Chapter 2.0 Alternatives Considered

2.1 Introduction

As previously discussed in **Chapter 1.0 Purpose and Need**, the state of Michigan administers the Airport Improvement Program (AIP) grants under the Federal Aviation Administration's (FAA) State Block Grant Program (SBGP). Under the SBGP, Michigan is responsible for evaluating the potential environmental impacts of projects under its authority, consistent with the National Environmental Policy Act (NEPA) of 1969. Some actions, such as relocating the FAA owned Runway End Identifier Lights (REILs) at the approach end of Runway 6, are considered outside the SBGP and are considered "Federal Actions" and subject to FAA involvement and review.

As the representative of the FAA for this project, the Michigan Department of Transportation Office of Aeronautics (MDOT AERO) is responsible for complying with the policies and procedures of NEPA, Council on Environmental Quality (CEQ) regulations, FAA Order 1050.1F*, Environmental Impacts: Policies and Procedures*, and other related environmental laws, regulations, and orders applicable to federal actions.

In accordance with the CEQ regulations found in 40 Code of Federal Regulations (CFR) Part 1500 (2020), an environmental review process requires that reasonable alternatives for the proposed action be identified and evaluated, although there is no requirement for the inclusion of any specific number or range of alternatives. This also aids the FAA in fulfilling its additional duty to identify the agency's preferred alternative as defined in 40 CFR § 1502.14(d). For alternatives that were considered but eliminated from further study, an explanation of why such alternatives were eliminated from further consideration in accordance with 40 CFR § 1502.14(a) is required. Additionally, pursuant to Section 1502.14(c), the environmental document must include an analysis of the No Action Alternative as a baseline against which to compare the impacts of the Proposed Action and any alternatives being considered.

FAA Order 1050.1F requires a discussion of alternatives that are reasonable and meet the purpose and need of the proposed action. The alternatives discussion should include:

- A list of alternatives considered, including the Proposed Action and the No Action alternatives.
- A concise statement explaining why any initial alternative considered was eliminated from further study because they were not considered reasonable or did not meet the purpose and need.
- A statement identifying a Preferred Alternative if one has been identified.

This chapter documents different options that may reasonably meet the purpose and need of the proposed project at the Ann Arbor Municipal Airport (ARB or Airport), as explained in **Chapter 1.0 Purpose and Need**. It should be noted that preliminary costs for build alternatives are provided; however, comprehensive costs will be developed during the final design of the Preferred Alternative.

See **Appendix C Runway Justification Study** for aircraft types that operate at ARB and the number of current and projected operations the Airport can expect in the future including a discussion of the designated Critical Aircraft. This Runway Justification Study also helped in developing build alternatives to meet the project's purpose and need for a greater length on Runway 6/24, and associated actions, to meet the operating needs of the critical aircraft at ARB.

The following alternatives are presented and discussed in this chapter:

- No Action Alternative – Maintain Existing 3,505 Feet of Runway Length
- Build Alternatives:
  - Alternative 1 – Extend 720 Feet at the Approach End of Runway 24
  - Alternative 2 – Shift Runway 150 Feet Southwest and Extend 720 Feet at the Approach End of Runway 6 (Preferred Alternative)
  - Alternative 3 – Extend 360 Feet at both ends of Runway 6/24

2.2 Safety Area Definitions and FAA Design Standards

Safety areas and design standards, as defined by the FAA in Advisory Circular (AC) 150/5300-13B, *Airport Design* are important in evaluating potential alternatives because they are a controlling factor for each runway end and for determining potential impacts. No alternative will be considered technically feasible and therefore reasonable if it does not meet the safety area standards and design requirements outlined in this section, per 40 CFR § 1508.1(z). This section includes a definition of the different safety areas important to this project and required by FAA design standards.

Runway Safety Area (RSA): The RSA is a two-dimensional graded area surrounding the runway surface and is constructed to enhance the safety of airplanes in the event of an unintended excursion from the runway's paved surface. This area must be:

- Cleared and graded with no potentially hazardous humps, ruts, depressions, or other surface variations
- Adequately drained to prevent water accumulation
- Capable, under normal (dry) conditions of supporting snow removal equipment, rescue and firefighting equipment, and occasional aircraft passage without causing structural damage to the aircraft
- Free of objects, except for those that need to be in the RSA because of their function, and then, to the extent practical, mounted on low impact (frangible) structures

Runway Object Free Area (ROFA): A ROFA is a two-dimensional ground surface surrounding a runway. The ROFA clearing standards preclude above-ground objects protruding above the elevation of the nearest point of the RSA, except those required to be within the ROFA for navigation, ground maneuvering, aircraft taxi, and aircraft holding purposes. No other objects are permitted.

