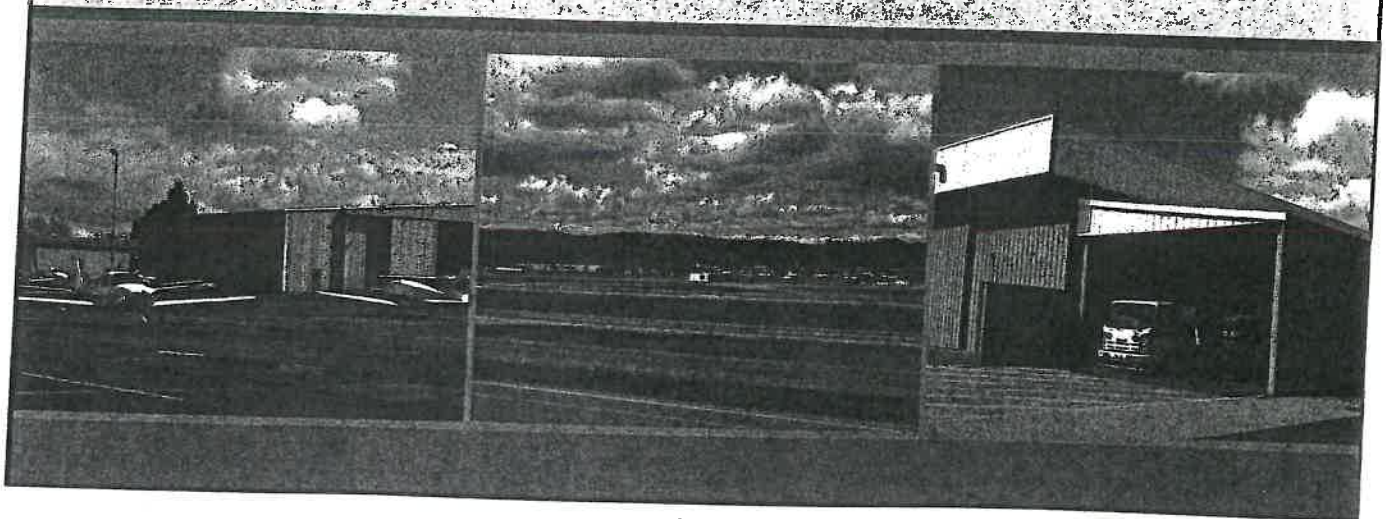
INVENTORY

The Buchanan Field Airport, Terminal and Administration Building Study is being undertaken in order to provide the Airport sponsor (Contra Costa County, California) with guidance for future development of a terminal building which will satisfy aviation demands now and into the future. The specific objectives of the study are:

- To inventory Airport physical facilities, air traffic operations, and socioeconomic data for use in generating forecasts of general aviation and potential commercial enplanement demand at the Airport;
- To research factors likely to affect air transportation demands in the local area over the next 20 years;
- To develop general aviation (including corporate) and commercial service demand forecasts;
- To provide recommendations on the size and location of the terminal and administration building;
- To provide information related to successful general aviation terminal and administration buildings at other airports, and
- To provide initial cost estimates and potential funding sources.

The format and structure of the study includes four specific elements which are briefly described as follows:



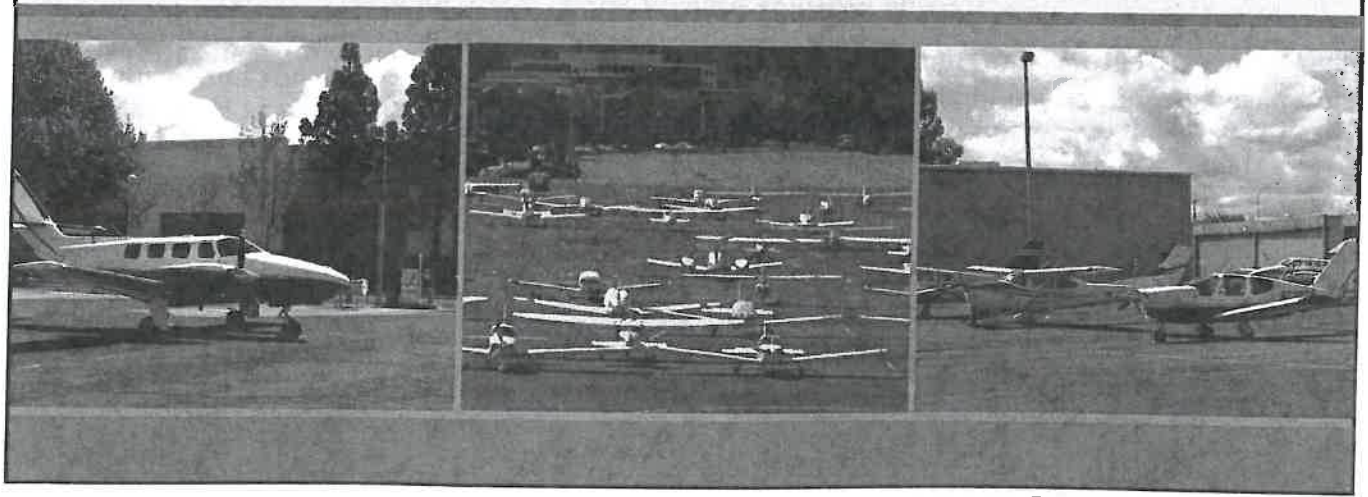
Chapter Two

AVIATION DEMAND FORECASTS

An important factor when planning the future needs of an airport involves a definition of aviation demand that may reasonably be expected to occur in both the near term (five years) and long term (20 years). For a general aviation airport such as Buchanan Field (CCR), forecasts of based aircraft and operations (takeoffs and landings) serve as the basis for facility planning.

Aviation activity can be affected by many influences on the local, regional, and national levels, making it virtually impossible to predict year-to-year fluctuations of activity over 20 years with any certainty. Therefore, it is important to remember that forecasts are to serve only as guidelines, and planning must remain flexible enough to respond to a range of unforeseen developments.

The following forecast analysis for Buchanan Field was produced following these basic guidelines. Existing forecasts are examined and compared against current and historical activity. The historical aviation activity is then examined, along with other factors and trends that can affect demand. The intent is to provide an updated set of aviation-demand projections for Buchanan Field and to utilize those factors which impact the need for terminal services to determine the size of an appropriate replacement terminal building.



Chapter Three

TERMINAL BUILDING REQUIREMENTS

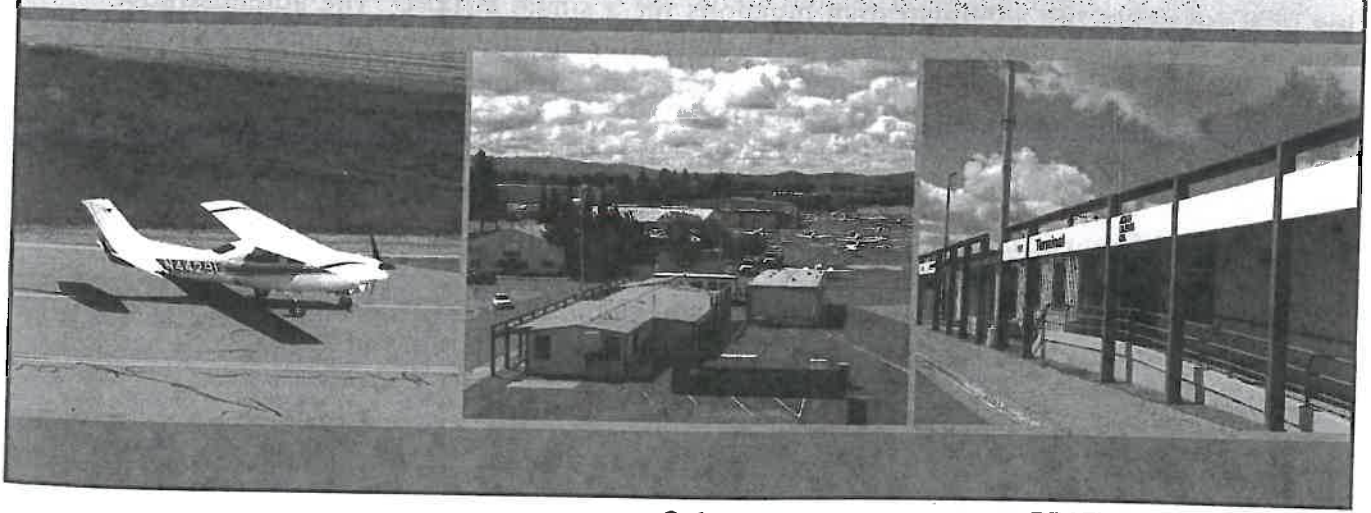
Elements forecast in the previous chapter, such as commercial and general aviation operations as well as potential enplanements, will be utilized in the analysis of terminal and administrative building requirements. This section of the study will cover the following elements:

- General Aviation Terminal and Administration Building Size Requirements;
- Potential Locations for the Terminal Building;
- Review of other Successful General Aviation Terminal Building Projects;
- Cost Estimate for a new Facility; and
- Potential Funding Sources.

TERMINAL BUILDING SIZE REQUIREMENTS

There are several resources available for determining the appropriate size of a terminal building. Those consulted for this study include:

- FAA AC 150/5360-13, *Planning and Design for Airport Terminal Facilities;*
- ACRP Report 25: *Airport Passenger Terminal Planning and Design;*
- ACRP Project Number 07-04: *Spreadsheet Models for Terminal Planning & Design;*
- FAA AC 150/5300-13A, *Airport Design;* and
- *TSA Recommended Security Guidelines for Airport Planning.*



SUMMARY/RECOMMENDATION

Buchanan Field is in need of a formal terminal building to serve existing users of the Airport and to potentially serve a commuter/commercial passenger function. The existing terminal building has outlasted its useful life, being nearly 30 years old.

This study provides recommendations regarding the size, location, and cost of developing a terminal and administration facility at the Airport. The minimum building size needed currently is 9,700 square feet. In the short term (next 5 years) a building size of 14,000 square feet is recommended. By the long term, a building size of 27,000 square feet is recommended. The short through long term estimates assume a combined facility that can accommodate general aviation, commercial, and administrative functions.

In addition, the Airport maintains a two ARFF vehicles and associated agents. A facility of approximately 4,000 square feet, which may be co-located with a terminal building, is recommended.

Four locations have been identified for a new terminal and administration building. The first option considered utilizing the site of the current terminal building. The second and third options are slightly to the south. All three of these options are on the east side of the Airport. The fourth option is located on the west side of the Airport in an area currently utilized for local aircraft tie-down positions.

Four examples of successful general aviation terminal buildings were presented along with the construction date, cost, funding sources, and available amenities. The example for Livermore Municipal Airport, which is currently under construction, is the most relevant in terms of cost due to its proximity to Buchanan Field. The 8,500 square foot Livermore terminal building is estimated to cost $5.9 million or $694 per square foot.

Most general aviation airports that construct terminal and administration buildings will primarily utilize local funding. Some funding may be available through AIP. Specifically, the Airport could put up to four years of non-primary entitlement funds ($600,000) toward a terminal project. As a reliever airport, they could also seek discretionary AIP funding of up to $200,000; however, a GA terminal building would rank low on the national priority ranking system.

LOCATION RECOMMENDATION

A variety of factors have been considered in evaluating an appropriate location for a replacement terminal and administrative building. These factors include: current land use, land control status, surface road access, expandability, available/potential vehicle parking. **Table 3F** presents a summary matrix of the major issues for each site considered.

Option 1, which is the location of the current terminal facility, is considered the first choice for a replacement terminal building. This location is centrally located to the runway and taxiway system which is desirable as taxi times and fuel burn are lower than if the terminal is located nearer the runway end. The site is the location of the current modular terminal structure; however, this structure should be removed and a new, permanent structure constructed. The land is owned and under the control of the Airport. The site is large enough to support phased construction of the terminal facility.

