



**AGENDA
ARCADIA CITY COUNCIL
CITY COUNCIL CHAMBERS
23 NORTH POLK AVENUE, ARCADIA FL
TUESDAY, MARCH 17, 2015
6:00 P.M.**

INVOCATION, PLEDGE, CALL TO ORDER AND ROLL CALL

PRESENTATIONS

1. Presentation to Franklin T. Boone – Retirement after 30 + years of service (Mayor Wertz-Strickland)
2. Presentation to Lieutenant Gary Evans – 20 years of service (Mayor Wertz-Strickland)
3. Certificate of Appreciation to Robert Womack of Womack Sanitation, Inc. (Mayor Wertz-Strickland)
4. Certificate of Appreciation to Brad Avery of WCA Waste Corporation (Mayor Wertz-Strickland)
5. Grant Writing Option - John Bry (Councilmember Coker)
6. Airport Master Plan (Mike Moon of Hanson Professional Services, Inc.)

CONSENT AGENDA

7. City Council Workshop Minutes for January 13, 2015 (Penny Delaney – City Clerk)
8. City Council Workshop Minutes for March 3, 2015 (Penny Delaney – City Clerk)
9. Special Event Permit – Six Gun Country Music Showcase (Carl McQuay – City Planner)

ACTION ITEMS

10. Cyndy's Place Regarding Discount of Water/Sewer – Andrew Crites, Representative
11. Approval of Application Regarding Planning & Zoning Board (Carl McQuay – City Planner)
12. Request for Rezoning of Parcel No. 36-37-24-0A00-0781-0000 (Carl McQuay – City Planner)
13. Alarm/Surveillance Systems at City Garage (Steve Underwood – Public Works Director)
14. Airport Painting (Councilmember Fink)

COMMENTS FROM DEPARTMENTS

15. City Marshall
16. City Attorney
17. Finance Director
18. Interim City Administrator

PUBLIC (Please limit presentation to five minutes)

MAYOR AND COUNCIL REPORTS

ADJOURN

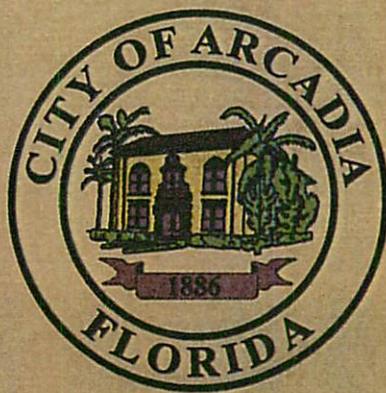
NOTE: Any party desiring a verbatim record of the proceedings of this hearing for the purpose of appeal is advised to make private arrangements therefore.

PLEASE TURN OFF OR SILENCE ALL CELL PHONES

PRESENTATION No. 1

Presented to
Franklin "Tim" Boone

In appreciation for
30 + years
of outstanding service
to the City of Arcadia
Oak Ridge Cemetery.



April 2, 1984 ~ February 27, 2015

PRESENTATION No. 2

Presented to

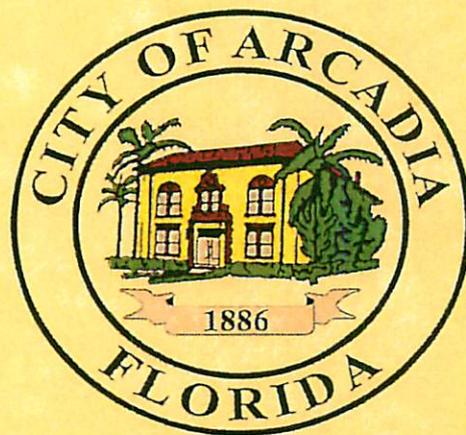
LT. GARY EVANS

In appreciation for

20 years

of outstanding service to the

City of Arcadia



03/03/95 – 03/03/15

PRESENTATION No. 3

Certificate of Appreciation

*In Grateful Appreciation For Your
Collaboration and Reduction of Fees in
the Demolition of the Arcadia Livestock
Market.*

We Hereby Present

Womack Sanitation, Inc.

With This Certificate of Appreciation

On this 17th day of March, 2015.



Mayor Judy Wertz-Strickland

PRESENTATION No. 4

Certificate of Appreciation

*In Grateful Appreciation For Your
Collaboration and Waiver of Fees in the
Demolition of the Arcadia Livestock
Market.*

We Hereby Present

WCA Waste Corporation

With This Certificate of Appreciation

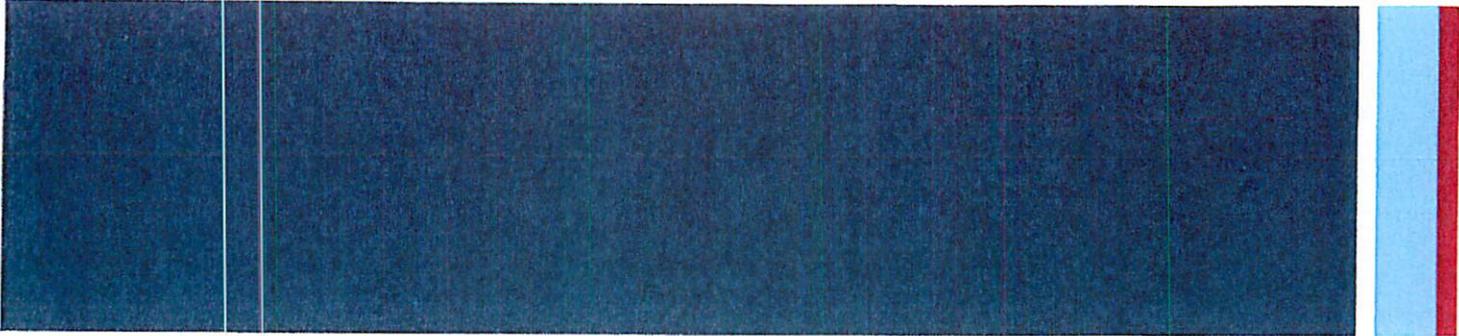
On this 17th day of March, 2015.



Mayor Judy Wertz-Strickland

PRESENTATION No. 5

PRESENTATION No. 6



Arcadia Municipal Airport Airport Master Plan and Airport Layout Plan Update

DRAFT

March 2015



Submitted to:
City of Arcadia

Prepared by:
Hanson Professional Services Inc.



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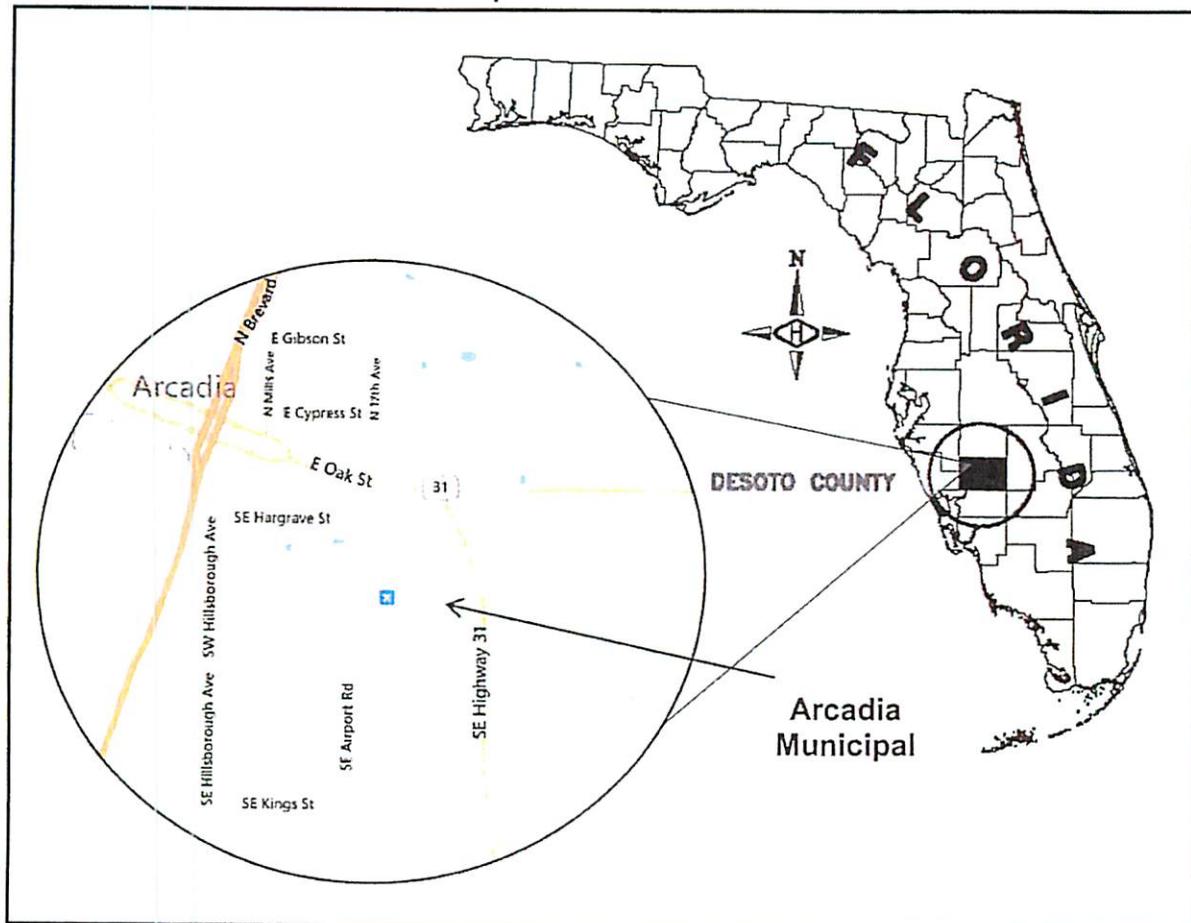
CHAPTER 1: EXISTING CONDITIONS

1.1 Airport Ownership and Location

Arcadia Municipal Airport ("X06") is a public use general aviation airport owned by the City of Arcadia, Florida and administered by the City Council. An Airport Advisory Committee (AAC) advises the City Administrator on matters pertaining to the airport. The City Administrator serves as the airport manager.

X06 is a non-towered airport that is operational 24 hours a day, seven days a week. Existing airport property is approximately 210 acres of land located on the southeast side of Arcadia, 2 miles from the city center. The airport is located south of State Route 70, west of State Route 31, and is accessible by SE A.C. Polk Drive which is off of Airport Road. Airport coordinates are latitude 27-11-44.1910N and longitude 081-50-14.0219W. Airport elevation is 63 feet above mean sea level (MSL). The airport's location is shown on Figure 1.1.

Figure 1.1: General Location map



1.2 Airport Facilities

1.2.1 Runways and Taxiways

Arcadia Municipal has one paved (asphalt) runway and one turf runway. The primary runway (6-24) is 3,700' long and 75' wide. The pavement was rejuvenated in early 2014 and the pavement condition is excellent. (Note: Runway 6-24 was previously identified as 5-23. Surveys conducted during runway rejuvenation project showed that Runway 5-23 markings should be changed to 6-24 due to changes in magnetic declination. The runway markings were corrected as part of the rejuvenation project. Runway headings for 13-31 will be evaluated as part of the surveys for the airport plans development.

Runway 13-31 is 2,829' long and 140' wide. The turf is in fair condition. The runway has no markings; however the thresholds and runway edges are identified by yellow painted tires. The Airport Master Record 5010 indicates the Runway 13 threshold is displaced by 775' due to a fence and the Runway 31 threshold is displaced 775' due to trees. However, the last FDOT inspection conducted in October 2013 indicates the Runway 13 threshold is displaced by 665' and the Runway 31 threshold is displaced by 985'. The actual displacement will be identified during the survey process for the Airport Plan Set.

Runway 6-24 has a 40' wide full parallel taxiway (Taxiway "A") with connectors to the T-hangar complex and the apron. The taxiway is constructed of asphalt and is in excellent condition as it was included in the 2014 Runway 6-24 rejuvenation project. The T-Hangar taxiways and connectors to the Parking Ramp and Taxiway A are in very poor condition. Table 1.1 summarizes runway characteristics.

In May of 2011, FDOT Aviation Office published a Statewide Airfield Pavement Management Program report documenting the condition of the pavement at Arcadia Municipal. The pavement conditions for Runway 6-24, taxiway and apron space were evaluated by an FDOT inspector. The report determined that the runway pavement and apron area was in fair condition prior to the rejuvenation project. Taxiway A and the connectors to Runway 6-24 were identified as satisfactory condition. Pavement servicing the T-hangar complex was documented as very poor condition. This includes the pavement leading to the T-hangar complex from the apron and Taxiway A.

1.2.2 Airport and Airfield Lighting

Arcadia Municipal has a rotating light beacon that had been out of service. The beacon was placed back into service as part of the installation of the new electrical vault. As indicated in Table 1.1, Runway 6-24 is equipped with medium intensity Quartz runway lights (MIRLs). The taxiway is equipped with medium intensity LED taxiway lights (MITLs). Runway 13-31 is not equipped with lights.

Table 1.1 Summary of Runway Characteristics

Airport Elevation		63 feet		
Runways	6	24	13	31
Dimensions (ft)	3,700 x 75		2,829 x 140	
Surface	Asphalt		Turf	
Surface Condition	Very Good		Fair	
Pavement Strength	12,500 LBS S.W.		NA	
Lighting	MIRL		None	
NAVAIDS	None	None	None	None
Visual Aids	PAPI - 2	None	None	None
Runway Marking	Non - Precision		None	

Source: Airport Master Record 5010, Airport Facility Directory, 2014

1.2.3 Approach and Landing Aids

In addition to the rotating beacon, Runway End 6 is equipped with precision approach path indicators (PAPIs) of the two-light unit type. X06 is also equipped with a lighted windsock.

1.3 Landside Facilities

Landside facilities include hangars, apron and ramp access, and auto parking. At X06 these facilities are located in the northeast quadrant of the intersection of Runways 6-24 and 13-31. Air-cadia is a fixed base operator (FBO) located in the terminal building which is immediately north of the apron. Services provided include Avgas fuel sale, tie-down rental, and small airframe and powerplant repairs. Additional tenants include Leading Edge which provides painting and upholstery services. Wingman Aviation provides aircraft maintenance services.

There are 10 paved parking spaces for automobile; however, the Airport allows automobiles to park in the grass adjacent to the terminal building. Tenants are permitted to park their vehicles in the grassy areas surrounding hangars. X06 can be accessed by vehicle via A.C. Polk Road which is accessed from Airport Road.

The airport has a total of 10 anchored tie-down spaces for local and itinerant aircraft located on the paved apron adjacent to the terminal building. Airport records indicate 4 spaces are leased and there is no waiting list. Air-cadia manages the rental and leasing of tie-down spaces and hangars and T-hangars. The Airport maintains the waiting list for all hangars and tie-down spaces.

A T-hangar complex is located just northeast of the apron which provides storage for 20 aircraft. Adjacent to the Runway 13 end, there is a larger t-hangar structure with three units that are each 1,100 square feet in size. Two conventional hangars in the sizes of 50' x 100' are occupied by Leading Edge and 90' x 45' occupied by Air-cadia. Airport records identify no vacancies and three individuals are on the waiting list for t-hangar complex. Figure 1.2 provides locations of airport facilities.

Figure 1.2: Facility Locations



1.4 Fuel Storage

X06 has one 12,000-gallon capacity above ground fuel tank that stores 100LL Avgas which is maintained by Air-cadia. The FBO takes all payment for fuel purchases and also pumps the fuel. Currently the airport does not accommodate self-serve fueling as the pump does not accept credit cards. According to Air-cadia records 5,863 gallons of 100LL were sold in 2013.

1.5 Published Instrument Approach Procedures

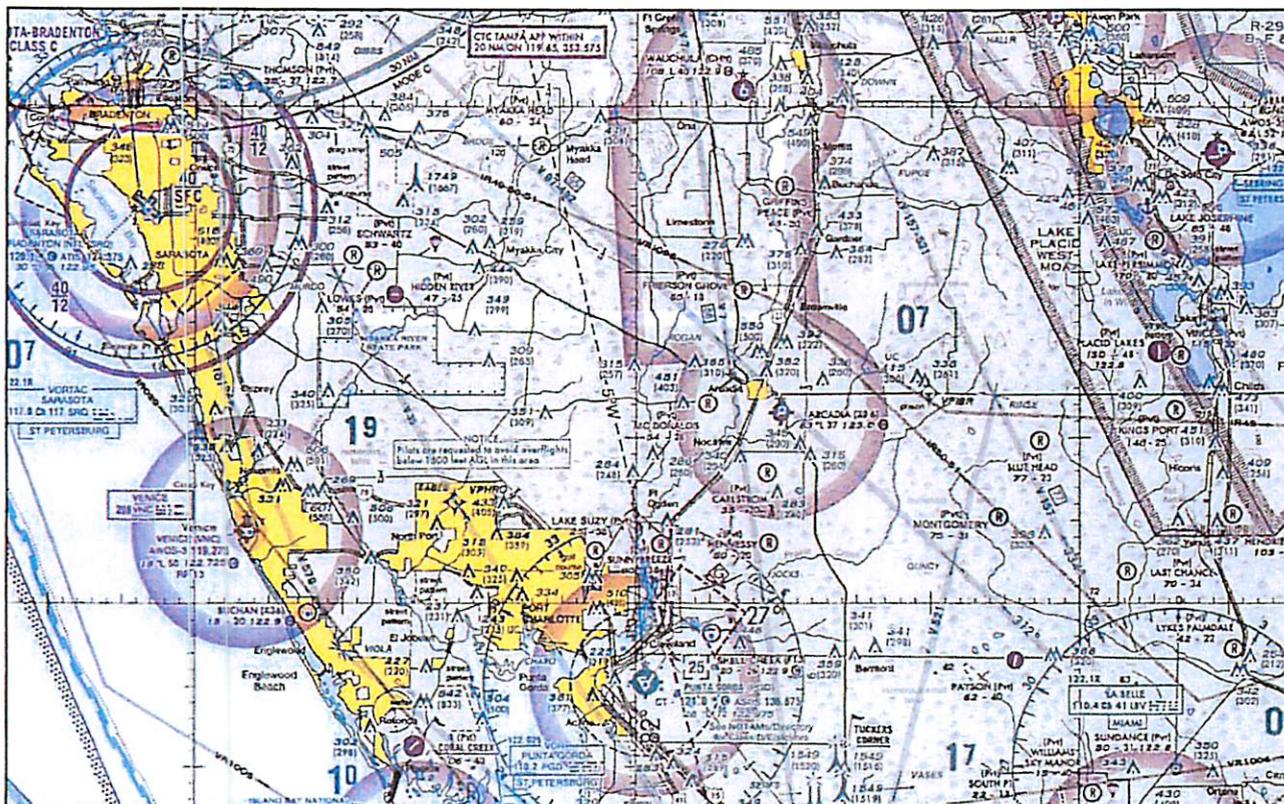
X06 has an En Route Area Navigation (RNAV) approach for Runway 6-24.

1.6 Area Airports and Airspace

X06 is a non-towered airport in Class E airspace. There are no overlapping airspaces associated with surrounding airports. Pilots in the vicinity of the airport may communicate using the Unicom frequency of 123.0. Airports and airspace in the vicinity of X06 are depicted on the Miami Sectional Aeronautical Chart, a portion of which is reproduced in Figure 1.3. The airport closest to X06 is Punta Gorda Airport, located approximately 18.5 nautical miles southwest of Arcadia. Punta Gorda is a public use airport with three asphalt runways and full service facilities. Roughly seven privately owned private use airports are located within 20 nautical miles with McDonalds Field the closest at approximately 4.2 nautical miles. Other nearby airports includes:

- KCHN – Wauchula Municipal Airport (19.3 nm N)
- KAVO – Avon Park Executive Airport (28.9 nm NE)
- KSEF – Sebring Regional Airport (30.7 nm NE)
- KVNC – Venice Municipal Airport (33.1 nm W)

Figure 1.3: Area Airports and Airspace



1.7 Airport Activity

1.7.1 Based Aircraft

Based aircraft data were obtained from the FAA's Terminal Area Forecast (TAF). This source reflects data and information obtained for recording on the FAA's Form 5010 Airport Master Record. Data for the period 2000 to 2013 are presented in Table 1.2.

