FEDERAL AVIATION ADMINISTRATION

EASTERN REGION
AIRPORTS DIVISION

Final

Short Environmental Assessment Form for AIRPORT DEVELOPMENT PROJECTS

Airport Name: **Oakland/Southwest Airport** Identifier: **Y47**

Project Title: **Runway 8/26 Shift, Shortening, and Approach Clearing**

This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the Responsible MDOT official.

E-SIGNED by BRYAN BUDDS
on 2024-05-13 11:53:20 EDT

Responsible MDOT Official Date

INSTRUCTIONS

THIS FORM IS FOR LIMITED USE ON SPECIFIC TYPES OF PROJECTS. AIRPORT SPONSORS MUST CONTACT YOUR LOCAL AIRPORTS DISTRICT OFFICE (ADO) ENVIRONMENTAL PROTECTION SPECIALIST (EPS) BEFORE COMPLETING THIS FORM.

This form was prepared by FAA Eastern Region Airports Division and can only be used for proposed projects in this region.

Introduction: This Short Environmental Assessment (EA), is based upon the guidance in Federal Aviation Administration (FAA) Orders 1050.1F – *Environmental Impacts: Policies and Procedures*, and the *Environmental Desk Reference for Airport Actions* and 5050.4B – *NEPA Implementing Instructions for Airport Actions*. These orders incorporate the Council on Environmental Quality's (CEQ) regulations for implementing the National Environmental Policy Act (NEPA), as well as US Department of Transportation environmental regulations, and other applicable federal statutes and regulations designed to protect the Nation's natural, historic, cultural, and archeological resources. The information provided by sponsors, with potential assistance from consultants, through the use of this form enables the FAA ADO offices to evaluate compliance with NEPA and the applicable special purpose laws.

Use: For situations in which this form may be considered, refer to the APPLICABILITY Section below. The local ADO has the final determination in the applicability of this form to a proposed Federal Action. Proper completion of the Form will allow the FAA to determine whether the proposed airport development project can be processed with a short EA, or whether a more detailed EA or EIS must be prepared. **If you have any questions on whether use of this form is appropriate for your project, or what information to provide, we recommend that you contact the environmental specialist in your local ADO.**

This Form is to be used in conjunction with applicable Orders, laws, and guidance documents, and in consultation with the appropriate resource agencies. Sponsors and their consultants should review the requirements of special purpose laws (See 5050.4B, Table 1-1 for a summary of applicable laws). Sufficient documentation is necessary to enable the FAA to assure compliance with all applicable environmental requirements. Accordingly, any required consultations, findings or determinations by federal and state agencies, or tribal governments, are to be coordinated, and completed if necessary, prior to submitting this form to FAA for review. Coordination with Tribal governments must be conducted through the FAA. We encourage sponsors to begin coordination with these entities as early as possible to provide for sufficient review time. Complete information will help FAA expedite its review. This Form meets the intent of a short EA while satisfying the regulatory requirements of NEPA for an EA. Use of this form acknowledges that all procedural requirements of NEPA or relevant special purpose laws still apply and that this form does not provide a means for circumvention of these requirements.

Submittal: When using this form for an airport project requesting *discretionary funding*, the documentation must be submitted to the local ADO by April 30th of the fiscal year preceding the fiscal year in which funding will be requested. When using this form for an airport project requesting *entitlement funding*, the documentation must be submitted to the local ADO by November 30th of the fiscal year in which the funding will be requested.

Availability: *An electronic version of this Short Form EA is available on-line at http://www.faa.gov/airports/eastern/environmental/media/C10.DOC. Other sources of environmental information including guidance and regulatory documents are available on-line at http://www.faa.gov/airports_airtraffic/airports/environmental.*

APPLICABILITY

Local ADO EPSs make the final determinations for the applicability of this form. If you have questions as to whether the use of this form is appropriate for your project, contact your local EPS BEFORE using this form. Airport sponsors can consider the use of this form if the proposed project meets either Criteria 1 or Criteria 2, 3, and 4 collectively as follows:

1) It is normally categorically excluded (see paragraphs 5-6.1 through 5-6.6 in FAA Order 1050.1F) but, in this instance, involves at least one, but no more than two, extraordinary circumstance(s) that may significantly impact the human environment (see paragraph 5-2 in 1050.1F and the applicable resource chapter in the 1050.1F Desk reference).

2) The action is one that is not specifically listed as categorically excluded or normally requires an EA at a minimum (see paragraph 506 in FAA Order 5050.4B).

3) The proposed project and all connected actions must be comprised of Federal Airports Program actions, including:

(a) Approval of a project on an Airport Layout Plan (ALP),
(b) Approval of Airport Improvement Program (AIP) funding for airport development,
(c) Requests for conveyance of government land,
(d) Approval of release of airport land, or
(e) Approval of the use of Passenger Facility Charges (PFC).

4) The proposed project is not expected to have impacts to more than two of the resource categories defined in the 1050.1F Desk Reference.

This form cannot be used when any of the following circumstances apply:

1) The proposed action, including all connected actions, requires coordination with or approval by an FAA Line of Business of Staff Office other than the Airports Division. Examples include, but are not limited to, changes to runway thresholds, changes to flight procedures, changes to NAVAIDs, review by Regional Counsel, etc.

2) The proposed action, including all connected actions, requires coordination with another Federal Agency outside of the FAA.

3) The proposed action will likely result in the need to issue a Record of Decision.

4) The proposed action requires a construction period exceeding 3 years.

5) The proposed action involves substantial public controversy on environmental grounds.

6) The proposed project would have impacts to, or require mitigation to offset the impacts to more than two resources[1] as defined in the 1050.1F Desk Reference.

7) The proposed project would involve any of the following analyses or documentation:
    a. The development of a Section 4(f) Report for coordination with the Department of the Interior,
    b. The use of any Native American lands or areas of religious or cultural significance,
    c. The project emissions exceed any applicable *de minimis* thresholds for criteria pollutants under the National Ambient Air Quality Standards, or
    d. The project would require noise modeling with AEDT 2b (or current version).

If a project is initiated using this form and any of the preceding circumstances are found to apply, the development of this form must be terminated and a standard Environmental Assessment or Environmental Impact Statement (if applicable) must be prepared.

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[1] A resource is any one of the following: Air Quality; Biological Resources (including Threatened and Endangered Species); Climate; Coastal Resources; Section 4(f); Farmlands; Hazardous Materials, Solid Waste, and Pollution Prevention; Historical, Architectural, Archaeological, and Cultural Resources; Land Use; Natural Resources and Energy Supply; Noise and Noise-Compatible Land Use; Socioeconomics; Environmental Justice; Children's Environmental Health and Safety Risks; Visual Effects; Wetlands; Floodplains; Surface Waters; Groundwater; Wild and Scenic Rivers; and Cumulative Impacts.

Complete the following information:

Project Location
Airport Name: Oakland/Southwest Airport Identifier: Y47
Airport Address: 57751 Pontiac Trail
City: New Hudson County: Oakland State: MI Zip: 48165

Airport Sponsor Information
Point of Contact: Cheryl Bush
Address: 6500 Patterson Parkway
City: Waterford State: MI Zip: 48327
Telephone: 248-666-3900 Fax:
Email: bushc@oakgov.com

Evaluation Form Preparer Information
Point of Contact: William Ballard, AICP
Company (if not the sponsor): Mead & Hunt, Inc.
Address: 2605 Port Lansing Road
City: Lansing State: MI Zip: 48906
Telephone: 517-908-3105 Fax: 517-321-5932
Email: william.ballard@meadhunt.com

1. Introduction/Background:

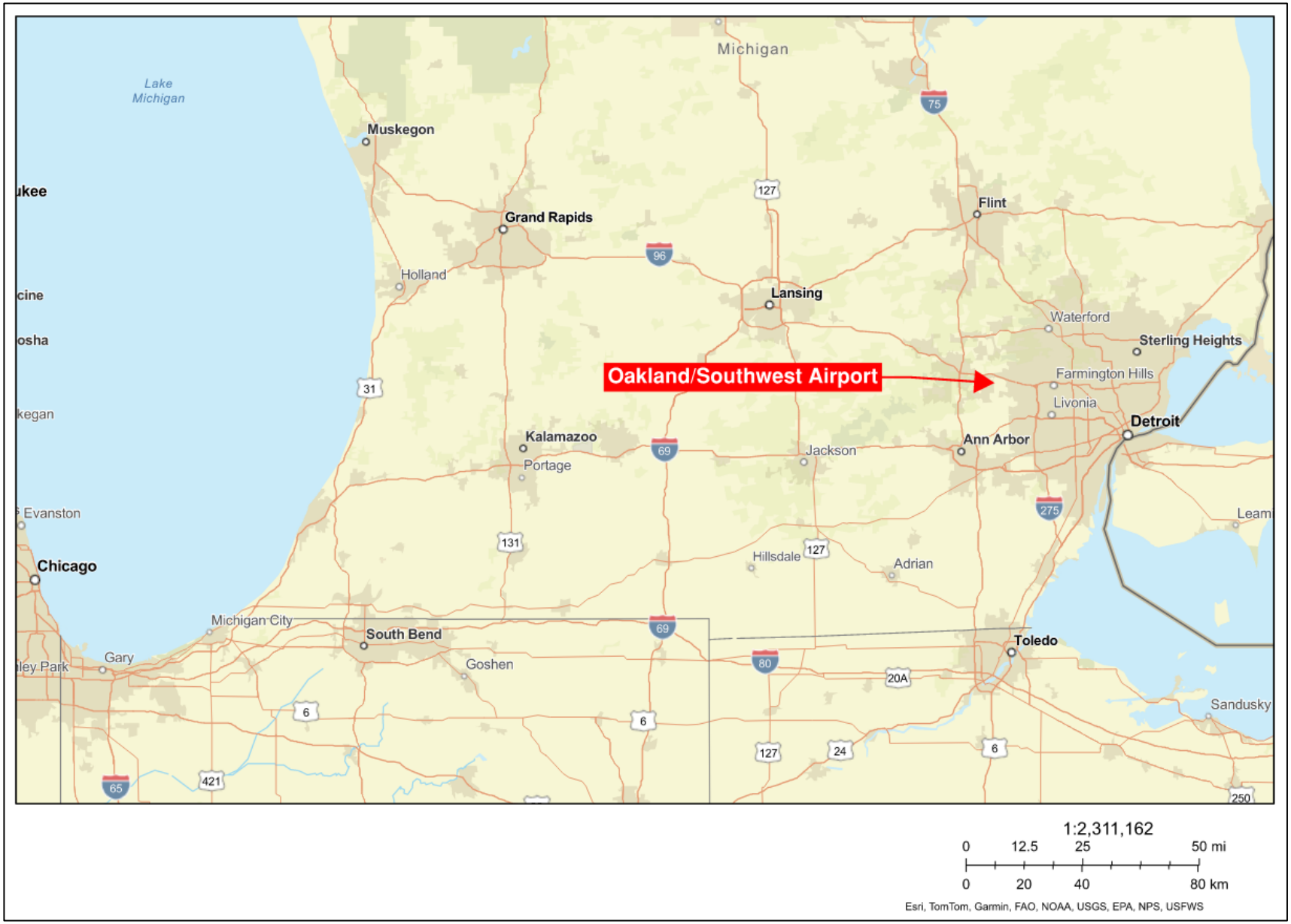
Oakland/Southwest Airport (Y47 or Airport) is a general aviation airport serving the southwest Oakland County region. Owned and operated by Oakland County, the Federal Aviation Administration (FAA) categorizes Y47 as a reliever airport for Detroit Metro Wayne County Airport in the *National Plan of Integrated Airport Systems* (NPIAS). The Airport is defined as a Tier I airport, the highest classification, within the 2017 *Michigan Aviation System Plan* (MASP), further demonstrating the importance of Y47 to the aviation transportation system within the state of Michigan.

Y47 is located one mile southwest of New Hudson, Michigan in Oakland County. Oakland County is situated in southeast Michigan approximately 15 miles northwest of downtown Detroit and is the second most populous county in the state with nearly 13 percent of Michigan residents.[2] Interstate 96 (I-96), a major east-west interstate highway that runs between Detroit and Muskegon, is located less than one mile north of the Airport.

Figure 1.0 Airport Location Map shows Y47's location within the state of Michigan, while **Figure 1.1 Surrounding Communities Map** shows the cities and townships near the Airport. **Figure 1.2 Vicinity Map** provides an overview of the local area surrounding Y47.

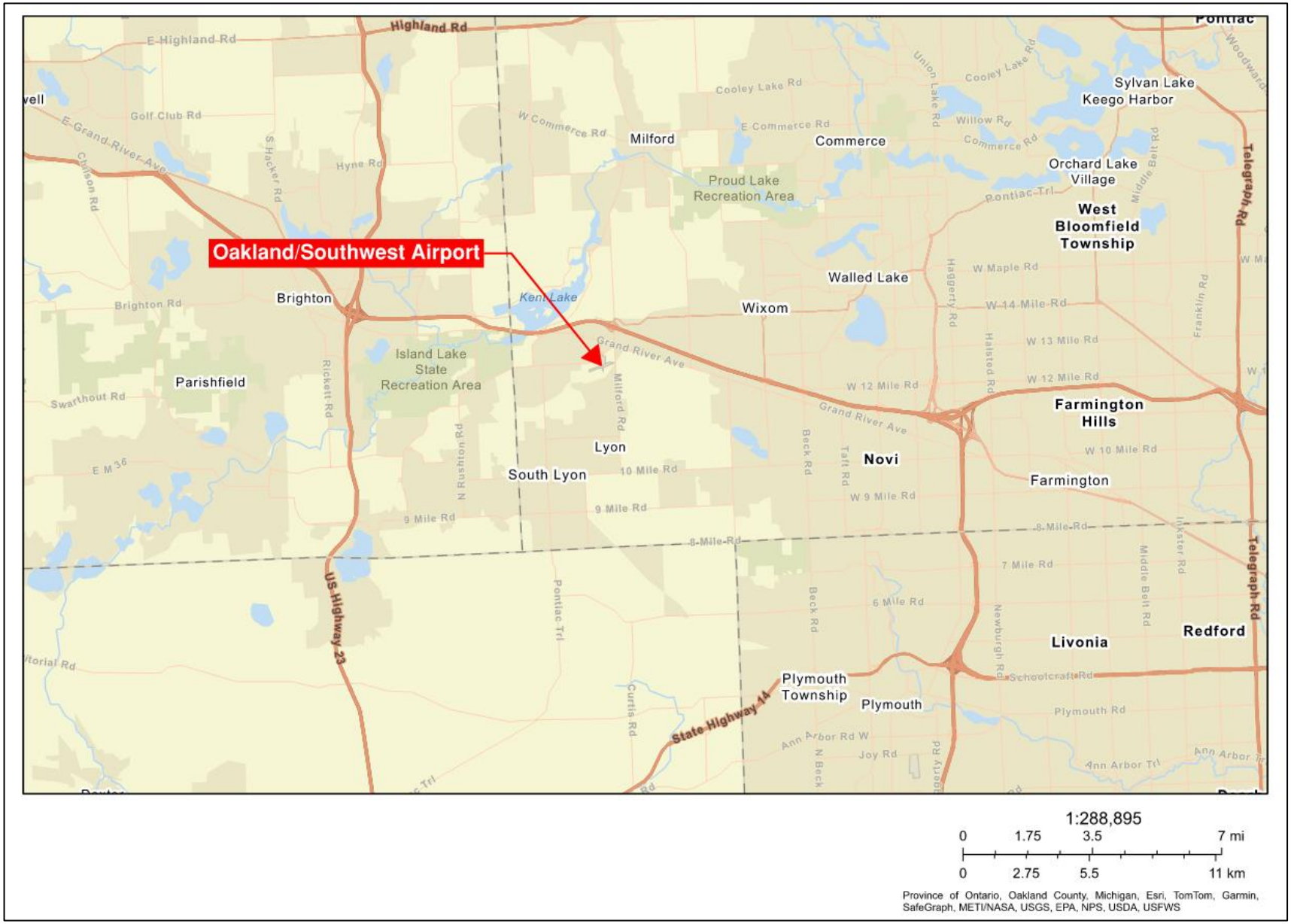
[2] United States Census Bureau, 2020 Census data.

