

ELOY MUNICIPAL AIRPORT



Airport Plans

The planning process for the Eloy Municipal Airport Master Plan has included several analytic efforts in the previous chapters intended to project potential aviation demand, establish airside and landside facility needs, and evaluate options for improving the airport to meet those airside and landside facility needs. The process, thus far, has included the presentation of two draft phase reports (representing the first four chapters of the Master Plan) to the Planning Advisory Committee (PAC) and the City of Eloy. A plan for the use of Eloy Municipal Airport has evolved considering their input. The purpose of this chapter is to describe, in narrative and graphic form, the plan for the future use of Eloy Municipal Airport.

AIRFIELD PLAN

The airfield plan for Eloy Municipal Airport was formulated to meet projected increased usage by small to medium sized business jets over the course of the next 20-year period. Airfield development focuses on meeting Federal Aviation Administration (FAA) design and safety standards, extending Runway 2-20, reconstructing Taxiway A at a 300-foot separation distance from the runway centerline, property acquisition to protect the runway approaches, and establishing instrument approach capabilities to both runway ends utilizing global positioning system (GPS) technology.

Exhibit 5A graphically depicts the proposed airfield improvements. The following text summarizes the elements of the airfield plan.



- **The extension of Runway 2-20 to 5,200 feet.**

The master plan development concept proposes a 1,300-foot extension of Runway 2-20 to a runway length of 5,200 feet. This runway length is consistent with the FAA runway length requirements contained in FAA AC 150/5325-4A, *Runway Length Requirements for Airport Design* for meeting 75 percent of large aircraft at 60 percent useful load. The extension is planned to be split into two 650-foot extensions of both runway ends. The 650-foot extension to the northeast may be short enough to avoid impacting an identified site potentially eligible for listing on the National Register of Historic Places. However, additional archaeological investigations will be necessary prior to an extension of the runway to the northeast.

The proposed extension to Runway 2-20 is included in this Master Plan for planning purposes only. This is to aid in local land use planning to ensure that appropriate land use measures are put into place to allow for this extension in the future if it is needed. By planning for a runway extension, the City and County can take appropriate measures to ensure there are no hazards or obstacle penetrations to the Title 14 Code of Federal Regulations (CFR) Part 77 airspace in the future that could prevent the extension, and to allow for compatible land use to be planned in the extended runway approach/departure area. Detailed justification for constructing the runway extension will be required with the environmental assessment (EA) and benefit-cost analysis. This justifica-

tion will require letters of support from users detailing 500 annual operations by the critical aircraft requiring the additional runway length.

- **Maintain Airport Reference Code (ARC) B-II design standards on Runway 2-20.**

The FAA has established design criterion to define the physical dimensions of runways and taxiways and the surrounding imaginary surfaces that protect the safe operation of aircraft at the airport. FAA design standards also define the separation criteria for the placement of landside facilities. As discussed previously in Chapter Three, FAA design criteria are a function of the critical design aircraft's (the most demanding aircraft or "family" of aircraft which will conduct 500 or more operations [take-offs and landings] per year at the airport) wingspan and approach speed, and in some cases, the runway approach visibility minimums. The FAA has established the Airport Reference Code (ARC) to relate these factors to airfield design standards.

Eloy Municipal Airport is currently used by a wide variety of general aviation aircraft ranging from small single engine piston recreational aircraft up to turboprop and occasional business jet aircraft. The skydiving operator that uses the airport conducts the greatest number of operations utilizing McDonnell Douglas DC-3 aircraft (ARC A-III), DHC-6 Twin Otters (ARC A-II), Shorts SC.7 Skyvans (ARC A-II), one Beechcraft 18 (ARC A-II), and one Pilatus PC-6 Porter aircraft (ARC A-II). The Facility Requirements chap-

ter identified the DHC-6 Twin Otter as the current critical design aircraft. Ultimately, it is anticipated that the fleet mix of aircraft operating at Eloy Municipal Airport will expand to include increased use by Beechcraft King Air turboprops and small to medium size business jets such as the Cessna Mustang very light jet (VLJ), Cessna 560XL (Citation Excel), and the Hawker Beechjet 400. These aircraft are included in approach category B.