Table 1.2: Based Aircraft Data

Year	Based Aircraft
2000	31
2001	31
2002	31
2003	31
2004	31
2005	31
2006	31
2007	31
2008	31
2009	31
2010	28
2011	28
2012	31
2013	31

Source: FAA Terminal Area Forecast

The Form 5010's detailed based aircraft estimate is presented below:

- Single-engine 0
- Multi-engine 0
- Jet 0
- Ultra-light 3
- Rotor 0
- **Total** 3

The number of based aircraft obtained from current airport records is presented below:

- Single-engine 18
- Multi-engine 4
- Jet 0
- Ultra-light 4
- Rotor 0
- **Total** 26

Review of the data indicates the limitation of the FAA database, specifically, a tendency to record the same estimated number of based aircraft for a period of years. While it is conceivable that an airport could have exactly the same complement of based aircraft for a period of five years, the recurrence of this circumstance for many airports in the TAF's database suggests that the TAF historical data may be insufficient for accurate reporting of actual numbers. For the purpose of this study, the 2013 data provided by airport staff identifying 26 based aircraft will be used.

1.7.2 Aircraft Operations

As noted, X06 is a non-towered airport. The airport staff and fixed base operators do not maintain a full log of operations; therefore, accurate data concerning aircraft operations are not available. (An operation is either a takeoff or a landing. Touch-and-go and stop-and-go activities, which simulate takeoffs and landings, count as two operations for each cycle.) The TAF's data concerning aircraft operations were also obtained and reviewed. The number of total operations has remained unchanged since 1990. These are presented in Table 1.3. The Form 5010 for 2010 continues to report 19,370 annual operations that are categorized as follows:

The Form 5010's aircraft operations estimate is presented below:

Air Carrier	0
Air Taxi	30
G.A. Local	12,500
G.A. Itinerant	6,800
Military	40
Total	19,370

Table 1.3: Annual Operations

Year	Total Operations
2000	19,370
2001	19,370
2002	19,370
2003	19,370
2004	19,370
2005	19,370
2006	19,370
2007	19,370
2008	19,370
2009	19,370
2010	19,370
2011	19,370
2012	19,370
2013	19,370

Source: FAA Terminal Area Forecast

The estimated number of aircraft operations obtained from the airport is presented below:

Air Carrier	0
Air Taxi	0
G.A. Local	8,577
G.A. Itinerant	4,616
Military	0
Total	13,196

The nature of the data concerning operations, i.e., identical numbers of operations occurring for several years, suggests the same database limitation referenced with respect to based aircraft. This will be considered more during the development of the aviation forecast. For the

purpose of this study, the 2013 base year data provided by airport staff identifying 13,196 operations will be used.

1.8 Socio-economic Data and Projections

Socio-economic characteristics identify an area's past and future growth. In certain regions, socio-economic characteristics have a positive relationship to aviation activity and are often useful in preparing estimates of future airport activity.

1.8.1 Population

The U.S. Census Bureau in Census 2010 recorded the population of the City of Arcadia as 7,637 persons. This represented an increase of 15% from the 2000 population (6,640). DeSoto County's 2010 population (34,863) represents a 8.2% increase from the 2000 population (32,209). Florida's population grew to 18,801,310 in 2010, representing a 17.6% increase from 2000. The Census Bureau estimates that the population of Arcadia in 2012 was 7,621 while DeSoto County's and Florida's populations were estimated as 34,712 and 19,320,749, respectively.

Population projections from the Census Bureau anticipate continued rapid growth in the state's population to 28,685,769 by 2030. Projections for the DeSoto County area are estimated to be 39,799 in 2033 representing a 14.2% increase.

1.8.2 Income

Income data were obtained for the U.S., Florida, and DeSoto County. These data indicate the following levels of per capita personal income (PCPI) in 2012:

- U.S. – \$43,735
- State of Florida – \$41,012
- DeSoto County – \$25,506

(Source: U.S. Department of Commerce Bureau of Economic Analysis)

The data examined shows a U.S increase of 8.9% since 2010. Corresponding percentage increases for the State of Florida and DeSoto County were 6.5% and 4.7%, respectively since 2010.

1.9 Area Land Use Planning and Management

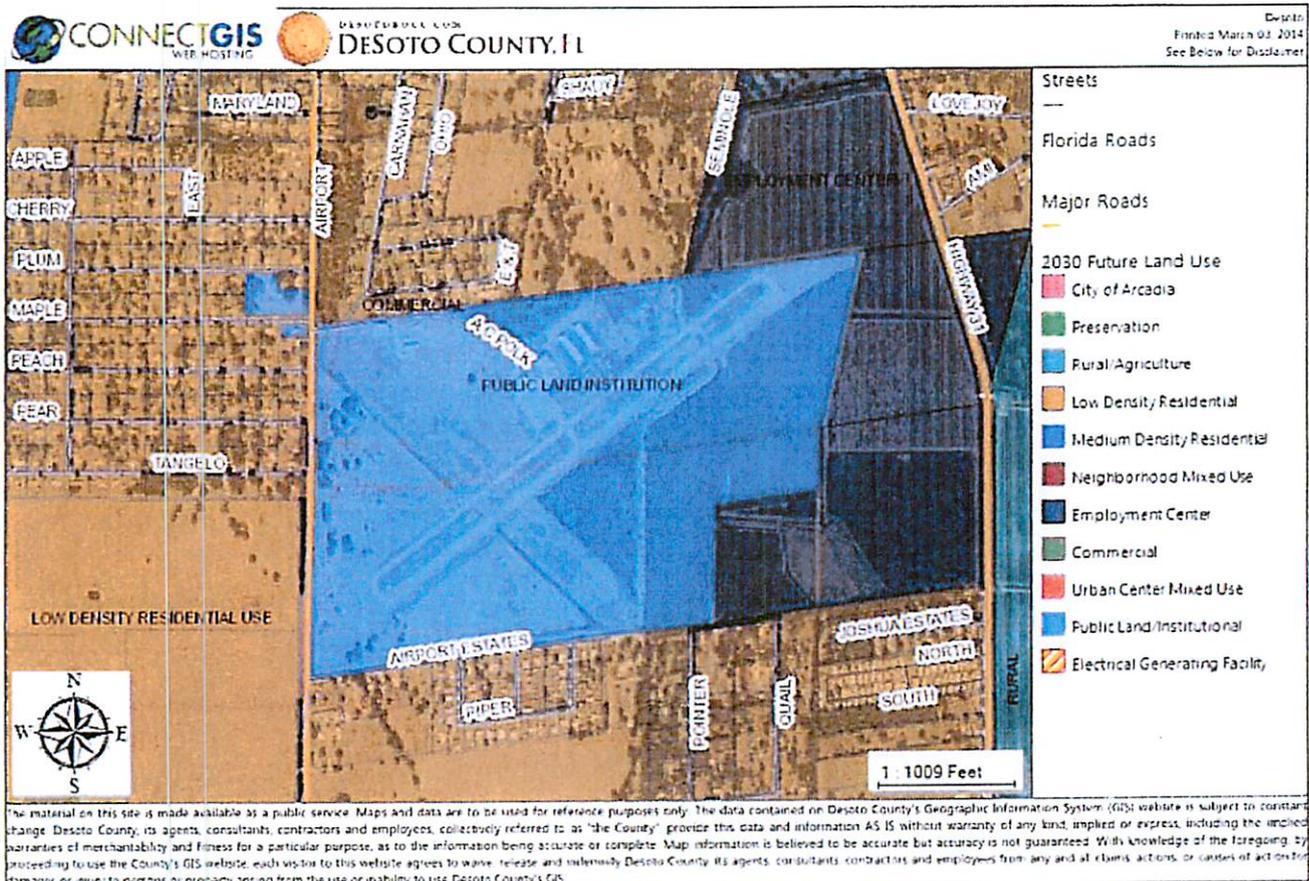
Land in the airport vicinity exhibits a variety of uses. Airport property is identified as public land/institutional. The DeSoto County Future Land Use Map, provided as Figure 1.4, indicates the following proposed land uses in the areas adjacent to X06:

- To the north and northeast, Low Density Residential and Employment Center.

- To the west, Low Density Residential.
- To the south, Low Density Residential.
- To the East, Employment Center and Rural Agricultural.

The City of Arcadia has partnered with DeSoto County Economic Development office to conduct comprehensive planning and adopt and administer a Land Development Code through its Community and Economic Development Department. Neither the Comprehensive Plan nor the Land Regulation Code addresses regulation of land use surrounding the airport.

Figure 1.4: Airport Area Future Land Use Map



Land Use Descriptions:

- Low Density Residential: Allowance for up to 2 dwelling units per acre.
- Public Land / Institution: Land containing State, Federal, City government facilities (excludes preservation land use which is related to threatened natural resources).
- Employment Center: Multiple types of non-residential land uses such as commercial, institutional, office, and industrial.
- Rural Agricultural: Mix of low density residential and agricultural activities. Allowance for up to 1 dwelling per 10 acres or 1 dwelling per 5 acres.

CHAPTER 2: ENVIRONMENTAL REVIEW

This Master Plan Update recommends substantial improvement to the Arcadia Municipal Airport during the 20-year planning horizon. This environmental review identifies impacts in certain areas, such as noise and compatible land use, which do not require field surveys. Other impact categories, such as air quality and wetlands, are examined to identify areas that could require further examination in the form of an EA. FAA Order 1050.1E, Environmental Impacts: Policies and Procedures identify airport development actions typically requiring an Environmental Assessment. This environmental review should not be considered an exhaustive analysis; rather, its purposes are to consider potential impacts of future airport development actions and to identify areas in which additional analysis may be needed. Proposed airport improvements over the 20-year planning period discussed in Section 1 of this Working Paper.

FAA Order 1050.1E, CHG 1, Environmental Impacts: Policies and Procedures identify airport development actions normally requiring an Environmental Assessment (EA). Review of that document indicates that the recommended actions in this Master Plan will not require an EA. The following sections identify the impact categories considered and present an overview of their potential significance.

2.1 Analysis of Impact Categories

Under the provisions of FAA Order 1050.1E, Environmental Impacts: Policies and Procedures and its supplement FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions the impact categories to be examined in the EA include:

- Air Quality
- Coastal Resources
- Compatible Land Use
- Construction Impacts
- Department of Transportation Act: Section 4(f)
- Farmlands
- Fish, Wildlife, and Plants
- Floodplains
- Hazardous Materials, Pollution Prevention, and Solid Waste
- Historical, Architectural, Archeological, and Cultural Resources
- Light Emissions and Visual Impacts
- Natural Resources and Energy Supply
- Noise
- Secondary (Induced) Impacts Socioeconomic Impacts, Environmental Justice, and Children's Environmental

- Health and Safety Risks
- Water Quality
- Wetlands
- Wild and Scenic Rivers

The objective of this review is to identify impacts in certain areas, such as noise compatibility and land use, which does not require field surveys. Other impact categories such as air quality and wetlands are examined to identify those areas that could require further examination.

2.2 Air Quality

The two principle sources of air pollution associated with the development and operation of the Airport are vehicular (both customer and maintenance vehicles and equipment) and aircraft emissions. Other contributing sources include emissions from aircraft refueling and repair/production activities.

Implementation of the recommendations in this Master Plan Update will require coordination with Florida Department of Environmental Protection Division of Air Resource Management to determine permitting requirements under the New Source Review (NSR) and Prevention of Significant Deterioration (PSD) Program. Construction permits are used to implement the Federal Clean Air Act requirements for air quality including Best Available Control Technology (BACT) determinations.

The principal effects upon air quality associated with proposed development actions will be construction emissions, especially dust. These will be temporary in nature; however, any necessary permits must be obtained before construction begins. Best Management Practices, such as watering, should be required of contractors to reduce any impacts associated with dust from construction activities.

Air quality associated with construction emissions, specifically dust, will not be a long-term factor. All necessary permits should be obtained before construction begins. Best Management Practices, such as watering, should be followed to reduce any impacts associated with dust from construction activity.

2.3 Coastal Resources

“The National Coastal Zone Management (CZM) Program is a voluntary partnership between the federal government and U.S. coastal states and territories authorized by the Coastal Zone Management Act of 1972. The Coastal Programs Division, within the National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management, administers the program at the federal level and works with state coastal zone management partners...”

In Florida, the entire state comprises the coastal zone. Although implementation of the proposed improvements would not be expected to impact coastal zones adversely, coordination will be required as part of an EA. Jurisdiction for this impact category is within the Florida Department of Environmental Protection Division of State Lands Office of Coastal and Aquatic Managed Areas.

The nearest Coast Barrier Resources System is Unit P21 located 37 miles west of DeSoto County in Charlotte County. Compliance with the Coastal Barrier Resources Act of 1982 is not a factor identified by this overview as requiring additional analysis.

2.4 Compatible Land Use

According to the DeSoto County Future Land Use Map (FLUM), Arcadia Municipal Airport is presently surrounded by low-density residential land use designations (2-3.5 DU/ac) to the north, west and south, and Neighborhood Mixed Use (3.5-5 DU/ac, or 0.8-1.2 FAR) property designation to the northeast and east of the airport property. As indicated by the noise contours illustrated in this report, some land uses currently developed or designated as low-density residential and Neighborhood Mixed Use may be impacted by the 65 DNL noise contour as a part of the airport's present or forecast operations. The potential increase in noise impacts identified in this update is associated with substantial amount of development possible on the vacant lands surrounding the facility under the present land use designations at maximum development potential.

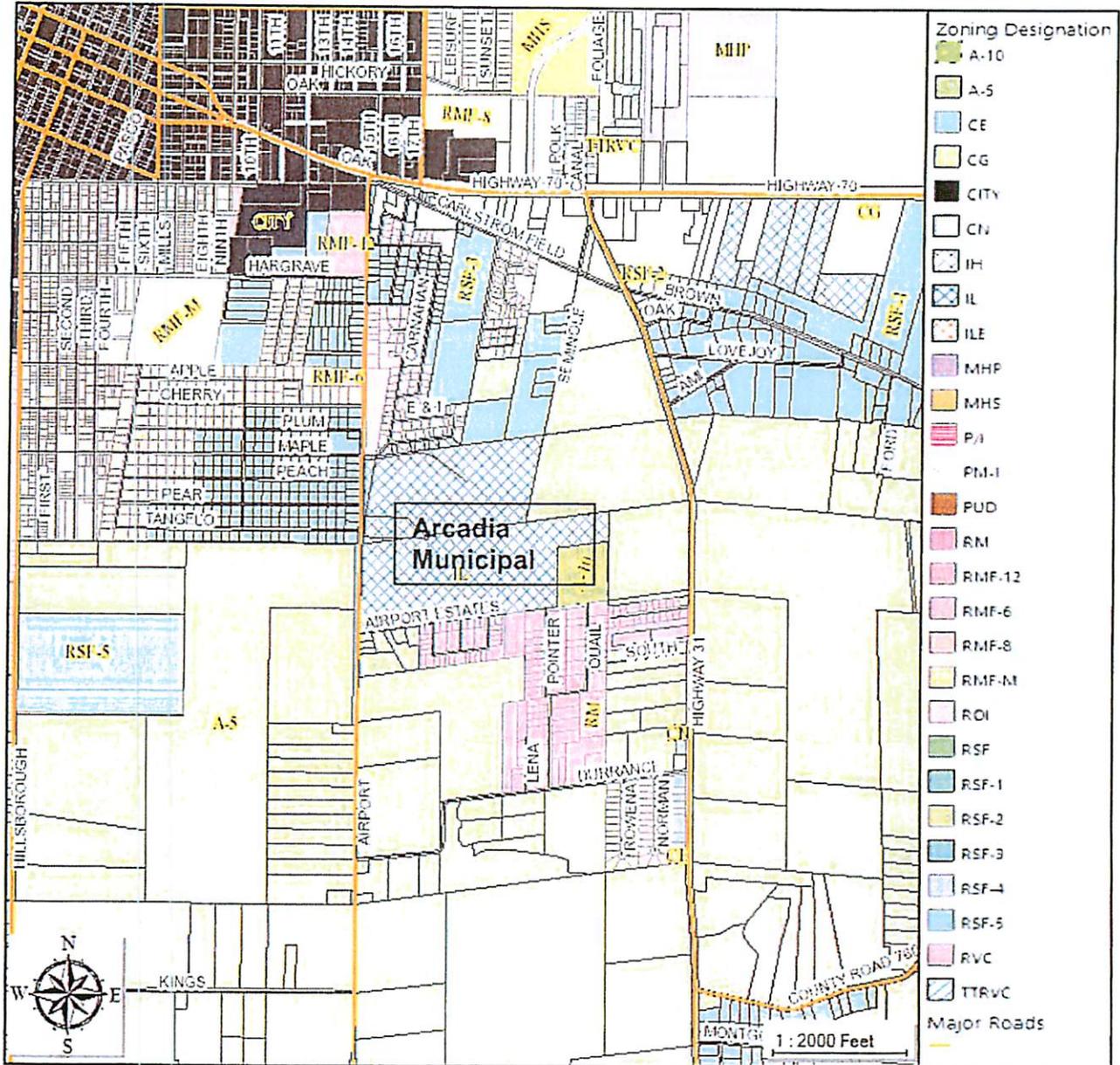
Furthermore, the existing Runway Protection Zones (RPZs) for both of the facility's runways have a potential to impact and be impacted by off-airport incompatible land uses. In accordance with the Federal Aviation Administration interim guidance on RPZs, any on-airport development that changes the dimensions of the present RPZs, or off-airport development that takes place within the existing or planned RPZs has to undergo an analysis of alternatives, designated to avoid, mitigate, or minimize potential impacts. Runway 05/23 is particularly susceptible to such impacts.

Section 163.3177(6)(a)11, Florida Statutes requires local governments to update or amend their comprehensive plan to include criteria and address compatibility of lands adjacent to an airport as defined in s. 330.35 and consistent with s. 333.02, in their future land use plan element by June 30, 2012. At the present, DeSoto County does not appear to have proposed or adopted comprehensive plan policies that address the airport land use compatibility provision of the aforementioned section.

While airport protection zoning regulations have been adopted by the City of Arcadia (Chapter 10, City of Arcadia Code of Ordinances) in accordance with requirements of s. 333.03, F.S., the airport is surrounded by properties that are presently unincorporated. DeSoto County did not adopt airport protection zoning regulations in accordance with requirements of s. 333.03,

F.S., and therefore, protections of the aviation facility from encroachment by tall structures and impacts on and by incompatible land uses are presently not in place. The DeSoto County Zoning Map is provided in Figure 2.1 below. The airport is located outside of the City of Arcadia limits and is surrounded by land zoned for residential and agricultural uses.

Figure 2.1 DeSoto County Zoning Map



Source: DeSoto County

2.5 Construction Impacts

Construction operations will cause specific impacts resulting from, and limited to, actions to improve the Arcadia Municipal Airport. The following are some impacts that might be expected from the proposed improvements.

- An increase in particulate and gaseous air pollution levels as a result of dust generated by construction activity and by vehicle emissions from equipment and workers' automobiles;
- An increase in solid and sanitary wastes from workers at the site;
- An increase in traffic volumes in the airport area due to construction activity;
- A slight increase in noise levels due to the operation of heavy equipment;
- Impacts to aircraft operations during runway construction, and
- Temporary erosion or scarring of land surfaces and loss of vegetation in areas which are excavated or otherwise disturbed.

These impacts are temporary in duration. Best Management Practices should be used to reduce construction impacts. For example, increases in dust generation can be significantly reduced by watering during construction. Bid packages for construction items should include provisions that require implementation of applicable practices to reduce such impacts.

2.6 Department of Transportation Act, Section 4(f) Lands

In accordance with requirements of the FAA Order 1050.1E and under the provisions of the Department of Transportation Act, Section 4(f), projects that require the use of any publicly owned land from a public park, recreation area, wildlife and waterfowl refuge, or historic site cannot be approved by the Department unless there is no feasible and prudent alternative to the use of such land, and the project includes all possible planning to minimize harm resulting from the use.

