CHAPTER 5

RECOMMENDED MASTER PLAN CONCEPT

AIRPORT MASTER PLAN

The planning process for Coolidge Municipal Airport has included several analytical 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 facility needs. The planning process, thus far, has included the presentation of two draft phase reports to the Planning Advisory Committee (PAC).

The PAC is comprised of several constituencies with an investment or interest in Coolidge Municipal Airport. This diverse group has provided extremely valuable input during this study. A plan for the use of the airport has evolved considering input from the PAC, City of Coolidge, Federal Aviation Administration (FAA), and Arizona Department of Transportation (ADOT) - Aeronautics Group. The purpose of this chapter is to describe, in narrative and graphic form, the plan for the future use and development of Coolidge Municipal Airport.

MASTER PLAN CONCEPT

The Master Plan Concept represents the development direction for Coolidge Municipal Airport through the 20-year planning period and beyond. This concept is the consolidation and refinement of the airside and landside planning alternatives presented in Chapter Four into a single recommended concept. It is important to note that the finalized concept provides for anticipated facility needs over the next 20 years, as well as establishing a vision and direction for meeting facility needs beyond the planning period of this Master Plan.

AIRSIDE DEVELOPMENT PLAN

Airside components include the runways, parallel and connecting taxiways, lighting and marking aids, and imaginary surfaces which help provide a safe operating environment for aircraft. The major airside issues addressed in the Master Plan Concept include the following list. The sections to follow detail the airside development recommendations as depicted on **Exhibit 5A**.

- Adhere to appropriate safety design standards on runways and taxiways.
- Improve instrument approach procedures on all runway ends.
- Acquire land for approach protection and potential runway extension.
- Extend Runway 5-23 2,638 feet to the northeast should additional length ever be warranted by aircraft operators in the future.
- Upgrade runway and taxiway lighting, visual approach aids, and airfield signage.
- Construct additional taxiways and realign existing taxiways associated with Runways 5-23 and 17-35.
- Extend Runway 17-35 400 feet to the north in order to accommodate a full-length parallel taxiway on the west side of Runway 5-23 while providing appropriate safety measures.
- Strengthen Runway 17-35 to 30,000 pounds single wheel loading (SWL).
- Construct hold aprons at each runway end.
- Install an Automated Weather Observation System (AWOS).

Airfield Design Standards

As a result of accepting federal grant funding, Coolidge Municipal Airport is a federally obligated airport and must comply with FAA design and safety standards. The FAA has established these design criteria to define the physical dimensions of runways and taxiways and the imaginary surfaces surrounding them that ensure 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 Chapters Three and Four, FAA design criterion, categorized by Airport Reference Code (ARC), is a function of the critical design aircraft's approach speed, wingspan, and/or tail height, and in some cases, the runway approach visibility minimums. The critical design aircraft is defined as the most demanding aircraft or "family" of aircraft which will conduct 500 or more itinerant operations per year at the airport.

As detailed in Chapter Three, Coolidge Municipal Airport is used by a wide range of aircraft. These aircraft include, at a minimum, single and multi-engine piston aircraft within ARCs

