Promoting General Aviation Transportation in Community Economic Development Through General Aviation Public Airport Managers and State Department of Aeronautics Officials

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Abstract

It is very difficult to pinpoint the specific "transportation development needs" of general aviation airports and their surrounding communities. Often, insufficient management expertise at individual airports, coupled with the state's occasional unfamiliarity with specific community problems, hinders the state's effective administration of airport assistance programs. Therefore, state officials would benefit from the airport administrators' opinions concerning how state programs might be modified to best meet individual airport needs. This paper describes a study which reveals "differences in perceptions" between the Alabama Department of Aeronautics (DOA) and individual general aviation public airport managers.

This study examines qualitative perceptions of 15 airport factors, such as paved runway length, adequate taxiways, approach aids, hangar/tie-down space, and strong airport management, plus community support areas, such as nearby hotel/motel, industrial park, and ground transportation. Airport managers judged these factors at their own airports, ideal airport, and at several chosen as a control mechanism. Airport managers were also asked to reveal sources and amounts of funding received for capital projects and operational needs. When compared with funding data from official sources, significant discrepancies were observed.

Data were obtained through a mail survey. Of the 79 strictly general aviation public airports surveyed, 54 responses were returned (68% response rate). Analysis revealed many significant differences in perception factor scores. Not only were there differences in perceptions between airport managers and DOA officials, but also between the managers' perceptions of their own airports versus the "ideal airport" revealing 10 areas where improvements are recommended (including the perception factor of strong airport management).

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It is very difficult to pinpoint the specific "transportation developmental needs" of general aviation public airports and their surrounding communities. Often, insufficient management expertise at individual airports, coupled with a state's occasional unfamiliarity with specific community problems, hinders effective administration of the state airport assistance program. Therefore, state officials should benefit from the "airport administrators' opinions" concerning how state programs might be modified to best meet individual airport needs. This paper describes a study which reveals "differences in perceptions" between a state-level aviation department, the Alabama Department of Aeronautics (DOA), and individual Alabama general aviation public airport administrators. State officials can use this information to maximize state programs by pinpointing areas of greatest need.

The paper highlights airport needs which are being effectively met, plus those areas which might be deficient and in need of further assistance. The data can be used to determine if these airports, in general, are self-sufficient. It can be approximately determined what capital requirements will be needed for the next three years. Reviewing capital expenditure funding and operational income, including sources, makes it easier to analyze how federal, state and local monies are utilized on a state planning level. Ratios, of aviation industry generated funds to public assistance funds, can be used in demonstrating to what extent public general aviation airports are user-supported. In addition, the physical operating data can be used in

pinpointing projects in most need of improvement or development.

Method

Subjects

The subjects for this research were the "administrators" from public-owned, public-use, noncommercial airports within the Alabama airport system (N = 79) and officials of the Alabama Department of Aeronautics. Some airports have regular airport managers, but most are served by persons who administer to the airport on a part-time/secondary occupation basis. Some of the airports do not have administrators, but are supervised by an airport board, a county commission, or a city/count clerk. A few of the respondents were mayors of the small communities in close proximity to the airport. The names and addresses of the airport administrators were obtained from the Federal Aviation Administration 5010 forms and verified by telephone contact. Data were derived from primary sources.

Procedure

The research examines confidential information concerning capital projects, plus perceptions in the operations area. The researchers selected 15 qualitative factors which might be considered important to have at/near an airport for attracting/promoting industrial and economic development in the nearby community. The factors include:

- Paved Runway < 4,000'
- Paved Runway > 4,000'
- Adequate taxiways
- Runway/Taxiway surface condition
- Approach aids (ILS, VASI)
- Control tower
- Ground transport (taxi, car)
- Hangar, tie-down space
- Commuter air service
- Nearby hotel/motel
- Industrial park
- Jet fuel
- Aircraft servicing (FBO)
- Aircraft parts/repair
- Strong airport management

Airport administrators judged these factors at their own airport, a hypothetical "ideal" airport and at six airports chosen as a study control mechanism. Data were obtained through mail survey method and follow-up phone calls. Of the 79 strictly general aviation public-owned, public-use airports surveyed, 54 (n = 54) responses were received (68% response rate). Data were then organized into charts for analysis.

