

# CHAPTER 4

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## Alternatives

### 4.1 Introduction

The purpose of analyzing alternatives in the EIR is to describe a range of reasonable alternatives to the project, or to the project location, which could feasibly attain most of the basic objectives of the project, but would avoid or substantially reduce any of the significant effects of the Proposed Project, and to evaluate the comparative merits of the alternatives (CEQA *Guidelines*, Section 15126.6[a]). Additionally, Section 15126.6(b) of the CEQA *Guidelines* requires consideration of alternatives that could reduce to a less than significant level or eliminate any significant adverse environmental effects of the project, including alternatives that may be more costly or could otherwise impede to some degree the attainment of the project's objectives.

It is important to understand, however, that the mere inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact "feasible". The ultimate determination regarding the feasibility of alternatives lies with the decision maker for a project, which in this case is the Solano County. Such determinations are to be made in statutorily mandated findings addressing potentially feasible means of reducing the severity of significant environmental effects. One finding that is permissible, if supported by substantial evidence, is that "specific economic, legal, social, technological, or other considerations ... make infeasible the ... alternatives identified" in the EIR. (Pub. Resources Code, §21081, subd. (a); see also CEQA *Guidelines*, §15901, subd. (a).) CEQA *Guidelines* section 15364 defines "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." In deciding whether an alternative is feasible or infeasible, a decision-making body may consider the stated project objectives in an EIR, and may balance any relevant economic, environmental, social, and technological factors.

The Project alternatives were analyzed for their abilities to meet the basic objectives of the Project. Where alternatives were found to attain most of the basic objectives, they were included as part of the detailed analysis presented in this chapter. Where alternatives were not found to attain most of the basic Project objectives, they were eliminated from further detailed consideration.

The basic objectives of the Proposed Project consist of the following:

1. Continue to provide general aviation services that will meet the present and forecasted air transportation needs of the region;
2. Provide an increasing range of general aviation services to the flying public;

3. Continue to serve as a vital and supporting transportation link connecting Solano County, Travis Air Force Base, and the cities of Vacaville, Fairfield, and Dixon to the region and beyond;
4. Preserve and further the history and value that Nut Tree Airport has in the local community;
5. Continue to maintain compatibility between the Airport and the surrounding community; and
6. Balance future development of the Airport with the protection of the environment.

### 4.1.1 Factors in the Selection of Alternatives

The CEQA Guidelines recommends that an EIR should briefly describe the rationale for selecting the alternatives to be discussed, identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency's determination (CEQA *Guidelines*, Section 15126.6(c)). The following factors were considered in identifying a reasonable range of alternatives to the Proposed Project.:

- The extent to which the alternative would accomplish most of the basic goals and objectives of the project;
- The extent to which the alternative would avoid or lessen one or more of the identified significant environmental effects of the project;
- The potential feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure;
- Consistency with applicable general plans and other regulatory considerations; and
- The requirement of CEQA *Guidelines* to consider a "no-project" alternative and to identify an "environmentally superior" alternative in addition to the no-project alternative (CEQA *Guidelines*, Section 15126.6(e)).

### 4.1.2 Alternatives Eliminated from Further Consideration

The following alternatives were identified, but eliminated from further consideration for the reasons expressed below.

#### **Extend Runway to 5,500 Feet with Instrument Approach Capabilities**

This development alternative would include all the landside development considered under the Proposed Project, and would extend the runway to a future runway length of 5,500 feet. Similar to the Proposed Project, this alternative would also correct the non-standard ROFA by shifting Runway 2/20 approximately 180 feet to the north. In other words, this alternative would remove 180 feet from the approach end of Runway 2 and add 980 feet (800-foot extension plus 180-foot shift) to the approach end of Runway 20.

This Alternative also includes a reduced approach visibility minimum (1-mile to  $\frac{3}{4}$ -mile) for Runway 20. The  $\frac{3}{4}$ -mile visibility minimum requires physical improvements (an approach

lighting system), and dimensional criteria improvements including a larger FAR Part 77 Primary Surface and a larger Runway Protection Zone (RPZ).

Extension of the Runway to 5,500 feet would have similar environmental impacts to hydrology and jurisdictional features identified northeast of Runway 20; though the impacts under this alternative would be slightly less due to the 100-foot reduction of pavement associated with the runway extension. Lastly, the runway extension and instrument approach would result in the extension of the runway protection zone affiliated with Runway 20 into areas beyond the Airport's boundaries. This would result in potential land use conflicts with neighboring land uses, and would be inconsistent with FAA standards for the RPZ. The potential compatibility issues resulting from this alternative would not be consistent with the objectives identified by the County in Section 2.5 of the Project Description. Due to the potential environmental impacts and land use incompatibilities, this alternative was dismissed from further consideration.

## 4.2 Alternatives Selected for Further Consideration

### 4.2.1 Alternative A – No Project Alternative

#### Description

Alternative A, the No Project Alternative, assumes that the proposed Master Plan would not be adopted. However, rather than the project setting remaining in its current setting, the No Project Alternative assumes that the current (1993) Master Plan and most recent (2007) airport layout plan (ALP) would remain in effect (see **Figure 4-1**). This would entail airside development similar to that of the Proposed Project; including construction of a variety of aircraft hangars, airfield lighting and marking upgrades, pavement rehabilitation, and refurbishment of existing hangars.

The No Project Alternative **would maintain the current runway length of 4,700 feet, but also retains the option** of extending Runway 2/20 to 5,600 feet, with the provision for precision instrument approach capabilities (less than ¾-mile visibility minimum to both runway ends. This alternative would not shift 180 feet of runway from the approach end of Runway 2 in order to correct the non-standard ROFA that extends into Putah South Canal; however, the runway extension and instrument approach would result in the extension of the runway protection zone affiliated with Runway 20 into areas beyond the Airport's boundaries. ~~Moreover, the runway width would increase to 100 feet (from its existing width of 75 feet).~~

**The 1993 Master Plan also forecasts a total of 180,000 aircraft operations by 2011. However, given that only 101,500 operations were occurring by 2011, it is not likely that the Airport would reach 180,000 operations within the reasonably foreseeable future. Forecasts in the 1993 Master Plan were made under a different economic climate than what exists today. In this case, future operation growth under Alternative A would likely be similar to forecasts under the Proposed Project. Given that Alternative A proposes similar levels of hangar development and that both the Proposed Project and Alternative A would be subject to current growth trends in general aviation activity, it is therefore reasonable to**

**assume that operation levels under either scenario would be similar by 2031 (approximately 127,000 annual operations).**

## **Basis for Selection**

The No Project Alternative is included in the EIR because CEQA Guidelines Section 15126.6(e)(1) requires that an EIR evaluate a “no project” alternative along with its impact in order to provide a comparison of the impacts of approving the proposed project with the impacts of not approving the Proposed Project. Pursuant to CEQA Guidelines Section 15126.6(e)(3)(A), **where the project is the revision of an existing land use or regulatory plan,** the No Project Alternative discusses “the **continuation of the existing plan, policy or operation into the future** ~~property remaining in its existing state.~~” **As such, the projected impacts of the Proposed Project will be evaluated against the impacts that would occur under the existing plan.** Besides considering the potential near-term implications of not implementing the Proposed Project, the No Project Alternative also considers potential environmental impacts in the “foreseeable future” related to this alternative (based on current plans and consistent with available infrastructure and community services). For this analysis, the No Project Alternative is evaluated out to the forecast year of 2031 in order to be consistent with the current Master Plan update.

