SECTION 2

EXECUTIVE SUMMARY

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This report documents the results of an Airport Master Plan update study for Fullerton Municipal Airport. The purpose of the study is to prepare a document and set of plans that will provide the City of Fullerton with a "roadmap" for the long-term development of the airport in a manner that is safe, environmentally sound and economically viable, while meeting the long-term needs of airport users. The important findings and recommendations of the study are summarized below, referenced to the remaining sections of the report.

EXISTING FACILITIES (SECTION 3)

- The Fullerton Municipal Airport is located at the western edge of the City of Fullerton in northern Orange County, California. The site has been used for aviation since 1913 and was officially dedicated as a public airport in 1928. Today Fullerton Municipal airport encompasses 86 acres.

- Fullerton Municipal Airport is included in the National Plan of Integrated Airport Systems (NPIAS) as a "reliever airport," having the function of relieving congestion at commercial service airports, particularly large and medium hub airports, and providing more general aviation access to the overall community

- Facilities at the airport include the following:

  - A lighted 3,121-foot runway, designated Runway 6-24 .
  - Lighted parallel taxiways on the north and south sides of the runway.
  - Three helipads.
  - A localizer, Runway Alignment Indicator Lights (RAILs), and visual approach slope aids.
  - An Automated Surface Observing System (ASOS) weather station
  - An administration / terminal building with attached air traffic control tower.
  - A total of approximately 255 aircraft parking spaces on the north and south sides of the field.
  - Individual aircraft storage hangars numbering 156.
  - Fuel storage capacity of 22,000 gallons for aviation gas and 22,000 gallons for jet-A fuel.

- The airport lies under a portion of the Class B airspace surrounding Los Angeles International Airport. There are 15 airports within 25 miles of Fullerton Municipal.

- Fixed-wing and helicopter noise abatement operating procedures are in affect at the airport.

- General aviation services are provided primarily by two full-service Fixed Base Operators (FBOs), Aviation Facilities, Inc. and General Aviation Company. Other tenants serving general aviation are Air Combat U.S.A., Ray's Flying Club, and Cardinal Air Services.

- In January 2002, there were 348 aircraft based at the airport. Aircraft operations (takeoffs and landings) in 2003 during hours of air traffic control operation numbered 89,453.

AVIATION FORECASTS (SECTION 4)

- Fullerton Municipal Airport's primary Airport Service Area consists of north Orange County (cities ranging to the south as far as Newport Beach and Tustin) and the southeastern part of Los Angeles County (including such cities as Whittier, Downey, Santa Fe Springs, Norwalk, La Mirada, Cerritos and Long Beach). Approximately eighty-nine percent of the airport's aircraft owners live in this area.

- The increase in number of aircraft based at the airport is expected to follow the nationwide percentage growth in general aviation aircraft. The resulting forecast of based aircraft is an increase from 348 in 2002 to 352 in 2008, 360 in 2013, and 382 in 2023 (see Table 2-1). In 2023 the mix of aircraft is expected to remain relatively unchanged from today – 85 percent single engine piston, 10 percent multi-engine piston, 2 percent turbine powered, and 3 percent helicopter.

- The number of aircraft operations per based aircraft is projected to remain at the average of 260 through 2023. The resulting aircraft operations forecast is 91,500 in 2008, 93,600 in 2013, and 99,300 in 2023, compared with 89,453 operations in 2003. Local operations are expected to continue to account for about 41 percent of the total. Ten percent of operations are projected to be instrument operations (Table 2-1).

- Peak hour operations in visual weather conditions are projected to be 38 through 2008, then increase to 39 in 2013 and 41 in 2023. Peak hour operations in IFR conditions are projected to increase from 14 in 2001 to 15 in 2008 and 16 by 2023.

- Avgas pumped at the airport is estimated to increase from an average of 274,000 gallons during 2000 and 2001 to 275,000 gallons in 2008, 281,000 gallons in 2013, and 298,000 gallons in 2023. Jet-A fuel pumped at the airport is estimated to increase from an average of 165,000 gallons during 2000 and 2001 to 168,000 gallons in 2013, and 179,000 gallons in 2023.

- The present airfield configuration accommodates the FAA requirements for the widths of the Runway Safety Area (RSA), Runway Object Free Area (ROFA), and Obstacle Free Zone (OFZ) at the sides of the runway. However, the portion of the RSA, ROFA and OFZ at the ends of the runway is significantly shorter than FAA standards.