Runway Protection Zone (RPZ): The RPZ is a trapezoidal shaped area centered on the extended runway centerline and extended off each runway end. The function of an RPZ is to enhance the protection of people

and property on the ground and prevent incompatible land uses. Airports are encouraged by the FAA to control the land within an RPZ and clear the areas of incompatible objects and activities.

To determine potential RPZ impacts of the proposed project, a separate technical report (RPZ Analysis) was completed for Runway 6/24 and is found in **Appendix D Runway Protection Zone Analysis**. The RPZ Analysis report evaluated land uses of six build alternatives to determine incompatible land uses, minimize potential impacts of incompatible land uses, and mitigate the risk to people and property within each build alternative's RPZ. Of the six alternatives evaluated in the RPZ Analysis report, only the three alternatives considered most reasonable were carried forward and evaluated in this chapter. The findings of three build alternatives carried forward are summarized and evaluated below.

Airport Traffic Control Tower (ATCT) Siting: Per Section 6.11.7 of AC150/5300-13B *Airport Design*, an ATCT should give controllers a clear line-of-sight to all surface movement areas, takeoff areas, and landing areas. During the planning of a runway or taxiway extension, the location of an existing ATCT site should be evaluated for impacts from the proposed extension. New development has the potential to affect operations and consideration should be given to maintaining an unobstructed line-of-sight from the ATCT to all points on movement area pavement, maintaining the minimum angle of incidence from the ATCT to all points on the movement area, ensure new light sources do not obscure the controller's view of the movement area, and consider potential effects of threshold parallax as viewed from the ATCT.

2.3 No Action Alternative – Maintain Existing 3,505 Feet of Runway Length

The No Action Alternative assumes that no action would be taken to address the needs of the Airport as identified in **Chapter 1.0 Purpose and Need**. Under this alternative, ARB would remain in its current state and the operating needs of the critical aircraft at ARB, as identified in the Runway Justification Study, would not be met. Under this alternative, the obstructed view of the intersection of Taxiway A and Connector Taxiway A1 experienced by the ATCT would remain unchanged.

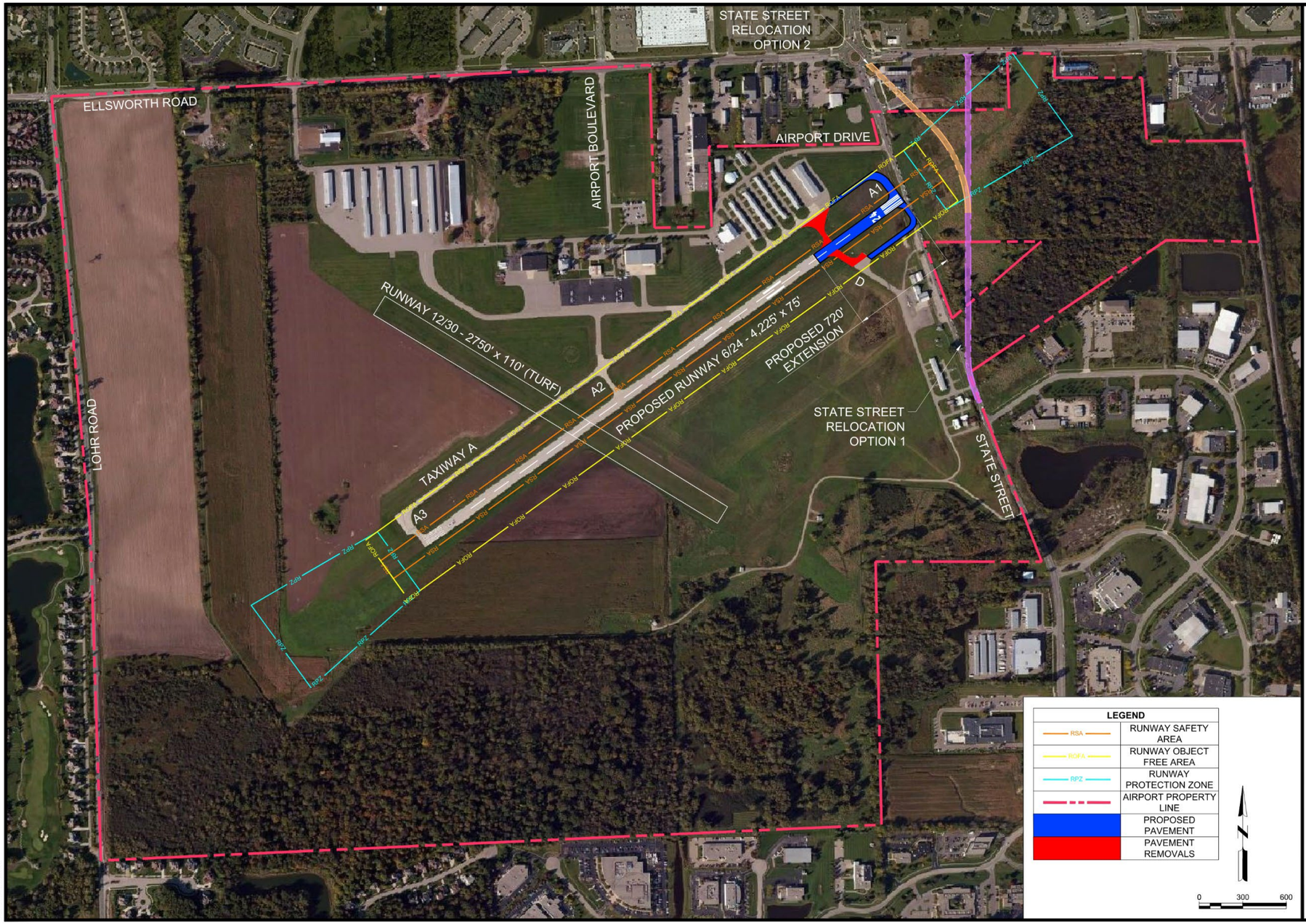
The No Action Alternative does not meet the project's purpose and need of providing an air transportation facility that would meet the operational needs of aircraft that currently operate at the Airport and are projected to modestly increase operations over time. This alternative also fails to provide a clear line-of-sight of all surface movement areas, takeoff areas, and landing areas for ATCT personnel as defined in AC 150/5300-13B, Section 6.11.7.