## **Distinctive Environmental Characteristics**

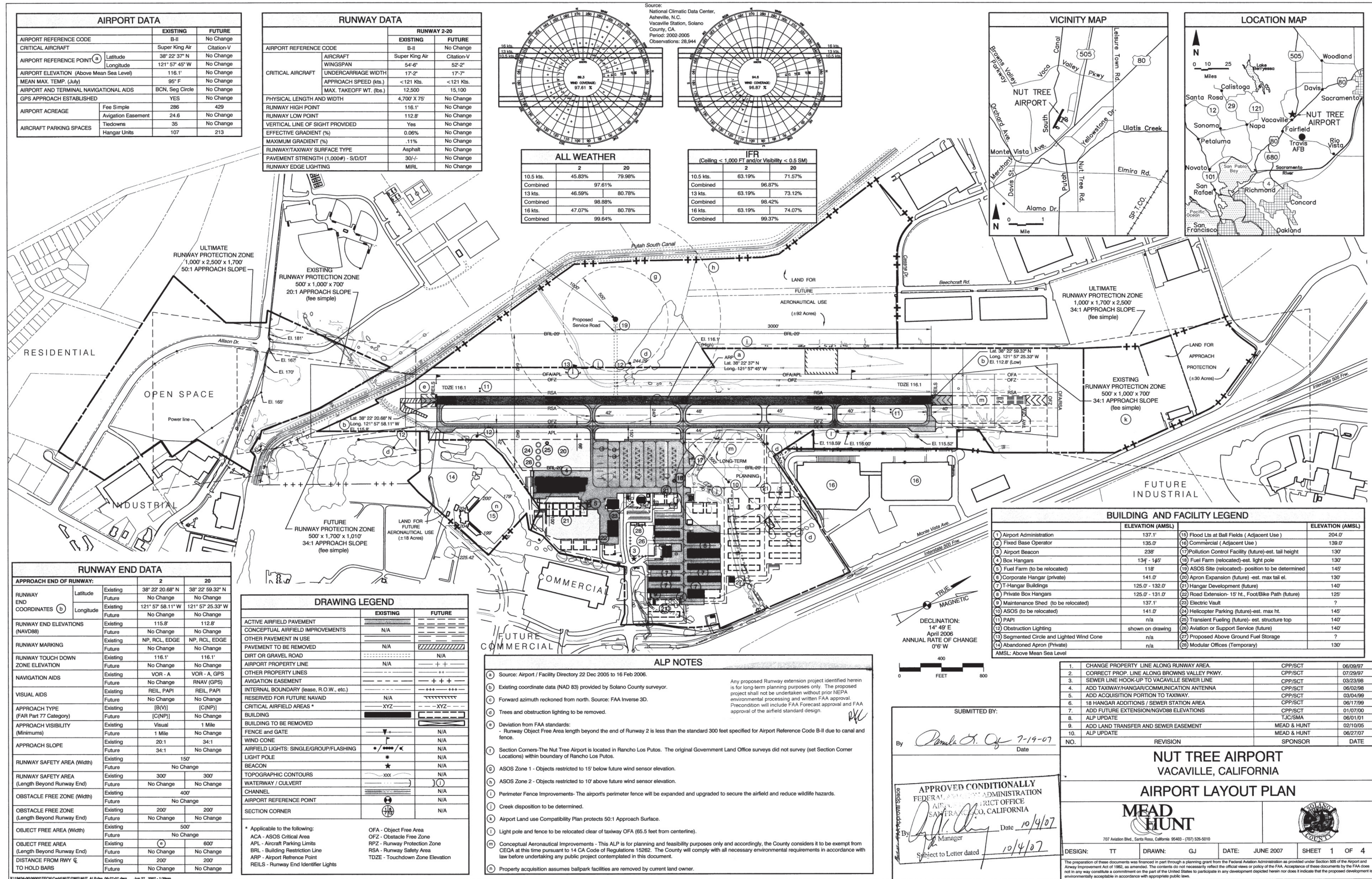
The following discussion summarizes the potential impacts of Alternative A and compares them to the impacts of the Proposed Project.

### ***Aesthetics***

Alternative A would likely involve the removal of some scenic features, such as trees, in order to accommodate the development of facilities proposed on the previous ALP. While Caltrans does not designate any highways in the vicinity of Nut Tree Airport to be “scenic” highways, Solano County has identified the I-505 corridor that runs north-to-south, and is located east of the Airport, as a scenic highway for its views of the Vaca Mountain foothills. While Alternative A would remove some trees within the viewing corridor of motorists traveling southbound on I-505, development would be consistent with surrounding land uses, which predominately consist of light industrial, commercial, and offices uses. While some scenic resources would be removed within a County-designated scenic corridor, the overall development would be consistent with nature, scale, and aesthetics of other uses in the nearby vicinity; therefore, the overall impact to aesthetic resources under Alternative A are considered similar to those of the Proposed Project and less than significant.

### ***Air Quality***

Construction-related impacts to air quality under Alternative A would likely be slightly less than those of the Proposed Project, as the previous ALP identified a similar scale of airport development, but did not include the development of non-aviation land uses. However, operation-related impacts to air quality under Alternative A would likely be greater than the Proposed Project, due to the higher number of operations forecasted in the previous Master Plan (**180,000** ~~242,500~~). Given the



SOURCE: Solano County, 2007; and ESA, 2013

Nut Tree Airport Master Plan EIR . 120526

Figure 4-1  
2007 Airport Layout Plan

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larger number of forecasted operations, particularly in categories of larger aircraft such as corporate jets, operational impacts to air quality would likely be greater than the Proposed Project's and potentially significant. **However, given that current operations (101,500) are lower than what was forecasted by the 1993 Master Plan, it is reasonable to assume that future operations under the No Project Alternative would grow at a slower rate than what was previously assumed. Here, it is more appropriate to utilize growth rates assumed under the Proposed Project. This would account for current trends in general aviation, current growth rates used by FAA, and future development of Nut Tree Airport assumed under the 2007 ALP. Assuming that future operations under the No Project Alternative would be similar to those under the Proposed Project, it is reasonable to determine that the generation of particulate matter and other pollutants associated with the operation of aircraft and other mobile sources under the No Project Alternative would be similar to that of the Proposed Project. Therefore, potential air quality impacts associated with forecasted operations under Alternative A would be similar to the Proposed Project and less than significant.**

### ***Biological Resources***

Biological impacts under Alternative A would be similar to those associated with the Proposed Project; with potential impacts to annual grassland and valley foothill riparian occurring as a result of proposed hangar development, apron expansion, and the extension of Runway 2/20 to 5,600 feet. While Alternative A would result in the loss of foraging habitat for Swainson's hawk and other nesting raptors in the vicinity of the Airport, it is likely that these losses would be less than those identified under the Proposed Project, as the Proposed Project also includes the construction of several non-aviation land uses not identified on the previous ALP. However, mitigation would still be required to address this potentially significant impact under this Alternative. In summary, while Alternative A would include the construction of a longer runway than the Proposed Project, the overall disturbance of grasslands and potential habitat would be less than the Proposed Project. Therefore, impacts to biological resources under this alternative would be considered less-than-significant (with mitigation), and would be less than the Proposed Project.

### ***Cultural Resources***

The potential for the discovery of buried archaeological resources under Alternative A would be similar to the potential under the Proposed Project. However, due to the need for less grading and impervious surface associated with Alternative A, it is assumed that while the potential for effects to unknown cultural resources would exist and the same mitigation would be applicable, the potential impact under Alternative A is less than the Proposed Project.

### ***Geology Soils and Seismicity***

Impacts related to geology, soils, and seismicity under Alternative A would likely be similar to those identified under the Proposed Project because the size of the development and the geologic setting of the alternative location are similar to that of the Proposed Project.

## **Greenhouse Gases**

Impacts related to the cumulative generation of greenhouse gas emissions under Alternative A would likely be greater than the Proposed Project, as operational emissions associated with aircraft activity, which was forecasted to be at greater levels in the previous Master Plan, would be significantly larger. Though greenhouse gas emissions from construction-related activities associated with Alternative A would likely be similar to the Proposed Project, assuming higher operation levels associated with the 1993 Master Plan, overall impacts associated the generation of greenhouse gas emissions would greater than the Proposed Project and potentially significant. However, given that only 101,500 operations were occurring by the 1993 Master Plan's forecast year of 2011, it is not likely that the Airport would reach 180,000 operations within the reasonably foreseeable future. Forecasts in the 1993 Master Plan were made under a different economic climate than what exists today. In this case, future operation growth under Alternative A would likely be similar to forecasts under the Proposed Project. Given that Alternative A proposes similar levels of hangar development and that both the Proposed Project and Alternative A would be subject to current growth trends in general aviation activity, it is therefore reasonable to assume that operation levels under either scenario would be similar by 2031. Therefore, potential greenhouse gas emission impacts associated with forecasted operations under Alternative A would be similar to those associated with the Proposed Project and less than significant.

