CHAPTER 4
AIRPORT ALTERNATIVES

In the previous chapter, the aviation facilities required to satisfy airside and landside demand through the long-term planning period of the master plan were identified. In addition, several Federal Aviation Administration (FAA) standards were discussed that apply to airfield design. The next step in the planning process is to evaluate reasonable ways these facilities can be provided while meeting design standards. The purpose of this chapter is to formulate and examine rational development alternatives that address the short-, intermediate-, and long-term planning horizon levels. Because there are multiple possibilities and combinations, it is necessary to focus on the opportunities that have the greatest potential for success. Each alternative provides a different approach to meeting existing and future facility needs; these layouts are presented for evaluation and discussion.

Some airports become constrained due to limited availability of space, while others may be constrained due to adjacent land use development or geographical features. Careful consideration should be given to the layout of future facilities and impacts on potential airfield improvements at Paso Robles Municipal Airport (PRB). Proper planning at this time can ensure the long-term viability of the airport for aviation and economic growth.

The primary goal of this planning process is to develop a feasible plan for meeting the needs that result from the projected market demand over the next 20 years. The plan of action should be developed in a manner that is consistent with the future goals and objectives of the City of Paso Robles and airport stakeholders, including users of the airport and the local community and region, all of which have a vested interest in the development and operation of PRB.

The goal is to develop an underlying rationale that supports the final recommended concept. Through this process, an evaluation of the highest and best uses of airport property will be made, while weighing local development goals, efficiency, physical and environmental factors, capacity, and appropriate safety design standards.

The alternatives presented in this chapter have been formulated as potential means to meet the overall program objectives for the airport in a balanced manner. Through coordination with PRB management, the planning advisory committee (PAC), and the public, an alternative (or combination of alternatives) will be refined and modified, as necessary, into a recommended development concept (Chapter 5); therefore, the planning considerations and alternatives presented in this chapter can be considered a beginning point in the evolution of a recommended concept for the future of PRB.

NO-ACTION/NON-DEVELOPMENT ALTERNATIVES

Prior to the presentation of development alternatives for PRB, several non-development options should be taken into consideration. Non-development alternatives include a "no-build" or "do-nothing" alternative, development of a replacement airport at a new location, or closure of the existing airport and the transfer of services to another existing airport. This section presents a discussion of the primary non-development alternatives.

NO-BUILD/DO-NOTHING ALTERNATIVE

The City of Paso Robles is charged with managing the airport for the economic improvement of the community and region. In some cases, alternatives may include a no-action option; for PRB, this would effectively reduce the quality of services being provided to the public, affect the aviation facility's ability to meet FAA design standards, and affect the region's ability to support aviation needs. The ramifications of a no-action alternative expand into impacts on the economic well-being of the region. If facilities are not maintained and improved so the airport can support general aviation operations, delays become unacceptable, or aircraft storage is not available, aviation activities and business may shift elsewhere. The no-action alternative is also inconsistent with a long-term goal of the FAA, which is to enhance local and interstate commerce.

Furthermore, PRB has received nearly $7.3 million in federal grants since 2005. These grants represent a direct economic stimulus that has lasting positive economic impacts. The City of Paso Robles has a vested interest in maintaining and improving airport facilities for business and general aviation users. Without a commitment to the ongoing improvement of the airport, users of the airport will be constrained from taking full advantage of the airport's air transportation capabilities; therefore, a no-action alternative is not considered further in this master plan.

TRANSFER OF SERVICE/RELOCATION OF AIRPORT

This study will not consider the relocation of services to another airport or the development of a new airport site. The development of a new facility is a complex and expensive option. A new site would require greater land area, duplication of investment in facilities, installation of supporting infrastructure that is already available at the existing site, and greater potential for negative impacts to natural, biological, and cultural resources.

As previously mentioned, the City of Paso Robles has accepted nearly $7.3 million in federal development grant funding over the past 20 years. Through grant assurances, the acceptance of these grants obligates the airport sponsor to maintain the airport as an airport. Closing the existing airport and transferring services to another existing airport would be considered a violation of the grant assurances and would require repayment of grants that are not yet fully depreciated. The investments made and the economic benefits received from the airport (both public and private) could not readily be shifted or regenerated to another airport without significant costs/losses. As such, this alternative is not considered practical, reasonable, or financially feasible.

NON-DEVELOPMENT ALTERNATIVES SUMMARY

The purpose of this master plan is to examine aviation needs at PRB over the course of the next 20 years; therefore, this master plan will examine the needs of the existing airport and present a program of needed capital improvement projects to cover the scope of the plan. The airport is a lucrative business, transportation utility, and economic asset for the region. It can accommodate existing and future demand and should be developed accordingly to support the interests of the residents and businesses that rely upon it. Ultimately, the final decision regarding development rests with the City of Paso Robles and the FAA on an individual project basis. PRB is a vibrant facility with abundant remaining growth potential; as such, the non-development alternatives will not be considered further in this planning process. The following analysis covers airside and landside development alternatives that consider an array of facility demands, including safety, capacity, access, and efficiency.

PLANNING OBJECTIVES

A set of basic planning objectives has been established to guide the alternatives development process. It is the goal of this master planning effort to produce a development plan for the airport that addresses the forecasted aviation demand and meets FAA design standards to the greatest degree possible. As the owner and operator of the airport, the City of Paso Robles provides overall guidance for its operation and development. It is of primary concern that PRB is marketed, developed, and operated for the betterment of the community and users of the airport. The following basic planning principles and objectives are utilized as general guidelines during this planning effort:

- Develop a safe, attractive, and efficient aviation facility in accordance with applicable federal, state, and local regulations.
- Preserve and protect public and private investments in existing airport facilities.
- Provide a means for the airport to grow as dictated by demand.
- Establish a plan to ensure the long-term viability of the airport and promote compatible land uses surrounding the airport.
- Develop a facility that is readily responsive to the changing needs of all aviation users.
- Reflect and support the long-term planning efforts that currently apply to the region.
- Develop a facility with a focus on achieving self-sufficiency in operational and developmental cost recovery.
- Ensure future development is environmentally compatible.

REVIEW OF PREVIOUS AIRPORT PLANS

The previous master plan for PRB was completed in 2004. Recommendations from this study included the following:

- Extension of Runway 1-19 by 1,200 feet to the north and 1,000 feet to the south to a length of 8,200 feet and a width of 150 feet to handle business jets, commuter aircraft, and large propeller aircraft
- Planned extension of Runway 13-31 to the northwest to a length of 6,400 feet
- Construction of a full-length parallel taxiway 400 feet southwest of Runway 13-31
- A new runway parallel Runway 1R-19L at a length of 3,400 feet long and 60 feet wide to permit simultaneous operations on the parallel runways
- Extensions of Taxiways C and D to the east of Runway 1-19 to connect to the parallel taxiway for Runway 13-31
- New taxiways off Taxiway E were planned to serve future development at the southwest corner of the airport. A new taxiway was planned off the parallel taxiway for an extended Runway 13-31 to serve future development at the northwest end of the airport.
- Planning for a precision approach to Runway 19R and preservation of the capability for future precision instrument approach procedures to the other three runway ends
- Development of an 8,000-square-foot (sf) passenger terminal building to accommodate scheduled airline service
- Reservation of space for a dedicated all-cargo facility, aircraft parking apron, and truck and vehicular parking area
- Identification of hangar development areas to accommodate a projected need of up to 180 hangar spaces
- Reservation of space west of Runway 1R-19L and north of Taxiway C for the construction of an airport traffic control tower (ATCT)
- Acquisition of properties totaling approximately 173 acres to accommodate runway extensions and establish control over various safety areas

Since the completion of the master plan, the airport has updated its airport layout plan (ALP) drawing set. The current ALP for PRB is from December 2019 and carries forward several recommendations from the 2004 master plan, including extensions to both runways; however, the proposed third runway and other taxiway extensions were eliminated from the plan.

The analysis presented in this chapter revisits some recommendations presented in the previous master plan and 2019 ALP. Since the completion of the last plan, parallel Taxiway A was extended to the Runway 1 threshold, creating a full-length parallel taxiway. In addition, several new hangars have been developed, along with several new non-aeronautical developments throughout the airport.

AIRSIDE ALTERNATIVES

Development alternatives are categorized into two functional areas: airside and landside. Airside considerations relate to elements such as runways, taxiways, navigational aids, lighting, and marking aids, and require the greatest commitment of land area to meet the physical layout of the airport, as well as the required airfield safety standards. The design of the airfield also defines minimum setback distances from the runway and object clearance standards. These criteria are defined first to ensure the fundamental needs of the airport are met. Landside considerations include hangars, aircraft parking aprons, and terminal services, as well as utilization of remaining property to provide revenue support for the airport and benefit the economic development and well-being of the regional area.

The remainder of this chapter describes various development alternatives for airside and landside facilities. Although each area is treated separately, ultimate planning will integrate the individual requirements so they can complement one another.

AIRSIDE CONSIDERATIONS

Table 4A presents the airside considerations that are specifically addressed in this analysis. Landside planning considerations are outlined later in this chapter. These issues are the result of the findings of the aviation demand forecasts and facility requirements evaluations, as well as input from the PAC and airport management. In addition to these considerations, both runways are planned to meet applicable runway design code (RDC) standards.[1] Runway 1-19 is planned to meet RDC C-III-4000 standards in the existing condition and C-IV-4000 standards in the ultimate condition. Runway 13-31 is planned to meet RDC C-III-5000 design standards in both the existing and ultimate condition.

TABLE 4A | Airside Planning Considerations

#	Non-Standard/Deficient Condition	Applicable Design Standard	Proposed Action(s) to be Evaluated
1	At 6,008 feet long, Runway 1-19 is limited in its ability to serve larger business jet aircraft. At 4,701 feet long, Runway 13-31 is limited in its ability to serve small and mid-sized business jets that occasionally utilize the runway during higher crosswind conditions.	FAA AC 150/5325-4B, *Runway Length Requirements for Airfield Design,* Paragraph 306	Consider extension options to a minimum length of 7,200 feet for Runway 1-19 and 5,500 feet for Runway 13-31.
2	Runway 1-19 has only one exit taxiway within the designated 2,000- to 4,000-foot range from the landing threshold for airfield capacity calculation purposes. Runway 13-31 has none.	FAA AC 150/5060-5, Change 2, *Airfield Capacity and Delay*	Consider adding new exits to both runways within the target range to enhance airfield capacity.