Vehicular road access is excellent. The location is at the end of the main Airport entrance road, John Glenn Dr. There is a parking lot in this location that has approximately 270 spaces. It should be noted that the parking lot is not owned by the Airport.

Option 2 is very comparable to Option 1 and would likely be considered the first choice if not for the fact the location is currently under lease. If the Airport were able to negotiate a relocation of the current FBO operations, this this would be an optimal location. One negative to consider is that an existing hangar, that currently generates revenue, would likely have to be removed.

The primary reason Option 3, was not chosen is because of the limited size of the parcel at the location. While an initial structure could be situated, after demolition of the existing hangar, future expansion would be limited by adjacent hangars and the road.

TABLE 3F
Terminal Building Location Matrix
Buchanan Field Airport

	Option 1	Option 2	Option 3	Option 4
Description	Location of the current terminal building.	Immediately south of current building.	East side between two GA conventional hangars.	Northside near conjunction of runways.
Current Use	Rarely used, aged modular terminal building.	FBO leasehold and hangar.	FBO leasehold and conventional hangar.	Gravel aircraft tie down area.
Land Status	Airport controlled.	Under long-term lease	Leasehold expires October 2014.	Airport controlled.
Surface Road Access	Excellent. At the end of main Airport entrance road, John Glenn Dr.	Excellent. At the end of main Airport entrance road, John Glenn Dr.	Excellent. Adjacent main Airport entrance road, John Glenn Dr.	Somewhat circuitous to get to the north side of the Airport.
Vehicle Parking Status	Adjacent parking lot with 270 spaces.	Adjacent parking lot with 270 spaces.	33 spots available currently.	None existing but undeveloped space available.
Building Expandable	Yes	Yes	Limited due to adjacent hangars.	Yes.
Primary Disadvantages	Air Ambulance operator would have to be relocated.	Parcel under lease currently. Potential loss of revenue producing hangar.	Mixed in among busy GA businesses; Loss of revenue producing hangar.	Not easy for unfamiliar public to access the north side.
Primary Advantages	Available parking; centrally located; Adjacent public viewing area; expandable, familiar location for airport users.	Available parking; centrally located; expandable, familiar location for airport users.	Location good for GA terminal exclusive functions but not for commercial function.	Available undeveloped land. Central location to the runway system.

Option 4 is not considered further because of the confusing surface road route to access the site. There is not direct access to the north side of the airfield from the Interstate.

CONCEPTUAL LAYOUT

The management of the Airport has indicated that they desire to house three primary elements within a replacement terminal facility: General Aviation Services, ARFF, and Airport Administration. **Exhibit 3G** presents one possible layout for such a facility. In addition, if the Airport were to see a return to commercial passenger service, they would like the site and building to be able to accommodate expansion.

As can be seen on the exhibit, the ARFF portion of the building includes two vehicles to house the two primary vehicles. This could be expanded to three or more bays depending on need. Also included in the ARFF space is a command center which would have views of

the airfield and all necessary communications equipment. An office room and storage space makes up the remaining portion of the ARFF functions.

A large public lobby is centrally located as a welcoming area for the building. A dedicated room is available for general aviation pilots to rest, eat, and do flight planning research. Several offices are located in proximity to the public lobby including an information/FBO customer service desk, a rental car counter, and restrooms.

Several offices are available to serve the Airport administration. This includes a print room and storage room. Restrooms are located in this portion of the building as well. When necessary, an additional wing could be added onto the building to accommodate commercial passenger service.

As shown in the exhibit, there is approximately 4,000 square feet dedicated to the ARFF functions and 14,000 square feet for general aviation and administration functions.