Previous planning efforts have identified ARC B-II as the existing and ultimate design standards for the Eloy Municipal Airport. The updated fleet mix forecast projects a mix of aircraft ranging from ARC A-I up to ARC B-II category. Therefore, Runway 2-20 is planned to meet all ARC B-II design standards.

It is anticipated that beyond the long range planning horizon of this master plan, faster business jets in approach category C may potentially become the critical design aircraft for the airport. While the majority of the airfield facilities will be designed to ARC B-II design standards, the runway/taxiway centerline separation distance and landside facilities will be planned at the appropriate separation distance to allow for the future transition to approach category C airfield design standards. Planning the runway/taxiway centerline separation distance to 300 feet and setting back the landside facilities to allow for the growth in safety areas will allow the airport to more easily transition to approach category C airfield design standards in the future. Relocating Taxiway A to the southeast will also shift the taxiway object free area

(TOFA). As depicted on **Exhibit 5A**, the TOFA will encompass a portion of the existing apron and the segmented circle and lighted wind indicator. As a result, the portion of the apron that is encompassed by the TOFA will no longer be usable for aircraft parking and the segmented circle and lighted wind indicator will need to be relocated northwest of the runway on ultimate airport property.

The existing airfield meets most of the ARC B-II design standards. Presently, the runway safety area (RSA), object free area (OFA), and the obstacle free zone (OFZ) meet FAA standards. The runway centerline to hold line separation needs to be extended from 130 feet from the runway centerline to 200 feet. The land encompassed by the runway protection zones (RPZs) off both ends of the runway are presently partially owned-in-fee by the City of Eloy. Approximately 1.3 acres of the Runway 2 RPZ and approximately 1.5 acres of the Runway 20 RPZ lay beyond airport property. If no project to extend Runway 2-20 is undertaken, these 2.8 acres of uncontrolled land encompassed by RPZs should be acquired to protect the approach paths into the runway.

- **Acquire lands for runway approach protection and future airport expansion.**

The expansion of the airfield both to the northeast and southwest will require the acquisition of property to protect the approach path into the runway. Ultimately, as depicted on **Exhibit 5A**, the Runway 2 RPZ will encompass approximately 9.65 acres of

property uncontrolled by the airport. This land should be acquired via fee-simple acquisition. The Runway 20 RPZ will ultimately extend beyond airport property, encompassing approximately 9.51 acres of property uncontrolled by the airport. Approximately 8.18 acres of the ultimate RPZ is proposed for fee-simple acquisition, while an avigation easement of 1.33 acres is planned for the drainage canal that passes through the RPZ.

An additional 5.55 acres is proposed for acquisition, allowing for the relocation of Taxiway A and the construction of holding aprons. The acquisition boundary coincides with the taxiway OFA, which will ultimately extend beyond airport property. The relocation of the segmented circle and the installation of an automated weather observation system (AWOS) will require an additional 1.38 acres of property acquisition northwest of the runway.

Due to limited developable airport property, the recommended master plan concept proposes the transfer of a 4.0 acre parcel of city owned property to the airport. This 4.0 acre parcel is located at the southwest end of the airport and is proposed for T-hangar development. Once this parcel is developed, an additional 5.5 acres of property is proposed for acquisition to allow for the expansion of aircraft parking apron capacity and conventional hangar storage.

In total, the recommended master plan concept proposes the acquisition of approximately 30.26 acres of property, 1.33 acres of avigation easement,

and the transfer of 4.0 acres of city owned property to the airport.

- **Establishing LPV non-precision instrument approaches to each runway end.**

The airfield plan reserves the potential for the FAA to establish localizer performance with vertical guidance (LPV) one-mile visibility non-precision instrument approaches to each runway end. The implementation of the LPV instrument approach would not require the installation of expensive equipment and would provide near-precision minimums. LPV approaches would attract corporate aviation users that typically require instrument approach capabilities at airports.

