Project No. A-3624

Project Director: H. T. Johnson

Sponsor: Troup County Airport Authority


Award Period: From 7/18/83 To 9/18/83

Sponsor Amount:

Estimated: $3,960
Funded: $3,960

Cost Sharing Amount: $990

Cost Sharing No.: E-900-821

Title: A Program of Economic Development and Technical Assistance For The Troup County Airport Authority

ADMINISTRATIVE DATA

1) Sponsor Technical Contact:

Thomas W. Sheffield

Chairman

Troup County Airport Authority

P.O. Box 430
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(404) 884-7625

2) Sponsor Admin/Contractual Matters:

Joanie Perry

Secretary

Troup County Airport Authority

P.O. Box 430
LaGrange, Georgia 30241
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Military Security Classification:

NA

Supplemental Information Sheet for Additional Requirements.

Travel: Foreign travel must have prior approval — Contact OCA in each case. Domestic travel requires sponsor approval where total will exceed greater of $500 or 125% of approved proposal budget category.

Equipment: Title vests with Sponsor, however, none proposed.

COMMENTS:

100% Advanced Payment Received.

COPIES TO:

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GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION

SPONSORED PROJECT TERMINATION/CLOSEOUT SHEET

Date 11/3/83

Project No. A-3624

Includes Subproject No.(s)

Project Director(s) H. T. Johnson

Sponsor Troup County Airport Authority

Title A Program of Economic Development and Technical Assistance for the Troup County Airport Authority

Effective Completion Date: 10/4/83 (Performance) 10/4/83 (Reports)

Grant/Contract Closeout Actions Remaining:

☐ None
☐ Final Invoice
☐ Closing Documents
☐ Final Report of Inventions
☐ Govt. Property Inventory & Related Certificate
☐ Classified Material Certificate
☐ Other

Continues Project No. Continued by Project No.

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Other

Form OCA 60-1028
MEMORANDUM

TO: Harris Johnson
FROM: Rich Combes

SUBJECT: Report Entitled "Callaway Airport Expansion Plan"

The report showed that the Airport Authority got a lot of work for the amount of money they spent. I have a few comments on the report which I hope you will find to be constructive. In the past, I have reviewed reports before they go to the sponsor, and where time permits, I would like for you to set aside some review time for future projects. My comments are as follows:

1. The title sheet should have project number, sponsor, Georgia Tech unit responsible for report (EDL/IED in this case), author and date. The report cover has "Engineering Extension Laboratory" it doesn't exist anymore!

2. You should include a Table of Contents and, where needed, List of Figures (or Exhibits) and List of Tables.

3. Pages should be numbered.

4. Tables should be identified through some numbering system and referred to in text.

5. The material following the Bibliography should be either included in the body of the text, after the page which refers to the material (e.g. the Exhibits should appear after the page on which they are first referenced), or should be packaged as an appendix or appendices. My "rule of thumb" is if material is important to the understanding of the report, it should be included in the body of the report. Otherwise, it should be put in an appendix.

6. The organization of the report could be improved -- I found it confusing to read. For example, what is the purpose of the "Economic Profile Update," and where do you refer to this data or the use of this data? Why does it follow the Summary? The system used for defining headings and subheadings in the report is not at all clear. I suggest that a more orderly approach would make the report much easier to read and comprehend. A
good place to start organizing is the definition of deliverables as given in the contract Statement of Work. Thus, using the stated purpose of the report, you might have three major sections:

- Evaluation of the Airport Facilities
- Suggested Activities for Attracting New Industry
- Marketing Plan

Each of these sections would be divided into appropriate subsections. As the report stands, almost every heading is in caps, making it difficult to determine the hierarchy of the various subjects or to distinguish table titles from sections.

7. It is not clear to me what the section title, "Perspective" is supposed to convey -- is it a topic separate from the "Marketing Plan?"

8. I feel you really shorted the sponsor on information to back up the cost estimates. Dollars are always the bottom line and any good engineering estimate should clearly state the basis of the estimate, even if you put the data and cost calculations in an appendix.

9. I feel that any record copy of the report, such as the one I reviewed, should have complete sets of figures, even if these are full-sized drawings. Blue-lines are relatively cheap to produce. If you have problems with reproduction or drawing, let me know and we can help get you copying assistance or drafting personnel.

10. I found several errors which were either typographical errors or mis-spellings (e.g. "lable," "amoratization"). Once you get Wordstar and Spellstar up on your PC, your quality control will be much easier, so I urge you to get Shirley trained quickly.

Harris, I will admit that I am pretty finicky when it comes to report quality. However, my philosophy holds that reports are the only lasting evidence of our work and therefore deserve a very critical review. If you want to discuss any of these comments, you know I am always ready to do so. In the future, let's get together on the reports before they go to the sponsor.
CALLAWAY AIRPORT
EXPANSION PLAN
PURPOSE

Callaway Airport, located in Troup County Georgia, has an excellent location with respect to the LaGrange Industrial Park; very good access to a major expressway (I-85); connections in under an hour to a major transportation hub; excellent prospects for development and growth; and very good existing runway facilities. Current airport development is hampered by the existing terminal/hanger facilities, their location with respect to the industrial activity and limited amounts of hanger space.

An excellent twenty-year plan for development was prepared in 1978 by Delta Assc., a planning and consulting group. The purpose of this report is to update the 1978 plan to allow for changes in the needs and environment of the Airport; to suggest additional efforts aimed at attracting light "advanced technology" industry, research and development, or offices to Airport property and to suggest a marketing strategy aimed at increasing Callaway Airport's visibility and utilization.

SUMMARY

The Airport and its facilities are important to LaGrange and to the LaGrange industrial development effort. While small airport transportation is important to industrial development in general and even more important to advanced technology activities in particular, it is generally not the most important criteria. However, a distinctive modern airport with good services, easy access and quality facilities can be the deciding factor for a location—other factors equal.

