


GA H1.2/AV5/1968

0362

Copy of Rec. P. M.
 COLORADO STATE PUBLICATIONS LIBRARY local
 GAH1.2/AV5/1968 Colorado. General A/Aviation In Colorado



3 1799 00016 2024

NO. COMMISSION
 Colo. 90011

**PLANNING
 DIVISION**

Return to
 State Publications Library
 201 East Colfax Avenue, Room # 314
 Denver, CO 80203

**Report to the Governor and the
 House of Representatives:**

**AVIATION
 IN COLORADO**



**House of Representatives
 Interim Committee on Aviation
 January 1968**

~~Colo.
 387.7
 COIGAR~~

AVIATION IN COLORADO

Report Of The
Interim Committee
On Aviation

House of Representatives
Colorado General Assembly

January, 1968

State Representative
TED BRYANT
1590 S. Birch St.
Denver, Colorado 80222



House of Representatives
Denver, Colorado

January 17, 1968

COMMITTEES

Vice Chairman of:
Transportation and
Highways

Member of:
Finance
Local Government

To Governor Love and Members of the House of
Representatives:

Pursuant to House Resolution No. 1011
adopted in the first regular session of the
Forty-sixth General Assembly, the Interim
Committee on Aviation submits the accompanying
report of committee activities and recommenda-
tions for your review and consideration.

Respectfully submitted,

Representative Ted Bryant
Chairman
Committee on Aviation

United Airlines
398-4141
398-4220

TB/mp

TABLE OF CONTENTS

	<u>Page</u>
COMMITTEE REPORT.....	1
Reports Discussed With the Committee.....	4
Planning Study of Air Transportation.....	4
Federal Funds for Airport Development.....	6
Survival Equipment.....	7
State Aviation Agency.....	8
Airports in the Denver Metropolitan Area.....	11
Committee Recommendations.....	13
Survival Equipment and Flight Plans.....	13
Weather Reporting.....	13
Airport Planning.....	13
Appointment of Another Committee.....	14
APPENDIX.....	15

COMMITTEE REPORT

The House of Representatives, in the first regular session of the Forty-sixth General Assembly, adopted House Resolution No. 1011, which provided, in part:

(1) That a committee is hereby established to consider the following: The present and future requirements of the aviation industry in the state of Colorado in order for it to continue to play its important role in the economy of the state; means for establishing better communication, cooperation and coordination between the various segments of the aviation industry in order to assure its continued orderly growth; and means of establishing better communication between the industry and the state.

(2) That the committee shall consist of not more than twenty members. A chairman and vice chairman shall be appointed from the House of Representatives of the Forty-sixth General Assembly by the Speaker of the House of Representatives. The remaining members shall be appointed by the chairman of the committee from the aviation industry with an equal number of members from commercial and general aviation...

Members of the committee were:

Representative Ted Bryant, Chairman
Representative Robert A. Jackson, Vice Chairman
Representative Roy H. Shore

Walt Berry	Arval Aviation, Pueblo
Gustav Byrom	Airport Manager, Grand Junction
Vern Carlson	Frontier Airlines
William J. Grant	Western Airlines
O. R. Haueter	Continental Airlines
Bill Huntsbarger	Airport Manager, Jefferson County
E. B. Jeppesen	Jeppesen & Co., Denver
Joe M. Johnson	Central Airlines
Robert Knight	Ozark Airlines
Frank Ladwig	Director of Aviation, Colorado Springs

D. C. Lynch
William J. McKenney
William T. Middleton
Don Murphy
Jerry Toppel

United Airlines
Braniff International Airlines
Trans World Airlines
Combs Aircraft, Denver
Denver Chamber of Commerce

Robert S. Wham
A. E. White
Ray Wilson

Vail Airways
Western Aviation, Loveland
Colorado Public Utilities Commission

In addition, advisory committee members, selected because of special knowledge of certain areas of aviation in Colorado, were appointed by the chairman:

W. A. Stephens

Area Manager, Federal Aviation Administration

One from each Council

Air Lines Pilots Association

Major General Joe C. Moffitt

Adjutant General, Colorado National Guard

Below are listed the persons who conferred with the committee during the interim study:

State and Federal Officials

Robert Bronstein, State Budget Director

Chuck Demaree, Assistant Area Manager,
Federal Aviation Agency

Henry Kimbell, FAA Airports Branch Chief,
Denver

Jim Miles, Colorado Division of Commerce
and Development

W. A. Stephens, FAA Area Manager, Denver

Marvin Stevenson, Director, Wyoming Aero-
nautics Commission

Jim Vercellino, Director, Arizona Depart-
ment of Aeronautics

Bill Walker, Management Analysis Director,
State Division of Accounts and Control

Jerry Wilson, FAA Air Traffic Branch, Denver

Local Officials

Warren Brandt, Transportation Engineer,
Inter-County Regional Planning Commission

John Christensen, County Commissioner,
Arapahoe County

Byron L. Johnson, Professor of Economics,
Colorado University; Chairman, Mayor's
Mass Transit Committee

Pete Mattivi, County Commissioner, Garfield
County

Lee Woolsey, Planning Director, Arapahoe
County

Others Participating

G. W. Anderson, Rifle, Colorado

Vaughn Cole, Owner-Operator of Columbine
and Boulder Airports

D. W. Cook, Air Radio Inc., Jefferson
County Airport

Carroll Delaney, Delaney Inc., Consulting
Engineers

T. V. Garel, Airport Consulting Engineer

Greg Isbill, Greg Isbill & Associates

Albert G. Melcher, Borman-Melcher & Associ-
ates

Roy W. Walholm, Survival Research Labora-
tories, Colorado Springs

This report is submitted to provide an overview of two major facets of the committee's activities. The first part of the report contains highlights of the presentations to the committee by persons concerned with topics under consideration, such as long-range state planning for aviation needs, development of surface transportation as related to aviation needs, the operation of aeronautics departments in other states, use of survival equipment, the coordinated development of airports in the Denver metropolitan area, and the funds paid to the state by the aviation industry in Colorado.