The scope of the Airport Master Plan and Airport Layout Plan update does not contemplate or propose the use of any publicly owned land from a public park, recreation area, wildlife and waterfowl refuge or an historic site. The nearest park or recreation area is the Walt Brewer Sports Complex, located more than 0.5 statute miles to the northwest from the nearest point of the airport property. According to the information obtained from the National Wildlife Refuge System, there are no wildlife or waterfowl refuges located in the airport vicinity. A search of the National Register of Historic Places identified four DeSoto County areas/structures listed in the register. None of the areas or structures are located on or in vicinity of the Arcadia Municipal Airport. Therefore, none of the public land categories will be impacted by the scope of this proposal.

2.7 Farmlands

In accordance with the federal Farmland Protection Policy Act (FPPA), in the event that a federally-funded project is likely to have direct or indirect impacts on Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance, a Form AD 1006 may be required to be prepared to determine the extent and significance of potential.

None of the proposed changes to this document are likely to impact – directly or indirectly – any farmlands that are subject to FPPA requirements, however, a survey of surrounding lands has been conducted to verify the absence of impact potential on Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. Lands located at the approach ends of Runway 13/31 are developed as low-density residential uses. Land located at the approach end of Runway 23 is currently developed as an orange grove, however, it's FLUM designation as Neighborhood Mixed Use indicates that this use is likely temporary, and ultimate development plans aim to convert this property to a non-farming use. Moreover, a soil report obtained from the USDA Natural Resources Conservation Service (NRCS) indicates the property soil as Smyrna fine sand, and therefore not subject to Prime and Important Farmland Classification. Land located at the approach end of Runway 5 is presently vacant, while its FLUM designation of Low Density Residential indicates a planned ultimate development as a non-farming use. A soil report obtained from the USDA NRCS indicates the property soil as Smyrna fine sand, Anclote mucky fine sand (depressional), and Ona fine sand. According to USDA NRCS report findings, none of the identified soils within the property are subject to Prime and Important Farmland Classification.

2.8 Fish, Wildlife, and Plants

For the purposes of the initial fish, wildlife, and plant assessment, data was collected from the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper, Florida Statewide Endangered and Threatened Plant Conservation Program database, as well as wildlife observation databases made available by the Florida Fish and Wildlife Conservation Commission (FFWCC) through the Florida Geographic Data Library.

Review of the rare plant data obtained from the Florida Statewide Endangered and Threatened Plant Conservation Program did not identify any plant conservation projects located in DeSoto County.

The habitat search conducted using the USFWS mapper did not identify any critical habitats. However, this part of the state is generally considered a suitable habitat range for the Florida scrub jay (*Aphelocoma coerulescens*), which is a threatened species. Data from the FFWCC wildlife observations database indicated a sighting of a Florida scrub jay at a ranch located approximately 2.9 statute miles north-northeast of the airport. The USFWS and the Florida

Natural Areas Inventory (FNAI) list protected species potentially found in DeSoto County. **Table 2.1** presents these species. Therefore, a biological survey of the area will need to be conducted to confirm the presence or absence of any threatened or endangered species, and a potential need for an Avian Protection Plan or any other proactive wildlife protection or conservation measures.

Table 2.1 Federal and State Listed Species in DeSoto County

Common Name	Scientific Name	Federal Status	State Status
Plant Species			
Edison's Ascyrum	Hypericum edisonianum	N	E
Giant Orchid	Pteroglossaspis ecristata	N	T
Sleeping Beauty Waterlily	Nymphaea jamesoniana	N	E
Wildlife Species			
American Alligator	Alligator mississippiensis	T	T
Black Skimmer	Rynchops niger	N	SC
Carolina Gopher Frog	Lithobates capito	N	SC
Crested Caracara	Caracara cheriway	T	T
Eastern Indigo Snake	Drymarchon couperi	T	T
Florida Black Bear	Ursus americanus floridanus	N	T
Florida Burrowing Owl	Athene cunicularia floridana	N	SC
Florida Grasshopper Sparrow	Ammodramus savannarum floridanus	E	E
Florida Sandhill Crane	Grus canadensis pratensis	N	T
Florida Scrub-Jay	Aphelocoma coerulescens	T	T
Gopher Tortoise	Gopherus polyphemus	C	T
Limpkin	Aramus guarauna	N	SC
Little Blue Heron	Egretta caerulea	N	SC
Manatee	Trichechus manatus	E	E
Osprey	Pandion haliaetus	N	SC
Sand Skink	Plestiodon reynoldsi	T	T
Sherman's Fox Squirrel	Sciurus niger shermani	N	SC
Snowy Egret	Egretta thula	N	SC
Southeastern American Kestrel	Falco sparverius paulus	N	T
Tricolored Heron	Egretta tricolor	N	SC
White Ibis	Eudocimus albus	N	SC
Wood Stork	Mycteria americana	E	E

Sources: USFWS, 2014; Endangered Species (E), Threatened Species (T), Not Listed (N), Special Concern (SC)

2.9 Floodplains

Executive Order 11988 directs federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare and restore and preserve

the natural and beneficial floodplains. Floodplains are defined as areas that have a one percent or greater chance of flooding in any given year. Information obtained from the Federal Emergency Management Agency (FEMA) Map Service Center shows a part of the Arcadia Municipal Airport developed and undeveloped property, as well as the associated infrastructure, in Flood Zone A, which is an area subject to inundation by a 100-year flood as determined using approximate methodologies. The area, which bisects Runway 6/24, measures approximately 25 acres. The objective would be to avoid development in this zone. Floodplains are not expected to impact the recommended future development recommended in this study as it is planned to occur on the north side of airport property.

2.10 Hazardous Materials, Pollution Prevention, and Solid Waste

FAA actions to fund, approve, or conduct an activity may require consideration of hazardous material, pollution prevention, and solid waste impacts under provisions of the National Environmental Protection Act (NEPA). FAA Order 1050.1.E, Change 1, Environmental Impacts: Policies and Procedures, dated March 20, 2006, identifies four primary laws that govern handling and disposal of hazardous materials, chemicals, substances and wastes.

Federal, state, and local laws regulate the use, storage, transport and disposal of hazardous materials. The largest hazardous material consumed and stored at the airport is fuel. The airport has one above ground fuel storage tank maintained by AirCardia. This tank is subject to various federal, state, and local regulations as outlined in previous paragraphs. The proposed airport improvements would not affect this tank however due to the age of this tank; it should be inspected for proper operation. Motor oil is the most common waste at the airport. Disposal bins should be provided to collect motor oil for appropriate disposal.

The U.S. EPA has listed three hazardous waste sites in the immediate vicinity of the airport, based on the Resource Conservation and Recovery Act (RCRA):

- Leading Edge (Handler ID: FLD984188235)
- Dexter Aviation LLC (Handler: FLR000151126)
- Debson Ranch (Handler: FLT980061824)

There is one known active landfill located 5 miles southwest of the airport. Airport construction projects, such as runway, taxiway, and apron construction, do not normally generate significant amounts of perishable or non-perishable waste, other than wastes associated with construction debris. Any wastes generated will be disposed in licensed landfills.

2.11 Historical, Architectural, Archeological, and Cultural Resources

The improvements proposed as a part of this update are not expected to impact any historical, architectural, archeological, or cultural resources. A search of the National register of Historic

Places and the National Historic Landmarks Survey maintained by the U.S. Department of Interior National Parks Service did not identify any listed structures, sites, or objects on or in the immediate vicinity of the airport property.

In the State of Florida, the Bureau of Historic Preservation within the Florida Department of State Division of Historical Resources is tasked with the review of development projects for compliance with federal and state historic preservation laws. The bureau also provides technical assistance on preservation laws, and should be consulted for consideration of projects' potential impacts on any historic or archeological properties.

2.12 Light Emissions and Visual Impacts

FAA Order 1050.1E, Change 1, indicates that proposed improvements resulting in light emission that create annoyances that interfere with normal activity may constitute a light emission impact. Proposed airport improvements include LED lighting on Runway 6/24 extension, Taxiway 'A' extension, and new Taxiway "B". Given the location of these improvements on the airfield, it is unlikely that significant impacts will be imposed on residence. Outside lighting associated with the new terminal building and parking lot are not anticipated to impact residences located off the Runway 24 end across Highway 31.

2.13 Natural Resources and Energy Supply

Effects on natural resources would include use of building materials, such as asphalt, concrete, etc. The amounts required for the proposed development actions are not considered significant within national, state, or local contexts. The proposed development actions will increase the power requirements for the airport due to the proposed runway and taxiway lighting extensions and additional landside facilities. The increased power requirements are considered to be within the capacity of the current supplier. Fuel consumption is expected to increase with additional aircraft operations at the airport. This increase will not have a significant impact on the nation's fuel resources, and no mitigation measures are envisioned.

All proposed upgrade projects should be evaluated for potential ways in which they can be made more energy efficient. Routinely, efforts should also be made to review changes to Florida's natural resource and energy policy to ensure compliance with new regulations and allow the airport to contemplate the use of any financial incentives that might be offered in relation to energy efficiency technologies.

2.14 Noise

Aircraft noise is a major environmental consideration when assessing possible impacts of airport development actions. For land use planning purposes, noise impacts at X06 were evaluated for existing conditions (2013) and for 20-year planning forecast (2033) conditions.

In accordance with FAA guidelines for the development of airport master plans, noise contours were generated using the FAA's Integrated Noise Model (INM) Version 7.0d. Data including runway location, elevation, temperature, pressure, and other variables were combined with flight paths and estimated and forecast airport activity to create contours that may be used to assess noise and land use compatibility. The Day-Night Level (DNL) metric was used. DNL represents the total noise exposure from aircraft operations over a given 24-hour period, and the noise contours produced represent noise levels in average daily duration of perceived decibels on the A-scale (dBA).

Interpretation of the significance of these noise impacts were based upon FAA guidelines presented in FAR Part 150, *Airport Noise Compatibility Planning* (see Table 2.2). Review of these standards indicates that DNL values of 65 and below are considered acceptable for all land use categories.

A review of the DNL noise levels for the Arcadia Municipal Airport indicates that no substantial, objectionable levels of noise will be imposed on non-compatible areas in the vicinity of the airport as a result of the proposed development. Figure 2.2 depicts the 2013 existing 65 DNL Noise Exposure Map. The 65 DNL noise contour for Runway 6-24 does reach outside of the airport boundary. On the 24 end the contour overlaps the agricultural land that this study will recommend the airport to purchase in the future. On the 06 end the noise contour overlaps Airport Estates Road. As with the 24 end, this area is begin recommended for acquisition in the future. Also, the contour is limited to the road and does not impact any residential properties. The 65 DNL contour for the proposed developments is contained within the proposed airport property envelope for the 2033 activity projections. The 2033 65 DNL noise contour can be found on Sheet ? of the Airport Plans in Chapter 6 of this document.

Table 2.2 FAA Land Use Compatibility Guidelines

Land Use	Yearly Day-Night Average Sound Level (Ldn) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
Residential						
Residential, other than mobile homes and transient lodgings	YES	NO (1)	NO (1)	NO	NO	NO
Mobile home parks	YES	NO	NO	NO	NO	NO
Transient lodgings	YES	NO (1)	NO (1)	NO (1)	NO	NO
Public Use						
Schools	YES	NO (1)	NO (1)	NO	NO	NO
Hospitals and nursing homes	YES	25	30	NO	NO	NO
Churches, auditoriums, and concert halls	YES	25	30	NO	NO	NO
Government services	YES	YES	25	30	NO	NO
Transportation	YES	YES	YES (2)	YES (3)	YES (4)	YES (4)
Parking	YES	YES	YES (2)	YES (3)	YES (4)	NO
Commercial Use						
Offices, business and professional	YES	YES	25	30	NO	NO
Wholesale and retail- building	YES	YES	YES (2)	YES (3)	YES (4)	NO

materials, hardware and farm equipment						
Retail trade-general	YES	YES	25	30	NO	NO
Utilities	YES	YES	YES (2)	YES (3)	YES (4)	NO
Communication	YES	YES	25	30	NO	NO
Manufacturing and Production						
Manufacturing, general	YES	YES	YES (2)	YES (3)	YES (4)	NO
Photographic and optical	YES	YES	25	30	NO	NO
Agriculture (except livestock) and forestry	YES	YES (6)	YES (7)	YES (8)	YES (8)	YES (8)
Livestock farming and breeding	YES	YES (6)	YES (7)	NO	NO	NO
Mining and fishing, resource production and extraction	YES	YES	YES	YES	YES	YES
Recreational						
Outdoor sports arenas and spectator sports	YES	YES (5)	YES (5)	NO	NO	NO
Outdoor music shells, amphitheaters	YES	NO	NO	NO	NO	NO
Nature exhibits and zoos	YES	YES	NO	NO	NO	NO
Amusements, parks, resorts, and camps	YES	YES	YES	NO	NO	NO
Golf courses, riding stables and water recreation	YES	YES	25	30	NO	NO

Numbers in parenthesis refer to notes.

Source: Federal Aviation Regulations Part 150, Airport Noise Compatibility Planning

Notes to Table 2-2

NOTE: The designations in this table do not constitute a Federal determination that any use of land is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with local land use authorities. FAA determinations under Part 150 are guidelines and are not intended to substitute for land uses determined to be suitable by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

Key to Table 1

YES	Land Use and related structures compatible without restrictions.
NO	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 dB must be incorporated into design and construction of structure.

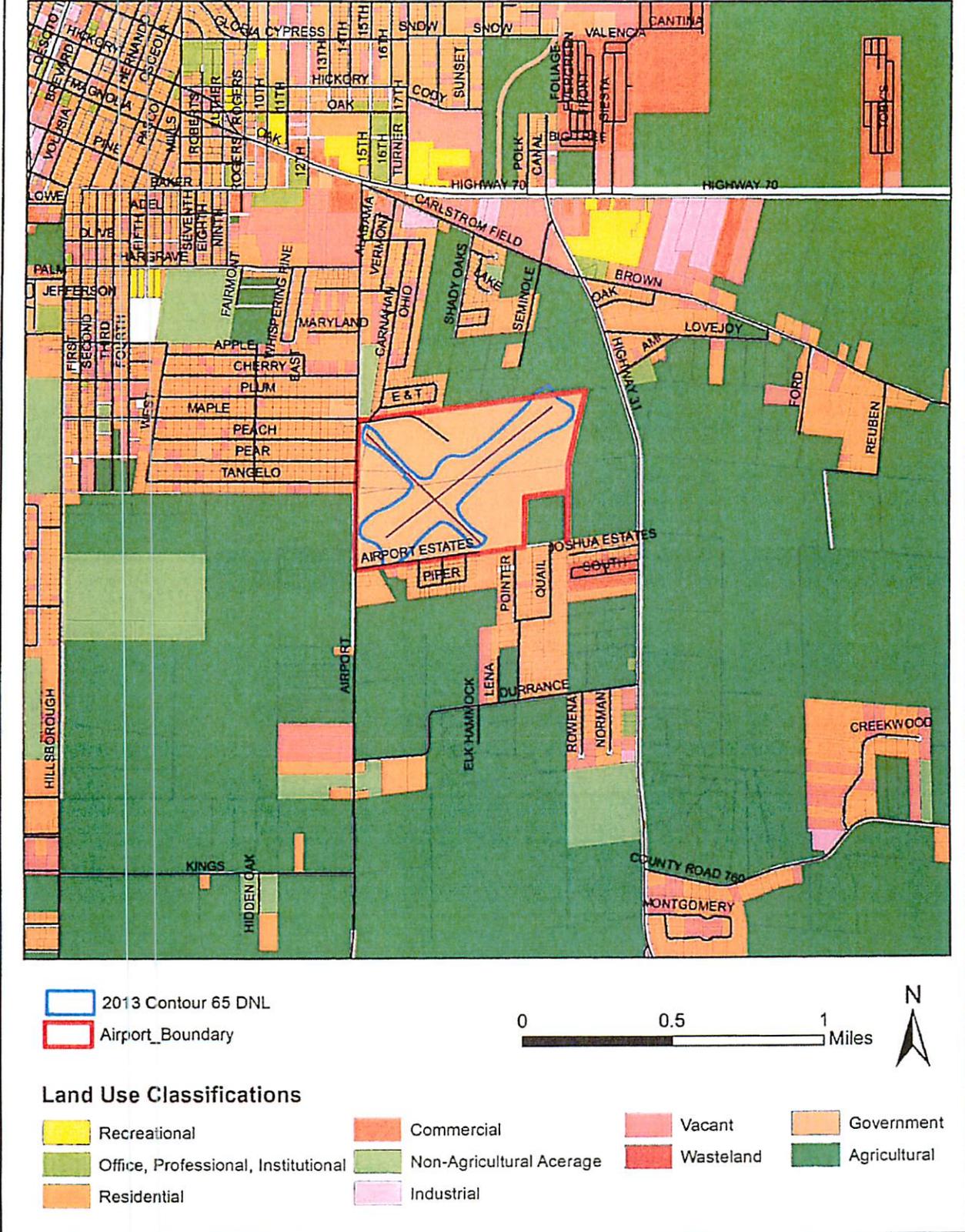
Notes for Table 1

(1)	Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB,
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	thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
(2)	Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(3)	Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(4)	Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(5)	Land use compatible provided special sound reinforcement systems are installed.
(6)	Residential buildings require an NLR of 25.
(7)	Residential buildings require an NLR of 30.
(8)	Residential buildings not permitted.
(End of Table 2-2)	

Source: FAA

Figure 2.2 2013 Existing Condition Noise Exposure Map



2.15 Secondary (Induced) Impacts

Data available from the Florida Department of Transportation Statewide Aviation Economic Impact Study (updated in March 2010) indicates that Arcadia Municipal Airport generates \$339,800 in annual economic activity. That data does not take into consideration potential positive socioeconomic impacts generated by proposed airport improvements in the form of temporary construction employment and income. However, the annual economic activity number is likely to go up in the event that planned airport improvements attract new airport tenants, businesses, or air traffic. Airport development is likely to create additional sources of airport revenue that go beyond the current revenues generated by flight training and recreational/sport aviation air traffic. Overall, it is expected that the community and region will be positively influenced by proposed improvements.

2.16 Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks

The areas proposed to be affected by the scope of the proposed airport improvements are contained within the airport property boundaries. Therefore, there are no anticipated highly adverse impacts on minority or low-income populations as a result of this proposal. Also, there are no anticipated impacts or disproportionate risks to children, resulting from environmental health or safety risks.

2.17 Water Quality

The Federal Water Pollution Control Act, as amended, commonly known as the Clean Water Act (CWA), governs the control of water pollution in the nation. The objective of the act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Federal agencies are required to comply with all federal, state, interstate and local water pollution control requirements both substantively and procedurally. The CWA provides the statutory basis for state water quality standards programs.

The airport is located within the jurisdiction of the Southwest Florida Water Management District (SWFWMD). Regulatory authority under programs delegated to the SWFWMD include management of the consumptive use of water, aquifer recharge, well construction, and surface water management, and the administration of the Department of Environmental Protections (DEP's) stormwater management program. The Florida DEP is also responsible for regulating public water systems in the State of Florida. This authority derives from Chapter 403, Part IV, Florida Statutes (FS), and by delegation of the federal program from the USEPA.

According to the EPA, there is one Toxic Releases to Water sites in DeSoto County. This site is located 3 miles northeast of the airport. Construction of the proposed airport improvements will temporarily increase runoff to the surrounding area; however, Best Management Practices,

including the maintenance of detention/retention basins, can be used to mitigate the flow of runoff so that impacts to water resources should be minimized. These actions will reduce impacts associated with construction of the proposed projects to area streams and ponds and to the area water quality in general. Coordination with the South Florida Water Management District and the Florida Department of Environmental Protection will be required for implementation of various proposed improvements.