A recent survey* of high technology firms indicated their key location factors as follows:

*Robert Premus, "Location of High Technology Firms and Regional Economic Development," Staff Study prepared for the use of the Subcommittee on Monetary and Fiscal Policy of the Joint Economic Committee of the U.S. Congress (GPO, 1982).
### HIGH TECH COMPANIES' LOCATION CHOICES

<table>
<thead>
<tr>
<th>Rank</th>
<th>Attribute</th>
<th>% Significant or Very Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Labor skills/availability</td>
<td>89.3</td>
</tr>
<tr>
<td>2</td>
<td>Labor Costs</td>
<td>72.2</td>
</tr>
<tr>
<td>3</td>
<td>Tax climate within the region</td>
<td>67.2</td>
</tr>
<tr>
<td>4</td>
<td>Academic institutions</td>
<td>58.7</td>
</tr>
<tr>
<td>5</td>
<td>Cost of living</td>
<td>58.5</td>
</tr>
<tr>
<td>6</td>
<td>Transportation</td>
<td>58.4</td>
</tr>
<tr>
<td>7</td>
<td>Access to markets</td>
<td>58.1</td>
</tr>
<tr>
<td>8</td>
<td>Regional regulatory practices</td>
<td>49.0</td>
</tr>
<tr>
<td>9</td>
<td>Energy costs/availability</td>
<td>41.4</td>
</tr>
<tr>
<td>10</td>
<td>Cultural amenities</td>
<td>36.8</td>
</tr>
<tr>
<td>11</td>
<td>Climate</td>
<td>35.8</td>
</tr>
<tr>
<td>12</td>
<td>Access to raw materials</td>
<td>27.6</td>
</tr>
</tbody>
</table>

Respondents were asked to rate each attribute as "very significant, significant, somewhat significant; or no significance" with respect to their choices. The percent of very significant and significant responses were added together to obtain an index of overall importance.

Source: JEC survey.

While transportation is not the most significant factor, it is one of the factors that southern areas generally rate low. The proposed facility at Callaway Airport could give LaGrange a relative advantage when compared to other similar locations when competing for industrial prospects.

The Airport is important to LaGrange's existing industry. Of seventeen industries in or near the Industrial Park representing 3,911 jobs, seven companies (1,976 employees) currently use the Airport some. Five companies (1,448 employees) indicated a need for improvement at the Airport.

Our recommendation is for a 3,750 S.F., pre-engineered, steel frame, aggregate sided terminal building located in the same position as that identified in the 1978 plan with provision for expansion of the building to 7,000 S.F. as needs dictate. We suggest that the initial step to be taken is the construction of a 100' x 100' service/storage hanger to be operated by the FBO, immediately followed by construction of the terminal building. Only after the service hanger and terminal building are in place do we recommend that the Authority attempt to actively solicit clients for corporate hangers and/or light industry structures.

A suggested set of covenants to control both hanger and light industry development is included.
ECONOMIC PROFILE UPDATE

The following economic data is presented as an update to the figures presented in the 1978 report.

EFFECTIVE BUYING INCOME BY HOUSEHOLD
Average All Households $17,022

<table>
<thead>
<tr>
<th>Dollar Range</th>
<th>Troup County</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,000 - $19,999</td>
<td>27.8%</td>
<td>27.7%</td>
</tr>
<tr>
<td>$20,000 - $34,999</td>
<td>29.1%</td>
<td>30.0%</td>
</tr>
<tr>
<td>$35,000 - $49,999</td>
<td>9.2%</td>
<td>11.9%</td>
</tr>
<tr>
<td>$50,000 - +</td>
<td>3.7%</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

Projected 1987 EBI $28,790


POPULATION TROUP COUNTY

<table>
<thead>
<tr>
<th>Year</th>
<th>LaGrange</th>
<th>Troup County</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>24,163</td>
<td>50,003</td>
</tr>
<tr>
<td>1993</td>
<td>29,720</td>
<td>56,100</td>
</tr>
</tbody>
</table>

TROUP COUNTY EMPLOYMENT

<table>
<thead>
<tr>
<th>Year</th>
<th>Manufacturing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>8,088</td>
<td>17,694</td>
</tr>
<tr>
<td>1980</td>
<td>8,842</td>
<td>21,268</td>
</tr>
<tr>
<td>1982</td>
<td>9,232</td>
<td>22,529</td>
</tr>
</tbody>
</table>

1980 Census data.

2Adjusted Sales and Marketing Mgt. data.
ULTIMATE EXPANSION

In order to formulate plans and a staging scheme for the Callaway Airport, some estimates of the long-term potential as dictated by the runway configuration and physical constraints must be made. The primary constraints at this time are the land mass (bounded by the LaGrange Industrial Park on one side) and the runway configuration.

The abandoned runway is expected to never be reopened. Therefore, the current runway configuration can be considered to be type L_2 Intersecting. The maximum of aircraft is expected to continue to be primarily Type 1 which consists of executive jet and transport type twin-engine piston as well as light twin and single-engine piston. The maximum practical annual capacity for this configuration (PANCAP) is 220,000 operations \{1\}. When compared with the current level of operations (average for '81 and '82 of 7,664 operations), Callaway Airport is unlikely to reach this limit in the foreseeable future.

A better estimate of long-term terminal load might be obtained by considering prior operations history and applying a projected growth rate.

PROJECTED OPERATIONS

<table>
<thead>
<tr>
<th></th>
<th>1983</th>
<th>1993</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>7,315</td>
<td>11,000</td>
<td>16,540</td>
</tr>
<tr>
<td>Itinerate</td>
<td>9,318</td>
<td>12,775</td>
<td>17,670</td>
</tr>
<tr>
<td>TOTAL</td>
<td>16,633</td>
<td>23,775</td>
<td>34,210</td>
</tr>
</tbody>
</table>

PROJECTED OPERATIONS FROM 1978 PLAN
(Adjusted for Shift in Years)(4.3% Growth)

<table>
<thead>
<tr>
<th></th>
<th>1983</th>
<th>1993</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>9,721</td>
<td>14,946</td>
<td>22,770</td>
</tr>
<tr>
<td>Itinerate</td>
<td>12,380</td>
<td>16,634</td>
<td>25,342</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22,101</td>
<td>31,580</td>
<td>48,112</td>
</tr>
</tbody>
</table>

Based on these projections as upper expansion limits the typical peak hour passenger volumes may be estimates as follows [?].
Facility Terminal Space (S.F.) | 1983 (Planning Only) | 1993 | 2003
--- | --- | --- | ---
Minimum | 2,613 | 3,727 | 5,372
Maximum | 3,460 | 4,961 | 7,550

ESTIMATED TYPICAL PEAK HOUR LOADING

<table>
<thead>
<tr>
<th>Terminal Occupants</th>
<th>1983</th>
<th>1993</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum TPHP</td>
<td>108</td>
<td>154</td>
<td>222</td>
</tr>
<tr>
<td>Maximum TPHP</td>
<td>143</td>
<td>205</td>
<td>312</td>
</tr>
</tbody>
</table>

The required number of parking spaces can be estimated as ranging between one parking space for each 1.8 to 1.6 peak hour loading requirement.

ESTIMATED PARKING REQUIREMENTS (AUTO SPACES)

<table>
<thead>
<tr>
<th>1983</th>
<th>1993</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>60</td>
<td>85</td>
</tr>
<tr>
<td>Maximum</td>
<td>90</td>
<td>128</td>
</tr>
</tbody>
</table>

Typical automotive parking spaces range from 8.75' x 18.25' (minimum allowed by covenants) to 9' x 20'. With allowances for aisles, lane ends and curbs; we can estimate that 40% of the parking area will be filled with parking spaces.