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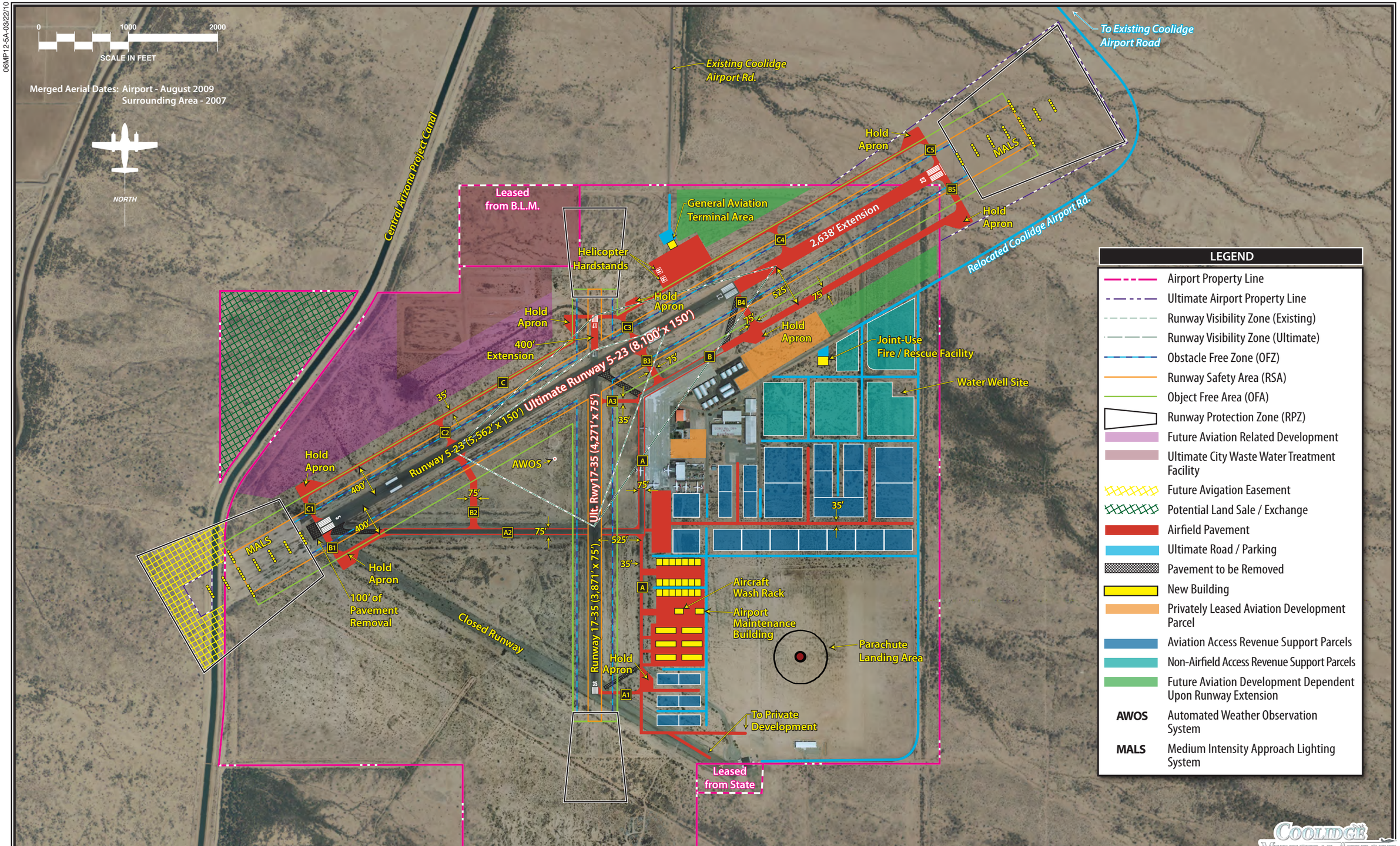

COOLIDGE MUNICIPAL AIRPORT

Exhibit 5A
MASTER PLAN CONCEPT

A-I and B-I; turboprop aircraft within ARCs A-II, B-I, B-II, and C-IV; and business jet aircraft within ARCs B-I, B-II, and C-I. The Lockheed C-130 turboprop aircraft, which is categorized within ARC C-IV, is the most demanding aircraft to utilize the airport in terms of approach speed and wingspan. Previous analysis has indicated that the C-130 exceeds the 500 annual operations threshold as determined by FAA to define the critical aircraft. As a result, it has been determined that the current airfield configuration should meet ARC C-IV design standards.

The Master Plan anticipates that Coolidge Municipal Airport will continue to accommodate significant volumes of C-130 aircraft operations through the long term planning period in addition to larger and more sophisticated business jet and turboprop aircraft. Analysis in the previous chapters indicated that each runway at Coolidge Municipal Airport is expected to serve different types of aircraft; therefore, an ARC has been assigned separately for each runway at the airport and used in the development and ultimate Master Plan Concept. As the primary runway at the airport, Runway 5-23 will serve the needs of all aircraft expected to utilize the airport. For this reason, the runway is planned for the most demanding ARC C-IV standards. It was determined that crosswind Runway 17-35 needs only to conform to ARC B-II design standards.

Adhering to ARC C-IV design standards on Runway 5-23 will allow the airport to accommodate a large range of turboprop and jet aircraft on the market today while ensuring the safety of these operations. Moreover, meeting these design requirements will allow the airport to be well positioned to remain competitive for aviation-related development and those businesses which have aviation needs.

