MILITARY VALUE, FACTORED IN FUNCTIONAL VALUE, AND REDUCED EXCESS CAPACITY OF EXISTING AIRFIELD COMPLEXES. IN THE ILLUSTRATIVE SCENARIO, MINIMUM MOVEMENT OF FUNCTIONS TO NEW SITES AND CONSOLIDATION OF FUNCTIONS AT SINGLE SITES WERE ALSO EMPHASIZED.

f. INSTALLATIONS IN SCENARIO:

INSTALLATION NAME	STRATEGY (CLOSE/GAIN/LOSE/DEACTIVATE)	COMPLETION YEAR
MERIDIAN NAS	CLOSE. STRIKE TRAINING MOVE AT DISCRETION OF DON.	NLT FY 2001
REESE AFB	CLOSE. SUPT TRAINING TO MOVE AT DISCRETION OF USAF.	"
VANCE AFB	CLOSE. SUPT TRAINING TO MOVE AT DISCRETION OF USAF.	"
WHITING NAS	CLOSE. MOVE HELICOPTER TRAINING TO FORT RUCKER. PRIMARY TRAINING TO MOVE AT DISCRETION OF DON.	"
FORT RUCKER	GAIN. DON HELICOPTER TRAINING.	"

g. MAJOR ACTIVITIES AND/OR ORGANIZATIONS AFFECTED (OR POTENTIALLY AFFECTED):

UIC/SRC	DESCRIPTION:	PERSONNEL STRENGTH: OFF/WOF/ENL/CIV/NAF/OTHER	STRATEGY: DESTINATION/YEAR
	NOT ADDRESSSED BY THIS GROUP		

UIC/SRC	DESCRIPTION:	PERSONNEL STRENGTH: OFF/WOF/ENL/CIV/NAF/OTHER	STRATEGY: DESTINATION/YEAR

h. REMARKS

AN ILLUSTRATIVE SCENARIO IS ATTACHED THAT CONSOLIDATES/COLLOCATES FUNCTIONS AND ALSO REDUCES THE NUMBER OF FUNCTIONAL MOVES TO NEW SITES.

ALTERNATIVE 2 SCENARIO
FOUR-SITE CLOSURE (GRADUATES PER YEAR)

While consistent with modeled results with respect to sites open and closed, this scenario was developed by the Joint Group to demonstrate a reasonable allocation of functions to the sites remaining open.

	PRIMARY	AIRLIFT-TANKER	MARITIME	BOMBER-FIGHTER	STRIKE	PRIMARY NFO	NFO STRIKE	PANEL NAV	AFLD OPS AVAILABLE	AFLD OPS REQUIRED
COLUMBUS	566			369					996770	995990
CORPUS	347		273						537240	536540
KINGSVILLE					372				751904	714984
LAUGHLIN	681								787572	787236
MERIDIAN										
PENSACOLA	301					718	312		647815	646452
RANDOLPH	239	752						222	619768	592832
REESE										
SHEPPARD	359			250					646988	646504
VANCE										
WHITING										
TOTAL	2493	752	273	619	372	718	312	222	4988057	4920538
ROTARY WING	UHPT									
FT RUCKER	1481								7441016	1907528
FLT SCREENING	FLT SCR									
HONDO	1037								554664	545462
USAFA	1036								651630	544936
TOTAL	2073								1206294	1090398

ASSUMPTIONS:

1. NAS Kingsville utilizes excess capacity from existing outlying airfield.
2. Columbus AFB utilizes excess capacity from existing outlying airfield.
3. NAS Pensacola utilizes excess capacity from existing outlying airfield.
4. Randolph AFB uses some NAS Corpus Christi airspace.
5. Requires MILCON for approximately 25,000 square yards of ramp space at Columbus AFB.

a. OPTION NUMBER:	b. CANDIDATE INSTALLATION:	c. DATE:
3	UNDERGRADUATE PILOT TRAINING	23 NOV 1994

d. INSTALLATION CATEGORY:

e. SCENARIO DESCRIPTION / SUMMARY:

FIVE SITE CLOSURE. THIS ALTERNATIVE CLOSES NAS CORPUS CHRISTI, NAS MERIDIAN, REESE AFB, VANCE AFB, AND NAS WHITING FIELD. ALL SERVICE UHPT IS CONDUCTED AT FORT RUCKER. THIS ALTERNATIVE BUILT ON ALTERNATIVE TWO CAPTURING THE OUTLYING FIELD AND AIR SPACE CAPACITY FROM CORPUS CHRISTI CLOSURE. IN ADDITION MINOR MILCON WAS REQUIRED TO ADD CAPACITY (TWO USABLE OUTLYING FIELDS) AT PENSACOLA. THE GROUP DEVELOPED A SCENARIO MINIMIZING MOVES AND CONSOLIDATING FUNCTIONS (SEE ALTERNATIVE THREE SCENARIO ATTACHED).