## **Hazards and Hazardous Materials**

Impacts associated with the exposure of persons to hazards or hazardous materials under Alternative A would likely be similar to those identified under the Proposed Project as the setting (a general aviation airport with no recent history of releases of hazardous materials into the soil or groundwater) is similar to the Proposed Project. However, unlike the Proposed Project, Alternative A would not result in the refurbishment of existing hangars that may be constructed with asbestos-containing materials and lead-based paint. Furthermore, the FAA recommends that for the Dassault Falcon 50 and the Dassault Falcon 900<sup>1</sup>, the recommended runway length is 5,857 feet. While it is possible for aircraft of this type to operate on smaller runways (as they currently do at Nut Tree Airport), additional runway length affords aircraft of this type the extra time that is sometimes necessary for takeoff during certain (e.g., hot) climate conditions. By extending the runway to 5,600 feet, Alternative A provides nearly the entire runway length recommended by the FAA for the safe operation of the critical class of aircraft identified above. Therefore, while overall impacts related to hazards and hazardous materials under this Alternative are considered less-than-significant, because Alternative A provides the additional safety buffer that a longer runway affords larger aircraft on departure, impacts are considered slightly less than those of the Proposed Project.

## **Hydrology and Water Quality**

Potential impacts to hydrology and water quality under Alternative A would be the same as the Proposed Project. Creation of impervious surface would be the same in both scenarios; requiring

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<sup>1</sup> The Dassault Falcon 50 and Falcon 900 are a class of business jet aircraft that weigh more than 12,500 pounds and less than 60,000 pounds. These aircraft types are currently based at Nut Tree Airport.



the development of a project drainage plan to avoid potential impacts to water quality, and new drainage features to handle additional stormwater runoff. The primary distinction between the Proposed Project and this Alternative, with respect to hydrology and water quality, is that Alternative A would not add additional paved surface related to the development of non-aviation land uses. However, Alternative A would extend Runway 20 further into an area that has been designated by FEMA as a 100-year flood zone. The creation of impervious surface in this area would alter the hydrology, and require specific design measures, such as the construction of a drainage basin, that would be used to avert potential risk from flooding. Because the runway extension under Alternative A extends further into this area than the Proposed Project, potential impacts associated with the redirection of floodwaters is considered greater under Alternative A. In summary, potential impacts to hydrology and water quality associated with Alternative A are considered less-than-significant (with mitigation similar to that of the Proposed Project); however, because of the additional impervious surface added to a 100-year flood zone under this Alternative, they are slightly greater than the Proposed Project.

### ***Land Use and Planning***

Alternative A would require construction of airport-related facilities on land that is designated by Solano County for airport-related uses. As such, no conflict with the Solano County General Plan would occur under Alternative A. Alternative A would also be required to comply with the compatibility policies set forth in the County's ALUCP. Proposed aviation-related facilities under Alternative A, which would essentially be the same as the Proposed Project, would be required to comply with the intensity standards and other development criteria set forth by the ALUCP. Thus, Alternative A would not conflict with the standards set forth by the ALUCP. Implementation of Alternative A, however, would result in the lengthening of Runway 2/20 to 5,600 feet and the addition of a precision approach to Runway 20. Though the 1988 ALUCP also assumed that the Runway 20 would have a precision approach, it did not anticipate an extension of the runway as well. Therefore, this difference in runway length could have the potential to trigger an update to the ALUCP to account for changes in changes to the runway's safety areas. (For example, the runway protection zone under the No Project Alternative would extend off Airport property.) Triggering an update to the current ALUCP would have indirect, but potentially significant impacts to City land uses in the vicinity of the Airport. In summary, while Alternative A would not conflict with Solano County land use policies, it has the potential to trigger a need to update existing land use plans such as the 1988 ALUCP, which could have indirect and potentially significant impacts to the City of Vacaville's General Plan and other development goals. Therefore, unlike the Proposed Project, Alternative A would result in potentially significant impact to local land use.

### ***Noise***

Construction of Alternative A would occur at the same distances from the nearest sensitive receptors as the Proposed Project. As described in more detail in Section 3.10, Noise, the construction of the Proposed Project would not result in significant noise impacts to nearby residents; therefore, potential construction noise impacts associated with Alternative A are also considered less-than-significant throughout all three phases of development. With respect to

operation-related noise impacts, Alternative A assumes the same level of operations as the forecasted in the previous Master Plan, which is higher than the forecasts in the updated Master Plan (~~180,000~~ 242,500 vs. 127,329 by 2031). This significant difference in forecasted operations could result in noise impacts to nearby sensitive land uses; therefore, potential noise impacts under Alternative A would ~~be~~ greater than those identified for the Proposed Project. **However, given that only 101,500 operations were occurring by the 1993 Master Plan's forecast year of 2011, it is not likely that the Airport would reach 180,000 operations within the reasonably foreseeable future. Forecasts in the 1993 Master Plan were made under a different economic climate than what exists today. In this case, future operation growth under Alternative A would likely be similar to forecasts under the Proposed Project. Given that Alternative A proposes similar levels of hangar development and that both the Proposed Project and Alternative A would be subject to current growth trends in general aviation activity, it is therefore reasonable to assume that operation levels under either scenario would be similar by 2031. Therefore, potential noise impacts associated with forecasted operations under Alternative A would be similar to those associated with the Proposed Project.** In summary, ~~while construction-~~ **and operation-**related noise impacts would be the same under either scenario, ~~operation-related noise would be greater under the No Project Alternative~~ **as compared to the Proposed Project**, and **therefore are considered less than significant**. ~~would have the potential to significantly impact noise sensitive land uses around the Airport.~~

### ***Utilities and Service Systems***

As described in the hydrology discussion above, Alternative A would require the construction of additional water drainage facilities in order to capture and redirect stormwater runoff from the project site, similar to the Proposed Project. This additional infrastructure would ensure that post-project flows were the same as the pre-project condition. Similar to the Proposed Project, mitigation would be required to avoid potential impacts to biological resources during the construction of these drainage features. However, given that Alternative A would not include the development of non-aviation uses, as under the Proposed Project, the generation of wastewater and the use of other utility services (water supply, landfills, etc.) would likely be less than under the Proposed Project. Furthermore, similar to the Proposed Project, development impact fees would be required for Alternative A to offset potential impacts to service ratios and response times for the Vacaville Fire Department and Solano County Sheriff's Department. Payment of these development fees would ensure that impacts to these service systems would remain less-than-significant under Alternative A. In summary, overall impacts to utilities and service systems under Alternative A would be less-than-significant (with mitigation similar to the Proposed Project), and would be less than those of the Proposed Project.

### ***Transportation***

Construction of Alternative A would generate both operational (long-term) and construction-related (short-term) impacts on local roadways and intersections identified in Section 3.12, Transportation. Due to the similarities in construction-related efforts, short-term impacts under Alternative A would be the same the Proposed Project. Furthermore, while Alternative A **forecasts a**

**greater number of aircraft operations, it is more likely that future operation levels under this Alternative would be similar to the Proposed Project. Assuming similar levels of aircraft operations, the Proposed Project would then likely generate a greater number of vehicle trips when accounting for proposed non-aviation development, which is not included under Alternative A. As such, potential impacts associated with traffic generation would be less under Alternative A as compared to the Proposed Project.** would have a greater number of forecasted aircraft operations, and subsequently more vehicle trips, any potential difference in trips generated between this Alternative and the Proposed Project, is likely marginalized given the added trips associated with non-aviation development under the Proposed Project. Therefore, potential transportation impacts associated with either scenario are considered similar and less than significant.

## Ability to Meet County Objectives

In an evaluation of the No Project Alternative's ability to meet the objectives identified by the County in Section 2.5 of the Project Description, it was determined that this alternative would be able to meet four out of the six objectives. The No Project Alternative would not adequately meet the following objectives:

- Continue to maintain compatibility between the Airport and the surrounding community; and
- Balance future development of the Airport with the protection of the environment.

## Alternative Feasibility

Alternative A would have very similar infrastructure needs as the Proposed Project; requiring the construction of new drainage improvements, on-site sewer lines, water lines, and electrical. However, whereas the Proposed Project would also accommodate the development of several non-aviation uses, Alternative A does not include these facilities, therefore costs associated with infrastructure would be slightly **lower** under this Alternative. Furthermore, from an operation standpoint, Alternative A would be capable of accommodating forecasted aircraft operations with expanded aircraft hangars, and an extended runway. Therefore, Alternative A is operationally feasible.