- **Adhere to appropriate safety design standards on runways and taxiways**

The Master Plan Concept considers the object free area (OFA) deficiency adjacent to the southwest end of Runway 5-23. As previously discussed, the FAA defines the runway OFA as an area centered on the runway extending laterally and beyond each runway end, in accordance with the critical aircraft design category utilizing the runway. The OFA must provide clearance of all ground-based objects protruding above the runway safety area (RSA) edge elevation, unless the object is fixed by function serving air or ground navigation. For Runway 5-23, ARC C-IV design standards apply which constitute an OFA that is 800 feet wide, extending 1,000 feet beyond each runway end.

The southwestern-most portion of the existing OFA on Runway 5-23 is obstructed by a levee and fence that are associated with the Central Arizona Project Canal. These facilities rise above the RSA edge elevation and, therefore, constitute a penetration to the OFA. The development plan considers abandoning the last 100 feet of pavement at the southwest end of Runway 5-23. As a result, all safety areas, including the OFA, are shifted

100 feet to the northeast, which clears the OFA from the levee system and fence associated with the Central Arizona Project Canal. In doing so, the airport is also able to gain positive control over the entire OFA. A northeasterly extension on Runway 5-23 is detailed in the analysis to follow, which would more than make up for the 100 feet of pavement removal called for to mitigate the OFA deficiency at the southwest end. The timing of pavement removal on the southwest end of Runway 5-23 could correspond with a runway extension to the northeast so as to not decrease usable runway length for future operations.

Design standards associated with airfield taxiways are related to the critical aircraft's airplane design group (ADG). A taxiway width of 75 feet is called for in order to conform to ADG IV standards. Currently, all existing taxiways at the airport range in width from 40-50 feet. The Master Plan Concept calls for widening certain taxiways to 75 feet to accommodate the C-130 aircraft which is the airport's existing and ultimate critical aircraft. Only certain taxiways on the east side of Runway 5-23 are proposed to be widened to 75 feet, as the Master Plan assumes future C-130 operations will focus in and around existing landside facilities on the east side of the airport. As proposed on the development concept, existing and ultimate taxiways labeled as A2, B, B1, B2, B3, B4, 5, and the northern portion of Taxiway A should be widened to 75 feet.

- **Improve instrument approach procedures on all runway ends**

There are currently two published instrument approach procedures serving Coolidge Municipal Airport. Both procedures are non-precision in nature providing course guidance information to pilots, with one serving Runway 5 and the other serving Runway 23. Where possible, approach minimums should be as low as practical considering safety and financial constraints. Lower approach minimums and/or straight-in instrument approach procedures could prevent aircraft from having to divert to another airport when visibility and cloud ceilings are lower than currently provided, which can cause financial hardship for the operator, on-airport business, and the City.

As a result, the Master Plan Concept calls for additional straight-in instrument approaches to Runway 5-23 at the airport that would allow for visibility minimums as low as ¾-mile and cloud ceilings as low as 200 feet above ground level (AGL). The installation of a medium intensity approach lighting system (MALS) is required to achieve these visibility minimums and cloud ceiling requirements. Further engineering analysis would be needed to determine the location of a MALS on either runway end.

Straight-in instrument approaches serving each end of Runway 17-35 are also called for on the development plan. In the event that Runway 5-23 were to be closed for emergency and/or maintenance reasons, Runway 17-35

would be the only available means for aircraft to access the airport. Thus, it is important that this runway be accessible at all times. The plan proposes each end of Runway 17-35 support a non-precision instrument approach with visibility minimums not lower than one mile.

A large majority of new instrument approach procedures are being developed with global positioning system (GPS). With the development of the Wide Area Augmentation System (WAAS), as discussed previously in Chapters Three and Four, a GPS WAAS approach provides for both course and vertical navigation, similar to a traditional instrument landing system (ILS) precision approach. As WAAS continues to be upgraded and the Local Area Augmentation System (LAAS) is implemented, precision approaches similar to an ILS should become available for Coolidge Municipal Airport via GPS. The LAAS enhancement serves to further improve the GPS data, making it more precise and in line with current ILS standards.

