



DRAFT  
ENVIRONMENTAL ASSESSMENT  
MISSION REALIGNMENT  
SHEPPARD AIR FORCE BASE, TEXAS

1. Introduction. The Department of Defense Secretary's Commission on Base Realignment and Closure was chartered May 3, 1988, to recommend installations for realignment and closure. Cost reduction and military value are the two primary factors considered in selecting installations for either realignment activity or closure. As a result, Sheppard Air Force Base Texas was one Base selected for realignment activity. A portion of training mission operations (aircraft engine, propulsion, maintenance and aircrew life-support training courses) will be relocated from Chanute Air Force Base, Illinois, to Sheppard Air Force Base, Texas. The purpose of this document is to assess the biological and socioeconomic impacts in accordance with United States Air Force Policy Guidance<sup>1</sup>, the National Environmental Policy Act, and other pertinent environmental assessment requirements. Under Air Force guidance, no alternatives to the realignment activity are to be evaluated.

2. Proposed Action. The proposed mission change will have two action components at Sheppard Air Force Base: (a) increase in personnel, trainees, and those involved in providing and supporting the training mission; and (b) construction of facilities to support the expanded training mission, including housing for trainees.

a. Personnel Increases. Base personnel will increase with the following new assignments.

Personnel Providing and Supporting Training Mission

- 520 Enlisted Persons
- 56 Officers
- 275 Civilians (estimated 50 percent to be hired from local labor market)

Trainees

- 1,663 Officers and Enlisted Persons

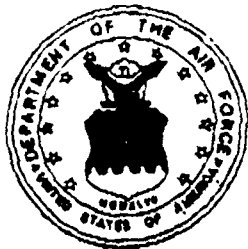
Relocation of personnel will begin in mid-1990 and will continue through 1994.

<sup>1</sup>Head Quarters, USAF/PPR Policy Guidance, 13 February 1989; subject: Environmental Impact Analysis Process (EIAP).

DISTRIBUTION STATEMENT A  
Approved for public release  
Distribution Unlimited

DTIC  
ELECTE  
OCT. 13 1993  
B D





**Air Force  
Environmental Planning Division  
(HQ USAF/CEVP)**

Room 5B269  
1260 Air Force Pentagon  
Washington, DC 20330-1260

16 JUL 93

MEMORANDUM FOR DTIC (Acquisition)

(ATTN: PAUL MAUBY)

SUBJ: Distribution of USAF Planning  
Documents Forwarded on 1 JULY 93

ALL the documents forwarded to  
your organization on the subject  
date should be considered

Approved for Public Release, Distribution  
is unlimited (Distribution statement 1).

*Jack Bush, GM-14*  
Mr. Jack Bush  
Special Projects and Plans  
703-697-2928  
DSN 227-2928

b. Construction. In order to meet the new training mission requirements, the following facilities will be constructed:

Construction Initiated in Fiscal Year 1991  
(millions of dollars)

After Technical Training Facility	1.05
Unaccompanied Enlisted Housing	29.00
Unaccompanied Officers Housing	3.90
Dining Facility	4.60
Addition, Aircraft Systems Facility	5.70
Weapons Support System Support Facility	3.20
ADAL Wing Headquarter Facility	0.81
Troop Subsistence Warehouse	0.51
Hospital Outpatient Addition	2.90
Support Facilities Modification	.35

FY91 TOTAL \$52.12

Construction Initiated in Fiscal Year 1992  
(millions of dollars)

Metal Technical Testing	21.0
AGE Training Facility	9.1

FY92 TOTAL \$29.1

All construction is expected to be completed by December of 1993. New construction and additions to existing facilities will be located in areas already cleared for Base activities.

3. Affected Environments. The biological, cultural and socioeconomic environments are potentially affected by the realignment activity. Each is addressed separately.

a. Biological and Cultural Environment. Each of the sites designated for construction has been inspected for potential natural and cultural resource impacts. Some of the sites are well-manicured bermuda lawns maintained by Base personnel, and other sites are existing buildings that will be modified or extended. No other vegetative communities were identified that would be affected by the construction, although a few widely scattered shade trees were observed near the sites. No significant prehistoric and/or historic cultural resources were identified during the inspection. Each of the proposed construction areas had a very low potential for the presence of prehistoric cultural remains. In addition, no significant historic resources were encountered. All of the buildings affected by the proposed construction were built in the 1950's.