(Continues)

[1] Applicable RDC standards are detailed in Chapter 3.

TABLE 4A | Airside Planning Considerations (continued)

#	Non-Standard/Deficient Condition	Applicable Design Standard	Proposed Action(s) to be Evaluated
3	Both runways have deficient runway blast pads.	FAA AC 150/5300-13B, Change 1, *Airport Design*, Paragraph 3.7.4	Add blast pads to each runway end, measuring 200 feet by 200 feet for Runway 1-19 and 140 feet by 200 feet for Runway 13-31.
4	Portions of the Runway 13-31 RPZs are not controlled by the airport via fee ownership or avigation easement. A commercial building is located within the Runway 31 RPZ. Affected property totals approximately 15.1 acres.	FAA AC 150/5190-4B, *Airport Land Use Compatibility Planning*, §2.2.5	Establish control via new avigation easements or fee ownership of all properties within the RPZs. Remove/mitigate incompatible land uses within the RPZs.
5	Runway 13-31 is not equipped with a full-length parallel taxiway, which is recommended for runways planned for instrument approach minimums of greater than one mile.	FAA AC 150/5300-13B, *Airport Design,* Appendix K, Table K-1	Consider adding a parallel taxiway to Runway 13-31.
6	Several taxiways intersect with the runways at acute angles and/or provide direct access to a runway from an aircraft parking apron.	FAA AC 150/5300-13B, Change 1, *Airport Design,* Paragraph 4.3	Consider taxiway design improvements to mitigate non-standard geometry.
7	The segmented circle and lighted wind cone obstruct the ROFA of both runways and the RVZ.	FAA AC 150/5300-13B, Change 1, *Airport Design,* Paragraph 3.12	Relocate the segmented circle and lighted wind cone outside the ROFA.
8	Runways 1 and 13 are not equipped with visual approach aids (PAPI-4s or REILs). Runway 31 is not equipped with REILs.	FAA AC 150/5300-13B, Change 1, *Airport Design,* Paragraph 6.11.14 & K1.1.4	Install PAPI-4 and REIL systems on all runway ends that are not currently equipped to improve pilot situational awareness and meet recommendations for runways planned for instrument approach minimums with one-mile visibility or greater.

PAPI = precision approach path indicator
REIL = runway end identifier lights
ROFA = runway object free area
RPZ = runway protection zone
RVZ = runway visibility zone

Source: Coffman Associates analysis

AIRFIELD ALTERNATIVES

Three alternatives have been prepared to address the items outlined in **Table 4A**. The details of each alternative are described as follows.

Airfield Alternative 1

Airfield Alternative 1 is depicted on **Exhibit 4A** and considers the following:

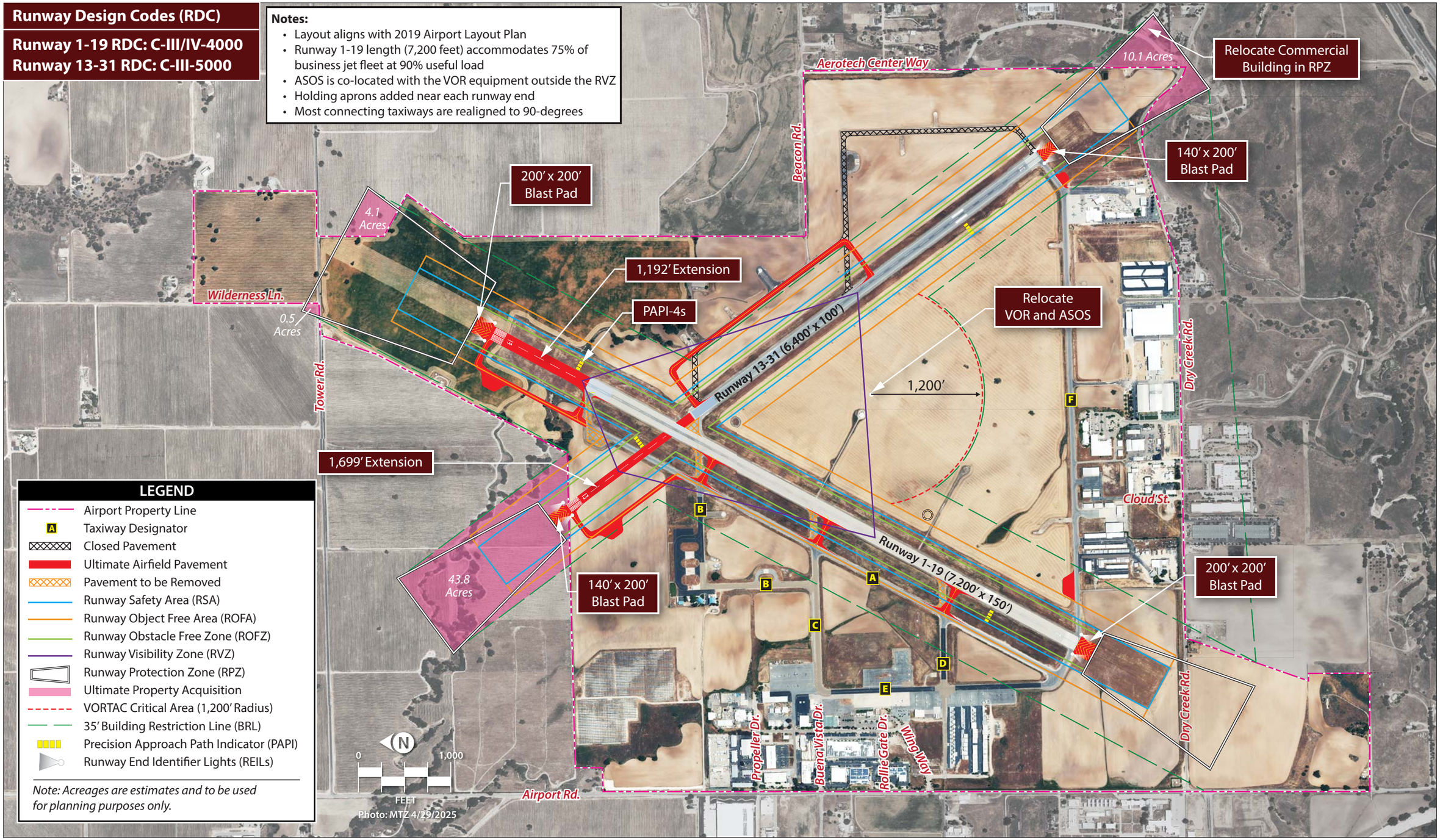
- The layout shown in Alternative 1 aligns with the airfield layout proposed on the 2019 ALP.
- Extension of Runway 1-19 1,192 feet northeast for a full length of 7,200 feet. This length matches the calculated recommended length to accommodate 75 percent of business jets operating at 90 percent useful loads. Connected actions include the following:

Runway Design Codes (RDC)

Runway 1-19 RDC: C-III/IV-4000
Runway 13-31 RDC: C-III-5000

Notes:

- Layout aligns with 2019 Airport Layout Plan
- Runway 1-19 length (7,200 feet) accommodates 75% of business jet fleet at 90% useful load
- ASOS is co-located with the VOR equipment outside the RVZ
- Holding aprons added near each runway end
- Most connecting taxiways are realigned to 90-degrees



LEGEND

- Airport Property Line
- Taxiway Designator
- Closed Pavement
- Ultimate Airfield Pavement
- Pavement to be Removed
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- Runway Visibility Zone (RVZ)
- Runway Protection Zone (RPZ)
- Ultimate Property Acquisition
- VORTAC Critical Area (1,200' Radius)
- 35' Building Restriction Line (BRL)
- Precision Approach Path Indicator (PAPI)
- Runway End Identifier Lights (REILs)

Note: Acreages are estimates and to be used for planning purposes only.

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- Extension of Taxiway A to the new Runway 19 threshold.
- Relocation of the PAPI-4 visual aid on Runway 19 and installation of a new PAPI-4 system for Runway 1.
- Installation of a REIL visual aid on Runway 1.
- Installation of high intensity runway lighting (HIRL) on the new runway pavement and medium intensity taxiway lighting (MITL) on the new taxiway pavement.
- Extension of non-precision runway markings to the new runway pavement.
- Acquisition of approximately 4.6 acres of property to protect the ultimate Runway 19 approach RPZ.
- All connecting taxiways between Taxiway A and Runway 1-19 are planned to be reconstructed to create 90-degree intersections with the runway. Taxiway F would still intersect with the Runway 1 threshold at an acute angle in this alternative.
- 200-foot by 200-foot blast pads are added to both ends of Runway 1-19 to meet RDC C-IV-4000 standards.

- Runway 13-31 is extended 1,699 feet to the northwest for a full length of 6,400 feet. This length exceeds the 6,000-foot recommended length for accommodating 100 percent of business jets operating at 60 percent useful load and would allow the runway to accommodate larger airplane design group (ADG) C and D business jets when operating at between 80 and 90 percent useful loads. Connected actions include the following:
  - Constructing a new partial-parallel taxiway to the Runway 13 threshold from Taxiway A.
  - Installing PAPI-4 visual aids on Runways 13 and 31.
  - Installing REIL visual aids on Runways 13 and 31.
  - Installation of medium intensity runway lighting (MIRL) on the new runway pavement and MITL on the new taxiway pavement.
  - Extension of non-precision runway markings to the new runway pavement.
  - Acquisition of approximately 53.9 acres of property to support the runway extension and to protect the RPZs for both runway ends.
  - The commercial building located within the Runway 31 approach RPZ is to be demolished or relocated.
  - The existing Taxiway B pavement between the Runway 13 threshold and Runway 1-19 is to be removed to mitigate the non-standard taxiway geometry.

  - The extension of Runway 13-31 results in intersecting runways at PRB, causing the runway visibility zone (RVZ) dimensions to increase and encompass the location of the very high frequency omnidirectional range (VOR) navigational equipment. As a result, the VOR would be relocated to an adjacent site outside of the RVZ.
  - 140-foot by 200-foot blast pads are added to both ends of Runway 13-31 to meet RDC C-III-5000 standards.