- The recommended runway lengths for small airplanes (less than 12,500 pounds) with approach speeds of 50 knots or more and less than ten passenger seats range from 2,510 to 3,640 feet. This is the category of aircraft predominantly using the airport now and expected to use the airport in the future. The Runway 6 and 24 takeoff lengths of 3,121 feet satisfy the requirements for over 95 percent of these aircraft.

- Runway 6-24 has a pavement strength rating of 12,500 pounds gross weight with single-wheel landing gear configurations. This is sufficient to accommodate all anticipated aircraft.

- The Runway Protection Zones (RPZs) are areas at the ends of the runway that provide for the unobstructed passage of aircraft through the airspace above them, and are used to enhance the protection of people and property on the ground. For Fullerton Municipal Airport, the FAA has permitted two sets of RPZs – The "RPZ-Part 77" provides obstruction protection while the "RPZ-Land Use" provides land use protection. Control of the RPZs by the airport owner is strongly encouraged by the FAA to prohibit unsafe uses within the RPZs. The acquisition of avigation easements by the City is recommended for RPZ areas not now controlled by the City.

- Unless FAA standards are changed, for example due to technological advances in air navigation under instrument conditions, a significantly improved instrument approach capability at Fullerton Municipal can not be justified due to the presence of controlling objects and the significantly larger clear areas that would be required.

- The projected hangar demand represents a need to add a net of 39 additional hangars between now and 2008, another 22 between 2009 and 2013, and another 12 from 2014 to 2023. This hangar demand does not include hangars that will be needed to replace old wooden hangars that will be removed.

ALTERNATIVE DEVELOPMENT CONCEPTS (SECTION 6)

- The goal of the concept alternatives analysis was to identify the appropriate airport development that best satisfies the following criteria:

  - Long term aviation needs
  - Safety of aircraft operations
  - Community and environmental compatibility
  - Flexibility to accommodate change
  - Efficiency of construction phasing

- Operational efficiency
- Relative financial effectiveness

- Airside alternatives were evaluated according to the criteria listed above to address the issue of non-standard Runway Safety Areas (RSAs) at each end of the runway. Options examined included:

  - Provide for meeting all RSA, ROFA and OFZ standards by shortening the overall runway length. This would result in an overall runway length of approximately 2,565 feet, compared with the present runway length of 3,121 feet.

  - Continue to operate with a non-standard RSA, ROFA and OFZ, under a waiver from FAA standards due to conditions that pre-dated the standards. Under this option, a notice in the FAA's Airport/Facility Directory[1] under "Airport Remarks" would alert pilots to the fact that standard RSAs, ROFAs and OFZs are not provided.

  - Install aircraft restraint material at the ends of the runway in lieu of the standard RSA, ROFA and OFZ.

  - Provide combinations of the above options.

- The airside concepts were presented to the Planning Advisory Committee (PAC) on December 18, 2002 for further review and evaluation. As a result of this evaluation and review by the FAA, it is recommended that the airport continue to operate with non-standard RSAs, and install "runway distance remaining" signs for each end and provide a notice of non-standard RSAs to pilots in the Airport/Facility Directory. This solution: (1) retains the existing runway takeoff and landing distances needed for general aviation operations, (2) allows pilots to make aircraft operating decisions on the basis of knowing what the runway lengths would be if standard RSAs were available, and (3) does not require extraordinary costs.

- Five initial landside development concepts were presented at the first Planning Advisory Committee meeting in August 13, 2002. Subsequently, these were refined and narrowed to four. The final four landside development concepts were evaluated and presented at the second Planning Advisory Committee on December 18, 2002. As a result of these evaluations, Landside Concept A, with some refinements, was selected. The Master Plan development concept, shown in Figure 2-1, emphasizes hangar development, with a mix of sizes ranging from T-hangars to junior executive hangars. This concept is preferred because it (1) provides the greatest number of hangars in Phase 1A, (2) provides a mix of hangar sizes, (3) meets the 2008 hangar needs, (4) replaces the older wooden hangars in poor condition, and (5) allows all tenant areas to remain occupied while new facilities are built.

[1] The Airport/Facility Directory is a guide that provides airport facility and flight information to pilots.