Air Training Command, Randolph AFB, TX.

Per telecon Mr. Jack Bush 697-2928  
11/9/93 cl

DTIC QUALITY INSPECTED 8

For	
<input checked="" type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
n/	
ty Codes	
Dist	Avail and/or Special
A-1	

As planned, the proposed construction projects would have no effect on significant cultural resources. No further environmental or cultural resource investigations are recommended.

b. Socioeconomic Environment. Both the off- and on-Base social and economic conditions are potentially affected by the realignment activity. These conditions are describe below.

(1) Off-Base Conditions.

(a) Population. The population in Wichita County, Texas, is most directly affected by the activities at Sheppard AFB. The county surrounds the Base, and Wichita Falls, the largest city, is located immediately to the south. The estimated 1989 population of the county and the city is 125 thousand and 98.9 thousand respectively<sup>2</sup>. The county's population has experienced slight growth since the 1980 census, when the population was 121 thousand persons. The city's population, which was 94 thousand in 1980, has accounted for most of the county's growth.<sup>3</sup>

Bureau of Economic Analysis 1985 OBERS population projection estimates the population of Wichita County will total 136.4 thousand persons in 1995.<sup>4</sup> Assuming no change in share in the city and county populations, the City of Wichita Falls population is projected to total 105 thousand persons.

(b) Employment. The Texas Employment Commission reports that the average annual total for non-agricultural wage and salary employment for 1988 was 50,700. This includes only the civilian labor force of Wichita County (Wichita MSA), which had an annual average unemployment rate of 6.3 percent for that year. The single most important employment category in the county is wholesale and retail trade, which composes approximately 24 percent of employment in the county. Services, the next most important employment category, employed 23 percent of the labor force.

---

<sup>2</sup>Estimated from data in City of Wichita Falls Growth Trends; City of Wichita Falls, Planning Department; Wichita Falls, Texas, 1989.

<sup>3</sup>US Bureau of Census, 1980 Census of Population and Housing, as reported in the United States Army Construction Engineering Research Laboratory Economic Impact Forecasting System (EIFS) database.

<sup>4</sup>Bureau of Economic Analysis 1985 OBERS Projections, Vol.2; US Government Printing Office, Washington DC; 1985.

Production workers and laborers make up the largest occupational category of the civilian labor force. The most recent occupational data, (1980 census) indicated that 33 percent of the work force was in the production and labor category, followed by the managerial and professional category, which comprises 20 percent of the total work force. The majority of the remaining categories include sales, clerical, and service workers, with only a slight number of persons being employed as technicians or agricultural workers.

(c) Income. The US Bureau of Census estimated that the total personal income of the population in Wichita County was \$1.6 billion in 1984.<sup>5</sup> The per capita income for that year was \$12,985 as compared to \$12,575 for the State of Texas, and \$12,772 for the United State population, respectively.

(d) Institutions and Public Services. According to the most recent Census of Governments, local governments (all governmental bodies including city and county governments) employed a total 4,771 persons, spending \$109.6 million annually.<sup>6</sup> Public governmental expenditures for education were estimated at \$47.2 million, translating into \$375.00 per capita. The per capita expenditures for education for the State of Texas was \$441.00. In the 1986-1987 school year, schools in Wichita County had an enrollment of 21,276 students.

Six hospitals currently operate in Wichita County, providing a total of 1,311 beds. The City of Wichita Falls serves as a medical center for surrounding counties in Texas and Oklahoma. In 1985, 226 medical doctors (MD) were practicing in Wichita County.<sup>7</sup>

(e) Housing. In 1988, the City of Wichita Falls reported a total 40,713 housing units, including 31,948

---

<sup>5</sup>US Bureau of Census County and City Data Book, 1988; US Government Printing Office; Washington DC, 1988.