Although the No Action Alternative does not meet the purpose and need of the proposed project, it is included as required by 40 CFR § 1502.14(c) to serve as a baseline of comparison to the environmental impacts associated with the other alternatives and is, therefore, retained for analysis and carried forward for review.

2.4 Alternative 1 – Extend 720 Feet at the Approach End of Runway 24

Under this alternative, Runway 6/24 would be extended 720 feet to the northeast at the approach end of Runway 24 to provide a total length of 4,225 feet of available runway length (**Figure 2.0 Alternative 1 – Extend 720 Feet at the Approach End of Runway 24**).

Figure 2.0 Alternative 1 – Extend 720 Feet at the Approach End of Runway 24



Source: Mead & Hunt, Inc.

Taxiway A would be extended to match the runway extension and a new connector taxiway (Taxiway A1) would be constructed to align with the relocated threshold of Runway 24. Existing Taxiway D would also be reconstructed to match the runway extension and be designed to intersect Runway 6/24 at a 90-degree angle. All applicable navigational aids (NAVAIDs), lighting, and signage would be relocated to match the proposed runway extension and would meet FAA design standards.

Taxiway D would be realigned so that it has a standard 90-degree intersection with Runway 6/24 to comply with FAA AC 150/5300-13B, Section 4.8.1. FAA design standards discourage direct access from an apron to a runway without requiring a turn by aircraft prior to reaching the runway as referenced in FAA AC 150/5300-13B, Section 4.3.5 *Runway Access from Apron*. Direct access configurations can lead to confusion when pilots expect to maneuver onto a parallel taxiway but instead enter a runway.

This alternative would also require State Street to be reconstructed outside of the extended runway, Taxiway D, the RSA, and the ROFA. The existing roadbed of State Street through these areas would be closed and the pavement removed. Two options for relocating State Street are shown on **Figure 2.0 Alternative 1 – Extend 720 Feet at the Approach End of Runway 24**. Any property that is not owned or controlled by ARB within the RSA and ROFA would require either acquisition or an avigation easement.

As previously mentioned, a separate RPZ Analysis evaluated land uses within the relocated RPZ off the end of Runway 24. The analysis found few incompatible land uses other than the two State Street relocation options. Generally, roads within an RPZ are undesirable and should be relocated outside of the RPZ if possible.

The primary advantage of Alternative 1 is that it offers 4,225 feet of usable runway length that meet the needs of existing small turboprop and jet aircraft that currently operate at the Airport and are forecasted to modestly grow in the future. Alternative 1 also corrects the geometry of Taxiway D with Runway 6/24 so that it intersects Runway 6/24 at 90-degree angle. This proposed design reduces pilot confusion and improves situational awareness.

Disadvantages of Alternative 1 include the relocation of State Street around the approach end of Runway 24 and its associated RSA and ROFA surfaces. The State Street relocation would also cause business and private property impacts where it connects to Ellsworth Road, likely causing land and commercial acquisitions. Also, there would be considerable community disruptions and road impacts during construction and realignment of State Street.

Preliminary investigations indicate that wetlands and a 100-year floodplain are found throughout the area east of State Street. It is likely that State Street realignment options would cause impacts to wildlife habitat, regulated wetlands and floodplains, thus adding to the environmental impacts of this alternative. See **Chapter 3.0 Affected Environment & Environmental Consequences** for information and maps of floodplains, delineated wetlands, and other environmental resources in the project area.