ESTIMATED AUTO PARKING REQUIREMENTS (S.F.)

<table>
<thead>
<tr>
<th>Parking Area</th>
<th>1983</th>
<th>1993</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>24,000</td>
<td>34,000</td>
<td>49,200</td>
</tr>
<tr>
<td>Maximum</td>
<td>40,500</td>
<td>57,600</td>
<td>87,750</td>
</tr>
</tbody>
</table>

1Calculated as .65% of total annual operations for TPHP and 2,420 S.F. per 100 TPHP.
TERMINAL FACILITY RECOMMENDATION

Terminal facilities are a key ingredient in subjective and visual evaluations of airport "quality". The terminal facilities currently at Callaway Airport are not consistent with the overall quality of the LaGrange Industrial Park which lies next to Callaway Airport.

The single most important goal for Callaway Airport is to establish operations of the new (i.e. East) side of the active runways. For this to be accomplished, FBO service hanger, aircraft parking apron, and terminal facilities must be established on this new side. This plan proposes a separate terminal facility although that is not the only configuration commonly used. A case in point is that several recently constructed facilities have been built as a lean-to adjacent to the service hanger. We would prefer to see a separate facility connected by walkway to the service hanger for reasons of security, noise and traffic levels.

The estimated 1993 facility requirements suggest a 3,727 S.F. terminal requirement which could be expanded as (and when) growth in operations dictate. The requirement for a building which can be expanded over time is best met by planning for the ultimate expansion at the very beginning. We suggest a pre-engineered, steel frame building with aggregate or masonry wall sections in a standard 50' x 75' configuration (3,750 S.F. Exhibit I). This type of construction allows excellent maintainability, relatively low cost, and the ability to expand by adding "bays" on to the existing building with decreased difficulty from a normally constructed building.

The local Industrial Development Authority should be provided a small office (115 S.F.) for supply storage and small meeting privacy. For larger groups the classroom (meeting room) should be made available with refreshments available through the kitchen/concession area.

A conceptual expansion plan detailing terminal expansion to 6,250 S.F. and ultimately to 7,500 S.F. is included as Exhibit II.
The various terminal spaces and their approximate areas are presented below:

<table>
<thead>
<tr>
<th>Space</th>
<th>Recommended Approximate Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lobby and waiting area</td>
<td>450 S.F.</td>
</tr>
<tr>
<td>Meeting/classroom</td>
<td>600 S.F.</td>
</tr>
<tr>
<td>FBO Sales/counter area</td>
<td>375 S.F.</td>
</tr>
<tr>
<td>FBO Office</td>
<td>195 S.F.</td>
</tr>
<tr>
<td>Restrooms 1</td>
<td>320 S.F.</td>
</tr>
<tr>
<td>Pilot's Ready &amp; lounge</td>
<td>375 S.F.</td>
</tr>
<tr>
<td>Maps and support</td>
<td></td>
</tr>
<tr>
<td>Industrial development office</td>
<td>115 S.F.</td>
</tr>
<tr>
<td>Concession/future kitchen/dining area</td>
<td>400 S.F.</td>
</tr>
</tbody>
</table>

The initial provision for parking should be sixty (60) spaces including employees and rental cars. We recommend for this airport full 9' x 20' (180 S.F.) parking spaces with 12' aisles. With access, aisles, and lane ends; we estimate 40% of the usable area will be parking spaces. Therefore, 27,000 S.F. of asphalt will be required.

Provision of terminal and parking facilities may be made in two steps. The first step is to provide service hanger and temporary FBO offices with fifteen (15) parking spaces near the rear of the service hanger and access by what will become parking aisles in the expanded mode. (See conceptual Step 1). Then, as the terminal building is constructed, parking may be filled in from a periphery.

A covenant agreement which controls buildings, sites, utilities and landscaping in the interest of the Airport is highly recommended. An example set of such covenants is included as Exhibit IX.

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1Men's -- 2 toilets, 1 urinal, pilot's shower.
Women's -- 3 toilets.
The results of this study and earlier assessments made by Delta Associates all indicate that the Callaway Airport has excellent potential for growth as a general aviation airport in West Central Georgia. It is advantageously located to serve the I-85 corridor area between Atlanta and Columbus, Georgia, including a portion of East Central Alabama. The summary of aircraft operations shows that the Callaway Airport has already demonstrated an outstanding capability for attracting both locally-based business aircraft and itinerant operations. The marketing strategy presented in this study is directed towards the long-term growth of these two sectors of activity and the expansion of support/satellite airport businesses. At least eight other general aviation airports compete with Callaway Airport in its market. With proper planning and promotion, Callaway should develop as the leading facility in the area.

The implementation of the marketing strategy for expanding and improving the operation of Callaway Airport is primarily the responsibility of the Airport Authority. While the performance of the fixed-based operator may be instrumental to the continued growth of airport operations, it is the Authority that has the legal, political, and financial powers essential for directing the overall development of the facility. And it is the Authority that is responsible for providing Troup County citizens and businesses with the best possible airport services and for maximizing the economic impact which can result from the overall airport development.

The marketing effort should begin with a community awareness program directed by the Authority. This program should emphasize a long-term commitment by the Authority to make Callaway Airport the most progressive and beneficial general aviation airport in the market area. Support for this effort must be acquired through the development of close working relationships between the Airport Authority and local governmental units, chambers of commerce, and industrial authorities. The continued support of the local news media will be essential in presenting airport development as an important part of overall community development.
Two members of the Airport Authority should be assigned the responsibility of generating local political/banking/media support. These members would begin work immediately after selection of terminal design and financial forecasts are completed. They need to know how much the total project is going to cost the federal government and how much the local costs will be. The purpose of this committee is to gather support for the airport modernization by indicating a positive relationship with jobs; the importance of an improved airport to continued industrial success and the overall quality of the modernization program.

EXPANSION OF FLIGHT OPERATIONS

The generation of revenue from Callaway Airport come primarily from flight operations. Although the level of business depends heavily upon the customer relations developed by the FBO and the quality of service he provides, the Authority should provide the impetus for operations growth by providing support through community relations, developing formal plans for improvements, and seeking the required funding from local, state, and federal sources. The Authority and the FBO should establish annual business goals and work jointly to meet the objectives. Quarterly reports on the operation should be reviewed jointly.

Based on past accomplishments, promotional efforts should be directed towards itinerant aircraft business in general and the business/corporate aircraft traffic in particular. The FBO and the Authority should consider jointly advertising in flight periodicals (refer to List of Periodicals in Exhibit VIII) always with an emphasis on airport improvements.