<sup>6</sup>1982 Census of Governments as reported in US Bureau of Census, County and City Data Book, 1988; US Government Printing Office, Washington DC, 1988.

<sup>7</sup>American Hospital Association as reported in US Bureau of Census County and City Data Book, 1988; US Government Printing Office; Washington, DC, 1988.

single family units, and 8,785 multifamily residences.<sup>8</sup> Single family housing has a vacancy rate of about 7 percent, while multifamily housing has a 14.6 percent vacancy rate. Based upon Wichita Board of Realtors data, the average selling price of houses in Wichita Falls was \$58,718 in 1988. The Board reports that 35.1 percent of houses listed in 1988 were sold.

(2) On-Base Conditions.

(a) Population. In June 1989, the number of military personnel stationed on-Base totaled 3,325, including 769 officers, 2,556 enlisted persons, and 3,926 trainees.<sup>9</sup> These personnel have 4,673 dependents, including 2,677 dependent children 18 years old and younger. Approximately 56 percent of the military personnel and their dependents live off-Base.

(b) Employment. Both the Air Force and its contractors employ 2,542 persons at Sheppard AFB. In June of 1989, 1,158 civilians were directly employed by the Air Force, and contractors employed 1,384 persons. The average salary of Air Force civilian employees was \$29,300.

(c) Expenditures. The operation of the Base depends on the purchases of goods and services from contractors in the surrounding area as well as other areas throughout the United States. During a 6-month period in 1989 (October to June), purchases for goods and services at Sheppard AFB totalled \$42.4 million, including \$31.8 million for services and \$10.6 million for supplies. In addition, \$8.2 million were paid to contractors for the purpose of operation and maintenance of the physical facilities.

(d) Housing, Schools, and Medical Facilities. The Base facilities include 742 housing units; 239 single family units and 503 multifamily units, in addition to 6 group dormitory-type facilities. Approximately 95 percent of the single and multifamily units were occupied in June 1989, with an occupancy rate of 85 percent in the group quarters. Approximately 1,900 units in Wichita County provide housing for the remaining military personnel stationed at the Base. One elementary school is located on the Base.

The Base provides health care on site for military personnel through a 130-unit hospital and an outpatient clinic operated in

---

<sup>8</sup>Correspondence with City of Wichita Falls Planning Department, July 1989.

<sup>9</sup>Data provided by Sheppard Air Force Base staff in June 1989 data call.

conjunction with the hospital.

Currently, sewage and solid waste is treated on Base; however, beginning in 1992, the base will use the city's wastewater treatment system.

4. Environmental Evaluation. The effects of the realignment are described in terms of changes in the existing biological and socioeconomic conditions.

a. Biological and Cultural. There would be no significant impact on environmental or cultural resources since the proposed construction activities would be restricted to existing bermuda lawns or modern day buildings.

b. Socio-economic Conditions.

(1) Methodology. The United States Army Corps of Engineers Construction Engineering Research Laboratory Economic Impact Forecast System (CERL-EIFS) is used to evaluate the socioeconomic effects of the proposed realignment move.<sup>10</sup> The EIFS impact model was selected because a combination of construction and troop movement activities is associated with the Sheppard Air Force Base Realignment action. In addition, the EIFS model was selected because of its unique ability to measure both types of activities and to model demographic effects, such as the number of school children impacting local school districts. Construction and realignment effects are identified separately.

(2) Construction Effects. Construction will affect the Wichita County economy since the material, labor, and services required to complete the construction will be purchased from the local area. As a result, increased sales, income, and employment are expected. The value of construction activity is expected to total \$81.2 million. Based on national averages of expenditures, it is estimated that 34.2 percent of the expenditures will be expended for labor, and 57.8 percent of the expenditures will be used for materials.

Table 1 displays the results of EIFS construction impact forecast. The results displayed for each year represents expenditures. The effects represented in the table are estimated to occur during the construction period. The impacts are estimated to occur within Wichita County. These effects include direct effects that result from actual expenditures for construction, as well as the indirect effects that result from the initial expenditures.