- A partial-parallel taxiway is planned on the northeast side of Runway 13-31 to support landside developments that could develop in that area of the airport. A disadvantage of this layout is that aircraft utilizing either runway would be required to use runway pavement for taxiing purposes, which is a non-standard condition.
- The automated surface observation system (ASOS) equipment is relocated to the same area as the VOR equipment to open development opportunities to land north of Taxiway F and south of the VOR critical area.
- Holding bays are added near the end of each runway to provide a location for aircraft to conduct pre-flight engine tests and to allow for aircraft bypassing, improving circulation and efficiency.

Airfield Alternative 2

Airfield Alternative 2 is depicted on **Exhibit 4B** and considers the following:

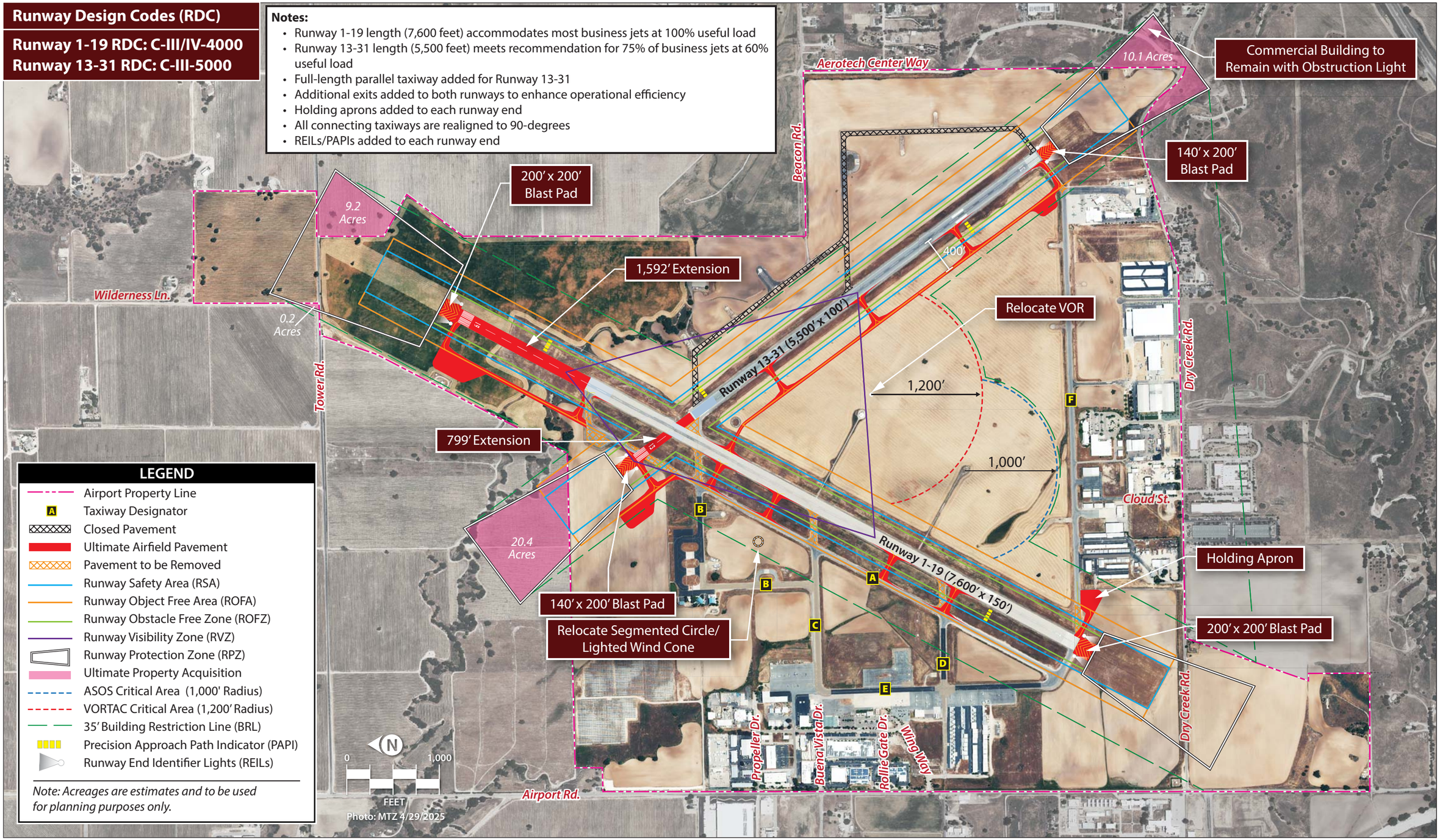
- Extending Runway 1-19 1,592 feet northeast for a full length of 7,600 feet. This length accommodates most ADG C and D business jets at 100 percent useful load. Connected actions include the following:
  - Extending Taxiway A to the new Runway 19 threshold.
  - Relocation of the PAPI-4 visual aid on Runway 19 and installation of a new PAPI-4 system for Runway 1.
  - Installation of a REIL visual aid on Runway 1.
  - Installation of HIRL on the new runway pavement and MITL on the new taxiway pavement.
  - Extension of non-precision runway markings to the new runway pavement.
  - Acquisition of approximately 9.4 acres of property to protect the ultimate Runway 19 approach RPZ.
  - All connecting taxiways on Runway 1-19 are planned to be reconstructed to create 90-degree intersections with the runway, including a new exit for a total of four exits between the Runway 1 threshold and the intersection with Runway 13-31. The exits are spaced to provide two exits within the target 2,000-foot to 4,000-foot area from each runway end to enhance airfield capacity.

Runway Design Codes (RDC)

Runway 1-19 RDC: C-III/IV-4000
Runway 13-31 RDC: C-III-5000

Notes:

- Runway 1-19 length (7,600 feet) accommodates most business jets at 100% useful load
- Runway 13-31 length (5,500 feet) meets recommendation for 75% of business jets at 60% useful load
- Full-length parallel taxiway added for Runway 13-31
- Additional exits added to both runways to enhance operational efficiency
- Holding aprons added to each runway end
- All connecting taxiways are realigned to 90-degrees
- REILs/PAPIs added to each runway end



LEGEND

- Airport Property Line
- Taxiway Designator
- Closed Pavement
- Ultimate Airfield Pavement
- Pavement to be Removed
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- Runway Visibility Zone (RVZ)
- Runway Protection Zone (RPZ)
- Ultimate Property Acquisition
- ASOS Critical Area (1,000' Radius)
- VORTAC Critical Area (1,200' Radius)
- 35' Building Restriction Line (BRL)
- Precision Approach Path Indicator (PAPI)
- Runway End Identifier Lights (REILs)

Note: Acreages are estimates and to be used for planning purposes only.

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  - 200-foot by 200-foot blast pads are added to both ends of Runway 1-19 to meet RDC C-IV-4000 standards.

- Runway 13-31 is extended 799 feet to the northwest for a full length of 5,500 feet. This length meets the recommended length for accommodating 75 percent of business jets operating at 60 percent useful load. Connected actions include the following:

  - Constructing a new full-length parallel taxiway at a 400-foot separation distance, including taxiways at both ends of the runway and three exit taxiways.

  - Installing PAPI-4 visual aids on Runway 13 and 31.

  - Installing REIL visual aids on Runway 13 and 31.

  - Installation of MIRL on the new runway pavement and MITL on the new taxiway pavement.

  - Extension of non-precision runway markings to the new runway pavement.

  - Acquisition of approximately 30.5 acres of property to support the runway extension and to protect the RPZs for both runway ends.

  - The commercial building located within the Runway 31 approach RPZ would remain and be equipped with obstruction lighting.

  - The existing Taxiway B pavement between the Runway 13 threshold and Runway 1-19 would be removed to mitigate the non-standard taxiway geometry.

  - The extension of Runway 13-31 results in intersecting runways at PRB, causing the RVZ dimensions to increase and encompass the location of the VOR navigational equipment. As a result, the VOR would be relocated to an adjacent site outside of the RVZ.

  - 140-foot by 200-foot blast pads are added to both ends of Runway 13-31 to meet RDC C-III-5000 standards.

- Holding bays are added near the end of each runway to provide a location for aircraft to conduct pre-flight engine tests and to allow for aircraft bypassing, improving circulation and efficiency. The holding apron layouts in this alternative are larger than the previous alternative, providing space for more holding aircraft and additional clearance from the taxiway object free area (TOFA) associated with the adjacent taxiway.

Airfield Alternative 3

Airfield Alternative 3 is depicted on **Exhibit 4C** and considers the following:

- Extending Runway 1-19 950 feet northeast for a full length of 6,958 feet. This length is shorter than the target length of 7,200 feet but would avoid the Runway 19 RPZ extending over Tower Road, a public roadway. Public roads are considered an incompatible land use within an RPZ;

however, the FAA will allow for public roads in the RPZ if the sponsor chooses to accept the incompatible condition. If the sponsor chooses not to accept a public road in the RPZ and is unwilling or unable to reroute Tower Road, this alternative provides an option for an extension without introducing a new public road incompatibility to the RPZ. Combining the northeast extension with a southwest extension to reach 7,200 feet in length would not be feasible as any extension in that direction would result in Dry Creek Road extending through the RSA and ROFA and impacting the Runway 1 approach RPZ to a greater degree. Further, the provided 6,958-foot length still accommodates most ADG C and D business jets at between 80 and 90 percent useful loads. Connected actions include the following:

  - Extending Taxiway A to the new Runway 19 threshold.
  - Relocation of the PAPI-4 visual aid on Runway 19 and installation of a new PAPI-4 system for Runway 1.
  - Installation of a REIL visual aid on Runway 1.
  - Installation of HIRL on the new runway pavement and MITL on the new taxiway pavement.
  - Extension of non-precision runway markings to the new runway pavement.
  - Acquisition of approximately 1.4 acres of property to protect the ultimate Runway 19 approach RPZ.
  - All connecting taxiways on Runway 1-19 are planned to be reconstructed to create 90-degree intersections with the runway. The exits are spaced to provide two exits within the target 2,000-foot to 4,000-foot area from each runway end to enhance airfield capacity.
  - 200-foot by 200-foot blast pads are added to both ends of Runway 1-19 to meet RDC C-IV-4000 standards.