As soon as operations are established on the "new" side of the airport, a survey should be made to determine if individuals or businesses located in or near Troup County have aircraft which are based at other local airports. Short-term incentives could be used to get these aircraft based at Callaway.

As facility improvements such as the relocation of the terminal building or the construction of additional hangers are made, a promotional brochure should be printed for use in marketing efforts. In addition to promoting flight operations, the brochure could be used to market other services, special events, and the availability of airport sites for industrial or commercial development. An example of a similar brochure is included as Exhibit III.
The centralized Southeastern location of the Callaway Airport, with 5,000 foot runways, makes it a favorable site for special "fly-in" events. In addition to the direct economical impact of a "fly-in", such an event provides opportunities to familiarize numerous aircraft pilots and other aviation enthusiasts with the facilities of the host airport. The Troup County Airport Authority, the FBO, and local organizations such as the chamber of commerce should investigate the potential for a special "fly-in" project. Sponsorship possibilities should be discussed with sport aviation associations, parachute clubs, etc.

DEVELOPMENT OF SUPPORT/SATELLITE BUSINESSES

Facility improvements at the airport, which will focus on the relocation of the terminal building and the completion of the new access road, will offer various opportunities for developing airport-related businesses on the property. The major opportunities identified by this study are as follows:

1. The location of maintenance firms to perform instrument, engine, and airframe repair and rebuild services. These firms could be sited in the old terminal area. Marketing techniques could include direct mail advertising of the sites to aircraft maintenance companies, periodical advertising, and joint marketing with the industrial authority and state agencies. This area lacks sufficient water supply (2") for most light industrial or commercial facilities.

2. The establishment of a restaurant or other commercial businesses in the new terminal area. The viability of commercial businesses probably depends upon drawing trade from the industrial park and the LaGrange area in general. Direct airport traffic alone appear insufficient to provide an optimal site for a retail or general service firm in the immediate area.

3. The development of limited light industrial property on or near the new terminal access road. This property would be ideal for small high-tech operations which could utilize the immediate access to a general aviation airport. These sites could be marketed best through joint activities with the county industrial authority and other state and local organizations. A particular opportunity exists to document light
industry opportunities on the Airport flyer discussed later in this report. We recommend that after completion of the terminal building, a single site be selected which is consistent with the overall Airport plan (see Step 3 Conceptual Plan Exhibit VI). This site should be documented on the Airport flyer, and marketed directly to likely prospects.

Thirty-one (31), four digit SIC Codes are identified in Exhibit VII. These SIC codes represent marketing opportunities for light industry sites. Standard & Poor's Inc. provides a company identification service by SIC code which will provide mailing labels for these SIC codes. This is an excellent mechanism for sending flyers to prospects. In addition, once the flyer is complete, supplies of the flyer should be made available to Georgia Tech's ATDC, Columbus College, and Columbus Vo Tech.

A reception and tour of the new terminal facility, which includes exposure to the light industry area for the members of the Southern Industrial Development Council (SIDC) and the Georgia Industrial Developers Association (GIDA) should be a part of the terminal dedication.

CORPORATE HANGER SPACE

Two members of the Airport Authority should be appointed to a sub-committee to prepare a model ten-year construction and lease-back plan for corporate hanger space. This plan should have a pre-identified site selected, a suggested hanger design, and current cost and amortization schedules. The plan, with Airport brochure should then be used as the basic marketing tool to approach existing, surrounding, and future industries to market available corporate hanger space.

An excellent arrangement to lend flexibility to hanger design is to construct one building wide enough to accommodate two corporate aircraft and with small office space available. This "open-bay" design is then subdivided in the interior by a fence to provide secure interior space for two separate corporate aircraft while at the same time reducing overall costs.

We recommend that the Authority maintain control over the type of construction and operations allowed at the Airport by preparing the financing and building the hangers and leasing those hangers to corporate tenants.
General aviation business flying represents the use of the aircraft as a transportation vehicle in the conduct of a business. It is used to transport executives, sales personnel, technicians and components from plant to plant and to customer locations. Business flying offers speed and low costs, enables coverage of greater marketing territories, increases person-to-person contact and places the aircraft user in a better competitive position. As aircraft become more important to business operations, firms will seek to locate near a suitable airport. It should be noted that in this context, "suitable" indicates an airport and facilities that compliment and lend credibility to the firm in question. This means the construction and facilities should be comparable in nature to the proposed industry buildings and that the grounds and landscaping should be compatible.

The combination of quality airport facilities which cater to general aviation business flying and well developed industrial parks (LaGrange Industrial Park) could be considered in the perspective of an "airport development district". The key to mutually beneficial aspects of these side-by-side community resources involve:

1. Compatable, planned environmental factors such as architectural and site design, landscaping and performance standards.
3. Non-aviation industrial development with ready access to taxiway and terminal facilities where desired.
4. Light industry, aviation oriented, and professional business oriented development at the airport proper.

When combined with the community resources of LaGrange (relatively low cost labor; excellent quality of life; cultural, recreational, and educational facilities) a good transportation network which includes a readily available, quality airport along with the already existing interstate highway access; this community should be able to maintain a relative advantage in attracting desirable, advanced technology industries for some time.
An example of this type of development can be seen in the Huntsville-Madison County Airport Development District. Now approximately twenty (20) years old, this district has been a major success and has been one of the primary contributing factors to the ability of the Huntsville area to continue to grow, establish new advanced technology companies and in general avoid the collapse predicted with the scaling back of the space program.

An airport location is not suitable or acceptable for all industrial, business or commerical activities. Appropriate non-aviation activities for potential airport locations are as follows:

1. Light manufacturing  
2. Distribution  
3. Research and development  
4. Offices  
5. Commercial activities

**LIGHT MANUFACTURING**

Industrial development in the immediate vicinity of air terminal facilities is, in general, restricted to medium-sized, light manufacturing.

**Necessary Conditions for Industrial Development in the Airport Environment**

The influence of air transportation can be seen where: (1) substantial travel is done by company personnel to distant points, (2) substantial travel is done by customers or clients who visit the facility, (3) where there is a significant movement of goods and services by air, and (4) there is an opportunity to improve a company's competitive advantage through the efficient use of air transportation. All manufacturing firms that possess these characteristics, however, are not necessarily suited for an airport location. Such firms must also be compatible with airport operations and surrounding development.

**Compatibility**

The compatibility of manufacturing operations and an airport can best be measured in terms of scale, operational characteristics and labor requirements.

The physical dimensions of an industrial plant are an important factor in determining its appropriateness for an airport location. In most instances, the amount of property on or near an airport site suitable for industrial development is limited.
The vertical scale of buildings and equipment is also a prime consideration in determining compatibility. Height restrictions in the vicinity of airports normally prohibit multi-story buildings and elevated structures such as grain elevators and blast furnaces. Consequently, only manufacturing operations that are adaptable to horizontal construction are desirable in the immediate proximity of an airport terminal facility.