THE ALTERNATIVE WAS DEVELOPED MANUALLY BY EXTENDING THE LOGIC FROM OPTION TWO. IT MAXIMIZED AVERAGE MILITARY VALUE, FACTORED IN FUNCTIONAL VALUE, AND REDUCED EXCESS CAPACITY OF EXISTING AIRFIELD COMPLEXES. IN THE ILLUSTRATIVE SCENARIO, MINIMUM MOVEMENT OF FUNCTIONS TO NEW SITES AND CONSOLIDATION OF FUNCTIONS AT SINGLE SITES WAS ALSO EMPHASIZED.

f. INSTALLATIONS IN SCENARIO:

INSTALLATION NAME	STRATEGY (CLOSE/GAIN/LOSE/DEACTIVATE)	COMPLETION YEAR
CORPUS CHRISTI NAS	CLOSE. PRIMARY, MARITIME TRAINING MOVE AT DISCRETION OF DON.	NLT FY 2001
MERIDIAN NAS	CLOSE. STRIKE TRAINING MOVE AT DISCRETION OF DON	"
REESE AFB	CLOSE. SUPT TRAINING TO MOVE AT DISCRETION OF USAF.	"
VANCE AFB	CLOSE. SUPT TRAINING TO MOVE AT DISCRETION OF USAF.	"
WHITING AFB	CLOSE. MOVE HELICOPTER TRAINING TO FORT RUCKER. MOVE PRIMARY AT DISCRETION AT DON.	"
FORT RUCKER	GAIN DON HELICOPTER TRAINING	"

g. MAJOR ACTIVITIES AND/OR ORGANIZATIONS AFFECTED (OR POTENTIALLY AFFECTED):

UIC/SRC	DESCRIPTION:	PERSONNEL STRENGTH: OFF/WOF/ENL/CIV/NAF/OTHER	STRATEGY: DESTINATION/YEAR
	NOT ADDRESSED BY THIS GROUP		

UIC/SRC	DESCRIPTION:	PERSONNEL STRENGTH: OFF/WOF/ENL/CIV/NAF/OTHER	STRATEGY: DESTINATION/YEAR

h. REMARKS

AN ILLUSTRATIVE SCENARIO IS ATTACHED THAT CONSOLIDATES/COLLOCATES FUNCTIONS AND ALSO REDUCES THE NUMBER OF FUNCTIONAL MOVES TO NEW SITES.

ALTERNATIVE 3 SCENARIO
FIVE-SITE CLOSURE (GRADUATES PER YEAR)

While consistent with modeled results with respect to sites open and closed, this scenario was developed by the Joint Group to demonstrate a reasonable allocation of functions to the sites remaining open.

	PRIMARY	AIRLIFT-TANKER	MARITIME	BOMBER-FIGHTER	STRIKE	PRIMARY NFO	NFO STRIKE	PANEL NAV	AFLD OPS AVAILABLE	AFLD OPS REQUIRED
COLUMBUS	684			223					996770	997202
CORPUS										
KINGSVILLE				146	372				966800	850180
LAUGHLIN	681								787572	787236
MERIDIAN										
PENSACOLA	507		273			718	312		1019840	1019996
RANDOLPH	262	752						222	619768	619420
REESE										
SHEPPARD	359			250					646988	646504
VANCE										
WHITING										
TOTAL	2493	752	273	619	372	718	312	222	5037738	4920538
ROTARY WING	UHPT									
FT RUCKER	1481								7441016	1907528
FLT SCREENING	FLT SCR									
HONDO	1037								554664	545462
USAFA	1036								651630	544936
TOTAL	2073								1206294	1090398

ASSUMPTIONS:

1. NAS Kingsville utilizes excess capacity from existing outlying airfield.
2. Columbus AFB utilizes excess capacity from existing outlying airfield.
3. NAS Pensacola utilizes excess capacity from existing outlying airfield: two of these airfields require runway extensions to 5,000 feet to be useable.
4. Randolph AFB uses some of NAS Corpus Christi airspace.

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 23, 1995

Minutes

The Joint Cross-Service Group on Undergraduate Pilot Training (UPT) meeting was convened by Mr. Lou Finch, DUSD(R), at 1430 hours on February 23, 1995, in Room 1C757, the Pentagon. The list of attendees is attached.