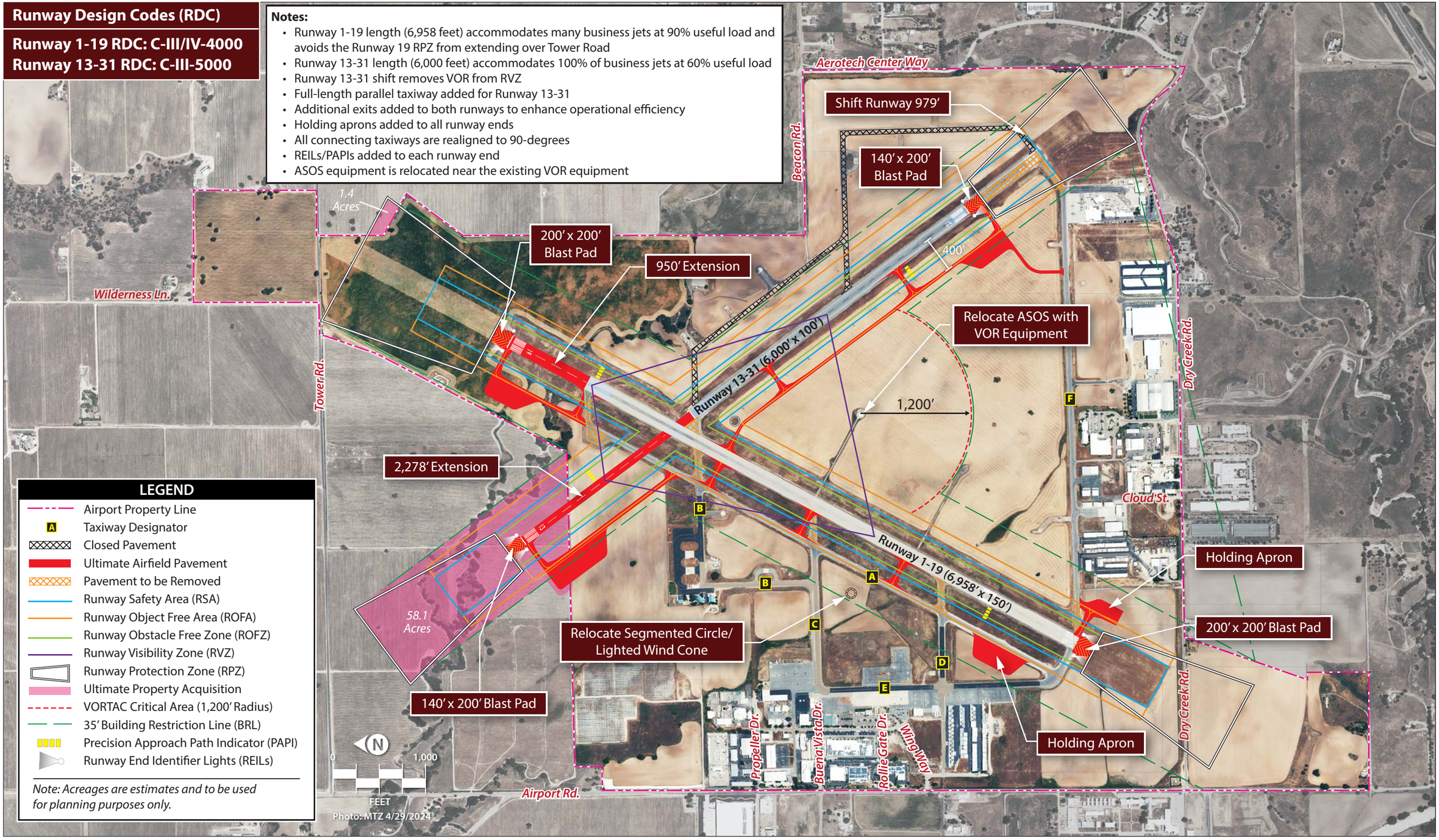
- Runway 13-31 is extended 2,278 feet to the northwest and the Runway 31 threshold is shifted 979 feet for a full length of 6,000 feet. This length meets the recommended length for accommodating 100 percent of business jets operating at 60 percent useful load. Connected actions include the following:
  - Acquisition of approximately 57.6 acres of property to support the runway extension and to protect the Runway 13 RPZ. The Runway 31 RPZ would be shifted onto existing airport property in this alternative, removing the commercial property from the RPZ and eliminating the need to acquire new property southeast of Runway 31.
  - Constructing a new full-length parallel taxiway at a 400-foot separation distance, including taxiways at both ends of the runway and three exit taxiways (including existing Taxiway A).
  - Installing PAPI-4 visual aids on Runways 13 and 31.

Runway Design Codes (RDC)

Runway 1-19 RDC: C-III/IV-4000
Runway 13-31 RDC: C-III-5000

Notes:

- Runway 1-19 length (6,958 feet) accommodates many business jets at 90% useful load and avoids the Runway 19 RPZ from extending over Tower Road
- Runway 13-31 length (6,000 feet) accommodates 100% of business jets at 60% useful load
- Runway 13-31 shift removes VOR from RVZ
- Full-length parallel taxiway added for Runway 13-31
- Additional exits added to both runways to enhance operational efficiency
- Holding aprons added to all runway ends
- All connecting taxiways are realigned to 90-degrees
- REILs/PAPIs added to each runway end
- ASOS equipment is relocated near the existing VOR equipment



LEGEND

- Airport Property Line
- Taxiway Designator
- Closed Pavement
- Ultimate Airfield Pavement
- Pavement to be Removed
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- Runway Visibility Zone (RVZ)
- Runway Protection Zone (RPZ)
- Ultimate Property Acquisition
- VORTAC Critical Area (1,200' Radius)
- 35' Building Restriction Line (BRL)
- Precision Approach Path Indicator (PAPI)
- Runway End Identifier Lights (REILs)

Note: Acreages are estimates and to be used for planning purposes only.

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- Installing REIL visual aids on Runways 13 and 31.
- Installation of MIRL on the new runway pavement and MITL on the new taxiway pavement.
- Extension of non-precision runway markings to the new runway pavement.
- The existing Taxiway B pavement between the Runway 13 threshold and Runway 1-19 would be removed to mitigate the non-standard taxiway geometry.
- The extension of Runway 13-31 results in intersecting runways at PRB, causing the RVZ dimensions to increase in size; however, unlike the previous alternatives, shifting Runway 13-31 to the northwest would alter the alignment of the RVZ, removing the VOR navigational equipment. This alternative allows the VOR equipment to remain in its existing location.
- The ASOS equipment is relocated to the same area as the VOR equipment to open development opportunities to land north of Taxiway F and south of the VOR critical area.
- 140-foot by 200-foot blast pads are added to both ends of Runway 13-31 to meet RDC C-III-5000 standards.

- Holding bays are added near the end of each runway to provide a location for aircraft to conduct pre-flight engine tests and to allow for aircraft bypassing, improving circulation and efficiency. This alternative includes holding aprons near Runway 1 along both Taxiway A and Taxiway F.

LANDSIDE ALTERNATIVES

Generally, landside issues are related to the facilities necessary or designed for the safe and efficient parking and storage of aircraft, movement of pilots and passengers to and from aircraft, airport support facilities, and overall revenue support functions. To maximize airport efficiency, it is important to locate facilities together that are intended to serve similar functions. The best approach to landside facility planning is to consider the development like that of a community for which land use planning is the guide. For general aviation airports, land use in the landside areas should generally be dictated by aviation activity levels. In the case of PRB, landside facilities are concentrated on the airport's west side, which includes the terminal building, fixed base operator (FBO), and specialty aviation service operator (SASO) facilities. The south side of the airfield includes several hangar developments as well as the Estrella Warbirds Museum. The landside alternatives will consider opportunities for continued development within these areas as well as explore options for expanding aeronautical and non-aeronautical developments to other areas.

LANDSIDE CONSIDERATIONS

Landside planning considerations are summarized in **Table 4B**. Generally, the considerations reflect the needs of a growing general aviation airport that has strong hangar demand and growing itinerant traffic that demands greater apron capacity. Jet A fuel storage capacity needs to be expanded, and an additional unleaded aviation fuel (100UL) tank may be added once it is more widely available and in greater demand. Consideration is also given to reserving space for advanced air mobility (AAM), an emerging entrant to the aviation industry.

TABLE 4B | Landside Planning Considerations

#	Landside Component	Existing Capacity	Consideration
1	Aircraft Storage Hangars	388,262 sf	Increase total capacity by 211,238 sf.
2	Aircraft Parking Apron	607,000 sf of apron/parking	Increase transient apron by 100,900 sf.
3	Fuel Storage Capacity	20,000 gallons Jet A 12,000 gallons 100LL	Increase Jet A storage by 27,600 gallons. Add a dedicated unleaded aviation fuel (100UL) tank.
4	Advanced Air Mobility (AAM)	None	Enhance existing helipad to accommodate electric vertical takeoff and landing (eVTOL) aircraft and/or reserve space for future vertiport and support facility development.

sf = square feet

Source: Coffman Associates analysis

The following section describes a series of landside alternatives as they relate to the identified considerations. Variations of future hangar and apron developments are presented to help visualize what future facility developments could look like.

Three alternatives have been prepared to provide potential development plans aimed at meeting the needs of general aviation through the long-term planning period and beyond. **The alternatives presented are not the only reasonable options for development.** In some cases, a portion of one alternative could be intermixed with another, and some development concepts could be replaced with others. The overall intent of this exercise is to outline basic development concepts to spur collaboration for a final recommended plan. The final recommended plan only serves as a guide for the airport to aid the City of Paso Robles in the strategic planning of airport property. Airport operators often change their plans to meet the needs of specific users. **The goal in analyzing landside development alternatives is to focus future development to achieve the highest and best use of airport property and aviation activity can be protected.**

LANDSIDE ALTERNATIVES

Landside developments that have been previously planned and are at different stages of development are reflected on each of the three landside alternatives to follow. Carried forward plans include:

- The terminal building expansion, which adds 5,200 sf of FBO space to the south side of the existing building.
- A new hangar complex along Taxiway D and Wing Way. This development includes 10 4,200 sf hangars and eight 1,600 sf hangars.
- CAL FIRE plans to construct a new 4,500 sf barracks facility adjacent to its existing structures to provide permanent accommodation to its firefighters and staff. Design plans for this facility are not available, but it is assumed to be located within the CAL FIRE base reserve parcel shown on the alternative exhibits.
- Construction of a new access road extending from Propeller Drive to the CAL FIRE base.