Operational characteristics such as the emission of smoke, glare, noise, electrical disturbances and other effects are particularly undesirable in the airport environment. Industrial wastes produced by certain manufacturing processes (chemical processing or meatpacking, for example) may also either greatly overload available waste disposal facilities or require large acreages of valuable land for treatment in the form of sewage lagoons and oxidation ponds. The safety and ease of aircraft operations as well as the overall quality of airport development may be jeopardized if such conditions are allowed to exist. Consequently, those manufacturing operations that do not meet minimum operational standards are not considered appropriate for an airport location.

Industrial operations that require a large number of employees (textiles, food processing and similar activities) may be incompatible with airport operations for two reasons. First, the concentration of a large number of people near an airport, and particularly in or near an approach zone, may constitute a crash hazard. Second, the movement of employees to and from work may interfere with airport traffic.

**Ability to Decentralize**

Industries most likely to decentralize and perhaps seek an airport location include (1) plants engaged in the latter stages of production and distribution and (2) maturing young enterprises.

Plants involved in the assembly and distribution of intermediate and finished products tend to decentralize. Branch plants of larger firms as well as small subsidiary industries often fit this criteria. Such plants are no longer tied to raw materials and are adaptable to the production of standard products on an assembly-line basis. Through improved transportation, mechanization, and management techniques, activities of this type are able to seek a location that gives them a competitive advantage in terms of increased marketing territory or reduced labor costs.
Maturing young enterprises also tend to decentralize and may subsequently be attracted to an airport environment. In contrast, new enterprises generally require (a) low-rent loft buildings and (b) a central location near an experienced labor supply, managerial personnel and potential customers. Such industries can ill afford the relatively high initial cost of a developed airport industrial site. As these small firms become established, however, they frequently become prime candidates for an airport location.

**Business Flying Potential**

One study revealed that the manufacturing activities found most often at an airport are: metal fabricating, machinery manufacturing, electronics equipment manufacturing, aircraft parts manufacturing, plastics, printing and apparels manufacturing.

The business flying potential of a specific industry is affected by three major factors: (1) relationship to a parent industry, (2) market size and (3) labor force characteristics.

The use of aircraft by parent firms for travel to and from branch or field facilities represents a major proportion of current business flying. Branch plants and small subsidiary firms, even those serving relatively small market areas may, consequently, make extensive use of airport facilities capable of handling large business aircraft.

Manufacturing firms serving regional and national markets are more apt to utilize business aircraft than those firms serving a local market. While business flying offers little advantage to a local firm, its speed and convenience can greatly increase market territory and potential contacts for those companies competing in a large market area.

Labor force characteristics are the third major factor influencing business flying potential. Industries with a large number of high-salaried, professional and technical employees in addition to executive and managerial personnel may find business flying particularly attractive to their operations. Through the use of business aircraft, critical personnel can reach a required destination more quickly and with less travel time involved.
It should be noted that due to the proximity of LaGrange to both Columbus and Atlanta, that air cargo operations are not probable at LaGrange unless both a glide slope (full ILS) system is installed and LaGrange is declared a "reliever" airport for Hartsfield International.

Access Requirements

Taxiway access is the unique feature offered to industry by an airport site. All industries desiring an airport location do not, however, require direct taxiway access. For firms utilizing general aviation business on an infrequent basis, close proximity to the general aviation aircraft parking aprons may be adequate. For those firms making frequent use of company-owned business and cargo aircraft, taxiway access is desirable.

DISTRIBUTION FACILITIES

Large distribution facilities are closely associated with the air cargo industry and are not deemed practical for Callaway Airport. However, the distribution of specialty repair parts, expert field service and/or emergency repairs would be a practical operation at the Callaway Airport site.

RESEARCH AND DEVELOPMENT

Research and development operations have excellent potential for an airport location. These activities are highly dependent upon creative and well-paid employees for whom the prestige of an aircenter complex may be desirable. There are four basic types of research and development laboratories: (1) research laboratories of manufacturing firms, (2) contract research laboratories, (3) United States Government laboratories, and (4) university research laboratories.

The two types of research and development laboratories for which Callaway may offer some advantage are manufacturing and contract laboratories.

OFFICES

The required mobility of businessmen, managerial personnel and professionals suggests a definite attractiveness of an airport for office facilities.
COMMERCIAL DEVELOPMENT

Commercial establishments desire an airport location to capitalize upon the market created by other non-aviation development in the vicinity and by the passengers, employees and visitors that frequent an air terminal facility. Those commercial uses considered most appropriate for the airport environment include (1) auto rental services, (2) restaurants, (3) banking facilities, and (4) airport parking facilities.

The type of restaurant locating near an airport ranges from the small, quick-order, counter-service type to deluxe, high-quality operations. The quick-order type is normally located within the terminal building for the convenience of passengers and should not be allowed elsewhere on airport property. Restaurants offering medium-priced meals are desirable for airport employees, office personnel and other persons frequenting the area. These facilities require both access to their terminal area and to the surrounding development, if possible.

A preliminary survey of the industries in the Industrial Park (Table A) indicates a minimum of 2,201 employees who are now served primarily by vending machines. The permitted lunch period (generally 30 minutes or less) would indicate that "sit-down" service in the terminal building would not be practical. However, we recommend that a planned area be provided in the terminal building for eventual dining facilities. Until growth in the Park and Airport warrants food service, the "kitchen area" may be used for vending/concessions and to allow space for caterers to set up serving operations for groups being met at the Airport.

BANKING

Banking facilities at the Airport are not justified at this time due to the availability of credit unions to most employees. Long-range planning should allow for "automated teller" facilities at an expanded terminal facility in anticipation of future declines in the cost of remote bank facilities.
In addition to the financial considerations of taxiways, aprons and other airside improvements related to federal funding, the following financial estimates are presented:

1. Terminal building 3,750 S.F. pre-engineered building, masonry or aggregate walls. finished $284,625
2. Paving and painting parking facilities 27,000 S.F. 94,500
3. 100' x 100' Service (FBO) hanger 127,440

TOTAL\(^1\) $506,525

\(^1\)Includes 20% contingency fee.
BIBLIOGRAPHY


(2) Aviation Demand and Airport Facility Requirements Forecasts, FAA, 1964.