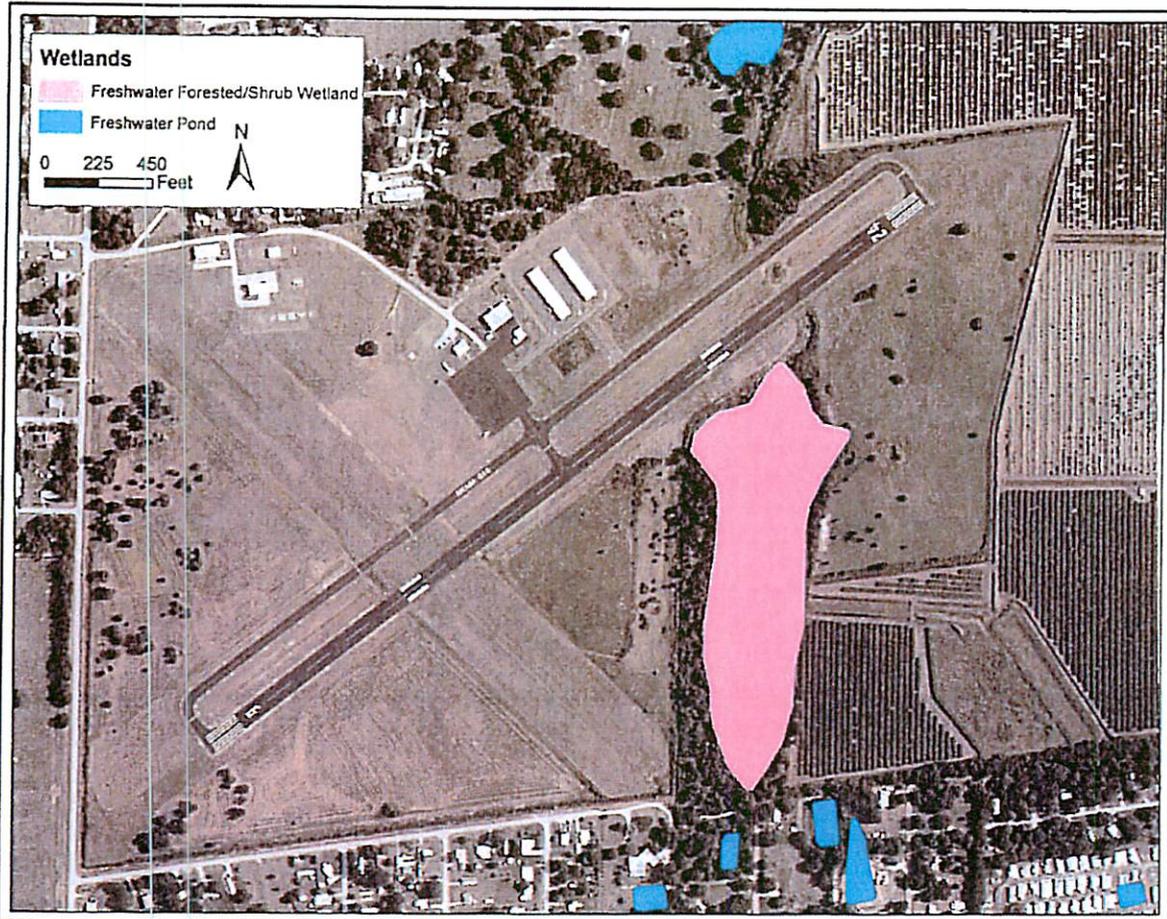
Long-term impacts of the projects would be limited to increased runoff due to increased areas of pavement for parking, runway, taxiway and apron space. The EPA considers this a non-point source pollution, because unlike point source pollution, it does not come from one specific location; rather, it comes from a broad range of sources. Pollutants carried by this runoff can be discharged into canals, lakes, and other bodies of water with adverse environmental impacts. These increases can be accommodated through stormwater management planning and implementation of those plans.

2.18 Wetlands

Information obtained from the Southwest Florida Water Management District indicates a presence of a potential wetland on the airport property approximately 18 acres in size as shown in **Figure 2.3**. This area may be impacted by aeronautical development projects. Impacts could also occur as a result of non-aeronautical development of the airport property.

Therefore, evaluation of existing wetland conditions and determination of status by an environmental scientist may be necessary, and development of that area may require coordination with federal and state agencies, as well as environmental mitigation. Agencies with jurisdiction over the wetlands are the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency at the federal level, as well as the Florida Department of Environmental Protection (FDEP) and the Southwest Florida Water Management District (SWFWMD) at the state level.

Figure 2.3 Wetlands Surrounding X06



Source: City of Arcadia

2.19 Wild and Scenic Rivers

The "Wild and Scenic" river classification is presently only applicable to approximately 49.2 miles of Florida's Loxahatchee (located just south of Stuart, FL) and Wekiva (located in Central Florida) rivers. As such, the proposed developments at the Arcadia Municipal Airport are not going to impact either one of these areas.

CHAPTER 3: FORECASTS OF AVIATION DEMAND

Estimates of future activity levels provide the basis for evaluating the adequacy of existing airport facilities and their capability to handle increased traffic levels. Forecasts of demand are also used to determine the types, quantities, and timing for needed improvements.

3.1 Forecast Methodologies

Aviation demand forecasts are generally prepared in a series of steps. First, historical aviation activity data are gathered and examined to estimate existing and past levels of traffic and trends or patterns of growth. Simultaneously, data that might indicate conditions or circumstances that would alter growth patterns are examined. The second step involves projecting past growth patterns into the future and projecting historical relationships between aviation activity and other indicators into the future. The resulting estimates are used in the third step, where a judgment is made concerning which projection represents the most reasonable estimate of future levels of aviation activity. This judgmental evaluation culminates in the selection of a preferred forecast.

Several techniques are typically examined for applicability in forecasting general aviation activity. These include regression analysis, trend analysis, market share analysis, and growth rate projections.

Regression analysis involves use of historical data to identify the relationships between a selected dependent variable, such as based aircraft, and independent variables, such as population. These relationships are then applied to projections of the independent variables to give estimates of future values for the dependent variable.

A second statistical technique, trend analysis, provides estimates of future values for the desired element (aviation demand) by determining its pattern of change and extending that pattern into the future. The primary assumption of this methodology is that the same factors will influence future aviation demand as have affected it in the past.

Because the airport does not maintain historical operations and based aircraft data for X06 are not available, regression analysis and trend analysis were not conducted. Historic data maintained by the FAA and FDOT both presented no change in the number of based aircraft or operations from the early 1990's through 2012. A trend analysis would show no movement in the trend line; therefore, the following two methods were the focus for developing the forecast in this Master Plan Update.

A third means to estimate aviation demand, market share analysis, involves review of historical activity at an airport and calculations to determine that activity as a percentage of activity in a larger regional, statewide, or national market. Calculated percentages, or market shares, are then applied to forecasts of activity at the larger level(s) to produce a market share projection for the individual airport.

A fourth method, similar to market share analysis, involves the application of growth rates present in third-party projections, such as the FAA's *Terminal Area Forecast* (TAF) to the local market. Adjustments may be made, up or down, on the basis of factors such as local socio-economic conditions and pending projects or development activity that could affect aviation activity.

These approaches were examined for applicability in the preparation of alternative projections from which the recommended forecast was selected.

3.2 Forecast Results

Airport activity forecasts are typically prepared for a number of components of aviation demand. These include:

- Based aircraft
- Aircraft operations by type
 - Annual
 - Design hour
 - Local/itinerant
 - Aircraft mix
- Design aircraft
- Annual instrument approaches
- Vehicles

The results obtained from the forecasting of these elements provide direct inputs for subsequent portions of this airport master plan update, most particularly the capacity analysis and facility requirements determinations.

3.2.1 Based Aircraft

The number of based aircraft at an airport is important in determining future activity levels and the need for expanded or improved airport facilities. Forecasts of based aircraft are used directly to estimate the need for certain types of facilities, such as hangars and aircraft apron. At non-towered general aviation airports, projections of based aircraft also often serve as the basis for developing the forecasts of other components of demand, such as aircraft operations.

The inventory of existing conditions provided data concerning historical levels of based aircraft at Arcadia Municipal Airport (X06) taken from the TAF's database. Although the database has limitations, it provides multi-year information. Because the data are not considered to reflect annual based aircraft data on a reliable basis, trend analysis and regression analysis were not judged applicable for preparing projections. Two alternative methods, market share and growth rate projections, were employed.

In addition to the TAF referenced earlier, the FAA's current reports include *FAA Aerospace Forecasts Fiscal Years 2013 – 2033* and *FAA Long-Range Aerospace Forecasts Fiscal Years 2020, 2025 and 2030*. Although differing in level of detail, both include forecasts of the national general aviation fleet. Table 3.1 displays the projections from the former report; Table 3.2 provides the forecasts from the latter.

Table 3.1: FAA Aerospace Forecasts Fiscal Years 2013-2033

Aircraft Type	Aircraft by Year			
	2013	2018	2023	2033
Total	221,085	223,920	227,915	246,375
Single-engine	135,005	131,095	128,200	129,040
Multi-engine	15,530	15,165	14,605	13,650
Piston-Engine Subtotal	150,535	146,260	142,805	142,690
Turboprops	9,830	10,650	11,595	13,740
Turbojets	12,230	14,420	16,895	24,620
Turbine Subtotal	22,060	25,070	28,490	38,360
Rotorcraft	10,995	12,815	14,590	18,555
Experimental	24,750	26,250	27,745	30,980
Sport Aircraft	7,075	7,890	8,680	10,245
Other	5,670	5,635	5,605	5,545

Source: FAA Aerospace Forecasts Fiscal years 2013-2033.

Using the market share approach involves calculating the percentage of national active aircraft and applying it to X06's 26 based aircraft. Applying the 2013 result of 0.01176%, $[(26/221,085)*100]$, projections for total national aircraft yields the following projections for X06:

- 2018 26 based aircraft
- 2023 27 based aircraft
- 2033 29 based aircraft

Table 3.2: FAA Long-Range Forecasts

Aircraft Type	Aircraft by Year					
	2010	2015	2020	2025	2030	2033
Total	242,700	261,400	274,900	288,300	303,400	314,454
Piston-Engine	169,600	173,000	174,400	175,500	176,600	183,034
Turbine Engine	21,700	26,500	31,600	37,100	43,300	44,878
Rotorcraft	11,300	13,600	15,200	17,000	19,000	19,692
Experimental/Other	40,100	48,300	53,700	58,700	64,500	66,850

Source: FAA Long-Range Aerospace Forecasts Fiscal Years 2020, 2025 and 2030 (2033 Extrapolated)

A second approach to developing an independent projection was used that applied national growth rates for total aircraft to the 26 based aircraft at X06. The *FAA Long-Range Aerospace Forecasts Fiscal Years 2020, 2025 and 2030*, projects an average annual growth rate of 1.4 percent until 2020 and a rate of 1.2 percent thereafter. The FAA's Long Range Forecasts ended at Fiscal Year 2030. Therefore, for use in this Master Plan Update, the 1.2 percent growth rate was projected out to Fiscal Year 2033.

- 2018 28 based aircraft
- 2023 31 based aircraft
- 2033 36 based aircraft (Extrapolated)

Comparison of these projections shows a difference of 7 based aircraft for the 2033 horizon year. The national market share projection shows a conservative increase in growth of 3 based aircraft over the entire planning horizon. The national growth rate projection was considered slightly more aggressive with an increase of 8 based aircraft over the entire planning horizon. The 1994 Airport Master Plan identified 38 based aircraft in the base year (1993). It is a realistic assumption that based aircraft could reach the 2033 projection associated with the national growth rate. Table 3.3 compares the projections for the market share and the national growth rate.

Table 3.3: National Growth Rate vs Market Share

Planning Year	National Growth Rate	Market Share	Difference
2018	28 Based Aircraft	26 Based Aircraft	2 (3.8%)
2023	31 Based Aircraft	27 Based Aircraft	4 (14.8%)
2033	36 Based Aircraft	29 Based Aircraft	7 (24.1%)
Growth	28.6%	11.5%	

For the purposes of this master plan update, the national growth rate was selected as the based aircraft forecast.

- 2018 28 based aircraft
- 2023 31 based aircraft
- 2033 36 based aircraft

Judgment in the selection of a preferred forecast should also include consideration of alternative forecasts. Two were considered in this study. The FAA's *Terminal Area Forecast* has already been referenced as a source of historical data and the limitations of that database have been noted. In the consultant's view, the TAF's forecasts for facilities such as X06 are very limited. For non-FAA facilities, which rely solely on Form 5010 data for general aviation activity levels, operations levels are held constant unless otherwise specified by a local or regional FAA official. The TAF projects based aircraft at X06, and most other general aviation airports, to remain constant through 2040. For X06, the relevant projections, by year, are:

- 2018 31 based aircraft
- 2023 31 based aircraft
- 2033 31 based aircraft

The TAF was not considered applicable to X06 due to lack of projected growth. The *FAA Aerospace Forecasts Fiscal Years 2013 – 2033* and *FAA Long-Range Aerospace Forecasts Fiscal Years 2020, 2025 and 2030* predict overall growth in the population of general aviation aircraft throughout their forecast periods. It is reasonable to conclude that X06 will share in that projected growth.

A second independent forecast from the website of the Florida Department of Transportation (FDOT) Aviation Office, forecasts based aircraft at X06 as follows:

- 2018 33 based aircraft
- 2023 34 based aircraft
- 2033 36 based aircraft (extrapolated)

Comparison of these results with those for the recommended forecasts shows no a difference in based aircraft for 2033. The FDOT forecast was projected to 2032. Therefore, for the purpose of this Master Plan Update, the forecast for 2033 was extrapolated by projecting the 0.65% growth rate into 2033. The near equality of these two forecasts suggests that the recommended based aircraft projection presented herein should be considered reasonable. Table 3.4 provides a comparison of four forecast options. Examination of the table indicates there are not drastic differences between the forecasting methods.

Table 3.4: Comparison of Forecasts for Based Aircraft

Forecast Years	Forecast Model			
	Market Share	National Growth Rate	TAF	FDOT
2018	26	28	31	31
2023	27	31	31	34
2033	29	36	31	36

3.2.2 Annual Operations

Forecasts of annual operations were also prepared for this study. (An operation is a take-off or a landing. Touch-and-go activity that simulates take-offs and landings constitute two operations for each touch-and-go cycle.)

As was the case with based aircraft, statistical techniques such as regression and trend analysis were not appropriate for this study because of database limitations. The TAF, for example, presents estimates of annual operations of 19,370 that remain constant from historical year 1990 to the estimate through 2040. For 2013, airport staff estimates roughly 36 operations per day.

An alternative method frequently used in preparing airport master plan forecasts is to develop a ratio of aircraft operations to based aircraft (OPBA) using historical data. This OPBA is then applied to forecasts of based aircraft to develop estimates of future annual operations.

The aircraft operations database provided by the TAF is presented in Table 3.5. These data were used to calculate the OPBA ratios also shown in the table. Based upon these data and calculations, the OPBA ratio can be seen to have increased 19.3% during the period for which estimates are presented.

Table 3.5: TAF General Aviation Operations Data

Year	Based Aircraft	Annual General Aviation Operations	OPBA
2000	37	19,370	524
2001	31	19,370	625
2002	31	19,370	625
2003	31	19,370	625
2004	31	19,370	625
2005	31	19,370	625
2006	31	19,370	625
2007	31	19,370	625
2008	31	19,370	625
2009	31	19,370	625
2010	28	19,370	692
2011	28	19,370	692
2012	31	19,370	625
2013	31	19,370	625

Context for these OPBA ratios was developed by examining other forecasts for the airport. As noted earlier, the website of the Florida Department of Transportation (FDOT) Aviation Office includes forecasts for activity at X06. Using those results, OPBA ratios were calculated. The results for these two sources are shown below:

- FDOT's OPBA ratios by year: 2018 – 591 operations per based aircraft; 2023 – 612 operations per based aircraft; and 2033 – 616 operations per based aircraft.

Within this context, the consultant concluded that the OPBA ratios used by FDOT would be adapted for use in this master plan. Table 3.6 presents the resulting forecasts of annual operations at X06.

Table 3.6: FDOT General Aviation Operations Data

	Year	Based Aircraft	OPBA	Annual Operations
<i>Historical</i>	2000	28	692	19,370
	2001	31	625	19,370
	2002	31	625	19,370
	2003	31	625	19,370
	2004	31	625	19,370
	2005	31	625	19,370
	2006	31	625	19,370
	2007	31	625	19,370
	2008	31	625	19,370
	2009	31	625	19,370
	2010	31	625	19,370
	2011	31	625	19,370
	2012	31	625	19,370
<i>Actual</i>	2013	31	629	19,496
	2013	26	508	13,196
Adjusted Forecast Based on FDOT OPBA				
<i>Forecast</i>	2018	28	591	16,548
	2023	31	612	18,972
	2033	36	616	22,176

Comparison of FDOT, TAF and OPBA are compared in Table 3.7. Relative to the FDOT forecasts, the revised master plan forecasts are 21.7% lower in 2018; 9.6% lower in 2023; and 0.1% lower in 2033. The TAF, by contrast, assumes that operations will remain constant (at 19,370 annually) throughout the period to 2040. For reasons previously discussed, the consultant does not consider the TAF's projections appropriate to an airport such as X06. The results in Table 3.6 are recommended for adoption as the forecasts of annual general aviation operations to be used in subsequent portions of this airport master plan.

Table 3.7: Comparison of TAF, FDOT, & OPBA Operations Forecast

Forecast Years	TAF Forecast Operations	FDOT Forecast Operations	OPBA Forecast Operations
2018	19,370	20,138	16,548
2023	19,370	20,801	18,972
2033	19,370	22,193*	22,176

*Forecast extrapolated

FAA data identifies 30 air taxi operations annually. No separate consideration was given to these operations as they are conducted by general aviation aircraft and handled by the FBO. FAA data identifies 40 military operations annually. Military operations also were not considered separately as they are typically conducted by medivac helicopters and the occasional T28 Trojan.

3.2.3 Local and Itinerant General Aviation Operations

A local operation is a take-off or a landing performed by an aircraft that will operate within the local traffic pattern, within sight of the airfield, or an operation which simulates a takeoff/landing cycle. Itinerant operations are all other arrivals and departures.

The TAF database's estimates show that 65% of operations at X06 are local and 35% are itinerant throughout the planning horizon. The splits between itinerant and local general aviation operations used in this study are as follows:

- 2018: 35% itinerant/65% local
- 2023: 35% itinerant/65% local
- 2033: 35% itinerant/65% local

Application of these percentages to the forecasts of general aviation operations recommended above produced the forecasts of local and itinerant operations shown in Table 2.8.

Table 3.8: Forecast of Local/Itinerant Operations

Year	Annual Operations		
	Total	Local	Itinerant
2018	16,548	10,756	5,792
2023	18,972	12,332	6,640
2033	22,176	14,414	7,762

3.2.4 Design Hour Operations

Design hour operations were also forecast as a function of total annual operations. The methodology used involved three steps. In Step 1, average day operations were calculated by dividing total annual operations by 365. In Step 2, design day operations were calculated by multiplying average day operations by 1.9. Step 3 involved an assumption that a typical design hour constituted a fixed percentage (15 percent) of design day operations; accordingly, design hour operations equaled .15 times design day operations. The projections are also presented in Table 3.9.

Table 3.9: Forecast of Design Hour Operations

Year	Operations			
	Annual	Average Day	Design Day	Design Hour
2018	16,548	45	86	13
2023	18,972	52	99	15
2033	22,176	61	115	17

3.2.5 Annual Instrument Approaches (AIAs)

Arcadia Municipal did not have published instrument approach procedures at the time of this Master Plan Update. Therefore there are no records of IFR operations for X06.

The ATADS database showed 3,214 general aviation instrument operations were performed in 2013 at Punta Gorda Airport (PGD) with a total of 55,781 general aviation operations. From this information, general aviation AIAs were calculated as 6% of total annual operations. Because X06 has a lower level of training activity, it was concluded that AIAs by general aviation aircraft would be a lower percentage of annual operations than those at PGD. Accordingly, AIAs were forecast by applying a factor of 4% to the forecasts of annual operations producing the following forecasts of AIAs at Arcadia Municipal Airport:

- 2018 662 AIAs
- 2023 759 AIAs
- 2033 887 AIAs

3.2.6 Aircraft Mix

Aircraft mix refers to the types of aircraft using the airport. For initial forecasting purposes, the categories considered were those reported by airport staff. Those categories and the number of based aircraft reported for each are as follows:

- Single-engine 18

- Multi-engine 4
- Jet 0
- Ultra-light 4
- Rotor 0
- Total 26

Based single-engine aircraft include the Cessna (140/150/172/182), Piper (Sport/Arrow/Cherokee/Colt), Mooney, and Cheetah. Based multi-engine aircraft include the Piper Seneca and the Gruman Widegeon. The FAA Long Range projected growth for 2013 through 2033, by FAA forecasting category, are as follows:

- Piston-engine 4%
- Rotorcraft 51%
- Turbine-engine 83%
- Experimental/other 45%

Consideration of this information as well as historical data for X06 suggests that based aircraft will continue to be dominated by the single-engine piston aircraft category. These observations and assumptions are reflected in the results presented in Table 3.10.