- Properties near the airport have previously been identified as potential targets for acquisition. These include approximately 184.1 acres northwest of the airport and approximately 290.0 acres to the northeast. These parcels are considered for acquisition on each of the alternatives for discussion purposes only.

- The east side of the airport, which totals approximately 139.8 acres, is reserved for Spaceport-related developments. A rocket fuel loading pad and two rocket engine testing sites are included with the potential spaceport development on the east side of Runway 13-31. The rocket fuel loading pad is located southwest of Runway 13-31, outside the ROFA. A 1,250-foot critical area is centered on the fueling pad. The two rocket engine testing pads are located within the spaceport reserve area to the east of Runway 13-31. Test site one includes a 620-foot critical area and test site two includes a 300-foot critical area. These critical areas represent the minimum allowable distance from the sites to public facilities that must be vacated while the sites are in use. Development may still occur within the critical areas, but people must be cleared while the sites are in use.

Landside Alternative 1

Landside Alternative 1 is depicted on **Exhibit 4D** and considers the following:

- Hangar development in this alternative is focused primarily on a variety of box hangars, which are a popular option among aircraft owners currently. The bulk of the new hangars are located in new columns south of Fuselage Way and north of Taxiway C, adjacent to the CAL FIRE base. Smaller hangars are shown on remaining developable property along Propeller Drive. A new FBO/SASO complex is shown at the south end of the terminal area off Airport Drive. The site includes five 15,000-sf hangars and benefits from good visibility from the airfield and from the road. In total, this alternative presents a net gain of 501,150 sf of hangar capacity.

- The transient apron east of Taxiway E is shown to be expanded by 262,900 sf. The FBO/SASO complex includes a 360,000-sf apron.

- The helipad is shown to be shifted east to allow for the addition of eight new helicopter parking spaces. This layout also allows for incorporating electric charging stations adjacent to some of the parking spaces so that the helipad could also serve as a vertiport for eVTOL aircraft. The vertiport/eVTOL support facilities could be located within the 6.3-acre aeronautical-use reserve parcel immediately north of the relocated helipad/vertiport and new parking spaces. The relocated helipad/vertiport is situated approximately 725 feet from the Runway 1-19 centerline, which exceeds the minimum separation distance (700 feet) required for runways that are used by heavy aircraft.

- Approximately 4.5 acres are reserved for future CAL FIRE base expansion.

- On the south side, a new taxiway network is shown to support approximately 52.7 acres of land reserved for aeronautical development, which includes new hangars, aprons, and support facilities. The infield development area would be accessible to public access via a new loop road

extending from Second Wind Way. The new road would render a portion of Taxiway F inaccessible to aircraft; however, the closure would not affect the airfield accessibility of any existing hangar facilities. An additional 12.9 acres south of Taxiway E is reserved for future aeronautical development, and approximately 31.5 acres that are largely segregated from the airfield are reserved for non-aeronautical uses.

The development of this area of the airfield would require the relocation of the ASOS equipment. Previously, the airfield alternatives considered relocating the ASOS equipment near the VOR facilities, which is included as part of this alternative.

- Vehicle parking is planned with the new FBO/SASO development complex and is included where appropriate to accompany new hangar developments. Approximately 1.5 acres of property along Rollie Gates Drive is reserved for new vehicle parking lot capacity near the terminal.

- Fuel storage facilities are planned to be expanded in their current locations, as needed. Depending on how the south area is developed, additional fuel storage facilities could also be needed to support the user base and to eliminate the need to send fuel trucks from the existing terminal area across the airfield to service aircraft.

- Airport property to the northwest of the airfield combined with approximately 184.1 acres shown for potential acquisition is reserved for both aeronautical and non-aeronautical uses. Approximately 68.4 acres, which are located within the extended building restriction line (BRL), is reserved for the future extension of Runway 13-31. Approximately 115.7 acres located outside of the BRL is reserved for future aeronautical developments. Approximately 118.8 acres of potential acquired property and existing airport property (including the solar farm) located along Airport Road is reserved for future non-aeronautical development.

- The 290.0 acres shown for potential acquisition to the northeast of the airfield is shown for future non-aeronautical development. Depending on how the Spaceport facilities are developed, it may be difficult to extend taxilane access to this area, which would make it more appealing for non-aeronautical uses.

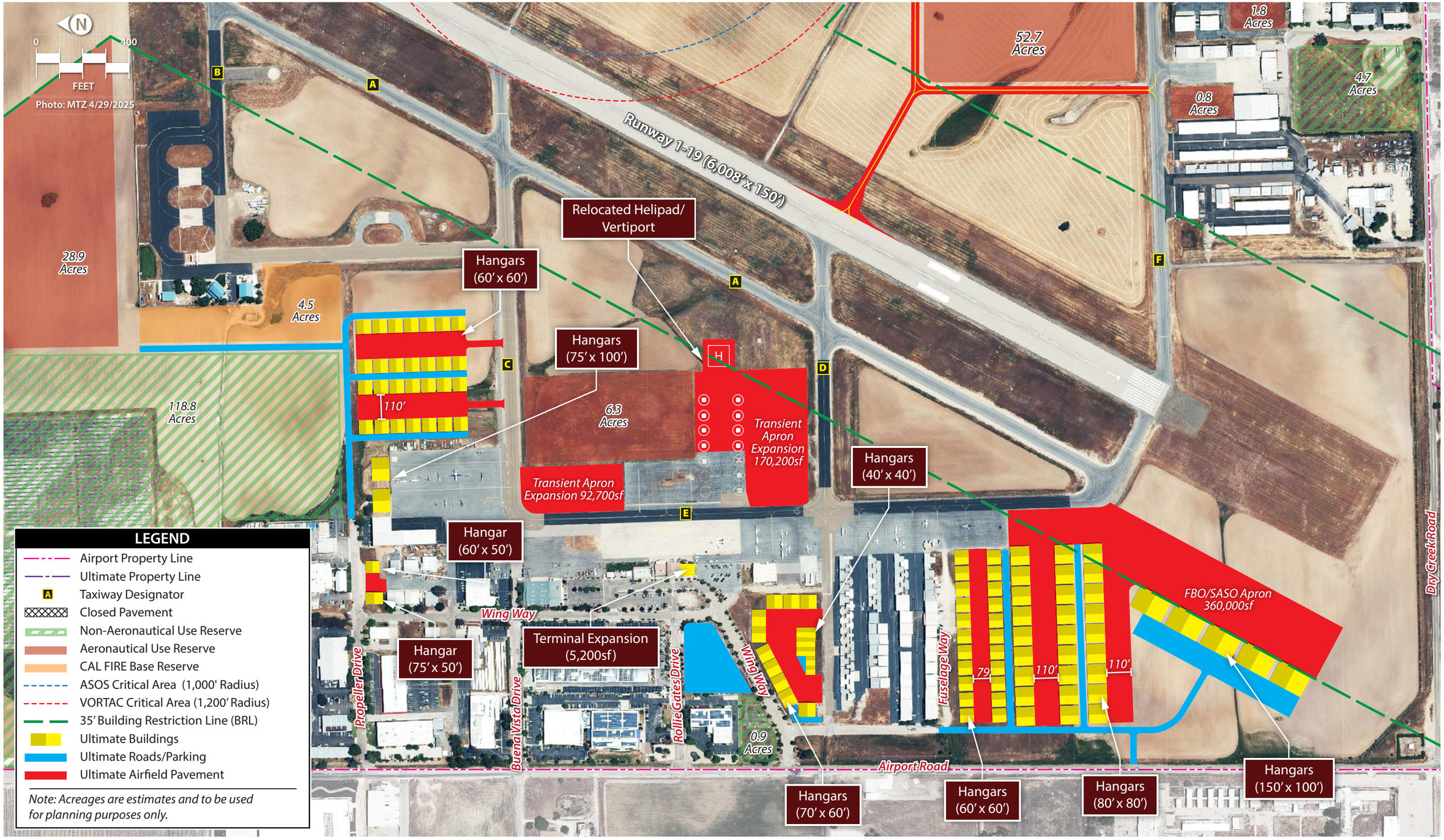
- Approximately 0.9 acres of airport property located near the intersection of Wing Way Airport Road is reserved for future non-aeronautical development.

Landside Alternative 2

Landside Alternative 2 is depicted on **Exhibit 4E** and considers the following:

- Hangar development in this alternative includes a greater mixture of hangar types to include smaller box hangars, FBO/SASO hangars, and T-hangars. This layout shows a larger FBO/SASO complex south of Fuselage Way compared to the previous alternative, and eight 10-unit T-hangars north of Taxiway C. Additional small hangars are shown along Propeller Drive. In total, this alternative presents a net gain of 372,410 sf of hangar capacity.