- **Restore PAPI-2 visual approach lighting systems.**

Runway 2-20 is equipped with precision approach path indicator (PAPI-2) lighting systems, which are currently out of service. These approach lighting systems should be restored to active use to provide pilots with an accurate approach slope. Ultimately, as the fleet mix shifts to more small and medium sized business jet and turbo-prop aircraft, the airport should consider the installation of PAPI-4 approach lighting systems, which provide a more accurate approach slope to pilots of larger and faster aircraft.

- **Holding apron construction.**

Piston-powered aircraft must complete a series of engine run-up tests before

departure. Holding aprons at the runway ends allow these activities to take place off the active taxiway surface, allowing ready-for-departure aircraft to bypass those aircraft holding or completing engine run-up tests. Holding aprons are planned at each end of Taxiway A.

- **Distance Remaining Signage**

Distance remaining signage is installed along runways to notify pilots of the distance from their position to the runway end. This signage is installed at 1,000-foot increments to improve safety of operations. This signage system is planned to be installed on Runway 2-20.

- **Restore Rotating Beacon and Runway End Identification Lighting**

Presently the airport's rotating beacon and runway end identification lighting (REIL) are out of service. The City of Eloy received a grant in 2010 to replace the airport's rotating beacon. The REIL lighting systems should also be restored to active use and relocated to the ultimate pavement ends after the extension to the runway.

- **Install AWOS**

The nearest weather reporting station to Eloy Municipal Airport is an automated weather observation System (AWOS-3) at Casa Grande Municipal Airport, approximately 13 nautical miles northwest. To provide pilots

with on-site weather information, an AWOS should be installed on the airport. The AWOS is planned to be located on ultimate airport property northwest of the runway in a location outside of the runway safety areas and where its instruments will be unobstructed by buildings.

LANDSIDE PLAN

Examples of landside facilities include aircraft storage hangars, terminal buildings, aircraft parking aprons, hangar and apron access taxilanes, and vehicle parking lots. The landside plan for Eloy Municipal Airport has been devised to efficiently accommodate potential aviation demand and provide revenue enhancement possibilities by designating the use of certain portions of airport property for aviation-related uses.

The development of landside facilities will be demand-based. In this manner, the facilities will only be constructed if required by verifiable demand. For example, T-hangars will only be constructed if an adequate number of new based aircraft owners desire enclosed aircraft storage. The landside plan is based on projected needs that can change over time and was planned with flexibility in mind to ensure the orderly development of the airport should this demand materialize.

The landside plan focuses landside development along the Taxiway A flight line, which will maintain good visibility from the airfield and coincides with existing landside developments. The

development plan provides for the expansion of aircraft storage hangar facilities, aircraft parking aprons, automobile parking, construction of an aircraft wash rack, and designated helicopter parking. Landside improvements are shown in detail on **Exhibit 5A** and summarized below.

- **Aircraft storage hangar development.**

Due to limited developable airport property, hangar development is proposed on City owned property and property planned for acquisition. Existing hangar demand is primarily for T-hangar storage. Therefore, the 4.0 acre parcel of City property, which is planned to be transferred to airport property, should be developed for T-hangar storage. Five 10-unit T-hangar facilities would fit within this 4.0 acre parcel. The acquisition of approximately 5.5 acres southwest of the City owned property will allow for the construction of an additional T-hangar facility as well as seven 2,500 square foot conventional hangars. Each of these hangar facilities would have vehicular access from Lear Drive, which would be extended to the southwest and end with a cul-de-sac.

The proposed hangar facilities in this recommended development concept will expand the storage hangar area at Eloy Municipal Airport by 60 individual T-hangar storage units and 17,500 square feet of conventional hangar space.

- **Expansion of the aircraft parking apron.**

An 11,111 square yard aircraft parking apron is planned adjacent to the conventional hangar development at the southwest end of the airport to provide additional local and itinerant aircraft parking positions. Once Taxiway A is reconstructed 100 feet southwest of its current location, the taxiway object free area (TOFA) will encompass existing apron and aircraft parking positions. The new apron will offset this loss and grow the total number of aircraft parking positions.