Table 3.10: Based Aircraft Mix

Aircraft Category	Based Aircraft by Year			
	2013	2018	2023	2033
Single-engine	18	19	21	25
Multi-engine	4	5	5	6
Jet	0	0	0	0
Helicopter	0	0	0	0
Experimenta/Other	4	4	5	5
Total	26	28	31	36

3.2.7 Design Aircraft

Aircraft mix refers to the types of airplanes that use, and will use, the airport. Mix is considered in requirements for runway length, strength, and width among other design parameters. Mix also reflects three primary aircraft characteristics with respect to airfield design weight, approach speed, and wingspan. Review and consideration of these factors produces planning inputs including the design aircraft for the airport as well as the mix of based aircraft and the overall operational fleet mix. The “design” aircraft may be a single aircraft or a composite of several different aircraft composed of the most demanding characteristics of each. FAA

Advisory Circular (AC) 150/5300-13A, Change 1, *Airport Design*, suggests two categories of aircraft weight. Aircraft weighing 12,500 pounds or less are classified as small aircraft, and aircraft weighing more than 12,500 pounds are classified as large aircraft. The AC lists five Aircraft Categories with respect to approach speed:

Category A: with speeds of less than 91 knots

Category B: with speeds of 91 knots or more but less than 121 knots

Category C: with speeds of 121 knots or more but less than 141 knots

Category D: with speeds of 141 knots or more but less than 166 knots

Category E: with speeds of 166 knots or more

The FAA's classification system divides aircraft into six Airplane Design Groups according to wingspans:

Group I: with wingspans of up to but not including 49 feet

Group II: with wingspans of up to but not including 79 feet

Group III: with wingspans of up to but not including 118 feet

Group IV: with wingspans of up to but not including 171 feet

Group V: with wingspans of up to but not including 197 feet

Group VI: with wingspans of up to but not including 262 feet

Based single-engine aircraft include the Cessna (140/150/172/182), Piper (Sport/Arrow/Cherokee/Colt), Mooney, and Cheetah. Based multi-engine aircraft include the Piper Seneca and the Grumman Widegeon. Airport staff indicated a Cessna Citation operates at the airport weekly from October through the end of April. Applying these criteria to aircraft at X06 shows that most based airplanes are small aircraft in Approach Categories A and B and Design Group I. Identification of the design aircraft at most general aviation airports is accomplished by considering itinerant aircraft. The Citation Jet was estimated to have performed 56 operations between October 2012 and the end of April 2013 (8 operations per month). The Citation is Category B and Design Group I/II. From this information it was concluded that the Design Aircraft for X06 would be a B-I (small).

3.2.8 Forecast of Pilots and Passengers

The number of persons using an airport during design hour conditions is a major consideration in defining future needs for terminal and auto parking space. Data presented in past FAA studies indicate the applicability of a ratio of two persons (one pilot and one passenger) per general aviation design hour operation. This ratio and forecasts of activity for Arcadia Municipal Airport were used to produce the projections of design hour pilots and passengers presented below:

- 2018 26 persons
- 2023 30 persons
- 2033 34 persons

3.3 Summary

Preceding sections have presented the forecasts of aviation demand at X06 and have described the historical data and methods used to produce the estimates of activity. Table 3.11 summarizes major elements of the recommended forecasts.

Table 3.11: Summary of Major Forecast Elements

Forecast Element	Forecast by Horizon Year				
	2013 FAA Estimate	2013 Airport Estimate	2018	2023	2033
Based Aircraft					
Single-engine	0	18	19	21	25
Multi-engine	0	4	5	5	6
Jet	0	0	0	0	0
Helicopter	0	0	0	0	0
Experimntnal/Other	3	4	4	5	5
Total	3	26	28	31	36
Annual Operations					
Local	12,500	8,577	10,756	12,332	14,414
Itinerant	6,870	4,619	5,792	6,640	7,762
Total	19,370	13,196	16,548	18,972	22,176
Design Hour Operations	N/A	N/A	13	15	17
Design Aircraft		B-I Small	B-I Small	B-I Small	B-I Small

CHAPTER 4: CAPACITY ANALYSIS AND FACILITY REQUIREMENTS

Preceding sections described existing airport facilities and presented the forecasts of activity anticipated at X06. Using the forecasts and airports physical and operational characteristics permits the evaluation of the airports capacity and determination of the facilities needed to serve local air transportation needs.

4.1 Capacity Analysis

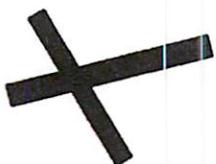
Three areas of capacity are addressed in the sections below: ability to process aircraft operations; adequacy of runway length and width; and wind coverage provided by the existing runway configuration.

4.1.1 Airfield Operational Capacity

FAA Advisory Circular 150/5060-5 Change 2, *Airport Capacity and Delay*, provides guidance and recommendations for completing a capacity analysis. Airfield capacity is a reasonable estimate of the maximum number of aircraft operations that the airport can accommodate in an hour. A number of factors can influence airfield capacity including, runway configuration, aircraft fleet mix, and weather conditions.

Airfield capacity can be defined by an airport's Annual Service Volume (ASV). The ASV is the number of annual operations capacity. For planning purposes, an airports ASV can be estimated by the runway configuration and the mix index, which accounts for the level of operations by large (Class C) and heavy (Class D) aircraft. The mix index formula is $\%(C+3D)$. Because the fleet mix at X06 contains only Class A and B aircraft, the mix index is 0%. Table 4.1 below shows the Annual Service Volume based on the intersecting runway configuration at X06.

Table 4.1: Annual Service Volume Based on Runway Configuration

FAA Runway Configuration	Mix Index%	Hourly Capacity (Operations/Hour)		Annual Service Volume (Operations/Year)
		VFR	IFR	
	0-20	98	59	230,000
	21-50	77	57	200,000
	51-80	77	56	215,000
	81-120	76	59	225,000
	121-180	72	60	265,000

Source: FAA AC 150/5060-5 Change 2

With a 0% mix index the ASV is 230,000; the VFR capacity is 98; and the IFR capacity is 59. FAA guidelines suggest that planning for additional capacity should be initiated at the below designated threshold levels of ASV:

- 60% of ASV: Planning for capacity improvements should begin
- 80% of ASV: Construction of improvements should be complete

The FAA forecast presented in Working Paper No. 1 indicates that the ASV will not be exceeded during the planning period with operations increasing to 22,176 by 2033. Hourly Capacity under VFR and IFR conditions is not forecasted to be exceeded by 2033. Therefore, additional airfield capacity is not needed within the planning period.

4.1.2 Runway Length and Width Requirements

Adequacy of the existing runway length was reviewed using information from the inventory of existing facilities and the forecasts of aviation demand. The former shows an existing primary runway (6-24) length of 3,700 feet. The forecasts suggest the need to consider a B-I small airplane as the Design Aircraft. Typical of these are the Piper Seneca, Beechcraft KingAir 100, Beechcraft Baron, Piper Navajo, and Piper Cheyenne.

Primary runway length requirements were determined based on the recommendations provided in FAA Advisory Circular 150/5325-4B, *Runway Length Requirements for Airport Design*. Applicable data used for X06 are runway elevation = 63' MSL and normal mean daily maximum temperature of the hottest month of the year = 92.2° Fahrenheit. Using this data and Figure 2-1 in the above referenced Advisory Circular, the runway length requirements were determined as shown in Table 4.2. The Design Aircraft for X06 is a B-I small airplane. As shown in the table below, serving 95 percent of small airplanes (12,500 pounds or less) requires 3,110 feet of runway while a runway length requirement of 3,690 feet is indicated for serving 100 percent of small airplanes with less than 10 passenger seats. For the purpose of this study the small aircraft runway standard of 3,690 feet was considered an appropriate option. Consistent with FAA's long-time practice, this length was rounded up to 3,700 feet.

Table 4.2: Runway Lengths Recommended for Airport Design

	Recommended Length
Small airplanes with approach speeds of less than 30 knots	302 feet
Small airplanes with approach speeds of less than 50 knots	805 feet
Small airplanes with less than 10 passenger seats	
95 percent of these small airplanes	3,110 feet
100 percent of these small airplanes	3,690 feet

Source: FAA AC 150/5325-4B

On the basis of this information, the existing primary runway length of 3,700 feet is sufficient; however. The impacts of the change in approach surface slope will be examined in the alternatives chapter. A Cessna Citation 560 operates twice a week from October through April for business purposes. The corporate jet is owned by Becker Trading Company, which is a produce grower, whose citrus manufacturing facility is located in Arcadia. Citrus is one of the biggest industries in Arcadia and it is reasonable to assume that in providing a longer runway this operator would increase flights to X06. At the existing length this aircraft can only operate at X06 by reducing the aircrafts take-off weight which affects the range of the aircraft.

In order for Runway 6-24 to be extended, the land just off runway end 24 would need to be acquired. Access from Highway 31 can be provided and the land not utilized for the runway extension can be designated as aeronautical use if it has airfield access or designated as non-aeronautical use if it does not have airfield access. The alternatives analysis will examine the runway extension and additional uses for the acquired land. Part 77 surfaces will also be examined.

With respect to Runway 13-31 at X06, FAA has long used a general guideline that a crosswind runway be at least 80 percent of the length of the primary runway. Given a primary runway length requirement of 3,700 feet; Runway 13-31 falls 180 feet short of the crosswind runway requirement. This is considered acceptable since the majority of traffic utilizes the primary runway. An extension to Runway 13-31 would be costly due to obstructions and access roads which are currently being cleared with the use of displaced thresholds on both runway ends. Further consideration on the runway extension and the possibility of paving Runway 13-31 will be analyzed as part of the alternatives chapter.

In regards to runway width, the FAA's standard for B-I small airplanes is 60 feet for runways with visual approaches, and instrument approach procedures with minimums not lower than $\frac{3}{4}$ statute mile. The present runway width is 75 feet for 6-24. Runway 13-31 is 140 feet wide. All runways exceed the recommended width.

4.1.3 Wind Coverage

FAA guidelines suggest that a runway or runway system should provide coverage for 95% of crosswinds. The weather station located in the City of Arcadia does not collect wind data. In the absence of data within the City of Arcadia, data from the Punta Gorda Airport weather equipment was utilized to determine wind coverage at X06. Examination of the all-weather wind rose in Figure 4.1 and the information in Table 4.3 shows that the existing runway system provides approximately 98.65% coverage for crosswind components of 10.5 knots or less. Runways 6-24 and 13-31 individually do not provide the recommended 95% coverage for crosswind components of 10.5 knots.

As shown in Figure 4.2 and Table 4.4, combined wind coverage is 98.19% under IFR conditions; however, none of the runways individually meets the 95% threshold at 10.5 knots or less. It is recommended that the existing intersecting runway configuration be maintained.

Figure 4.2: IFR Wind Rose

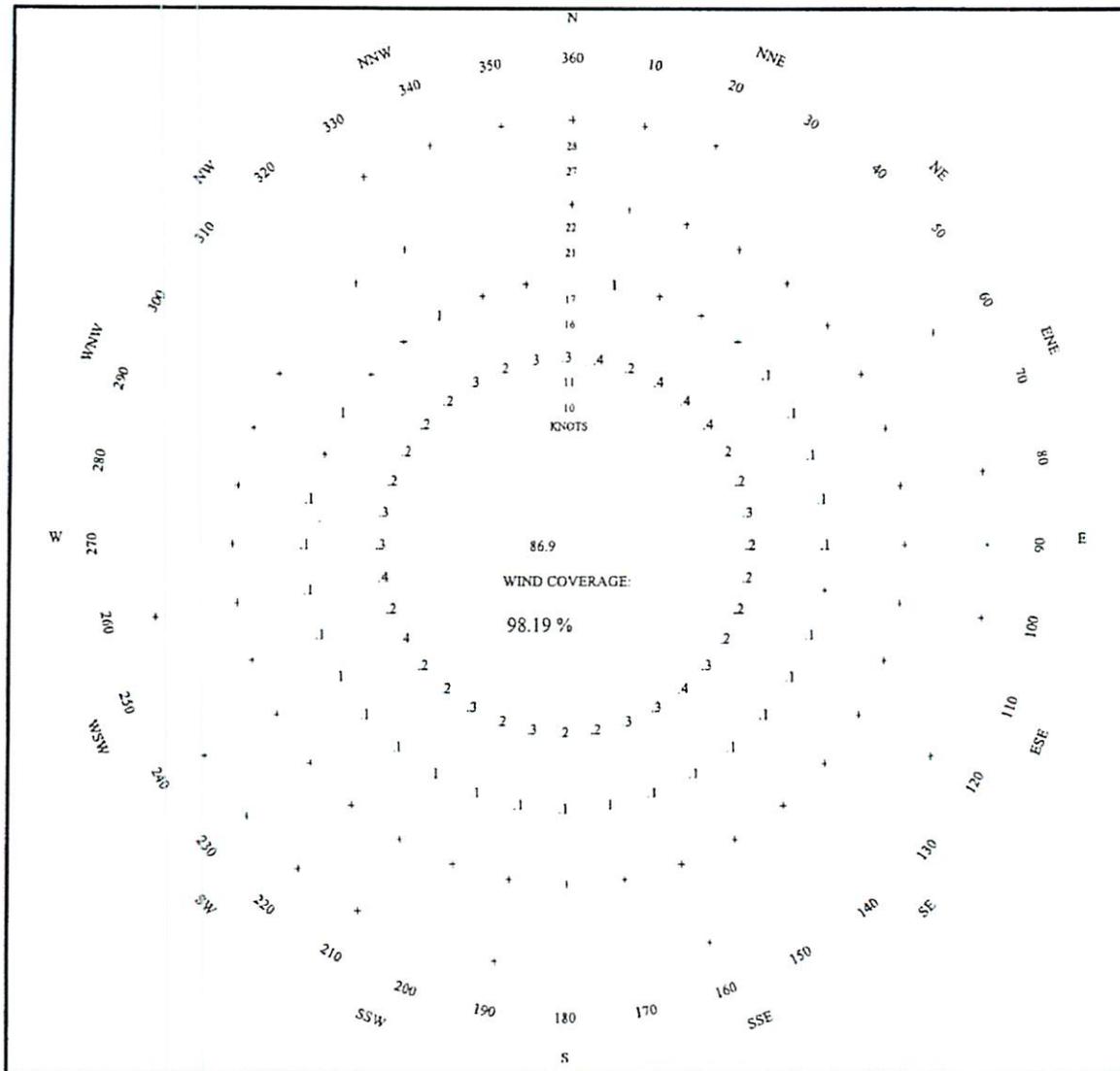


Table 4.4: IFR Wind Coverage (Percent)

Runway	Wind Velocities	
	10.5 Knots	13 Knots
6-24	93.92	96.28
13-31	93.29	95.88
Combined	98.19	99.23

Source: Punta Gorda Airport Weather Station; Period 2004-2013

4.2 Airside Facility Requirements

For the purposes of this report, the airside facilities of an airport are the runway configuration, its associated taxiway system, and any visual or electronic navigational/landing aids. Future needs for these facilities were determined based upon forecasts of aviation demand, in particular, projected levels of aircraft operational activity and aircraft fleet mix. Guidelines and planning standards from FAA AC 150/5300/13A Change 1, *Airport Design* were used.

4.2.1 Airfield Design Guidelines and Standards

The FAA has developed guidelines for airport geometry. These include specifications for Obstacle Free Zones (OFZ), Runway and Taxiway/Taxilane Object Free Areas (ROFA/TOFA), Runway and Taxiway Safety Areas (RSA/TSA), Runway Protection Zones (RPZ), aircraft holdline dimensions, and FAR Part 77 Surfaces. Applications of these guidelines for B-I Small Design Aircraft are shown in Table 4.5. Specific design dimensions applicable to airfield alternatives will be discussed in the next chapter.

Table 4.5: Alternative Airfield Design Standards

Design Standard/Surface Runway 6-24	Design Standard for Approaches with visual & not lower than 1 mile visibility minimums, Approach Category B, Design Group I Small Airplanes
Runway Width	60 feet
Runway Object Free Area	250 feet wide, longitudinally centered about the runway centerline, and extending 240 feet beyond each runway end
Runway Safety Area	120 feet wide, centered longitudinally on runway centerline, extending 240 feet beyond each runway end
Runway Protection Zones	Begins 200 feet beyond each runway end, with an inner width of 250 feet, an outer width of 450 feet, and a length of 1,000 feet
Holding Position Markings	125-foot separation from runway centerline to intersecting runway/taxiway centerline
Runway to Parallel Taxiway	Minimum 150-foot separation, taxiway to runway centerline
Runway to Aircraft Parking	Minimum 125-foot separation, runway centerline to parking
Taxiway Safety Area	49 feet wide
Taxiway Width	40 feet wide
Taxiway Object Free Area	89 feet wide
Taxilane Object Free Area	79 feet wide
FAR Part 77 Primary Surface	500 feet wide, longitudinally centered on runway centerline, extending 200 feet beyond each runway end

Source: FAA AC 150/5300-13A, Change 1

4.2.2 Runway Grades and Line-of-sight

The maximum longitudinal runway grade and allowable grade change for a paved runway is ± 2.0 percent for airplanes in Approach Categories B. It is recommended that longitudinal

grades be kept to a minimum. The FAA recommends turf runways be graded to provide at least a 2.0 percent slope away from the center of the runway for a minimum distance of 40 feet on either side of the centerline of the landing strip and a 5.0 percent slope from that point to the edge of the RSA to provide rapid drainage.

In the presence of a full parallel taxiway, gradient changes shall be such that any point 5 feet above the runway centerline shall be mutually visible with any other point 5 feet above the runway centerline that is located at a distance less than one half the length of the runway. X06 meets the runway grade requirements for Runway 6-24. During the survey process, Runway 13-31 centerline slope gradient will be evaluated.

For airports with intersecting runways, the FAA recommends a clear line-of-sight between the ends of runways. The determination of the runway visibility zone (RVZ) for airports with intersecting runways reflects the distance of runway ends from the point of intersection of the centerlines of the runways. For conditions at X06, the visibility point on each runway segment is determined as follows:



Runway 24 Marking

- The end of the runway if runway end is less than 750 feet from the runway intersection.
- 750 feet from the runway intersection if the end of the runway is less than 1,500 feet from the runway intersection.
- Half the distance from the intersecting runway, if the end of the runway is more than 1,500 feet from the runway intersection.

Connection of the visibility points with imaginary straight lines defines the runway visibility zones. Applying this guidance to X06 indicates there are no existing problems. The RVZ area will be depicted in the Airport Plans Package later in the study.

4.2.3 Taxiway System

The taxiway system consists of Taxiway A which is a 40 foot wide full parallel for Runway 6/24. Taxiway A has connectors to the apron and t-hangar complex. The connector to the apron is 40 feet wide and the connector to the t-hangar complex is 25 feet wide. There is a taxiway that connects the apron to the t-hangar complex which measures 25 feet wide. The existing taxiway configuration for both runways meets the 150-foot centerline-to-centerline separation requirement. It is recommended that Taxiway B be constructed to provide access to development on the northwest side of the facility via Taxiway A.

The alternatives chapter will provide further potential locations and configurations for the proposed new taxiway. It is also recommended that planning for rehabilitation of the pavement

adjacent to both t-hangar buildings begin immediately. This pavement was identified as very poor in the May 2011 Statewide Airfield Pavement Management Report.

4.2.4 Airfield Lighting

Runway 6-24 has quartz Medium Intensity Runway Lights (MIRLs) and the taxiway is equipped with LED Medium Intensity Taxiway Lights (MITLs). The Runway 6 end is equipped with a two-light Precision Approach Path Indicator (PAPI). Runway 6-24 and Taxiway A lighting was replaced in early 2014 as part of the installation of the new electrical vault. Runway 13-31 is not equipped with runway lights. A lighted windsock is located on the northeast side of the intersection of Runways 6-24 and 13-31. MITLs should be included in any construction of the taxiway A extension improvements and MIRLs should be included in the recommended construction of the Runway 6-24 extension.