Figure 1.0 Airport Location Map



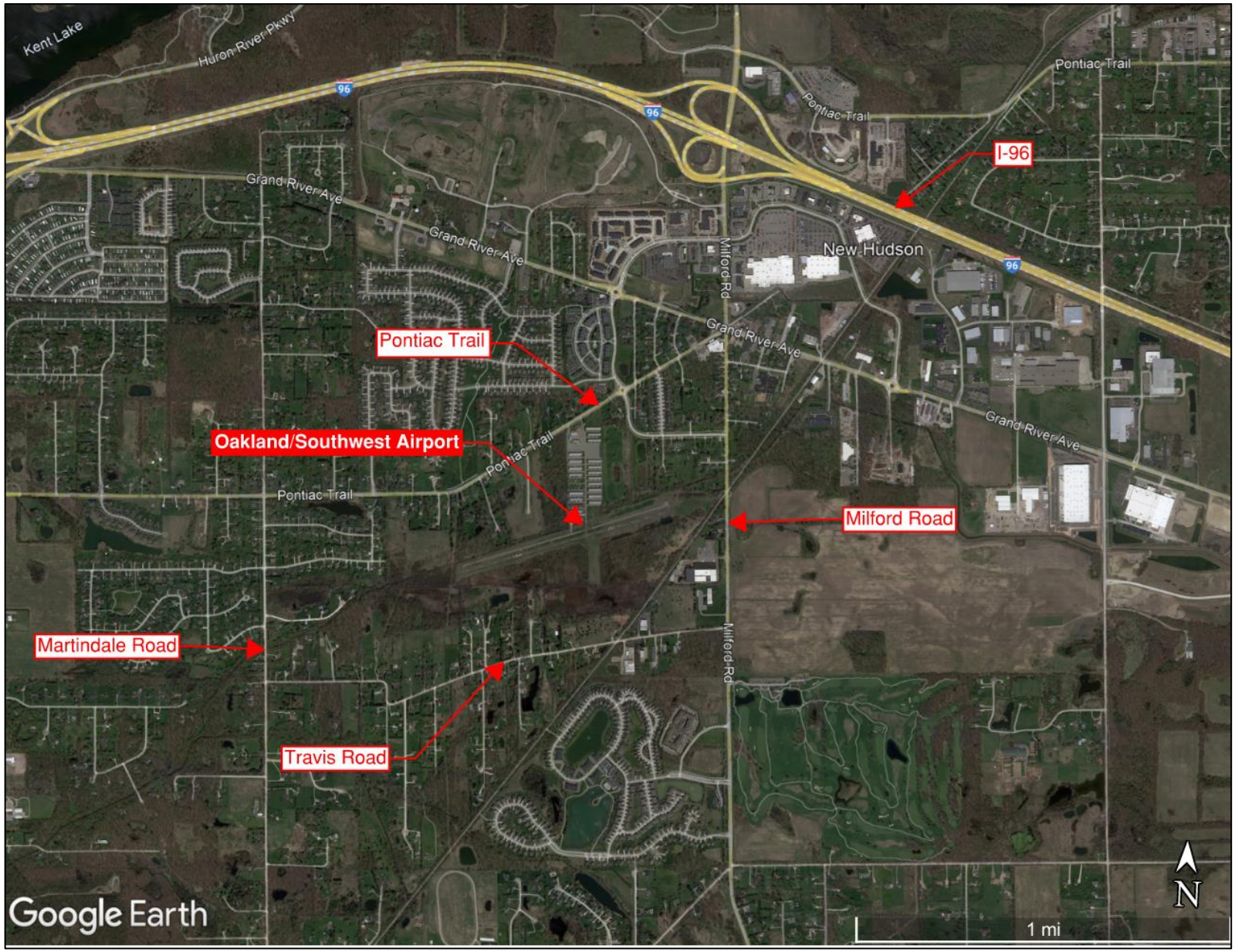
Source: US Environmental Protection Agency (USEPA) NEPAssist Tool with labeling by Mead & Hunt, 2024

Figure 1.1 Surrounding Communities Map



Source: USEPA NEPAssist Tool with labeling by Mead & Hunt, 2024

Figure 1.2 Vicinity Map



Source: USEPA NEPAssist Tool with labeling by Mead & Hunt, 2024

Aircraft operations at Y47 are supported by a single runway. Runway 8/26 is 3,128 feet long by 40 feet wide and has an asphalt surface reported to be in excellent condition on the FAA Form 5010-1, *Airport Master Record* (last inspection date of February 2022). The runway is oriented in a generally east-west direction. Runway 8 has an 867-foot displaced landing threshold, and Runway 26 has an 864-foot displaced landing threshold. Both of these displacements are due to the presence of vegetative (tree) obstructions at the approach ends of the runway. A full-length, parallel taxiway intersecting five connector taxiways is located north of Runway 8/26 with a holding pad located north of the approach end of Runway 26. A north-south taxiway provides access from the center portion of the parallel taxiway to the T-hangars and executive/corporate hangars north of the runway. **Figure 1.3 Existing Airport Layout** illustrates the Airport's configuration.

There are several navigational aids (NAVAIDs) that exist on the airfield. These NAVAIDS include a rotating beacon, lighted wind indicator, segmented circle, low intensity runway lights (LIRL), and a two-box Visual Approach Slope Indicator (VASI) at each end of Runway 8/26. The Airport's only published instrument approach procedure is a Very High Frequency Omni-Directional Range (VOR) or Global Positioning System (GPS)-A for circling approaches.

Resource agencies and Native American tribes with potential jurisdiction over or interest in the proposed action were contacted at the beginning of the project and given the opportunity to provide comments on the proposed action. **Appendix A – Early Agency and Tribal Coordination** contains a copy of the distribution list, early coordination letters, project maps, and agency and organization response letters.

2. Project Description (List and clearly describe **ALL** components of project proposal including all connected actions). Attach a map or drawing of the area with the location(s) of the proposed action(s) identified:

The FAA requires that an airport sponsor maintain an Airport Layout Plan (ALP) that ensures the safety, utility, and efficiency of the airport. In 2020, Oakland County completed an update to the ALP for Y47, which was last updated in 2005 (see **Appendix B – 2020 ALP Update Narrative Report**). During the 2020 ALP Update, a facilities requirements analysis was performed to identify the improvements necessary to accommodate existing and forecasted demand at the Airport. Of prime importance in meeting the current and projected demand are Y47's primary aircraft operational areas, as well as the configuration of key components such as the runway and taxiways. As part of the facilities requirements analysis, a determination of the appropriate Runway Design Code (RDC) for Runway 8/26 was conducted. The RDC is the code signifying the design standards to which a particular runway is built. These design standards are outlined in FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*.

The facilities requirements analysis revealed that while the RDC for Runway 8/26 was previously designated as B-II, the appropriate RDC for the runway is A-I Small. Currently, Runway 8/26 does not meet many of the dimensional standards associated with RDC A-I Small. A runway length analysis also showed that a runway length of 2,300 feet (versus the existing runway length of 3,128 feet) would adequately accommodate most of the aircraft based and operating at the Airport on a regular basis.

Figure 1.3 Existing Airport Layout

Source: *Oakland/Southwest Airport – Airport Layout Plan Update*, prepared by Mead & Hunt, January 2020

The ALP Update recognized that an important consideration with any proposed runway threshold changes at Y47 was the presence of a number of obstructions off both ends of Runway 8/26. According to the 2005 ALP Update for Y47, there are many Federal Aviation Regulation (FAR) Part 77 penetrations existing in the vicinity of the Airport, including lateral penetrations of the primary and transitional surfaces. The majority of these penetrations were by vegetation or trees, however, there were some poles, hangars, and towers that also penetrated surfaces. As part of the 2020 ALP Update, new aerial photography and obstruction mapping was prepared that allowed further analysis of potential obstructions.

Following an alternatives development process that focused on reconfiguring the airfield and removing/mitigating obstructions to the approach surfaces to meet FAA and state of Michigan design standards, the 2020 ALP Update recommended several key improvements. These included reconstructing Runway 8/26 at a length of 2,300 feet and a width of 60 feet; removing the parallel taxiway and constructing a bypass taxiway for Runway 26 and a turnaround for Runway 8; and acquiring easements and removing tree obstructions west of Runway 8 and east of Runway 26.

Based on the 2020 ALP Update and a subsequent Runway Protection Zone (RPZ) Analysis conducted in 2020 that documented a range of alternatives that could avoid or minimize the impact of incompatible land uses within the RPZs of a shortened Runway 8/26, Oakland County is exploring the potential environmental impacts of airfield reconfiguration, as well as avigation easements and obstruction (tree) clearing and grubbing at both ends of Runway 8/26. Removal of trees penetrating the approach surfaces will better facilitate clear approach and departure paths and enhance safety and utility of the Airport. Acquisition of easements will give Oakland County the right to maintain the airspace in these areas and allow for the removal of the trees.

Aerial photography and obstruction mapping for the 2020 ALP Update and a Light Detection and Ranging (LiDAR) Obstruction Analysis completed in 2020 for the FAR Part 77 approach surface identified parcels located on and off Airport property that are expected to be included in the avigation easement acquisition and tree removal process. These parcels include properties with existing obstructions to the FAR Part 77 approach surface as well as those with obstructions that are within 10 feet of the approach surface. Inclusion of these parcels allows for proper planning for future removals.

The major development items that will be covered as a part of this Short Form Environmental Assessment (EA) include:

- Remove 220 feet of existing pavement from the Runway 8 end and 608 feet from the Runway 26 end, resulting in both a shifting of runway thresholds and an overall reduction in runway length from 3,128 feet to a new length of 2,300 feet.
- Widen Runway 8/26 to the standard width of 60 feet (existing width is 40 feet).
- Remove the existing full-length parallel taxiway, which is not required based on current and projected activity levels and replace with a taxiway turnaround at the Runway 8 end and a bypass taxiway at the Runway 26 end to facilitate 180-degree turns and back taxiing.
- Construct a taxiway connector between an executive hangar and Runway 8/26 to replace the existing taxiway connector that will be lost due to the removal of the parallel taxiway.
- Obtain avigation easements to remove trees that are obstructions to the FAR Part 77 approach surfaces and state of Michigan design standards for Runways 8 and 26.

- Clear and grub tree obstructions (where feasible) which penetrate the FAR Part 77 approach surfaces and state of Michigan design standards for Runways 8 and 26.
- Clear and grade the area between the Runway Safety Area (RSA) and the Runway Object Free Area (ROFA) on the south side of the runway to create a surface that the Airport can easily maintain.

Maps showing the locations of obstructions and property parcel boundaries at the approach ends of Runways 8 and 26 are provided in **Appendix C – Obstructions and Property Parcel Boundaries**.

3. Project Purpose and Need:

Purpose of the Proposed Action

The purpose of the proposed action is twofold. First, Oakland County proposes to reconfigure the airfield to right-size the Airport and reduce the cost of improvements necessary to meet FAA and Michigan Department of Transportation Office of Aeronautics (MDOT AERO) design standards. Second, Oakland County proposes to remove tree obstructions located in the approaches at both ends of Runway 8/26 to enhance safety and utility of Y47 for existing and future users.

Need for the Proposed Action

The need for reconfiguration of the Airport's airfield and removal of trees in the Runway 8/26 approaches was identified during the 2020 ALP Update. The proposed project is needed to allow the Airport to safely and efficiently accommodate existing and forecasted demand while meeting FAA and MDOT AERO design standards.

As explained above, the Airport was previously designated as RDC B-II. However, during the 2020 ALP Update, it was determined that the appropriate RDC is A-I Small. Runway 8/26 currently does not meet many of the FAA's dimensional standards associated with this RDC. In addition, a runway length analysis showed that a runway length of 2,300 feet was sufficient based on Y47's based aircraft as well as local and itinerant traffic.

A runway length of 2,300 feet would also allow for the elimination of the displaced landing thresholds at the Airport and the associated requirement for published declared distances due to the threshold displacements. MDOT AERO discourages the use of displaced thresholds and declared distances at general aviation airports in Michigan. Specifically, at general aviation airports like Y47 that are heavily used by student and recreational pilots, the use of declared distances is not recommended as this information can be difficult to understand even for more experienced commercial rated pilots.

Also, Y47 currently cannot meet FAA safety standards outlined in FAA Order 5190.6B, *Airport Compliance Manual*, FAA AC 150/5300-13B, *Airport Design*, and FAR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace* due to trees that have grown over time to now become penetrations to the approach surfaces of Runways 8 and 26. These FAA documents establish runway design guidance for surfaces intended to protect the runway environment from objects that may interfere with aircraft operations. The design surfaces include two-dimensional areas such as runway safety areas (RSAs) and RPZs as well as three-dimensional approach surfaces as identified in FAR Part 77. Airports have a responsibility to protect and maintain these runway design surfaces so that objects do not become obstructions to aircraft operations.

The presence of obstructions in the Runway 8/26 approaches limits the safety and utility of the Airport and has resulted in a downgraded classification to a Basic Utility airport under MDOT AERO's requirements for airport licensing in the state of Michigan. Airports in Michigan are licensed based on their classification as either a Basic Utility airport or General Utility airport. Each classification includes various improved airport design standards and services, including minimum runway lengths as well as various obstruction clearance standards. Y47 was previously classified as a General Utility airport. By providing clear and unobstructed airspace at Y47, the Airport would again meet General Utility licensing standards and not compromise its federal and state funding capabilities.

4. Describe the affected environment (existing conditions) and land use in the vicinity of project:

Airport Location and History

Y47 is located in Lyon Township, which is in the southwest corner of Oakland County. Communities neighboring Lyon Township are the cities of South Lyon, Novi, and Wixom and the townships of Milford, Green Oak, and Salem (see **Figure 1.1 Surrounding Communities Map**). I-96 bisects the northern portion of the Township, running parallel to Grand River Avenue. The Airport is in the north-central portion of the Township, less than one mile south of I-96. Surrounding roads are Pontiac Trail to the north, Milford Road to the east, Travis Road to the south, and Martindale Road to the west (see **Figure 1.2 Vicinity Map**).

Lyon Township boasts an attractive business climate, historic rural character, scenic charm, residential appeal, and an abundance of recreational resources. The Township's natural and recreational assets include golf courses; the Huron Valley Trail, which is a paved trail for biking, hiking, cross country skiing, and other outdoor activities; and James F. Atchison Memorial Park, a bluff-top green space with spectacular views and home to the Lyon Township Kite Festival, which draws more than 2,000 flyers and spectators each year.

Y47 has been an integral part of the Michigan aviation system for over 70 years. The Airport opened in 1946, serving as a private training facility for war veterans interested in pursuing their pilot's licenses under the G.I. Bill. The private airport transitioned to public ownership by Oakland County in August 2000. Oakland County now maintains and operates Y47, along with Oakland County International Airport (PTK) and Oakland/Troy Airport (VLL).

Land Use and Zoning

Lyon Township regulates development and use of land within its borders and has an adopted land use zoning ordinance in place with criteria for uses to be developed within certain zones. In conjunction with the zoning ordinance, the Township has also adopted a zoning map that divides the city into areas consistent with the zoning ordinance. Y47 itself has been designated as part of a special land use area, allowing the Airport within the R-1.0 Residential-Agricultural land use district. West and directly adjacent to the Airport is R-0.3 Single-Family Residential, north of the Airport is an area zoned as Planned Development District, and northeast of Y47 is an area zoned as New Hudson Neighborhood. I-1 Light Industrial is located to the southeast, with R-0.5 Single Family Residential to the south and I-2 General Industrial District to the east. Existing zoning within the vicinity of Y47 is shown in **Appendix D – Land Use and Zoning**.

Existing land uses around the Airport include residential, industrial, commercial/office, agricultural, recreation/conservation, and vacant land (see **Appendix D – Land Use and Zoning**). Most of the Airport is surrounded by single family residences, with large areas of vacant land found immediately west of Runway 8, south of Runway 26, and west of the hangar and tie-down area. The Huron Valley Trail runs east of the Airport in a southwest-northeast direction and crosses Milford Road before continuing toward I-96. Several industries are located southeast of the Airport between the Huron Valley Trail and Milford Road, while an area of commercial/office land uses is found at the intersection of I-96, Milford Road, and Pontiac Trail Road. Across Milford Road directly east of Y47 is a large tract of agricultural land.

Population Growth Statistics

According to the 2020 Census, the state of Michigan had more than 10.0 million residents in 2020, an increase of 2.0 percent from the nearly 9.9 million residents recorded in the state in the 2010 Census, as shown in **Table 1-0 Surrounding Area Population, 2010-2020**. At the county level, the number of residents in Oakland County grew from 1.2 million residents in 2010 to nearly 1.3 million residents in 2020, an increase of 6.0 percent. Lyon Township experienced strong growth during this period, increasing 60.0 percent from 14,545 residents in 2010 to 23,271 residents in 2020. As a result, Lyon Township is one of the fastest growing communities in southeast Michigan. Population growth has been strong in the Township due to construction of numerous residential developments.

Table 1-0
Surrounding Area Population, 2010-2020

Geographic Area	2010	2020	Percent of Change
State of Michigan	9,883,640	10,077,331	2.0%
Oakland County	1,202,362	1,274,395	6.0%
Lyon Township	14,545	23,271	60.0%

Source: U.S. Census Bureau State & County QuickFacts

Industrial and Commercial Growth Characteristics

According to the Michigan Bureau of Labor Market Information and Strategic Initiatives, the total labor force for the state of Michigan was more than 4.8 million people in 2022, while the number of employed workers was more than 4.6 million (**Table 1-1 Labor Force, 2022**). The state of Michigan unemployment rate in 2022 was 4.2 percent. At the county level, the total labor force and number of employed workers for Oakland County stood at 664,232 people and 644,401 workers, respectively, in 2022, representing an unemployment rate of 3.0 percent. No data were available for Lyon Township.

Table 1-1
Labor Force, 2022

Geographic Area	Total Labor Force	Employed	Percent Unemployed
State of Michigan	4,836,000	4,633,000	4.2%
Oakland County	664,232	644,401	3.0%
Lyon Township	N/A	N/A	N/A

Source: Michigan Bureau of Labor Market Information and Strategic Initiatives, 2024

Data from the U.S. Bureau of Economic Analysis shows the top five industries by employment in Oakland County in 2022 were professional, scientific, and technical services; health care and social assistance; retail trade; finance and insurance; and real estate and rental and leasing (**Table 1-2 Oakland County Top Five Industries by Employment, 2022**). Together these industries comprised 50 percent of the employed labor force in Oakland County.

Table 1-2
Oakland County Top Five Industries by Employment, 2022

Industry	Oakland County Employees	Percent of Total Employed
Professional, Scientific, and Technical Services	139,286	13.5%
Health Care and Social Assistance	120,378	11.6%
Retail Trade	90,280	8.7%
Finance and Insurance	85,182	8.2%
Real Estate and Rental and Leasing	83,793	8.1%

Source: U.S. Bureau of Economic Analysis, November 2023

Table 1-3 Top 10 Largest Employers in Oakland County, 2023 identifies the 10 largest employers in Oakland County in 2023. The largest employer in Oakland County is Corewell Health with more than 14,500 local employees.

