

## Chapter Two

# Alternatives

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## 2.0 GENERAL

Federal guidelines concerning this environmental review process require that all reasonable alternatives that might address the “purpose and need” be considered. The examination of alternatives is of critical importance to the environmental review process and serves to ensure that an alternative that might enhance or have a less detrimental effect on environmental quality has not been prematurely dismissed from consideration.

In assessing the environmental consequences of a proposed action, prudent and feasible alternatives to the proposed plan were considered including those that would avoid or minimize adverse impacts, enhance the quality of the human environment, or provide a more feasible construction scenario.

## 2.1 ALTERNATIVES

**Section 1.2 – Project Background** discusses the improvements needed at the Airport to correct any existing facility deficiencies, to satisfy future demands and to comply with safety guidelines and regulations. **Section 1.3 – Purpose and Need** points to the “need” to address these issues by extending and strengthening primary Runway 18/36 and its parallel/connecting taxiways; constructing additional aircraft and vehicular parking; and access roadways; and other ancillary projects at the Airport. Several alternatives were investigated to determine if they could address the “purpose and need”:

- ◆ No Action Alternative
- ◆ Alternative 1: Extend Runway 18/36 at both ends to 5,902'
- ◆ Alternative 2: Extend Any Runway End to Approximately 5,900'
- ◆ Alternative 3: Construct a New Runway to 6,700'
- ◆ Alternative 4: Service from Alternate Airports
- ◆ Alternative 5: Construct New Airport
- ◆ Alternative 6: Utilize Alternate Modes of Transportation
- ◆ Alternative 7: Utilize Advanced Technologies

As discussed in **Section 1.3 - Purpose and Need**, the Airport plans to accommodate existing and future aviation demand by enhancing the margin of safety and efficiency of the existing airport facilities in a manner that meets the physical and operational requirements of airport users and complies with current Federal Aviation Administration (FAA) airport design standards, while considering the physical constraints at the Airport. Additional ancillary projects included in the Sponsor’s Proposed Action are secondary in nature and alternatives for

those projects are not discussed in this document. The reduction of floodplain limits, at the Airport, to accommodate future landside development, including floodplain alternatives, was assessed in the 2009 Final Airport Drainage Study and is summarized in Section 4.13 of this document.

## **2.2 ALTERNATIVES IDENTIFIED**

### **2.2.1 No Action Alternative**

The Council on Environmental Quality (CEQ) regulations includes specific directions in the consideration of alternatives. Section 1502.14(d) of said regulation states: “*Agencies shall include the alternative of no action in any environmental analysis.*” The No Action Alternative for this study assumes that the Airport will maintain its existing runway and taxiway configuration. This alternative also assumes no ancillary projects would be developed.

### **2.2.2 Alternative 1: Extend Runway 18/36 at both ends to 5,902'**

This alternative proposes the construction of a 1,615' x 75' extension to the Runway 18 end and a 285' x 75' extension to the Runway 36 end for a total runway length of 5,902'. This alternative also includes strengthening existing Runway 18/36, constructing connecting taxiways, aircraft parking aprons, buildings/hangars, automobile parking and access roadways; acquiring land; install approach light system to Runway 36 and relocating navigational aids. This alternative also includes the development of ancillary projects as identified in **Section 1.4 – Sponsor’s Proposed Action**. Alternative 1 is depicted in **Exhibit 1-2** (found in **Appendix A**).

### **2.2.3 Alternative 2: Extend Any Runway End to Approximately 5,900'**

This alternative proposes extending any runway end to a total length of 5,900 feet. The extension would be an approximate 2,505 foot extension to either Runway 9 or 27 or an approximate 1,900 foot extension to either Runway 18 or 36. This alternative would also include the development of ancillary projects as identified in **Section 1.4 – Sponsor’s Proposed Action**. Alternative 2 is depicted in **Exhibit 2-1** (found in **Appendix A**).

### **2.2.4 Alternative 3: Construct New Runway to 6,700'**

This alternative proposes construction of a new runway to a total length of 6,700 feet to meet the recommended primary length as identified in IDOT's 2007 memo. This alternative would also include the development of ancillary projects as identified in **Section 1.4 – Sponsor’s Proposed Action**.