The first part of this paper presents a summary of the survey itself, and details of data collection. Then a discussion is given of each section of the survey and results obtained. The next section denotes the findings of the study as they relate to the survey questions. Finally, the study is summarized, conclusions are presented, and recommendations are given.

Survey of airport administrators was accomplished using a questionnaire developed specifically for this study. Part I of the questionnaire deals with airport capital needs. Respondents listed significant capital improvements and large equipment purchases for both fiscal years 1985 and 1986. Included were funding sources, amount of funds, and primary reasons (developmental, safety, or maintenance) why the project was needed. Administrators were also asked to estimate their capital project needs for fiscal years 1987 through 1989. The second half of the financial section (Part I) covers airport operations income for fiscal years 1985 and 1986. The first question specifically asks "if the airport had been able to cover operating expenses from airport user charges or other airport incomes." Administrators then listed sources and amounts of operating incomes, and were asked to send a copy of their operating budget (for expenses). The final question in this section asks "if they were familiar with the state assistance program," and to please comment on it.

Part II of the survey deals with operational aspects. Airport administrators were asked to give their perceptions by rating six pre-selected

(control) airports as to the airports' capability to support community industrial and economic development; respondents were specifically asked not to look up airport information via directory or map, but to just "give their perceptions." The selected airports included one highly developed, and one underdeveloped, airport in the three Federal Aviation Administration categories of Basic Utility, General Utility, and Transport. These airports, whose capabilities were known to DOA, were chosen so as to compare airport administrators' perceptions against a controlled entity. Administrators' perceptions were then gathered pertaining to the importance of 15 qualitative factors that might help promote industrial and economic development in the nearby community. The last area (of Part II) combined the first two areas of perceptions in that it asks administrator perceptions of the 15 qualitative factors at their own airports, at the "ideal airport," and at the same six "control airports." The researchers also obtained, for comparison purposes, DOA perceptions in the same areas. Those areas in which opinions varied significantly, by 1.5 or more factor points, were noted.

Results

Airport Capital Needs

Of those airports surveyed, 50 of 79 responded with financial information regarding capital expenditures in 1985, 1986 and future needs for 1987-1989. Administrators were asked to describe the item, the source and amount of funding, and the prime reason for the expenditure (developmental, safety, or maintenance). For 1985, respondents claimed they had received $6,360,229 from the Federal Airway Improvement Program, $281,175 from the Alabama State Department of Aeronautics, $934,440 from local city or county assistances, and $2,000 from private sources. In comparing these monies with the official funding information from the Federal Aviation Administration and DOA, some discrepancies were found. In 1985, the FAA granted, to those airports who

responded to the survey, $2,028,844 (AIP) and the DOA, $279,363. While the DOA amounts show only a difference of $1,812, the FAA difference is $4,331,385.

For 1986, the figures also showed some inconsistencies. The total claims from those airports responding were Federal AIP, $3,668,026; State DOA, $53,795; local, $547,009; and private, $0. The official sources supplied the following: FAA/AIP, $2,049,863, and DOA, $361,246. The difference in the FAA/AIP official and claimed is $1,618,163; DOA, $307,451.

All were instances where they claimed more than they actually received, except the 1986 DOA differences in which airport administrators claimed $307,451 less than was actually allocated.

In estimating future capital funding needs through 1989, airport administrators claimed they would need $13,893,452 from the FAA and DOA, and $2,608,870 from local funds. The FAA has already approved $1,315,321 for 1987 capital projects.

It is also significant to note percentages of "aviation industry generated funds" versus "public assistance funds." Aviation industry generated funds would include Federal AIP, State Airport assistance funds from aviation fuel tax, and private sources. Public assistance funds would include other state programs and local city or county assistance. Exhibit 1 summarizes these percentages for claimed funding amounts, as well as official funding amounts, since there were discrepancies between these two amounts. It also includes the ratio of aviation industry generated funds to public assistance funds for fiscal years 1985 and 1986.