4.2.5 Airfield Marking and Signage

Runway 6-24 is equipped with non-precision markings including runway centerline, threshold markings, runway designation markings, and aiming points. The turf runway, 13-31, does not have markings. Taxiway A is equipped with centerline and hold line markings. Runway 6-24 and Taxiway A markings were improved in early 2014 as part of the pavement rejuvenation project which also included the apron pavement.

The airfield at X06 is equipped with signage typical of an airport of its type. All signage was installed in early 2014 as part of an airfield lighting improvement project that included the installation of a new electrical vault, lighted windcone and runway and taxiway lights. As runway and taxiway improvements are completed, the locations of existing and new/replacement signs should be reviewed and installations made that conform to FAA guidelines. Plans for the appropriate marking and signage will be included with all runway and taxiway improvement projects.

4.2.6 Instrument Approach Capability

On May 29, 2014, two GPS instrument approach procedures for Runway 6-24 were published for X06. The minimums associated with those approach procedures are provided below in Table 4.6. These approaches are considered adequate for operations at X06.

Table 4.6: GPS Approach Minimums

Runway	Circling Ceiling	Visibility
06	420	1
24	420	1

Source: FAA National Flight Data Center (NFDC)

4.3 Landside Facility Requirements

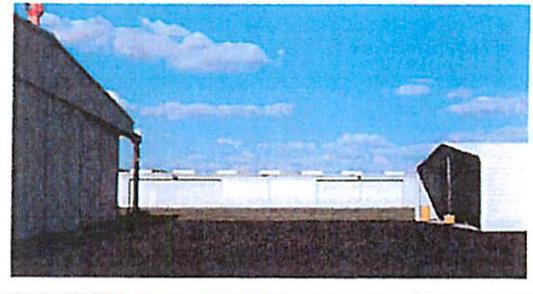
This section describes the guidelines and methodologies used to develop facility requirements for the landside areas of the airport. These were estimated using forecasts of aviation demand and FAA guidelines. The following categories were examined:

- T-Hangars and Conventional Hangars
- Aircraft Apron and Tie Downs
- Terminal Facility and FBO
- Auto Parking and Ground Access
- Fuel Storage

4.3.1 T-Hangars and Conventional Hangars

Several factors influence hangar requirements, e.g., the number of based aircraft, the physical characteristics of these aircraft, aircraft owner preferences, and the local climate. Currently the majority of X06's based aircraft are stored in T-hangars. Currently, the airport has 23 T-hangars and 2 conventional hangars.

The number of based aircraft at the airport is projected to increase from 26 to 36 during the 20-year planning period. It is estimated that 90% of based aircraft at X06 are stored either in a T-hangar (80%) or conventional hangar (10%). This percentage was applied to estimate the total number of hangar spaces. Continuation of these practices would indicate the need for the additional hangar units identified in Table 4.7. The proposed areas for additional hangars will be examined as part of the analysis of alternatives.



T-Hangar & Maintenance Building

Table 4.7: Hangar Requirements

Year	Forecast Based Aircraft	T-Hangars		Conventional Hangars	
		Existing Units	Units Required	Existing	Required
2013	26	23	NA	2	NA
2018	28		22		3
2023	31		25		3
2033	36		29		4
Total Additional Hangars			6		2

4.3.2 Aircraft Apron and Tie-Downs

X06 has 10 aircraft tie-down spaces on the ramp adjacent to the terminal building. This area is used for both based aircraft and itinerant aircraft. Based upon the forecast of itinerant operational activity, requirements can be formulated with the following five-step methodology:



Existing Apron

Step 1 produces estimated peak month itinerant operations by assuming them equal to 10 percent of

annual itinerant operations. Step 2 estimates average daily itinerant operations from the peak month, from Step 1, dividing it by 30. In Step 3, it is assumed that the busy itinerant day is 10 percent more active than the average day. Step 4 was modified from the FAA's approach. That methodology uses the final assumption that parking will be needed for 50 percent of the itinerant aircraft during the busiest day of the peak month. Finally, 360 square yards per aircraft is used space requirements. Table 4.8 depicts the cumulative results of this analysis.

Table 4.8: Estimates of Itinerant Ramp Requirements

Year	Itinerant Operations				Total Spaces Needed	Area (Sq. yds.)
	Annual	Peak Month	Average Daily	Busy Day		
2018	5,792	579	18	21	11	3,823
2023	6,640	664	22	24	12	4,382
2033	7,762	776	26	28	14	5,123

Note: Area totals are rounded.

It is estimated that 10% of based aircraft will occupy tie-down spaces. Based upon the forecasts of demand and the estimates of future aircraft stored in hangars, 10 tie-downs will be inadequate. Projected needs for aircraft tie-down spaces (parking apron) are outlined in Table 4.9. Options for additional tie-down and itinerant apron space will be provided in the alternatives analysis. The development of the new itinerant ramp will be located near the new terminal building site off the Runway 24 end.

Table 4.9: Tie-down Requirements

Year	Forecast Based Aircraft	Based Aircraft Demand	Itinerant Aircraft Demand	Total Tie-Down Demand	Additional Tie-Downs Required
2013 Existing Tie-downs = 10					
2018	28	3	11	14	4
2023	31	3	12	15	5
2033	36	4	14	18	8

4.3.3 Terminal Facility and FBO

A general aviation terminal facility provides space for management and operations offices, lounge areas, restrooms, and other areas for the needs of pilots and passengers. The existing terminal building is 1,200 square feet and is shared with the FBO. The FAA has formulated guidelines for calculating general aviation terminal requirements that utilize airport operational peaking characteristics. The method relates the number of peak hour pilots and passengers to the functional areas within the terminal. The product of the analysis is then an overall building size.

Local aircraft owners typically do not use general aviation terminal facilities as often as pilots/passengers associated with itinerant operations. For this reason, 80 percent of the

forecast pilot/passengers design hour was considered in calculating general aviation terminal facility requirements.

FAA guidelines suggest that a ratio of 49.0 square feet per peak hour pilot/passenger be used to calculate general aviation terminal building floor space requirements. Using this approach and 80 percent of the pilot/passenger design hour calculated in the forecast chapter, requirements for general aviation terminal building space were calculated by multiplying design hour operations by 1.8 to estimate passenger. These results were then multiplied by 49 square feet per pilot/passenger to estimate terminal building space requirements. The results were as follow:

- 2018: 1,835 square feet
- 2023: 2,117 square feet
- 2033: 2,399 square feet
(Numbers are rounded.)



Existing Terminal Building

The size of the terminal building is forecast to be inadequate by 2018. As can be seen in the photograph, the terminal/FBO building is an older structure. As it reaches the end of its

usefulness, consideration should be given to a new terminal building. It is recommended that the new terminal be located on the east side of the airfield with an access road from Highway 31. The location of the new terminal building, access road and utilities (water, sewer, electric) will be identified on the Airport Layout Plan provided in Chapter 6 of this document. The existing FBO building should be maintained as a facility for based operators or a potential future aviation related tenant.

4.3.4 Parking and Ground Access

Immediate access to the primary landside areas is provided by A.C. Polk Drive which ends at the terminal building. A.C. Polk is a two lane road which also provides access to a residential development to the north of the airport. X06 has no perimeter service road and no other access to the airfield. Construction of a new access road off Highway 31 will provide entrance to the planned new terminal building complex.

With regard to auto parking, provisions are typically made for 1.3 parking spaces per design hour operations. In the case of X06 it is assumed that owners/operators of based aircraft typically park their surface vehicles in or adjacent to the hangar when using their aircraft. The consultant's experience at general aviation airports such as X06 suggests that an alternative methodology is applicable, because owners/operators of based aircraft frequently park their surface vehicles in their hangars while their aircraft are in use. For the purposes of this study, the following methodology was used:

- Design hour for pilots and passengers assuming 50 percent of local pilots will park their surface vehicles in a parking lot.

- Total parking spaces for itinerant pilots and passengers were estimated by multiplying design hour pilots and passengers by 1.3.
- Total parking spaces required for itinerant pilots and passengers were calculated and increased by 10 percent to provide spaces for employee parking and local operators.

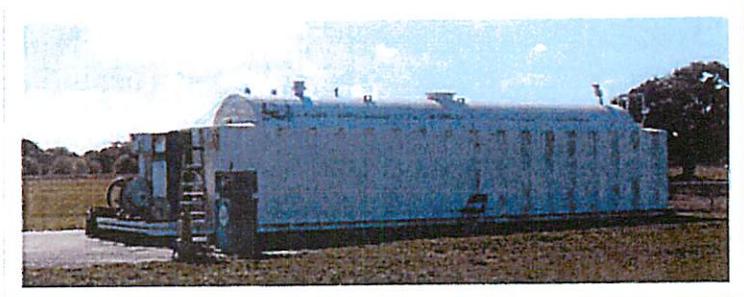
This methodology produced the following estimates of parking spaces required:

- 2018: 13 spaces
- 2023: 14 spaces
- 2033: 17 spaces

Currently there are 10 paved parking spaces adjacent to the terminal building. These numbers suggest that by 2018 the existing parking will not accommodate the increase in demand. It is recommended that new vehicle parking be constructed near the t-hangar complex, new terminal building and each new storage hangar. Locations for additional vehicle parking will be presented on the Airport Layout Plan.

4.3.5 Fuel Storage

Existing fuel storage is maintained by Air-cadia and consists of one above ground 12,000-gallon tank which stores 100LL Avgas. Currently self-serve fueling is not available because the pump is not equipped to accept credit cards. It is recommended that the pump be upgraded to self-serve with a credit card reader so operators, both local and transient, can purchase fuel at any time without contacting the FBO.



Above Ground Fuel Tank

Airport staff indicated 2013 annual fuel sales of 5,863 gallons of 100LL. Unadjusted for seasonal demand, the sales for 2013 would translate into an average of 489 gallons per month in the tank. As air traffic increases, fuel

sales will also increase. The addition of self-serve fueling will also increase sales as pilots will be more likely to refuel at X06 with a simplified transaction at the pump. It is projected that fuel sales will approach 9,700 gallons per year by 2033 or 808 gallons per month. The 12,000 gallon capacity fuel tank is expected to be adequate for the fuel storage requirements through the 2033 planning period.

In December 2014 World Fuel Services Inc. inspected the fuel tank and provided the City with recommended repairs. The repairs are estimated to cost \$33,600 and would include an internal cleaning of the tank; replace filter, drain box, pipes and vales; and install a new credit card reader. World Fuel recommended the City contact environmental / regulatory agencies such as EPA, NFPA and FAA for approval prior to completing any repairs on the fuel system. It should be noted that future construction and operation of all airport fuel facilities must comply with future airport rules and regulations, FAA guidance, applicable uniform building and fire

code standards, and any state or federal laws regarding fuel storage tank regulations. A new Jet A and 100LL fuel farm is recommended to be constructed with the new terminal building at the new site. This new fuel farm will not contain self-service fueling. All fueling at the new terminal building location will be truck delivery. The existing 100LL tank should be upgraded including a functioning card reader and remain in the current location to provide self-fuelling services for based aircraft owners and itinerant operators.

CHAPTER 5: IDENTIFICATION AND ANALYSIS OF ALTERNATIVES

The preceding portions of this report provided forecasts of aviation demand for X06. Subsequently, these forecasts were used, in conjunction with FAA guidelines and standards, to identify facility requirements for the airport. As with most projects, improvements can often be accomplished in various ways. The purpose of this evaluation of alternatives is to identify the plan that will best serve the area and its future aviation needs. This chapter describes the analysis of alternative development plans for the Arcadia Municipal Airport.

Information in preceding sections indicates the need for airport improvements to respond to existing and future demand. Runway and other airfield improvements have significant cost implications. Landside/hangar development, often a major local or private expenditure, must also be considered and integrated. This airport master plan will consider alternatives in these areas:

- Runway 6 extension
- New terminal complex (including access road, fuel farm, vehicle parking, apron space)
- New aircraft storage
- Apron expansion
- New Taxiway B

5.1 Identification of Alternatives

Six broad airfield and landside alternatives have been developed for future improvements to the Arcadia Municipal Airport. The following airfield and landside alternatives were formulated to address the facility requirements.

- **Alternative No. 1 – Maintain Existing Conditions.** Alternative No. 1 would retain the existing airfield configuration with no improvements. Runway lengths would remain at 2,829 feet for 13-31 and 3,700 feet for 6-24. The existing parallel taxiway configurations would also be retained.
- **Alternative No. 2 – *Extension of the Runway 6 end only.*** This alternative would allow the full 600 feet of pavement to be extended to the southwest. The existing RPZ already encompasses Airport Road and an adjacent vacant lot. This alternative would shift the existing RPZ farther into the vacant lot which is currently impacted. The property to the west of Airport Road will be acquired to relocate Airport Road and residential land acquisition and relocation will be required for the homes to the south of Runway 6. The residential properties will be purchased to allow for the development of the new access to SE Airport Estates Road. This alternative is depicted in **Figure 5.1**.

Extension Justification: European Rally School is a new business which will be locating in Desoto County, Florida on 713 acres located approximately 4.5 miles south of Arcadia

Municipal Airport. The property on which the school will be located is owned by the State of Florida and an agreement for the purchase has been reached.

The business is owned by Ivor Wigham. Mr. Wigham owned the Go Rally driving school at Keystone Heights Airpark just south of Starke, Florida. The business will offer an ideal venue for advanced driver education, special and exclusive corporate events or team building experiences, media and hospitality functions or vehicle test sessions. The school attracts clients, including military, from around the world.

Mr. Wigham was interviewed about the proposed new facility which is currently in the process of obtaining permits and is expected to be fully operational by the end of 2015. Mr. Wigham indicated that up to 25 corporate jets, including regional jets, could reasonably be expected to use Arcadia Municipal on an annual basis. Numerous smaller aircraft will use the airport consistently. He further stated that during special events as many as three corporate jets a day would land at the airport. Military training frequently attracts aircraft as large as a C-130. Various models of helicopters can be expected weekly.

As a result of this business locating in DeSoto County, Arcadia Municipal Airport can expect a positive increase in traffic and that aircraft which use the airport for access to the school include the Citation X, Pilatus PC-12, and various models of the Learjet and King Air, as well as numerous smaller single and twin engine aircraft.

- **Alternative No. 3 – Runway 13-31 (Turf) Object Free Area Clearance.** At its current length of 2,829 feet, Runway 13-31 has portions of the fence lying within the runway object free area (ROFA). **Figure 5.2** depicts the turf runway at a reduced length of 2,295 feet. The reduction in the total length of Runway 13-31 will remove the portions of the fence that are currently impacting the ROFA. The full 2,829 feet will be restored upon the completion of a fence relocation project that would realign the fence line removing the impacted portions from the ROFA.
- **Alternative No. 4 – Construct New Conventional & T-Hangar Building.** This alternative identifies the proposed expansion of the existing apron to the east and includes the addition of a two new 10 stall t-hangar buildings to the east of the existing t-hangar complex. Several new conventional hangars will be constructed to the northwest, adjacent to existing hangar buildings. Taxiway B will be constructed to provide access to the existing and new the hangar development. Automobile parking is also being proposed near the T-hangar complex. The expansion of the existing apron will include a new taxiway connector to the t-hangar complex and the elimination of the existing ramp connector which leads directly from Runway 6/24. The appropriate lighting and signage will be installed during the construction of Taxiway B. The proposed locations for the apron expansion, the new terminal building apron, Taxiway B and the Hangar developments are illustrated in **Figure 1-3**.
- **Alternative No. 5 – Construct New Terminal/FBO Building.** This alternative identifies the proposed location for a new terminal/FBO building to the southeast of the Runway 24

end. The new building is estimated to be 2,400 square feet and will house the FBO, management and operations offices, lounge area, planning room and restrooms for pilots and passenger. An automobile parking lot will be constructed adjacent to the new terminal/FBO building for pilot, passenger and employee use. Construction of a new fuel farm, storage hangars and a new access road from US 31 are also included in this alternative. The existing terminal building is proposed to be maintained for storage or tenant use. Figure 5.4 shows the location of the developments proposed as Alternative 5.