The second part of the report outlines four recommendations which the committee has submitted to interested parties or is submitting to the General Assembly for action.

I. Reports Discussed With the Committee

Planning Study of Air Transportation

As one part of a series of comprehensive state planning studies, the Colorado state planning office conducted a study of existing and future public airport requirements in Colorado. The results of this report were reviewed by both a subcommittee of the Aviation Committee and by the full committee in one of its meetings. A summary of this planning study is appended to this report (Appendix Item I). To illustrate the scope of the planning report, below are presented, in brief form, some of the major recommendations contained in the report:

Planning. "We recommend intelligent, fact-supported planning on every level; i.e., in the smallest community, within the counties and regions, and especially on a state and state-wide level."

Establishment of a Planning Group. "We are strongly in favor of a state-originated air transport industry group that could correlate most statewide activities and assist in the multitude of problems that need immediate attention...The important thing is that we recommend a group that can correlate all necessary activities, assist in planning, educate, motivate, and weld the many loose ends of the state's aeronautics industry into a working viable entity."

Legislative Support. "In several instances the state's aeronautics industry is suffering from either restrictive laws and ordinances that should be removed from the books or the absence of legislative support that needs to be supplied. We recommend that a study be made of this situation; that circumscribing fiats be removed or modified; and that new laws and regulations needed for the protection and support of the industry be enacted."

Airport Financing. "We recommend that the problem of airport financing be given immediate attention and that aggressive action be taken by all participants in getting a more equitable portion of federal transportation system allotments, a more adequate portion of state funds, and forms of pledge supports that will induce private investors."

New Airports for Air Carrier/Air Taxi Services. "We recommend that airports able to accommodate at least air taxi/

commuter-type aircraft be built in (or near) Las Animas, Carbondale, and Fraser. In each case there is at least one great need and advantage that can be mutually enjoyed by the aeronautics industry and by the community or area...We recommend that a full-service, secondary airport be built at Niwot to serve the rapidly developing industrial complex in this area. If, however, costs or other factors preclude the building of an airport at Niwot, we recommend that the facilities at the Jefferson County Airport and at the Longmont Municipal Airport be further developed to enable them to handle the increasing traffic in this area."

Helicopter/VTOL Ports and Stops. "We recommend that sites be selected and either a heliport or helistop be constructed in or near the center of the commercial areas in Denver, Colorado Springs, Pueblo, Boulder, Loveland, Longmont, Fort Collins, Greeley, and Estes Park. We also recommend that such accommodations be constructed at the larger colleges, universities, industrial parks, and particularly popular recreational areas where such services are needed."

Future Airport Facilities. It was recommended that airport sites be selected and plans initiated for: (a) new airport facilities serving 13 cities; (b) new reliever (secondary) airports in Colorado Springs, Pueblo, and Denver; and (c) helicopter/VTOL sites for 19 cities.

State Aid and Support for Community Airports. "We recommend that the State of Colorado or some agency within the State devise a plan whereby communities can immediately receive the aid (financial and otherwise) and support they need to start to solve their problems and realize their potentials."

Development of Air Commuter Service. "We recommend that air commuter services be given every possible support by all parties concerned, but particularly by the State. This industry is extremely important to the State as a whole, but at the moment needs a bit of extra support to get it operationally able to be self-supporting. Any approach must be largely mindful of the end result, not momentary imbalances or seeming partialities."

General Advances in Aviatational Technologies. "We recommend that the State encourage and support all elements of the aeronautics industry that can in any way reflect benefit to the State and its communities. We particularly recommend that the State support the aeronautics industry in:

- (1) Developing a comprehensive and credible safety program, supported by the necessary laws and regulations;
- (2) Developing a program for education in the disciplines and technologies of the industry and a program that will

help to remove many semantic barriers from the minds of the public;

(3) Establishing and eventually implementing a plan for the widespread use of navigational aids throughout the State; and

(4) Exploiting all of Colorado's natural resources through the media of air transport. Such potentials as the skiing industry should be fully supported by both communities and the State."

Other Recommendations. Three other recommendations, specifically relating to Stapleton International Airport, Denver, were included in the report.

The consultants from the firm assisting the state planning office with this report, Greg Isbill and Associates, provide a few general comments in addition to the report. Airport financing was said to be the greatest problem of aviation development, particularly since some new airports are needed in the state. There was said to be a need to work for more service to the smaller communities by air taxi or third level carriers. New airports and heliports involve a 20-year program for which it is necessary to start planning now. Airports serving recreational areas in the state are not adequately developed.

Stapleton International Airport was said to suffer from poor zoning and need for adequate land. The bonding capability at Stapleton is presently \$20 million but should be \$200 million. Someone must lead its development which will take work and lobbying, with public interest and industry support, to achieve government implementation of these ideas.

The state planning office said that it welcomed suggestions in regard to this study, especially since members of the aviation industry were not directly included in the study. The study was described as embryonic as it is only one element of an overall study of transportation in the state. The report is based on projections of future needs in 15 or 20 years from now. It was hoped that the study would be a stimulus to local development and expansion of transportation in the state. Air transportation development was said to be critical to the overall development of transportation in the state.