In 1985, the ratio of "Aviation Industry Generated Funds" to "Public

Assistance Funds" was 7.1:1 for claimed (federal and state) amounts and 2.5:1 for official (federal and state) amounts; the differences between the claimed and official ratios is 4.6. For 1986, the ratio on "Aviation Industry Generated Funds" to "Public Assistance Funds" for claimed (federal and state) amounts was 6.8:1, and for official (federal and state) amounts, 4.4:1; the difference here is 2.4.

Also, in this section was a place for administrators to record for what purposes funds were used. Airport administrators were given three categories to assign their capital expenditures to: developmental (D), safety (S), and maintenance (M). Exhibit 2 summarizes these amounts for fiscal years 1985, 1986 and 1987-1989.

It is important to note that not all respondents answered the D-S-M part of the questionnaire, and some that did answer, did so incorrectly, so that public assistance totals here are less than those given in Exhibit 1, where all given information was used.

Airport Operations Funding

When asked if the airport had been able to cover operating expenses from airport user charges or other airport incomes, of the 50 who responded with this information, 26% said "yes", and 74% said "no".

Sources and amounts of operational incomes were then recorded for fiscal years 1985 and 1986. Exhibit 3 summarizes these amounts, again comparing aviation industry generated funds and public assistance funds.

The information in Exhibit 3 does not include the response from Selma. In reviewing Selma's budget, it was found that large incomes were gained from rental property on the airport site (Selma's Craig Field is a former Air Force Base, with personnel housing which is apparently being rented. This situation is quite unusual and warrants the exclusion of Selma's very large non-airport incomes from those of other airports).

For the operating incomes of all other respondents, in 1985, aviation industry generated funds to public assistance funds were 1.0:1. In 1986, this ratio was 1.3:1. This indicates an almost 50-50 ratio for both years.

Of the 50 airports who responded with financial information, 26% sent a budget and 74% did not. Of those (13) who did send a budget, few provided the researchers with sufficient operating expenses information to compare with operations funding received. Some sent a city budget which provided little airport information; some repeated the capital expenditures; and some repeated the operational funding received. Needless to say, inaccurate information in this area makes the data less than desired.

A summary of administrators' comments on the State of Alabama's Airport Development Program (ADP) is included. Results indicate that 56% of the respondents are aware of the state assistance program, and 44% are not. While most of the airports which did give comments were already aware of the program, a few comments came from airports unfamiliar with it. In summarizing the comments, three main points were made.

Many who had already been successful in obtaining assistance, were very satisfied with the program. Adjectives, such as excellent, cooperative, efficient, well-administered, valuable, and helpful, were used. Second, a few respondents claimed the funding level of Alabama DOA is far below that of other states and needs to be increased greatly. In particular, details mentioned were the desire to see the $50,000 ceiling lifted; adversity to the

50-50 plan (50% grant funds matched with 50% local match, cash or inkind) due to the fact that rural airports do not generate enough direct monies to support the 50-50 plan; and displeasure with the lack of assistance to very small airports. It was also felt that this assistance needs to stress industry location. The third, and most often mentioned comments, dealt with the purported fact that the program needs to be more widely publicized. Respondents in this area felt more effort should be made to help communities become more aware of what, and how much funding is available; who qualifies for the program; plus more information on the procedure for application for state aid. In general, airports claimed they want more information so they will be better able to take advantage of available funds.

Operations

This section begins with perceptions concerning the "capability of six control airports to promote economic and industrial development in surrounding communities." Exhibits 4, 5 and 6 show a comparison of these perceptions between DOA, the airport's administrator, and the average general opinion.

*When comparing results in Exhibits 4, 5 and 6, it is important to note that questionnaires were not received from two of the six control airports. These two were among those considered to be underdeveloped. All relationships between either average general opinion and DOA, or DOA and the airport manager, or average general opinion and the airport manager are highlighted with an " * " if there is a 1.5 or greater difference. Average general opinion factor scores were calculated by taking the total points of the responses and dividing it by the number of responses to obtain the average.*

The Basic Utility airports are Bay Minette Municipal and Elba (Carl

Folsom), of which Bay Minette is the more highly developed. The General Utility are Gulf Shores-Jack Edwards and Butler-Choctaw County; the more highly developed in this category is Gulf Shores. Airports in the Transport category are Marion County and Fairhope; of these, Fairhope Municipal is a more highly developed airport.