Planning considers all future straight-in instrument approaches at the airport to utilize GPS capabilities. Future analysis completed by the FAA separate from this study will determine the types of instrument approach procedures and corresponding minimums that could serve the airport. As called out in previous chapters, in the event that either or both ends of Runway 5-23 were served with a GPS localizer performance with vertical guidance (LPV) approach, the MALS is recommended but may not be required.

- **Acquire land for approach protection and potential runway extension**

With the onset of improved instrument approach procedures to Runway 5-23, the proposed runway protection zones (RPZs) will further expand to include areas outside existing airport property. Furthermore, the potential for extending Runway 5-23 to the northeast, as depicted on the development plan, would require additional property to be controlled by the airport. The Master Plan Concept depicts two types of land acquisition. The first type called for would secure the land necessary to accommodate a 2,638-foot runway extension and associated RPZ to the northeast in addition to providing for the MALS. As a result, approximately 78.5 acres of land should be acquired through fee simple property acquisition on the northeast side of the airport. In addition, approximately 3.8 acres of land should be acquired southwest of the airport to secure land necessary to install the MALS serving Runway 5.

The second type of land acquisition calls for an avigation easement over the remaining 21 acres of land located within the RPZ southwest of the airport. An avigation easement on this property could be designed to control both land use development and the airspace above, which should be adequate as long as the land use remains vacant or compatible with airport operations.

It should be noted that approximately 32 acres of airport property are currently located on the west side of the

Central Arizona Project Canal. It would be difficult to utilize this property for aviation-related development due to the canal serving as a physical barrier that would not allow aircraft access to existing airfield facilities. Consideration could be given to potentially selling this parcel or exchanging portions of this property with adjacent land that would be needed for acquisition of RPZs and/or a runway extension. Land currently depicted on the development plan for ultimate property acquisition and/or avigation easement falls under the jurisdiction of the State of Arizona and Central Arizona Project. Further analysis outside this Master Plan would be needed to consider the likelihood of a land sale or exchange.

- **Extend Runway 5-23 2,638 feet to the northeast should additional length ever be warranted by aircraft operators in the future**

The Master Plan Concept includes extending Runway 5-23 2,638 feet to the northeast, allowing for 8,100 feet of usable runway pavement. It should be noted that the ultimate runway length considers 100 feet of pavement being removed from the southwest end of Runway 5-23 in order to mitigate the OFA deficiency as previously discussed.

This extension would require the relocation of Coolidge Airport Road, which currently provides access to and from landside development at the airport. In order to provide the highest level of safety, the development plan considers relocating the roadway outside all safety areas associated with the runway extension, including the RPZ. As depicted, the relocation of Coolidge Airport Road would extend beyond existing airport property over areas of land currently owned and controlled by the Arizona State Land Department. The relocated roadway could tie into existing Coolidge Airport Road farther north of the airport.

The runway extension is planned to allow for increased useful load (fuel, passengers, and baggage) and longer stage lengths for jet aircraft that may operate at the airport in the future. While allowing for adequate operations for most of the current aircraft fleet utilizing the airport, including the C-130, the present length of Runway 5-23 can limit the useful load of some larger aircraft when daily temperatures climb well above 100 degrees, which occurs frequently during the summer months at Coolidge Municipal Airport. Consequently, some aircraft must reduce passenger and/or fuel loads to operate from Runway 5-23, especially during the warmest summer months.

In the event that typical business jet aircraft, such as the Cessna Citation 550 and 650, Challenger 600, Beechjet 400, Lear 35, or Gulfstream family, all which require lengths longer than 5,562 feet, begin to operate at the airport on a much more frequent basis, necessary justification may be made to extending the runway length to as much as 7,000 feet.

Data on the most demanding jet aircraft currently utilizing the airport al-

so revealed that a large majority of existing flights from the airport are regional in nature with shorter stage lengths. This eliminates the need to stop enroute for additional fuel. If the stage lengths of these demanding aircraft were to increase, justification could be made for additional runway length as shown on the development plan to allow for increased useful loads in terms of fuel.

Specialty operators currently located at the airport to include International Air Response and Complete Parachute Solutions have indicated a desire to ultimately operate larger air cargo and military jump aircraft. Personnel from these companies have indicated that at least 7,000 feet of runway length would be needed to safely accommodate these prospective aircraft.