Another disadvantage of Alternative 1 is that the ATCT will continue to have visibility deficiencies at the new intersection of Taxiway A and connector Taxiway A1 when aircraft and ground vehicles are in the area.

According to Section 6.11.7 of AC 150/5300-13B, an existing ATCT should give controllers a clear line-of-sight to all surface movement areas, takeoff areas, and landing areas.

Alternative 1 is not considered a reasonable alternative because it fails to meet the project's purpose and need of addressing visibility issues experienced by the ATCT. Although Alternative 1 provides adequate runway length for current and future users, it fails to provide unobstructed views of the entire movement area of the airfield. Eliminating existing obstructions that block the visual observation of the movement area would cause the relocation and reconstruction of vital Airport infrastructure such as hangars, taxiways, and taxilanes. This would cause extended interruptions during demolition and reconstruction resulting in unacceptable impacts to Airport operations and existing users.

Alternative 1 is the most expensive of the build options, with a preliminary cost estimate of $10.9 million. This alternative is approximately three times more expensive than Alternative 2 (Preferred Alternative). Therefore, it is also not an economically feasible alternative per 40 CFR § 1508.1(z).

2.5 Alternative 2 – Shift Runway 150 Feet Southwest and Extend 720 Feet at the Approach End of Runway 6 (Preferred Alternative)

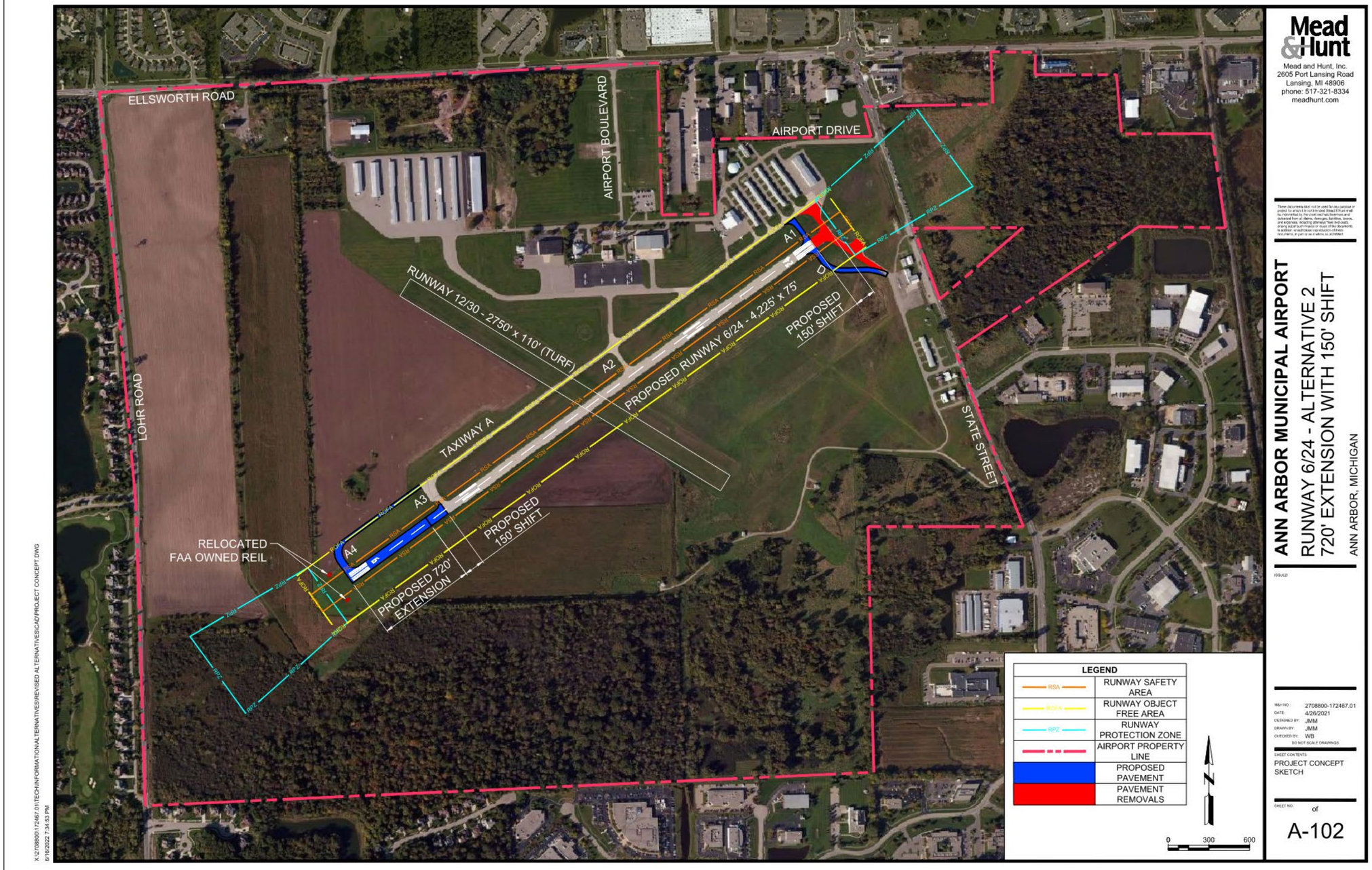
With this alternative, Runway 6/24 would be shifted 150 feet to the southwest and then extended 720 feet at the approach end of Runway 6 to provide 4,225 feet of usable runway length (**Figure 2.1 Alternative 2 – Shift Runway 150 Feet Southwest and Extend 720 Feet at the Approach End of Runway 6 (Preferred Alternative)**). The shift would be accomplished by constructing an additional 150 feet of runway length at the end of Runway 6 and removing 150 feet of existing pavement at the Runway 24 end. The runway shift would provide clear visibility and line-of-sight of the new intersection of Taxiway A and connector Taxiway A1 for ATCT personnel.