In comparing the preceding DOA opinions with the average perception scores from airport administrators, it was found that highly developed Basic Utility Bay Minette was given an average score of 3.47, and less developed Carl Folsom was given an average of 2.76. In the General Utility category, highly developed Gulf Shores-Jack Edwards received a 3.95, and less developed Butler-Choctaw County, a 3.29. Finally, in the Transport category, highly developed Fairhope received a 3.71 and less developed Hamilton-Marion County, a 3.49.

In the second part of the operations section, perception of fifteen airport factors are as illustrated in Exhibit 7. They ranked from 1 to 5, perceiving from very unimportant to very important. The airport administrators' scores were calculated by dividing the total points of the responses by the number of responses, and thereby obtaining an "average response" per factor.

*Areas where a difference of 1.5 or greater exists are highlighted with an " *." According to this table, all sections are in close agreement - less than 1.5 point difference - except that of Paved Runway < 4,000'. DOA gave this factor a score of 5 (important), while airport administrators gave it a 2.280 (unimportant).*

The last part of the operations section of the survey asks airport

administrators to score the adequacy of these same 15 factors at "their" airport, the "ideal" airport, and at the six "control" airports. Exhibit 8 is a chart showing the average perception score for each airport, for each factor given, to the degree that the airport definitely does not offer (1), or definitely does offer (5) the listed factor. These numbers were obtained by taking the point total of the responses for each factor at each airport, and dividing it by the number of responses, to obtain the "average response."

Discussion

In analyzing the questionnaires, it became quite evident that most airport administrators, through no fault of their own, were somewhat lacking in understanding many of the basic perceptions of aviation management; many work on a part-time/secondary occupation basis. From telephone conversations, it was found that many were confused by aviation-related questions. In most instances where rural airports were administered by county clerks, there was obviously insufficient managerial expertise, as well as a lack of aviation knowledge. Another related problem in this area occurred in that initial phone calls were made to determine appropriate persons to fill out the survey; it often occurred that this person passed the survey on to someone else. These situations created problems in adequacy of information provided, continuity, as well as follow-up.

Airport Capital Needs

Of those who did return questionnaire, 60% did receive Federal or State money and 40% did not. Of those who did not respond, 50% did receive Federal or State grants and 50% did not. These close percentages indicate that previous receipt of assistance is not a standard characteristic of those that

did, or did not, respond.

In the area of capital need, there were significant discrepancies between federal and state monies claimed by respondents, versus that officially recorded by the FAA and DOA. For 1985, respondents claimed they had received $6,360,229 from the Federal AIP, and $281,175 from the State DOA. Official FAA and DOA sources revealed that these amounts were $2,028,844 and $279,363 respectively. While the DOA amounts show only a difference of $1,812, the FAA difference is $4,331,385. In reviewing the FAA description of funding for 1984, several projects, whose funding was allocated in 1984, were not completed until 1985 and were thus accounted for in 1985 by the airports. This explains some of the discrepancies between official sources and respondents' claims.

In 1986, the figures still showed some inconsistencies. The total claims from those airports responding were $3,668,026 Federal AIP, and $53,795 state DOA. The official sources supplied the following: $2,049,863 FAA/AIP, and $361,246 DOA. The difference in official versus claimed is $1,618,163 FAA/AIP, an $307,451 DOA.

Referring to Exhibit 1 ratios of Aviation Industry Generated Funds to Public Assistance Funds were calculated for both claimed and official amounts. In 1985, this ratio was 7.1:1 for claimed and 2.5:1 for official amounts. In both cases, this indicates the aviation industry did provide more than public assistance in 1985. In 1986, the claimed amounts came to a ratio of 6.8:1 and the official amount, 4.4:1. This, again, reveals the aviation industry provided more funding for capital projects in 1986 than did public assistance. As for future requirements through 1989, only $1,315,321, of the $13,893,452 the airports claimed they would need, has already been approved by the FAA for 1987. This is only 9.5% of the total needed through 1989.