Table 1-3
Top 10 Largest Employers in Oakland County, 2023

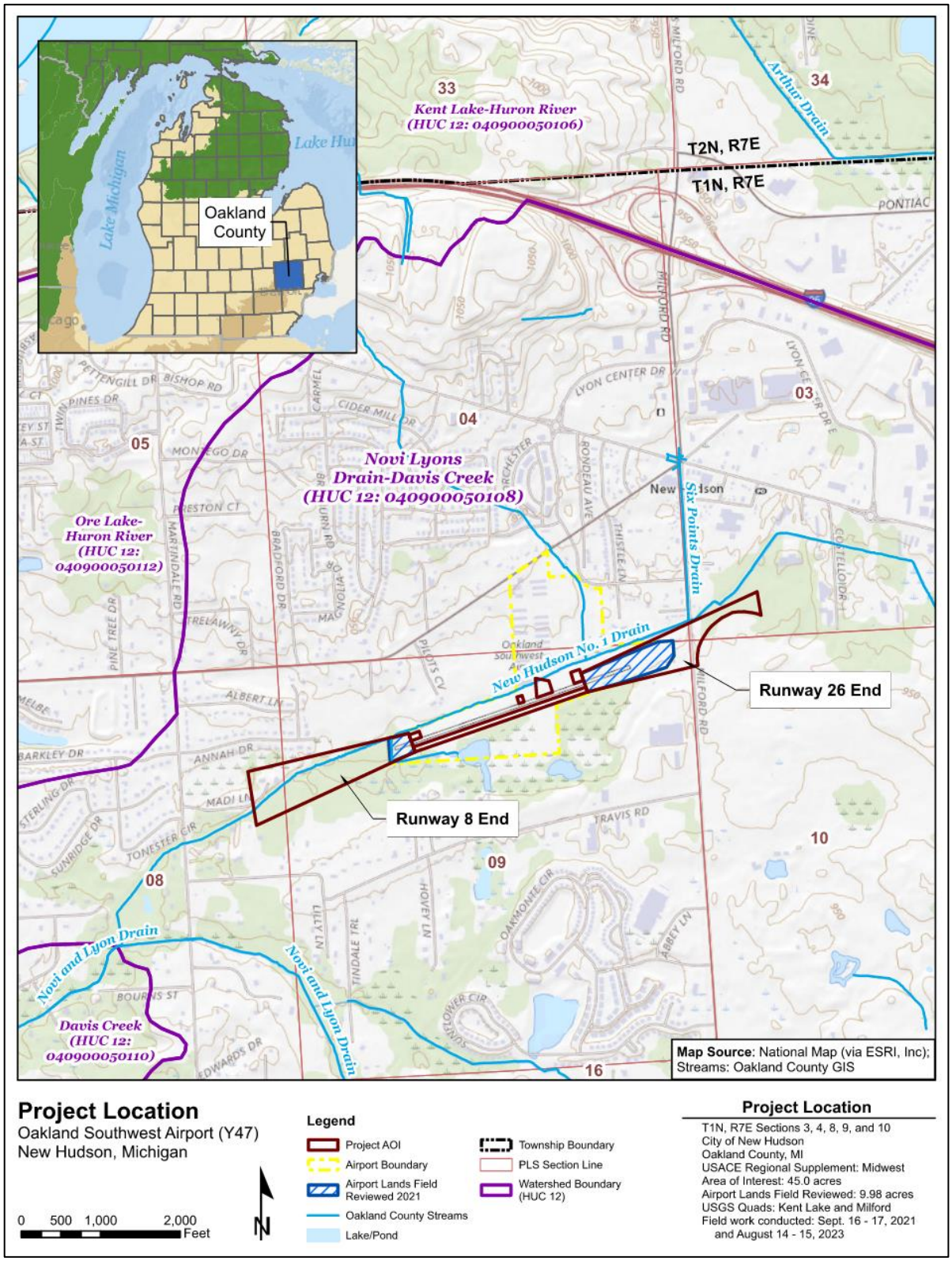
Company/Organization	Local Employees	Business Type
Corewell Health	14,580	Health Care System
Stellantis NV	11,524	Automobile Manufacturer
General Motors Co.	7,451	Automobile Manufacturer
UWM Holdings	6,000	Mortgage Lender
Henry Ford Health System	5,301	Health Care System
Ascension Michigan	5,219	Health Care System
U.S. Postal Service	4,927	Postal Service
Oakland County	3,679	Government
Amazon.com Inc.	3,650	Ecommerce
Trinity Health Michigan	3,159	Health Care System

Source: Crain's Detroit Business, December 2023

Environmental Characteristics of the Project Area

Y47 property covers approximately 79 acres within the Novi Lyons Drain-Davis Creek Watershed of the Huron River Watershed. Surrounding land uses primarily include single-family residential to the north and lower density residential as well as vacant land to the west and south. The New Hudson No. 1 Drain, a steep-sided constructed drain approximately 25 feet wide, parallels Runway 8/26 on the northern side and flows to the west (see **Figure 1.4 Project Location Map**).

Figure 1.4 Project Location Map



Source: *Wetland Delineation Report, Environmental Assessment for Runway 8/26 Shift and Shortening and Approach Clearing, Oakland/Southwest Airport, New Hudson, Michigan*, prepared by Mead & Hunt, January 2024

Trees along this ditch primarily consist of cottonwood, box elder, and elm. Several ponds are present on the south side of the runway and are presumed to be borrow pits created as part of the construction of the runway. At the western Airport property boundary, an intersecting ditch drains northward from wetlands on the south side of the Airport. Embankments along this western ditch are dominated by glossy buckthorn. The Airport is bounded by Pontiac Trail on the north, Milford Road on the east, and Travis Road on the south.

Only those resources likely to be impacted within the proposed project area were field delineated. Scientists and biologists conducted detailed wetland, cultural, biological, and hazardous materials investigations and field surveys as part of the proposed project. Some portions of the project area were not field reviewed due to private property owners refusing access. These areas were assessed using sources such as general site observations from the right-of-way, professional experience, historic aerial photos, online data such as soils maps, and published technical documents.

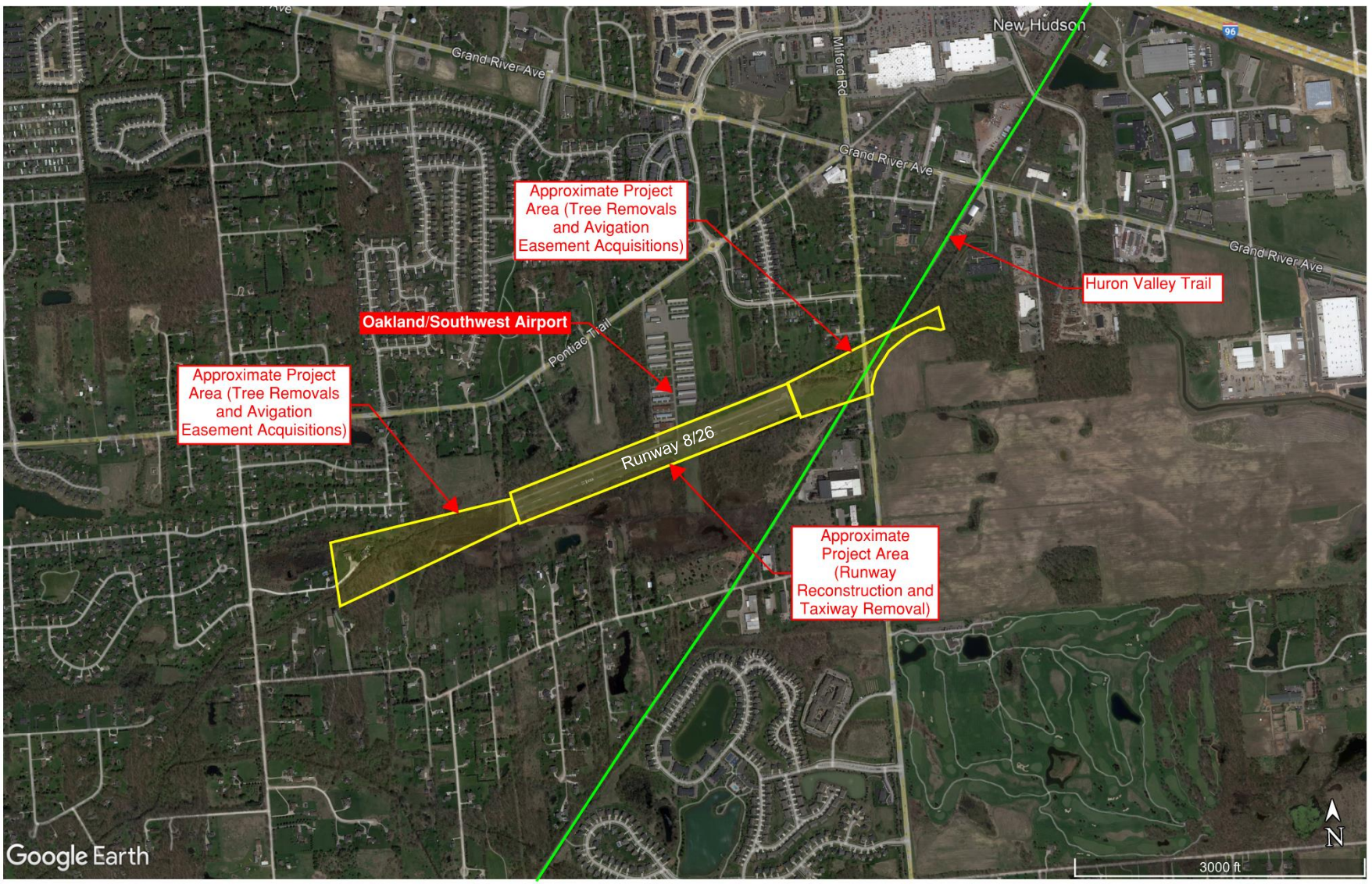
The project area is comprised of three sections (see **Figure 1.5 Project Area Map**). The first section extends southwest from the approach end of Runway 8. Vegetation immediately west of the Runway 8 threshold is dominated by a mix of low shrubs and small trees. Further to the west, vegetative cover shifts to a taller, more mature canopy. The New Hudson No. 1 Drain flows through this section on the northern side. This section also includes a cul-de-sac at the east end of Madi Lane, with two residences present.

The second section extends to the northeast from the approach end of Runway 26. This section is irregularly shaped and is comprised partly by a cleared grassy field surrounded by areas of tree cover within the Airport property boundary. Tree cover between Airport property and Milford Road is patchy with smaller trees and a few isolated mature trees, while the area east of Milford Road is nearly all forested. The Huron Valley Trail, a multi-use recreational trail, runs in a southwest-to-northeast direction through this section (see **Figure 1.5 Project Area Map**). Siberian elm, black walnut, black locust, box elder, sumac, and red pine are present along the trail. A residence with mowed turf grass sits between Airport property and Milford Road.

The third section is between the two previously described sections and is comprised of the main portion of Runway 8/26 and the associated parallel taxiway. The RSAs on either side of Runway 8/26 are regularly mowed. A mix of turf grasses and other graminoid vegetation and common forbs cover these managed areas. Outside of the actively maintained areas surrounding the runway, the dominant vegetation is a mixture of low shrubs and trees. Wetter areas on the south side of the runway support dogwoods and willows among a mixture of graminoid and forb vegetation indicative of southern shrub habitat. The terrain surrounding the runway is flat and slopes gently from east to west.

A total of five separate wetland boundaries enclosing 4.410 acres were delineated within the project area at Y47 during field visits conducted in 2021 and 2023. An additional 6.821 acres enclosing four wetlands on private property within the project area were estimated using background data sources during the 2023 field visit.

Figure 1.5 Project Area Map



Source: Google Earth Imagery with labeling by Mead & Hunt, Inc., 2024

No mapped Federal Emergency Management Agency (FEMA) floodplains are in the Runway 26 section of the project area, although there are mapped areas of 100-year floodplain along the New Hudson No. 1 Drain. At the approach end of Runway 8, an area of 100-year floodplain is mapped along the ditch that runs from the south side of the runway and around the runway threshold.

5. Alternatives to the Project: Describe any other reasonable actions that may feasibly substitute for the proposed project and include a description of the "No Action" alternative. If there are no feasible or reasonable alternatives to the proposed project, explain why (attach alternatives drawings as applicable):

This section identifies the potential alternatives evaluated for their feasibility to meet the project's purpose and need. These alternatives were developed from the 2020 ALP Update (see **Appendix B – 2020 ALP Update Narrative Report**), the RPZ Analysis conducted in 2020 (see **Appendix E – RPZ Analysis**), and through discussions with the Airport, MDOT AERO, and various regulatory agencies. A No Action alternative is also provided, as required by National Environmental Policy Act (NEPA) and FAA regulations. Preliminary costs are provided for the build alternatives; however, more refined costs will be developed during final design of the Preferred Alternative.

No Action Alternative

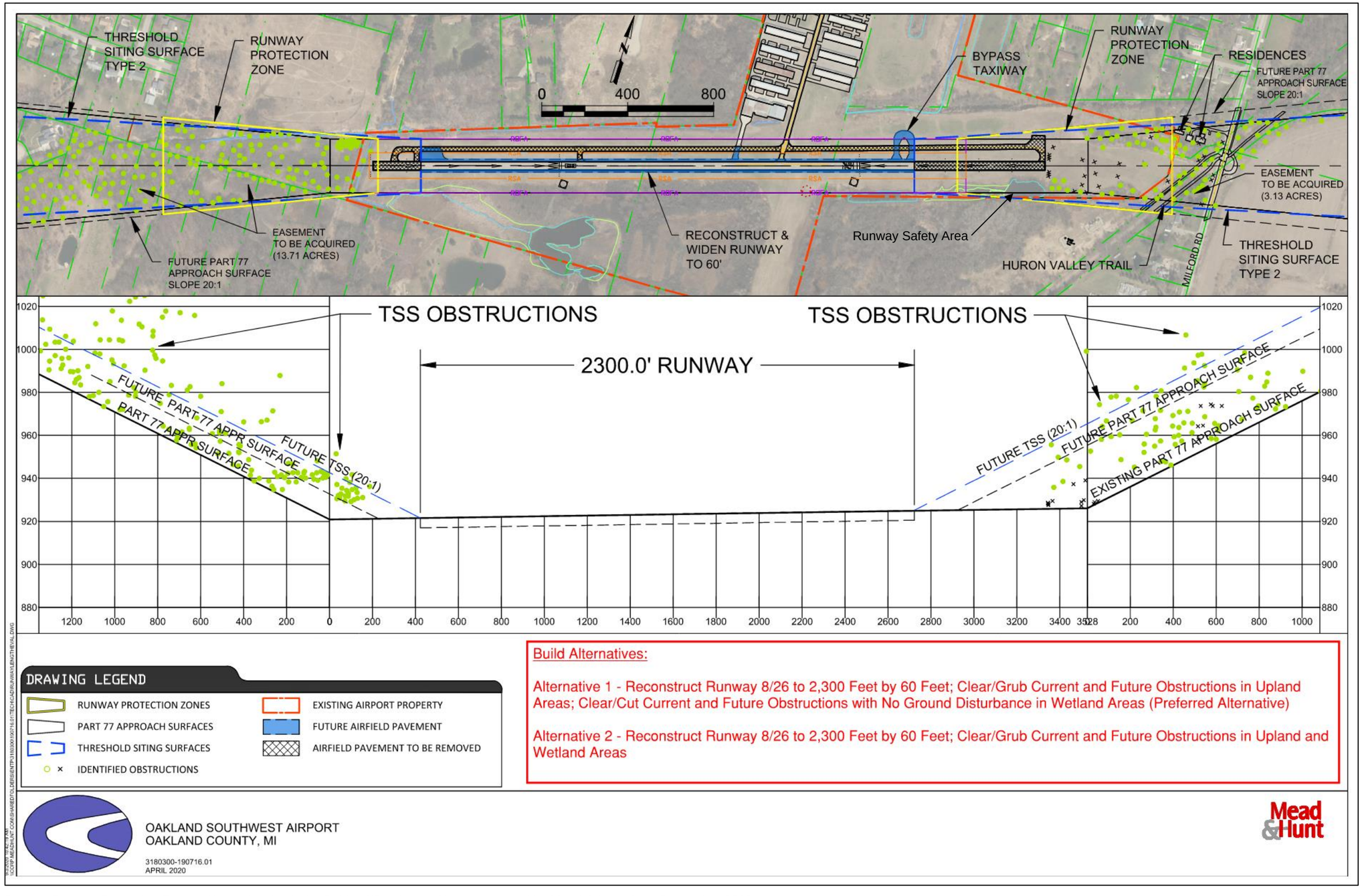
The No Action Alternative assumes that Y47 would remain in its current state and no action would be taken to reconstruct Runway 8/26 or remove the obstructions to the runway approach surfaces. As such, the No Action Alternative does not meet the project's purpose and need of reconfiguring the airfield and removing obstruction hazards to air navigation to allow the Airport to safely and efficiently accommodate existing and forecasted demand while meeting FAA and MDOT AERO design standards.

Although the No Action Alternative does not meet the purpose and need, it is a baseline of comparison for environmental impacts associated with the build alternatives and is, therefore, retained and carried forward for analysis.

Alternative 1 – Reconstruct Runway 8/26 to 2,300 Feet by 60 Feet; Clear/Grub Current and Future Obstructions in Upland Areas; Clear/Cut Current and Future Obstructions with No Ground Disturbance in Forested Wetland Areas (Preferred Alternative)

Alternative 1 proposes to reconstruct Runway 8/26 to a 2,300-foot length and 60-foot width (see **Figure 1.6 Alternatives Considered**). At the approach end of Runway 8, 220 feet of existing pavement would be removed, while 608 feet of pavement would be removed at the approach end of Runway 26, resulting in a shift and shortening of the runway from its existing length of 3,128 feet. The full-length parallel taxiway would also be removed and replaced with a taxiway turnaround at the approach end of Runway 8 and a bypass taxiway at the approach end of Runway 26. A taxiway connector between an executive hangar and Runway 8/26 would be constructed to replace the existing taxiway connector that would be lost due to the removal of the parallel taxiway. Reconstructing the runway to a 2,300-foot length would eliminate the need for displaced thresholds and declared distances. Displaced thresholds and declared distances are discouraged by the FAA and MDOT AERO.

Figure 1.6 Alternatives Considered



Source: *Runway Protection Zone – Alternative Analysis, Oakland/Southwest Airport*, prepared by Mead & Hunt, Inc., September 2020

This alternative also proposes to clear approximately 22 acres of land in the Runway 8/26 approaches containing current and future obstructions to the approach surfaces. The area between the RSA and ROFA on the south side of the runway would be cleared of low shrubs and trees.

Grubbing and earth moving activities under this alternative would occur only in upland areas and wetland areas south of the runway between the RSA and ROFA. Once the trees and shrubs are cut and the stumps are grubbed, the project area would be graded as needed to create a level surface, and replacement turf grass would be planted. This alternative would create areas that Y47 can easily maintain to prevent obstructions in the future. It would also create a surface on the south side of the runway between the RSA and ROFA that the Airport can easily maintain.

In wetland areas in the runway approaches, trees would be cleared and stumps would remain with no ground disturbance. Since stumps would remain in the wetland areas, this alternative would create lowland areas that Y47 would have to continuously maintain to prevent regrowth that would result in future obstructions.

By moving the Runway 26 threshold further west, Alternative 1 eliminates several incompatible land uses in the relocated RPZ for Runway 26, which are two residences, Milford Road, and powerlines along Milford Road. A private driveway and the Huron Valley Trail would remain in the RPZ, but only in the far southeast corner.