Federal Funds for Airport Development

Officials of the Denver branch office, Federal Aviation Agency (FAA) met with the committee to outline federal funding programs available from that office for airport development and for the development of navigational aids. In order to obtain federal aid, a community must be included in the federal-aid

airport program which is reviewed annually in cooperation with Ray Wilson, Aeronautical Inspector, Colorado Public Utilities Commission. The FAA notifies all airports included in the airport plan when they are receiving requests for grants. Last year Colorado received \$956,000 of the apportioned money for this program, but this amount would not be sufficient to provide for needs at Stapleton International Airport, not to mention other airports in the state. Congress allocated \$7,500,000 for reliever airports to take non-airline traffic away from busy airports. The FAA receives requests and makes the allocations on priority basis. The National Airport Plan is reviewed annually in September. The FAA office said it would appreciate recommendations from the committee although that agency has coordinated planning activities with the Public Utilities Commission in the past. In some other states the state aviation commissions have made plans of their own and FAA coordinates its plans with the state plans. The FAA must approve all plans for airport sites, air space clearance, and other plans for airport development.

Federal funds are available on an "as needed" basis for development of navigational aids. Allocations are based on planning standards and air traffic volume basis. Air traffic counts are maintained to keep track of the number of aircraft operating at a given location. Recommendations for navigational aids are received by the FAA from private citizens and organizations.

Survival Equipment

At the committee's July 12 meeting, Roy W. Walholm, Survival Research Laboratories of Colorado Springs, made a presentation concerning survival kits for aircraft and exhibited various survival kits and equipment. Many of the items displayed are common, everyday items, available anywhere, but which in many instances of private airplane accidents, had not been included as part of the plane's equipment. Items which could be used in a lightweight kit for aircraft included a reflection type, high visibility, rescue blanket weighing less than two ounces; survival match and flint kits; food rations of various sizes; rescue signaling equipment; first aid kits; and other standard emergency equipment such as knives, saws, cord, and compasses. It was suggested that a small, minimum kit for light aircraft could be prepared consisting of six basic survival items, weighing about two pounds and costing \$10 to \$15.

It is interesting to note that specific survival gear is required to be carried aboard all aircraft during cross-country flights in Canada and Alaska. It was pointed out that some of the terrain and weather conditions in Colorado are not unlike parts of Alaska and Canada where only certain multi-engine and locally based aircraft are exempt from requirements for carrying

certain survival equipment. At least some of the frequently heard objections of bulkiness and excess weight for aircraft have been overcome with recent development of some compact, lightweight equipment.

Mr. D. W. Cook of Air Radio, Inc., of Jefferson County Airport discussed emergency homing devices for aircraft with the committee. Mr. Cook pointed out that there are three frequency categories possible for use as homing devices: (1) VHF (some models now available); (2) 75 megacycle; and (3) low frequency, on which research is presently being conducted. At the time of Mr. Cook's presentation, it was reported that there were 33 airplanes currently lost in the western states with 63 people aboard. The aircraft have been missing from two or three days to six years. It was suggested that a regulation regarding an emergency homing device could save many lives, would reduce the number of aircraft search and rescue efforts, and would eliminate unnecessary expenses in the conduct of such operations.

State Aviation Agency

An important topic discussed at several of the committee's meetings was the possible formation of a more permanent agency of the state which would represent and promote the best interests of aviation in Colorado. This agency could be a commission composed of interested citizens, part of a larger department, or an advisory committee which would be limited to promotional activities for the industry. In conjunction with these topics, James Vercellino, Director of the Arizona Department of Aeronautics, and Marvin Stevenson, Director of Wyoming Aeronautics Commission, discussed their duties and the operation of the aviation departments in those two states.

The Arizona department of aeronautics was created in 1946, with the original purpose of serving in an advisory capacity for aviation development. Policy for the department is set by a five member commission appointed by the Governor, each of whom serves a five year term. The director is hired by the commission, members of which are paid only travel expenses.

Financing of the Arizona department is by aviation gas tax of seven cents per gallon. Provision is made for the tax to be refunded to purchasers if applied for within six months after purchase. The department is financed by unclaimed moneys from aviation fuel. Most fixed-base operators and local operators apply for the tax refunds since the money paid is a rather large amount and ninety percent of the funds were reported to come from transient, non-resident pilots. Two additional sources of income for the department are fees from the operation of Grand Canyon National Park Airport and from jet fuel taxed on sales tax basis of 3.5 cents. The state tax commission deposits that portion of that sales tax used for jet fuel

to the aviation fund for airport improvement and the building of airports.

In Arizona, a state airport aid program, consisting of outright grants from the state, has enabled small communities to take advantage of federal programs in which the communities receive 60 percent of necessary funds from the federal government. For example, a state aid program may provide a community with \$20,000, the community will then raise \$20,000, and these funds will be placed with the federal \$60,000 for a \$100,000 project. A total of 69 projects have been completed to date in all facets of airport facilities, except buildings. Recently completed is a \$2,250,000 facility, the Grand Canyon National Park Airport, which used federal legislation providing for construction of airports near national parks. The state aviation department will participate in local projects in which the federal government is not involved.

Mr. Vercellino explained that the assessed valuation of aircraft in Arizona had differed depending on local county assessment practices but that Arizona now imposes a tax in lieu of personal property with the value of airplanes which is computed by state aviation department. The rate of taxation was reported to be one percent of fair market value or initial selling (list) price of the airplane. This change has provided good tax structure and improved facilities at airports because of increased revenues available.

Pilot safety clinics are sponsored by the department and the FAA to provide best information to pilots on this subject. Many subjects are covered in these clinics, Mr. Vercellino said, including turbulence, weight and balance, mountain wave, and alcoholism. The department also gives assistance to public schools in courses such as mathematics in which aviation might be of interest.