Mr. Finch pointed out that Office of the Secretary of Defense review of proposed base closure and realignment recommendations was nearing a close. The Secretary was expected to finalize his recommendations to the Commission by March 1. He stated the purpose of the meeting was to review the Military Departments' recommendations relating to the Group's work. He also noted the Secretary of the Navy's interest to ensure that that the Group had explored the concept of base complexes.

Mr. Gardner led a discussion to compare the Military Departments' recommendations to the Group's alternatives (attached "Wrap-Up"). It was agreed that the recommendations were not inconsistent with the Group's effort, maintained sufficient capacity to meet projected requirements, and also provided a sound basis for carrying out DoD's policies for cross-service flight training.

Next, the Group shifted its focus to the issue of base complexes, which are base pairs located close to one another that share the same or similar functions. Given that definition, three UPT base complexes were considered: 1) NAS Pensacola - NAS Whiting, 2) NAS Kingsville - NAS Corpus Christi, and 3) Columbus AFB - NAS Meridian. The Group agreed to use the Military Departments' recommendations as the baseline for its analysis (attached). The baseline retains two of the three complexes, and supports the Navy's recommendation to close NAS Meridian.

The Group developed and investigated two alternatives to determine if there were any compelling reasons to maintain the Columbus AFB - NAS Meridian complex. Both alternatives also incorporated an effort to reduce the required number of JPATS training sites. The first alternative created a JPATS "Master" site at the Columbus/Meridian complex. This required the addition of 5 new outlying fields and relocating the fighter/bomber UPT function from Columbus to Laughlin AFB. The second alternative built the JPATS "Master" site at the NAS Pensacola - NAS Whiting complex by upgrading 7 existing outlying fields and relocating the maritime and primary/intermediate NFO training functions to NAS Meridian. A variant of the first alternative was also discussed which located all strike training at NAS Meridian. However, the variant was not given further consideration by the Group as it did not provide a net increase in base complexes, would waste significant investment in the T-45 training system at NAS Kingsville, and also require significant investment in infrastructure at NAS Meridian. Finally, a third alternative was discussed. It was similar to the second alternative but shifted the maritime and primary/intermediate NFO training functions to Vance AFB.

The Group assessed the first alternative and found its up-front costs excessive. After a lengthy discussion and additional input from both Navy Budget Office and OUSD (PA&E) analysts, the Group determined that cost savings/cost avoidance estimates derived from either JPATS site consolidation or formation of a JPATS base complex could not readily be identified. The Group also agreed that these savings (if any) would be well in the future. The Group assessed the second alternative and found it similar to alternative one but noted it had a much smaller up-front MILCON requirement. It was agreed, however, that the maritime and primary/intermediate NFO training functions could readily be accommodated by those flight training bases not recommended for closure by the Military Departments. Therefore, in reviewing the base complex issue, the Group found no clear or compelling rationale to change the Military Departments' recommendations.

There being no further matters to discuss, the meeting was adjourned at 1600 hours.

Approved: Lou Finch
Chairman

[redacted]

BRAC 95

Joint Cross-Service Group on Undergraduate Pilot Training Meeting

February 23, 1995

Key Attendees

Mr. Lou Finch, chairman, OSD (Personnel and Readiness)
Mr. Dan Gardner, assistant study team leader, OSD (Personnel and Readiness)
Maj Gen Glenn Profitt, Air Force
Col John Boyd, Air Force
Lt Col Len Jarman, Air Force
Lt Col Mark Bruggemeyer, Air Force
CAPT Brian Buzzell, Navy
Mr. Steve Belcher, Navy
LCDR Steve Bertolaccini, Navy
Col Dave Stockwell, (USMC), Navy
LTC Tom Hinkel, Army

[redacted]

UNDERGRADUATE PILOT TRAINING JOINT CROSS-SERVICE GROUP

"WRAP-UP"

This point paper summarizes the results of the BRAC 95 Joint Cross-Service Group (JCSG) on Undergraduate Pilot Training (UPT). The UPT JCSG developed three functional base closure and realignment alternatives and submitted them to the Military Departments for consideration. While the Military Departments did not adopt any of the JCSG's alternatives exactly as proposed, the three sites recommended by the Military Departments for closure or realignment were in one or all of the JCSG's alternatives, as displayed in the following table.

(X = Closure)	JCSG Alternatives			Recommendations	
	Alt 1	Alt 2	Alt 3	Air Force	Navy
Corpus Christi NAS			X		X*
Meridian NAS	X	X	X		X
Reese AFB	X	X	X	X	
Vance AFB		X	X		
Whiting Field NAS	X	X	X		
Columbus AFB					
Fort Rucker AATC					
Kingsville NAS					
Laughlin AFB					
Pensacola NAS					
Randolph AFB					
Sheppard AFB					
Total	3	4	5	1	2

* Navy recommended realigning - not closing -- UPT functions at NAS Corpus Christi.