However, when considering potential land use implications and compatibility with the City of Vacaville, Alternative A becomes less feasible. Extension of the Runway to 5,600, with the addition of a precision approach to the Runway 20 end, would result in the lengthening and widening of the runway safety area (RSA) and runway object free area (ROFA). The increase in size of the ROFA, in particular, would require the acquisition of privately-owned parcels located east of the runway. Furthermore, a 900-foot extension of the runway and installation of a precision approach to Runway 20 would result in the RPZ extending beyond the Airport's current property boundary. The RPZ would encompass areas already developed and would create potential compatibility issues for existing and future development within the City. Moreover, extension of the RPZ beyond the Airport property boundary creates potential conflicts with FAA standards, which

requires the ROFA<sup>2</sup> to be obstruction-free and encourages airport owners to control land uses within their RPZs.

In conclusion, while Alternative A may require less infrastructure and meet the some operational objectives of the Proposed Project, these benefits are offset by potential land use conflicts associated with extending the runway to 5,600 feet and adding a precision approach. When combined with some of the other environmental issues associated with the runway extension (as identified in the analysis above and summarized in **Table 4-2** below), which would be greater than those of the Proposed Project, Alternative A is considered less feasible than the Proposed Project.

## 4.2.2 Alternative B – No Runway Extension Alternative

### Description

Alternative B considers the development of all landside and airside improvements included in Phases I through III of the Proposed Project, with the exception that Runway 20 would not be extended by 600 feet. Aircraft operation forecasts under Alternative B are assumed to be the same as the Proposed Project.

### Basis for Selection

Alternative B is included in the EIR to provide a basis for comparing the potential impacts of an alternative that retains the existing length of Runway 2/20. By not extending the runway, no additional pavement for the runway or connecting taxiways would be required; reducing the overall amount of impervious surface created. So as to be in concert with the analysis for the No Project Alternative, this analysis considers both the potential near-term and long-term impacts of the No Runway Extension Alternative. Long-term impacts for this alternative are evaluated out to the forecast year of 2031.

### Distinctive Environmental Characteristics

The following discussion summarizes the potential impacts of Alternative B and compares them to the impacts of the Proposed Project.

#### *Aesthetics*

Impacts related to aesthetic resources under Alternative B would likely be similar to those identified under the Proposed Project (less than significant) because the size and nature of the development, with the exception of the runway extension, and the setting of the alternative location are similar to that of the Proposed Project.

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<sup>2</sup> A portion of Putah South Canal currently traverses through the ROFA associated with Runway 2.

### ***Air Quality***

Construction-related impacts under Alternative B would be slightly less than those of the Proposed Project due to the fact that this Alternative does not include the construction of a runway extension. Long-term operation-related impacts under this Alternative would include emissions from general aviation activity similar to the Proposed Project, as the forecasted number of aircraft operations would remain the same. Therefore, impacts to air quality under this Alternative, would be less-than-significant, and slightly less than under the Proposed Project.

### ***Biological Resources***

Near-term (Phase I) biological impacts under Alternative B would be similar to those associated with the Proposed Project; with potential impacts to annual grassland and valley foothill riparian occurring as a result of proposed hangar development, apron expansion, and the shifting of 180 feet of runway from the end of Runway 2 to the Runway 20 approach end. In the long-term, implementation of Alternative B would result in the creation of less pavement, and would therefore reduce the amount of annual grassland that would be removed from the project area. Subsequently, Alternative B would also reduce the amount of lost foraging habitat for Swainson's hawk and other nesting raptors; though mitigation would still be required to address impacts related to the loss of foraging habitat associated with other development identified under Phases II and III. While the construction of new general aviation landside and airside facilities would occur under Alternative B, the overall disturbance of grasslands and potential habitat would be less than the Proposed Project; therefore, impacts to biological resources under this alternative would be considered less-than-significant (with mitigation), and would be less than the Proposed Project.

### ***Cultural Resources***

The potential for the discovery of buried archaeological resources under Alternative B would be similar to the potential under the Proposed Project. However, due to the need for less grading and impervious surface associated with Alternative B, it is assumed that while the potential for effects to unknown cultural resources would exist and the same mitigation would be applicable, the potential impact under Alternative B is less than the Proposed Project.

### ***Geology Soils and Seismicity***

Impacts related to geology, soils, and seismicity under Alternative B would likely be similar to those identified under the Proposed Project because the size of the development and the geologic setting of the alternative location are similar to that of the Proposed Project.

### ***Greenhouse Gases***

Impacts related to the cumulative generation of greenhouse gas emissions under Alternative B would be the same as the Proposed Project, as construction-related emissions and operational emissions associated with aircraft activity would be nearly identical. However, given that construction of a runway extension would not occur under this Alternative, construction-related emissions are considered to be slightly less than the Proposed Project. Therefore, cumulative greenhouse gas

emission impacts under Alternative B are considered to be less-than-significant, and would be slightly less than the Proposed Project.

### ***Hazards and Hazardous Materials***

Impacts associated with the exposure of persons to hazards or hazardous materials under Alternative B would likely be similar to those identified under the Proposed Project as the setting (a general aviation airport with no recent history of releases of hazardous materials into the soil or groundwater) is similar to the Proposed Project. Similar to the Proposed Project, Phase I of Alternative B would result in the refurbishment of existing hangars that may be constructed with asbestos-containing materials and lead-based paint. As such, Alternative B would also require mitigation to avoid potential exposure to these hazardous materials. Maintaining the current runway length, however, presents a potential safety hazard with respect to the operation of larger (e.g., corporate jet) aircraft. The FAA recommends that for the Dassault Falcon 50 and the Dassault Falcon 900, the recommended runway length is 5,857 feet. While it is possible for aircraft of this type to operate on smaller runways (as they currently do at Nut Tree Airport), additional runway length affords aircraft of this type the extra time that is sometimes necessary for takeoff during certain (e.g., hot) climate conditions. By not extending the runway, Alternative B does not provide the additional buffer recommended by the FAA for the safe operation of the critical class of aircraft identified above. Therefore, while overall impacts related to hazards and hazardous materials under this Alternative are considered less-than-significant (with mitigation), because Alternative B fails to provide the additional safety buffer that a longer runway affords larger aircraft on departure, impacts are considered greater than those of the Proposed Project.

### ***Hydrology and Water Quality***

Potential near-term impacts to hydrology and water quality under Alternative B would be the same as the Proposed Project. In the near-term, the creation of impervious surface would be the same in both scenarios; requiring the creation of a project drainage plan to avoid potential impacts to water quality, and new drainage features to handle additional stormwater runoff. The primary distinction between the Proposed Project and Alternative B, with respect to hydrology and water quality, is that Alternative B would not add additional paved surface related to the extension of Runway 20 in Phase III. Under Alternative B, Runway 20 would not be extended by 600 feet, thus reducing the amount of impervious surface that would generate additional stormwater runoff. Furthermore, Alternative B would avoid extending Runway 20 into an area that has been designated by FEMA as a 100-year flood zone. Avoiding the creation of impervious surface in this area would reduce potential impacts related to altering the hydrology of this area. Therefore, while potential near-term hydrology and water quality impacts under Alternative B and the Proposed Project would be similar; long-term and overall impacts to this resource under Alternative B would be less than under the Proposed Project (with mitigation).

### ***Land Use and Planning***

Alternative B would require construction of airport-related facilities on land that is designated by Solano County for airport-related uses. As such, no conflict with the Solano County General Plan

would occur under Alternative B. Similarly, Alternative B would not conflict with the *City of Vacaville General Plan*, as this Alternative would also remain predominately on County property, and would only require City consent for the acquisition of off-Airport parcels. Alternative B would also be required to comply with the compatibility policies set forth in the County's ALUCP. Proposed aviation- and non-aviation facilities under Alternative B, which would be the same as the Proposed Project, would be required to comply with the intensity standards and other development criteria set forth by the ALUCP. Thus, Alternative B would not conflict with the standards set forth by the ALUCP. Furthermore, as described in more detail in Section 3.9, Land Use, implementation of the Proposed Project would not trigger a need to update the ALUCP. Under Alternative B Runway 2/20 would remain its current length of 4,700 feet, which is the length assumed under the 1988 ALUCP. While the ALUCP also assumes that Runway 20 would have a precision instrument approach, which is not included under either the Proposed Project or Alternative B, this is not a significant difference such that an update to the ALUCP would be warranted. In summary, implementation of Alternative B would not conflict with local land use policies, nor would it trigger a need to update existing land use plans such as the 1988 ALUCP; therefore, Alternative B would result in less-than-significant impacts to local land use plans or other state guidelines, similar to the Proposed Project.