Taxiway A would be extended to the southwest to match the additional runway length and a new connector taxiway (Taxiway A4) would be constructed to align with the relocated threshold of Runway 6. All applicable NAVAIDs, lighting systems, and signage would be relocated to match the proposed runway extension and would meet FAA standards, including the relocation of existing FAA-owned REILs found at the approach end of Runway 6.

Existing Taxiway D and Taxiway A1 would be relocated 150 feet to the southwest and reconstructed to comply with FAA AC 150/5300-13B, Section 4.3.5 *Runway Access from Apron,* which prohibits direct access from an apron to a runway without requiring a turn by aircraft prior to reaching the runway. Alternative 2 also corrects the geometry of Taxiway D with Runway 6/24 so that it intersects Runway 6/24 at a right angle per FAA AC 150/5300-13B, Section 4.8.1. This proposed design helps pilots improve their situational awareness.

The RPZ Analysis evaluated land uses within the relocated RPZ off the end of Runway 24. While the existing alignment of State Street continues to be an incompatible land use, analysis found this to be the preferred alternative when compared to other road relocation options. No RSA or ROFA impacts are expected with this alternative.

Figure 2.1 Alternative 2 – Shift Runway 150 Feet Southwest and Extend 720 Feet at the Approach End of Runway 6 (Preferred Alternative)



Source: Mead & Hunt, Inc.

This 150-foot shift and runway extension to the southwest also keeps the RPZ at the approach ends of Runways 6 and 24 entirely within existing Airport property, eliminating the need for land acquisition or easements to control land uses within these areas. This is more advantageous when compared to the other build alternatives and improves the existing conditions, thus giving the Airport more control over its RPZ.

There are few environmental concerns or potential impacts associated with Alternative 2. Two regulated wetlands and a constructed agricultural drainage ditch were field delineated off the end of Runway 6. Preliminary design indicates that impacts to both regulated wetlands can be avoided. The RSA and ROFA of Runway 6 will intersect a constructed agricultural ditch; however, the ditch flows inside an existing culvert at this location. Therefore, ditch impacts are not expected. See **Chapter 3.0 Affected Environment & Environmental Consequences** for information and maps of floodplains, delineated wetlands, and other environmental resources in the project area.

One regulated wetland complex is found in the vicinity of Runway 24 and the proposed relocated Taxiway D area; however, preliminary analysis again indicates that the construction of Taxiway D can be designed to avoid impacts to this wetland.

According to the Flood Insurance Rate Maps, the area southwest of the existing Runway 6 threshold is located within a 100-year floodplain. As with the other build alternatives, Alternative 2 is expected to have minor floodplain impacts.

This alternative would result in aircraft transiting lower, albeit at a safe altitude, over Lohr Road. Currently, aircraft on a standard approach to Runway 6 pass over Lohr Road at approximately 72 feet. With the runway extension, aircraft on a standard approach to Runway 6 would transit over Lohr Road at approximately 49 feet.

Alternative 2 offers many advantages over the other build alternatives. Alternative 2 provides 4,225 feet of needed runway length for small turboprop and jet aircraft that currently operate at ARB and are projected to grow moderately in the future. Alternative 2 provides additional runway length entirely within existing Airport property without requiring the relocation of State Street or causing property or road construction impacts.

Additionally, Alternative 2 relocates the intersection of Taxiway A and Taxiway A1 so that pilot visibility is maximized thus increasing safety. Shifting the runway 150 feet to the southwest also eliminates the obstructed view from the ATCT so that air traffic controllers can view the entire movement area of Runway 6/24. This alternative also corrects the geometry of Taxiway D so that it intersects Runway 6/24 at a right angle thus reducing pilot confusion and improving situational awareness.

