SURVEY OF BUSINESS AIRCRAFT USERS

by
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INTRODUCTION

In the fall of 1991, the Texas Transportation Institute conducted a survey for the Texas Department of Transportation, Division of Aviation, of business aircraft users in Texas. The purpose of the survey was two-fold: (1) to provide the Division of Aviation with information to help clarify which system airports need to be upgraded from utility to transport standards, and (2) to improve the understanding of what airport requirements business users have.

A list of business aircraft users was obtained from the Federal Aviation Administration. Another list was provided by the National Business Aircraft Association. Surveys were mailed to turbine aircraft users in Texas, the surrounding states (New Mexico, Oklahoma, Arkansas, and Louisiana), and to selected operators of turbine aircraft throughout the United States.

TEST SURVEY

Prior to the mass mailing, a test survey was conducted. A list prepared by Jack Shelton, Assistant Director of Aviation, Dallas Love Field, of those he considered to be representative of corporate business aircraft users, as well as others known to have an interest in aviation, was used to determine how effective the survey instrument would be in meeting the stated purpose of the survey.

Ten survey instruments were either mailed, electronically transmitted, or hand delivered. Attempts were made to contact all survey recipients by telephone; and, where possible, personal interviews were conducted. Of the ten test surveys sent, five responses were received.

Recipients of the test survey instrument were requested to complete the survey and return it along with any comments which they felt would improve its clarity and effectiveness. After receiving the responses, suggested changes were incorporated into the survey instrument. The final survey instrument is shown in Appendix A.

MAIL-OUT SURVEY RESULTS

A total of 1,416 survey instruments were mailed out. Of these, 65 were undeliverable (insufficient or incorrect address). Of the survey instruments successfully delivered, 215 were completed and mailed back, giving a 15 percent rate of return.

The survey instrument which consisted of 22 questions was designed to cover the following:

(1) information about the aircraft user;

(2) type and requirements of aircraft and where the aircraft are based;

(3) airports frequented, number of trips to those airports, and facilities available;

(4) weather information services;

(5) aviation plans; and

(6) perception of overall quality of Texas airports.

Space was also provided to include comments or suggestions.

Business Aircraft Users (Survey Questions 20, 21, 22)

The survey indicates that business aircraft users in Texas probably will be either in an energy-related or professional field, will work for a company that employs 500 or more people, and will use their aircraft mainly for transporting personnel. Table 1 shows the primary products and services of those business aircraft users responding to the survey.

Table 1
Primary Services and Products

Primary service/product	Number of responses
Energy (oil, gas, etc.)	78
Professional (banking, medical, etc.)	76
Transportation (charter, air ambulance, etc.)	36
Agriculture (farming, ranching, etc.)	19
Construction (steel, maintenance, etc.)	8
Education	3
No response given	22
TOTAL[1]	242

[1]Some respondents indicated that they have more than one primary product or service

Based on results of the survey, larger companies tend to use aircraft more than smaller companies (Table 2). Fifty-three percent of those companies using aircraft had 100 or more employees. Thirty-eight percent had 500 or more employees.

Table 2
Survey Respondent Employment Size

Number of employees	Percentage
1 - 24	20
25 - 99	17
100 - 499	15
500 - over	38
Not specified	10

Answers to Question 22 (Estimate the PERCENT of total company flying in Texas attributable to transporting personnel, goods incoming, goods outgoing, and other) showed that business aircraft are used most often to transport personnel. Seventy-six percent (162 of 215 responding) said that they use their aircraft at least 90 percent or more of the time for transporting personnel. Coming in a very distant second was the "Other" category with 2 percent (5 of 215 responding); these business aircraft users are involved in charter and medical service, business and sales calls, and flight inspections. Only one respondent's aircraft is used 100 percent of the time for "goods outgoing." Other responses were distributed across "goods incoming," "goods outgoing," and "other."