### **Noise**

Construction of Alternative B in both the near-term and long-term would occur at the same distances from the nearest sensitive receptors as the Proposed Project. As described in more detail in Section 3.10, Noise, the construction of the Proposed Project would not result in significant noise impacts to nearby residents; therefore, potential construction noise impacts associated with Alternative B are also considered less-than-significant throughout all three phases of development. With respect to operation-related noise impacts, Alternative B assumes the same level of operations as the Proposed Project (127,329 a year). As described in Section 3.10, noise associated with forecasted (2031) operations would not result in noise impacts to nearby sensitive land uses; therefore, potential noise impacts would similarly be considered less-than-significant under Alternative B. In summary, overall noise impacts associated with near-term (Phase I) and long-term (Phases II, III) of Alternative B would be less-than-significant, and similar to the Proposed Project.

### **Utilities and Service Systems**

As described in the hydrology discussion above, Alternative B would require the construction of additional water drainage facilities in order to capture and redirect stormwater runoff from the project site, similar to the Proposed Project. This additional infrastructure would ensure that post-project flows were the same as the pre-project condition. Similar to the Proposed Project, mitigation would be required to avoid potential impacts to biological resources during the construction of these drainage features. However, given that Alternative B would not include the 600-foot extension of Runway 20, fewer drainage improvements would be required under this Alternative, as compared to the Proposed Project. Given that all other project features under Alternative B are the same as the Proposed Project, impacts to other utilities (water supply, landfills, and wastewater treatment)

are considered less-than-significant under Alternative 2 (also see Section 3.11, Utilities and Service Systems).

Furthermore, similar to the Proposed Project, development impact fees would be required for Alternative B to offset potential impacts to service ratios and response times for the Vacaville Fire Department and Vacaville Police Department. Payment of these development fees would ensure that impacts to these service systems would remain less-than-significant under Alternative B.

In summary, overall impacts to utilities and service systems under Alternative B would be less-than-significant, and would be slightly less than those of the Proposed Project.

### ***Transportation***

Construction of Alternative B would generate both operational (long-term) and construction-related (short-term) impacts on local roadways and intersections identified in Section 3.16. While the number of vehicle trips generated from general aviation operations under Alternative B are expected to be the same as the Proposed Project, construction-related vehicle trips would be slightly less given that the runway extension would not be built under this Alternative. Therefore, potential transportation impacts associated with Alternative B are considered less-than-significant (with mitigation), and slightly less than those of the Proposed Project.

### **Ability to Meet County Objectives**

In an evaluation of the Alternative B's ability to meet the objectives identified by the County in Section 2.5 of the Project Description, it was determined that this alternative would be able to meet five out of the six objectives. Alternative B would not fully meet the following objective:

- Continue to provide general aviation services that will meet the present and forecasted air transportation needs of the region.

### **Alternative Feasibility**

Alternative B would have very similar infrastructure needs as the Proposed Project; requiring the construction of new drainage improvements, on-site sewer lines, water lines, and electrical. Therefore, potential differences in infrastructure costs between this Alternative and the Proposed Project would be nominal.

In a comparison of potential environmental impacts, Alternative B would have fewer overall impacts than the Proposed Project, given that this Alternative would not include the extension of Runway 20. By not extending the runway, potential construction-related impacts to air quality and noise would be avoided. Similarly, by not extending the runway, potential loss of Swainson's hawk habitat would be reduced, as would other issues related to the creation of additional impervious surface within a 100-year floodplain.

From an operational standpoint, however, implementation of this Alternative is less feasible in that it will not be able to accommodate forecasted air transportation needs given that it would not



extend Runway 2/20. An airport should be designed in accordance with the Airport Reference Code (ARC) standards that are described in Advisory Circular (AC) 150/5300-13, *Airport Design*.<sup>3</sup> According to ARC standards, the future design aircraft for Nut Tree Airport is the Citation V (ARB B-II<sup>4</sup>). In its current configuration, Runway 2/20 is, for the most part, compliant with FAA-specified ARC B-II design standards. However, based on analysis provided in the Master Plan, operators of larger general aviation aircraft, which are forecasted to use Nut Tree Airport over the course of the next 20 years, would benefit from a longer runway (see Chapter D of the Master Plan). Furthermore, as previously discussed under the hazards discussion above, by not extending the runway, this Alternative fails to provide any additional safety buffer that is sometimes needed for larger (e.g., corporate jet) aircraft departing in hot climate conditions.

Therefore, while Alternative B accomplishes many of the objectives outlined by the County for the Proposed Project, and the same or fewer environmental impacts, this Alternative would fail to provide the appropriate facilities to meet all forecasted air transportation needs of the flying public. As such, this Alternative is considered less feasible than the Proposed Project.

### 4.2.3 Alternative C – 400-foot Runway Extension

#### Description

Alternative C considers the development of all landside and airside improvements included in Phases I through III of the Proposed Project, with the exception that Runway 20 would be extended by only 400 feet, rather than 600. Aircraft operation forecasts under Alternative C are also assumed to be the same as the Proposed Project.

#### Basis for Selection

Alternative B-C is included in the EIR to provide a basis for comparing the potential impacts of an alternative that retains the option of extending Runway 20, but to a length slightly less than what is identified under the Proposed Project. By limiting the runway extension to 400 feet, additional pavement for the runway or connecting taxiways would be reduced; thus minimizing the overall amount of impervious surface created. So as to be in concert with the analysis for the No Project Alternative, this analysis considers both the potential near-term and long-term impacts of the No Runway Extension Alternative. Long-term impacts for this alternative are evaluated out to the forecast year of 2031.

<sup>3</sup> The ARC is a coding system used to relate and compare airport design criteria to the operational and physical characteristics of the aircraft intended to operate at the airport.

<sup>4</sup> The ARC has two components that relate to an airport's "design aircraft." The first component, depicted by a letter (i.e., A, B, C, D, or E), is the aircraft approach category, and relates to aircraft approach speed. The second component, depicted by Roman numeral (i.e., I, II, III, IV, or V), is the aircraft design group and relates to aircraft wingspan.

## **Distinctive Environmental Characteristics**

The following discussion summarizes the potential impacts of Alternative ~~B-C~~ and compares them to the impacts of the Proposed Project.

### ***Aesthetics***

Impacts related to aesthetic resources under Alternative C would likely be similar to those identified under the Proposed Project (less than significant) because the size and nature of the development, with the exception of the runway extension, and the setting of the alternative location are similar to that of the Proposed Project.

### ***Air Quality***

Long-term operation-related impacts under the alternative would include emissions from general aviation activity (similar to the Proposed Project). Construction-related impacts would be similar to those of the Proposed Project under Alternative C as the same facilities would be constructed. However, while construction-related emissions under either scenario would be similar, construction emissions would be slightly less under Alternative C, as this Alternative would construction 200 feet less of runway. Therefore, impacts to air quality under this Alternative, are considered less-than-significant, and slightly less than the Proposed Project.

### ***Biological Resources***

Near-term (Phase I) biological impacts under Alternative C would be similar to those associated with the Proposed Project; with potential impacts to annual grassland and valley foothill riparian occurring as a result of proposed hangar development, apron expansion, and the shifting of 180 feet of runway from the end of Runway 2 to the Runway 20 approach end. In the long-term, implementation of Alternative C would result in the creation of less pavement (with a 200-foot shorter runway extension), and would therefore reduce the amount of annual grassland that would be removed from the project area. Subsequently, Alternative C would also reduce the amount of lost foraging habitat for Swainson's hawk and other nesting raptors; though mitigation would still be required to address impacts related to the loss of foraging habitat associated with other development identified under Phases II and III. While the construction of new general aviation landside and airside facilities would occur under Alternative C, the overall disturbance of grasslands and potential habitat would be slightly less than the Proposed Project; therefore, impacts to biological resources under this alternative would be considered less-than-significant (with mitigation), and would be less than the Proposed Project.