The Arizona aeronautics department has no regulatory authority but the department may intervene on behalf of airlines at hearings relative to certificates of authority and other issues. On the advice of the Commission, the Arizona legislature passed a law regarding flying under the influence of alcohol and drugs and Arizona has also enacted legislation covering careless or reckless flying.

As part of its promotional activity, the Arizona department publishes a monthly newsletter that is mailed to all airplane owners in the state. Changes in regulations, local conditions of fields, and other general information is included in this letter. The department cooperates with the activities of all aviation organizations in the state, such as the Flying Farmers and the Civil Air Patrol.

Marvin Stevenson, Director of the Wyoming aeronautics commission, said that the operation of the Wyoming department was much the same as described in Arizona. The Wyoming Commission has seven members, one each from the five judicial districts, and two members selected at large from the state. One member is appointed from the legal or accounting profession and this provision was mentioned as a safeguard for the taxpayers' interests. Commission members are appointed by the Governor with not more than four members of one political party. The members serve six year terms and not more than two may be appointed in any biennial period. Mr. Stevenson noted that there are 39 airports in Wyoming, even though state population is only approximately 330,000 persons.

The Wyoming department operates on an administrative budget of \$60,000 per year and capital outlay funds appropriated by legislature was \$130,000 for the last biennial period. These funds are to assist airports in construction projects but the department cannot spend more than local sponsors on a project. Not more than \$8,000 may be spent per project by the Commission.

Municipalities operating their own airports obtain four cents per gallon of aviation gasoline from every gallon sold through their facilities. Tax collections are earmarked to be used only in the maintenance and upkeep of the airport at which collected. Large users get refunds of two cents of the four cents per gallon tax (over 10,000 gallons). No other refunds are given; the result is that small users are paying for the facilities they use.

From the date an aviation safety program was started by the Wyoming Commission, Mr. Stevenson said the number of fatalities by air accidents was down from an average of 16 per year to three per year, based on ten year periods. The Commission, by statute, is responsible for search and rescue operations and it supervises the Civil Air Patrol in these operations. A fund has been established for the purchase of gas for airplanes used in search operations who are not CAP members.

Also reviewed by the committee was material concerning the statutory authority of aviation commissions in selected states and typical provisions for a number of state boards and commissions organized in Colorado. This material is available in Legislative Council office for any member of the General Assembly who might be interested.

In another report to the committee, Robert Bronstein, State Budget Director, outlined funds paid to the state and local government by various facets of aviation and possible sources of funds available for aviation such as airport development and general aviation promotion. There are no special state aviation taxes, but Mr. Bronstein estimated that the state derives approximately \$655,000 annually from aviation sources.

Several alternatives were suggested as possible means of obtaining funds for aviation, each of which is based on the consideration that airports and aviation in general are in the economic interest of the whole state:

(1) Establishment of a state department of aeronautics with appropriation from the state general fund.

(2) Enactment of a statutory means of providing state aid to airport development. This alternative would require that standards in qualifying for funds be set in the statute and would require an appropriation to carry out the airport development program.

(3) Establishment of a state lending authority to lend funds to local areas for aviation facilities development.

(4) State issuance of revenue bonds for aid to the air industry.

(5) State assumption of the operation of some or all airports as a state rather than a local function.

Airports in the Denver Metropolitan Area

Two interconnected concepts are involved in the development of airports in the Denver metropolitan area: (1) Improvement of surface transportation facilities to the major airport from the major centers of population and from the satellite airports; and (2) the planning for future use of all airports for private aircraft, fixed base operators, commercial passenger traffic, and air-freight operations. The first part of this section briefly notes some of the alternative methods considered in committee meetings relating to surface transportation serving Stapleton International Airport from downtown Denver and from the smaller airports in the Denver metropolitan area:

(a) Use of Denver's Union Station as a downtown airline terminal, utilizing the existing railroad line to Stapleton as a means of high speed transit.

(b) Purchase of the air rights above the railroad yards between the 16th street and 20th street viaducts for use as an elevated parking area, business development, and heliport. This proposal was made as a supplement to the Union Station proposal.

(c) Establishment of an underground or above-ground transportation system on 16th and 17th streets with Union Station as the terminal, and further use of the existing railroad tracks for high speed transit system in the metropolitan area.

(d) Planning and development of suitable highways connecting the smaller airports surrounding Denver, particularly Columbine Airport in Jefferson County, Arapahoe County Airport, Jefferson County Airport, and Sky Ranch Airport with Stapleton Field. A perimeter transportation system around the city was mentioned as a means of improving the inadequacies of present surface transportation and also of alleviating air traffic congestion at Stapleton by encouraging use of the smaller airports by private aircraft.

Some specific examples of problems in the development of smaller suburban airports might be pointed out as illustrative of the need for including aviation considerations in the planning for the metropolitan area. Vaughn Cole, owner of Columbine and Lazy 8 Airports, acquired Columbine Airport in Jefferson County in January, 1967, and the Lazy 8 operation in Boulder in February. These airports are similar in size and scope. Fifty aircraft have been brought on the field at Columbine, in addition to aircraft already located there, partly through promotional and public relations work. Mr. Cole believes that Colorado and the Denver metropolitan area has great potential in general aviation, but that planning must be undertaken to achieve this potential. Surface transportation was described as probably the biggest problem at the present time. For example, Columbine Airport needs one mile of additional hard surface road to the airport as this facility is completely inoperative when it rains. Mr. Cole said that the county has not agreed to do the paving of the road.