Aircraft Information (Survey Questions 1, 2, 7, 8, 9, 10, 11, 14)

Tables 3 and 4 address Question 1: Please list the type(s) of aircraft you use. A total of 275 aircraft are owned by those responding to the survey. Table 3 is a list by manufacturer of aircraft which are owned by survey respondents:

Table 3
Aircraft by Manufacturer

Manufacturer	Number of aircraft	Percent of total
Beechcraft	94	34
Lear	37	13
Miscellaneous*	28	10
Piper	23	8
Dassault-Falcon	20	7
British Aerospace	16	6
Gulfstream	12	4
Israel Air	11	4
Mitsubishi	8	3
Canadair	7	3
Grumman	7	3
Swearingen	7	3
Rockwell	5	2
TOTAL	275	100

*Miscellaneous aircraft - three or less aircraft of the same model/manufacturer

The top 15 aircraft models, their available seats and typical passenger load, and minimum runway requirements, are shown in Table 4. These 217 aircraft represent 79 percent of the aircraft reported in the survey.

Table 4
Top 15 Aircraft
Owned by Survey Respondents

Manufacturer/ model	Number of aircraft	Seats/ Typical load	Avg. Ann. Hrs.	RW length required							RW width required			
				3,000	3,500	4,000	4,500	5,000	6,000	7,000	50	75	100	150
Beechcraft King Air[1]	40	8/4	345	16	11	10	-	-	-	-	21	9	6	1
Beechcraft Super King Air[2]	30	9/5	381	7	12	7	-	1	-	-	13	10	3	1
Cessna Citation[3]	24	8/4	397	8	5	7	-	4	-	-	5	15	4	-
Lear 35	21	8/4	608	-	1	7	1	8	1	1	3	8	7	1
British Aerospace 125-800A	15	7/4	564	-	-	-	2	10	1	2	1	7	5	2
Lear 55	12	8/3	437	-	-	-	-	9	3	-	-	11	1	-
Piper Cheyenne[4]	12	8/4	276	3	1	2	-	4	-	-	4	4	2	-
Beechcraft Baron 58	11	6/3	345	8	2	-	-	-	-	-	8	2	-	-
Israel Air 1124 Westwind	11	8/4	373	1	-	3	-	6	1	-	2	2	3	4
Gulfstream Aerospace[5]	10	13/7	462	-	-	1	-	9	-	-	3	2	5	-
Cessna 425	9	8/4	294	5	1	2		1	-	-	6	3	-	-
Dassault-Falcon 10	7	8/4	442	-	2	2	1	2	-	-	3	3	-	1
Cessna 441	5	9/5	432	3	1	-	-	1	-	-	3	-	1	1
Lear 25	5	9/4	385	-	-	1	-	3	1	-	1	-	3	1
Swearingen-Fairchild Merlin	5	10/6	480	1	1	2	-	-	-	1	4	1	-	-

[1]Includes King Air model numbers F 90, BE 90, 100, and C 90A.
[2]Includes Super King Air model numbers 200 and 300.
[3]Includes Citation I 501, Citation SII 550, Citation III 650, Citation V 560, and Citation.
[4]Includes PA31T, PA321T2, Cheyenne, and Cheyenne II.
[5]Includes Aerospace II, III, and IV.

The largest aircraft reported in the survey were three Boeing 727s (127-passenger aircraft). Two of these aircraft are used by the federal government; a typical passenger load of 80 was reported with 1300 annual hours and runway requirements of 7,000 x 150. The other Boeing 727 is based in France and reported a typical passenger load of 10 with 250 annual hours and runway requirements of 5,000 x 150.

On Question 2 (Your aircraft's minimum runway length is determined by: Aircraft performance data, Company policy, Insurance requirements, Other (please specify), it was expected that respondents would check only one blank; however about 25 percent indicated more than one factor influenced their minimum runway length. Of those giving single answers, 67 percent stated that their minimum runway length requirements are determined by aircraft performance data; 30 percent said they are determined by company policy; and 1 percent said they are determined by insurance requirements. Table 5 shows actual responses to Question 2.

Table 5
Minimum Runway Requirement Determinants

Minimum RW length determined by:	Respondents giving single answer	Respondents giving more than one answer
Aircraft performance data	112	48
Company policy	50	45
Insurance requirements	1	4

Write-in responses indicated that minimum runway requirements were also determined by "common sense" and pilot experience, and FAR guidelines.