### **2.2.5 Alternative 4: Service from Alternate Airports**

This alternative considers the ability to serve flight activity from other airports. In metropolitan areas, the drive time to any location should be considered. Since Lansing Municipal Airport (IGQ or Airport) is located within the Greater Chicago metropolitan area, a distance of approximately 20-nautical miles or 30-minutes of travel time was established as a reasonable travel time limit to area airports. There are four (4) public use general aviation airports within an approximate 20-nautical mile or 30-minute drive radius of the Airport. These facilities were

analyzed and are listed in **Table 2-1** and are depicted on **Exhibit 2-2: Area Public Use General Aviation Airports** in **Appendix A**.

**Table 2-1:**  
**Area Public Use General Aviation Airports**

<b>Associated City</b>	<b>Name of Airport</b>	<b>Longest Runway Length (ft)</b>	<b>Approximate Nautical Miles</b>	<b>Approximate Drive Time (min)</b>
Griffith, IN	Griffith-Merrillville Airport	4,900	6	19
Gary, IN	Gary/Chicago International Airport	7,003	7	18
Monee, IL	Bult Field Airport	5,001	12	32
Hobart, IN	Hobart Sky Ranch Airport	3,125	12	25

Source: AirNav.com website

### **2.2.6 Alternative 5: Construct New Airport**

This alternative would require the preparation of a new Airport Master Plan and Site Selection Report to locate and construct a new airport for the Lansing area. This alternative would require the acquisition of hundreds of acres of property potentially including residences and businesses, relocation and severance of roadways, construction of new runways, taxiways, aprons, navigational aids, passenger and general aviation and corporate facilities, and the creation and/or extension of water, sewer and utility lines to serve a new site. It would also necessitate the divestiture of public and private facilities at the existing Airport. A new and separate environmental action and study would also be required.

### **2.2.7 Alternative 6: Utilize Alternate Modes of Transportation**

Alternate modes of transportation could be utilized to divert existing and future airport usage away from the Airport to railroads, highways, and navigable waterways. In order to assess the value of each mode, it is necessary to remember that passengers generally select that transportation mode which provides the most convenient and cost effective mean to reach their destination.

The closest cross country passenger train service is offered by Amtrak. The closest station is located approximately three miles south-southeast of the Airport in Dyer, Indiana. This station has one daily train to Chicago and Indianapolis. Numerous connections can be made on Amtrak in Chicago and Indianapolis.

High Speed Rail includes the use of high-speed light rail systems for the transport of passengers to and from specific locations. Currently, there is no high-speed rail service to or from the Lansing area.

Interstate 80/294, which is approximately 2.5 miles north of the Airport, Illinois 394, which is approximately two miles west of the Airport, as well as U.S. Route 41, which is approximately three miles east of the Airport, serve the Lansing area. This network of highways provides

access to and from the Lansing area in all general directions. The nearest Greyhound Bus Line station is located approximately nine miles north of the Airport in Hammond, Indiana.

Finally, the nearest commercially navigable waterway is the Illinois Waterway. At its closest point, it is approximately seven miles north of the Airport. No known scheduled passenger service is available.

### **2.2.8 Alternative 7: Utilize Advanced Technologies**

Advanced technology alternatives considered included Telecommunications and Video Conferencing, which allows business and education interface via telephone lines and/or satellite communication technologies.

## **2.3 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION**

### **2.3.1 Alternative 2: Extend Any Runway End to Approximately 5,900'**

This alternative proposes meeting the Purpose and Need by extending any runway end to a length necessary to meet the need of an approximately 5,900' runway. The alternative constraints are shown on **Exhibit 2-1: Alternative 2: Extend Any Runway End to Approximately 5,900' Constraints Map**, found in **Appendix A**.