When selecting the appropriate reason "why" a capital project was done, it

can be seen from Exhibit 2 that airport administrators spent most of their capital funding on developmental projects and the least on safety projects for both 1985 and 1986. In 1985, 78.0% of funding was spent on Development, 5.2% on safety, and 16.8% on maintenance. In 1986, the percentages were: development, 83.7%; safety, 1.6%; and maintenance, 14.7%. The same trend was indicated for 1987-1989 in that 66.6% would be used for development; 15.0% for safety, and 18.4% for maintenance. This reveals that airports recognize a need for development.

Again, problems arose in that not all respondents gave a reason for their expenditures. Also, many of those that did, gave multiple reasons, not assigning specific amounts to specific purposes. This lowered the accuracy of information again confirming the problem with insufficient managerial/aviation expertise. For those respondents who did not give reasons, or whose reasons were ambiguous, we did not use their responses in calculating total amounts in Exhibit 2.

Airport Operations Funding

Of the 50 airports who responded with financial information, 74% said they were not able to cover operating expenses from airport user charges or other airport incomes. Unfortunately, only a few usable budgets were sent, so it was impossible to determine to what extent operating expenses were not covered. However, as Exhibit 3 shows, it is possible to determine ratios of Aviation Industry Generated Funds to Public Assistance Funds in determining to what extent Alabama general aviation public airports are dependent on public assistance funding for operations. For 1985, this ratio was 1.0:1. In 1986, it was 1.3:1. This indicates an almost 50/50 ratio for both years. This reveals that, in general, the airports are very dependent on public assistance funds, almost on an equal/matching basis with aviation industry generated funds. In other words, general aviation is not paying for itself on a dollar

for dollar basis, although, there are other secondary community support roles that an airport can fulfill.

In briefly summarizing respondents comments on the DOA Airport Development Program, three main points were made. First, many who had received assistance were pleased. Second, some felt that the funding level in Alabama is too low and difficult to obtain. The third, and most often mentioned, was the fact that many knew nothing about the program and how to apply. Associated with this point is the fact that it was found (by survey and phone) there had been several airport administrators who recently started working in that position. This would indicate respondents are perhaps too new on the job to know about such state assistance programs.

Operations

*Exhibits 4, 5 and 6 reveal perceptions of the six control airports by the DOA, that airport's manager, and the average response (general opinion). All fifteen factors were scored and compared. Any differences of 1.5 or greater between either general opinion and DOA, or DOA and the airport manager, or general opinion and the airport manager, are indicated by a " * ." The perceptions measured the "capability to promote economic and industrial development in the surrounding communities" of the six airports.*

The mean average of respondent opinion confirmed DOA's (control) opinion in that Bay Minette Municipal received an average of 3.47 and Carl Folsom Airport (Elba) 2.76; Jack Edwards Airport (Gulf Shores), 3.95 and Butler-Choctaw County, 3.29; and Fairhope Municipal 3.71 and Marion County, 3.49. These numbers are consistent with, and support, DOA opinion, indicating the respondents perceived the same general capabilities of airports.

Exhibit 7 depicts a comparison of "perception of importance" of the fifteen airport factors. They were scored from 1 to 5, perceiving from very unimportant to very important. The only area where DOA and general opinion of

importance differed by 1.5 or greater was in the category of "Paved Runway < 4,000'". DOA gave this factor a score of 5 (important), while airport administrators gave it an average of 2.28 (unimportant). DOA gave a score of 5 to both > 4,000' and < 4,000' indicating that either is important, depending upon specific characteristics of the individual airport. For example, if the community could only support an airport requiring a 3,500' runway, then it would not be economical to install a 4,500' runway before it was needed. The respondents felt that a runway > 4,000' was more important (4.65) versus a runway < 4,000' (2.28). This indicates they feel a longer runway is more important. Of the 55 who responded with this information, 55% have runways < 4,000' and 45% have runways, ≥ 4,000'. Since these percentages are almost 50/50, this reveals that those with runways > 4,000' agree that the longer length is advantageous, while those with runways < 4,000' see a need for the developmental advantages of longer runways. A longer runway naturally attracts larger planes including business jets, and should attract industry and other community developmental programs.

Exhibit 8 reveals general opinion concerning the perceived ability of eight airports to offer (5), or not (1), the 15 factors. Respondents gave perceptions at "their" airport, "ideal" airport, and at six "control" airports.