Alternative 1 would have the least impacts on wetlands of the build alternatives since ground disturbance in wetland areas would be minimized. Field visits conducted in 2021 and 2023 to delineate/estimate wetland boundaries found a total of 11.231 acres of wetlands (1.039 acres forested and 10.192 acres non-forested) within the project area. These wetlands are located in both approaches of Runway 8/26 and along the south side of the runway. Of the 11.231 acres of wetlands within the project area, a total of 4.583 acres would be impacted under this alternative. Wetlands that would be impacted in the runway approaches are forested wetlands (total of 1.039 acres). Trees within these forested wetlands will be cleared without any ground disturbance. Consultation with EGLE indicates that cutting trees in any forested wetland is considered an impact to that wetland even if there is no ground disturbance. Wetlands along the south side of the runway (total of 3.544 acres) are non-forested wetlands and would be cleared, grubbed, filled, and graded to accommodate the RSA and ROFA for the reconstructed runway. Proposed mitigation for wetland impacts is expected to include an EGLE Part 303 Wetland Protection permit and mitigation of 1.039 acres for the forested wetlands (1:1 ratio) and 5.316 acres for the non-forested wetlands (1:1.5 ratio) for a total of 6.355 acres. Mitigation would include the purchase of wetland credits at an EGLE approved mitigation bank within the same watershed.

Mapping from FEMA shows the presence of a 100-year floodplain at the approach end of Runway 8. This floodplain is associated with a drainage ditch that runs along the southern edge of the existing RSA and around the runway threshold. As such, this alternative may also have impacts on floodplains because of grubbing and grading activities within a regulated floodplain. However, like impacts to wetlands, they would be the least extensive of the build alternatives since grubbing and grading would only occur in upland areas and along the south side of the runway in the area between the RSA and ROFA. An EGLE Part 31 Floodplain Permit and a compensating cut of material within the limits of the same floodplain in an area not classified as a protected resource (e.g., wetland or threatened or endangered species habitat) would be required for any fill associated with this alternative.

In addition to wetland and floodplain impacts, the wooded areas in the Runway 8/26 approaches provide suitable summer habitat for the U.S. Fish and Wildlife (USFWS)-designated endangered Northern Long-eared Bat (NLEB) and Indiana Bat and potentially provide suitable summer habitat for the proposed endangered Tricolored Bat. However, consultation with the USFWS indicates appropriate mitigation is to restrict tree removal during the summer roosting season of the NLEB and Indiana Bat. Tree removals would only be allowed from October 1 through April 14.

Potentially suitable habitat for the Eastern Massasauga Rattlesnake (EMR) is also present at the approach end of Runway 8 along an emergent / forested transition zone and could be impacted under Alternative 1. Appropriate mitigation would be restricting clearing and grubbing activities outside of the active season for the EMR and implementation of recommended best management practices (BMPs) for projects within the known EMR range.

Lastly, tree removals proposed under Alternative 1 would remove trees on the Huron Valley Trail, a recreational trail that cuts through the eastern portion of the project area at the approach end of Runway 26 (see **Figure 1.5 Project Area Map**). The Huron Valley Trail is considered a Section 4(f) resource. Numerous trees along the trail have been identified as obstructions to the approach surface for Runway 26. Coordination to remove trees began in 2015 when Oakland County executed a Memorandum of Agreement (MOA) with the Michigan DNR to allow Oakland County to acquire an avigation easement over the trail and remove trees as necessary for Airport purposes. The MOA, which is provided in **Appendix F – Section 4(f) Resources**, outlines the steps that must be taken to minimize the impacts of tree removals on the trail. See **Subsection (E) Section 4(f) Resources** found in **Section 6. Environmental Consequences** below for additional information on Section 4(f) resources in the project area.

The total cost to implement Alternative 1 is estimated at $10.6 million ($9.2 million for runway reconstruction; $690,000 for tree removals; and $700,000 for wetland mitigation), which is significantly less expensive than Alternative 2.

Advantages of this alternative:

- Meets the project's purpose and need.
- Provides long-term solution to vegetation maintenance in upland areas.
- Reduces incompatible land uses in the RPZ at the approach end of Runway 26.
- Minimizes impacts to wetlands and floodplains.
- Least expensive of the build alternatives.

Disadvantages of this alternative:

- Requires avigation easements over approximately 30 parcels to remove obstructions to the FAR Part 77 approach surfaces and MDOT AERO design standards.
- Requires ongoing vegetation maintenance in wetland areas.
- Requires an EGLE Part 303 Wetland Protection Permit and purchase of wetland credits at an EGLE-approved mitigation bank.
- Requires an EGLE Part 31 Floodplain Permit and a compensating cut of material.
- Potential impacts to the NLEB, Indiana Bat, Tricolored Bat, and EMR.
- Tree removals are proposed on the Huron Valley Trail.

Alternative 1 is a reasonable alternative because it meets the project's purpose and need, provides a long-term solution to vegetation management in upland areas, greatly minimizes impacts to wetlands and floodplains, reduces incompatible land uses in the RPZ at the approach end of Runway 26, and is the least expensive of the build options.

Alternative 2 – Reconstruct Runway 8/26 to 2,300 Feet by 60 Feet; Clear/Grub Current and Future Obstructions in Upland and Wetland Areas

Alternative 2 also proposes to reconstruct Runway 8/26 at a length of 2,300 feet and a width of 60 feet (see **Figure 1.6 Alternatives Considered**). Like Alternative 1, 220 feet of existing pavement at the approach end of Runway 8 would be removed, and 608 feet of pavement would be removed at the approach end of Runway 26, eliminating the need for displaced thresholds and declared distances. The full-length parallel taxiway would be replaced with a taxiway turnaround at the approach end of Runway 8 and a bypass taxiway at the approach end of Runway 26. Also, a taxiway connector between an executive hangar and Runway 8/26 would be constructed to replace the existing taxiway connector that would be lost due to the removal of the parallel taxiway.

In addition, approximately 22 acres of land in the Runway 8/26 approaches containing current and future obstructions to the FAR Part 77 approach surfaces and along the south side of the runway would be cleared. The area between the RSA and ROFA on the south side of the runway would be cleared of low trees and shrubs.

Under this alternative, upland and wetland areas would be cleared, grubbed, and graded to create a level surface, and turf grass would be planted following removal of the trees and stumps. This alternative would create upland and wetland areas that the Airport can easily maintain to prevent obstructions in the future. A surface that Y47 can easily maintain would also be created on the south side of the runway between the RSA and ROFA.

Like Alternative 1, implementation of Alternative 2 would relocate the Runway 26 threshold to the west, which would remove two residences, Milford Road, and powerlines along Milford Road from the relocated RPZ. A private driveway and a segment of the Huron Valley Trail would still remain in the southeast corner of the RPZ.

Alternative 2 would have the most impacts on wetlands due to proposed grubbing and grading activities throughout the entire project area. As previously explained, field visits conducted in 2021 and 2023 to determine the presence of wetlands within the project area delineated or estimated a total of 11.231 acres of wetlands (1.039 acres forested and 10.192 acres non-forested). All 11.231 acres would be impacted by this Alternative. Mitigation would be required for all wetland areas impacted by grubbing and grading activities and would include an EGLE Part 303 Wetland Protection Permit and the purchase of wetland credits at an EGLE approved mitigation bank within the same watershed. Mitigation of 17.366 acres (2.078 acres for forested wetlands at a 2:1 ratio and 15.288 acres for all other wetlands at a 1:1.5 ratio) is expected to offset impacts to area wetlands.

This alternative would also have the most impacts on floodplains because of grubbing and grading activities within regulated floodplains. As explained under Alternative 1, a 100-year floodplain runs around the Runway 8 threshold. This floodplain intersects a 100-year floodplain around the New Hudson No. 1 Drain that runs

along the north side of Runway 8/26 and continues to the west through the portion of the project area west of the Runway 8 threshold. An EGLE Part 31 Floodplain Permit and a compensating cut of material within the limits of the same floodplain in an area not classified as a protected resource is expected with this alternative.

Lastly, this alternative would require tree removals on the Huron Valley Trail and the same potential impacts on endangered and threatened species as Alternative 1. Tree removal stipulations on the Huron Valley Trail are outlined in the MOA between Oakland County and the Michigan DNR, while mitigation for protected bat species is tree removals only allowed from October 1 through April 14. EMR mitigation is the implementation of BMPs.

Alternative 2's estimated cost is approximately $11.7 million ($9.2 million for runway reconstruction; $630,000 for tree removals; and $1.9 million for wetland mitigation) and is the most expensive of the build alternatives.

Advantages of this alternative:

- Meets the project's purpose and need.
- Provides long-term solution to vegetation maintenance in upland and wetland areas.
- Reduces incompatible land uses in the RPZ at the approach end of Runway 26.

Disadvantages of this alternative:

- Requires avigation easements over approximately 30 parcels to remove obstructions to the FAR Part 77 approach surfaces and MDOT AERO design standards.
- Considerable impacts to wetlands are expected since wetland areas within the project area would be grubbed and graded.
- Requires an EGLE Part 303 Wetland Protection Permit and purchase of wetland credits at an EGLE-approved mitigation bank.
- Requires an EGLE Part 31 Floodplain Permit and a compensating cut of material.
- Potential impacts to the NLEB, Indiana Bat, Tricolored Bat, and EMR.
- Tree removals are proposed on the Huron Valley Trail.
- Most expensive of the build alternatives.

Although Alternative 2 meets the project's purpose and need and provides a long-term solution to vegetation management in the runway approaches, it is not considered a reasonable alternative because it would have the most impacts of the build alternatives on wetlands and floodplains. It would also be the most expensive option to implement.

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 1 – Reconstruct Runway 8/26 to 2,300 Feet by 60 Feet; Clear/Grub Current and Future Obstructions in Upland Areas; Clear/Cut Current and Future Obstructions with No Ground Disturbance in Forested Wetland Areas (Preferred Alternative)**, as shown in **Figure 1.6 Alternatives Considered**.

Although both build alternatives meet the project's purpose and need, Alternative 1's primary advantage is that it minimizes impacts to wetlands and floodplains, since grubbing and grading activities would be confined to

upland areas and the wetland area along the south side of the runway. Alternative 1 is also much less expensive to implement than Alternative 2.

Like Alternative 2, Alternative 1 would remove trees on the Huron Valley Trail. However, an MOU between Oakland County and the Michigan DNR outlines appropriate minimization steps. Also, both alternatives would have potential impacts on the NLEB, Indiana Bat, Tricolored Bat, and the EMR. Any impacts would be easily mitigated through tree removal restrictions for bats and implementation of BMPs for the EMR.

Lastly, Alternative 1 would not provide a long-term solution to vegetation management in lowland areas, but this criterion is outweighed by the need to minimize environmental impacts to wetlands and floodplains.

Based on the analysis presented above, Alternative 1 is considered the most reasonable alternative. As a result, Alternative 1 is carried forward in this Short Form Environmental Assessment for additional analysis, public comment, and agency review.

6. Environmental Consequences – Special Impact Categories (refer to the Instructions page and corresponding sections in 1050.1F, the 1050.1F Desk Reference, and the Desk Reference for Airports Actions for more information and direction. Note that when the 1050.1F Desk Reference and Desk Reference for Airports Actions provide conflicting guidance, the 1050.1F Desk Reference takes precedence. The analysis under each section must comply with the requirements and significance thresholds as described in the Desk Reference).

(A) AIR QUALITY

(1) Will the proposed project(s) cause or create a reasonably foreseeable emission increase? Prepare an air quality assessment and disclose the results. Discuss the applicable regulatory criterion and/or thresholds that will be applied to the results, the specific methodologies, data sources and assumptions used, including the supporting documentation and consultation with federal, state, tribal, or local air quality agencies.

The proposed project would result in no change to the airside or landside capacity at the Airport, including its capacity to handle ground vehicle traffic. Therefore, no permanent increases in emissions are anticipated from implementation of the proposed project.

In addition, Y47 experiences approximately 13,000 annual aircraft operations, well below the threshold that requires an air quality analysis (180,000 GA / air taxi operations) per the FAA's *Environmental Desk Reference for Airport Actions*. Therefore, an air quality assessment was not completed.

During construction and tree removals, the Preferred Alternative would result in a minor temporary increase in emissions because of increased vehicle traffic and dust from ground disturbing activities. Any impacts to air quality during construction and tree removals will be temporary and easily mitigated through the regulatory permitting process and the use of BMPs. The following BMPs are recommended during construction and tree removals where feasible:

- Use low-sulfur diesel fuel (less than 0.05 percent sulfur).

- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Position the exhaust pipe so that the diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- Use catalytic convertors to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.
- Use pressurized, climate-controlled cabs that are equipped with high efficiency particulate air (HEPA) filters to reduce the operator's exposure to diesel fumes. Pressurization ensures that air is moved from the inside to the outside. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintain diesel engines, which is essential to keeping exhaust emissions low, and follow the manufacturer's recommended maintenance schedule. For example, blue/black smoke indicates that an engine requires servicing or tuning.
- Reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel operators to perform routine inspections, and maintaining filtration devices.
- Purchase new vehicles equipped with the most advanced emission control systems available.
- With older vehicles, use electric starting aids as block heaters to warm the engine to reduce diesel emissions.

(2) Are there any project components containing unusual circumstances, such as emissions sources in close proximity to areas where the public has access or other considerations that may warrant further analysis? If no, proceed to (3); if yes, an analysis of ambient pollutant concentrations may be necessary. Contact your local ADO regarding how to proceed with the analysis.

No. All proposed project activities are considered routine.

(3) Is the proposed project(s) located in a nonattainment or maintenance area for the National Ambient Air Quality Standards (NAAQS) established under the Clean Air Act?

Yes. According to the EGLE Attainment Status for the National Ambient Air Quality Standards (NAAQS) map shown in **Appendix G – Air Quality**, Oakland County is within an Ozone Attainment / Maintenance area.

According to the U.S. Environmental Protection Agency's (USEPA) Green Book National Area and County-Level Multi-Pollutant Information (see **Appendix G – Air Quality**), Oakland County is a maintenance area for the following pollutants:

- Oakland County (Whole) – 8-Hour Ozone (2015)
- Oakland County (Partial) – Carbon Monoxide (1971)
- Oakland County (Whole) – PM-2.5 (2006)

4) Are all components of the proposed project, including all connected actions, listed as exempt or presumed to conform (See FRN, vol.72 no. 145, pg. 41565)? If yes, cite exemption and go to (B) Biological Resources. If no, go to (5).

All components of the proposed project are listed as exempt or presumed to conform under the following sections of FRN, vol. 72 no. 145, pg. 41565:

1. II. Existing Exemptions, *2. Routine Maintenance and Repair Activities [40 CFR 93.153(c)(2)(iv)]*

2. II. Existing Exemptions, *8. Actions (or Portions Thereof) Associated With Transfers of Land, Facilities, Title, and Real Properties Through an Enforceable Contract or Lease Agreement Where the Delivery of the Deed Is Required To Occur Promptly After a Specific, Reasonable Condition Is Met, Such as Promptly After the Land Is Certified as Meeting the Requirements of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and Where the Federal Agency Does Not Retain Continuing Authority To Control Emissions Associated With the Lands, Facilities, Title, or Real Properties [40 CFR 93.153(c)(2)(xix)]*

3. III. Presumed to Conform Project Descriptions and Justifications, *3. Non-Runway Pavement Work*

4. III. Presumed to Conform Project Descriptions and Justifications, *9. Airport Safety*

(5) Would the net emissions from the project result in exceedances of the applicable *de minimis* threshold (reference 1050.1F Desk Reference and the *Aviation Emissions and Air Quality Handbook* for guidance) of the criteria pollutant for which the county is in non-attainment or maintenance? If no, go to (B) Biological Resources. If yes, stop development of this form and prepare a standard Environmental Assessment.

Not applicable.

(B) BIOLOGICAL RESOURCES

Describe the potential of the proposed project to directly or indirectly impact fish, wildlife, and plant communities and/or the displacement of wildlife. Be sure to identify any state or federal species of concern (Candidate, Threatened or Endangered).

1) Are there any candidate, threatened, or endangered species listed in or near the project area?

Early agency coordination with federal and state regulatory agencies with interest or jurisdiction over biological resources in the project area was conducted at the onset of this project. Agency response letters are found in **Appendix A – Early Agency and Tribal Coordination**.

To determine the presence of threatened, endangered, proposed, and candidate species and evaluate the potential impacts from the proposed project at the federal and state level, a qualified biologist conducted site visits on September 16 – 17, 2021 and August 15 – 16, 2023, within a 45-acre Area of Interest (AOI) shown in **Figure 1.4 Project Location Map**.

A review of threatened and endangered species information provided in the USFWS' Information for Planning and Consultation (IPaC) database for the AOI identified six federally endangered, proposed endangered, threatened, non-essential experimental, or candidate species (**Table 1-4 USFWS Endangered and Threatened Species List**).

The Monarch Butterfly is a candidate species and is not yet listed or proposed for listing. Consultation with USFWS under Section 7 of the Endangered Species Act (ESA) is not required for candidate species although project components may be considered or implemented to best support the monarch. USFWS proposes to list the Tricolored Bat (TCB) as endangered under the ESA and if finalized will extend the Act's protections to this species. Therefore, for the purposes of this Short Form EA, the TCB will be considered as protected under the ESA. The Whooping Crane is listed as a non-essential experimental population. In Michigan, this reintroduced population migrates from Wisconsin to Florida. Also shown on this list is the Rusty Patched Bumblebee, which is considered a species of special concern by the state of Michigan. For the biological report evaluating protected species in the project area, see **Appendix H – Biological Resources**.

Table 1-4
USFWS Endangered and Threatened Species List

Species Name	Common Name	Status
Myotis sodalis	Indiana Bat	Endangered
Myotis septentrionalis	Northern Long-eared Bat	Endangered
Perimyotis subflavus	Tricolored Bat	Proposed Endangered
Sistrurus catenatus	Eastern Massasauga Rattlesnake	Threatened
Grus americana	Whooping Crane	Experimental Population, Non-essential
Danaus plexippus	Monarch Butterfly	Candidate
Bombus affinis	Rusty Patched Bumble Bee	Endangered

Source: USFWS Information for Planning and Consultation (IPaC) Database

A database search of the Michigan Natural Features Inventory requested from EGLE as part of a Transportation Preliminary Database Search revealed no occurrences for state-listed threatened or endangered species. No Tier 1-designated EMR habitat is present within the proposed project area and no occurrences of Michigan Mussel Protocol Group 1/Group 2 listed mussels were found. While the database search did not indicate the presence of Northern Long-eared Bats or Indiana Bats, the project area is within the range of the Indiana Bat, and the bat is considered potentially present wherever suitable habitat exists.

(2) Will the action have any long-term or permanent loss of unlisted plants or wildlife species?