#### **2.3.1.1 Runway 9/27**

Runway 9/27 is currently 3,396' x 75'. In order to meet the need of a 5,900' long runway, an approximate 2,500' extension would be required. The extension of the runway to the west would require the relocation or closure of Burnham Avenue. The Airport Sponsor has stated that relocation or closure of Burnham Avenue is not an option due to the roadway's function as an arterial roadway, effectively limiting westward extension of the runway. Additionally, the extension could displace commercial development along Burnham Avenue and approximately 50 homes, and would sever a neighborhood. Expansion of the runway to the east is limited by manufacturing development and would require the relocation or closure of Margo Lane, which is located in Indiana. While this alternative may meet the runway length needed to accommodate the existing and projected aircraft at the Airport, this option would not meet the purpose and need of considering the existing physical constraints at the Airport, including Burnham Avenue to the west and significant development to the east. Therefore, this alternative was dismissed from consideration.

#### **2.3.1.2 Runway 18/36**

Runway 18/36 is currently 4,002' x 75'. In order to meet the need of a 5,900' long runway, an approximate 1,900' extension would be required. While an extension to the runway north by approximately 1,900' could physically be constructed on Airport property, the localizer would have to be moved to the north side of Glenwood Lansing Road causing the relocation or closure of that road. In addition, several homes located north of Glenwood Lansing Road in the localizer critical area and runway approach would be displaced under this alternative.

A 1,900' extension to the south is constrained by the proposed Joe Orr Road extension. The proposal to extend Joe Orr Road from Lynwood to Dyer has been planned for a number of years. In 1993 the Village of Lansing worked closely with the Village of Lynwood to negotiate the compatibility of Runway 18/36 and the proposed road extension. The Village of Lansing coordinated with the Village of Lynwood to revise the alignment to bow around the southern end of Runway 36. Extending the runway south would have adverse affects on this proposed road, residential development to the south-southeast and residential development currently being developed to the south-southwest. The extension would also displace approximately 21 homes within the runway approach under this alternative.

Any extension would require extensive land acquisition and residential, commercial, and industrial area displacements due to additional areas for Runway Protection Zones, navigational aid critical areas, approach surfaces and clearance of obstructions penetrating the Part 77 approach surfaces. While this alternative may meet the runway length needed to accommodate the existing and projected aircraft at the Airport, this option would not meet the purpose and need of considering the existing physical constraints at the Airport, including the Glenwood Lansing Road and the proposed Joe Orr Road extension. Therefore, due to the above-stated impacts, this alternative has been dismissed from further consideration.

### **2.3.2 Alternative 3: Construct New Runway to 6,700'**

An analysis was conducted to determine if a new runway could be constructed at IGQ to 6,700 feet based on IDOT's 2007 memo stating that 6,700 feet is justified. While a 6,700 foot runway could be accommodated, there would be significant impacts to existing and future developments in the Airport environs. Since the airport is constrained by Glenwood Avenue to the north, Burnham Avenue to the west, and significant residential and commercial development to the east, the most logical alternative for a new runway would be a north-south alignment on or near the existing Runway 18/36 alignment. However, as previously identified in Alternative 2, this option would require extensive land acquisition and residential, commercial, and industrial area displacements for Runway Protection Zones, navigational aid critical areas, approach surfaces and clearance of obstructions penetrating the Part 77 approach surfaces. Although it is the Sponsor's preference to extend the primary runway to the 6,700 foot length as identified in IDOT's 2007 memo, this option is constrained by physical constraints in the project area. While this alternative may meet the runway length needed to accommodate the existing and projected aircraft at the Airport, this option would not meet the purpose and need of considering the physical constraints at the Airport. Therefore, due to the above-stated impacts, this alternative has been dismissed from further consideration.

### **2.3.3 Alternative 4: Service from Alternate Airports**

This alternative proposes utilizing alternative airports to meet the purpose and need. There are four (4) public use general aviation airports within an approximate 20-nautical mile or 30-minute drive radius of the Airport. The airports are: Griffith-Merrillville, Gary/Chicago International, Bult Field, and Hobart Sky Ranch.

Only one of the airports provides runway facilities that are equivalent to or more than the facilities proposed at IGQ. Only Gary/Chicago International has facilities adequate to handle the existing and projected demand at IGQ. However, this airport was dismissed from further consideration due to the fact that during periods of vehicle traffic congestion, this airport would likely be beyond the acceptable 30 minute drive time<sup>4</sup>, and that both airports are necessary to accommodate the overall demand of the area in the short- and long-term development periods. For these reasons, this alternative would not meet the purpose and need of enhancing the margin of safety and efficiency for the existing and projected aircraft at the IGQ. Therefore, use of other airports as an alternative to the Sponsor's Proposed Action was rejected as a practicable alternative.