Many interesting relationships occurred here. In comparing perceptions between "their" airport and "ideal" airport, and whether or not the factor is offered, it was found in most cases respondents gave "their" airport a lower score for the factor than they did the "ideal" airport. (The only factor where the "ideal" airport offers less is the factor of Paved Runway < 4,000'). This indicates most administrators feel their airport is less than ideal and desire some improvement and development. This also supports the claim of future need for capital improvements of $13,893,452, as was stated in the

Capital Projects section.

For the "ideal" airport, the three factors with the lowest scores which respondents felt would probably be less offered were Paved Runway of < 4,000' (2.78), a Control Tower (3.419) and Commuter Air Service (3.809). The three factors they felt most important to have at the ideal airport are Runway/Taxiway Surface Condition (4.795), Strong Airport Management (4.814), and Paved Runway > 4,000' (4.864).

At their own airports, respondents felt that the three least offered factors were commuter air service (1.404), control tower (1.500) and jet fuel (2.542). The three most offered factors at their airports were paved runway < 4,000' (3.553), hanger/tie-down space (3.560) and runway/taxiway surface condition (3.760).

Two factors least found at "their" airports were also perceived to be least found at the "ideal" airport: Control Tower and Commuter Air Service. One factor found most at "their" airport, as well as the "ideal" airport, was runway/taxiway surface condition.

Again, the runway factors played an important role. For the "ideal" airport, the least offered would be a Paved Runway of < 4,000' and the most offered would be paved runway > 4,000'. This indicates a desire for the advantages of a longer runway and the development they can attract.

From Exhibit 8, a comparison of the "ideal" airport versus the other airports reveals some areas of difference. Several factors received higher scores for "ideal" airport when compared to "your" airport and the six "control" airports. These factors are: Approach Aids, Control Tower, Hangar/Tie-down Space, Ground Transport, Commuter Air Service, and Strong Airport Management. The fact that the "ideal" airport is the only one that strongly offers these factors indicates respondents would like to see these things, in particular, developed more thoroughly at their airports.

Recommendations

1. Because of a lack of managerial and aviation expertise on the part of airport administrators, it is felt that an airport management training program would help eliminate inefficiencies in administering to these airports. One alternative is a video-taped short-course on aviation management through a university's extension program; a cost-effective program has been developed for the Southeastern Airport Managers Association (SAMA) by Auburn University, and will be available summer of 1987. The six 2-hour tapes can be sent to administrators for study at their convenience, thereby eliminating a need for travel to conferences, etc.

2. Since there were discrepancies between claimed and official sources of funding from the FAA and DOA, it would be beneficial to develop a system for reporting airport funds received. Also, requiring federal funds to flow through the state office (channeling) before being distributed to individual airports, would allow for a more thorough awareness of fund distribution.

3. As was strongly suggested by respondents in their comments on the DOA Airport Development Program, a concerted effort should be made by Alabama DOA to publicize the state's Airport Development Program. The airports should be informed as to funds available, who qualifies, how to apply, etc.

4. In trying to attract industry to Alabama, it would be beneficial to conduct similar research on a national or regional level. This would help reveal to what extent Alabama's state assistance compares to that of other states, and could reveal a need for an increase in airport assistance funding in order to compete with other states for industrial and economic development.

Exhibit 1 - Alabama Airport Funding Sources 1985 - 1986

1985

	Claimed Federal and State			Official Federal and State		
	Aviation Industry Generated Funds	Public Assistance	Total	Aviation Industry Generated Funds	Public Assistance	Total
Private	$ 2,000	---------	(0.17%)	$ 2,000	--------	(0.1%)
Federal	$6,360,229	---------	(83.9 %)	$2,028,844	--------	(62.5%)
State	$ 281,175	---------	(3.7 %)	$ 279,363	--------	(8.6%)
Local	----------	$934,440	(12.33%)	----------	$934,440	(28.8%)
	$6,643,404	$934,440	$7,577,844	$2,310,207	$934,440	$3,244,647
	(7.1:1)			(2.5:1)		