An aircraft wash rack facility is planned to be constructed at the southwest end of this apron to provide an area for aircraft cleaning and the proper collection of the aircraft cleaning solvents and contaminants removed from the aircraft hull during cleaning.

- **Terminal/airport maintenance facility**

Presently, Eloy Municipal Airport does not have a dedicated terminal building or maintenance facilities. Specialty operators currently provide individual general aviation services. Typical terminal services provided at general aviation airports include passenger waiting areas, a pilot's lounge and flight planning area, concessions or restaurant, and office space for management or for lease. A terminal building can also be cross-utilized for

the storage of airport maintenance equipment and maintenance personnel office space. The recommended master plan concept proposes the construction of a 7,000 square foot terminal/airport maintenance facility adjacent to Hangar #1 and the vehicle parking lot. This site is centrally located on the airport, near the self-service fuel facility, and is easily visible from the airfield.

THROUGH-THE-FENCE

Eloy Municipal Airport has several through-the-fence operators located adjacent to airport property. According to Advisory Circular 150/6190-7 *Minimum Standards for Commercial Aeronautical Activities*, the FAA defines through-the-fence as “those activities permitted by an airport sponsor through an agreement that permits access to the public landing area by independent entities or operations offering an aeronautical activity or to owners of aircraft based on land adjacent to, but not part of, the airport property. **The obligation to make an airport available for the use and benefit of the public does not impose any requirement for the airport sponsor to permit ground access by aircraft from adjacent property.**”

While it is within the rights of the airport sponsor to enter into such agreements, it is also the responsibility of the sponsor of federally obligated airports to meet continuing “grant assurances” entered into when accepting federal Airport Improvement Program

(AIP) development grants. The pertinent FAA regulations related to through-the-fence operations are:

- FAA Advisory Circular 150/1690-7, *Minimum Standards for Commercial Aeronautical Activities* (8-28-2006) and;
- FAA Order 5190.6B, *FAA Airport Compliance Manual* (9-30-2009).

Section 12.7 of the *Airport Compliance Manual* states the following:

“As a general principle, the FAA does not support agreements that grant access to the public landing area by aircraft stored and serviced offsite on adjacent property. Thus, this type of agreement is to be avoided since these agreements can create situations that could lead to violations of the airport’s federal obligations. (“Through-the-fence” access to the airfield from private property also may be inconsistent with Transportation Security Administration security requirements.)

Under no circumstances is the FAA to support any “through-the-fence” agreement associated with residential use since that action will be inconsistent with the federal obligation to ensure compatible land use adjacent to the airport.

The FAA will not approve through-the-fence requests under the following conditions:

- If the intended use of the through-the-fence access is for a residential airport. This violates Grant Assurance 21, *Compatible Land Use* and;
- If the subject land is requested to be released by the airport sponsor from grant obligations, then utilized for aeronautical purposes. The FAA will not release from obligation airport property that may be needed for aeronautical purposes currently or in the future.

In general, the FAA will only consider through-the-fence access if all existing airport property is already developed and the airport is unable to purchase adjacent property. Under these circumstances the FAA provides a list of steps to follow when drafting through the fence agreements. This list is as follows:

- a. "The access agreement should be a written legal document with an expiration date and signed by the sponsor and the "through-the-fence" operator. It may be recorded. Airports should never grant deeded access to the airport.
- b. The right of access should be explicit and apply only to the "through-the-fence" operation (i.e., right to taxi its aircraft to and from the airfield).
- c. The "through-the-fence" operator shall not have a right to grant or sell access through its property so other parties may gain access to the airfield from

adjacent parcels of land. Only the airport sponsor may grant access to the airfield.