It should be noted that the runway extension included in this Master Plan is for planning purposes only and this document does not justify a runway extension utilizing federal grant funding. Justification for funding the runway extension will be required outside the Master Plan process and closer to the time for implementation should justification exist. Including this extension in the Master Plan allows the City to take appropriate measures to ensure that there are no hazards or obstacle penetrations to the airspace surrounding the airport that could in the future prevent the extension, while allowing for compatible land uses to be planned in the extended runway approach/departure areas. As previously discussed in Chapter One, the *2007 City of Coolidge General Plan* shows significant development in areas adjacent to existing airport property. Being able to protect specific areas for airport development is vital to the continued and future success of the Coolidge Municipal Airport, City of Coolidge, and surrounding areas.

Justification for a runway extension will require that the airport detail 500 annual operations by aircraft users that require a longer runway length than what currently exists. This documentation is usually in the form of a letter of support from the users detailing the following:

1) Aircraft type;
2) Number of annual operations; and
3) Runway length required to operate to their intended destination with full passenger loading assuming the mean maximum temperature of the hottest month and existing runway gradient.

- **Upgrade runway and taxiway lighting, visual approach aids, and airfield signage**

Currently, Runway 17-35 is not provided with medium intensity runway lighting (MIRL), which limits its use to daytime operations only. MIRL would provide pilots with positive identification of the runway and its alignment during nighttime and/or poor visibility conditions. As a result, MIRL should be applied to Runway 17-35 during the short term planning period of this study.

Medium intensity taxiway lighting (MITL) is also limited to two existing

taxiways serving the east side of the airfield. In an effort to increase safety and provide enhanced guidance for aircraft taxiing during nighttime conditions, MITL should be applied to all active taxiways, both existing and ultimate, at Coolidge Municipal Airport.

The Master Plan Concept includes the installation of runway end identification lights (REILs) on each end of Runways 5-23 and 17-35. This will provide pilots with the improved ability to distinguish the runway ends during nighttime conditions. REILs should be considered for all lighted runway ends not planned for a more sophisticated approach lighting system. As a result, REILs are recommended on Runway 17-35 in the event that MIRL is implemented. As the primary runway, Runway 5-23 should contain at least REILs in the short term. In the event that a MALS was to be implemented on this runway as shown on the development plan, the REILs serving each runway end could be removed.

Runway 5-23 is currently served with two-box precision approach path indicators (PAPI-2s) that provide pilots with visual guidance information during landings to each runway end. PAPI-2s should be installed on each end of Runway 17-35 to further enhance airfield operational efficiency and safety. The airfield plan considers upgrading to a four-box PAPI (PAPI-4) on each end of Runway 5-23 in order to better serve larger and quicker aircraft that currently use and are projected to frequent the airport more regularly.

The development plan also considers designating all taxiways in conformance with FAA Advisory Circular (AC) 150/5340-18D, *Standards for Airport Sign Systems*. This AC specifies that the entrance/exit taxiways that connect the runways and parallel taxiways should be assigned alphanumerically. Potential taxiway designations following the recommendations of the AC are depicted on the development plan. In addition to designating the taxiways, signage referring to holding positions, routes/directions, and runway exits should be implemented.

- **Construct additional taxiways and realign existing taxiways associated with Runways 5-23 and 17-35**

Currently, there are three entrance/exit taxiways on the east side of Runway 5-23. This includes one entrance/exit taxiway at each runway end and one taxiway leading to/from the intersection of both runways. The Master Plan Concept includes removing the taxiway leading to/from the intersection of Runways 5-23 and 17-35 in order to provide better separation of aircraft that could potentially be using both runways simultaneously. As a result, the construction of a new taxiway is proposed approximately 400 feet northeast providing access to the existing aircraft parking apron. An additional exit taxiway is proposed farther southwest approximately 1,800 feet from the Runway 5 threshold. A parallel taxiway, called out

as Taxiway B on the development plan, would also be extended to accommodate the proposed runway extension to the northeast.