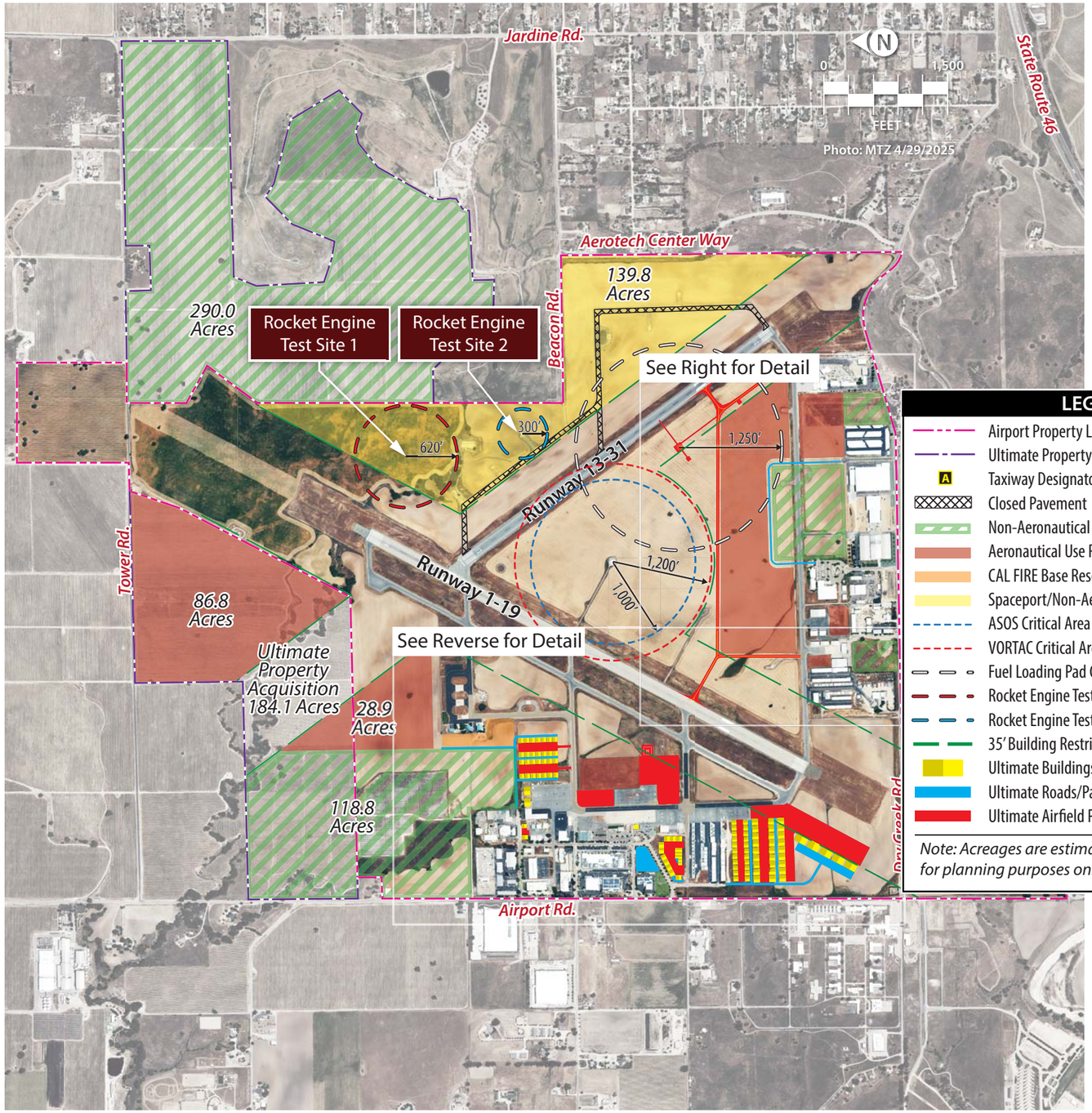
- This layout relocates Taxiway E east of the transient apron so that parking capacity may be expanded by 170,200 sf.

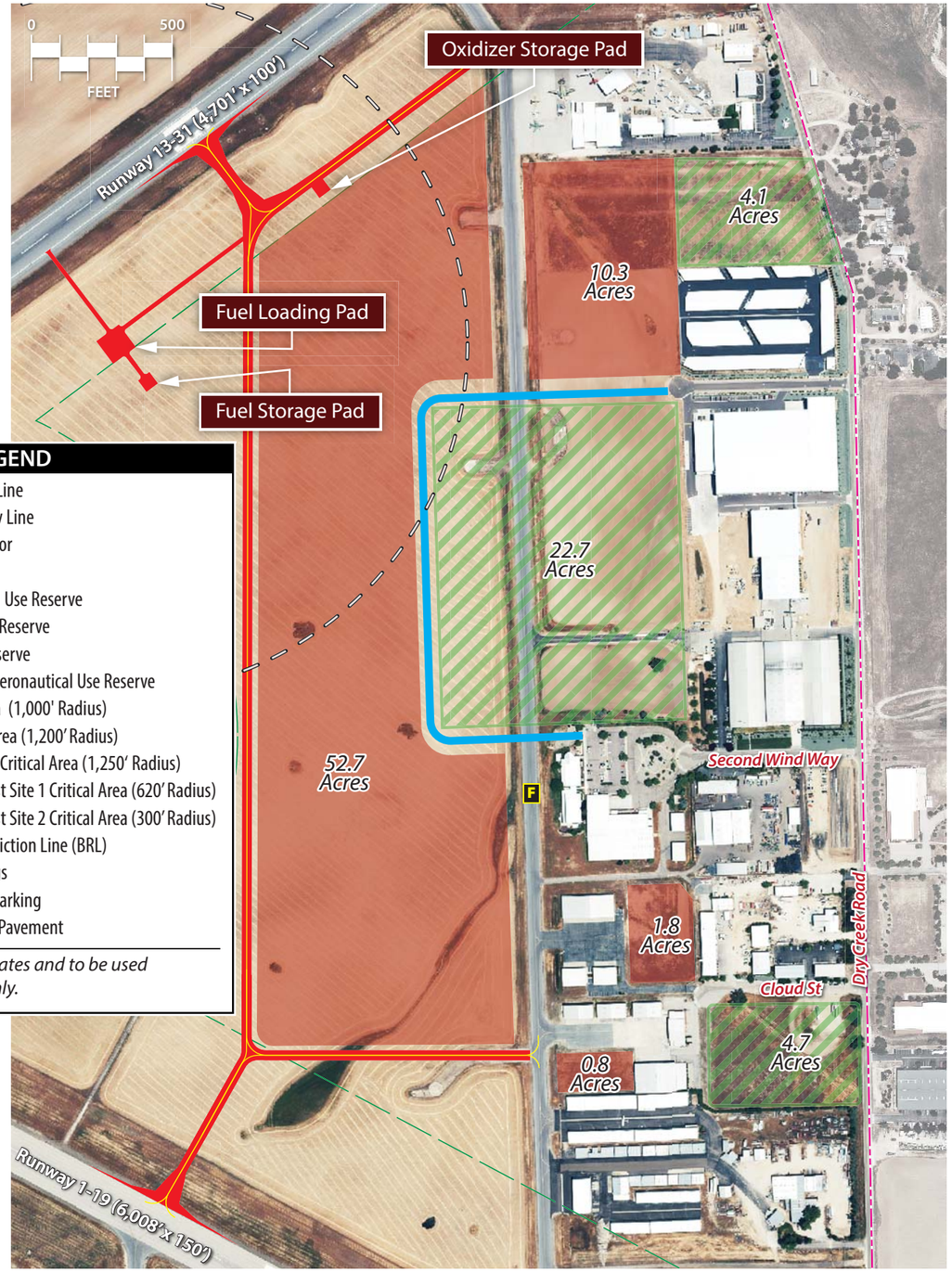


LEGEND

- Airport Property Line
- Ultimate Property Line
- A — Taxiway Designator
- Closed Pavement
- Non-Aeronautical Use Reserve
- Aeronautical Use Reserve
- CAL FIRE Base Reserve
- ASOS Critical Area (1,000' Radius)
- VORTAC Critical Area (1,200' Radius)
- 35' Building Restriction Line (BRL)
- Ultimate Buildings
- Ultimate Roads/Parking
- Ultimate Airfield Pavement

Note: Acreages are estimates and to be used for planning purposes only.

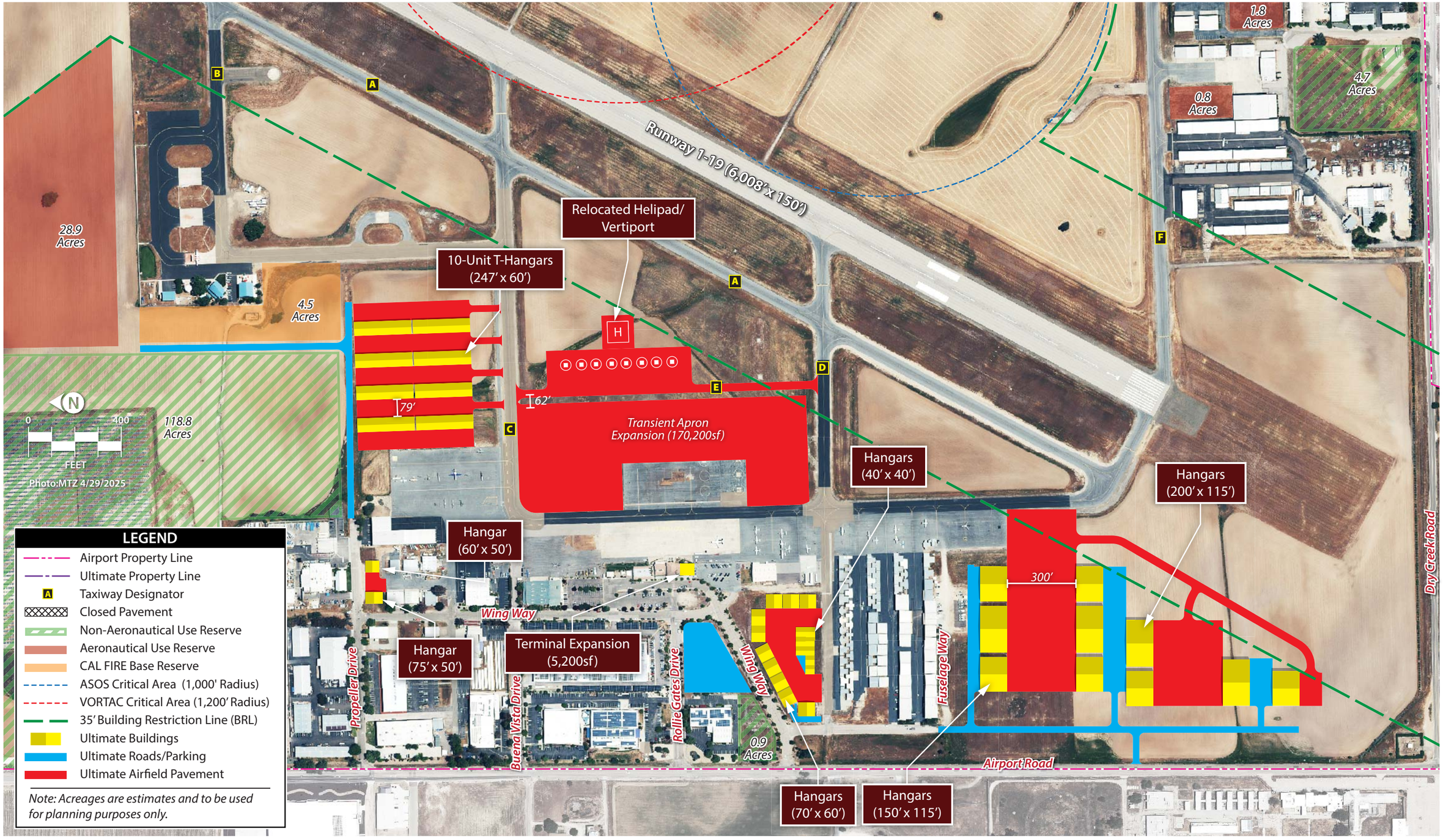




LEGEND

- Airport Property Line
- Ultimate Property Line
- Taxiway Designator
- Closed Pavement
- Non-Aeronautical Use Reserve
- Aeronautical Use Reserve
- CAL FIRE Base Reserve
- Spaceport/Non-Aeronautical Use Reserve
- ASOS Critical Area (1,000' Radius)
- VORTAC Critical Area (1,200' Radius)
- Fuel Loading Pad Critical Area (1,250' Radius)
- Rocket Engine Test Site 1 Critical Area (620' Radius)
- Rocket Engine Test Site 2 Critical Area (300' Radius)
- 35' Building Restriction Line (BRL)
- Ultimate Buildings
- Ultimate Roads/Parking
- Ultimate Airfield Pavement

Note: Acreages are estimates and to be used for planning purposes only.