- d. The access agreement should have a clause making it subordinate to the sponsor's grant assurances and federal obligations. Should any provision of the access agreement violate the sponsor's grant assurances or federal obligations, the sponsor shall have the unilateral right to amend or terminate the access agreement to remain in compliance with its grant assurances and federal obligations.
- e. The "through-the-fence" operator shall not have a right to assign its access agreement without the express prior written approval of the sponsor. The sponsor should have the right to amend the terms of the access agreement to reflect a change in value to the off-airport property at the time of the approved sale if the "through-the-fence" access is to continue.
- f. The fee to gain access to the airfield should reflect the airport fees charged to similarly situated on-airport tenants and aeronautical users. For example, landing fees, ground rent, or tie-down fees paid to the sponsor by comparable on-airport aeronautical users or tenants to recover the capital and operating costs of the airport should be reflected in the access fee assessed the

“through-the-fence” operator, including periodic adjustments. In addition, if the “through-the-fence” operator is granted the right to conduct a commercial business catering to aeronautical users either on or off the airport, the sponsor shall assess, at a minimum, the same concession terms and fees to the “through-the-fence” operator as assessed to all similarly situated on-airport commercial operators. As previously stated, the FAA does not support granting “through-the-fence” access to aeronautical commercial operators that compete with on-airport operators.

- g. The access agreement should contain termination and insurance articles to benefit the sponsor.
- h. The expiration date of the access agreement should not extend beyond a reasonable period from the sponsor’s perspective. It should not depend upon the full depreciation of the “through-the-fence” operator’s off-airport investment (i.e., 30 years), as would be the case had the investment been made inside the airport. In any case, it should not exceed the appraised useful life of the off-airport facilities. Should the access agreement be renegotiated at its expiration, the new access fee should reflect an economic rent for the depreciated off-airport aeronautical facilities (i.e., hangar, ramp, etc.) compa-

rable to what would be charged by the sponsor for similar on-airport facilities. That is, when on-airport facilities are fully amortized and title now vests with the airport instead of the tenant, the airport may charge higher economic rent for the lease of its facility. The access fee for a depreciated off-airport facility should be adjusted in a similar fashion notwithstanding that title still vests with the off-airport operator. However, there is no limitation on what the airport sponsor may charge for “through-the-fence” access.”

The City of Eloy does not presently have FAA approved through-the-fence agreements with any of the off-airport operators. Therefore, it is recommended that the City of Eloy work with the FAA, and on- and off-airport stakeholders to establish a through-the-fence agreement utilizing the steps listed above.

AIRPORT ACCESS

As indicated in **Chapter One – Inventory**, the *City of Eloy Small Area Transportation Study (SATS) 2009* plans for the expanded roadway network in the City of Eloy. **Exhibit 5B** identifies the ultimate vicinity roadway plan modified to reflect the recommended airport development concept. Ultimately, Tumbleweed Road, the main vehicle access point to the airport, is planned to be widened to a four lane minor arterial, which should provide adequate levels of service

through the planning period of this master plan.