Question 7 asked respondents where their aircraft are based. Table 6 shows that most reported aircraft (158 of 215 respondents) are based in Texas; however, 25 percent are based in other states, and one aircraft is based in France.

Table 6
Based Aircraft Locations

City/ Airport	Based	City/ Airport	Based	City/ Airport	Based
Dallas, Love	26	San Angelo/Mathis Fld	2	Jacksonville/ Cherokee Co	1
Houston/ Hobby	20	Tyler/Pounds Fld	2	Lancaster Muni	1
Houston Intercont'l	9	Waco Regional	2	Odessa/ Schlemeyer	1
Addison	8	Wichita Falls/Shepard AFB	2	Perryton/ Ochiltree Co	1
Austin/Mueller	7	Amarillo/Tradewind	1	San Marcos Muni	1
San Antonio Int'l	7	Andrews/Andrews Co	1	Snyder/ Winston Fld	1
Fort Worth/ Meacham	6	Angleton/Cameron	1	Temple/ Draughon-Miller	1
Sugar Land Muni	6	Baytown	1	Wharton Muni	1
Longview/ Gregg Co	5	Beeville Muni	1	**Out of State**	
				Oklahoma	16
College Sta./ Easterwood	3	Big Spring/McMahon-Wrinkle	1	Arkansas	14
Midland Regional	3	Breckenridge/Stephens Co	1	Louisiana	12
Mt Pleasant Muni	3	Brenham Muni	1	New Mexico	5
Amarillo Int'l	2	Dallas/Redbird	1	Arizona	1
Beaumont Muni	2	Denton Muni	1	Colorado	1
El Paso Int'l	2	Georgetown Muni	1	Delaware	1
Houston/S'west	2	Greenville/Majors Fld	1	Nevada	1
Laredo Int'l	2	Houston/Andrau	1	Ohio	1
Lufkin/ Angelina Co	2	Houston/D W Hooks	1	Pennsylvania	1
McAllen/Miller Int'l	2	Houston/Ellington AFB	1	**Foreign**	
Mineral Wells Muni	2	Houston/West Houston	1	France	1

Question 8 asked "Where in Texas do you fly which frequently requires an instrument approach?" and asked if the approaches were adequate or inadequate. Business aircraft users indicated that most trips are to commercial service airports where the instrument approaches are adequate. However, when flying to smaller airports, they reported some inadequate approaches. Table 7 lists those airports that were considered to have inadequate approaches and the number of times those airports were noted on the survey instrument.

Table 8 gives minimum instrument approach requirements (Question 9). A non-directional beacon was indicated to be the minimum instrument approach requirement for most business aircraft users, followed by very high frequency omni-directional radio ranges (VOR).

Table 7
Airports Noted as Having Inadequate Instrument Approaches

Airport	Inadequate	Airport	Inadequate
Cleburne Muni	3	Hallettsville Muni	1
Hebbronville/Jim Hogg Co	3	Hondo Muni	1
Jasper/Bell Field	3	Houston/D W Hooks Mem'l	1
Kerrville/Louis Shreiner Fld	3	Huntsville Muni	1
Mount Pleasant Muni	3	Junction/Kimble Co	1
Alpine Muni	2	Lajitas	1
Andrau Airport	2	Lancaster Muni	1
Carrizo Springs/Dimmit Co	2	Levelland Muni	1
Cherokee Co	2	Marfa Muni	1
Eagle Pass Muni	2	McCamey/Upton Co	1
Ft. Worth Meacham	2	McGregor Muni	1
Follett/Lipscomb Co	2	McAllen/Miller Int'l	1
Mineral Wells Muni	2	New Braunfels Muni	1
Pearsall/McKinley Field	2	North Dallas	1
Amarillo/Tradewind	1	Orange Co Airport	1
Addison	1	Ozona Muni	1
Atlanta Muni	1	Perryton/Ochiltree Co	1
Baytown	1	Port Mansfield/C.R. Johnson	1
Beeville Muni	1	Presidio/Lely Int'l	1
Caldwell Muni	1	Rockport/Aransas Co	1
Conroe/Montgomery Co	1	Silsbee-Kountze/Hawthorne	1
Del Rio Int'l	1	Snyder/Winston Field	1
Falfurrias/Brooks Co	1	Throckmorton/Muni	1
Fort Stockton/Pecos Co	1	Tyler/Pounds Field Muni	1
Georgetown Muni	1	Uvalde/Garner Field	1
Giddings/Giddings-Lee Co	1	West Houston	1
Graham Muni	1		