LEGEND

- Airport Property Line
- Ultimate Property Line
- A Taxiway Designator
- Closed Pavement
- Non-Aeronautical Use Reserve
- Aeronautical Use Reserve
- CAL FIRE Base Reserve
- ASOS Critical Area (1,000' Radius)
- VORTAC Critical Area (1,200' Radius)
- 35' Building Restriction Line (BRL)
- Ultimate Buildings
- Ultimate Roads/Parking
- Ultimate Airfield Pavement

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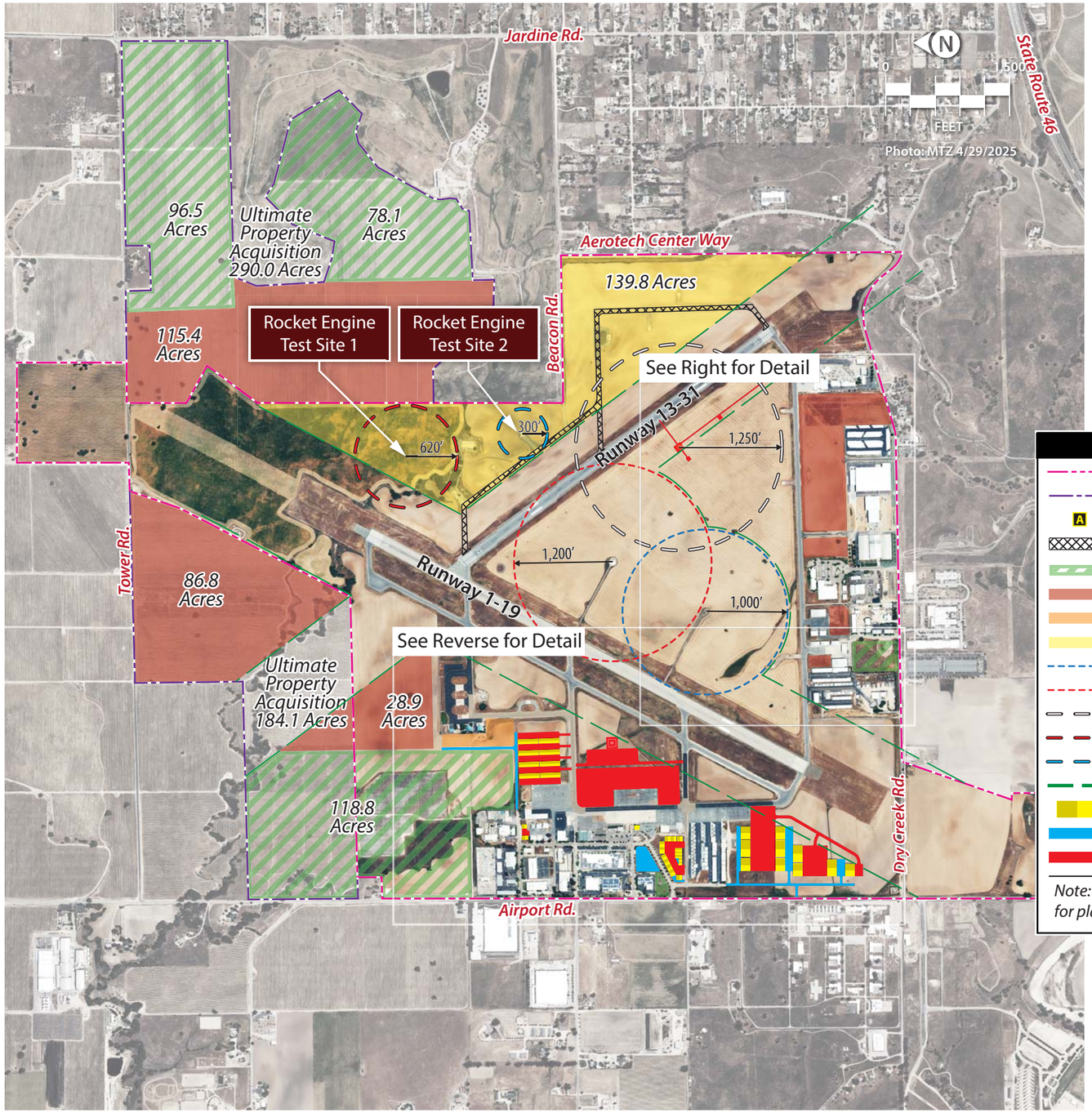

LEGEND

- Airport Property Line
- Ultimate Property Line
- A Taxiway Designator
- Closed Pavement
- Non-Aeronautical Use Reserve
- Aeronautical Use Reserve
- CAL FIRE Base Reserve
- Spaceport/Non-Aeronautical Use Reserve
- ASOS Critical Area (1,000' Radius)
- VORTAC Critical Area (1,200' Radius)
- Fuel Loading Pad Critical Area (1,250' Radius)
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- Rocket Engine Test Site 2 Critical Area (300' Radius)
- 35' Building Restriction Line (BRL)
- Ultimate Buildings
- Ultimate Roads/Parking
- Ultimate Airfield Pavement

Note: Acreages are estimates and to be used for planning purposes only.

- The helipad is relocated east of the relocated Taxiway E and includes eight new helicopter/eVTOL parking spaces. The relocated helipad/vertiport is situated approximately 750 feet from the Runway 1-19 centerline, which exceeds the minimum separation distance (700 feet) required for runways that are used by heavy aircraft.

- Approximately 4.5 acres is reserved for future CAL FIRE base expansion.

- Vehicle parking is planned with the new FBO/SASO development complex and is included where appropriate to accompany new hangar developments. Approximately 1.5 acres of property along Rollie Gates Drive is reserved for new vehicle parking lot capacity near the terminal.

- Unlike the previous alternative, the south side in this layout assumes the ASOS equipment remains in its current location and that no new development occurs north of Taxiway F. In this case, approximately 30.5 acres of land is reserved for aeronautical development. Approximately 4.7 acres of land that is inaccessible to the airfield is reserved for non-aeronautical development.

- Fuel storage facilities are planned to be expanded in their current locations, as needed. Depending on how the south area is developed, additional fuel storage facilities could also be needed to support the user base and to eliminate the need to send fuel trucks from the existing terminal area across the airfield to service aircraft.

- Like the first alternative, airport property to the northwest of the airfield combined with approximately 184.1 acres shown for potential acquisition is reserved for both aeronautical and non-aeronautical uses, totaling approximately 68.4 acres for the future extension of Runway 13-31, approximately 115.7 acres for future aeronautical developments, and approximately 118.8 acres of acquired property and existing airport property (including the solar farm) for non-aeronautical development.

- The 290.0 acres shown for potential acquisition to the northeast of the airfield is shown for a mixture of aeronautical (115.4 acres) and non-aeronautical (174.6 acres) uses.

- Approximately 0.9 acres of airport property located near the intersection of Wing Way Airport Road is reserved for future non-aeronautical development.

Landside Alternative 3

Landside Alternative 3 is depicted on **Exhibit 4F** and considers the following:

- Hangar development in this alternative emphasizes larger FBO/SASO hangar types, including four FBO/SASO hangars along Taxiway C and the extended Propeller Drive. This site has good visibility from the airfield but is less visible from the road network. An additional FBO/SASO site is shown east of Runway 1-19, which would require road access to be extended through Taxiway F, similar to the first alternative. The land south of Fuselage Way is shown for development of 13 10-unit T-hangar units. Additional small hangars are shown along Propeller Drive. In total, this alternative presents a net gain of 429,260 sf of hangar capacity.

- The transient terminal apron is expanded by 619,700 sf, including the existing helipad, which is relocated to a new site north of Propeller Drive in this alternative. This site includes ten individual aircraft parking spaces and is more secluded from the airfield. At a separation distance of 2,000 feet from the Runway 1-19 centerline, this site is more likely to allow for more independent operations with minimal wake turbulence disruption to fixed wing operations at the airport. Included at the heliport/vertiport site is a 10,000 sf terminal building that could support both passenger and cargo handling capabilities.

- Approximately 4.5 acres is reserved for future CAL FIRE base expansion.

- Vehicle parking is planned with the new FBO/SASO development sites and is included where appropriate to accompany new hangar developments. Approximately 1.5 acres of property along Rollie Gates Drive is reserved for new vehicle parking lot capacity near the terminal.

- The south side in this layout assumes the ASOS equipment is relocated near the VOR equipment to allow for new development north of Taxiway F. As already discussed, the layout shows a new FBO/SASO development site along Runway 1-19, which is further supported by a parallel taxiway east of the runway and a 546,000 sf apron. Road access to the midfield area is extended from Second Wind Way. Approximately 71.5 acres of property on the south side is reserved for future aeronautical developments and 8.8 acres are reserved for non-aeronautical developments.

- Fuel storage facilities are planned to be expanded in their current locations, as needed. Additional fuel storage facilities are assumed to be located with the new FBO/SASO facilities north of Taxiway F to eliminate the need to send fuel trucks from the existing terminal area across the airfield to service aircraft.