The extension of Taxiway A approximately 1,800 feet to the south is also called for in the development plan that provides a full length parallel taxiway serving Runway 17-35. Extending this taxiway to the south will improve airfield efficiency and safety and will also provide access to potential landside development on the east side of the airport. It should be noted that a taxiway is proposed approximately 300 feet south of the intersection of both runways connecting Runway 17-35 to the existing aircraft parking apron that replaces the existing taxiway farther north. The development plan also realigns the existing and ultimate entrance/exit taxiways serving all runway ends at the airport perpendicular to the runway centerline in order to allow pilots with improved line-of-sight capability to the approach ends of each runway.

The Master Plan Concept also depicts the construction of a parallel taxiway on the west side of Runway 5-23 in order to satisfy potential landside development in the northwest area of the airport. This taxiway could provide access to aircraft storage hangars and aviation-related businesses. The parallel taxiway is planned for 400 feet of separation from the Runway 5-23 centerline in order to adhere to ARC C-IV design standards. Although the runway is designed to ADG IV standards, this parallel taxiway would be designed to meet ADG II aircraft since the movement of ADG IV aircraft, in particular the C-130, is expected to be limited to existing areas on the east side of the airport.

- **Extend Runway 17-35 400 feet to the north in order to accommodate a full-length parallel taxiway on the west side of Runway 5-23 while providing appropriate safety measures**

It was determined that the current Runway 17 threshold is located within the existing and ultimate obstacle free zone (OFZ) associated with Runway 5-23. It is recommended that the Runway 17 threshold be relocated outside the OFZ to provide a greater level of safety associated with the runway system at Coolidge Municipal Airport. As illustrated on **Exhibit 5A**, a 400-foot northerly extension is called for on Runway 17-35. As previously discussed in Chapter Three, although the current length of 3,871 feet on this runway could limit some aircraft in ARC B-I and B-II on hot days, its length is adequate in the capacity as serving as the airport's crosswind runway. The primary purpose of extending the runway is to enhance safety associated with the intersecting runway system, while also accommodating a full-length parallel taxiway on the west side of Runway 5-23.

- **Strengthen Runway 17-35 to 30,000 pounds SWL**

The current strength rating on Runway 17-35 is 17,000 pounds SWL. This strength rating should be adequate to meet the mix of aircraft cur-

rently utilizing the airport; however, the recommended development plan includes reconstructing Runway 17-35 to obtain an ultimate SWL of 30,000 pounds. This will meet the ARC B-II critical design aircraft for the runway on a regular basis as the number of aircraft operations is forecast to increase over the next several years.

- **Construct hold aprons at each runway end**

The current airfield alignment does not include hold aprons. Hold aprons are recommended to be constructed serving each end of Runway 5-23 and Runway 17-35 in order to provide an area for aircraft to prepare for departure and/or bypass other aircraft which are ready for departure. Hold aprons also provide a designated area for transient and local aircraft to perform engine run-ups for maintenance purposes.

- **Install an AWOS**

An AWOS is planned to be implemented approximately 150 feet south of the existing segmented circle and wind cone located in the midfield area of the airport. This location meets the recommended separation criteria from the primary runway as set forth in FAA Order 6560.2B, *Siting Criteria for Automated Weather Observing Systems*. Electric utility service can be extended to this location from the Runway 5-23 lighting system, located approximately 500 feet to the northwest. The AWOS will provide important weather information to pilots such as wind conditions, visibility, cloud ceilings, and altimeter settings.

LANDSIDE DEVELOPMENT PLAN

Landside components include aircraft storage hangars, aircraft parking aprons, hangar and apron access taxiways and taxilanes, fuel storage facilities, terminal areas, and vehicle parking lots which help provide the interface between air and ground transportation modes. The primary goal of landside facility planning is to provide adequate aircraft storage space to meet the forecast need, while also maximizing operational efficiencies and land uses. Achieving this goal yields a development scheme which segregates aircraft users (large vs. small aircraft).

The landside plan for Coolidge 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 and non-aviation development. Future construction of landside facilities is anticipated to be done through a combination of private and public investments.

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, aircraft storage hangars will be constructed only if new based aircraft owners desire enclosed aircraft storage. The landside

plan is based on projected needs that can change over time. The landside plan is developed with flexibility in mind to ensure the orderly development of the airport should this demand materialize.