While Alternative 2 has many advantages, a minor disadvantage is the need to relocate the FAA owned REILs at the approach end of Runway 6. This will require the Airport to coordinate with the FAA during final design and construction. However, this coordination is not expected to present major challenges.

Alternative 2 is the least expensive of the build alternatives, with a preliminary cost estimate of $3.1 million. This alternative is considerably less expensive when compared to Alternative 1 and Alternative 3. Therefore, Alternative 2 is considered a reasonable alternative because it fully meets the project's purpose and need, satisfies all safety area requirements, and has minimal community, road, and environmental impacts.

2.6 Alternative 3 – Extend 360 Feet at Both Ends of Runway 6/24

Alternative 3 proposes to achieve a runway length of 4,225 feet with the construction of a 360-foot extension on each end of Runway 6/24 (**Figure 2.2 Alternative 3 – Extend 360 Feet at Both Ends of Runway 6/24**).

At the approach end of Runway 6, a 360-foot extension of the runway and parallel Taxiway A as well as the construction of a new Taxiway A4 connector would be built to align with the new runway threshold. At the approach end of Runway 24, a 360-foot extension of the runway and parallel Taxiway A would occur and Taxiway A1 would also be relocated. Existing Taxiway D would be reconstructed to match the runway extension and be designed to intersect Runway 6/24 at a 90-degree angle to comply with FAA AC 150/5300-13B, Section 4.8.1.

Minor coordination with the FAA would occur so that all applicable NAVAIDs, lighting systems, and signage would be relocated to match the proposed extensions at each runway end and would meet FAA design standards, including the relocation of existing FAA owned REILs at the approach end of Runway 6.

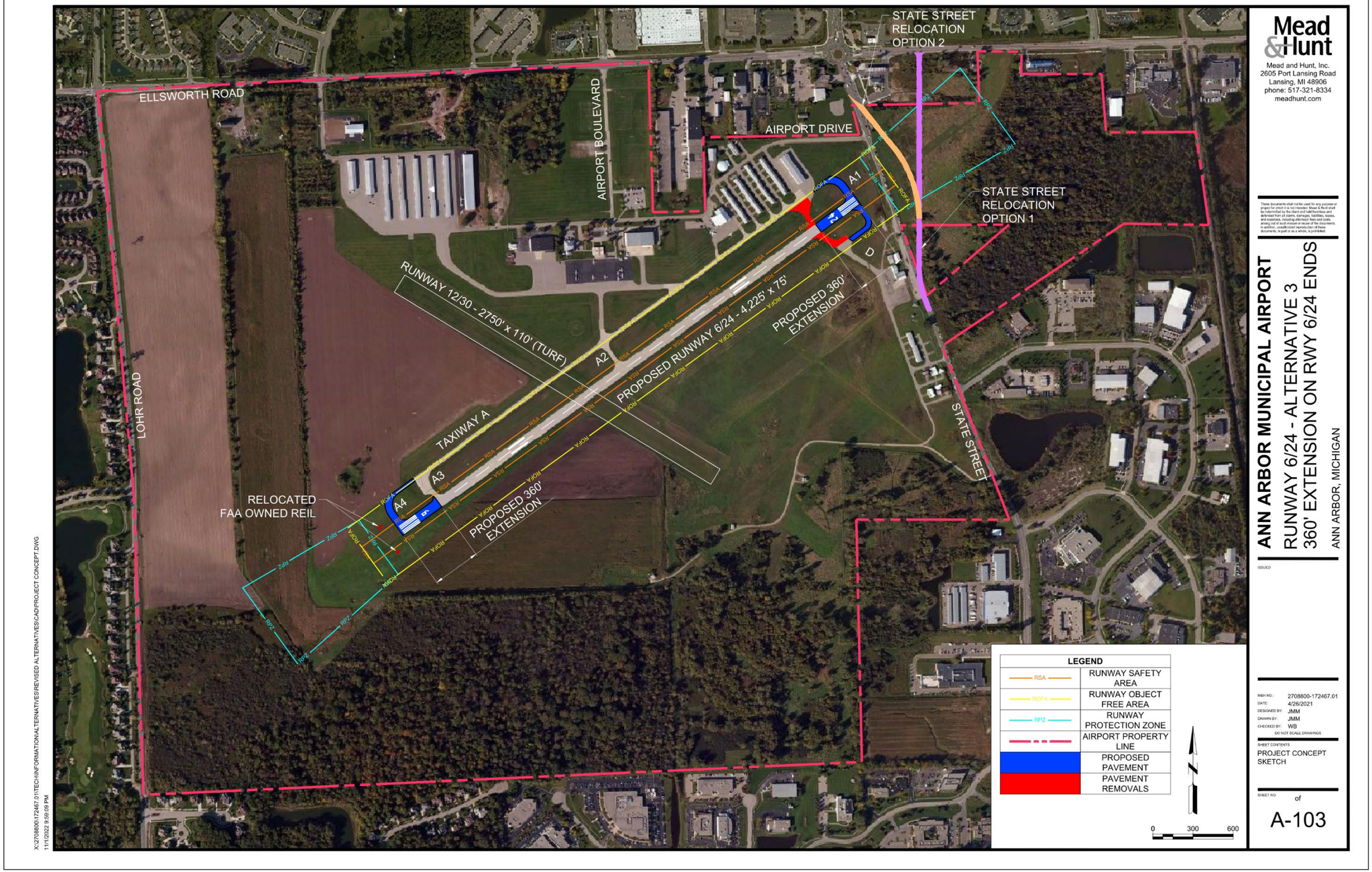
With the runway extending to the northeast, State Street would be relocated so that its new alignment would be constructed around the approach end of Runway 24 and the associated RSA and ROFA surfaces as shown on **Figure 2.2 Alternative 3 – Extend 360 Feet at Both Ends of Runway 6/24**. The existing roadbed of State Street through these areas would be closed and the pavement removed. Acquisition of land would be required to relocate State Street, and avigation easements within the relocated RPZ at the approach end of Runway 24 for portions outside of the existing Airport property would be needed. No RSA or ROFA impacts are anticipated with the 360-foot extension of Runway 6 to the southwest.