### **2.3.4 Alternative 5: Construct New Airport**

A new airport master plan and site selection study would be required to determine the location for a new airport development. A new airport would include, at a minimum, the construction of new runways, general aviation and corporate hangars, a parking apron, and auto-parking facilities. Development of a new airport site would involve substantial construction costs and development time. A new airport site would also require conversion of large sections of farmland, which are few in the Lansing area, to non-agricultural use, loss of wildlife habitat, and potentially significant changes in socioeconomic characteristics of the new airport environs. For these reasons, this alternative would not meet the purpose and need of enhancing the margin of safety and efficiency for the existing and projected aircraft at IGQ nor would it be within the existing physical constraints. Therefore, this alternative has been dismissed from further consideration.

### **2.3.5 Alternative 6: Utilize Alternate Modes of Transportation**

Given the limitations of service and distances on regional rail transportation, implications on a nationwide scale are all the more obvious. Conventional railroad transportation in the United States simply cannot compete with the efficiency and convenience of aviation; therefore, it cannot be considered a viable alternative to the Sponsors Proposed Action. Despite an adequate street and highway system, distance and travel times are the overriding disadvantage to make bus or motor vehicle transportation competitive. Automotive travel outside of the Lansing area involves significant increases in time, in comparison to the use of aircraft service. Surface transportation is not an acceptable alternative to the proposed development. Since few commercially navigable waterways exist in Illinois, it places greater limitations on the available travel locations. There are no known scheduled passenger services via waterway. Utilizing these other modes of transportation would deny the traveler the high degree of mobility and access that aviation service provides. For these reasons, this alternative would not meet the purpose and need of enhancing the margin of safety and efficiency for the existing and projected aircraft at IGQ. Therefore, alternate modes of transportation are not an acceptable alternative to the Sponsor's Proposed Action and were dismissed from further consideration.

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<sup>4</sup> Federal Aviation Administration, Order 5090.3C Field Formulation of the National Plan of Integrated Airport Systems, December 4, 2000.

### **2.3.6 Alternative 7: Utilize Advanced Technologies**

The advanced technology alternative listed previously does not provide suitable transportation for passengers to and from the Lansing area to other destinations, nor does it address the purpose and need of enhancing the margin of safety and efficiency for the existing and projected aircraft at IGQ. Therefore, use of advanced technologies was dismissed from further consideration.

## **2.4 ALTERNATIVES CONSIDERED FOR FURTHER EXAMINATION**

### **2.4.1 No Action Alternative**

The No Action Alternative does not meet the criteria established to serve the “purpose and need” of the Airport. However, Council on Environmental Quality (CEQ) Regulations and the FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, prescribe the need to analyze and compare the No Action Alternative to the Sponsor’s Proposed Action. Therefore, the No Action Alternative will be studied further in **Chapter 4 - Environmental Consequences** of this document.

### **2.4.2 Alternative 1: Extend Runway 18/36 at both ends to 5,902'**

This alternative proposes the construction of a 1,615' x 75' extension to the Runway 18 end and a 285' x 75' extension to the Runway 36 end for a total runway length of 5,902'. This alternative also includes strengthening existing Runway 18/36; constructing connecting taxiways, aircraft parking aprons, buildings/hangars, automobile parking and access roadways; acquiring land and relocating navigational aids. The complete list of projects included in this alternative is included in **Section 1.4 - Sponsor's Proposed Action**.

Airport expansion was discussed at the July 12, 2005 Village of Lansing Committee of the Whole meeting. This alternative, along with four other build alternatives, was presented and discussed at the August 9, 2005 and September 13, 2005 Committee of the Whole meetings. This alternative was discussed and shown on the Airport Layout Plan at the October 11, 2005 Committee of the Whole meeting, and was approved, by the Airport Board, on the Airport Layout Plan at the Regular Board meeting on October 18, 2005.