### SUMMARY OF INDUSTRIAL SURVEY

<table>
<thead>
<tr>
<th>Company</th>
<th>Employees</th>
<th>Use Airport</th>
<th>Air Freight</th>
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<th>L.P.</th>
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<td>Haynes</td>
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<td>Cafeteria</td>
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<td>NOK - USA</td>
<td>243</td>
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SOME EXHIBITS NOT INCLUDED IN COPIES OF THIS REPORT.
### Recommended SIC Codes

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<td>Aircraft engines and parts</td>
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<td>Engineering, scientific, associated instruments</td>
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<td>Automatic controls for commercial equipment</td>
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<td>8911</td>
<td>Consulting (robotics)</td>
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EXHIBIT VIII

Magazines Relating to Aircraft, Airports, or Pilots

"Airport Services Management"
The business magazine for managers of aviation services and airports.
Lakewood Publications, Inc.
731 Hennepin Avenue
Minneapolis, MN 55403
612-333-0471
20,000 Circulation

"Commuter Air"
The international magazine for regional, commuter, and short haul airlines.
Communication Channels, Inc.
6285 Barfield Rd.
Atlanta, GA 30328

"Pilot News"
A monthly general aviation journal.
Elisa Boland, Sales Coordinator
1025 Lou Holland Dr.
Kansas City, MO 64116
816-474-1513

"Aero Trader"
(Buy-sell-trade)
14549 62nd St. North
Clearwater, FL 33520
813-536-2711

"Rotor & Wing International"
PJS Publications, Inc.
News Plaza
Box 1790
Peoria, IL 61656
309-682-6626
30,166 Circulation

"Avionics"
Box 5100
Westport, CT 06881
203-227-2280

"FAA General Aviation News"
USFAA, Flight Standards Service
Washington, DC 20592
60,000 Circulation
"Avionics News"
A monthly publication of the Aircraft Electronics Association, dedicated
to all those serving general aviation electronics.
P. O. Box 1981
Independence, MO 64055
816-373-6565

"Airline Executive"
Communication Channels, Inc.
6285 Barfield Rd.
Atlanta, GA 30328

"Airports International"
IPC Business Plaza
205 E. 42nd St.
New York, NY 10017
212-867-2080

"General Aviation News:: The Green Sheet"
Wolfe Publishing, Inc.
Box 1094
Snyder, TX 79549
1-800-351-1372 or 915-573-6318
33,618 Circulation

"Private Pilot"
Macro-Comm Corporation
Box 4030
San Clemente, CA 92672
90,000 Circulation

"Professional Pilot Magazine"
Queensmith Communications Corporation
West Building
Washington National Airport
Washington, DC 20001
33,000 Circulation

"Flying"
Ziff Davis Publishing Co.
Aviation Division
1 Park Avenue
New York, NY 10016
300,000 Circulation

"AOPA Pilot"
Aircraft Owners & Pilots Association
Box 5800
Washington, DC 20014
255,000 Circulation
"Aerial Applicator"
Ned K. Rosenblatt, Editor & Publisher
9836 Jersey St.
Drawer 2887
Santa Fe Springs, CA 90670
7,736 Circulation

"Ag-Pilot International"
Bio-Aeronautic Publishers, Inc.
Box 25
Milton-Freewater, OR 97862
7,840 Circulation

"Aviation Week & Space Technology"
1221 Ave. of the Americas
New York, NY 10020
125,421 Circulation

"Plane & Pilot"
Werner & Werner Corporation
606 Wilshire Blvd.
Santa Monica, CA 90401
75,000 Circulation

"Trade-A-Plane"
Roy A. Stone
Box 509
Crossville, TN 38555

"Aviation Magazine"
Data Publications
12 Old Route 7
Brookfield, CT 06804
203-792-5800

"Business Aviation"
Ziff Davis Publishing Co.
1156 15th St., N.W.
Washington, DC 20005
202-293-3400

"Business & Commercial Aviation"
Ziff Davis Publishing Co.
Hangar C-1
Westchester County Airport
White Plains, NY 10604
914-948-1912
51,000 Circulation
The Lobby of Lowe Aviation Company, Macon, GA.
EXHIBIT IX

SUGGESTED COVENANTS OF A LIGHT INDUSTRY AREA For THE TRoup COUNTY AIRPORT AUTHORITY

West Georgia Area Office
Engineering Experiment Station
Georgia Institute of Technology
DEFINITIONS

A. "Buildings" shall include both the main portion of such building and all projections of extensions therefrom, including garages, outside platforms, docks, carports, canopies and porches. Ground cover shall not be included.

B. "Building Site" shall mean any lot, or portion thereof, or two or more contiguous lots or portions thereof.

C. "Improvements" shall mean and include a light industrial building or buildings, outbuildings appurtenant thereto, parking areas, loading areas, fences, masonry walls, hedges, lawns, mass plantings and any structures of any type or kind located above ground.

D. "Building Site" shall mean the entire lot or lots (if contiguous) leased or purchased by one tenant.

E. "Set Back" shall mean the distance a building must be set back from the property line of the parcel.

F. "Front lot line" shall mean the property line which faces the street; of corner parcels the "front lot line" shall mean the property line which is the width dimension of the parcel.

G. "Rear lot line" shall be the property line usually parallel to the front lot line and contiguous to another parcel property.

USE OF PROPERTY

Each site shall be used only for manufacturing, processing, storage, office, display, laboratory, professional, research and development activities; and there shall not be permitted any use which will be offensive to the neighborhood by reason of odor, fumes, gases, dusts, smoke, noise or pollution or will be hazardous by reason of danger of fire or explosion or chemical damage.

The following operations and uses shall not be permitted on any property subject to these restrictions: residential; trailer courts; labor camps; drilling for and/or removal of oil, gas or other hydrocarbon substances; junk yards; commercial excavation of building or construction materials; distillation of bones; dumping, disposal, incineration or reduction of garbage, sewage, offal, dead animals, or refuse; fat rendering; stockyard or slaughter of animals; smelting
of iron, tin, zinc, or other ores; raising animals of any kind; tanning; petroleum storage; acid manufacture; fertilizer manufacture; coal or wood yard; manufacture or storage of explosives or fireworks.

ADMISSION TO THE AIRPORT

In order to achieve an overall compatibility and continuity of architectural design, lot layout, and landscaping, all plans for building design, construction, landscaping, screening, signs or for any subsequent alterations are subject to the prior written approval of the Troup County Airport Authority. The ratio of building to land area in a site shall be determined on the basis of a site plan to be approved in advance of construction. Such site plan shall incorporate and show compliance with all restrictions contained herein with respect to streets, utilities, site coverage; front, side and rear building setbacks; heights of structures; architectural design and materials; site landscaping improvements and maintenance; off-street parking; loading facilities; outside storage; signs; and drainage. No buildings shall be erected, or exterior structural alterations or additions made on any site except pursuant to plan and specifications reviewed and approved by the Troup County Airport Authority and such approvals shall not be withheld unreasonably. In the event that the Troup County Airport Authority, or its designated representative, shall fail to approve or disapprove such building plans, specifications or site plans within sixty (60) days after they have been submitted, such approval will not be required and this covenant will be deemed to have been complied with. Where these restrictions are more restrictive than applicable building and zoning regulations, the more restrictive applicable regulations shall apply. When required all site plans, improvements and/or additions must have prior written approval of the FAA.