Table 8
Minimum Instrument Approach Requirements

Minimum instrument approach	Number of responses
NDB	125
RNAV	4
Localizer (only)	14
VOR	55
VOR/DME	23
ILS	35

Ninety-five percent of business aircraft users preferred VASI-PAPI visual approach aids over PLASI (Question 10). The majority of business aircraft users (67 percent) required medium intensity runway lights. Low intensity runway lights were required by 18 percent and high intensity runway lights by 15 percent (Question 11).

Table 9 shows the responses to Question 14: Is your aircraft equipped with (check all that apply):

Table 9
Aircraft Equipment

Aircraft equipped with	Number of responses
LORAN	135
FMS	63
WX Radar	214
DME	215
Autopilot	214
TACS II	8
GNS	95
EFIS	58
Flight Director	201

Airports Used and Facilities Available (Survey Questions 3, 4, 5, 6)

When asked to which Texas airports they most frequently fly (Question 3), business aircraft users listed more than 160 airports. The survey instrument requested that respondents indicate by airport or code name those airports they used; unfortunately, many who chose to use codes either gave codes for which no airport existed or it was difficult to discern exactly what they had written (e.g., "GR9" or "6R9"; the letter "l" or the number "1"?). The most frequented commercial service airports are shown below in Table 10:

Table 10
Most Frequented Commercial Service Airports

City/Airport	Total number of trips/year
Dallas/Love Field	7,936
Houston/William P. Hobby	4,161
Austin/Robert Mueller	3,474
San Antonio Int'l	2,284
Houston Intercontinental	1,974
Fort Worth/Meacham Field	1,270
College Station/Easterwood Field	1,165
El Paso Int'l	1,099
Longview/Gregg Co	1,079
Beaumont/Jefferson Co	883
Dallas/Fort Worth Int'l	828
Tyler/Pounds Field	780
Temple/Draughon-Miller	600
Midland Regional	513
Corpus Christi Int'l	412
McAllen/Miller Int'l	351
Brownsville/South Padre Island Int'l	347
Amarillo Int'l	241
Lubbock Int'l	204
Laredo Muni	148

Of those airports which were either reliever, transport, or utility, the most frequented are shown in Table 11:

Table 11
Most Frequented Reliever, Transport, and Utility Airports

City/Airport	Total number of trips/year
Addison	1,090
Mount Pleasant Muni	508
Granbury Muni	400
Angleton-Lake Jackson/Brazoria Co	309
Houston/David Wayne Hooks Memorial	309
Denton Muni	300
Kountze-Silsbee/Hawthorne Field	300
Jacksonville/Cherokee Co	260
Sugar Land Muni	260
Greenville/Majors Field	200
Fort Worth/Spinks	176
Georgetown Muni	175
Beeville Muni	160
Mineral Wells Muni	158
Houston/Andrau Airport	150
Perryton/Ochiltree Co	150
Snyder/Winston Field	150
Conroe/Montgomery Co	146
Hallettsville Muni	120
Baytown	100
Brenham Muni	100

Question 4 requested that respondents rate facilities as either "acceptable" or "not acceptable" at the general aviation airports that they use (Table 12). According to one respondent, "There have been numerous

occasions where we needed to go to a small town but could not because of inadequate or nonexistant (sic) facilities." Runway width was acceptable to almost every one responding to the survey (97 percent). Least acceptable was the price of fuel (71 percent); one respondent observed, however, "Will fuel prices ever be acceptable to corporate operators?"