The Preferred Alternative is not expected to result in long-term or permanent loss of unprotected species. The portions of the project area that will not be developed will remain available for use by plant and wildlife species. It is likely that species that prefer open areas will benefit from the project.

(3) Will the action adversely impact any species of concern or their habitat?

A review of the IPaC database was coupled with use of the USFWS-directed Michigan Endangered Species Determination Key (DKey), which provided recommended effect determinations for species within the AOI. **Table 1-5 Recommended Effect Determinations from the Michigan Endangered Species Determination Key (DKey)** presents the recommended determinations. The USFWS verification letter is found in **Appendix H – Biological Resources**.

Table 1-5 Recommended Effect Determinations from the Michigan Endangered Species Determination Key (DKey)		
Common Name / Species Name	**Status**	**DKey Determination**
Indiana Bat *(Myotis sodalis)*	Endangered	NLAA*
Northern Long-eared Bat *(Myotis septentrionalis)*	Endangered	NLAA*
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	No effect**
Eastern Massasauga Rattlesnake *(Sistrurus catenatus)*	Threatened	NLAA*
Monarch Butterfly *(Danaus plexippus)*	Candidate	No effect
Whooping Crane *(Grus americana)*	Experimental Population, Non-essential	No effect

*NLAA=May affect, but not likely to adversely affect
Source: Michigan Endangered Species Determination Key (DKey)

Indiana Bat, Northern Long-eared Bat, and Tricolored Bat

The primary direct effect of the proposed project for the Indiana Bat, Northern Long-eared Bat (NLEB), and TCB is the loss of potential habitat, specifically larger trees that may provide potential roost trees and foraging habitat. No known roost trees for the NLEB or the Indiana Bat are present within the AOI. The proposed action would not affect winter habitat needs since there are no known hibernacula present in the AOI for either bat. However, suitable summer bat habitat is present within the AOI as shown in **Appendix H Modeled Bat Habitat and Habitat Assessment Forms** found in **Appendix H – Biological Resources.**

Selective tree removals (i.e., individual trees) will be employed to the greatest extent possible, especially in areas where the obstruction density is low. In wetland areas, trees will be cut and removed but grubbing or other land disturbance will be avoided. In addition, tree removal activities will be performed outside the summer roosting season of the Indiana Bat and NLEB and will only be allowed from October 1 through April 14. Adherence to these avoidance and minimization measures should limit incidental take of Indiana Bats and the NLEB. Therefore, the proposed action may affect but is not likely to adversely affect the Indiana Bat or the NLEB.

While the status of the TCB under the ESA is proposed endangered, Section 7(a)(4) of the ESA requires federal agencies to confer with USFWS if their action will jeopardize the continued existence of a proposed species. Suitable summer TCB habitat is potentially present within the AOI. However, since documented occurrences in Michigan and more specifically Oakland County are rare, it is unlikely that the bat is present. Following the recommendations for tree cutting within specific time frames (October 1 through April 14) for the Indiana Bat and NLEB should limit any potential incidental take of TCB. Therefore, the proposed action will have no effect on the TCB.

Eastern Massasauga Rattlesnake (EMR)

The AOI does not fall within Tier 1 or Tier 2 EMR habitat, and EMR are unlikely to be present. However, the AOI is within the known range of the snake. Potentially suitable habitat is present at the approach end of Runway 8 along an emergent / forested transition zone. Suitable hibernation sites and potentially suitable upland habitat in open areas that could provide nesting sites are present within this transition zone.

Clearing and grubbing activities will occur in upland areas only outside of the active season for the EMR, overlapping with the inactive season for bats. Trees within wetlands, areas potentially utilized by the snakes as hibernation sites during the winter, would be cut and removed with limited ground disturbance. No hydrologic alterations are anticipated to occur during project activities. The proposed project activities will not appreciably change surface water elevations upstream or downstream along the New Hudson No. 1 Drain nor include any significant changes to local hydrology.

Recommended BMPs for projects within the known EMR range will be implemented as follows:

- Use wildlife-safe erosion control materials.
- View the Michigan Department of Natural Resources' "60-Second Snakes: The Eastern Massasauga Rattlesnake" video and/or review the EMR fact sheet.
- Report any EMR observations (or any other threatened or endangered species) during project implementation.

Therefore, the proposed action may affect, but is not likely to adversely affect, the EMR. No additional mitigation is required.

Monarch Butterfly

Little suitable habitat is present within the AOI in part due to the long history of vegetation maintenance activities on the airfield and the presence of scrub-shrub, forested areas not conducive to supporting the Monarch's host plant. Therefore, the proposed project will have no effect on the Monarch Butterfly.

The Monarch Butterfly is a candidate species and is not yet listed or proposed for listing. Consultation with USFWS under Section 7 of the ESA is not required for candidate species. USFWS encourages opportunities to conserve the species if possible.

Rusty Patched Bumble Bee (RPBB)

The RPBB historically is associated with grasslands and tallgrass prairies of the Upper Midwest. This type of habitat provides nesting sites, overwintering sites, and nectar and pollen from an abundant array of forbs.

The AOI is within the historical range of the RPBB, but suitable foraging and nesting habitat is not present within the AOI on Airport property due to the long history of vegetation maintenance activities on the airfield. Therefore, the AOI on Airport property provides limited potential habitat for the RPBB.

The AOI outside of Airport property is covered by shrubby wetland areas often dominated by large areas of invasive species or mature forested areas, habitat that would not appear to provide the nectaring and foraging resources needed to support the RPBB. Therefore, the AOI outside of Airport property provides limited potential habitat for the RPBB.

The RPBB has not been documented within Oakland County since 1965, and it is unlikely to be present. Therefore, the proposed project will have no effect on the RPBB. Section 7 consultation and Incidental Take permits are not needed.

(4) Will the action result in substantial loss, reduction, degradation, disturbance, or fragmentation of native species habitats or populations?

See responses above.

During early agency coordination, U.S. Department of Agriculture (USDA) Wildlife Services recommended the following strategies to mitigate potential impacts to biological resources (see **Appendix A – Early Agency and Tribal Coordination**):

- Avoid planting any vegetation after the trees are removed that may be attractive to wildlife such as clover, wheat, rye, corn, and soybeans. These plantings are known to attract deer and geese at various times of the year which can be hazardous to aviation safety.
- If any standing water is documented upon tree removal, it can be plotted on a map and checked for any modification efforts that may be implemented in the area. This will be dependent on soil type.
- Once the trees are removed, if the area reverts to native vegetation, the recommended grass height is 7 to 14 inches. Consider letting it grow longer if geese and starlings appear to be attracted to it or cutting it shorter if the grass is attracting rodents, coyotes, and raptors.
- Conduct routine wildlife monitoring of the proposed area to evaluate wildlife usage before and after the project is completed. If an increase in wildlife usage is noted, recommended mitigation techniques would include non-lethal harassment and/or lethal removal.
- Wildlife Services can perform a site visit to further discuss habitat management techniques to discourage wildlife usage of the proposed area as well as non-lethal and lethal control strategies to respond to wildlife using the area.
- Wildlife Services would also be able to conduct a mini-wildlife hazard assessment over the course of several days to better evaluate wildlife hazards and their effect on aviation safety. Ideally, visits could be scheduled before and after the tree removal to fully assess wildlife usage in the area. Recommendations could then be developed on wildlife hazard mitigation strategies.

(5) Will the action have adverse impacts on a species' reproduction rates or mortality rate or ability to sustain population levels?

See responses above.

(6) Are there any habitats, classified as critical by the federal or state agency with jurisdiction, impacted by the proposed project?

No critical habitat under USFWS jurisdiction was found in the project area.

(7) Would the proposed project affect species protected under the Migratory Bird Act? (If **Yes**, contact the local ADO).

Bird sighting data was accessed through eBird as part of the evaluation of biological resources within the project area. eBird is an ornithology data depository that includes information, distribution, abundance, habitat use, and trends on birds through a checklist data framework.

A listing of 149 birds seen in the general Airport vicinity over the last five years is included with the Biological Resources Report provided in **Appendix H – Biological Resources**. Bird sighting data from South Hill Road wetlands, located approximately 1.5 miles due east of Runway 8/26 within a similar forested and wetland environment, was accessed and presumed to be a representative sample of the species likely to be found within the general Airport vicinity.

Most of these species are birds commonly found in more developed environments (e.g., Canada Geese, Cardinals, Robins, Starlings, House Finches, House Sparrows, and Crows) or are found in open woodlands and shrubby areas during migration (e.g., Warblers, Northern Flickers, Cedar Waxwings, and Sapsuckers). Several sightings of raptors were reported and included Red-tailed, Broad-winged, and Sharp-shinned Hawks, Cooper's Hawk, Northern Harrier, Osprey, Peregrine Falcons, and American Kestrels, likely finding suitable perches within the area's wooded environment and suitable open spaces to hunt.

The eBird data includes sightings of seven birds listed as Birds of Conservation Concern (BCC) and one sighting of a Bald Eagle (*Haliaeetus leucocephalus*). These sightings were for one or two birds at each reported observation, except for the Rusty Blackbird where six birds were reported in one sighting. The following BCC birds were reported:

- Black Tern (*Chlidonias niger*)
- Cerulean Warbler (*Setophaga cerulea*)
- Chimney Swift (*Chaetura pelagica*)
- Lesser Yellowlegs (*Tringa flavipes*)
- Pectoral Sandpiper (*Calidris melanotos*)
- Rusty Blackbird (*Euphagus carolinus*)
- Short-billed Dowitcher (*Limnodromus griseus*)

In addition, the USFWS IPaC database search identified fourteen bird species protected under the *Migratory Bird Treaty Act* (MBTA) of 1918 or birds protected under the *Bald and Golden Eagle Protection Act* (Eagle Act) of 1940. Project activities will occur during the winter months. The probability of presence for all identified migratory birds with the exception of the Bald Eagle is indicated to be very low to absent. Bald Eagles are active throughout the year. However, adjacent forested and wetland habitat provide refugia for any eagles present during project activities. Based on this information, it is concluded the project will have no impact on species identified as BCC under the MBTA or on Bald Eagles protected under the Eagle Act. For details on migratory birds in the project area and USFWS correspondence, see **Appendix H – Biological Resources**.

If the answer to any of the above is "Yes," consult with the USWFS and appropriate state agencies and provide all correspondence and documentation.

Not applicable.

(C) CLIMATE

(1) Would the proposed project or alternative(s) result in the increase or decrease of emissions of Greenhouse gases (GHG)? If neither, this should be briefly explained and no further analysis is required and proceed to (D) Coastal Resources.

Climate change and greenhouse gases are a growing concern for the aviation industry. The primary source of greenhouse gas emissions at an airport are associated with aircraft operations, and the short-term emissions, from construction equipment activity. Climate change is generally governed by the Clean Air Act (42 U.S.C. §§ 7408, 7521, 7571, 7661, et seq.).

Although there are no federal standards for aviation-related greenhouse gas emissions, it is well established that greenhouse gas emissions affect climate. Where a proposed action would result in an increase in greenhouse gas emissions, the emissions should be assessed either qualitatively or quantitatively. There are no significance thresholds for aviation greenhouse gas emissions. A NEPA analysis to attempt to link specific climate impacts to a proposed action or alternative(s) is not required, given the small percentage of emissions that aviation projects contribute annually.

In terms of relative U.S. contribution, the U.S. General Accounting Office reports that aviation accounts "for about 3% of total U.S. greenhouse gas emissions from human sources, according to USEPA data" compared with other industrial sources such as the country's transportation sector (20 percent) and power generation (41 percent). The International Civil Aviation Organization (ICAO) estimates that greenhouse emissions from aircraft account for roughly three percent of all anthropogenic greenhouse gas emissions globally. Climate change due to greenhouse gas emissions is a global phenomenon, so the affected environment is global.

Based on FAA data, the current and forecasted operations activity at the Airport (13,000 annual operations currently and 18,865 annual operations forecast in 2050) is insignificant when compared to overall national aviation activity. Therefore, assuming that greenhouse gases occur in proportion to the level of activity, the actions necessary as a part of the Preferred Alternative, relative to aviation throughout the United States, is negligible. Climate impacts are not expected from the Preferred Alternative or implementation of the No Action Alternative.

(2) Will the proposed project or alternative(s) result in a net decrease in GHG emissions (as indicated by quantitative data or proxy measures such as reduction in fuel burn, delay, or flight operations)? A brief statement describing the factual basis for this conclusion is sufficient.

No, see response to Item 1 above.

(3) Will the proposed project or alternative(s) result in an increase in GHG emissions? Emissions should be assessed either qualitatively or quantitatively as described in 1050.1F Desk Reference or Aviation Emissions and Air Quality Handbook.

No, see response to Item 1 above.

(D) COASTAL RESOURCES

(1) Would the proposed project occur in a coastal zone, or affect the use of a coastal resource, as defined by your state's Coastal Zone Management Plan (CZMP)? Explain.

The Airport is in Oakland County, Michigan. Oakland County is an inland county and is not included in the Michigan Coastal Management Program (MCMP). The Airport is approximately 30 miles from the Detroit River's location in downtown Detroit, which is the nearest coastal area included in the MCMP; therefore, the proposed project would not occur in or affect the use of a coastal resource as defined by the MCMP.

Impacts to coastal resources as defined by the MCMP are not expected from construction or operation of the Preferred Alternative or implementation of the No Action Alternative.

(2) If **Yes**, is the project consistent with the State's CZMP? (If applicable, attach the sponsor's consistency certification and the state's concurrence of that certification).

Not applicable.

(3) Is the location of the proposed project within the Coastal Barrier Resources System? (If **Yes**, and the project would receive federal funding, coordinate with the FWS and attach record of consultation).

As stated above, Y47 is in Oakland County, which is an inland county located approximately 30 miles from the Detroit River. The Detroit River is the nearest coastal area with units included in the Coastal Barrier Resources System. Therefore, the location of the proposed project is not within the Coastal Barrier Resources System.

Impacts to the Coastal Barrier Resources System are not expected from construction or operation of the Preferred Alternative or implementation of the No Action Alternative.

(E) SECTION 4(f) RESOURCES

(1) Does the proposed project have an impact on any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or an historic site of national, state, or local significance? Specify if the use will be physical (an actual taking of the property) or constructive (i.e., activities, features, or attributes of the Section 4 (f) property are substantially impaired.) If the answer is "No," proceed to (F) Farmlands.

Data from the Michigan DNR, Oakland County, and Lyon Township were reviewed for the presence of public parks, recreation areas, wildlife and waterfowl refuges, historic sites, and schools with playgrounds within and in proximity (one-mile radius) of the proposed project area. **Appendix F – Section 4(f) Resources** provides a map of the resources identified through this analysis.

As previously explained, the Huron Valley Trail runs in a southwest-northeast direction through the project area at the approach end of Runway 26. This 12-foot-wide asphalt recreational trail, developed and operated by the Western Oakland County Trailway Management Council (WOCTMC), is 12.2 miles in length and follows along the former Air-Line Railway, one of Michigan's first railroads. The Huron Valley Trail has been a popular fixture in the New Hudson community for many years. Locally known as the "Rail Trail," it has been described as a strategically important $1.7 million multi-jurisdictional trail that links the fastest growing sections of southeast Michigan with a large extended trail system and a vast array of outstanding parks, recreation, and natural resources.

Several trees located in the trail's right-of-way have been identified as obstructions to the FAR Part 77 approach surface for Runway 26 and would be removed under the Preferred Alternative. In addition, an avigation easement would be required over the trail since a portion of it would pass through the RPZ of the reconfigured runway. There would be no direct taking or constructive use of the trail under the Preferred Alternative, however. No impacts to the trail are expected with the No Action Alternative.

To minimize the effects of tree removal under the Preferred Alternative, the MOA previously executed between Oakland County and the Michigan DNR requires all live trees to be replaced at a ratio of one-to-one. The replacement trees are to be planted within the trail right-of-way but outside of the avigation easement. The WOCTMC is responsible for specifying tree species and planting locations. Oakland County is to ensure that the trail remains open and recreational activities are not limited during tree removal activities. Additionally, the County's contractor will secure a bond prior to tree removal activities to address any unforeseen damage that may occur to the trail during construction. See **Appendix F – Section 4(f) Resources** for a copy of the executed MOA.

Other resources in the vicinity but outside of the project area are as follows:

- James F. Atchison Memorial Park
- Coyote Golf Club
- Gilden Woods Early Care and Preschool
- Red Apple Preschool
- Dolsen Elementary School

No impacts to these resources outside the project area are anticipated from construction or operation of the Preferred Alternative or implementation of the No Action Alternative.

(2) Is a *De Minimis* impact determination recommended? If "yes", please provide; supporting documentation that this impact will not substantially impair or adversely affect the activities, features, or attributes of the Section 4 (f) property; a Section 106 finding of "no adverse effect" if historic properties are involved; any mitigation measures; a letter from the official with jurisdiction concurring with the recommended *de minimis* finding; and proof of public involvement. (See Section 5.3.3 of 1050.1F Desk Reference). If "No," stop development of this form and prepare a standard Environmental Assessment.

Yes. See **Appendix F – Section 4(f) Resources** for a copy of the MOA executed between Oakland County and the Michigan DNR.

(F) FARMLANDS

Does the project involve acquisition of farmland, or use of farmland, that would be converted to non-agricultural use and is protected by the Federal Farmland Protection Policy Act (FPPA)? (If **Yes**, attach record of coordination with the Natural Resources Conservation Service (NRCS), including form AD-1006.)

According to the USDA National Resources Conservation Service (NRCS) Web Soil Survey database, there are areas of "Prime Farmland if Drained" and "Farmland of Local Importance" throughout the project area (see **Appendix I – Farmland**).

Initial coordination with the USDA NRCS office in East Lansing, Michigan regarding the presence of farmlands off the runway ends where tree removals are proposed occurred in June 2022. During this coordination, the NRCS advised that tree removals do not permanently remove farmland from production. Therefore, according

to the NRCS, the tree removals component of the proposed project is exempt from the Federal Farmland Protection Policy Act (FPPA) and there is no need to complete a form AD-1006.

Additional coordination with the USDA NRCS office occurred in February 2024 regarding the farmlands within the portion of the project area between the runway ends where the runway will be shortened, and the parallel taxiway replaced with a taxiway turnaround at the approach end of Runway 8 and a bypass taxiway at the approach end of Runway 26. The NRCS advised during this coordination that a form AD-1006 is not necessary for these proposed improvements because the project area was previously converted to non-farmland.