1986

	Claimed Federal and State			Official Federal and State		
	Aviation Industry Generated Funds	Public Assistance	Total	Aviation Industry Generated Funds	Public Assistance	Total
Private	----------	-------		----------	---------	
Federal	$3,688,026	-------	(85.9%)	$2,049,863	---------	(69.3%)
State	$ 53,795	-------	(1.3%)	$ 361,240	---------	(12.2%)
Local	----------	$547,009	(12.8%)	----------	$547,009	(18.5%)
	$3,741,821	$547,009	$4,268,830	$2,411,109	$547,009	$2,958,118
	(6.8:1)			(4.4:1)		

Exhibit 2 Capital Expenditure Categories

1985

Development %	Safety %	Maintenance %	TOTAL
$706,600 - 78%	$47,000 - 5.2%	$152,300 - 16.8%	$905,900

1986

Development %	Safety %	Maintenance %	TOTAL
$491,200 - 83.7%	$9,525 - 1.6%	$86,450 - 14.7%	$587,175

1987-1989

Development %	Safety %	Maintenance %	TOTAL
$3,951,500 - 66.6%	$889,000 - 15.0%	$1,090,900 - 18.4%	$5,931,400

Exhibit 3 Operational Income

	1985			1986		
	Aviation Industry Generated Funds	Public Assistance	Total	Aviation Industry Generated Funds	Public Assistance	Total
User Charges	$264,477	--------	(34.6%)	$412,497	--------	(47.6%)
Federal	$115,213	--------	(15.1%)	$ 72,495	--------	(8.4%)
State	--------	$383,719	(50.2%)	----------	$380,814	(44.0%)
Local	--------	$ 500	(0.1%)	----------	0	
	$379,690	$384,219	$763,909	$484,992	$380,814	$865,806
	(1.0:1)			(1.3:1)		

Exhibit 4 Perceptions of Airport Development Factors - Basic Utility Airports

Basic Utility

FACTORS	Bay Minette Municipal (+) General Opinion		DOA		Airport Manager	Carl Folsom (Elba) (-) General Opinion		DOA	Airport Manager
Runway <4,000'	3.519		5		5	3.464	*	5	D
Runway >4,000'	3.069	*	5	*	1	2.750	*	1	I
Adequate Taxiways	2.800		3	*	1	2.714		2	D
Runway/Taxiway Condition	3.548		4		3	3.207		3	
Approach Aids	2.345		3		2	2.037		1	N
Control Tower	1.464		1		1	1.296		1	O
Hangar/tie-down	2.833		3		2	2.517		3	T
Ground Transport	2.517		2		2	2.074		1	
Commuter Service	1.724		1		1	1.385		1	R
Nearby Hotel/Motel	2.933		2		3	2.536	*	1	E
Industrial Park	2.536	*	1		1	2.192		1	S
Jet Fuel	2.517	*	1	*	4	1.815		1	P
AirCraft Service (FBO)	3.323		4		4	2.138		1	O
AirCraft parts/repair	3.032	*	5	*	3	1.893		1	N
Strong Airport Management	2.900		3		3	2.571	*	1	D

Exhibit 5 - Perceptions of Airport Development Factors - General Utility Airports

General Utility

FACTORS	Butler Choctaw County (-) General Opinion		DOA		Airport Manager	Jack Edwards (Gulf Shores) (+) General Opinion		DOA		Airport Manager
Runway <4,000'	3.462	*	5		5	3.741		5		5
Runway >4,000'	2.767		4		5	3.993		3	*	5
Adequate Taxiways	2.517		2		3	3.800		4		5
Runway/Taxiway Condition	3.379		3	*	5	4.031		3		4
Approach Aids	2.034		3		3	3.033		4		5
Control Tower	1.214		1		1	1.586		1		1
Hangar/tie-down	2.700		4		4	3.344		4		3
Ground Transport	2.071	*	1		3	3.355		4		3
Commuter Service	1.407		1		1	2.267		1	*	5
Nearby Hotel/Motel	2.517	*	1	*	4	3.710		5	*	1
Industrial Park	2.192		1	*	5	2.793		2	*	5
Jet Fuel	1.536		1		1	3.774		4		5
AirCraft Service (FBO)	2.345	*	4	*	1	3.750		4		5
AirCraft parts/repair	1.931		3	*	1	3.438		3	*	5
Strong Airport Management	2.621		3	*	5	3.548		5		4