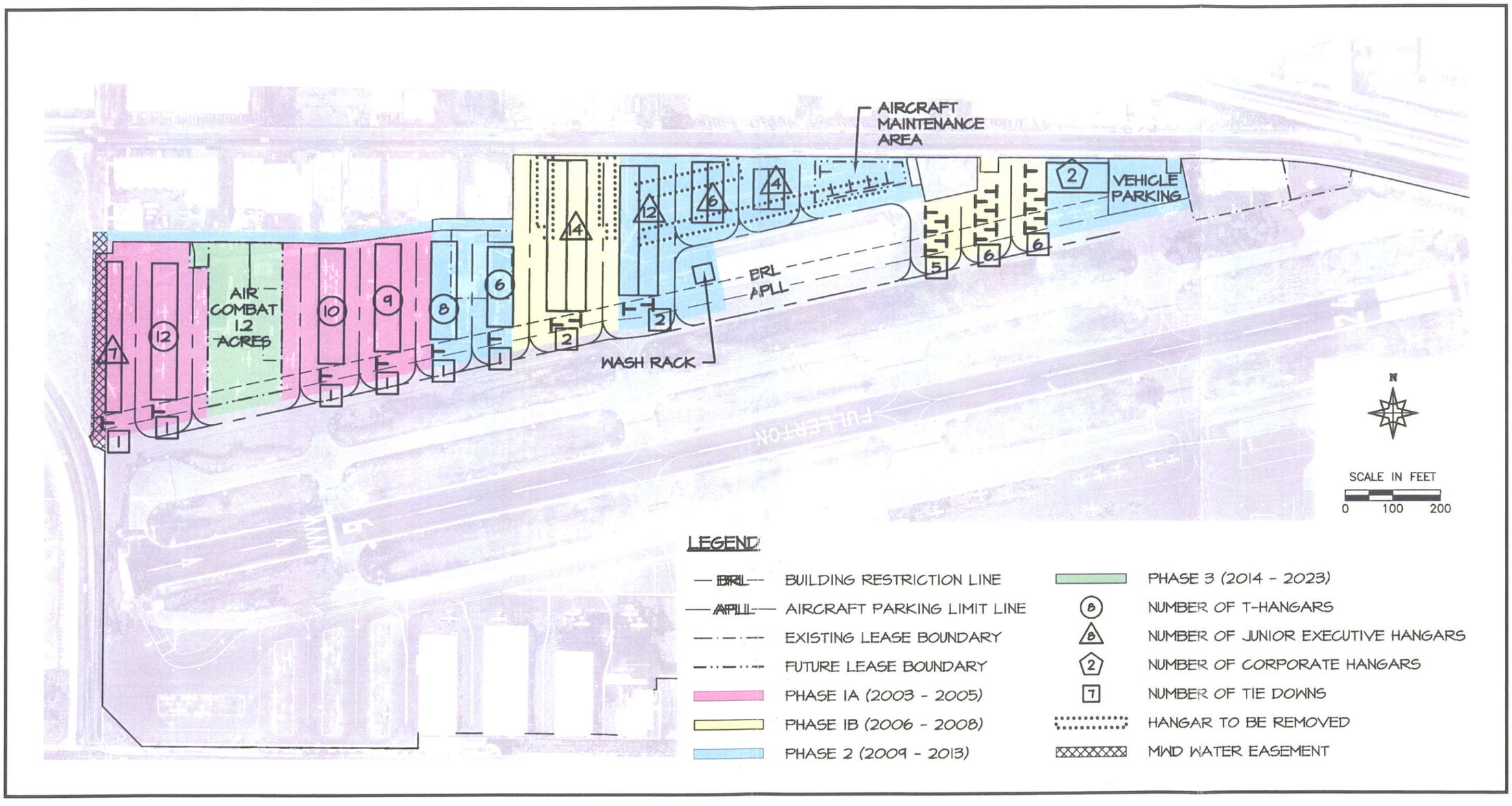

Figure 2-1
Master Plan Development Concept

AIRPORT PLANS (SECTION 7)

- The 20-year Fullerton Municipal Airport Master Plan development program is illustrated on a set of eight plans (Appendix C), which have been reduced from large-scale sheets. The overall development plan, including airside and landside improvements is shown on the Airport Layout Plan. The Building Area Plan provides greater detail of the airport building areas. The Part 77 Plans depict the imaginary surfaces on and around the airport that could potentially affect airport operations, as provided in Federal Aviation Regulations (FAR) Part 77. The Runway Protection Zone (RPZ) Plan illustrates land uses and facilities within each of the RPZ areas. Land uses and noise contours surrounding the airport are shown in the Off-Airport Land Use Plan. Exhibit "A" gives the acquisition history of airport property. The development plan is flexible and can accommodate changing needs as they might occur.