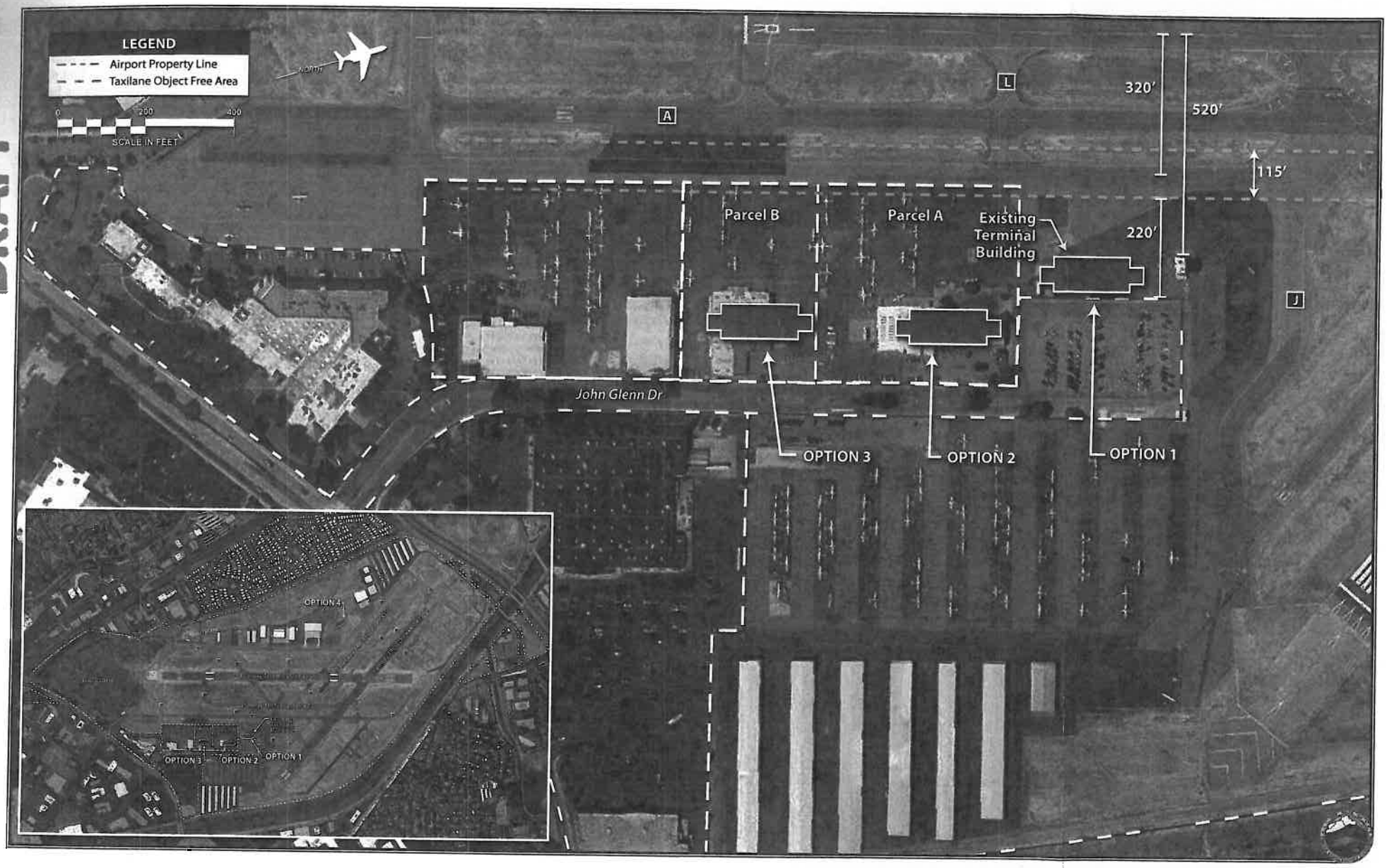
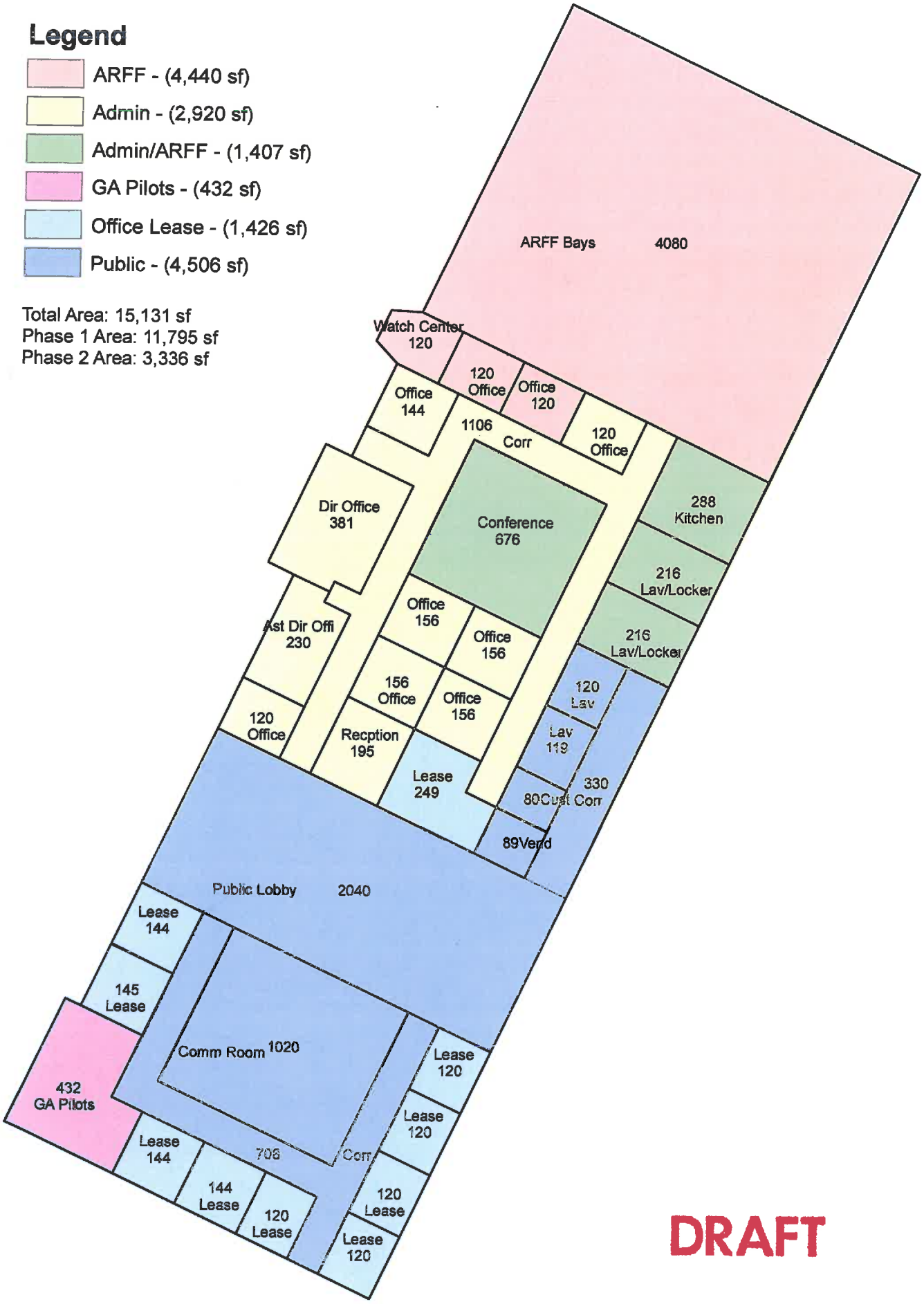


Exhibit 3B
TERMINAL LOCATION OPTIONS

Legend

- ARFF - (4,440 sf)
- Admin - (2,920 sf)
- Admin/ARFF - (1,407 sf)
- GA Pilots - (432 sf)
- Office Lease - (1,426 sf)
- Public - (4,506 sf)

Total Area: 15,131 sf
Phase 1 Area: 11,795 sf
Phase 2 Area: 3,336 sf



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