Documentation of coordination with the NRCS is provided in **Appendix I – Farmland**.

Farmland impacts are not expected from the construction or operation of the Preferred Alternative or implementation of the No Action Alternative.

(G) HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

(1) Would the proposed project involve the use of land that may contain hazardous materials or cause potential contamination from hazardous materials? (If Yes, attach record of consultation with appropriate agencies). Explain.

Hazardous materials are those which can pose a risk to health, safety, and property, including hazardous wastes and hazardous substances as well as other materials. Hazardous materials are regulated under several statutes, including the *Comprehensive Environmental Response, Compensation, and Liability Act* (42 U.S.C. §§ 9601-9675), the *Resource Conservation and Recovery Act* (RCRA) described in 42 U.S.C. §§ 6901-6992k, and the *Toxic Substance Control Act* (15 U.S.C. §§ 2601-2697). Solid waste is discarded material that falls into specific regulatory definitions; solid waste is regulated under RCRA. Pollution prevention refers to efforts to avoid, prevent, or reduce discharges and emissions of pollutants.

In January 2023, a Transaction Screen Assessment (TSA) was conducted for the proposed project area according to American Society for Testing and Materials (ASTM) *Standard Practice for Transaction Screen Assessments E1528-14*. ASTM defines Recognized Environmental Conditions (RECs) as the presence or likely presence of hazardous substances or petroleum products in the airfield reconfiguration or obstruction clearing areas under conditions that are indicative of an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into the structures in the airfield reconfiguration or obstruction clearing areas or into the ground, groundwater, or surface water of the airfield reconfiguration or obstruction clearing areas. The term does not include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of enforcement action if brought to the attention of appropriate governmental agencies. For details of the TSA, see **Appendix J – Hazardous Materials**.

The FAA has not established a significance threshold for hazardous waste, solid waste, or pollution prevention. However, the FAA 1050.1F *Desk Reference* offers guidance to consider whether the proposed project could:

- Violate any laws or regulation regarding hazardous waste
- Involve a contaminated site, or if actions within a contaminated site are appropriately mitigated
- Produce an appreciable amount of hazardous waste

- Generate a different quantity or type of solid waste that could exceed local capacity or use different methods of collection and disposal.

The TSA report concluded that the assessment revealed no evidence of RECs in connection with the airfield reconfiguration or obstruction clearing areas.

(2) Would the operation and/or construction of the project generate significant amounts of solid waste? If **Yes**, are local disposal facilities capable of handling the additional volumes of waste resulting from the project? Explain.

The Preferred Alternative may produce minor amounts of solid waste during construction through soil excavation, pavement removal, pavement construction, and tree removal activities. Solid waste generated during construction would be managed in accordance with state and local regulations and BMPs. In the case of tree removals, tree debris will be removed and preferably sold for firewood or offered to parcel owners, as appropriate. Upon completion, the potential for long-term generation of significant levels of solid waste is not expected.

The contractor will be required to have a Spill Prevention, Control, and Countermeasure (SPCC) plan in place to be implemented if a spill occurs during construction or tree removal activities. An approved erosion control plan is also required to provide a collection area for non-recyclable waste. Any waste generated will be disposed of in compliance with all federal, state, and local regulations.

(3) Will the project produce an appreciable different quantity or type of hazardous waste? Will there be any potential impacts that could adversely affect human health or the environment?

The proposed project is not anticipated to produce any impactful amounts of hazardous waste during airfield reconfiguration or tree removals. Any hazardous waste generated during the project will be managed and disposed of in accordance with applicable regulations and BMPs.

(H) HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

(1) Describe any impact the proposed project might have on any properties listed in, or eligible for inclusion in the National Register of Historic Places. (Include a record of your consultation and response with the State or Tribal Historic Preservation Officer (S/THPO)).

Historical, architectural, archeological, and cultural resources include a variety of sites, properties, and facilities related to activities and societal and cultural institutions. Such resources express past and present elements of human culture and are important to a community. Section 106 of the National Historic Preservation Act requires federal agencies or their representatives to consider the effects their actions may have on these properties.

To evaluate potential historic or archeological resources in the project area, a Section 106 report (found in **Appendix K – Section 106 Report**) was completed for two Areas of Potential Effect (APE): the Built-Environment APE and the Archeology APE.

The Built-Environment APE is approximately 205 acres, to include the area proposed for Runway 8/26 reconstruction and the areas where obstructions have been identified for removal at the approach ends of Runway 8/26. The APE includes both full and partial parcel boundaries of properties where obstructions have been identified for removal. The full parcel boundaries of these properties are included in the APE, along with partial parcels of the Huron Valley Trail, and areas of Airport property that include the proposed runway reconstruction work and tree removals.

The Archeology APE is approximately 53 acres, including the area proposed for Runway 8/26 reconstruction (17.2 acres) and the areas where obstructions have been identified for removal in the runway approaches 22 acres).

Architectural historians requested a records search from the Michigan State Historic Preservation Office (SHPO) to confirm whether any built resources within the project area had been previously surveyed. Additionally, the historians searched locally designated resources to identify potential built-environment resources in Lyon Township and Oakland County. Lastly, the historians conducted a site visit in September 2022 to identify any potential built-environment resources within the APE.

An Archeological Reconnaissance Survey of the areas proposed for tree clearing in the approaches of Runway 8/26 occurred in September 2021 to identify any previously recorded archeological sites and to visually inspect the APE for signs of unrecorded archeological sites. A review did not indicate the presence of previously identified archeological sites within the project area. In addition, the visual reconnaissance did not identify any surface indications of archeological sites within the project area.

In November 2023, a Phase I Archeology Survey involving visual inspection and subsurface testing was conducted for the portion of the project area involving the runway reconstruction. No archeological resources were identified.

The Section 106 Report summarizing these findings was submitted to the SHPO for review and concurrence. SHPO subsequently issued a “No historic properties affected” determination. The SHPO letter is included in **Appendix K – Section 106 Report**.

Historical, architectural, archeological, and cultural resources impacts are not expected from the construction or operation of the Preferred Alternative or implementation of the No Action Alternative. However, if historical, architectural, archeological, or cultural resources are encountered during construction or tree removal activities, work must stop, and the SHPO must be notified immediately.

(2) Describe any impacts to archeological resources as a result of the proposed project. (Include a record of consultation with persons or organizations with relevant expertise, including the S/THPO, if applicable).

The archeological investigations did not identify any archeological resources within the project area. See **Appendix K – Section 106 Report** for details of the archeological surveys conducted for the project area.

(I) LAND USE

(1) Would the proposed project result in other (besides noise) impacts that have land use ramifications, such as disruption of communities, relocation of residences or businesses, or impact natural resource areas? Explain.

The Preferred Alternative is consistent with the existing zoning and land uses of the surrounding area, as shown in **Appendix D – Land Use and Zoning**. The proposed project would not alter or otherwise impact any political boundaries or cause a change in Oakland County jurisdiction or ownership of Y47. The airfield reconfiguration portion of the project area is located on existing Airport property. Although the obstruction removal portions of the project area extend off existing Airport property, these areas involve tree removals only. Therefore, existing land use patterns will remain unchanged.

The Preferred Alternative is not expected to increase congestion, cause degradation of level of service, or permanently close any surface roads within, or adjacent to, the project area. There would be no relocations of residents or businesses or impacts to natural resource areas. Traffic from construction vehicles would be managed to avoid or minimize any impacts to local roads by defining haul routes and by scheduling the arrival and departure times of construction traffic so that normal traffic patterns are not interrupted. Any potential impacts during airfield reconstruction or tree removal activities would be temporary in nature.

Outside of the project area, land use would remain the same; therefore, land use compatibility would remain unchanged with the Preferred Alternative, and no adverse impacts are anticipated. No impacts or changes to land use are expected with the No Action Alternative.

(2) Would the proposed project be located near or create a wildlife hazard as defined in FAA Advisory Circular 150/5200-33, "Wildlife Hazards On and Near Airports"? Explain.

The Preferred Alternative would not increase wildlife attractants or introduce new wildlife hazards to aircraft. It is anticipated that the Preferred Alternative may decrease wildlife attractants by removing existing wildlife habitat and trees.

(2) Include documentation to support sponsor's assurance under 49 U.S.C. § 47107 (a) (10), of the 1982 Airport Act, that appropriate actions will be taken, to the extent reasonable, to restrict land use to purposes compatible with normal airport operations.

The Airport has committed to restrict non-compatible land uses through the ALP process and land use and zoning controls at the township and county level.

(J) NATURAL RESOURCES AND ENERGY SUPPLY

What effect would the project have on natural resource and energy consumption? (Attach record of consultations with local public utilities or suppliers if appropriate)

The proposed project would slightly increase the use of natural resources and energy supplies during airfield reconstruction and tree removal activities. Construction of the proposed project would result in temporary increases in energy demand and would require the use of construction materials (e.g., aggregate, fill, sub-base materials, and asphalt). Additionally, trucks and construction equipment would consume fuels as needed

for construction and tree removal purposes. BMPs to reduce energy consumption during construction and tree removals will be employed, where applicable. To reduce energy consumption associated with the temporary use of construction equipment and vehicles for the Preferred Alternative, construction equipment should be in good working order to ensure the most efficient use of fuel. All vehicles and equipment should be checked for leaks and repaired immediately.

Operation of the proposed project would result in reduced usage of consumable natural resources (e.g., fuel and electricity) for several reasons. First, aircraft would be required to taxi shorter distances because of the reduced runway length. Also, because the runway will be shortened and the parallel taxiway will be removed, there will be fewer runway and taxiway lights needed. Finally, as part of the runway reconstruction project, new light-emitting diode (LED) lights will replace existing runway lights, LED Precision Approach Path Indicators (PAPIs) will replace the existing VASIs, and LED Runway End Identifier Lights (REILs) will be installed at both runway ends.

Based on the information presented above, natural resources and energy supply impacts are not expected from the construction or operation of the Preferred Alternative or implementation of the No Action Alternative.

(K) NOISE AND NOISE-COMPATIBLE LAND USE

Will the project increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe? (Use AEM as a screening tool and AEDT 2b as appropriate. See FAA Order 1050.1F Desk Reference, Chapter 11, or FAA Order 1050.1F, Appendix B, for further guidance). Please provide all information used to reach your conclusion. If yes, contact your local ADO.

Per FAA Order 1050.1F – *Environmental Impacts: Policies and Procedures*, and the *Environmental Desk Reference for Airport Actions*, any airport that exceeds 90,000 annual piston-powered aircraft operations or 700 annual jet-powered aircraft operations, 10 or more daily helicopter operations, or any project that includes the construction of a new airport, a runway relocation, runway strengthening, or a major runway expansion requires a noise analysis. A noise analysis is performed for actions which result in a general overall increase in daily aircraft operations or the use of larger/noisier aircraft. The FAA's noise analysis primarily focuses on how proposed airport actions would change the cumulative noise exposure of individuals to aircraft noise in areas surrounding the airport.

According to the FAA 2023 Terminal Area Forecast (TAF), Y47's total operations are forecast to remain below 19,000 annual operations through 2050, which is below 90,000 operations. Therefore, the propeller aircraft activity levels are below the stated threshold for a noise analysis.

Y47's FAA Form 5010-1, *Airport Master Record* indicates there are two based helicopters at the Airport, which means it is unlikely the threshold of 10 daily helicopter operations for a noise analysis will be exceeded.

According to the FAA's Traffic Flow Management System Counts (TFMSC) database, there were no Instrument Flight Rules (IFR) jet operations at Y47 in 2020, 2021, 2022, or 2023. As such, the threshold of 700 annual jet operations has not been exceeded at the Airport.

Lastly, the proposed project does not involve constructing a new airport, runway relocation, runway strengthening, or a major runway expansion. The proposed project will reduce the length of the Airport's runway thus causing existing noise to be closer to the Airport environment. Therefore, due to the nature of the proposed project, a noise analysis was not completed.

Temporary noise will occur due to operations of heavy equipment and construction vehicles during reconfiguration of the airfield and tree removal activities. Construction staging areas are not allowed near noise sensitive land uses.

Noise impacts are not expected from construction or operation of the Preferred Alternative or implementation of the No Action Alternative.

(L) SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, and CHILDREN'S HEALTH and SAFETY RISKS

(1) Would the project cause an alteration in surface traffic patterns, or cause a noticeable increase in surface traffic congestion or decrease in Level of Service?

The proposed project does not involve the relocation or closure of any existing roads. There would be a slight increase in surface traffic along surrounding roads (e.g., Pontiac Trail, Milford Road, Travis Road, and Martindale Road) during construction and tree removal activities due to construction vehicles accessing the project area. Traffic from construction vehicles would be managed to avoid and minimize any impacts to local roads by defining haul routes and by scheduling the arrival and departure times of construction traffic so that normal traffic patterns are not interrupted. Any potential construction impacts to surface transportation would be temporary in nature.

Neither the Preferred Alternative nor the No Action Alternative are expected to increase congestion, cause degradation of level of service, or alter surface traffic patterns within, or adjacent to, the project area.

(2) Would the project cause induced, or secondary, socioeconomic impacts to surrounding communities, such as changes to business and economic activity in a community; impact public service demands; induce shifts in population movement and growth, etc.?

The proposed project involves a shift and shortening of Runway 8/26 as well as tree removals in the runway approaches and on the south side of the runway. Therefore, given the nature of the project, the Preferred Alternative would not cause changes to business and economic activity in the surrounding communities, impact public service demands, or induce shifts in population movement and growth.

Implementation of the No Action Alternative would have no induced, or secondary, socioeconomic impacts to surrounding communities.

(3) Would the project have a disproportionate impact on minority and/or low-income communities? Consider human health, social, economic, and environmental issues in your evaluation. Refer to DOT Order 5610.2(a) which provides the definition for the types of adverse impacts that should be considered when assessing impacts to environmental justice populations.

The purpose of Executive Order 12898 - *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, is to identify, address, and avoid disproportionately high and adverse human or environmental effects on minority and/or low-income populations. Environmental justice is defined as the right to a safe, healthy, productive, and sustainable environment for all, where "environment" is considered in its totality to include the ecological, physical, social, political, aesthetic, and economic environments.

The FAA 1050.1F, *Desk Reference* also suggests the following factors as an example of the magnitude to consider when analyzing typical environmental justice impacts. The factors to consider that may be applicable to environmental justice include, but are not limited to, a situation in which the proposed action or alternative(s) would have the potential to lead to a disproportionately high and adverse impact to an environmental justice population, i.e., a low-income or minority population, due to:

- Significant impacts in other environmental impact categories; or
- Impacts on the physical or natural environment that affect an environmental justice population in a way that the FAA determines is unique to the environmental justice population and significant to that population.

In compliance with Executive Order 12898, U.S. Census Bureau data was reviewed in the USEPA's Environmental Justice Screening and Mapping Tool (EJScreen). The EJScreen showed that areas directly surrounding the project area do not have high proportions of minority populations. According to EJScreen, 20 percent of the population within a one-mile radius of the Airport is comprised of people of color, who are assumed to be minorities. In addition, only six percent of the population is considered low income (**Appendix L – EJScreen Community Report**). Based on this data, minority or low-income populations will not be disproportionately impacted by the proposed action.

Environmental justice impacts from construction or operation of the Preferred Alternative or implementation of the No Action Alternative are not anticipated.

(4) Would the project have the potential to lead to a disproportionate health or safety risk to children?

In most cases, the significance of impacts to children's environmental health and safety is dependent on the significance of impacts in other environmental categories. Under the Preferred Alternative, there are no significant impacts to air quality, noise, or other resource categories that may influence the health of the surrounding population, including children. Areas affected by the Preferred Alternative do not include schools or other facilities that would otherwise be primarily accessed by children. In addition, reconfiguration of the airfield will occur entirely on Airport property. Although some tree removals are proposed on private property, the EJScreen data shows that 29 percent of the residents within a one-mile radius of Y47 are under the age of 18 (**Appendix L – EJScreen Community Report**). Therefore, no disproportionate health or safety risks to children are expected.

Children's Environmental Health and Safety Risks impacts from construction or operation of the Preferred Alternative or implementation of the No Action Alternative are not anticipated.

If the answer is "YES" to any of the above, please explain the nature and degree of the impact. Also provide a description of mitigation measures which would be considered to reduce any adverse impacts.

See responses above.

(M) VISUAL EFFECTS INCLUDING LIGHT EMISSIONS

(1) Would the project have the potential to create annoyance or interfere with normal activities from light emissions for nearby residents?

Airport lighting is required for security, obstruction identification, and navigation. The essential lighting systems required to safely operate an airport and its components can contribute to light emissions. When projects introduce new or relocated existing airport lighting facilities that may affect residential or other light-sensitive areas in proximity to an airport, an analysis of these impacts is necessary. FAA guidance states that the level of light emissions considered sufficient to warrant a special study is unusual, for example, occurring when a high-intensity strobe would be shining into a residential area or when apron, parking, or streetlights create a visual impact to pilots.

The proposed project will not introduce new lighting facilities that may affect residential or other light-sensitive areas in proximity of Y47. Although trees will be removed in the runway approaches that may function as a visual shield for residential properties, the Preferred Alternative proposes to reduce the length of Runway 8/26 by removing pavement at both runway ends, which would move runway lights farther from light-sensitive areas. Trees and shrubs will also be cleared along the south side of the runway between the RSA and ROFA, but a buffer of vegetation will remain between the runway and residences south of the Airport.

Visual Effects (including light emissions) impacts from the construction or operation of the Preferred Alternative or implementation of the No Action Alternative are not anticipated. No mitigation is proposed.

(2) Would the project have the potential to affect the visual character of nearby areas due to light emissions?

A project can also have impacts on the visual resources and visual character of the surrounding area. Visual resources and visual character impacts are typically related to a decrease in the aesthetic quality of an area resulting from development, construction, or demolition. FAA guidance states that an analysis of visual impacts is necessary when the proposed action would affect, obstruct, substantially alter, or remove visual resources including buildings, historic sites, or other landscape features, such as topography, water bodies, or vegetation, which are visually important or have unique characteristics.

Although the proposed project will remove trees, impacts on resources that are visually important or have unique characteristics are not anticipated.

(3) Would the project have the potential to block or obstruct views of visual resources?

The proposed project involves the reconstruction of Runway 8/26, removal of unused pavement at both runway ends, removal of the parallel taxiway, and removal of tree obstructions. Therefore, the project will not result in the blocking or obstructing of visual resources.