### ***Cultural Resources***

The potential for the discovery of buried archaeological resources under Alternative C would be similar to the potential under the Proposed Project. However, due to the need for less grading and impervious surface associated with Alternative C, it is assumed that while the potential for effects to unknown cultural resources would exist and the same mitigation would be applicable, the potential impact under Alternative C is less than the Proposed Project.

### ***Geology Soils and Seismicity***

Impacts related to geology, soils, and seismicity under Alternative C would likely be similar to those identified under the Proposed Project because the size of the development and the geologic setting of the alternative location are similar to that of the Proposed Project.

### ***Greenhouse Gases***

Impacts related to the cumulative generation of greenhouse gas emissions under Alternative C would be the same as the Proposed Project, as construction-related emissions and operational emissions associated with aircraft activity would be nearly identical. However, given that construction of a runway extension would be reduced by 200 feet under this Alternative, construction-related emissions are considered to be slightly less than the Proposed Project. Therefore, cumulative greenhouse gas emission impacts under Alternative C are considered to be less-than-significant, and would be slightly less than the Proposed Project.

### ***Hazards and Hazardous Materials***

Impacts associated with the exposure of persons to hazards or hazardous materials under Alternative C would likely be similar to those identified under the Proposed Project as the setting (a general aviation airport with no recent history of releases of hazardous materials into the soil or groundwater) is similar to the Proposed Project. Similar to the Proposed Project, Phase I of Alternative C would result in the refurbishment of existing hangars that may be constructed with asbestos-containing materials and lead-based paint. As such, Alternative C would also require mitigation to avoid potential exposure to these hazardous materials. Furthermore, as explained previously in this Chapter, the FAA recommends a runway length of 5,857 feet for the two most critical business jet aircraft currently based at Nut Tree Airport (the Dassault Falcon 50 and Falcon 900). Additional runway length affords heavier aircraft additional takeoff time during hotter climate conditions. While Alternative C would add an additional 400 feet to Runway 2/20, this would be 200 feet less than the proposed 600-foot extension, and would therefore not provide as much runway buffer as a the Proposed Project. While overall impacts related to hazards and hazardous materials under this Alternative are considered less-than-significant (with mitigation), because Alternative C provides less of a safety buffer than a 600-foot runway extension affords larger aircraft on departure, impacts are considered greater than and similar to those of the Proposed Project.

### ***Hydrology and Water Quality***

Potential near-term impacts to hydrology and water quality under Alternative C would be the same as the Proposed Project. In the near-term, the creation of impervious surface would be the same in both scenarios; requiring the creation of a project drainage plan to avoid potential impacts to water quality, and new drainage features to handle additional stormwater runoff. The primary distinction between the Proposed Project and Alternative, with respect to hydrology and water quality, is that Alternative ~~B-C~~ would not add slightly less paved surface related to the extension of Runway 20 in Phase III. Under Alternative C, Runway 20 would be extended by 400 feet, thus reducing the amount of impervious surface that would generate additional stormwater runoff. Furthermore, while Alternative C would avoid extending the runway itself into an area

that has been designated by FEMA as a 100-year flood zone, a small portion of the entry/exit taxiway would extend into the existing flood zone. The creation of impervious surface in this area would alter the hydrology, and require specific design measures, such as the construction of a drainage basin, that would be used to avert potential risk from flooding. While a portion of the 100-year flood zone would be altered as a result of this Alternative, the overall affect would be less than the Proposed Project. Therefore, while potential near-term hydrology and water quality impacts under Alternative ~~B~~C and the Proposed Project would be similar and less-than-significant (with mitigation); long-term and overall impacts to this resource under Alternative ~~B~~C would be less than under the Proposed Project.

### ***Land Use and Planning***

Alternative C would require construction of airport-related facilities on land that is designated by Solano County for airport-related uses. As such, no conflict with the Solano County General Plan would occur under this Alternative. Similarly, Alternative C would not conflict with the *City of Vacaville General Plan*, as this Alternative would also remain predominately on County property, and would only require City consent for the acquisition of off-Airport parcels. Alternative C would also be required to comply with the compatibility policies set forth in the County's ALUCP. Proposed aviation- and non-aviation facilities under Alternative C, which would be the same as the Proposed Project, would be required to comply with the intensity standards and other development criteria set forth by the ALUCP. Thus, Alternative C would not conflict with the standards set forth by the ALUCP. Furthermore, as described in more detail in Section 3.9, Land Use, implementation of the Proposed Project would not trigger a need to update the ALUCP. Under Alternative C, Runway 2/20 would be extended to 5,100 feet. As described in Section 3.9, extension of the runway by 600 feet (under the Proposed Project) would not trigger a need to update the current ALUCP; therefore, extension of the runway by only 400 feet under Alternative C would not constitute a significant difference such that an update to the ALUCP would be warranted. In summary, implementation of Alternative C would not conflict with local land use policies, nor would it trigger a need to update existing land use plans such as the 1988 ALUCP; therefore, Alternative C would result in less-than-significant impacts to local land use plans or other state guidelines, similar to the Proposed Project.

### ***Noise***

Construction of Alternative C in both the near-term and long-term would occur at the same distances from the nearest sensitive receptors as the Proposed Project. As described in more detail in Section 3.10, Noise, the construction of the Proposed Project would not result in significant noise impacts to nearby residents; therefore, potential construction noise impacts associated with Alternative C are also considered less-than-significant throughout all three phases of development. With respect to operation-related noise impacts, Alternative C assumes the same level of operations as the Proposed Project (127,329 a year). As described in Section 3.10, noise associated with forecasted (2031) operations would not result in noise impacts to nearby sensitive land uses; therefore, potential noise impacts would similarly be considered less-than-significant under Alternative C. In summary, overall noise impacts associated with near-term (Phase I) and long-term (Phases II, III) of Alternative C would be less-than-significant and similar to the Proposed Project.

### ***Utilities and Service Systems***

As described in the hydrology discussion above, Alternative C would require the construction of additional water drainage facilities in order to capture and redirect stormwater runoff from the project site, similar to the Proposed Project. This additional infrastructure would ensure that post-project flows were the same as the pre-project condition. Similar to the Proposed Project, mitigation would be required to avoid potential impacts to biological resources during the construction of these drainage features. However, given that Alternative C would include a 400-foot extension of Runway 20, as opposed to the 600-foot extension associated with the Proposed Project, fewer drainage improvements would be required under this Alternative. Given that all other project features under Alternative C are the same as the Proposed Project, impacts to other utilities (water supply, landfills, and wastewater treatment) are considered less-than-significant (with mitigation) under Alternative C (also see Section 3.11, Utilities and Service Systems), and would be slightly less than those of the Proposed Project.

Furthermore, similar to the Proposed Project, development impact fees would be required for Alternative ~~B-C~~ to offset potential impacts to service ratios and response times for the Vacaville Fire Department and Vacaville Police Department. Payment of these development fees would ensure that impacts to these service systems would remain less-than-significant under Alternative C.

In summary, overall impacts to utilities and service systems under Alternative C would be less-than-significant, and would be slightly less than those of the Proposed Project.

### ***Transportation***

Construction of Alternative C would generate both operational (long-term) and construction-related (short-term) impacts on local roadways and intersections identified in Section 3.16. While the number of vehicle trips generated from general aviation operations under Alternative C are expected to be the same as the Proposed Project, construction-related vehicle trips would be slightly less given that the runway extension would be shorter under this Alternative. Therefore, potential transportation impacts associated with Alternative C are considered less-than-significant (with mitigation), and slightly less than those of the Proposed Project.

### **Ability to Meet County Objectives**

In an evaluation of Alternative C's ability to meet the objectives identified by the County in Section 2.5 of the Project Description, it was determined that this alternative would be able to meet all of the six objectives.

### **Alternative Feasibility**

Alternative ~~B-C~~ would have very similar infrastructure needs as the Proposed Project; requiring the construction of new drainage improvements, on-site sewer lines, water lines, and electrical. Therefore, potential differences in infrastructure costs between this Alternative and the Proposed Project would be nominal.