Table 12
Airport Facilities
(in percentages)

Airport facilities	Acceptable	Not acceptable
NAVAIDS	94	6
Visual approach aids	86	14
Terminal facilities	84	16
RW length	96	4
RW width	97	3
RW surface condition	82	18
RW lighting	89	11
Support services	85	15
Fuel availability	96	4
Fuel price	71	29

Question 5 asked respondents to rate terminal facilities at the general aviation airports they use (Table 13). Acceptable to 95 percent was telephone availability and to 92 percent was rest room facilities. Ground transportation (courtesy car and taxi service) and meeting and flight planning rooms were the least acceptable.

Table 13
Terminal Facilities
(in percentages)

Terminal facilities	Acceptable	Not acceptable	Not available
Rest rooms	92	6	2
Food/drink	80	16	4
Telephone	95	4	1
Courtesy car	71	14	15
Rent car	86	5	9
Taxi service	79	12	9
Television	81	7	12
Waiting area	84	11	5
Meeting room	76	9	15
Flight planning room	78	14	8

Seventy percent of the respondents indicated that they were able to use any Texas airport (Question 6). Of those 30 percent who noted problems, Eagle Pass was singled out as troublesome more than any other airport. Complaints about Eagle Pass ranged from inadequate runway and ramp areas to runway length to approach. One respondent indicated that NAVAIDS, runway conditions, length and width (from Question 4) and "all of the above (Question 5) are not acceptable at Eagle Pass." Another said, "Eagle Pass International; runway only 3000 x 30! I can use for customs."

Other airports mentioned as unusable to business aircraft users are listed in the following table:

Table 14
Airports Cited as Unusable by Survey Respondents

Associated City/Airport	Times reported	Comment/reason unusable
Addison	1	Poor taxiways
Bandera	1	No comment/reason given
Beaumont Muni	2	a. Facilities, approaches, runway width (would use airport 12+ times per year) b. Needs a private FBO
Big Bend area	1	No comment/reason given
Cleburne Muni	1	IFR weather
College Station/ Easterwood	1	No comment/reason given; would go there 6 times
Columbus/Robert R. Wells, Jr.	1	No comment/reason given
Eagle Pass Muni	6	a. Runway and ramp area 10 & 12 b. Eagle Pass International runway only 3000 x 30! I can use for customs. c. Runway too short, no approach d. Runway length; would go there 1/mo. e. NAVAIDS, runway conditions, length & width are unacceptable All of the above (ref: Question 5) are unacceptable at Eagle Pass f. No comment/reason given
Eastland Muni	1	Narrow
Falfurrias Brooks Co	1	Needs to be widened
Fredericksburg/ Gillespie Co	1	Longer runway
Gonzales Muni	1	Runway condition and length

Table 14 (Con't)
Airports Cited as Unusable by Survey Respondents

Associated City/Airport	Times reported	Comment/reason unusable
Hamilton Muni	1	Runway will not take Falcon 20 -- need 4500 ft. and 30,000 lb. load (would use airport approximately 30 times per year)
Houston/Andrau	3	a. Narrow b. No comment/reason given c. Dangerous air & ground maneuvering
Sugar Land Muni	3	a. Narrow runway b. Many airports meet our length requirement but have no weather reporting, i.e., Houston Hull (Sugar Land Muni) c. Needs weather reporting
Houston/Southwest	2	a. No comment/reason given b. Narrow RW
Houston/West Houston	2	a. Management b. No comment
Johnson City	1	No comment/reason given; (If an airport were in Johnson City) would use 3 times per year
LaGrange/Fayette Regional	1	No comment/reason given
Levelland	1	Needs another 1500' of runway
Livingston Muni	1	No comment/reason given; would go 10 times per year
Luling/Carter Memorial	1	Runway length, transportation, approach/NAVAIDS. Would go there 4 times
Matagorda Island	1	Not allowed by Fish and Wildlife Services

Table 14 (Con't)
Airports Cited as Unusable by Survey Respondents

Associated City/Airport	Times reported	Comment/reason unusable
North Dallas Jetport	1	No comment/reason given
Pleasanton Muni	2	a. We can take off with light loads only. We would land there more frequently if the runway were longer. b. Too short; would make 6 trips
Presidio/Lely Int'l	1	Need a IFR approach
Rockport/ Aransas Co	1	A precision approach is required during low over cast days -- would improve usage by 200%
San Angelo/ Mathis Fld	1	The runway is too short in summer months. Cannot carry enough fuel to go to West Coast.
San Antonio/ Boerne Stage Field	1	Can't get off runway
Waller/Skylake	1	Too rough -- go there 2-3 times per year
Waxahachie	3	a. No comment/reason given b. No comment/reason given c. Understand new runway under construction
Wichita Falls/ Kickapoo	1	No comment/reason given