Figure 5.1 Alternative 2, Runway 6 and Taxiway A Extension, Road Relocation

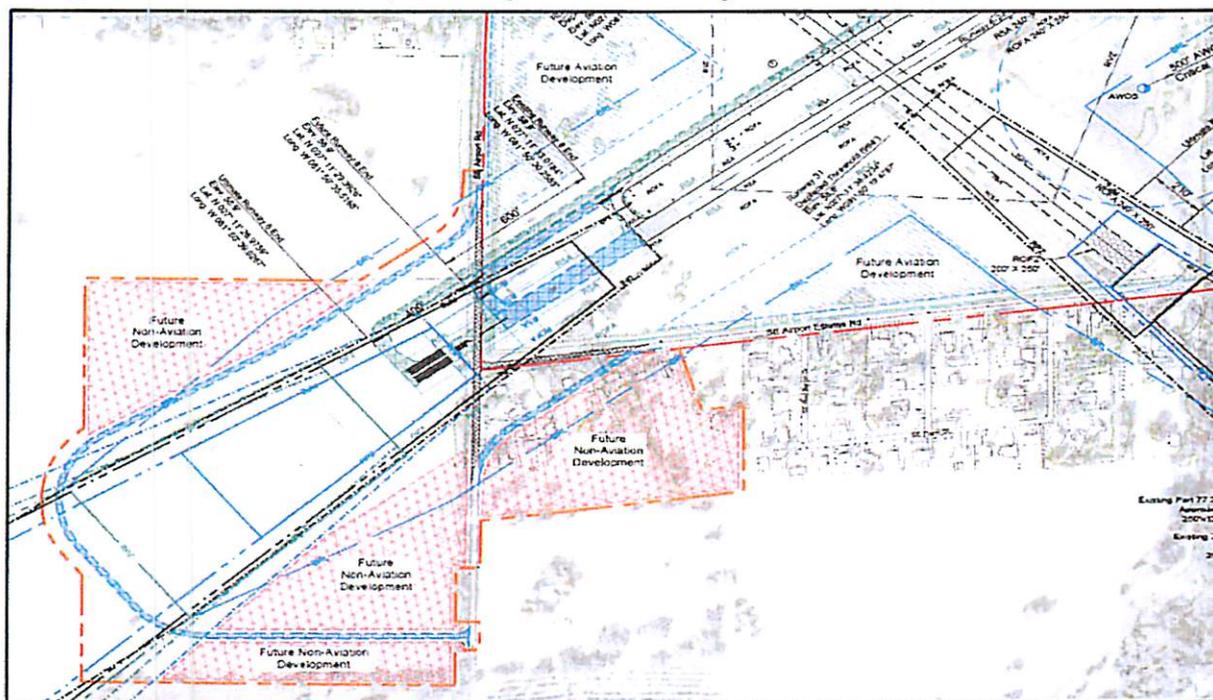


Figure 5.2 Alternative 3, Runway 13-31 ROFA

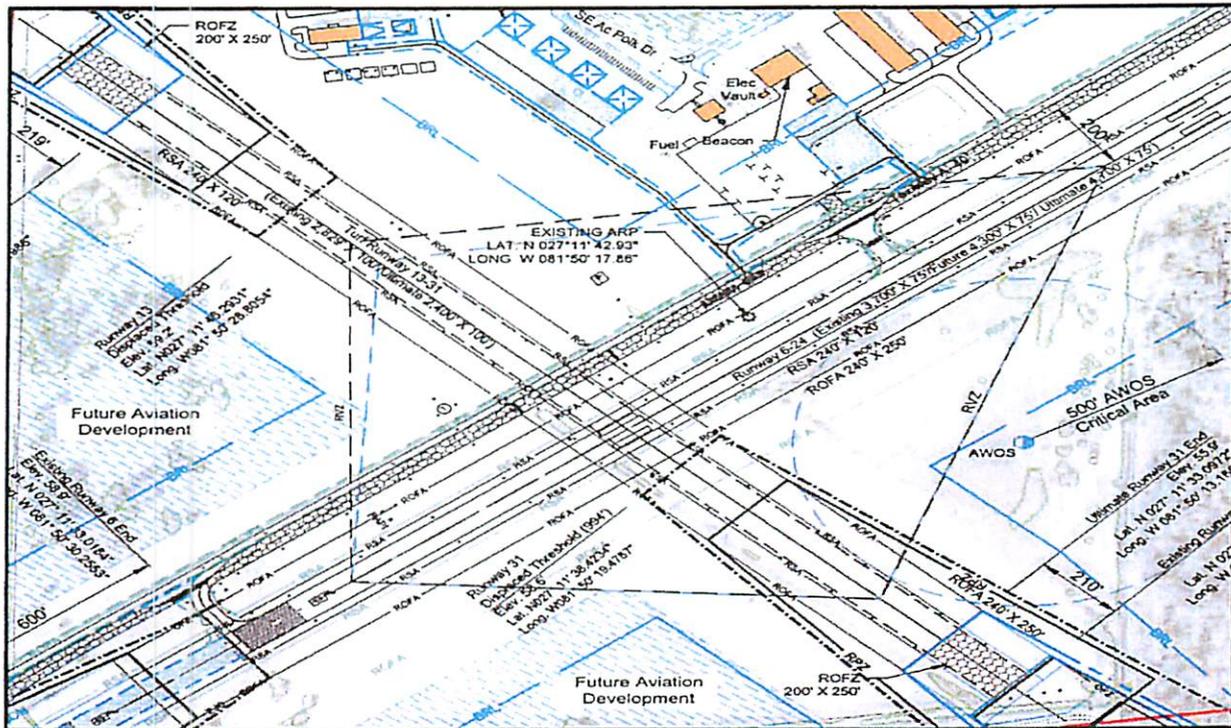


Figure 5.3 Alternative 4, New Hangar Storage, Taxiway B & Apron Expansion

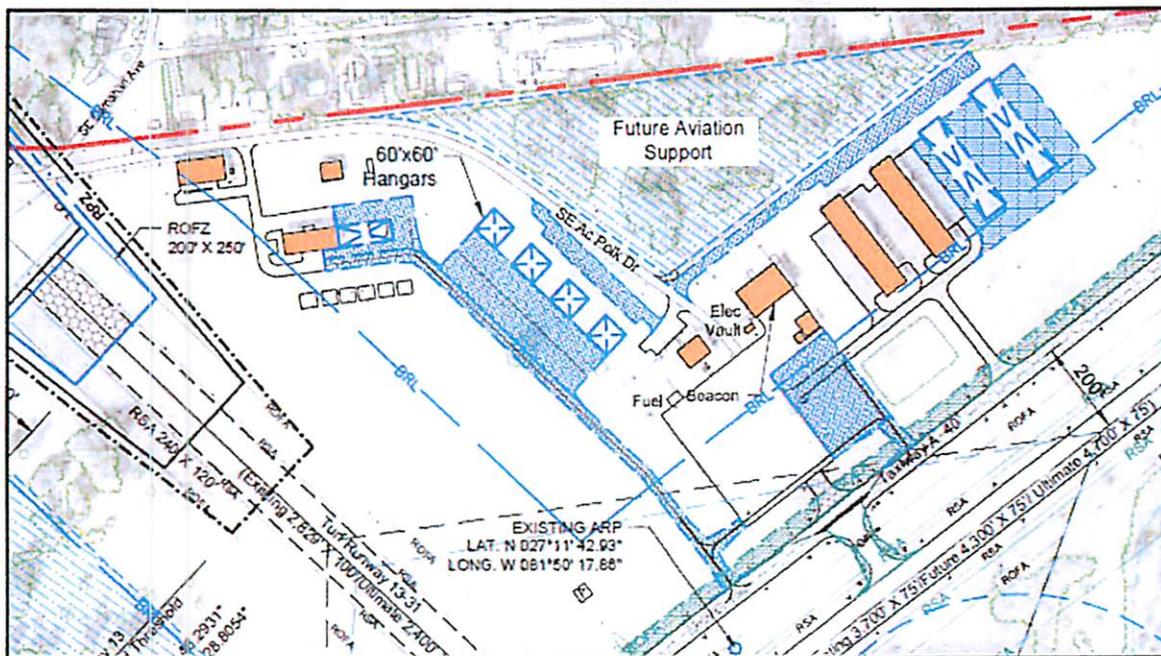
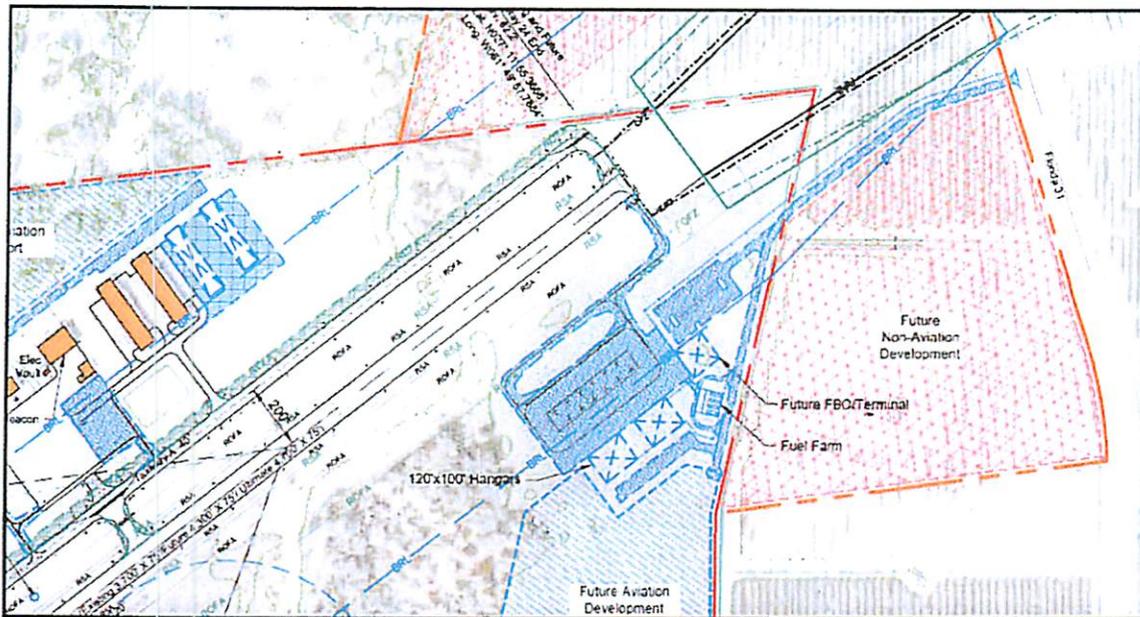


Figure 5.4. Alternative 5, New Terminal Building



5.2 Evaluation of Alternatives

Several criteria were used to determine the relative merits of the alternatives. These include:

- Safety
- Ability to serve future demand
- Aeronautical considerations
- Environmental effects
- Surface access considerations

It should be noted that the process of examining alternatives does not necessarily produce full acceptance of a single alternative to the exclusion of all facets of the others. The recommended alternative often will be a combination of features of two or more alternatives that during the evaluation are shown to address the standards explicit in the evaluation criteria.

5.2.1 Safety

Safety was evaluated in terms of the conformity with FAA guidelines and criteria for airport development. This included consideration of standards such as runway-taxiway separations, runway safety areas (RSAs), runway and taxiway object free areas (ROFAs and TOFAs), and runway protection zones (RPZs). While airfield capacity has an obvious relationship to safety, it was considered as part of the evaluation of the airport's ability to serve future demand.

X06s airfield currently has a few deviations from FAA's guidelines and standards that will require correcting. Examples include the following:

- Fencing within the Runway Object Free Area.
- Aircraft tie-downs and other aircraft parking within the Runway Visibility Zone.
- Lack of control or ownership interest in the Runway Protection Zones.

The airfield alternatives were analyzed for such nonconformities with guidelines and standards to reflect consideration of the safety criterion.

Alternative 1 – Maintain Existing Conditions would correct none of the existing conditions that deviate from FAA's guidelines and standards. This failure to address conditions that detract from safety is unacceptable as an alternative.

Alternative 2 would also include the construction of a 600 foot Runway 06 extension. The taxiway would also be extended to maintain the full parallel for Runway 6-24. The additional pavement would improve airfield capacity and contribute to the safe operation of business jet traffic such as the Citation X that utilizes the airport.

Alternatives 3 aim to correct the obstructions identified by FDOT during an annual inspection in the latter part of 2014. The Runway Object Free Area for Runway 13-31 was determined by the FDOT inspector to be impacted by portions of the existing fencing. Temporarily reducing the length of the turf runway would bring each runway end in far enough to remove the penetrating portions on the fence line. Ultimately it is recommended that the location of the portions of the fence impacted by the ROFA be relocated as part of another airport improvement project. Once the fence is relocated, the runway can be returned to the original 2,829 feet.

Alternative 4 would also include construction of new Taxiway B which would connect to Taxiway A providing airfield access from hangars located on the northwest portion of the airport. This new taxiway would contribute to the safety of operations by facilitating aircraft movement from hangars located in the northwest quadrant of the airport.

Existing and proposed facilities show no major modifications to FAA standards. The principal safety concern at X06 is the removal of tree obstructions impacting approaches to each runway ends.

5.2.2 Ability to Serve Future Demand

Discussions in Working Papers indicate that based aircraft and aircraft operations at X06 are forecast to grow steadily and that new/additional facilities will be required to accommodate this growth. This criterion includes consideration of each alternative's response to existing and anticipated levels of demand.

As noted in Working Paper No. 2, the Annual Service Volume for the present airfield configuration (Alternatives 1) is estimated as 230,000 operations. Forecasts of demand indicate that the airport is not expected to exceed 138,000 annual operations by 2033. This forecast constitutes approximately 60 percent of estimated Annual Service Volume; therefore, no problems with annual capacity are anticipated during the planning period. FAA does, however, recommend that planning for additional capacity be initiated when the 60 percent threshold is reached. Growth in activity at X06 should be monitored and the airfield capacity issue should be re-examined in future master plan updates.

Potential does exist for peak hour operations to exceed hourly capacity under VFR conditions during the planning period. This will be heavily dependent upon the amount of traffic attracted to the airport due to the extension of Runway 6-24 and the availability of a full service FBO. Using the forecasts provided in Working Paper No. 1, the 60 percent threshold would be exceeded during the planning period; therefore, the next master plan update should review growth in operations, especially peaking characteristics, and provide appropriate recommendations.

5.2.3 Aeronautical Considerations

This criterion included consideration of airspace effects associated with the various alternatives as well as issues related to obstructions identified using standards from Federal Aviation Regulations (FAR) Part 77 Objects Affecting Navigable Airspace. Regardless of the specific alternative, airspace conflicts with other airports are not currently of concern. It is anticipated that this condition will continue into the future; therefore, all alternatives were considered equal in terms of effects upon area airspace. All alternatives present problems with respect to obstructions. Implementation of any of the alternatives will require addressing the obstruction problems relative to FAR Part 77 surfaces.

5.2.4 Environmental Effects

The evaluation of alternatives also considered environmental effects that development would impose. Because landside development exists and is planned exclusively on airport properties, associated off-airport effects would be limited. Consequently, this part of the evaluation focused upon Alternatives No. 1, 2, and 3.

Among the factors considered in this comparative analysis were noise, compatibility with existing plans, land acquisition and relocation requirements, and impacts of surface drainage and wetlands and floodplains. Each of these subjects is considered below.

- **Aircraft Noise.** Examination of potential noise impacts related to aircraft activity was completed using the FAA's Integrated Noise Model. (Noise contours for the recommended plan are included in the final Airport Plan Set.)

The analysis showed that for both existing operations and those forecast for the 20-year planning horizon (Year 2033). The 65 Day-Night Level (DNL) contours for existing conditions pose no impact to residential land uses as discussed in Chapter 2, Environmental Review. The 65 DNL contour will impact an agricultural property on the 24 end and Airport Estates Road on the 906 end. Both areas are recommended for acquisition to accommodate the Runway 6 extension and the ownership of the RPZ's. The 2033 65 DNL noise contour will lay within the new airport boundary due to the acquisition of land necessary for the Runway 6 extension. The 2013 and 2033 Noise Exposure Maps are on Sheets ? and ? (Sheet #'s will be inserted upon completion of the plan set prior to submission to the FAA) of the Airport Plans in Chapter 6 of this report.

- **Land Acquisition and Relocation Requirements.** The potential need for relocation and acquisition was reviewed for each of the development options. Alternative 2 would require the acquisition of roughly 170 acres of land located to the west of Airport Road. There are also 9 residential properties to the southwest that would require acquisition. Relocation of the occupants of these residences would also be required. This property would be used to relocate Airport Road which would go through the RPZ, and construct a new access road to SE Airport Estates Road.

It is also recommend that the property to the northeast of Runway end 24 be acquired. This would allow the airport to own and control the RPZ for that runway end. In the future that parcel can be developed to for non-aviation use and provide an additional revenue source to that airport.

- **Surface Drainage and Wetlands and Floodplains.** Alternatives 2, 4, and 5 would create more paved areas due to the new runway/taxiway and access taxiways pavements. This could be mitigated by proper airfield drainage. Impacts to drainage patterns, wetlands and floodplains are expected to be minimal.

5.2.5 Surface Access Considerations

Primary access to X06 is via Airport Road thence to AC Polk Drive. Alternative 2 will not affect the access to the airport using AC Polk however it will impact access to a portion of the residential neighborhood to the southwest of the airport. Due to the necessary relocation of Airport Road so it is not within the RPZ, a new road will be constructed to provide access to homes on SE 12th Place. Alternate 5 will include access to the new terminal building development via a road off Highway 31 on the southeast side of the airport. This new road will provide surface access to the terminal building, storage hangars and fuel farm. On the basis of surface access effects alone, alternatives 2 and 5 are considered feasible.

CHAPTER 6: AIRPORT PLANS

An airport plans package was prepared to depict the existing facilities and proposed improvements in the long-term development plan for the Arcadia Municipal Airport. Projects eligible to receive federal funding under the Airport Improvement Program (AIP) must be shown on an approved Airport Layout Plan (ALP) in order to qualify for assistance. The Airport Layout Plan is the primary drawing in the plans package which shows the overall development plan for the airport, both existing and proposed.

The airport plans set is an important tool for airport development. These drawings should be reviewed and revised, as appropriate, upon completion of airport improvement projects. An 11"x17" format plan set is included at the end of this chapter. Drawings comprising the ALP set include:

- Cover Sheet
- ALP Drawing
- Data Sheet
- Terminal Area Plan
- Inner Portion of the Approach Surface Drawing
- Airport Airspace Drawing
- Airport Land Use Drawing
- Airport Property Map / Exhibit A

The features of these drawings are briefly discussed in subsequent paragraphs.

6.1 Cover Sheet

The cover sheet provides an index of drawings in the plans set. The location map and vicinity map indicate the location relative to the State of Florida and the City of Arcadia, respectively. The wind rose and an accompanying table indicate coverage of crosswinds provided by runways individually and collectively. An index of drawings is also provided.

6.2 ALP Drawing

The ALP was developed in accordance with FAA AC 150/5300-13A, Airport Design and the FAA Airport Layout Plan Drawing Set Checklist. The ALP depicts existing facilities and improvements recommended in this Master Plan Update through planning year 2033. Notable recommendations include extension of Runway 6-24 and a corresponding Taxiway A, new t-hangar and box hangar buildings, taxiway improvements, new terminal area including a new entrance road, terminal building, fuel farm, aircraft storage hangars and aircraft and vehicle parking, expanded apron area and an area designated aeronautical/non-aeronautical which will house a camp ground location. The installation of an Automated Weather Observation System is also anticipated.

The ALP also incorporates development projects that have been completed since the last ALP.

The last ALP was completed and approved as part of the 1994 Airport Master Plan. The following developments have occurred since 1994:

- Runway 6-24 rejuvenation and new pavement markings
- New electrical vault (new location)
- New lighted windsock (new location)
- New Runway 6-24 quartz lighting and Taxiway 'A' LED lighting
- Runway 6 PAPI

6.3 Data Sheet

The Airport Data Sheet includes information regarding the existing and future facilities at the airport. The information includes the following:

- Navigational Aids
- Wind Coverage
- Runway Characteristics
- Taxiway Characteristics
- Airport Characteristics
- Design Standards

6.4 Terminal Area Plan

The Terminal Area Plan provides depiction of the existing FBO/Terminal Complex and Ultimate Terminal Complex to be constructed on the southeast quadrant of the airport and apron areas including in the proposed development areas of the airport. Also depicted are existing and future hangars, aircraft parking aprons and vehicle parking facilities.

6.5 Inner Portion of the Approach Surface Drawing

These plans provide detailed views of the physical features near each runway's extended centerline including topography, roads, obstructions and incompatible objects in these critical areas. A table usually summarizes the existing obstructions (road, fence, brush) to the airspace and their proposed disposition, if applicable.

6.6 Airport Airspace Drawing

Ideally, airports should be located where the airspace is free and clear of obstructions that could not be hazardous to aircraft. It is necessary to keep the surrounding airspace free from obstacles by preventing, where possible, the introduction and development of obstructions that could interfere with the navigation of aircraft.

The regulations for the protection of airspace in the vicinity of airports are established by the definition of a set of "imaginary surfaces"; penetration of these surfaces can result in an obstruction affecting navigable airspace. The shape and size of these imaginary surfaces is

defined in Federal Aviation Regulations (FAR) Part 77, Objects Affecting Navigable Airspace. The Airport Airspace Plan depicts the imaginary surfaces applicable to the Arcadia Airport. It is important to illustrate the airspace for the ultimate airport development conditions to prevent introduction of obstructions that would inhibit realization of the plan. The imaginary surfaces shown in the Airspace Plan are:

- Primary Surface
- Approach Surface
- Horizontal Surface
- Transitional Surface
- Conical Surface

The Airspace Plan depicts these surfaces in plan view. To ensure understanding of these surfaces, explanations of each are provided below.

- **Primary Surface** – The primary surface is a surface longitudinally centered on the runway. When the runway has a prepared hard surface, the primary surface extends 200 feet beyond each end of the runway. When the runway has no prepared hard surface, the primary surface ends at the end of that runway. Runway 6-24 currently has a non-precision approach and has a primary surface width of 500 feet. Runway 13-31 is a turf runway that serves small aircraft only and has a primary surface width of 250 feet.
- **Approach Surface** – The approach surface is the surface longitudinally centered in the extended runway centerline that extends outward and upward from each end of the primary surface. The approach slope and dimensions are determined for each runway end based on the type of approach.

Runway 6-24 is a non-precision runway and requires a 34:1 slope at a horizontal length of 10,000 feet. The approach surface measures 500 feet at the inner edge and expands to a width of 2,000 feet. Runway 13-31 is a visual turf runway with a 20:1 approach slope with a horizontal length of 5,000 feet. The approach surface measures 250 feet at the inner edge and expands to a width of 1,250 feet.

- **Horizontal Surface** – The horizontal surface is an imaginary horizontal plane located 150 feet above the established airport elevation. At the Arcadia Municipal Airport, the elevation is 63 feet above mean sea level (MSL) so the horizontal surface's elevation is 213 feet. The dimensions of the horizontal surface are established by arcs of specified dimensions from the end of the primary surface for each runway. The arcs are connected by striking tangents to the arcs with the tangents' being parallel to the runway alignment(s).
- **Transitional Surface** – The transitional surface is an inclined plane with a slope of 7:1 extending upward and outward from the primary and approach surfaces, terminating at the point where they intersect with the horizontal surface or conical surface.

- **Conical Surface** – The conical surface is an inclined plane extending upward and outward from the outer boundary of the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.

6.7 Airport Land Use Drawing

The Existing Land Use Plan illustrates the general boundaries of the airport property, land use as designated by the controlling jurisdiction, and noise contours for the base year of the analysis. The Future Land Use Plan depicts noise contours for the Year 2033 levels of forecast activity. Noise contours represented include the 60, 65, and 70 DNL contours. The significance of these contours and their relationships to land use compatibility were discussed in Chapter 2 of this report.

6.8 Airport Property Map / Exhibit A

The Airport Property Map depicts the existing and proposed airport property envelope. The associated Property Map Data Table indicates, by parcel number, the type of interest owned (fee simple), nature of the party from which the land was acquired and other information. The Property Plan also reflects the future acquisition of land to accommodate the Runway 24 extension, new terminal building, road relocation, new access road, utility installation and airspace protection.

11x17 Airport Plan Set to follow.