- The proposed Master Plan improvement projects by phase are:

  - Phase 1A (2004 to 2005)
    - Apply to FAA for modification of standards for Runway Safety Areas, Runway Object Free Areas, and Runway Obstacle Free Zones.
    - Reconstruct pavement at northwest ramp.
    - Construct two washracks on south side.
    - Construct 38 hangars in northwest corner and area between Air Combat and Ray's Flying Club.
    - Relocate wind speed instrument near northeast ramp.
    - Install runway distance remaining signs for Runways 6 and 24.

  - Phase 1B (2006 to 2008)
    - Rehabilitate pavement at northeast ramp.
    - Construct 14 hangars to replace the two north-south rows of wooden T-hangars.
    - Acquire avigation easements for Runway Protection Zone (RPZ) areas.
    - Replace VASI on Runway 24 with PLASI.

  - Phase 2 (2009 to 2013)
    - Develop FBO/corporate site in northeast area.
    - Construct 14 hangars in Ray's Flying Club area.
    - Rehabilitate northside access road and provide turn-around area.
    - Construct 22 hangars to replace the two east-west rows of wooden hangars and relocate the aircraft maintenance area.

FINANCIAL PLAN AND ECONOMIC IMPACT (SECTION 8)

- The proposed Master Plan improvement projects listed above are estimated to cost $7,866,000 (in 2003 dollars) over the 20-year planning period.

- Funding is expected to be provided through the following sources: $1.0 million in FAA grants, $0.05 million in state grants, and $6.8 million funded by the City of Fullerton.

- One method for funding the City share could be municipal lease financing, which is available for hangar construction. In this method, the City would be able to finance up to $10 million worth of equipment and projects without entering the secondary market, while gaining the benefits of lower interest payments available to tax free municipal bonding. Cash flow projections indicate that hangar revenues will be sufficient to provide for municipal lease financing of the hangar improvements.

- The total economic impact of Fullerton Municipal Airport to Orange County in 2003, including direct, indirect, and induced benefits is:

  - Total jobs: 180 employees
  - Total sales: $18.2 million
  - Total income: $9.6 million

ENVIRONMENTAL EVALUATION (SECTION 9)

- The aircraft noise analysis shows that there are 13 residential properties partially or wholly within the 65 dBA CNEL noise contours for 2002 and 2023. According to criteria adopted by the Airport Land Use Commission for Orange County (ALUC) for new development around airports, residential uses within the 65 CNEL noise contour would be inconsistent with its land use guidelines. The existing residential areas within the 65 CNEL are along Seacrest Drive in Buena Park (one property), along 4th Street in Buena Park (two properties), and along Pritchard Avenue in Fullerton (ten properties). Noise contours for 2023 are slightly smaller than 2002 contours overall, although the number of residential units within the 65 CNEL for 2002 is the same as projected for 2023.

- The ALUC also establishes land use criteria for new development in aircraft accident hazard areas around airports. Based on the accident history at the Fullerton Municipal Airport, FAA standards, and historical land uses, three Hazard Zones are identified in this master plan: (1) Runway Protection Zone (RPZ)-Land Use, (2) Runway Protection Zone (RPZ)-Part 77, and (3) Accident Potential Zone (APZ) II. Within the RPZ-Land Use, new land uses acceptable to the ALUC are limited to aviation-related uses and open space. A small portion of the Runway 6 RPZ-Land Use contains rear yards of privately-owned residential property along 4th Street. No homes are in the RPZ-Land Use. The remainder of the Runway 6 RPZ-Land Use contains aviation and industrial uses. The Runway 24 RPZ-Land Use contains aviation uses and some industrial uses. Although industrial land uses, which pre-date the ALUC standards, in the RPZ-Land Use for both runway ends do not conform to the ALUC standards, they conform to FAA land use standards.