The DoN recommended closing NAS Meridian (included in all three JCSG Alts) and also moved the UPT functions out of NAS Corpus Christi (included in JSCG Alt 3). The DoN declined closing NAS Whiting Field (included in all three JCSG Alts) based on its estimate of high MILCON costs associated with moving Whiting Field's Helicopter functions to Fort Rucker and its Primary Fixed-wing functions to NAS Pensacola.

Key Factors

1. DoN COBRA analysis generated projected cost savings/cost avoidance of $57.8M based on single siting Advanced E2/C2 and Strike functions at NAS Kingsville using NAS Corpus Christi's airfield as an outlying field (OLF).

2. DoN COBRA analysis generated projected cost savings/cost avoidance of $53.5M based on consolidation of Navy's mine sweeping helicopters at NAS Corpus Christi. The Ingleside/Corpus Christi complex would become the Navy's "Mine Warfare Center of Excellence."

3. The DoN COBRA-generated MILCON requirement ($138M) projected for NAS Pensacola and Fort Rucker to accommodate closing NAS Whiting and movement of its Primary Fixed-wing and Helicopter flight training functions was deemed prohibitive given the associated estimated return on investment of 15 years.

The Air Force recommended closing Reese AFB (included in all three JCSG Alts) based on its low ranking compared to other UPT bases, judged on all eight criteria and Air Force excess UPT base capacity. The Air Force considered additional UPT site closures unacceptable (i.e., Vance AFB, included in JCSG Alts 2 and 3) because of capacity requirements to 1) incorporate Air Force's Introduction to Fighter Fundamentals (IFF) training {not within the JCSG's scope of analysis}, 2) provide flexibility for introduction of new training systems, and 3) allow an additional capacity buffer to account for the turmoil associated with base closures and fielding of new aircraft. Based on Air Education and Training Command (AETC) certified data, the Air Force estimated that it required an additional 6.5 percent of the annual DoD UPT capacity to allow for these concerns.

<u>Key Factors</u>

1. JCSG Alternative 1 resulted in retention of approximately 10 percent excess DoD UPT capacity - enough to accommodate the Air Force concerns.

2. JCSG Alternatives 2 and 3 retained approximately 1.3 percent and 2.3 percent DoD UPT excess capacity respectively. Neither alternative would accommodate the Air Force's concerns.

3. Both Military Department submissions, when combined, would retain DoD UPT excess capacity of approximately 10 percent - enough to accommodate the Air Force concerns.

The Army found all three JCSG alternatives to be acceptable. The movement of the DoN Helicopter training function from NAS Whiting Field to Fort Rucker (included in all three JCSG Alts) would have reduced Fort Rucker excess rotary-wing capacity. Fort Rucker is the largest DoD helicopter training complex, the Army's single helicopter training site for both undergraduate and advanced helicopter training with many Army-unique facilities. Realigning Fort Rucker's Primary Helicopter training function was not developed as an alternative because closing Fort Rucker was not considered viable.

<u>Summary</u>

The Military Departments' recommendations are not inconsistent with the work of the JCSG. In particular, their proposals maintain sufficient capacity to ensure meeting projected requirements. They also provide a sound basis for carrying out the Departments' policies for cross-service flight training. Based on the above, the Military Departments' recommendations are acceptable from the Joint Cross-Service Group perspective.

Baseline for Complex Evaluation

- Service recommendations
- Flight screening excess will not be included in this evaluation
- Helo excess at Whiting and Rucker will not be included in this evaluation

Base	Ops Avail (000's)	PTR	Pre-BRAC JPATS	Forecast JPATS	JPATS BRAC Laydown
Columbus	784	369 B/F	X	X	
Corpus	---	---	X		
Kingsville	752	372 STK/E2C2			
Laughlin	788	681 PRI	X	X	X
Meridian	---	---	---		
Pensacola	408(1)	273 MARITIME 718 PRI/INT NFO 312 ADV NFO	X	X	X
Randolph	620	520 PRI 222 PANEL NAV	X	X	X
Reese	---	---	X		---
Sheppard	647	359 PRI	X	X	X
		250 B/F			
Vance	685	304 PRI	X	X	X
		752 A/T			
Whiting	497(2)	629 PRI (3)	X	X	X

TOTAL 5184 Fixed Wing Ops Available
4921 Fixed Wing Ops Required
263 Excess Ops (5.3%)