Weather Information Services (Survey Questions 16, 17, 18)

Questions 16, 17, and 18 addressed airport weather information services. One question that generated much discussion was number 16: "Where do you get weather information PRIOR to a flight? (check all that apply)." Apparently, business aircraft users take advantage of whatever is available, from the most basic ("I look outside; call destination airport.") to the most sophisticated ("We generally use the computer service if available, but always back this info. up by talking to FSS.").

AFSS was the most frequently used source of weather information with 174 responses; followed by DUAT, 96 responses; television, 92 responses; and AWOS/ASOS, 40 responses (Table 15).

Table 15
Weather Information Sources

Where do you get information prior to a flight?	Number of responses
AFS	174
AWOS/ASOS	40
Television	92
DUAT	96

Many of those answering the survey commented on the usefulness of weather briefing stations (Question 17). Eighty-eight percent said that the stations at general aviation terminals were either "very useful" or "moderately useful" (Table 16). According to one individual, "One of the best improvements that can be made is to make more and better weather information available from more outlying and remote airports (AWOS!!)."

Table 16
Usefulness of Weather Briefing Stations

How useful are weather briefing stations?	Percent of responses
Very useful	46
Moderately useful	42
Not useful	5
Do not know	6

Responding to Question 18, "Are weather information services at Texas airports useful?", 50 percent said they were, 41 percent said they were not, and 9 percent did not know.

Aviation Plans (Survey Questions 12, 13, 15)

According to the responses received to Question 12, 54 percent of business aircraft users do not plan to make any changes to their aircraft. Forty-two percent indicated they would be increasing the number of aircraft, and only 4 percent said they would decrease the number. Sixty percent plan to upgrade the type of aircraft in their fleet.

Question 13 asked respondents if their new aircraft would be more demanding of airport facilities. The majority of the respondents (59 percent) said no. The 41 percent who answered yes cited the need for longer and wider runways. The minimum length specified was 4000 feet with a minimum width of 50 feet. The maximum length specified was 6000 feet with a width of 100 feet.

Question 15 asked, "Do you plan to install any of the following (equipment) within one year?" Answers are recorded below in Table 17.

Table 17
Planned Aircraft Additions

Aircraft equipped with	Number of responses
LORAN	36
FMS	7
WX Radar	10
DME	3
Autopilot	5
TACS II	18
GNS	12
EFIS	7
Flight Director	5

Also mentioned to be installed were storm scope, upgrade VLF/OMEGA, GPS, GNS upgrade, SATNAV, telephone, and cockpit voice recorder.

Overall Quality of Texas Airports (Survey Question 19)

A healthy two-thirds of respondents rated Texas airports as "good." Thirteen percent considered them to be "excellent"; 22 percent said they were "fair"; and 1 percent indicated that Texas airports were in "poor" condition.

Interestingly, 73 percent of Texas respondents rated Texas airports as either "excellent" or "good"; however, 92 percent of out-of-state respondents said that Texas airports were "excellent" or "good."

COMMENTS FROM THE RESPONDENTS

The following comments and suggestions were taken verbatim from the survey instruments. They are included for information:

- Why not visit Wisconsin State Aviation Dept. and discuss their computer WX and flt planning/flt plan filing system? That system is the best I've seen.
- While some of my answers may seem vague, however your questions were not specific. Ask me about airports by name and I will tell you if we operate into them and what I think of the airport and facilities. By the way, telephone weather briefing are not adequate, only acceptable. The WX channel helps and should be available at all airports.
- By comparison to other states, TDA, in my opinion, ranks lower than average in support to smaller gen. av. airports, i.e., GA, MN, NE. Maybe too much overhead & not enough funds to towns.
- We would like to see a public owned airport in or around Baytown. Both airports are privately owned & do not spend - (or have) the monies to spend to help bolster the aviation community. The East Side has a lot of companies who have aviation interest, but they have to limit themselves to Hobby or Ellington. We would work with anyone interested in getting a public airport on the East Side.
- If Montgomery Co. Airport, CXO, had an ILS and weather reporting it would make an ideal alternate airport when the weather requires it. Weather reporting by an approved source is required for Part 135 operators, and it's safer for Part 91 operators, to begin an instrument approach. The airports we feel would benefit most with weather reporting are; SGR (Sugar Land Municipal), CXO (Montgomery County, Conroe), LBX (Angleton/Lake Jackson, Brazoria County), JCT (Junction,

Kimble County).

- We have operated corporate aircraft for 19 years. Greater than 99% of our flying involves business use of the airplane. Aviation has been a major contribution for the success of our business. I hope that Texas airports can be kept as a high priority within the governmental process -- for continued improvements and increasing safety for all of aviation.
- Our aircraft are absolutely indispensable to our business and, in the case of some of our air ambulance flights, are the only way some patients can be transported.
- Our business is primarily in West Texas & East New Mexico, with corporate offices in San Angelo. There is no air service in 90 percent of the towns where our stores are located. A corporate airplane or long long long days on the highways are our only choices to physically keep in contact with our stores.
- If something is not done soon to help General Aviation there will be no need for airports. The costs to run an aircraft is putting everyone out of the aviation market. Product liability has to be controlled and fuel has to be lowered to a reasonable price. The new luxury tax on aircraft is a criminal offense.
- Don't spend any money on airports until you get the FAA off our back. Thay (sic) are killing general corp flying. All airports except what the airlines use will not survise (sic) unless you stop the FAA.
- G.A. needs some good P.R. to show value to community rec'd. The county judge @ _____ is anti GA and gives no support or help to FBO. This is common to many locations.

APPENDIX
SURVEY INSTRUMENT

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Texas Department of Aviation

August 2, 1991

Dear Business Aircraft User,

The Texas Department of Aviation needs your professional advice. We need more airport improvements than we have money to spend; so, in an effort to help identify projects we have asked the Texas Transportation Institute at Texas A&M University to survey business aircraft users about their needs.

As an aircraft user, your opinion is important to us. This survey presents an excellent opportunity for you to make your personal and corporate needs known and to express your wants and desires for the airports you use, and those airports that you would like to use. Space is provided on the back page for your suggestions and/or comments.

If you have questions or would like more information, please call Holland Young at the Texas Department of Aviation (512/476-9262) or Ben Guttery at the Texas Transportation Institute (409/845-9934). I know your time is valuable. Any assistance you can give will be greatly appreciated. Please return this survey by August 30, 1991, so that we can tabulate the results. We look forward to hearing from you.

Sincerely,

1. **Please list the type(s) of aircraft you use.**

Manufacturer	Model	Seats	Typical Paggenger Load	Annual Hours flown	Runway length & width Requirements
_____	_____	____	____	_____	_____ x _____
_____	_____	____	____	_____	_____ x _____
_____	_____	____	____	_____	_____ x _____
_____	_____	____	____	_____	_____ x _____
_____	_____	____	____	_____	_____ x _____
_____	_____	____	____	_____	_____ x _____

2. **Your aircraft's runway requirements are determined by:**

____ Aircraft performance data
____ Company policy
____ Insurance requirements
____ Other (please specify)
_____

3. **Which airports in Texas do you use and approximately how often do you fly to each?**

Airport name or code	# of trips per year
1. _____	____
2. _____	____
3. _____	____
4. _____	____
5. _____	____
6. _____	____
7. _____	____
8. _____	____
9. _____	____
10. _____	____

4. **Please rate the following at Texas general aviation airports you use.**

acceptable	not acceptable	
[ ]	[ ]	NAVAIDS
[ ]	[ ]	Visual approach aids
[ ]	[ ]	Terminal facilities
[ ]	[ ]	Runway length
[ ]	[ ]	Runway width
[ ]	[ ]	Runway surface condition
[ ]	[ ]	Runway lighting
[ ]	[ ]	Support services
[ ]	[ ]	Fuel Availability
[ ]	[ ]	Fuel Price
[ ]	[ ]	Other (please specify)