Potential environmental impacts associated with Alternative C, while similar to the Proposed Project's, would be slightly reduced; as the proposed runway extension would be shortened by 200 feet. Such a measure would avoid potential biological and hydrological impacts caused by creating impervious surfaces in areas known to be viable habitat for Swainson's hawk and other nesting raptors. Furthermore, by extending the runway by only 400 feet, a 100-year flood zone, located north east of Runway 20, would mostly be avoided (though a portion of the connecting taxiway would still extend into this flood zone).

Lastly, from an operational standpoint, Alternative C would likely be able to achieve the same objectives as the Proposed Project. By extending Runway 20 400 feet, Nut Tree Airport would still be capable of catering to most of the heavier aircraft in the ARC B-II design category forecasted to operate out of the Airport over the next 20 years. Therefore, this Alternative is operationally feasible.

In conclusion, given the economic, environmental, and operational factors described above, Alternative C is considered a feasible alternative to the Proposed Project.

### 4.3 Environmentally Superior Alternative

**Table 4-1** provides a summary of the ability of Alternatives A, B, and C to meet the County's objectives, as specified in Section 2.3 of the Project Description. **Table 4-2** provides a summary of the environmental evaluation for each alternative, as compared to the Proposed Project. As shown in **Table 4-2**, the No Project Alternative would result in similar or slightly less impacts ~~potentially greater impacts to air quality, biological resources, hydrology, land use, and noise impacts,~~ as compared to the Proposed Project. Direct physical changes to the environment would be slightly less under the No Project Alternative, given the lack of future non-aviation uses, as identified under the Proposed Project. This would also result in less usage of utilities and the generation of less traffic. However, a longer runway extension and a precision approach to Runway 20 create potential land use conflicts than under the Proposed Project. When considered as a whole, the No Project Alternative would have slightly less impacts as compared to the Proposed Project. Alternative B would have similar impacts to the Proposed Project, but eliminates all potential impacts strictly associated with an extension to Runway 20. However, this also means that Alternative B would fail to provide for the additional runway length that the FAA recommends for the safe operation of larger critical aircraft. Lastly, Alternative C, as identified in **Table 4-2**, would have similar, if not reduced impacts in areas related primarily to biological resources and hydrology, when compared to the Proposed Project, while providing more safety buffer for departing aircraft than Alternative B, but less than the Proposed Project (because of the reduced runway extension).

As compared to the Proposed Project and the other alternatives, Alternative A, the No Project Alternative, would be considered the environmentally superior alternative for the marginal benefits it offers in areas such as biological resources, utilities, and transportation, over the Proposed Project. However, CEQA Guidelines Section 15126(e)(2) states that when the environmentally superior alternative is the No Project Alternative, the EIR shall also

**identify an environmentally superior alternative from the other alternatives.** Therefore, while it fails to provide the additional runway length that larger aircraft can need during departure in hot weather conditions, because of its ability to avoid biological and hydrological impacts, **as well as any potential land use conflicts,** related to extending Runway 20, Alternative B is considered to be the environmentally superior alternative.

**TABLE 4-1  
COMPARISON OF ALTERNATIVES' ABILITY TO MEET COUNTY OBJECTIVES**

<b>County Objective</b>	<b>Alternative A – No Project Alternative</b>	<b>Alternative B – No Runway Extension</b>	<b>Alternative C – 400-foot Runway Extension</b>
Continue to provide general aviation services that will meet the present and forecasted air transportation needs of the region.	Yes	No	Yes
Provide an increasing range of general aviation services to the flying public.	Yes	Yes	Yes
Continue to serve as a vital and supporting transportation link connecting Solano County, Travis Air Force Base, and the cities of Vacaville, Fairfield, and Dixon to the region and beyond.	Yes	Yes	Yes
Preserve and further the history and value that Nut Tree Airport has in the local community.	Yes	Yes	Yes
Continue to maintain compatibility between the Airport and the surrounding community.	No	Yes	Yes
Balance future development of the Airport with the protection of the environment.	<u>Yes</u> <del>No</del>	Yes	Yes

**TABLE 4-2  
COMPARISON OF ALTERNATIVES FOR THE CUMULATIVE (2031) SCENARIO**

<b>Environmental Impact (Prior to Mitigation)</b>	<b>Proposed Project</b>	<b>Alternative A – No Project</b>	<b>Alternative B – No Runway Extension</b>	<b>Alternative C – 400-foot Runway Extension</b>
<b>3.1 Aesthetics</b>				
<b>3.1-1:</b> Would the Proposed Project have a substantial adverse effect on a scenic vista?	LTS	LTS	LTS	LTS
<b>3.1-2:</b> Would the Proposed Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway or local scenic route?	LTS	LTS	LTS	LTS
<b>3.1-3:</b> Would the Proposed Project substantially degrade the existing visual character or quality of the site and its surroundings?	LTS	LTS	LTS	LTS
<b>3.1-4:</b> Would the Proposed Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	LTS	LTS	LTS	LTS



**TABLE 4-2  
COMPARISON OF ALTERNATIVES FOR THE CUMULATIVE (2031) SCENARIO**

<b>Environmental Impact (Prior to Mitigation)</b>	<b>Proposed Project</b>	<b>Alternative A – No Project</b>	<b>Alternative B – No Runway Extension</b>	<b>Alternative C – 400-foot Runway Extension</b>
<b>3.2 Air Quality</b>				
<b>3.1-1:</b> Could implementation of the Proposed Project conflict with or obstruct implementation of an applicable air quality plan?	LTS	<u>LTSPS</u>	LTS-	LTS-
<b>3.2-2:</b> Could the proposed project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	LTS	<u>LTSPS</u>	LTS-	LTS-
<b>3.2-3:</b> Could the Proposed Project create objectionable odors?	LTS	LTS	LTS	LTS
<b>3.2-4:</b> Could the Proposed Project expose persons to substantial levels of toxic air contaminants, which could lead to an increase in the risk of cancer?	LTS	LTS+	LTS	LTS
<b>3.2-5:</b> Could the Proposed Project expose persons to substantial levels of toxic air contaminants and substantial increase in acute and chronic health impacts?	LTS	LTS+	LTS	LTS
<b>3.2-6:</b> Could the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed qualitative thresholds for ozone precursors)?	LTS	<u>LTSPS</u>	LTS	LTS
<b>3.3 Biological Resources</b>				
<b>3.3-1:</b> Could the Proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?	PS	PS <sub>-</sub> +	PS-	PS-
<b>3.3-2:</b> Could the Proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS?	PS	PS <sub>-</sub> +	PS-	PS-
<b>3.3-3:</b> Could the Proposed Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	PS	PS <sub>-</sub> +	PS-	PS-
<b>3.3-4:</b> Could the Proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	LTS	LTS	LTS	LTS

**TABLE 4-2  
COMPARISON OF ALTERNATIVES FOR THE CUMULATIVE (2031) SCENARIO**

<b>Environmental Impact (Prior to Mitigation)</b>	<b>Proposed Project</b>	<b>Alternative A – No Project</b>	<b>Alternative B – No Runway Extension</b>	<b>Alternative C – 400-foot Runway Extension</b>
<b>3.3-5:</b> Could the Proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	PS	PS	PS	PS
<b>3.3-6:</b> Could the Proposed Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	NI	NI	NI	NI
<b>3.4 Cultural Resources</b>				
<b>3.4-1:</b> Would the construction or operation of the Proposed Project cause a substantial adverse change in the significance of an architectural/structural historical resource as defined in CEQA Guidelines Section 15064.5?	NI	NI	NI	NI
<b>3.4-2:</b> Would the Proposed Project cause a substantial adverse change in the significance of an archaeological resource, either a unique archaeological resource (PRC Section 21083.2) or a historical resource that is an archaeological resource (PRC Section 21084.1)?	NI	NI	NI	NI
<b>3.4-3:</b> Would the Proposed Project disturb any human remains, including those interred outside of formal cemeteries?	PS	PS+	PS-	PS-
<b>3.4-4:</b> Construction-related activities associated with the Proposed Project could disturb any human remains, including those interred outside of formal cemeteries.	PS	PS+	PS-	PS-
<b>3.5 Geology, Soils, and Seismicity</b>				
<b>3.5-1:</b> Would the Proposed Project expose people to injury or structures to damage from potential rupture of a known earthquake fault, strong groundshaking, seismic-related ground failure, or landslides?	LTS	LTS	LTS	LTS
<b>3.5-2:</b> Would the Proposed Project result in substantial soil erosion or the loss of topsoil?	LTS	LTS	LTS	LTS
<b>3.5-3:</b> Would the Proposed Project be located on soils that are potentially unstable, or that could become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	LTS	LTS	LTS	LTS
<b>3.5-4:</b> Would the Proposed Project would be located on expansive, corrosive, or other unstable soils creating substantial risks to life or property?	LTS	LTS	LTS	LTS