In Boulder the problem was seen as one of lack of public relations and understanding of general aviation by the public although the City Council was said to be increasingly interested in the future of the airport. Mr. Cole suggested that smaller airports should be planned with the cooperation of the state and should be planned with consideration given to their relationship to major airports. Working with airlines for air taxi or commuter service from smaller airports was important, Mr. Cole said.

Mr. Lee Woolsey, Arapahoe County Planning Director, said that there now exists good commercial air service between major cities in Colorado. However, a real problem exists in smaller communities where there is no commercial air service. Two or three different levels of air transportation are needed including a metropolitan area network of helicopters to serve subcores or activity centers, such as shopping centers, in suburban communities. In regard to the perimeter roadway system, Mr. Woolsey said that the metro system is now oriented to the automobile rather than to a fully integrated transportation system study. The plans for future construction call for concentric rings of freeways around the city but that the proposed route is not as direct as it could be in relation to the Arapahoe County Airport.

Committee members were asked for comments relative to areas of the state other than Denver. Gus Byrom of the Grand Junction airport said their airport has a good location and good freeway to the airport, and that they are near the center of town. An attempt is being made to plan for proper zoning for airport growth. Walter Berry of Pueblo said they are behind as far as air traffic is concerned although their planning for surface transportation has been good. Frank Ladwig of Colorado Springs thought that air taxi should be studied and developed further since Colorado is behind in this phase of aviation.

Adjutant General Moffitt of the Colorado National Guard suggested that Buckley Field might become a joint use facility and that the city of Aurora is working on this idea. Buckley Field could help with the overcrowding problem but that it would not compete with private enterprise. Mr. Stephens said the FAA could accept Buckley as joint use facility only if it were instrumented and had an east/west runway which would be an extremely costly installation. The airlines may be interested in Buckley as a training facility, but there would be a problem of air space with small aircraft. There is also the possibility of using Buckley Field for air freight.

II. Committee Recommendations

During the course of its considerations, the committee took a position on four recommendations which it submits to appropriate authorities for further action.

(1) Survival equipment and flight plans. The Aviation Committee recommends that an educational program be inaugurated to urge the use of survival equipment and the filing of flight plans, and that the local General Aviation Division Office of the FAA be requested to emphasize these subjects in their safety meetings. The committee has received a report from the Denver office of the FAA in regard to increased activities of that agency in providing more information to pilots on these subjects.

(2) Weather reporting. In view of a FAA suggestion that additional weather stations on the Western Slope of Colorado, possibly in seven or eight locations, the committee requested that Senator Peter Dominick continue his efforts in securing more adequate weather reporting and forecasting services for Colorado and, specifically, to seek implementation of the recommendations of the local FAA by the Weather Bureau.

(3) Airport planning. The committee is contacting the airport managers of each of the airports and the County Commissioner in the six-county Denver metropolitan area with an invitation that they provide one person each to serve on an advisory

committee to the Inter-County Regional Planning Commission for the purpose of advising the Commission on future aviation and airport planning developments. Ray Wilson, Aeronautics Inspector of the Colorado Public Utilities Commission, has been designated as chairman of this advisory committee.

(4) Appointment of another committee. The Aviation Committee requests that the House of Representatives, in its 1968 session, provide for the appointment of another interim committee to continue the study of aviation needs in Colorado. In approving this motion, the committee agreed that the feasibility of establishing a division of aviation under a state department of transportation would be considered if the committee were reconstituted.

APPENDIX ITEM I

"Colorado Air Transportation Study" Report from the Colorado State Planning Office

INTRODUCTION

The air transportation study is one of a series of comprehensive state planning studies being conducted by the Colorado Division of Commerce and Development to guide the physical, social, and economic development and growth of the State, as well as to ensure the prudent use of the State's facilities and resources. The identification of both existing and future public airport requirements will provide a necessary tool and guide at both the state and local levels for comprehensive planning and development of the State of Colorado.

To achieve clarity and comprehensiveness with brevity, tables and illustrations are used as extensively as possible, particularly in the surveys of existing facilities.

Sources of information on which our figures, rationale, and recommendations are based include our own extensive and rigorous research and the experience and recorded statistics from public domain literature. Data published by the various branches and agencies of city, state, and federal governments have been used where credible and acceptable, as has all appropriate and accurate information from the literature of the industry. Airport operational logs, financial statements, etc., have also been reviewed. In general, all available, appropriate, and applicable literature has been reviewed and evaluated.

To best communicate the results of our investigations, it is expedient that a common frame of reference be established between the readers and writers of this report. To do this, our rationale is arranged so that the reader can see the broad spectrum of forces that impinge on what at first glance may seem to be a completely local or regional situation. We have, in the interests of clarity and depth of understanding, prepared a glossary of the somewhat technical terms used that are a part of the air transportation industry idiom.

SUMMARY

This chapter, Chapter I, contains a summary of the materials included in this report and a statement of our general recommendations. Detailed recommendations are incorporated in the body of the text. Recommendations regarding the individual airports are presented along with the survey analyses of these airports.

Regional recaps have also been made, and recommendations of regional consequence are included in these recaps. Overall state recommendations are included in the general recommendations section of this chapter.

Chapter II presents a detailed survey of all publically owned airports in the State of Colorado. From the information developed for each airport, one can get a clear picture of what exists and what is needed to make each airport a more vital and effective part of the air transport industry. Where appropriate, brief analyses are made of area economics and economic potential. For each airport, recommendations of present (immediate) needs and future (long-term) needs are made.

With these individual airport analyses, airport comparisons are obvious, so one community can easily determine where it stands.