5. **Please rate the following at Texas general aviation terminals you use.**

acceptable	not acceptable	not available	
[ ]	[ ]	[ ]	Rest rooms
[ ]	[ ]	[ ]	Food/Drinks
[ ]	[ ]	[ ]	Telephones
[ ]	[ ]	[ ]	Courtesy Car
[ ]	[ ]	[ ]	Rent Car
[ ]	[ ]	[ ]	Taxi Service
[ ]	[ ]	[ ]	Television
[ ]	[ ]	[ ]	Waiting Area
[ ]	[ ]	[ ]	Meeting Room
[ ]	[ ]	[ ]	Flt. Planning Room
[ ]	[ ]	[ ]	Other (please specify)

_____

6. **Are there any airports in Texas which you cannot use, but would like to use?**

[ ] Yes [ ] No

If Yes, please name the airport, why you are unable to use it, and how frequently you would go there if improvements were made.

_____
_____
_____
_____

7. **Where is your firm's aircraft based?**

State _____
Airport (name or code) _____

8. **Where in Texas do you fly which frequently requires an instrument approach?**

Airport	approach adequate	approach not adequate
_____	[ ]	[ ]
_____	[ ]	[ ]

9. **Please check which minimum instrument approach you REQUIRE.**

[ ] NDB [ ] VOR
[ ] RNAV [ ] VOR/DME
[ ] Localizer (only) [ ] ILS

10. **Please check your PREFERRED visual approach aid.**

[ ] VASI/PAPI [ ] PLASI

11. **Please check the minimum type of runway lights you find adequate for your needs.**

[ ] LIRL [ ] MIRL [ ] HIRL

12. **Within the next 5 years, does your firm plan to** (check all that apply)

[ ] Increase the number of aircraft owned
[ ] Decrease the number of aircraft owned
[ ] Make no changes to the fleet
[ ] Upgrade type of aircraft in fleet

13. **Will your new aircraft be more demanding on airport facilities (longer or wider runway required)?**

[ ] No [ ] Yes (specify facility needed)
_____

14. **Is your aircraft equipped with** (check all that apply)

[ ] LORAN [ ] TCAS II
[ ] FMS [ ] GNS
[ ] WX Radar [ ] EFIS
[ ] DME [ ] Flight Director
[ ] Autopilot

15. **Do you plan to install any of the following within one year ?** (check all that apply)

[ ] LORAN [ ] TCAS II
[ ] FMS [ ] GNS
[ ] WX Radar [ ] EFIS
[ ] DME [ ] Flight Director
[ ] Autopilot
[ ] Other (please specify)
_____

16. **Where do you get weather information PRIOR to a flight?** (check all that apply)

[ ] AFSS [ ] Television
[ ] AWOS/ASOS [ ] DUAT
[ ] Other (please specify)
_____

17. **If you are familiar with weather briefing stations located in general aviation terminals, please indicate how useful they are.**

[ ] Very useful [ ] Moderately useful
[ ] Not useful [ ] Do not know

18. **Are weather information services at Texas airports adequate?**

[ ] Yes [ ] No [ ] Do not know

19. **Overall, how do you find the condition of airports in Texas?**

[ ] Excellent [ ] Good
[ ] Fair [ ] Poor

20. **What is your firm's primary product or service?**
_____

21. **How many people work at your company?**
_____

22. **Estimate the PERCENT of total company flying in Texas attributable to transporting**

___ % Personnel
___ % Goods incoming
___ % Goods outgoing
___ % Other (please specify)
_____

If we have any further questions, may we give you a call? All responses will be confidential.

Contact Person: _____

Firm: _____

Telephone: _____

Thank you very much for your time and effort.

Texas Department of Aviation
P.O. Box 12607
Austin, Texas 78701

In the space below or on a separate page, please elaborate on any of your answers or describe an occasion when your aircraft played a major role in your business. This is your opportunity to let us know how important aviation and Texas airports are to your business.

To return your survey, fold along solid lines so address below is visible and staple.

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