The RPZ Analysis found no incompatible land uses within the relocated Runway 6 RPZ. The analysis found no incompatible land uses within the relocated Runway 24 RPZ other than the two State Street relocation options.

Environmental impacts to wetlands can be expected with the 360-foot extension to the northeast where wetlands are found throughout the area east of State Street in the Runway 24 approach. As with Alternative 1, it is also likely that either State Street alignment option would impact regulated wetlands and floodplains.

There are no environmental concerns or potential impacts associated with the extension of Runway 6 to the southwest. Although two regulated wetlands, a 100-year floodplain, and a constructed agricultural drainage ditch are located off the end of Runway 6, these resources are outside the area of construction and would likely not be impacted by the 360-foot extension. See **Chapter 3.0 Affected Environment & Environmental Consequences** for information and maps of wetlands, floodplains, and other environmental resources in the project area.

Figure 2.2 Alternative 3 – Extend 360 Feet at Both Ends of Runway 6/24



Source: Mead & Hunt, Inc.

The primary advantage of Alternative 3 is that it provides 4,225 feet of usable runway length for small turboprop and jet aircraft that currently operate at the Airport. This alternative would also comply with FAA AC 150/5300-13B, Section 4.8.1 and realign Taxiway D so that it has a standard 90-degree intersection with Runway 6/24 and FAA AC 150/5300-13B, Section 4.3.5 *Runway Access from Apron* to address direct access issues from a taxiway onto a runway.

Disadvantages associated with Alternative 3 include the relocation of State Street around the approach end of Runway 24 and its associated RSA and ROFA surfaces. Like Alternative 1, this alternative would cause business and private property impacts where State Street connects to Ellsworth Road, likely causing land and commercial acquisitions. Also, community and road disruptions during construction are expected.

Another disadvantage of Alternative 3 is that the ATCT will continue to have visibility concerns at the intersection of Taxiway A and connector Taxiway A1. Although the alignment of the intersection of Taxiway A1 with Runway 6/24 would improve, the relocation of the intersection farther to the northeast would not allow air traffic controllers in the ATCT to view this area clearly, further worsening the current line-of-sight issue. According to FAA guidance defined in AC 150/5300-13B Section 6.11.7, all surface movement areas, takeoff areas, and landing areas should be observable from the ATCT. Under this alternative, FAA criterion would not be satisfied, and the existing condition would remain unresolved.

Another slight disadvantage to implementing this alternative is required coordination with the FAA to relocate the FAA-owned REILs at the approach end of Runway 6 during final design and construction. Coordination is expected to be minimal and pose no major challenges.

Alternative 3 is not considered a reasonable alternative because it fails to meet the project's purpose and need of addressing ATCT visibility issues associated with the intersection of Taxiway A and connector Taxiway A1. Although Alternative 3 provides adequate runway length for current and future users, it fails to provide line-of-sight of the entire movement area of the airfield.

Alternative 3 is the second most expensive of all the build options, with a preliminary cost estimate of $9.9 million. This alternative is approximately three times more expensive than Alternative 2 (Preferred Alternative). Therefore, it is also not an economically feasible alternative per 40 CFR § 1508.1(z).

2.7 Comparison of Alternatives

Table 2-0 Summary of Alternatives Comparison provides an overview of each build alternative. Categories of interest are presented for each build alternative with the No Action Alternative shown for comparison purposes. Only categories reasonably expected to be impacted by the project were included in the comparison table. For a detailed discussion of potential environmental impacts of the No Action Alternative and Preferred Alternative, see **Chapter 3.0 Affected Environment & Environmental Consequences**.