One of our most important premises in undertaking this study was that no airport or community is an "island" and complete within itself. Its only utility is the amount of its participation in the entire aeronautics industry and the strength and economic solidarity of the industry as a whole. This premise became one of our most certain convictions as the study progressed. It became extremely apparent that any study of state aeronautical facilities would be incomplete without presenting the dimensions of the great national/international

industry to serve as a rule by which the local industry could be measured. It was also apparent that the strides of the total industry needed to be presented for the good they might do in serving as an industrial catalyst and as a motivational force to counteract traditional apathy.

Because the Colorado situation, per se, and the situation as a complex can be validly and objectively considered only when viewed as a vital and indivisible part of the complete national/international matrix, some important facts and figures from this central portion of the industry are presented in Chapter III. Many of these facts and figures are analyzed and an overall rationale developed.

A review of Colorado's aeronautics/aviational history reveals that airports, airlines, and anything that might resemble an aeronautics facility or activity have grown like "Topsy" with some few exceptions, but must now be planned and regimented to specific purposes and long-range goals. To make these purposes clear and to provide them with credibility, a comprehensive analysis of Colorado's air transport facility problems and potentials is presented in Chapter IV.

In the various sections of Chapter IV, important data from many sources are reviewed and analyzed. Colorado's aeronautics history was studied to see what light such a review might shed on the why and how of the present situation.

The Stapleton International Airport was carefully analyzed to determine its position in the total picture and its importance and influence on the state aeronautics complex.

Problem areas for the Denver hub, the various regions, and the state as a whole were carefully considered, and possible solutions were determined. Along with problems we analyzed the many important potentials that can be realized with a strong air transport industry.

Colorado has many fine potentials, all of which could not be analyzed in this report. The incipiently great skiing industry was taken as an example

and related to its influence on air transport and, conversely, air transport's influence on the skiing industry.

In such comparisons, we feel that this report brings into sharp focus some of the really important factors that need to be thoroughly considered in any analysis and subsequent planning of Colorado's aviaional future.

GENERAL RECOMMENDATIONS

In this chapter we present direct statements of our recommendations without any attempt to include more than a cursory rationale, since all of these recommendations are well supported and substantiated within the body of the report. Our recommendations are made directly, straightforwardly, and without equivocation. We have done this for the sake of clarity and brevity, but are, of all people, most aware that they could be completely out of phase if the aviation industry does not continue to do what it seems destined to do. From the many problem areas we present, particularly in Chapter IV, it should be obvious that we are thoroughly cognizant that the industry does not, inevitably, have to accomplish certain anticipated goals. It is entirely possible that, with community and regional lethargy, uncooperative self-interests, and commercial and political restrictions, we could have an aeronautical industry rollback of severe--if not catastrophic--consequences.

There is a way to avoid such a disaster. We believe it will be avoided and that the industry will continue to grow and prosper. Some of the steps we recommend are already becoming concensus, and necessarily so, for these are the steps that can remove us from the abyss of destruction that we are approaching with a mathematical certainty unless these steps are taken.

The following recommendations are presented to represent the many different problem/potential areas in the state's aviation matrix, and not just to solve

the immediate "airport crises" problem. These recommendations are not necessarily listed in the order of their importance, since their importance, in many cases, is strictly relative.

Planning

Our first recommendation concerns the very reason for this report; i.e., continued intelligent planning based on research and analyses. In the past there has been far too little in-depth planning, and the resultant problems are present everywhere. We recommend intelligent, fact-supported planning on every level; i.e., in the smallest community, within the counties and regions, and especially on a state and statewide level.

One of the prime purposes of this report--particularly in our constant efforts to communicate reasons and situations--has been to provide information with which planners on all levels might have a comprehensive awareness of the total picture and thus be able to make considered, judicious decisions.

Establishment of a Planning Group

As stated several times within this report, we are strongly in favor of a state-originated air transport industry group that could correlate most statewide activities and assist in the multitude of problems that need immediate attention. We have, however, been reluctant to name or in any way define such a group, since such a responsibility is neither stated or implied in the intent of this study. We realize that to suggest or recommend any duties or activities for such a group inherently implies certain responsibilities and authorities and gives dimensions to its area of cognizance. These, however, are as unintended as they are unavoidable. The important thing is that we recommend a group that can correlate all necessary activities, assist in planning, educate, motivate, and weld the many loose ends of the state's aeronautics industry into a working viable entity.

This group is discussed in detail in Chapter IV, Section F.

Legislative Support

In several instances the state's aeronautics industry is suffering from either restrictive laws and ordinances that should be removed from the books or the absence of legislative support that needs to be supplied. We recommend that a study be made of this situation; that circumscribing fiats be removed or modified; and that new laws and regulations needed for the protection and support of the industry be enacted. Three particularly important examples are:

- (1) The law governing the building of heliports in certain areas. This edict is now obsolete and needs to be modified or replaced.
- (2) Community, county, and state regulations regarding protective zoning around airports need to be enacted. These regulations should prescribe the limitations of land use around airports and establish realistic criteria for future obstructive zoning regulations.
- (3) In the situations where certain communities are already pressing their debt limitations that are set either by state statute (in the cases of statutory communities) or by charters (in the case of home rule cities), new legislation should be enacted that would give issuing bodies some sort of supplemental form of pledge to help overcome investor resistance to revenue bonds and, generally, to make the profits financially feasible.

Airport Financing

We recommend that the problem of airport financing (as indicated in 3 above) be given immediate attention and that aggressive action be taken by all participants in getting a more equitable portion of federal transportation system allotments, a more adequate portion of state funds, and forms of pledge supports that will induce private investors.