It should be noted that standards have been developed for pilot visibility between intersecting runways, such as the case at Coolidge Municipal Airport. For intersecting runways, a clear line-of-sight between the ends of intersecting runways is recommended. The runway visibility zone (RVZ) outlines the area needed to be clear of obstructions so that proper visibility can be maintained. With the proposed northeasterly extension on Runway 5-23, the RVZ would further shift to the northeast and encompass more area, especially east of the runway intersection. Fortunately, existing infrastructure will remain just outside the shifted RVZ. As a result, the ultimate RVZ will not impose any significant restrictions to future airport development.

The following list includes the major considerations for landside improvements at Coolidge Municipal Airport throughout the planning period. **Exhibit 5A** depicts the recommended landside development plan for the airport.

- Construct additional aircraft storage hangars.
- Provide additional apron space for aircraft parking and support future aviation-related development.
- Extend aircraft access to the east side of the airport providing for additional aviation development.
- Construct aviation support facilities to include a fire/rescue facility, airport maintenance building, and an aircraft wash rack.
- Designate non-aviation development parcels on airport property to further enhance potential revenues.
- Maintain the existing parachute landing area free of hazards within a radial distance of 1,000 feet.
- Identify existing airport property on the west side of Runway 5-23 for future aviation-related development.

Hangars and Aviation Development Parcels

The Master Plan Concept shows the location for potential hangar development at the airport. **Table 5A** presents the existing and ultimate aircraft hangar storage area as determined previously in Chapter Three.

As can be seen from the table, the Master Plan Concept provides approximately 183,900 square feet of hangar space. The need over the next 20 years is estimated at 45,900 square feet should demand for based aircraft and annual aircraft operations grow according to the forecasts presented in

Chapter Two. Therefore, the hangar layout presented represents a vision for the airport that extends beyond the scope of this Master Plan. The reason for this is to provide airport decision-makers with dedicated areas on the airport that should be reserved for certain hangar types.

TABLE 5A
Hangar Space Planned
Coolidge Municipal Airport

	Current Supply Estimate	20-Year Supply Forecast	Total 20-Year Need	Provided in Master Plan
Based Aircraft	38	90	52	
Hangar Area Requirements (square feet)				
Hangar Area	71,200	117,100	45,900	
Maintenance Area Reserve	18,000	15,800	0	
Total Hangar Storage Area	89,200	132,900	45,900	183,900

Source: Coffman Associates analysis

The hangar layout meets the separation of activity levels philosophy previously discussed in Chapter Four. In order for the hangar development to occur as illustrated on the Master Plan Concept, Taxiway A must be extended farther south to provide aircraft access to these development areas. As proposed, 21 separate executive-style hangars intended for private aircraft owners and/or aviation businesses and six storage hangars that could provide aircraft storage space similar to a T-hangar or box hangar are located immediately east of the Taxiway A extension. The hangars would share a large apron area while being separated by aviation support facilities to be discussed later.

Also included on the development plan are several parcels dedicated for aviation-related development on the east side of the airport. Northeast of the current terminal area adjacent to the existing Runway 23 threshold are approximately eight acres of airport property currently being leased to a private entity to construct future aviation-related development. The potential exists for this area to accommodate aircraft storage hangars as demand dictates. Contrary to the previously discussed hangar storage facilities proposed farther south, this area is adjacent to existing taxiway access and provided utility infrastructure for immediate development. Farther northeast, approximately ten acres of land are identified for future aviation development dependent on a runway extension. Specialty aviation businesses and/or fixed base operators (FBOs) could occupy this high-activity area that would be provided immediate access to the runway and taxiway system.

The existing terminal area contains a two-acre parcel that has recently been

leased to a private entity which plans to construct a large hangar facility to support its specialty aviation operation in the near future. The Master Plan Concept also proposes the expansion of the terminal apron farther south to encompass an additional 17,100 square yards of apron space. Two undeveloped parcels that provide aircraft access to the apron expansion are depicted, each totaling approximately 1.7 acres. Parcels such as these are popular because business entities can lease airport property and then construct a custom hangar facility to meet the needs of their operation. Placed in a desirable midfield location on the airport with immediate taxiway access leading to either runway, these parcels could support high-activity aviation operations similar to an FBO or specialty business such as those currently at the airport.