Exhibit 6 - Perceptions of Airport Development Factors - Transport Airports

Transport

FACTORS	Marion County (-) General Opinion		DOA	Airport Manager	Fairhope Municipal (+) General Opinion		DOA	Airport Manager
Runway <4,000'	3.269	*	5	D	3.583		5	* 1
Runway >4,000'	4.167		5	I	4.656		5	5
Adequate Taxiways	3.200		2	D	4.129		5	4
Runway/Taxiway Condition	3.667	*	2		4.156		5	5
Approach Aids	2.679		4	N	3.355		4	3
Control Tower	1.321		1	O	1.586		1	1
Hangar/tie-down	3.300		3	T	3.844		4	3
Ground Transport	2.414		3		3.548	*	2	* 4
Commuter Service	1.536		1	R	2.034		1	1
Nearby Hotel/Motel	3.000		3	E	3.467		3	4
Industrial Park	2.615		4	S	2.889		4	3
Jet Fuel	2.883		4	P	3.933		5	5
AirCraft Service (FBO)	3.097		3	O	4.031		5	4
AirCraft parts/repair	2.839		2	N	3.906		4	4
Strong Airport Management	2.833	*	1	D	3.806		4	* 1

Exhibit 7 - Importance Weighting of Airport Development Factors

FACTORS	DOA		Airport Administrators
Paved Runway < 4,000'	5	*	2.28
Paved Runway > 4,000'	5		4.65
Adequate Taxiways	4		4.29
Runway/Taxiway Surface Condition	5		4.49
Approach Aids	4		4.45
Control Tower	2		3.42
Hangar/Tie-down Space	5		4.26
Ground Transport (taxi, car)	5		3.75
Commuter Air Service	3		3.08
Nearby Hotel/Motel	3		3.81
Industrial Park	4		4.15
Jet Fuel	4		3.98
Aircraft Servicing (FBO)	5		4.27
Aircraft Parts/Repair	3		3.73
Strong Airport Management	5		4.48

DOA = Department of Aeronautics Officials.
* = Significant difference in factor scores.

Exhibit 8 Perceptions of Airport Administrators about Various Airports

FACTORS	Your A.P.	Ideal A.P.	Bay Minette	Carl Folsom	Jack Edwards	Butler Choc.	Marion Co.	Fairhope Munic.
Paved runway less than 4,000'	3.553	2.744	3.519	3.464	3.741	3.462	3.269	3.583
Paved runway greater than 4,000'	3.184	4.864	3.069	2.750	3.933	2.767	4.167	4.656
Adequate taxiways (twy)	2.958	4.721	2.800	2.714	3.800	2.517	3.200	4.129
Runway/taxiway surface condition	3.760	4.795	3.548	3.207	4.031	3.379	3.667	4.156
Approach aids (ie ILS, VASI)	2.600	4.791	2.345	2.037	3.033	2.034	2.679	3.355
Control tower	1.500	3.419	1.464	1.296	1.586	1.214	1.321	1.586
Hangar, tie-down space	3.560	4.705	2.833	2.517	3.344	2.700	3.300	3.844
Transport (ie taxi, car rental)	2.625	4.535	2.517	2.074	3.355	2.071	2.414	3.548
Commuter air service	1.404	3.809	1.724	1.385	2.267	1.407	1.536	2.034
Nearby hotel/motel	3.408	4.349	2.933	2.536	3.710	2.517	3.000	3.467
Industrial park	3.140	4.256	2.536	2.192	2.793	2.192	2.615	2.889
Jet fuel	2.542	4.512	2.517	1.815	3.774	1.536	2.833	3.933
Aircraft servicing (FBO)	3.041	4.548	3.323	2.138	3.750	2.345	3.097	4.031
Aircraft parts/repair	2.837	4.341	3.032	1.893	3.438	1.931	2.839	3.906
Strong airport management	3.333	4.814	2.900	2.571	3.548	2.621	2.833	3.806

1 = Definitely does not offer.
5 = Definitely does offer.