NOTES:
(1) Added 1/2 Choctaw ops back to Pensacola from Whiting
(2) Reduced 1/2 Choctaw ops from Whiting capacity
(3) Assume upgrade OLF at Whiting to meet primary PTR

OPTION 1 COLUMBUS-MERIDIAN JPATS COMPLEX

Base	Ops (000's)	PTR	JPATS Laydown	Comments
Columbus Meridian Complex	2467 Required 1321 Available 1146 Shortfall	2134 PRI	2	Build 5 OLF's @ 250K ops/OLF and $200M Meridian OLF 212K ops (existing) Columbus OLF 287K ops(existing)
Kingsville	[redacted]	372 STK/E2C2		
Laughlin	[redacted]	369 B/F		
Corpus	[redacted]	**CLOSED**		
Pensacola	[redacted]	273 MARITIME 718 PRI/INT NFO 312 ADV NFO	1	
Randolph	[redacted]	752 A/T 222 PANEL NAV		
Reese	[redacted]	**CLOSED**		
Sheppard	[redacted]	359 PRI	1	
	[redacted]	250 B/F		
Vance	[redacted]	**CLOSED**		
	[redacted]			
Whiting	497(Excess)	**HELO ONLY**		

Notes:

(1) Baseline excess FW airfield ops is 2047K (42%); Closing Vance reduces it to (28%); Closing Whiting reduces it to 18%
(2) Airspace is adequate
(3) Ramps/Aprons/Taxiways must be analyzed
(4) Helo needs to move to Rucker to gain an additional closure
(5) Meridian range status to be resolved.

Costs:

(1) OLF's $200M (5 x $40M)
(2) Keeping Meridian open $30M/Yr
(3) Laughlin range $9M
(4) Relocation of AF assets

Savings:

(1) Savings potential from reducing JPATS from 6 to 4 sites
(2) Savings potential from JPATS complex
(3) Potential to close one addtional base (4 vs 3)

OPTION 2 PENSACOLA-WHITING JPATS COMPLEX (MERIDIAN REMAINS OPEN)

Base	Ops (000's)	PTR	JPATS Laydown	Comments
Columbus		369 B/F		
Meridian		273 MARITIME 312 ADV NFO		
Kingsville		372 STK/E2C2		
Laughlin		**CLOSED**		
Corpus		**CLOSED**		
Pensacola Whiting Complex	2645 Required 905 Available 1740 Shortfall	2134 PRI 718 PRI NFO/INT	2	Extend 7 OLF's by avg of 1000 ft @ $1.7M (Total $12M)
Randolph		752 A/T 222 PANEL NAV		
Reese		**CLOSED**		
Sheppard		359 PRI	1	
		250 B/F		
Vance		**CLOSED**		

Notes:

(1) Baseline excess FW airfield ops is 1760K (36%); Closing Laughlin reduces it to (22%); Closing Vance reduces it to 6%
(2) Meridian range status to be resolved.
(3) Helo will remain at South Whiting Field.

Costs:

(1) OLF's $12M (7 OLF's x 16700 SY x $100/SY)
(2) Keeping Meridian open $30M/Yr
(3) Moves cost
(4) Additional PCS costs for splitting NFO training

Savings:

(1) Savings potential from reducing JPATS from 6 to 3 sites
(2) Savings potential from JPATS complex
(3) Potential to close one addtional base (4 vs 3)

OPTION 3 PENSACOLA-WHITING JPATS COMPLEX (MERIDIAN CLOSES)

Base	Ops (000's)	PTR	JPATS Laydown	Comments
Columbus		369 B/F		
Meridian		**CLOSED**		
Kingsville		372 STK/E2C2		
Laughlin		**CLOSED**		
Corpus		**CLOSED**		
Pensacola Whiting Complex	2645 Required 905 Available 1740 Shortfall	2134 PRI 718 PRI NFO/INT	2	Extend 7 OLF's by avg of 1000 ft @ $1.7M (Total $12M)
Randolph		312 ADV NFO 222 PANEL NAV		
Reese		**CLOSED**		
Sheppard		359 PRI	1	
		250 B/F		
Vance		752 A/T		
		273 MARITIME		

Notes:

(1) Baseline excess FW airfield ops is 2010K (41%); Closing Laughlin reduces it to 25%
(2) Meridian range status to be resolved.
(3) Helo will remain at South Whiting Field.

Costs:

(1) OLF's $12M (7 OLF's x 16700 SY x $100/SY)
(2) Moves cost
(3) Additional PCS costs for splitting NFO training

Savings:

(1) Savings potential from reducing JPATS from 6 to 3 sites
(2) Savings potential from JPATS complex
(3) Potential to close one addtional base (4 vs 3)

TAB 25