The development plan also focuses on vacant property farther east of the existing terminal area and flight line. Before any aviation development can take place in this area, aircraft access will need to be provided. A taxiway extending approximately 2,700 feet to the east would provide access to several parcels ranging in size from approximately one acre to 3.7 acres. Three additional taxiways extending north from the east/west taxiway could further enhance potential aviation development. It should be noted that the design and separation standards for this proposed taxiway development supports ADG II design. Moving to the south side of the airfield adjacent to proposed Taxiway A, six ½-acre parcels are proposed that could be leased to private aircraft owners or business operators to construct aviation-related facilities.

Table 5B provides a breakdown of the potential aviation development parcels on the east side of Coolidge Municipal Airport as depicted on the Master Plan Concept. As proposed, there are 28 individual parcels that total approximately 44.5 acres of space. Significant improvements will be needed for the utilization of this area to include site preparations, roadway access, and utility extensions. Careful consideration should be given regarding the implementation of staging projects in these areas. While the recommended development plan shows total build-out, actual demand will dictate the timeline for future development.

TABLE 5B
East Side Proposed Parcel Development
Coolidge Municipal Airport

Parcel Size	Number of Parcels	Total Acreage
Less than One Acre	6	3
Between One and Two Acres	17	24.2
Between Two and Three Acres	1	2.5
Greater Than Three Acres	4	14.8
Total Proposed Parcel Development	**28**	**44.5**

Source: Coffman Associates analysis

Aviation Support Facilities

Currently, the airport does not have a facility that would allow for the proper disposal of aircraft cleaning fluids nor does it have a dedicated building to store and maintain airport equipment. As a result, the development plan calls for the construction of an aircraft wash rack and dedicated airport maintenance building on the south side of the airport adjacent to the proposed hangar storage facilities discussed previously. Vehicle access to this area would be via a roadway extending south from the existing terminal area.

A joint-use fire/rescue facility that would serve both the airport and surrounding areas is also shown adjacent to Coolidge Airport Road. Although not required at a general aviation airport such as Coolidge Municipal Airport, the facility would bring an added safety enhancement to aircraft operations and businesses. The facility would have to be funded locally since it is not an FAA requirement to have such a facility on the airport.

Non-Aviation Development Parcels

The Master Plan Concept also reserves land on the east side of the airport for non-aviation parcels that could support commercial and/or industrial development. Five separate parcels are depicted on the development plan, ranging in size from two acres to nine acres. This type of land use would be compatible with aviation activities conducted at the airport and be similar to those activities that currently exist on the nine-acre parcel being leased directly east of the existing terminal area. Improved automobile access and utility infrastructure would be needed in order to accommodate these non-aviation land uses which could further enhance airport revenue support.

Parachute Landing Area

As detailed in Chapter Four, an active parachute landing area associated with Complete Parachute Solutions is located on the southeast side of the airport. Due to the nature of the parachute operations as they relate to specialized military training, the Master Plan Concept maintains a 1,000-foot radial distance free of development from the center of the landing area. As a result, no future development is proposed in the southeast area of the airport.

West Landside Plan

A large area of vacant airport property extends west of Runway 5-23. As previously discussed, the development plan depicts a parallel taxiway on the west side of Runway 5-23 that would accommodate future development in this area. While forecast aviation demand is expected to be met on the east side of the airport through the planning period of this study, the Master Plan Concept designates over 100 acres of property for future aviation development. In particular, approximately 23 acres of existing airport property on the north side of the airport could be dedicated for a general

aviation terminal area to include a terminal building and aircraft parking apron. This concept allows the potential for separation between typical general aviation activities that could take place on the west side of the airport from specialty operations such as those currently being conducted on the east side of the airport. Extensive utility infrastructure and roadway access would be needed to prepare the west side of the airport for any type of development. It should be noted that the development plan sets aside approximately 25 acres on the northwest side of the airport to accommodate a future waste water treatment facility as proposed by the City of Coolidge.

SUMMARY

The recommended Master Plan Concept is designed to assist in making decisions on the future growth and development of Coolidge Municipal Airport. Flexibility will be very important to future development at the airport, as activity may not occur as predicted. The recommended plan provides the airport stakeholders with a general guide that, if followed, can maintain the airport's long term viability and allow the airport to continue to provide air transportation service to the region.

Chapter Six

CAPITAL IMPROVEMENT PROGRAM