STREETS AND UTILITIES

All vehicular ingress-egress to a lot or tract occupied by an Industrial Enterprise shall be by means of an established accessway complying with the provisions set forth herein. Each lot or tract and its accessway(s) shall be so arranged and maintained as to prevent unchanneled vehicular ingress-egress except by means of an established access roadway. Vehicular accessways from public streets and roads shall be so designed, located and constructed as to best facilitate the flow of traffic to and from the premises without, in so doing, creating unduly adverse traffic flow conditions or safety hazards on the
involved public streets or roads. Each property owner shall provide adequate ingress or egress to the improved portions of the lot or tract including hard, dust free surfaced roads and driveways for all primary ingress and egress. The number of accessways provided for each lot or tract shall be held to the minimum deemed essential. Joint use of accessways by adjoining property owners of small lots or tracts is permissible and recommended. Not more than one accessway into a lot or tract from any street or road shall be permitted when the lot frontage thereon is less than 400 feet. When the frontage is 400 feet or more two (2) accessways shall be permitted provided, however, that the distance (centerline to centerline) between such accessway must be greater than 125 feet. When an accessway is jointly used by adjoining property owners, each such owner shall be permitted another accessway from the same street or road provided it is located not less than 125 feet (centerline to centerline) away from the joint use accessway. The plans showing the location and design of accessways shall be subject to review and approval by the City's Engineer.

Owner or lessee agrees to execute any and all agreements necessary and reasonable for the further development of the Park, including the granting of easements of not more than twenty (20) feet in width, for future gas, water, sewerage, telephone, entrance and access roads and electrical lines provided that no such area or easement shall interfere with any building planned for, or constructed on, the said real estate by the owner or lessee.

All water-borne industrial wastes which cannot be treated properly in the sanitary sewage treatment plant shall be the responsibility of the industry to treat properly before discharging, in conformity with requirement of the Georgia State Department of Health and Natural Resources and prevailing municipal, county, or other state regulations. Each owner or lessee shall connect to the existing water and sewerage facilities.

BUILDING SETBACKS

No structure of any kind and no part thereof shall be placed on any site closer to a property line than herein provided. The setback line is established as fifty (50) feet on property fronting public streets. The setback line is established as twenty-five (25) feet on all sides and at the rear of all buildings.
HEIGHTS OF STRUCTURES

The building height shall not be permitted to exceed twenty-five (25) feet.
Height is to be measured from the average grade at the wall or walls fronting on a street or streets upward to the top of such wall(s) at its uppermost point. The height may be exceeded, with the approval of the Troup County Airport Authority, for wireless radio or television masts, flagpoles, and similar structures. However, no structure of any kind shall intrude into the transitional surface of the Callaway Airport.

ARCHITECTURAL DESIGN AND MATERIALS

All buildings must be fire resistant and constructed of masonry or steel materials, or of other materials expressly approved in advance by the Troup County Airport Authority. No building or structure shall be erected or altered until and unless the plans or specifications for the same showing the nature, shape, size, color, architectural design, materials, and location of the lot shall have been first submitted to and approved in writing by the Troup County Airport Authority. The Troup County Airport Authority shall respond within a reasonable period of time upon the submission of such plans and specifications and the Troup County Airport Authority shall not arbitrarily or unreasonably withhold its approval of such plans and specifications. In the event that the Troup County Airport Authority fails to approve or disapprove such plans and specifications within sixty (60) days after they have been submitted, said plans and specifications shall be deemed approved.

The exterior appearance of any new building shall be such as to blend in harmoniously with adjacent buildings and to provide an attractive public appearance when viewed from a street or highway, or from adjacent properties.

The exterior finish shall be common brick, concrete blocks, tile bricks, enamel metal siding, their equivalent or better, but no building thereon shall be covered with asbestos siding or galvanized sheet metal. All buildings located within the Airport shall have fronts of face brick in combination with baked on enamel, or plastic finish metals, its equivalent or better. No wood-frame or other construction shall be permitted which possesses a fast deteriorating potential or which is of a temporary nature. All buildings/structures shall be in full compliance with the applicable requirements of local building codes and regulations. All building/structures shall be properly and adequately
maintained so as to prevent deterioration and the development of an undesirable exterior appearance. The provisions of the City building code shall be followed in the design of building and structures to be considered within the park. All electrical installations shall comply with the applicable provisions of the National Electrical Code, as published by the National Fire Protection Association as amended by the City. All other adopted codes of the City shall be compiled with.

SITE LANDSCAPING IMPROVEMENTS AND MAINTENANCE

The owners of lessees of any sites or any lots in the Callaway Airport shall at all times keep the premises, buildings, improvements and appurtenances in a safe, clean, wholesome condition and comply in all respects with all government, health, fire and police requirements and regulations and that any owner will remove, at his own expense any rubbish of any character whatsoever which may accumulate on said site and that the owner shall be responsible for keeping the grass neatly mowed on all areas of his site.

All front yard areas shall be maintained in a high-class manner by the owners or lessees whose responsibility it is. Should owner or lessee fail to maintain the Airport premises in a good and attractive condition and should said condition continue for a period of thirty (30) days, after written request from the Chairman of the Troup County Airport Authority, or his designated representative, then in such event the Troup County Airport Authority is and shall be authorized to enter upon the property and correct the condition, rendering its bill for said correction to the appropriate owner or lessee, which bill shall promptly be paid by the responsible party, it being understood that if the owner fails to incorporate responsibility for the maintenance of the premises in the above manner in lease with lessee requiring lessee to maintain premises, the responsibility for the maintenance shall rest in the owner of the property for the above purposes. Upon the occasion of the happening of a second violation, in addition to the foregoing a penalty of $100.00 per violation will also be imposed by the Troup County Airport Authority to assure the continued quality maintenance of the development.
Not less than fifteen (15%) of the total of every lot shall be landscaped in green with suitable, planted ground cover, trees, shrubs, etc. All front yard areas shall be so planned and landscaped as to provide a pleasing, park-like appearance when viewed from the bordering streets. All lot areas not covered by green landscaping or a permanent building or structure shall be paved or otherwise surfaced in such a manner as to prevent the development of dust, mud, and other similarly undesirable conditions.

All fencing for screening, security or other purposes, shall be attractive in appearance and shall be of an all-metal, industrial type of galvanized or non-ferrous material. No fence, masonry wall, hedge or mass planting shall be permitted to extend beyond the building setback lines set forth in these covenants except with the written approval of the Authority. Painted metal or redwood members may be woven into the metal chain links to increase the screening properties of the fences installed for screening purposes. It is preferred to have natural screening (shrubs, trees, etc.) in addition to the fencing.