We suggest that this problem is critical and needs immediate and affirmative action.

New Airports for Air Carrier/Air Taxi Services

We recommend that airports able to accommodate at least air taxi/commuter-type aircraft be built in (or near) Las Animas, Carbondale, and Fraser. In

each case there is at least one great need and advantage that can be mutually enjoyed by the aeronautics industry and by the community or area. For example, the airport at Fraser is urgently needed as an alternative and emergency port for both air carrier and commuter service planes. On the other hand, an airport of this consequence at Fraser would allow the trunk airlines (and commuter lines) to schedule thousands of tourists and skiers right into the heart of this recreational area. Airlines estimate that they could easily triple the numbers of out-of-state skiers into Winter Park, for example, if an adequate all-weather airport were available at or near Fraser.

We recommend that a full-service, secondary airport be built at Niwot to serve the rapidly developing industrial complex in this area. If, however, costs or other factors preclude the building of an airport at Niwot, we recommend that the facilities at the Jefferson County Airport and at the Longmont Municipal Airport be further developed to enable them to handle the increasing traffic in this area.

Helicopter/VTOL Ports and Stops

We recommend that sites be selected and either a heliport or helistop be constructed in or near the center of the commercial areas in Denver, Colorado Springs, Pueblo, Boulder, Loveland, Longmont, Fort Collins, Greeley, and Estes Park. We also recommend that such accommodations be constructed at the larger colleges, universities, industrial parks, and particularly popular recreational areas where such services are needed.

Future Airport Facilities

We recommend that planning be started that will ensure adequate airports, heliports, and VTOL sites throughout the various regions of the State. Sites should be selected and plans initiated for:

(1) New airport facilities at

Springfield	- Baca County
Cheyenne Wells	- Cheyenne County
Fairplay	- Park County
Kiowa	- Elbert County
Castle Rock	- Douglas County
Aurora	- Adams County
Grand Junction	- Mesa County
Conejos	- Conejos County
San Luis	- Costilla County
Dove Creek	- Dolores County
Lake City	- Hinsdale County
Creede	- Mineral County
Brighton	- Adams County

(2) New reliever (secondary) airports at

Colorado Springs	- El Paso County
Pueblo	- Pueblo County
Denver	- Denver County

(3) Helicopter/VTOL sites at

Cripple Creek	- Teller County
Colorado Springs	- El Paso County
Pueblo	- Pueblo County
Brighton	- Adams County
Littleton	- Arapahoe County
Boulder	- Boulder County
Georgetown	- Clear Creek County

Denver	- Denver County
Central City	- Gilpin County
Golden	- Jefferson County
Longmont	- Boulder County
Estes Park	- Larimer County
Loveland	- Larimer County
Fort Collins	- Larimer County
Greeley	- Weld County
Ouray	- Ouray County
Hot Sulphur Springs	- Grand County
Silverton	- San Juan County
Telluride	- San Miguel County

Denver City Airport Authority

We recommend that a Denver city airport authority be organized to specifically and expressly look after the welfare of the Stapleton International Airport.

Stapleton International Airport Expansion

We recommend the immediate acquisition of sufficient Rocky Mountain Arsenal property to ensure the eventual construction of much needed additional runways, taxiways, aprons, and passenger/cargo service facilities.

Stapleton International Airport Zoning

We recommend that all present and any new properties around Stapleton International Airport be protected by adequate zoning and hazard- and obstruction-limiting regulations. We further recommend that these regulations (or laws) be sufficiently comprehensive to allow for future changes but are thoroughly protected against private interests and political vagaries.

State Aid and Support for Community Airports

We recommend that the State of Colorado or some agency within the State devise a plan whereby communities can immediately receive the aid (financial and otherwise) and support they need to start to solve their problems and realize their potentials.

Development of Air Commuter Service

We recommend that air commuter services be given every possible support by all parties concerned, but particularly by the State. This industry is extremely important to the State as a whole, but at the moment needs a bit of extra support to get it operationally able to be self-supporting. Any approach must be largely mindful of the end result, not momentary imbalances or seeming partialities.

General Advances in Aviatational Technologies

We recommend that the State encourage and support all elements of the aeronautics industry that can in any way reflect benefit to the State and its communities. We particularly recommend that the State support the aeronautics industry in:

- (1) Developing a comprehensive and credible safety program, supported by the necessary laws and regulations;
- (2) Developing a program for education in the disciplines and technologies of the industry and a program that will help to remove many semantic barriers from the minds of the public;
- (3) Establishing and eventually implementing a plan for the widespread use of navigational aids throughout the State; and
- (4) Exploiting all of Colorado's natural resources through the media of air transport. Such potentials as the skiing industry should be fully supported by both communities and the State.

SOLVING PROBLEMS AND REALIZING POTENTIALS

This report in consonance with most objective, unbiased studies regarding the aeronautics industry reveals at least three primary, interrelated situations:

- (1) The growth and the potential growth of the aeronautical industry (and its associated commerce) are of fantastic proportions.
- (2) Such growth and growth potentials are creating a plethora of problems with effects that range in impact from a completely local community problem to the national economy-impairing problem precipitating from the air carrier/general aviation congestion and priorities situation.
- (3) In solving these problems (from the smallest to the largest) a great deal of intelligent and earnest effort is being expended. The effort, however, is largely impotent simply because it lacks direction--it is like the knight who mounted his horse and rode off in "all" directions. The large diversity of interests in seeking to realize individual interests saps the strength from each effort by combating other individual interests to the ultimate harm and debilitation of the entire industry. Then, too, there are the efforts that are so small and unobtrusive that they get pushed aside and neglected. Yet these efforts are also critically important to the welfare of the State's aeronautical industry.