Table 2-0 Summary of Alternatives Comparison					
Category	**Criteria**	**No Action Alternative**	**Alternative 1**	**Alternative 2 (Preferred Alternative)**	**Alternative 3**
Meets Project Purpose and Need	Provides 4,225 ft of Runway Length for Current and Future Users	**No**	**Yes**	**Yes**	**Yes**
	Provides an Unobstructed View of Taxiway A and Airfield Movement Areas	**No**	**No**	**Yes**	**No**
Technical Feasibility	Realigns Taxiway D to Comply with FAA AC 150/5300-13B	**No**	**Yes**	**Yes**	**Yes**
	Requires Road Relocations	**No**	**Yes**	**No**	**Yes**
	Expected Property Acquisitions and/or Easements	**No**	**Yes**	**No**	**Yes**
	Expected Commercial / Private Property Impacts	**No**	**Yes**	**No**	**Yes**
	Potential RSA / ROFA / RPZ Impacts	**No**	**Yes**	**No**	**Yes**
	Level of Construction Difficulty	**N/A**	**High**	**Low**	**High**
Environmental* Impacts	Potential Impacts to Wetlands	**No**	**Yes**	**No**	**Yes**
	Anticipated Impacts to Floodplain Resources	**No**	**Yes**	**Yes**	**Yes**
Economic Feasibility	Estimated Cost to Implement (2021 dollars)	**$0**	**$10.9 million**	**$3.1 million**	**$9.9 million**

*Only those environmental impact categories with likely impacts were included in this table.
Source: Mead & Hunt, Inc.

2.8 Selection of the Preferred Alternative

After a thorough analysis of the advantages and disadvantages of each alternative, the alternative that best meets the project's purpose and need is Alternative 2. See **Figure 2.1 Alternative 2 – Shift Runway 150 Feet Southwest and Extend 720 Feet at the Approach End of Runway 6 (Preferred Alternative)** for a graphic representation of the designated Preferred Alternative.

Alternative 2 offers many advantages over the other alternatives. Alternative 2 provides 4,225 feet of needed runway length for small turboprop and jet aircraft that currently operate at ARB. Alternative 2 would be built entirely within the existing Airport property boundary without requiring the relocation of State Street or causing property or road construction impacts.

Shifting the runway 150 feet to the southwest eliminates the existing obstructed view from the ATCT so that air traffic controllers can view the entire movement area of Taxiway A and Runway 6/24. Alternative 2 also corrects the geometry of Taxiway D with Runway 6/24 thus meeting FAA design standards.

The 150-foot shift and runway extension to the southwest also keeps the RPZ at the approach end of Runway 6 and Runway 24 entirely on existing ARB property, consequently eliminating the need for land acquisition or easements to further control land uses within these areas.

Although there are regulated environmental resources in the project area, impacts to wetlands or other environmental resources are not anticipated with Alternative 2. As with all the build alternatives, Alternative 2 is anticipated to have minor floodplain impacts.

The result of Alternative 2 is that aircraft would transit lower, albeit at a safe altitude, over Lohr Road than Alternative 1 or Alternative 3. If conducting a standard approach to Runway 6, aircraft pass over Lohr Road today at approximately 72 feet. With the runway extension, aircraft on a standard approach to Runway 6 would transit over Lohr Road at approximately 49 feet.

Although Alternative 1 and Alternative 3 meet the project's purpose and need by providing adequate runway length to meet the needs of Airport operators, both alternatives fail to satisfy additional selection criteria because they do not address existing ATCT visibility issues and will continue to have line-of-sight deficiencies when aircraft and ground vehicles are operating in the northeastern portion of Taxiway A.

Alternative 1 and Alternative 3 also each require the relocation of State Street around the approach end of Runway 24 and its associated RSA and ROFA surfaces. Relocating State Street is likely to cause business and private property impacts, resulting in land and commercial acquisitions. Also, community, road, wetland, and floodplain impacts during construction and realignment of State Street are likely. Lastly, Alternatives 1 and 3 are substantially more expensive than Alternative 2.

Alternative 2 is the only alternative considered reasonable based on the analysis presented above. The selection of Alternative 2 as the Preferred Alternative for this project has been recommended by the Airport and MDOT AERO. As a result, only Alternative 2 and the No Action Alternative are carried forward into the EA for additional analysis, public comment, and agency review. Alternatives 1 and 3 are dismissed from further consideration and will not be carried forward for additional evaluations.

For a detailed discussion of potential impacts of the No Action Alternative and Preferred Alternative, see **Chapter 3.0 Affected Environment & Environmental Consequences**.