OFF-STREET PARKING

Every lot or tract on which a business enterprise is located shall be provided with no less than the following off-street parking spaces:

One automobile parking space for every two employees, plus one space for each company-owned or leased automobile or truck, plus such additional spaces as are necessary for the parking of customers-visitors' automobiles, delivery trucks during any time when loading facilities prescribed herein are insufficient to handle all trucks waiting to use them. No on-street truck parking shall be permitted.

Each automobile parking space shall contain no less than 160 square feet exclusive of access roads and aisles. All accessways, aisles, parking and truck loading-unloading areas shall be paved or covered with a bituminous or comparable, dust-free, hard surfacing and shall be so designed and graded as to provide for the suitable disposal of all storm water accumulating theron. All parking areas and principal accessways should be suitably illuminated for night use.
LOADING FACILITIES

Truck and railroad loading docks and doors shall be constructed only on the sides or rear of any building or structure, and the traffic area around the loading docks and doors shall be paved. Truck loading docks and doors shall be located as to accommodate all trucks and trailers without requiring maneuvering or protrusion into any street during the time of loading or unloading.

OUTSIDE STORAGE

No outside storage will be permitted on the front of the property, and no outside storage of any kind shall be permitted unless such stored material is visually screened from all streets by a fence of adequate height (in no case less than six (6) feet) and screening effect to prevent the stored material from being viewed from the property line by a person standing on rear two-thirds (2/3) of the property and within the building setback lines.

Screens shall consist of aesthetically desirable walls, fences, shrubs, trees, and/or other effective vision obscuring construction or landscaping.

FUEL

No tenant or owner of any facility shall be permitted to store, service, or supply in any form. All fuel sales, service, or supply shall be conducted by the Authority approved FBO or his designated representative.

SIGNS

Signs, billboards and all objects of an unsightly nature are hereby prohibited, except quality signs which properly identify the business or product of the owner or lessee. One sign will be permitted on each street frontage. Final size and design of all signs must be approved by the Troup County Airport Authority. In approving the size of a sign, its relationship to the size of the buildings or other improvements will be taken into consideration. Signs of the neon-flashing type shall not be permitted.

Nothing in this section should be construed to prohibit the installation of essential directional, traffic control and safety signs or the illumination of roads, buildings, accessways, outside storage areas, parking and truck loading-unloading areas when such is needed for functional and safety purposes. In no event, however, shall such illumination be permitted if it produces a glare, disturbing or dangerous to vehicular users on the adjoining streets.
DRAINAGE

Every lot shall be so planned, graded and maintained as to provide for the suitable and safe disposal of all storm water accumulating thereon. Disposal of all storm water shall be into permanent ditches, culverts, etc. In such a manner as to prevent any damage to adjacent properties, public streets, railroads sidings, and utility distribution systems. The site plan showing the storm water disposal planning shall be subject to review and approval by the City's Engineers.

In no case, shall culverts be less than fifteen (15) inches in diameter.

AIR POLLUTION

Visible emissions of smoke will not be permitted which exceed Ringlemann No. 1 on the Ringlemann Chart of the U.S. Bureau of Mines other than the exhausts emitted by motor vehicles or other transportation facilities. This requirement shall also be applicable to the disposal of trash and waste materials. Windborne dust, sprays, and mists originating in plants will not be permitted.

No plant or operation shall discharge into the atmosphere toxic or noxious matter.

The emission of odors which are detectable at any point beyond the property line of any plant will not be permitted.

HEAT OR GLARE

Any operation producing intense glare or heat shall be performed within an enclosed or screened area in such manner that the glare or heat emitted will not be discernible from the property line.

ILLUMINATION

The source of illumination of any kind within the property shall not be visible at the property line except for normal installation of standard interior lighting fixtures within buildings.

The maximum height of any lighting standard shall be limited to 30 feet above curb level.
The intensity of illumination shall be limited to 10-foot candles or 0.1 lumens per square foot for open areas or surfaces visible at the property line.

The design and location of exterior lighting shall comply in all respects to the requirements of the Federal Aviation Administration or any successor agencies and other governmental agencies having applicable jurisdiction with respect to height, type and placement of lighting standards as they may affect the safety of flight operations into, from and around the Airport.

RE-PURCHASE OF LAND

If, after expiration of twelve (12) months from the date of execution of a sales contract agreement on the property, purchaser shall not have begun in good faith the construction of an acceptable building upon said property, the Troup County Airport Authority shall have the option to refund the purchase price and enter into possession of said property.

In the event any owner of land lying within the Airport shall desire to sell all or any part of the land which at the time is unimproved owned in such park separate and apart from the improved portion of the tract owned, then the Authority shall have the prior right and option to purchase the unimproved premises proposed to be sold at the same price per acre paid by the owner for said land when originally acquired from the Authority. Prior to any sale of such land, the owner, his successors or assigns shall notify the Authority of his intention to sell, describing the premises to be sold. The Authority shall have thirty (30) days from the date of receipt of such notice to exercise its option. In the absence of written notification sent by the Authority of its election to exercise said option, such owner shall be free to sell such premises to any person (s) and at any price deemed acceptable to such owner.

Furthermore, if after twenty-four (24) months from the date construction is commenced, the building is not substantially completed, and/or employed at least twenty-five per cent (25%) of the firm's initial projected employment figures, the Authority retains the option to refund the purchase price after deducting its expenses, or declare the lease cancelled, and enter into the possession of said property. The Authority, for good cause, may extend these time limits.
COVENANT ENFORCEMENT

The City, the Troup County Airport Authority or any owner or lessee of the prior described land shall have the right to sue for and obtain an injunction prohibiting the violation of any covenant set forth herein in addition to a legal action for damages; and the failure of the City, the Troup County Airport Authority of the owner or lessee of any lot or lots or building sites hereby restricted to enforce any of the covenants herein set forth at the time of its violation, shall in no event be deemed to be a waiver of the right to do so as to any subsequent violation. The violation of these covenants shall not defeat or render invalid the lien of any mortgage made in good faith.

Each of the foregoing covenants, conditions, restrictions and reservations are primarily for the benefit of the Authority, and the Authority hereby expressly reserves the right to alter, change or amend any or all of the same, at its discretion; except for those restrictions found in the zoning ordinance of the City regulating industrial land use classifications. Any such alteration, change or amendment must be in writing and authorized by formal action of a majority of the members of the Authority and delivered to the person or firm seeking such waiver. The invalidity of any one or more of these covenants shall not affect the validity of the remaining covenants, all of which shall continue in force and effect.