---

<sup>10</sup>US Army Corps of Engineers Construction Research Laboratory, Economic Impact Forecast System (EIFS) II: User's Manual, Updated Edition; Technical Report N-69; CERL; Champaign, IL, 1984.

TABLE 1  
 CONSTRUCTION IMPACT FORECAST  
 FOR  
 SHEPPARD AIR FORCE BASE REALIGNMENT (1)

Construction Initiated by:	FY 91	FY 92	Total
Increases in:			
Sales Volume (\$ millions)	48.3	26.9	75.2
Income (\$ millions)	15.2	8.6	23.8
Net Local Government Revenue (\$ millions)	.3	.2	.5
Employment (man-years)	868	485	1,353

(1) Based on \$81.2 million in construction; Impacts expressed in terms of effects to Wichita County.

The total effects of the construction will increase sales volume in the county by \$75.2 million. The construction activity will generate 1,353 man-years worth of labor and \$23.8 million in personal income. Of this amount, 369 man-years worth of labor is expected as result of construction activity. As a result of increased taxes, receipts and other forms of revenue, local government revenues will increase by \$500,000.

These effects represent a general stimulus to the local economy. However, the affects are within the 95 percent confidence interval of the predicted 1995 values of all the above parameters, based on historic trends (1969-1986). From this statistical perspective, these effects of the realignment do not represent a significant impact on the local economy. Though on-Base traffic and noise levels may temporarily increase due to construction, these impacts are only temporary.

(3) Troop Realignment Action Effects. The realignment action will result in a military personnel increase of 2,239. The average military salary is estimated at \$24,000. Approximately 20 percent of all military personnel are expected to reside off-Base. At least 275 civilian personnel will be needed. Of this number, 50 percent are expected to be hired from the local area. The average civilian employee annual salary is estimated at \$29,000.

Table 2 displays the result of the EIFS troop realignment impacts and the total effects of full implementation of the realignment activity. The EIFS model estimates that the realignment will increase sales volume in the local area by \$78.7 million, including purchases of services and supplies to support the expansion activity as well as the personal expenditures by



personnel. The estimated increase of \$69.1 million represents the income of employees in local retail, wholesale, and service establishments that are initially affected by the realignment, plus the income of new personnel. A total \$1.7 million increase in all forms of local governmental revenue is also expected. The employment figure includes increases in local retail, wholesale, service establishments, and employment associated with the realignment, plus the effected military and civilian personnel. The employment figure includes both direct and indirect changes to local employment. The EIFS model estimates that the population of the county will increase by 5,961, including trainees, permanent military, and civilian personnel and their dependents. Of these persons, 4,857 are expected to reside off-Base. The number of school children associated with the realignment is 1,237. The EIFS model estimates that the realignment action will increase the demand for housing by 1,933 units. The realignment activity will include construction of housing for 1,580 persons, all for trainees. Based on these numbers the net demand for housing is 353.

---

TABLE 2  
TROOP REALIGNMENT IMPACT FORECAST  
FOR  
SHEPPARD AIR FORCE BASE REALIGNMENT

---

Increases in:

Sales Volume (\$ millions)	\$78.7
Income (\$ millions)	\$69.1
Net Government Revenues (\$ millions)	\$ 1.7
Employment	3,323
Population	5,961
Off-Base Population	4,857
School Children	1,237
Demand for Housing	1,933

---

These effects represent a general stimulus to the local economy. The effects are within the 95 percent confidence interval of the predicted 1995 values of all the above parameters, as based on historic trends (1969-1986). From this statistical perspective, these effects do not represent significant impacts.

The in-migrating population does not appear to tax the existing availability of goods and services in Wichita County. The housing market has a stock of available housing both in multifamily and single family units. There are adequate medical facilities and schools available both on- and off-Base. Because the Base already employs a sizable number of civilians from the

county, increase employment opportunities at the Base will not be disruptive to current wage and salaries rates. The timing of the realignment action is scheduled to occur over several years, consequently lessening the potential for disruption due to increases in demand for goods and services.

(4) Summary. Neither the construction activity nor the troop realignment activity is expected to have a significant adverse impact on the biological or socioeconomic condition on- or off-Base.