To meet the problems and realize the potentials that are so clearly visible, all of these diverse and many-faceted interests must be channelized and correlated and appropriate action intelligently implemented. This cannot be done through any existing group or organization, for none of these represent the interests of all. So it is expedient that a legal (state) entity be established through which the ultimate best interests of the entire industry/community may be achieved.

As we have already indicated, it is not within the realm of this study to suggest the responsibilities and authorities of the proposed group. Neither do we try to define such a group, declare its avenues and dimensions of activity, or prescribe the characteristics and backgrounds of its members. Rather, we have endeavored to make the problems and potentials as graphic and persuasive as possible so that the urgent need for such a group can be clearly seen. We will have fulfilled our responsibility and stayed within the framework of our "authority" if we can present the situation with sufficient dynamics to motivate some aggressive and affirmative action within the industry itself.

We do recommend that the industry as a whole (i.e., the state industry) sorely and urgently needs a correlating body that can channel the myriad needs and efforts of all participants into a force of optimum consequence. For the sake of clarity, this proposed and presently amorphous body will be termed "the State board."

Since to detail the tasks such a board would do (or the areas for which it would be responsible) would be tantamount to defining the authorities and responsibilities of the State board, we use generic rather than specific terms. In some cases examples are used to illustrate a situation.

In broad terms then, the State board would serve to accomplish several extremely important and crucial functions. First, the State board would seek to develop within the State/industry matrix a pervading common purpose. For only with unity, cooperation, and mutual objectivity can the industry solve its problems and reach its full potentials.

The State board would serve as a planning center. Planning, per se, is probably the biggest, most urgent, and most ultimately rewarding need of the industry. So far, many parts of the industry (particularly in airport site selection) have grown in spite of negative conditions and not because of adequate planning. So the State board could help communities in their planning; i.e., show them how to plan and what factors to consider. In the larger cities (the hub or trunk airports) the State board could be particularly effective in collecting and analyzing data from all sources so that projections and estimates are more realistic. Plans for large or small activities need to be based on as many facts as possible. So the State board could serve as an important agency in overall planning, since it would be the reservoir of all non-proprietary information.

The critical situation often referred to as the "airport crisis" has many causal relationships with inadequate planning, usually with planning that was inadequate because of neither apathy nor intent, but simply because the plans were made from incomplete, non-factual, and non-timely data. Yet this great problem does exist and is approaching a climax with mathematical certainty. Only immediate, accurate, and industrywide planning--correlated and directed through a central agency that can take the individual plans and needs and weld them into a synergistic force--can avert an industry rollback of catastrophic consequences.

The matters of airport financing and airline subsidies are frequently either inadequately understood or misunderstood. Community cognizance of these matters will only come in time if there is some state or national entity whose responsibility includes the dissemination of such information. An assisting and advisory agency such as we propose could be of particular value in assisting small communities and big cities to take full and optimum advantage of all financial aid opportunities and to make sound and reasonable financial arrangements for the needs of the particular project. A whole new look at federal funding and means of both stimulating and assisting local financing is in order, but such actions will only come from an agency chartered to see that they do.

The State board would be responsible for the education of the masses and certain esoteric groups as apropos the air industry. For example, the airport crisis is a problem that must be elevated in the minds of government, civic, and industry leaders. It must be made a point of primary consideration for all concerned. Whether one calls it education or persuasion, attention and an across-the-board cooperative effort is a primary need. Federal officials, state

and community leaders, airport executives, airline management, general aviation officials, and aircraft manufacturers all must somehow be brought together to focus on means of averting a breakdown of the total aeronautical system.

The industry in its great hubs and vital trunks needs a (state) correlating body that can be an articulate and persuasive spokesman for all associates. These stronger, more dynamic elements must have a central source through which their fundamental and industrial life-sustaining requirements can be channeled so that their efforts are sustained and their objectives are realized. These vital and presently strong industrial/commercial entities must have a "generator" through which their "power drives" for progress can be circulated without creating a nullifying conflict of interests. But there are few of these hubs in Colorado, and the great service of our proposed board will be to the smaller communities of the State.

For the regions and the individual communities, the supports the State board could offer are legion. For example, the State board could:

- (1) Serve as a source of basic information and professional assistance in planning efforts;
- (2) Provide liaison among all elements of the industry and associated businesses;
- (3) Provide assistance and correlation of effort in the exploitation of natural areas (e.g., Colorado Ski Country U.S.A);
- (4) Correlate and implement all efforts at developing productive and profitable air commuter service charters;
- (5) Devise and develop financing plans, including methods and procedures through which larger amounts of federal aid can be made available to small communities;
- (6) Develop and implement plans and means whereby most state airports can be "fitted" with the appropriate navigational aids and airport improvements;
- (7) Correlate and optimize interfaces between all transport media;
- (8) Help all communities exploit any potential sources of revenues such as the rapidly rising tide of international tourism; and

- (9) Assist and direct all communities in the formulation of plans that are the product of research and analysis.

These are random examples, but they do reveal the wide areas of activity that need centralized correlation and support. In Colorado, our proposed State board would find a basic activity requirement to be the motivation and support of smaller communities who as yet have not been able to visualize their roll in the total picture. The State board would advise them on the adequacy of their present facility, the extent the facility should be improved, the possible sources of air transport industry revenues, the legal steps necessary to protect their facility, etc. The State board would be a teacher, trainer, persuader, helper, legal aid, and all-around advocate of air industry and community progress.

Such a board as we propose, operating as a state agency and with public funds, would have the ultimate good and pervading interests of the general public as a primary objective.