Based on the information above, visual effects (including light emissions) impacts from construction or operation of the Preferred Alternative or implementation of the No Action Alternative are not anticipated. No mitigation is proposed.

If the answer is "YES" to any of the above, please explain the nature and degree of the impact using graphic materials. Also provide a description of mitigation measures which would be considered to reduce any adverse impacts.

Not applicable.

(N) WATER RESOURCES (INCLUDING WETLANDS, FLOODPLAINS, SURFACE WATERS, GROUNDWATER, AND WILD AND SCENIC RIVERS)

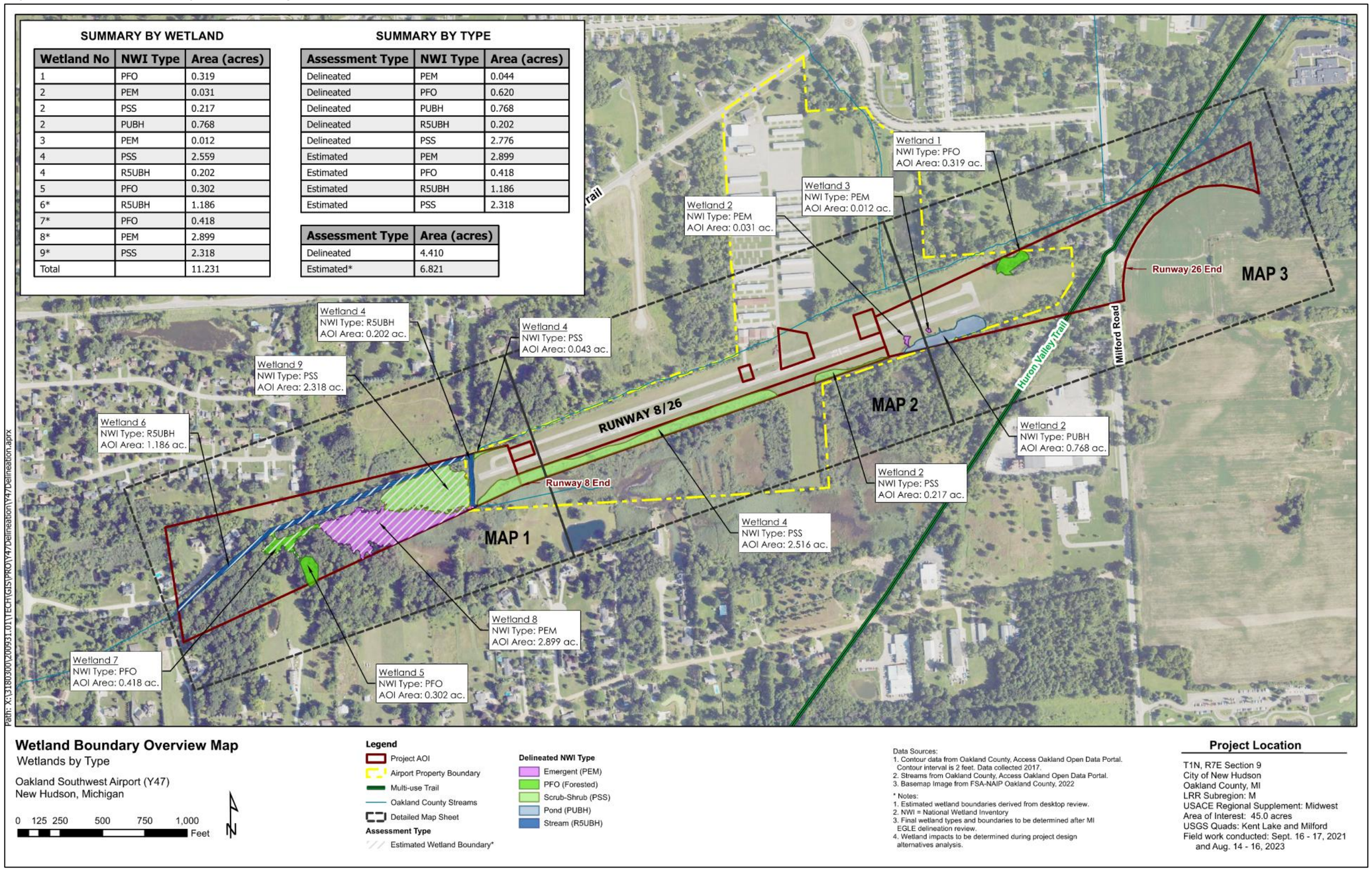
(1) WETLANDS

(a) Does the proposed project involve federal or state regulated wetlands or non-jurisdictional wetlands? (Contact USFWS or appropriate state natural resource agencies if protected resources are affected) (Wetlands must be delineated using methods in the US Army Corps of Engineers 1987 Wetland Delineation Manual. Delineations must be performed by a person certified in wetlands delineation Document coordination with the resource agencies).

To determine the locations and limits of area wetlands, appraise their types and functions, assess their regulatory status, and evaluate potential impacts from the proposed project, a qualified wetland biologist conducted a United States Army Corps of Engineers (USACE)-compliant wetland delineation within a 45-acre Area of Interest (AOI) in September 2021 and August 2023. The field methods used conform to the Routine Onsite Method of the *1987 U.S. Army Corps of Engineers' (USACE) Wetland Delineation Manual*, as enhanced by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*. Numerous private parcels included in the AOI were not field reviewed due to refusal by property owners to allow access. On those parcels where permission was not provided, background data sources including two-foot contours, soils, NWI mapping, historic aerial photos, field conditions observed from accessible adjacent parcels, and delineator experience were used to identify and estimate wetland boundaries. The full wetland delineation report is provided in **Appendix M – Wetlands**.

A total of 11.231 acres were identified within the AOI. Five wetlands encompassing 4.410 acres were delineated within the AOI with access permission, with a portion of one of these wetlands composed of a drainage ditch located at the approach end of Runway 8 and along the southern edge of the existing RSA. On inaccessible private parcels within the AOI, three wetlands and one constructed drain (New Hudson No. 1 Drain) encompassing 6.821 acres were estimated based on background data sources. **Figure 1.7 Wetland Boundary Overview Map** shows the delineated and estimated wetlands within the AOI. **Table 1-6 Summary of Delineated and Estimated Wetlands within the Area of Interest** summarizes the delineated and estimated wetlands.

Figure 1.7 Wetland Boundary Overview Map



Source: *Wetland Delineation Report, Environmental Assessment for Runway 8/26 Shift and Shortening and Approach Clearing, Oakland Southwest Airport, New Hudson, Michigan*, prepared by Mead & Hunt, Inc., January 2024

Table 1-6 Summary of Delineated and Estimated Wetlands within the Area of Interest				
Wetland ID	**Cowardin Type**	**Dominant Vegetation**	**Total Area within AOI (Acres)**	**Total Area within AOI (Sq. Ft.)**
1	PFO	*Populus deltoides* (FAC)*; Rhamnus cathartica* (FAC)*; Toxicodendron radicans* (FAC)*; Vitis riparia* (FACW)	0.319	13,876.13
2	PUBH/PSS/PEM	*Typha angustifolia* (OBL)*; Vitis riparia* (FACW)*; Rhamnus cathartica* (FAC)*; Juglans nigra* (FACU)*; Cornus amomum* (FACW)*; Frangula alnus* (FACW)*; Solidago canidensis* (FACU)*; S. gigantea* (FACW)*; Carex lacustris* (OBL)*; Eleocharis obtusa* (OBL)	1.016	44,259.64
3	PEM	*Eleocharis obtusa* (OBL)	0.012	533.98
4	R5UBH/PSS	*Frangula alnus* (FACW)*; Thalictrum dasycarpum* (FACW)*; Euthamia graminifolia* (FACW)*; Cornus amomum* (FACW)*; Cornus racemosa* (FAC)*; Solidago canadensis* (FACU)*; Phalaris arundinacea* (FACW)	2.761	120,276.05
5	PFO	*Acer saccharinum* (FACW)*; Fraxinus pennsylvanica* (FACW)	0.302	13,136.04
		Total Delineated	**4.410**	**192,081.84**
6	R5UBH	*Acer saccharinum* (FACW); *Fraxinus pennsylvanica* (FACW); *Populus deltoides* (FAC)	1.186	51,666.95

Table 1-6 Summary of Delineated and Estimated Wetlands within the Area of Interest				
7	PFO	*Acer saccharinum* (FACW); *Fraxinus pennsylvanica* (FACW); *Populus deltoides* (FAC)	0.418	18,214.28
8	PEM	*Phagmites australis* (FACW)	2.899	126,279.10
9	PSS	*Phagmites australis* (FACW); *Frangula alnus* (FACW); *Rhamnus cathartica* (FAC)	2.318	100,970.72
		Total Estimated	**6.821**	**297,131.05**
		Grand Total	**11.231**	**489,212.89**

Source: *Wetland Delineation Report, Environmental Assessment for Runway 8/26 Shift and Shortening and Approach Clearing, Oakland Southwest Airport (Y47), New Hudson, Michigan*, prepared by Mead & Hunt, Inc., January 2024

Of the 11.231 acres of wetlands within the project area, a total of 4.583 acres would be impacted by the implementation of the Preferred Alternative. Wetlands that would be impacted in the runway approaches are classified as forested wetlands (total of 1.039 acres). Trees within these forested wetlands will be cleared without any ground disturbance. Consultation with EGLE indicates that cutting trees in any forested wetland is considered an impact to that wetland even if there is no ground disturbance. Wetlands along the south side of the runway (total of 3.544 acres) are classified as non-forested wetlands and would be cleared, grubbed, filled, and graded to accommodate the RSA and ROFA for the reconstructed runway.

(b) If yes, does the project qualify for an Army Corps of Engineers General permit? (Document coordination with the Corps).

A Part 303 Wetland Protection Permit from the EGLE is anticipated. Final authority over permitting requirements is the responsibility of EGLE.

(c) If there are wetlands impacts, are there feasible mitigation alternatives? Explain.

A total of 6.355 acres of wetland mitigation is expected including mitigation of 5.316 acres for non-forested wetlands (1:1.5 ratio) and 1.039 acres for the forested wetlands (1:1 ratio). Given that the forested wetland is not permanently removed but converted to a different type, EGLE has reduced their mitigation requirements to a ratio of 1:1 (rather than a 2:1 ratio for typical forested wetland impacts). Mitigation will include the purchase of wetland credits at an EGLE-approved mitigation bank within the same watershed. Final mitigation requirements are at the discretion of EGLE and will be incorporated into the anticipated wetland permit.

During final design of the Preferred Alternative, modifications will be considered to lessen the impacts on regulated wetlands. All delineated wetlands will be shown on construction plans to protect them from any possible direct or indirect impacts and construction documents will require avoidance and erosion control measures.

(d) If there are wetlands impacts, describe the measures to be taken to comply with Executive Order 11990, Protection of Wetlands.

Wetland mitigation required by EGLE will comply with Executive Order 11990.

(2) FLOODPLAINS

(a) Would the proposed project be located in, or would it encroach upon, any 100-year floodplains, as designated by the Federal Emergency Management Agency (FEMA)?

Early agency correspondence from FEMA indicated that there appeared to be mapped floodplain around Runway 8/26 (see **Appendix A – Early Agency and Tribal Coordination**).

FEMA Flood Insurance Rate Maps (FIRMs) were reviewed for the project area to evaluate potential floodplain impacts. FIRMs indicate that regulated floodplains are found in the project area. These floodplains are associated with New Hudson No. 1 Drain and a drainage ditch that runs along the southern edge of the existing RSA and around the Runway 8 threshold. No floodplain impacts are anticipated at the approach end of Runway 26. The floodplain maps are presented in **Figure 1.8 Floodplain Map – Approach End of Runway 8** and **Figure 1.9 Floodplain Map – Approach End of Runway 26**.

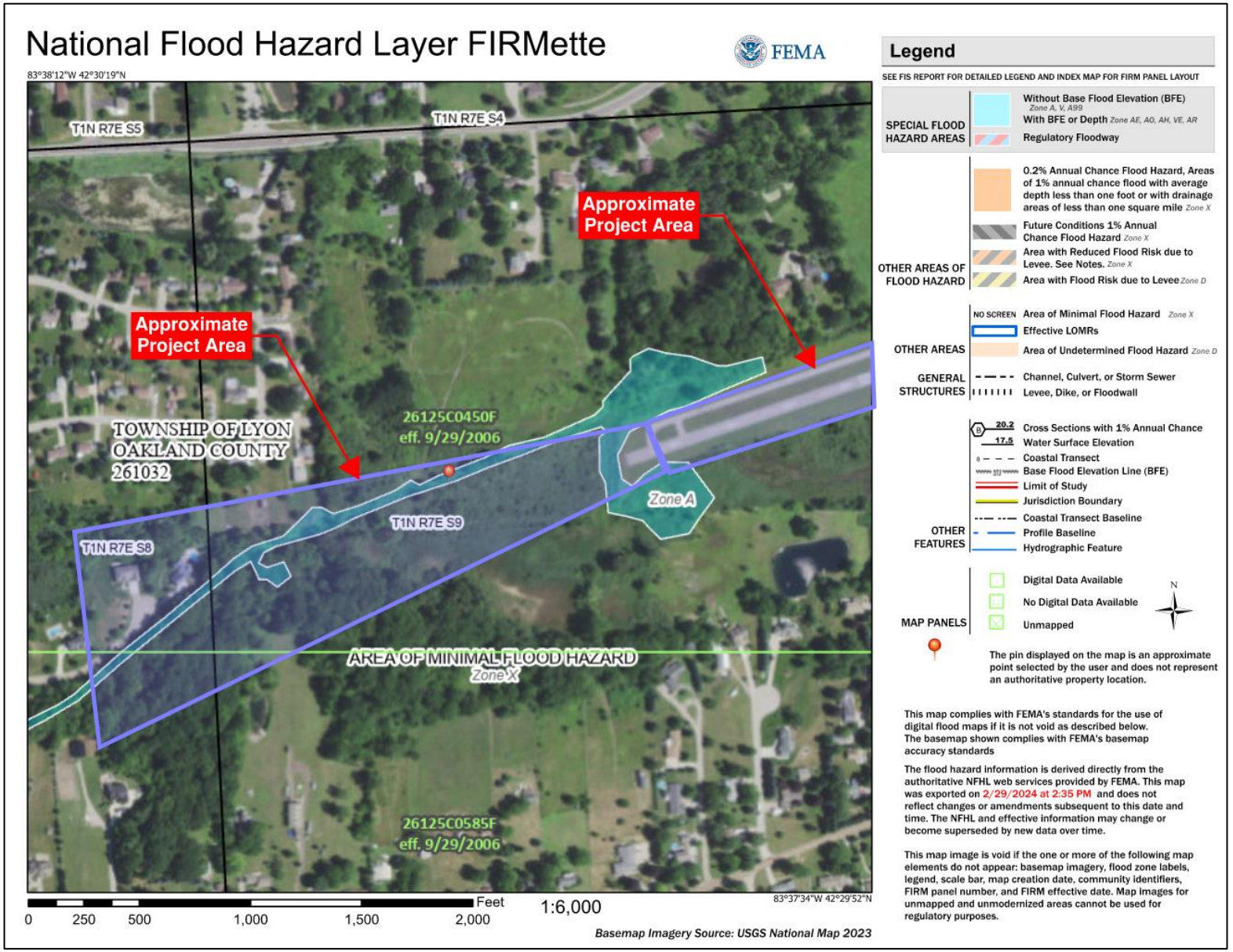
(b) If Yes, would the project cause notable adverse impacts on natural and beneficial floodplain values as defined in Paragraph 4.k of DOT Order 5620.2, *Floodplain Management and Protection*?

The Preferred Alternative may impact the floodplains at the approach end of Runway 8 due to grubbing and grading activities, although minimal grading or filling work is proposed. A determination of the amount of grading and filling work required will be made during final design. An EGLE Part 31 Floodplain Permit is anticipated as well as a compensating cut of material within the limits of the same floodplain in an area not classified as a protected resource. Final mitigation requirements are at the discretion of EGLE.

(c) If Yes, attach the corresponding FEMA Flood Insurance Rate Map (FIRM) and describe the measures to be taken to comply with Executive Order 11988, including the public notice requirements.

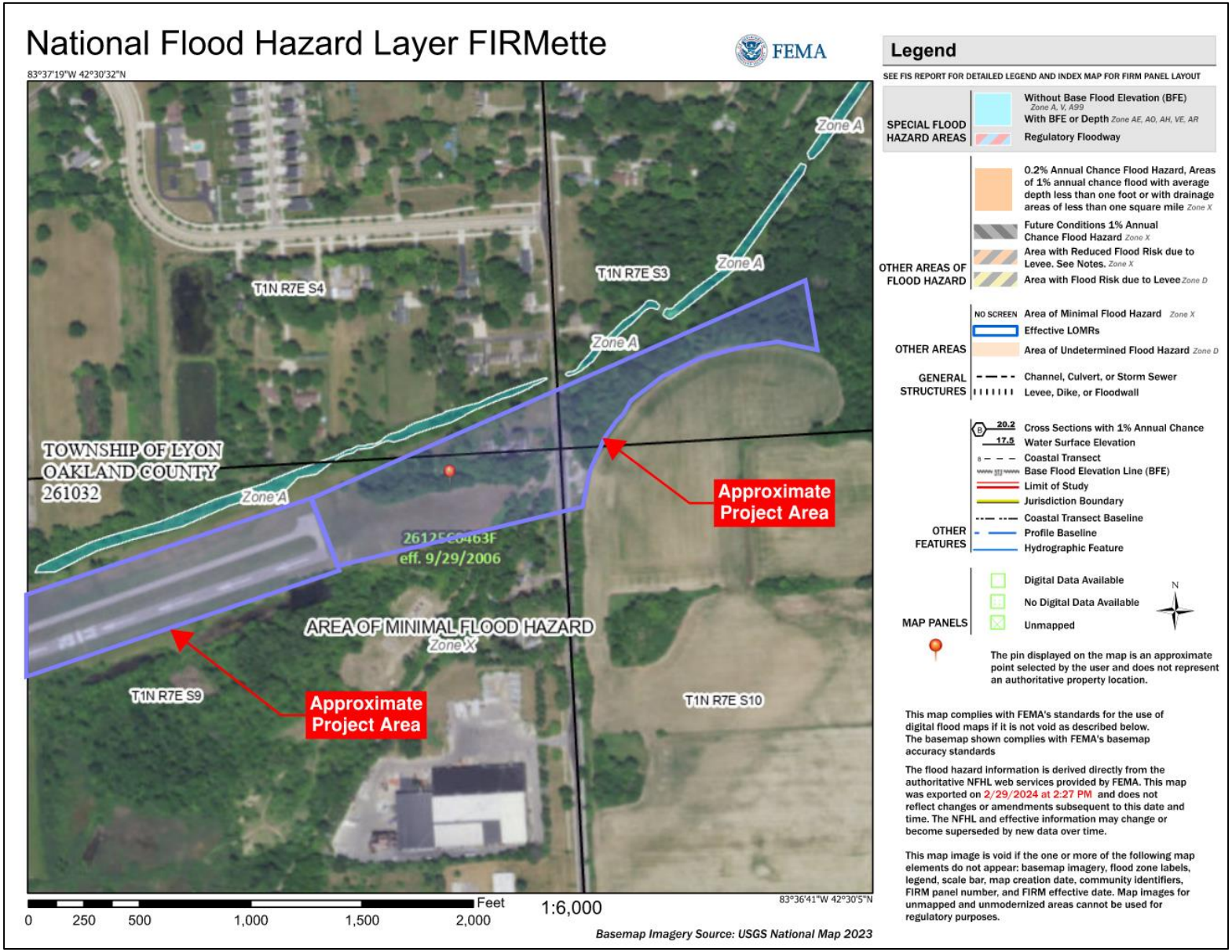
Not applicable.