CHAPTER 7: FINANCIAL AND IMPLEMENTATION PLAN

This section describes recommended development at the Arcadia Municipal Airport for the 20-year planning period. Using FAA guidelines for airport master plans, recommended improvements are grouped into three phases: short-term (1 to 5 years), intermediate-term (6 to 10 years), and long-term (11 to 20 years). Phasing of projects assists the airport sponsor in budgetary planning for needed construction improvements. It also provides a preliminary set of recommendations pertaining to priorities for implementation of projects insofar as timing is concerned. These recommendations are subject to later revisions based upon operational and budgetary considerations.

7.1 Existing JACIP

In order to plan and program state funding for airport improvements, the Florida Department of Transportation uses a process termed the Joint Automated Capital Improvement Plan (JACIP). The JACIP provides online access to a spreadsheet that identifies proposed projects, by airport, for a six-year period. Table 7.1 summarizes the current JACIP for X06. Review of the table shows that realization of all the projects in the plan would require over \$9,000,000 in total funding by Year 2021 assuming that the cost estimates remained applicable.

Table 7.1 Existing JACIP Summary

Project Description	Year	Estimated Cost
Reconstruct Hangar Taxiways	2015	\$ 800,000
Taxiway B Construction	2015	\$ 1,200,000
AWOS	2015	\$ 100,000
2015 Yearly Total		\$ 2,100,000
Land Acquisition	2016	\$ 800,000
2016 Yearly Total		\$ 800,000
Taxiway Extension	2017	\$ 1,100,000
Water and Sewer Supply	2017	\$ 1,000,000
Runway Extension	2017	\$ 1,100,000
2017 Yearly Total		\$ 3,200,000
Avigation Easement	2018	\$ 200,000
T-Hangars	2018	\$ 450,000
2018 Yearly Total		\$ 650,000
Rehabilitate Apron	2021	\$ 500,000
Rehabilitate Taxiway	2021	\$ 800,000
Runway Pavement Rehabilitation	2021	\$ 1,000,000
2021 Yearly Total		\$ 2,300,000
Airport Total		\$ 9,050,000

Source: Florida Aviation Database.

7.2 Development Phasing and Revised Cost Estimates

This master plan included a review of future projects within the context of existing and anticipated conditions and activity at the airport. Based upon this review, revisions are recommended to the JACIP's lists of projects. Table 7.2 identifies the airport improvements recommended by this study. These are arranged by proposed development phase. Planning

level cost estimates were prepared for these items and are also presented in Table 4-2. The table further indicates the potential sources of funding for individual projects based upon current FAA and FDOT eligibility guidelines. Additional information concerning funding sources is provided in section 7.3 of this section.

Eligibility for FAA funding does not ensure that grants will be forthcoming in the timeframes indicated in Table 7.2. The FAA's resources are limited, and the process of awarding grants is competitive. As a result, the consultant recommends that annual reviews of X06's needs and opportunities be conducted to ensure that the money available is used most effectively. In general terms, priorities should be considered that reflect the following factors:

- Safety as indicated by conforming to FAA Guidelines – This factor places most emphasis upon maintenance and improvements, such as obstruction removal, correction of deficiencies that do not meet FAA standards, etc.
- Maintenance of existing facilities – X06 has several facilities in need of maintenance/rehabilitation, particularly T-Hangar pavement. In the absence of full funding for all projects, emphasis should generally be placed upon those projects that will allow continued use of existing needed facilities.
- Improvements that provide additional income – Recommendations are indicated in Table 7.2 that would support development of several parcels for rentals. As described in the following section, these rents would increase the capability of the airport to provide local funding for operations, maintenance, and improvements.

Table 7.2 Proposed Projects by Development Phase

Phase I: 2013-2018 Projects	Estimated Cost	Eligible Funding by Source		
		Federal	State	Local
Construct Taxiway B (Butler Bldg to Taxiway A)	\$ 1,100,000	\$ 990,000	\$ 55,000	\$ 55,000
Avigation Easement & Obstruction Removal	\$ 425,000		\$ 425,000	
Land Acquisition West of US 31	\$ 750,000		\$ 600,000	150,000
Extend Water & Sewer	\$ 1,250,000		\$ 1,000,000	\$ 250,000
Construct 60x60 Box Hangar w/ramp & vehicle parking	\$ 525,000		\$ 420,000	\$ 105,000
Extend AC Polk Drive	\$ 500,000		\$ 400,000	\$ 100,000
Construct Perimeter Fencing East Quadrant	\$ 550,000		\$ 440,000	\$ 110,000
Total, Phase I: 2013-2018	\$ 5,100,000	\$ 990,000	\$ 3,340,000	\$ 770,000

Phase II, 2019-2023 Projects	Estimated Cos	Eligible Funding by Source		
		Federal	State	Local
Construct Two T-Hangar Buildings	\$ 675,000		\$ 540,000	135,000
Construct 60x60 Box Hangar w/ramp & vehicle parking	\$ 525,000		\$ 420,000	\$ 105,000
Apron Expansion	\$ 425,000	\$ 382,500	\$ 21,250	\$ 21,250
Construct 60x60 Box Hangar w/ramp & vehicle parking	\$ 525,000		\$ 420,000	\$ 105,000
Construct 60x60 Box Hangar w/ramp & vehicle parking	\$ 525,000		\$ 420,000	105,000
Land Acquisition West of Airport Road	\$ 2,225,000	\$ 2,002,500	\$ 111,250	\$ 111,250
Total, Phase II: 2019-2023	\$ 4,900,000	\$ 2,385,000	\$ 1,932,500	\$ 582,500

Phase III: 2024-2033 Projects	Estimated Cos	Eligible Funding by Source		
		Federal	State	Local
Airport Road Relocation	\$ 1,450,000		\$ 1,160,000	\$ 290,000
Runway 6 Extension	\$ 1,550,000	\$ 1,395,000.00	\$ 77,500	77,500
Construct Terminal Building, apron, fuel farm, access road, & vehicle parking	\$ 3,575,000		\$ 2,860,000	\$ 715,000
Construct Two 100x120 Hangars	\$ 1,950,000		\$ 1,560,000	\$ 390,000
Total, Phase II: 2024-2033	\$ 8,525,000	\$ 1,395,000	\$ 5,657,500	\$ 1,472,500

Source: Hanson Professional Services Inc.

7.3 Funding Sources

Funding of airport development projects is provided by sources at the federal, state, and local levels as well as private entities. The primary source, especially at general aviation airports such as X06, is the Federal Aviation Administration’s Airport Improvement Program (AIP). Financing for the AIP comes from the Airport and Airway Trust Fund, which receives proceeds from various aviation related taxes, such as those imposed on aviation fuel. AIP funding is distributed under appropriations set by Congress for entitlement, state apportionment, and discretionary funds as FAA grants. Under the current program, the grants provide up to 90% of the costs for eligible projects, which include airport planning, airport capacity enhancement and preservation projects, noise compatibility programs, and many types of airport improvement and development projects. AIP has several categories including:

- **Entitlement Funds** – The appropriation for commercial service airport entitlement funds is based on a formula related to the number of enplaned passengers and state

population. Scheduled commercial service airports receive entitlement funds based upon their respective levels of enplaning paid passengers departing on scheduled commercial aircraft. These figures are reported by the airlines to the FAA. General aviation airport entitlement funds are limited to \$150,000 per year per airport; however, within certain guidelines and limits, use of these funds may be deferred and the amounts carried forward to future years.

- **State Apportionment Funds** – These funds are available for use within each state for planning and development at general aviation, reliever, and non-primary commercial service airports, the latter category being defined as those commercial service airports that enplane between 2,500 and 9,999 passengers annually. The area and population of each state is used to determine state apportionment amounts.
- **Discretionary Funds** – Any eligible airport may use federal discretionary funds from the AIP. Discretionary allocations are a function of project need and priorities according to the FAA's rating system and are weighed against other projects. Funding levels, or set-asides, are often established by legislation related to discretionary funds for special projects and noise mitigation.
 - **State Funding** – For eligible projects at community service airports, FDOT provides up to 5 percent of the local share if federal funding is available and up to 80 percent if federal funding is not available. FDOT will also provide up to 50 percent of the local share for economic development projects. Section 288.0656, Florida Statutes, establishes the Rural Economic Development Initiative (REDI) to better serve Florida's rural communities by providing a more focused and coordinated effort among state and regional agencies that provide programs and services for rural areas.
- **Local Funding** – The City of Arcadia has contributed the necessary matching funds for X06's capital improvement projects. The City's funding capability is based upon surplus airport revenues and a budget set forth by the City or Arcadia annually. Local funding may take various forms. Some communities provide regular general revenue funding for their airports; others make local matching funds available to secure federal and state grants. The State Department of Transportation (Aviation Office) has been designated as a REDI agency and therefore the State of Florida may fund 100% of eligible projects for communities that are classified as Rural Economic Development Initiative areas. Desoto County has been designated as a REDI community and therefore Arcadia also receives the REDI designation. For this reason the Local match requirement for grants may be absorbed by the state making the local share outlined in Table 7.2 zero and increasing the FDOT share by the local match shown.

AGENDA No. 7



CITY COUNCIL AGENDA ITEM
Requested Council Meeting Date: March 17, 2015

DEPARTMENT: Administration

SUBJECT: Minutes from January 13, 2015 (Senior Advisors Workshop)

RECOMMENDED MOTION: Council Approval

SUMMARY:

FISCAL IMPACT: _____ () Capital Budget
() Operating
() Other

ATTACHMENTS: () Ordinance () Resolution () Budget (x) Other

Department Head: Penny Delaney

Date: 03/17/15

Finance Director (As to Budget Requirements)

Date:

City Attorney (As to Form and Legality)

Date:

Interim City Administrator: Beth Carsten

Date:

COUNCIL ACTION: () Approved as Recommended () Disapproved
() Tabled Indefinitely () Tabled to Date Certain _____ () Approved with Modifications

**AGENDA MINUTES
CITY COUNCIL
CITY OF ARCADIA
TUESDAY, JANUARY 13, 2014
5:00 P.M.**

The following minutes reflect action items of the City Council of the City of Arcadia. For a verbatim copy of the minutes, you may contact City Administration to obtain a copy of the recorded meeting.

CALL TO ORDER & ROLL CALL

The Mayor called the meeting to order at approximately 5:00 p.m. with the following members and staff present:

Arcadia City Council

Mayor Judy Wertz-Strickland
Councilmember Susan Coker
Councilmember Joseph E. Fink

Deputy Mayor Frierson
Councilmember S. Delshay Turner

Arcadia City Staff

Interim City Administrator Beth Carsten
City Clerk Penny Delaney
Marshall Matt Anderson

SENIOR ADVISORS ASSISTANCE IN SEARCH FOR CITY ADMINISTRATOR

Mayor Wertz-Strickland advised that Beth Carsten had spoken with Mr. Bressner. Ms. Carsten advised that she had spoken with him earlier that day and he was willing to walk the City Council through the paperwork that he had previously sent to give deeper insight into it and answer any questions that the City Council may have. Ms. Carsten asked if there was anything they wanted to discuss before they called him and there was no comment from anyone. At this time, Ms. Carsten called and was able to connect with Mr. Kurt Bressner on the speaker phone.

Mr. Bressner thanked the City Council for allowing him to talk with them about hiring a City Administrator. He advised the Senior Advisor Program, formerly known as the Range Rider Program, consists of former city and county managers with extensive board experience. He stated they felt they were giving back to the profession. He advised that he has thirty-three (33) years of experience as a City Manager in four (4) communities and his last City Manager position was in Boynton Beach, Florida, where he retired in 2001. He further advised that he serves as the state coordinator for the Senior Advisor Program and does it as a volunteer activity just like all the other Senior Advisors.

He reviewed a report which had been provided to the City Council entitled “Typical City, Town or County Manager/Administrator Search Option, Process and Timeline”. He advised the purpose of the report is to help City Council make an informed decision on the process and the selection of the best candidate. He stated that it also serves as a resource to assist staff in developing the profile and advertising. He pointed out four (4) options: 1) hire search firm; 2) perform the search in-house by City staff; 3) a hybrid approach to receive assistance from the Senior Advisor program in collaboration with staff; and 4) not to do a recruitment and hire someone from within. He pointed out that in addition to the four (4) options, there are other components of the report and that is a timeline for a typical search of which he reviewed. He explained there are five (5) steps: 1) develop a profile and advertisement which is critical because the profile and the advertisement is Arcadia’s window on the world and it’s where Council’s outlook on the best possible City Administrator can be found who will serve the needs of the community for many years. He stated that it gives the applicant good information as to what the issues are in the community, what you’re looking for in a City Administrator, what the responsibilities are for the City Administrator and what the issues and concerns are in the community. He advised that if there are problem areas, they need to be disclosed because it’s important for the applicant to make an informed decision as to whether or not they would like to proceed.

Mr. Bressner addressed the application process and stated they are all members of the International City Management Association and there is a code of ethics that they continue to abide by. Senior Advisors are effectively barred from actually going out and recruiting individuals to come to a community. He advised they can work with the community to develop a profile and advertisement. A recruiter and search firm can do that and communities who feel they have a need for an active recruitment component should seriously consider using a search firm rather than Senior Advisors and he stated he wanted to disclose that upfront. He stated that once the applications are in, there is a short period of time that they are reviewed. He advised they are in a position to give the City ten (10) semi-finalists and then it will be up to the elected body to narrow it down to the finalists with five (5) to seven (7) finalists being optimal. Mr. Bressner advised that once the interview process has concluded and the finalists have been selected, then the candidates will be invited to the community for interviews. He stated Skype interviews can be used for a preliminary review, but he recommended that when it gets narrowed down to the finalists that they be invited to the community to participate in an interview process. Mr. Bressner stated that this allows Council and the candidate to size each other up. He felt there had to be some chemistry and something that happens between the selected manager and the community. Mr. Bressner stated that once the interviews are done, hopefully there will be a finalist and possibly a semi-finalist and then Council will go through the selection process and negotiation of an employment agreement with the successor administrator.

Mr. Bressner stated that the report also provides good resources. He pointed out the companion guide to it that the ICMA put out and it’s very good also. He advised they also provided a recruitment profile checklist and stated these were items that needed to go into a profile. He stated they also listed search firms with contact information. He then referred to the last element of the report which is the summary of where the advertisement is placed. He advised if a search firm is used, they will take care of a lot of that, but if Senior Advisors are

used, they will work with staff to put together the advertisement in a number of locations with the goal to get maximum exposure.

Mr. Bressner then opened it up to any questions from Council. Different members of Council asked various questions which were basically confirmation of what Mr. Bressner had reviewed. Mr. Bressner gave different scenarios of cities that Senior Advisors had assisted. The subject of background checks came up and Mr. Bressner stated that the search consultant would do a preliminary background review before they recommend the finalists. He stated that when he reviews resumes, he does a goggle search, but it's not to the degree that a search firm does. He advised the City do a full background check on all the finalists. Mayor Wertz-Strickland stated it had been advertised before and felt there were a significant amount to pick through and she wondered if they could do that again with the Senior Advisors and pick up a company to do the background search. Mr. Bressner stated that they would not recommend anyone who does not have the requisite experience and background that is expected of a City Administrator position. He recommended they advertise nationally, through ICMA, Florida League of Cities, and other organizations that will give national exposure. He stated ICMA would cost around \$700.00 and stated it may be money well spent.

Councilmember Fink stated that he felt they needed to have Senior Advisors assist rather than an outside firm. He stated that they had to get this right and they can't afford to make any more mistakes. Mr. Bressner advised that they had declined to provide assistance to the City during one of its earlier searches because the decision making environment was unsettled. They didn't feel the process, at that time, was going to have a chance of being successfully completed without it going in another direction at the last minute. He stated that based on what has happened since that time, he felt the community was righting the ship and moving in the right direction and felt they should have a good search. He pointed out that information is out in the street and possible candidates will be knowledgeable of it. Mr. Bressner stated that staff had asked if they could use some of the same material, yes, but need to start all over. He pointed out different individuals are on the dais now which brings different perspectives, expectations, and beliefs and those have to be translated into a wish list for a successful candidate.

Regarding building the profile, Mr. Fink asked if he was suggesting on doing it collectively. Mr. Bressner stated they would have a structured one on one interview or by phone with the members of the commission (council) and then put together a composite of what's important and then come together and develop a consensus document which will be done at a public meeting so the profile will be approved officially by City Council before the advertisement goes out. Councilmember Fink asked for confirmation that the finalists should be vetted prior to coming to Council and Mr. Bressner stated yes. Mr. Bressner stated that it was very important that you establish what you expect to pay the individual and be up front about it and make sure it's part of the profile and the advertisement. Councilmember Fink pointed out that in the past, the Police Department did the background check and it has not been successful and felt it was money better spent to have a company do the background checks. Mr. Bressner stated that it needed to be a reputable firm that will give you your legal, reputation, financial, etc.

Councilmember Coker asked if candidates needed to be a member of the two organizations in order to be able to apply if they go through Senior Advisors. Mr. Bressner

stated they did not have to be members of ICMA, but they would be looking for someone with municipal and smaller community experience. He stated that they would recommend if they are not members, they would join as soon after as they are appointed because then they fall under the Code of Ethics. Mr. Bressner stated he would provide a copy of it to Council because it is far-reaching and a powerful document that members of ICMA and Florida City Management Association are required to uphold. Councilmember Coker asked if it was customary to pay for the travel and Mr. Bressner stated that it was which would include a hotel stay.

Deputy Mayor Frierson stated that they used Skype last time and it seemed to work well. Mr. Bressner stated it had been used for preliminary interview, but he didn't recommend it be done for the final interviews. Deputy Mayor Frierson asked what he thought about a time frame. Mr. Bressner stated that four (4) to six (6) months would be a good guesstimate.

Mayor Wertz-Strickland stated her reasons for having the finalists come to Arcadia as being it would allow the finalists to see what they'll be dealing with and it would allow the Council to see if they could work with them on a one to one basis. Mr. Bressner stated that many communities do a meet and greet for the candidates, along with a parallel citizen advisory committee that would interview the candidates to come up with some recommendations.

Mayor Wertz-Strickland asked if they were involved in the process with Lake Wales and Mr. Bressner stated that they were and explained the process in more depth. He stated he would speak with them and see if they would provide the City with their process. The Mayor thanked him for giving instruction tonight and stated they were looking forward to working with him. Mr. Bressner stated that a final decision would need to be made at the next Council meeting regarding same. He stated his appreciation for the opportunity to talk with them. The telephone conference ended at that time.

Councilmember Fink stated that he felt they should go with the Senior Advisors for the search until such time as they get the final selections and at that time, they do a preliminary background check on the candidates. He suggested doing them with Skype interviews and then narrow them down to three (3) or four (4) finalists and have them come before Council to see how they fit. Deputy Mayor Frierson thought Skype worked very well and stated that if you listen really close to them and pay attention to their mannerism, you could get a really good feel for the type of person they are. She stated it would be the first time Council has paid expenses.

Mayor Wertz-Strickland stated her opinion is to use Skype and when it is narrowed down to possibly three (3), then bring them in. Deputy Mayor Frierson stated that if they are going to pay expenses, they should not limit themselves to staying close to this area, because it will limit the candidates and there are candidates in other states that are looking for positions that are experienced and would like to come to Florida. The Mayor felt that it should be placed on the agenda for the 20th to be decided so they can go ahead and get started.

Deputy Mayor Frierson stated they need to recognize Beth Carsten because through this she will be working on the next audit and when that is completed, she'll be working on the budget. Ms. Carsten stated that Mr. Bressner had stated they would be willing to come in

another workshop setting to start the profile search. He said one way to proceed would be to give each council member a survey to get started and then in a group setting, you would put them together and discuss it in the workshop setting. The discussion turned to salary and Councilmember Fink stated they may need to pay a little more. The Mayor stated it would be put on the next agenda and she expressed her desire that they all be together and diligent on this.

PUBLIC

None

MAYOR AND COUNCIL MATTERS

None

ADJOURN

Having no further business at this time, Councilmember Coker made a motion to adjourn and Councilmember Fink seconded the motion. The meeting was adjourned at 6:17 P.M.

ADOPTED THIS ___ DAY OF _____, 2015.

By:

Judy Wertz-Strickland, Mayor

ATTEST:

Penny Delaney, City Clerk