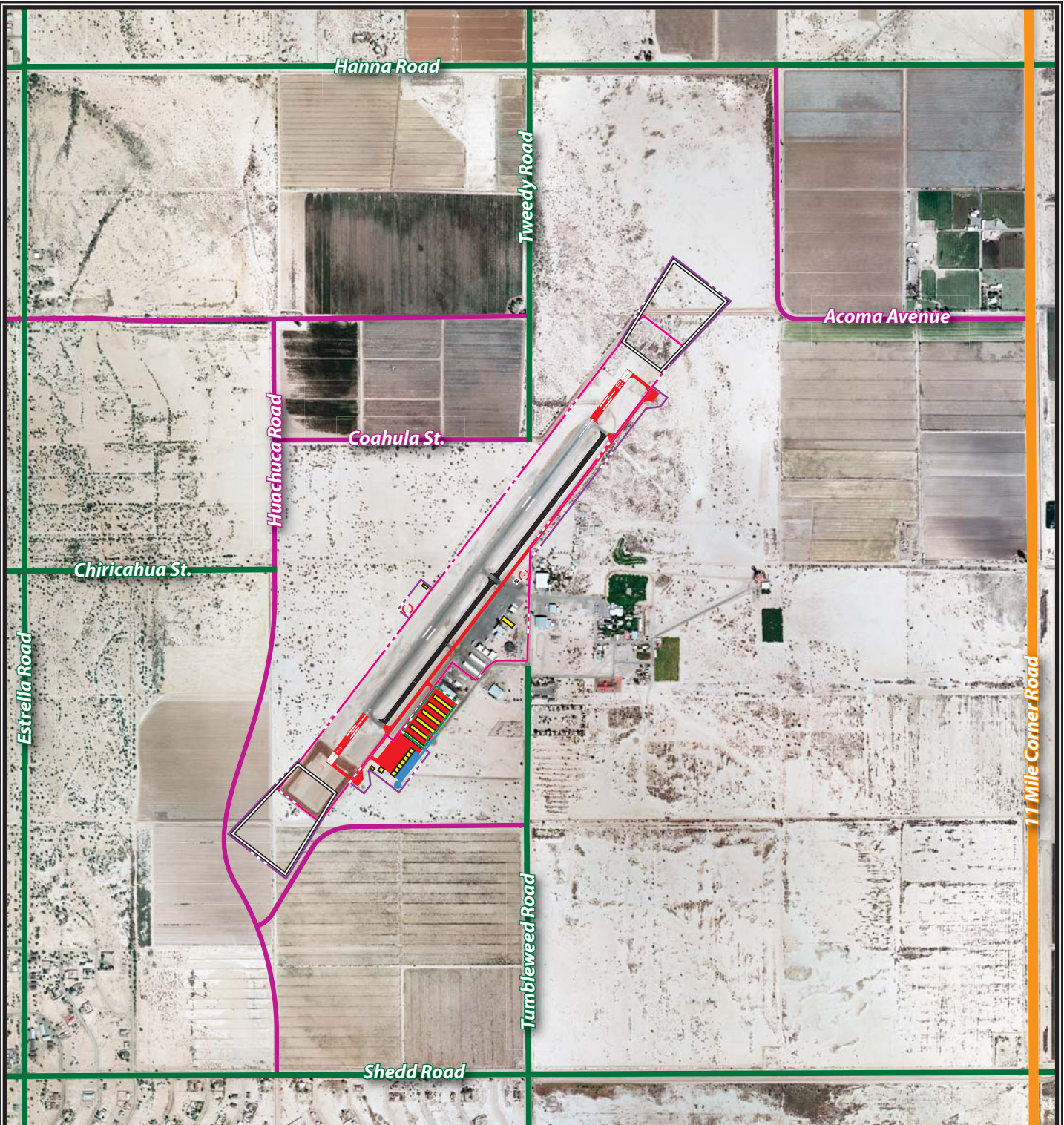
According to the SATS, Huachuca Road would ultimately pass through the Runway 2 RPZ, which would infringe upon current FAA airfield safety policies. To mitigate potential safety issues, it is recommended that Huachuca Road be realigned as depicted on **Exhibit 5B** around the western edge of the RPZ. A collector roadway extending from Tumbleweed Road to Huachuca Road is also planned to improve public vehicle circulation and access potential south of the airport.

SUMMARY

The Master Plan for Eloy Municipal Airport has been developed in coopera-

tion with the PAC, interested citizens, and the City of Eloy. It is designed to assist the City in making decisions relative to the future use of Eloy Municipal Airport as it is maintained and developed to meet its role as defined in Chapter Two.

Flexibility will be a key to the plan, since activity may not occur exactly as forecast. The Master Plan provides the City with options to pursue in marketing the assets of the airport for community development. Following the general recommendations of the plan, the airport can maintain its viability and continue to provide air transportation services to the region.



LEGEND

	Airport Property Line		Collector - 2 Lanes
	Ultimate Airport Property Line		Major Arterial - 4 Lanes
	City Owned Property		Minor Arterial - 4 Lanes
	Ultimate Airport Pavement		
	Ultimate Airport Roads / Parking		
	Ultimate Airport Building		
	Pavement to be Removed		
	Runway Protection Zone (RPZ)		

Source:
City of Eloy Small Area Transportation Study, 2009.

0 1500 3000
SCALE IN FEET

NORTH