**TABLE 4-2  
COMPARISON OF ALTERNATIVES FOR THE CUMULATIVE (2031) SCENARIO**

<b>Environmental Impact (Prior to Mitigation)</b>	<b>Proposed Project</b>	<b>Alternative A – No Project</b>	<b>Alternative B – No Runway Extension</b>	<b>Alternative C – 400-foot Runway Extension</b>
<b>3.6 Greenhouse Gases</b>				
<b>3.6-1:</b> Could the proposed project generate GHG emissions, either directly or indirectly, that may have a cumulatively significant impact on the environment?	LTS	<u>LTSPS</u>	LTS-	LTS-
<b>3.6-2:</b> Could the Proposed Project conflict with the GHG reduction measures identified in CARB's AB 32 Scoping Plan or other applicable Plan or policy for reducing GHG emissions?	LTS	LTS	LTS	LTS
<b>3.7 Hazards and Hazardous Materials</b>				
<b>3.7-1:</b> Would the Proposed Project create a significant hazard to the public or the environment from the transportation, use, or disposal of hazardous materials?	LTS	LTS	LTS	LTS
<b>3.7-2:</b> Would the Proposed Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	PS	LTS	PS	PS
<b>3.7-3:</b> Would the Proposed Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	LTS	LTS	LTS	LTS
<b>3.7-4:</b> Would the Proposed Project be located on a site which is included on a list of hazardous materials sites and, as a result, would it create a significant hazard to the public or the environment?	NI	NI	NI	NI
<b>3.7-5:</b> Would the Proposed Project, which is located within an airport land use plan, result in a safety hazard for people residing or working in the project area?	LTS	LTS-	LTS+	LTS+
<b>3.7-6:</b> Would the Proposed Project be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	NI	NI	NI	NI
<b>3.7-7:</b> Would the Proposed Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS	LTS	LTS	LTS
<b>3.7-8:</b> Would the Proposed Project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	LTS	LTS	LTS	LTS

**TABLE 4-2  
COMPARISON OF ALTERNATIVES FOR THE CUMULATIVE (2031) SCENARIO**

<b>Environmental Impact (Prior to Mitigation)</b>	<b>Proposed Project</b>	<b>Alternative A – No Project</b>	<b>Alternative B – No Runway Extension</b>	<b>Alternative C – 400-foot Runway Extension</b>
<b>3.8 Hydrology and Water Quality</b>				
<b>3.8-1:</b> Would the Proposed Project result in a violation of water quality standards or waste discharge requirements?	LTS	LTS	LTS	LTS
<b>3.8-2:</b> Would the Proposed Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?	LTS	LTS-	LTS-	LTS-
<b>3.8-3:</b> the Proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	PS	PS+	PS-	PS-
<b>3.8-4:</b> Could the Proposed Project substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	PS	PS+	PS-	PS-
<b>3.8-5:</b> Could the Proposed Project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	PS	PS+	PS-	PS-
<b>3.8-6:</b> Could the Proposed Project otherwise substantially degrade water quality?	PS	PS+	PS-	PS-
<b>3.8-7:</b> Would construction of the Proposed Project result in placement of housing within a 100-year flood zone?	NI	NI	NI	NI
<b>3.8-8:</b> Would implementation of the Proposed Project impede or redirect flood flows due to placement of new structures?	LTS	LTS+	LTS-	LTS-
<b>3.8-9:</b> Would the Proposed Project expose people or structures to significant risk of flooding due to levee or dam failure?	NI	NI	NI	NI
<b>3.8-10:</b> Would implementation of the Proposed Project result in increased risk of inundation by seiche, tsunami, or mudflow?	NI	NI	NI	NI
<b>3.9 Land Use</b>				
<b>3.9-1:</b> Would implementation of the Proposed Project result in the physical division of an established community?	NI	NI	NI	NI
<b>3.9-2:</b> Would the Proposed Project conflict with applicable adopted land use plans?	LTS	PS	LTS-	LTS-

**TABLE 4-2  
COMPARISON OF ALTERNATIVES FOR THE CUMULATIVE (2031) SCENARIO**

<b>Environmental Impact (Prior to Mitigation)</b>	<b>Proposed Project</b>	<b>Alternative A – No Project</b>	<b>Alternative B – No Runway Extension</b>	<b>Alternative C – 400-foot Runway Extension</b>
<b>3.9-3:</b> Would the Proposed Project conflict with an applicable airport land use compatibility plan?	LTS	LTS	LTS	LTS
<b>3.9-4:</b> Would the Proposed Project conflict with an applicable habitat conservation plan?	NI	NI	NI	NI
<b>3.10 Noise</b>				
<b>3.10-1:</b> Would the Proposed Project expose persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	LTS	<u>LTSPS</u>	LTS	LTS
<b>3.10-2:</b> Would the Proposed Project expose persons and structures to groundborne vibration or groundborne noise levels?	LTS	LTS	LTS	LTS
<b>3.10-3:</b> Would activities associated with the Proposed Project permanently or temporarily increase ambient noise levels at nearby land uses?	LTS	<u>LTSPS</u>	LTS	LTS
<b>3.10-4:</b> For a project located within two miles of a public airport or public use airport, would the Proposed Project expose people residing or working in the project area to excessive noise levels?	LTS	<u>LTSPS</u>	LTS	LTS
<b>3.10-5:</b> For a project located within two miles of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	NI	NI	NI	NI
<b>3.11 Utilities and Public Services</b>				
<b>3.11-1:</b> Would the Proposed Project result in substantial adverse physical impacts associated with the need for new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services?	LTS	LTS-	LTS	LTS
<b>3.11-2:</b> Would the Proposed Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	LTS	LTS-	LTS	LTS
<b>3.11-3:</b> Would the Proposed Project require the construction of new storm water drainage facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects?	PS	PS-	PS-	PS-
<b>3.11-4:</b> Would the Proposed Project result in insufficient water supplies from existing entitlements or need new or expanded entitlements?	LTS	LTS-	LTS	LTS
<b>3.11-5:</b> Would the Proposed Project result in a determination by the	LTS	LTS-	LTS	LTS

**TABLE 4-2  
COMPARISON OF ALTERNATIVES FOR THE CUMULATIVE (2031) SCENARIO**

<b>Environmental Impact (Prior to Mitigation)</b>	<b>Proposed Project</b>	<b>Alternative A – No Project</b>	<b>Alternative B – No Runway Extension</b>	<b>Alternative C – 400-foot Runway Extension</b>
wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				
<b>3.11-6:</b> Would the Proposed Project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?	LTS	LTS-	LTS	LTS
<b>3.11-7:</b> Would the Proposed Project comply with federal, state, and local statutes and regulations related to solid waste?	LTS	LTS	LTS	LTS
<b>3.12 Transportation</b>				
<b>3.12-1:</b> Could the Proposed Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for performance of study intersections and roadways, including those in an applicable congestion management program, under Existing plus Project Conditions?	LTS	LTS-	LTS-	LTS-
<b>3.12-2:</b> Could the Proposed Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, which would result in substantial safety risks?	LTS	LTS	LTS	LTS
<b>3.12-3:</b> Could the Project substantially increase hazards due to a design feature?	LTS	LTS	LTS	LTS
<b>3.12-4:</b> The project would result in inadequate emergency access.	LTS	LTS	LTS	LTS
<b>3.12-5:</b> Could the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	LTS	LTS	LTS	LTS
<b>3.16-6:</b> Could construction activities associated with the Project result in temporary circulation impacts on the street system?	LTS	LTS	LTS	LTS

**Key:**

LTS = Less than significant

NI = No impact

PS = Potentially significant

+ = Greater in magnitude than the Proposed Project

- = Lesser in magnitude than the Proposed Project