- Similar to the previous alternatives, airport property to the northwest of the airfield combined with approximately 184.1 acres shown for potential acquisition is reserved for both aeronautical and non-aeronautical uses, totaling approximately 68.4 acres for the future extension of Runway 13-31, approximately 115.7 acres for future aeronautical developments, and approximately 118.8 acres of acquired property and existing airport property (including the solar farm) for non-aeronautical development.

- The 290.0 acres shown for potential acquisition to the northeast of the airfield is shown for future Spaceport expansion.

- Approximately 0.9 acres of airport property located near the intersection of Wing Way Airport Road is reserved for future non-aeronautical development.

SUMMARY

This chapter presents an analysis of various options that may be considered for specific airport elements. The need for alternatives is typically spurred by projections of aviation demand growth and/or by the need to resolve non-standard airport elements. Several development alternatives related to both the airside and the landside have been presented.

LEGEND

- Airport Property Line
- Ultimate Property Line
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- ASOS Critical Area (1,000' Radius)
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- Ultimate Roads/Parking
- Ultimate Airfield Pavement

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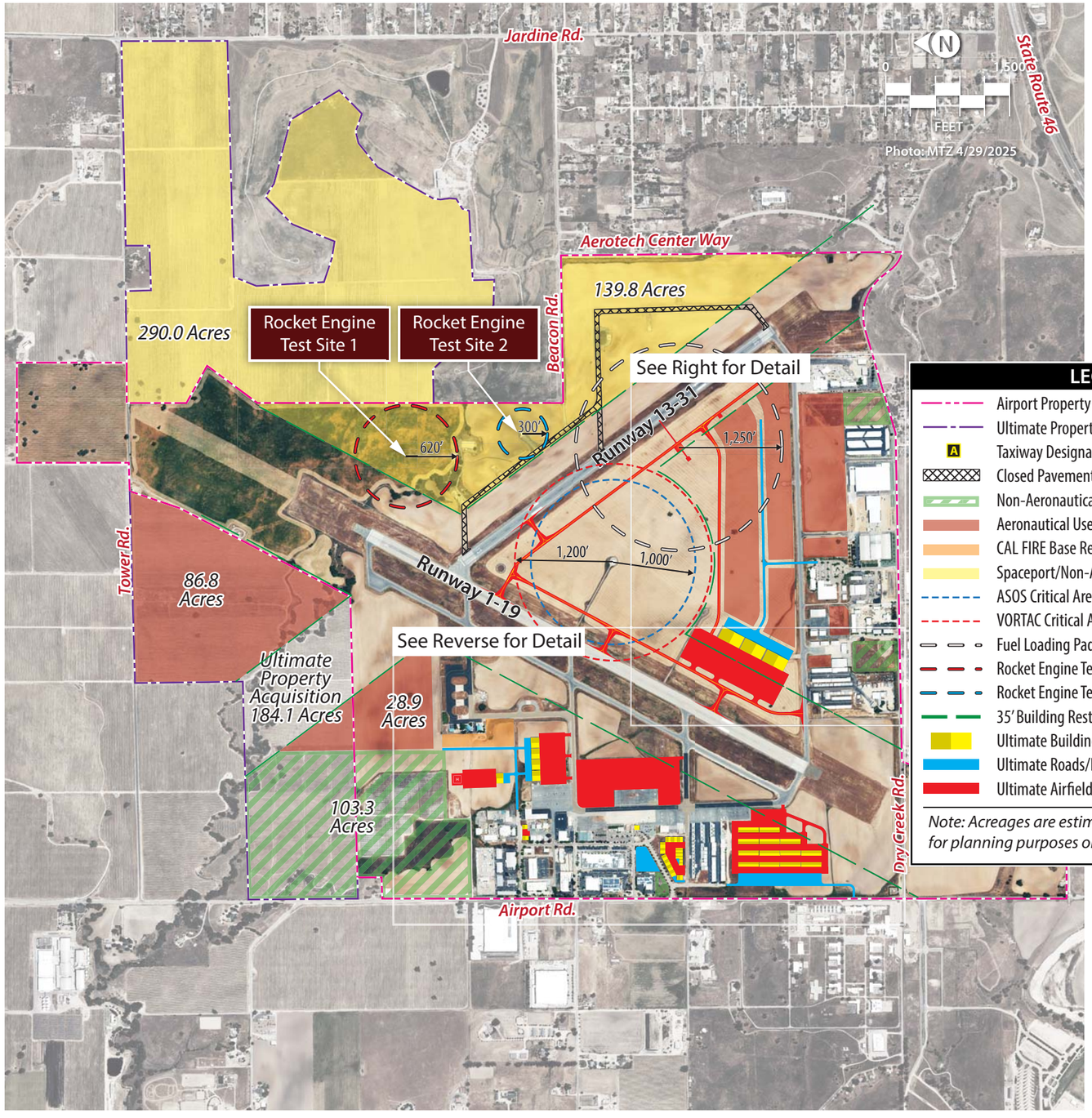
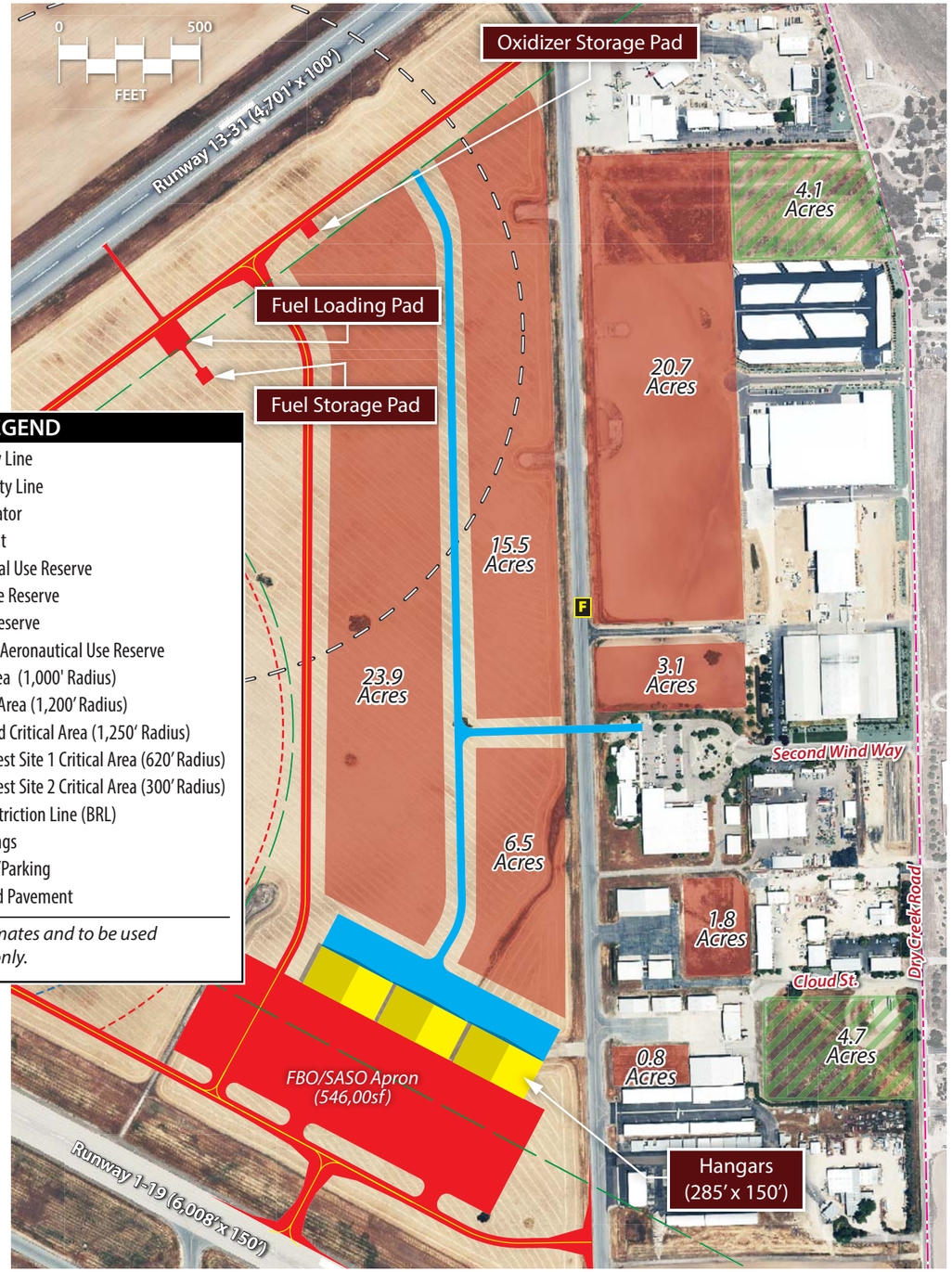
28.9 Acres
104.5 Acres
4.5 Acres
1.8 Acres
4.7 Acres
0.8 Acres
0.9 Acres
Relocated Helipad/ Vertiport
Vertiport Terminal (10,000sf)
Hangars (125' x 100')
FBO/SASO Apron (190,200sf)
Transient Apron Expansion (619,700sf)
FBO/SASO Apron (546,00sf)
Hangars (285' x 150')
Runway 1-19 (6,008' x 150')
Hangars (40' x 40')
10-Unit T-Hangars (247' x 60')
Hangar (60' x 50')
Hangar (75' x 50')
Terminal Expansion (5,200sf)
Hangars (70' x 60')
79'
Wing Way
Propeller Drive
Buena Vista Drive
Rollie Gates Drive
Fuselage Way
Dry Creek Road
Airport Road
N
0
400
FEET
Photo: MTZ 4/29/2025





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- Ultimate Roads/Parking
- Ultimate Airfield Pavement

Note: Acreages are estimates and to be used for planning purposes only.

The next step in the master plan development process is to arrive at a recommended development concept. Participation of the PAC and the public will be important considerations. Additional consultation with the FAA may also be required. Once a consolidated development plan is identified, a 20-year capital improvement program will be presented that includes a prioritized list of projects tied to aviation demand and/or necessity. Finally, a financial analysis will be presented to identify potential funding sources and show airport management what local funds will be necessary to implement the plan.