Figure 1.8 Floodplain Map – Approach End of Runway 8



Source: Federal Emergency Management Agency (FEMA)

Figure 1.9 Floodplain Map – Approach End of Runway 26



Source: FEMA

(3) SURFACE WATERS

(a) Would the project impact surface waters such that water quality standards set by Federal, state, local, or tribal regulatory agencies would be exceeded or would the project have the potential to contaminate a public drinking water supply such that public health may be adversely affected?

Wetland 6 is a portion of the New Hudson No. 1 Drain, measuring approximately 2,039 feet long (see **Figure 1.7 Wetland Boundary Overview Map**). The constructed drain is steep sided, and the banks are covered by mature trees consisting of green ash, cottonwood, and silver maple. The width of water flow is approximately 20 feet and top of bank width is approximately 35 – 45 feet. The ditch profile is fairly consistent throughout the portion of the project area at the approach end of Runway 8. The drain runs along the entire length of the north side of the runway and remains outside of the portions of the project area involving runway reconstruction and tree removals at the approach end of Runway 26. The USEPA classifies the New Hudson No. 1 Drain as an impaired stream.

In addition, Wetland 4 is located at the approach end of Runway 8 and along the southern edge of the existing RSA. This wetland is partly composed of a drainage ditch that appears to drain north and intersects the New Hudson No. 1 Drain. The USEPA also classifies this ditch as an impaired stream.

Previously described site visits conducted to delineate wetlands found no other regulated waters within the project area.

The Preferred Alternative will reduce impervious surface areas and likely decrease stormwater runoff due to the proposed removal of runway and taxiway pavement for reconfiguration of the airfield. Estimates indicate a net decrease in impervious surfaces of 1.10 acres (48,200 square feet). However, soil erosion is a source of concern due to potential impacts to surface waters from runway reconstruction and tree removals. Since the Airport site is generally flat, a high risk of soil erosion during excavation and ground disturbing activities is not expected. However, some amount of erosion may occur. The following list of BMPs represents common erosion control measures that should be considered during construction and obstruction removal and applied where applicable:

- Sediment traps
- Temporary cement ponds
- Temporary grassing of disturbed areas
- Vegetation cover replaced as soon as possible
- Erosion mats and mulch
- Silt fencing and drainage check dams
- Settling basins for stormwater treatment

All excavated soils and staging areas for construction equipment will be placed in non-sensitive upland areas with all disturbed areas replanted as soon as possible to reduce the likelihood of erosion.

Mitigation measures prepared under an erosion control plan, in accordance with FAA AC 150/5370-10H, *Standard Specifications for Construction of Airports*, will help minimize long-term impacts to area water quality and to the existing drainage system.

Part 91, Michigan Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, requires the Airport to acquire a soil erosion and sedimentation control permit from the Oakland County Water Resources Commissioner's Office.

The Airport is also required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from EGLE for construction activity disturbing one acre or more of soil. Permittees are required to control runoff from construction sites and develop a construction Stormwater Pollution Prevention Plan (SWPPP) that includes erosion prevention and sediment control BMPs.

Surface water impacts from the construction or operation of the Preferred Alternative or implementation of the No Action Alternative are not anticipated.

(b) Would the water quality impacts associated with the project cause concerns for applicable permitting agencies or require mitigation in order to obtain a permit?

See above. Surface water impacts are not anticipated.

If the answer to any of the above questions is "Yes," consult with the USEPA or other appropriate Federal and/or state regulatory and permitting agencies and provide all agency correspondence.

Not applicable.

(4) GROUNDWATER

(a) Would the project impact groundwater such that water quality standards set by Federal, state, local, or tribal regulatory agencies would be exceeded, or would the project have the potential to contaminate an aquifer used for public water supply such that public health may be adversely affected?

In evaluating groundwater resources in the project area, the following databases were reviewed:

- USEPA Sole Source Aquifer for Drinking Water Database and Mapping Tool
- EGLE Open Data Geographic Information System (GIS) dataset for water wells in south central and southeastern Michigan
- EGLE Open Data GIS dataset for wellhead protection areas in Michigan

The USEPA maintains a database of groundwater sources that serve as the sole source of drinking water for a population. According to this database, the proposed project is not within a Sole Source Aquifer for Drinking Water.

The EGLE maintains several water wells and wellhead protection areas databases in Michigan. According to EGLE's Open Data GIS dataset for water wells, a few drinking water wells are within or in close proximity to the obstruction removal portions of the project area (see **Appendix N – Groundwater**). However, there will be no direct impacts to these wells. The wells will be flagged in the field during tree removals and will be marked on construction plans to ensure they are avoided. If it is determined during final design that there will be impacts

to any wells during project implementation, the wells will be relocated in accordance with state and local regulations.

Wellhead protection areas represent the land surface area that contributes groundwater to wells serving public water supply systems throughout Michigan. Wellhead protection areas define a landscape in which management strategies are employed to protect public water supply from groundwater contamination. According to EGLE's Open Data GIS dataset for wellhead protection areas, the project area is not located within a wellhead protection area (see **Appendix N – Groundwater**).

Groundwater impacts from the construction or operation of the Preferred Alternative or implementation of the No Action Alternative are not anticipated.

(b) Would the groundwater impacts associated with the project cause concerns for applicable permitting agencies or require mitigation in order to obtain a permit?

See above. The proposed project is not anticipated to have any impacts on groundwater.

(c) Is the project to be located over an EPA-designated Sole Source Aquifer?

As stated above, the proposed project is not located over a USEPA-designated sole source aquifer.

If the answer to any of the above questions is "Yes," consult with the USEPA or other appropriate Federal and/or state regulatory and permitting agencies and provide all agency correspondence as an attachment to this form.

Not applicable.

(5) WILD AND SCENIC RIVERS

Would the proposed project affect a river segment that is listed in the Wild and Scenic River System or Nationwide River Inventory (NRI)? (If Yes, coordinate with the jurisdictional agency and attach record of consultation).

Wild and Scenic Rivers are those resources that have extraordinary scenic, recreational, geologic, ecosystem, historic, or cultural value as defined in the *Wild and Scenic Rivers Act*. The *Wild and Scenic Rivers Act* (16 U.S.C. §§ 1271-1287) creates a national system intended to preserve certain rivers in a free-flowing condition for current and future enjoyment. The national system is administered by the Bureau of Land Management (BLM), the National Park Service (NPS), the USFWS, and the United States Forest Service (USFS). The land surrounding a protected river or river segment determines the agency that administers the national system.

The Nationwide Rivers Inventory (NRI) is a list maintained by the NPS that identifies river segments that possess remarkable natural or cultural values and are of more than local or regional importance. All federal agencies are required to avoid or mitigate impacts to NRI segments.

There are no Wild and Scenic Rivers located at or within proximity of the project area. The nearest NRI river (Huron River) is located approximately 2.5 miles northwest of the approach end of Runway 8.

Impacts to Wild and Scenic Rivers and NRI resources are not anticipated with the construction or operation of the Preferred Alternative or the No Action Alternative. No mitigation is proposed.

(O) CUMULATIVE IMPACTS

Discuss impacts from past, present, and reasonably foreseeable future projects both on and off the airport. Would the proposed project produce a cumulative effect on any of the environmental impact categories above? Consider projects that are connected and may have common timing and/or location. For purposes of this Form, generally use 3 years for past projects and 5 years for future foreseeable projects.

Cumulative impacts on the environment commonly result from the incremental change of an action when added to past, present, and reasonably foreseeable development in the area that is not directly associated with the Preferred Alternative, regardless of what agency or person undertakes such actions. According to FAA Order 5050.4B, reasonably foreseeable actions include those "on or off-airport that a proponent would likely complete and that has been developed with enough specificity to provide meaningful information to decision makers and the interested public." In some cases, the individually minor impact of separate projects can have substantial effects when considered together over time.

Very few improvement projects have been completed at Y47 over the last few years beyond routine maintenance activities. The Airport's efforts have been directed at completing the needed Runway 8/26 reconstruction and obstruction removal project covered in this Short Form EA. One past project of note was the rehabilitation of Runway 8/26 in 2021. No environmental impacts were associated with that project.

Y47 is planning various improvement projects in the coming years. According to the FY 2024-2030 Airport Capital Improvement Program (ACIP) prepared for Y47 in 2023, the following projects are planned at the Airport over the next seven years:

- 2024 – Approach Clearing on Airport Property (Design)
- 2024 – Approach Clearing on Airport Property (Construction)
- 2024 – Land Acquisition – Phase I
- 2025 – Land Acquisition – Phase II
- 2026 – Land Acquisition – Phase III
- 2027 – Wetland Mitigation
- 2028 – Approach Clearing off Airport Property (Design)
- 2028 – Approach Clearing off Airport Property (Construction)
- 2029 – Runway Reconstruction with Taxiway Improvements (Design)
- 2029 – Runway Lighting with NAVAIDs (Design)
- 2030 – Runway Reconstruction with Taxiway Improvements (Construction)
- 2030 – Runway Lighting with NAVAIDs (Construction)

The MDOT conducts other federal or federally assisted transportation improvement activities throughout the state of Michigan. According to MDOT's 2024-2028 Five-Year Transportation Program, MDOT does not propose to complete any projects in the immediate vicinity of Y47. The nearest project is a preventative maintenance project on I-96 approximately 1.9 miles northwest of the Airport. Construction of this project is planned for 2026.

The above-described projects are not expected to result in cumulative impacts when considered with the construction of the Preferred Alternative. Given the minor related impacts of the proposed project, the implementation of the Preferred Alternative, when viewed considering past, current, and future planned actions, is unlikely to result in significant cumulative impacts. All future actions on or off Airport property will be subject to avoidance and minimization studies and will undergo agency review and permitting, as required.

7. PERMITS

List all required permits for the proposed project. Has coordination with the appropriate agency commenced? What feedback has the appropriate agency offered in reference to the proposed project? What is the expected time frame for permit review and decision?

The following permits are anticipated for the proposed project:

- Part 303 Wetland Protection Permit issued by EGLE.
- Part 31 Floodplain Permit issued by EGLE.
- Soil erosion and sedimentation control permit under Part 91, Michigan Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, issued by the Oakland County Water Resources Commissioner's Office.
- NPDES permit under Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended, issued by EGLE.

8. MITIGATION

Describe those mitigation measures to be taken to avoid creation of significant impacts to a particular resource as a result of the proposed project, and include a discussion of any impacts that cannot be mitigated.

Projects should take care to avoid permanent adverse impacts on the environment. It is important that all adverse environmental impacts be minimized or mitigated if avoidance is not possible. The various impacts of the Preferred Alternative and the means to mitigate them to the greatest extent possible are summarized below.

Air Quality

Any impacts to air quality during construction and tree removals will be temporary and easily mitigated through the regulatory permitting process and the use of BMPs. The following BMPs are recommended during construction and tree removals where feasible:

- Use low-sulfur diesel fuel (less than 0.05 percent sulfur).
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Position the exhaust pipe so that the diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- Use catalytic convertors to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.

- Use climate-controlled cabs that are pressurized and equipped with HEPA filters to reduce the operator's exposure to diesel fumes. Pressurization ensures that air is moved from the inside to the outside. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintain diesel engines, which is essential to keeping exhaust emissions low, and follow the manufacturer's recommended maintenance schedule. For example, blue/black smoke indicates that an engine requires servicing or tuning.
- Reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel operators to perform routine inspections, and maintaining filtration devices.
- Purchase new vehicles that are equipped with the most advanced emission control systems available.
- With older vehicles, use electric starting aids as block heaters to warm the engine to reduce diesel emissions.

Biological Resources

Suitable summer habitat for the Indiana Bat and NLEB is present within the project area. In addition, suitable summer habitat for the TCB is potentially present within the project area. Therefore, selective tree removals (i.e., individual trees) will be employed to the greatest extent possible, especially in areas where the obstruction density is low.

In wetland areas, trees will be cut and removed but grubbing or other land disturbance will be avoided. In addition, tree removal activities will be performed outside the summer roosting season of protected bat species and will only be allowed from October 1 through April 14. Adherence to these avoidance and minimization measures should limit incidental take of Indiana Bats, the NLEB, and the TCB.

The project area is within the historic range of the EMR. As such, clearing and grubbing activities will occur in upland areas only outside of the active season for the EMR, overlapping with the inactive season for bats. Trees within wetlands, areas potentially utilized by the snakes as hibernation sites during the winter, would be cut and removed with limited ground disturbance. The USFWS-recommended BMPs for projects within the known EMR range will be implemented as follows:

- Use of wildlife-safe erosion control materials.
- Viewing of the MDNR's "60-Second Snakes: The Eastern Massasauga Rattlesnake" video and/or review of the EMR fact sheet.
- Reporting of any EMR observations (or any other threatened or endangered species) during project implementation.

Section 4(f) Resources

To minimize tree removals to the Huron Valley Trail under the Preferred Alternative, the MOA previously executed between Oakland County and the Michigan DNR requires all live trees to be replaced at a ratio of one-to-one. The replacement trees are to be planted within the trail right-of-way but outside of the avigation easement. The WOCTMC is responsible for specifying tree species and planting locations. Oakland County is to ensure that the trail remains open and recreational activities are not limited during tree removal activities. Additionally, the County's contractor will secure a bond prior to tree removal activities to address any unforeseen damage that may occur to the trail during construction.

Hazardous Materials, Solid Waste, and Pollution Prevention

The contractor will be required to have a SPCC plan in place to be implemented if a spill occurs during construction or tree removal activities. An approved erosion control plan is also required to provide a collection area for non-recyclable waste. Any waste generated will be disposed of in compliance with all federal, state, and local regulations and BMPs.

Historical, Architectural, Archeological, and Cultural Resources

If historical, architectural, archeological, or cultural resources are encountered during construction or tree removal activities, work must stop, and the SHPO must be notified immediately.

Natural Resources and Energy Supply

BMPs to reduce energy consumption during construction and tree removals will be employed, where applicable. To reduce energy consumption associated with the temporary use of construction equipment and vehicles for the Preferred Alternative, construction equipment should be in good working order to ensure the most efficient use of fuel. All vehicles and equipment should be checked for leaks and repaired immediately.

Noise and Noise-Compatible Land Use

Construction staging areas are not allowed near noise sensitive land uses.

Socioeconomics, Environmental Justice, and Children's Health and Safety Risks

During construction and tree removals, traffic from construction vehicles would be managed to avoid and minimize any impacts to local roads by defining haul routes and by scheduling the arrival and departure times of construction traffic so that normal traffic patterns are not interrupted.

Wetlands

Mitigation of 5.316 acres for non-forested wetlands (1:1.5 ratio) and 1.039 acres for the forested wetlands (1:1 ratio) is expected. Given that the forested wetland is not permanently removed but converted to a different type, EGLE has reduced their mitigation requirements to a ratio of 1:1 (rather than a 2:1 ratio for typical forested wetland impacts). Mitigation will include the purchase of wetland credits at an EGLE-approved mitigation bank within the same watershed. Final mitigation requirements are at the discretion of EGLE and will be incorporated into the anticipated wetland permit.

During final design of the Preferred Alternative, modifications will be considered to lessen the impacts on regulated wetlands. All delineated wetlands will be shown on construction plans to protect them from any possible direct or indirect impacts and construction documents will require avoidance and erosion control measures.

Floodplains

The Preferred Alternative may impact the floodplains at the approach end of Runway 8 due to grubbing and grading activities, although minimal grading or filling work is proposed. A determination of the amount of grading and filling work required will be made during final design. An EGLE Part 31 Floodplain Permit is anticipated as well as a compensating cut of material within the limits of the same floodplain in an area not classified as a protected resource. Final mitigation requirements are at the discretion of EGLE.

Surface Waters

Since the Airport site is generally flat, a high risk of soil erosion during excavation and other ground disturbing activities is not expected. However, some amount of erosion may occur, which will be minimized through the use of appropriate BMPs. The following list of BMPs represents common erosion control measures that should be considered during construction and applied where applicable:

- Sediment traps
- Temporary cement ponds
- Temporary grassing of disturbed areas
- Vegetation cover replaced as soon as possible
- Erosion mats and mulch
- Silt fencing and drainage check dams
- Settling basins for stormwater treatment.

All excavated soils and staging areas for construction equipment will be placed in non-sensitive upland areas with disturbed areas replanted as soon as possible to reduce the likelihood of erosion.

Mitigation measures prepared under an erosion control plan, in accordance with FAA AC 150/5370-10H, *Standard Specifications for Construction of Airports*, will help minimize long-term impacts to area water quality and to the existing drainage system.

Part 91, Michigan Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, requires the Airport to acquire a soil erosion and sedimentation control permit from the Oakland County Water Resources Commissioner's Office.

The Airport is also required to obtain a NPDES permit from EGLE for construction activity disturbing one acre or more of soil. Permittees are required to control runoff from construction sites and develop a construction SWPPP that includes erosion prevention and sediment control BMPs.

Groundwater

Since there are a few drinking water wells within or in close proximity to the obstruction removal portions of the project area, the wells will be flagged in the field during tree removals and will be marked on construction plans to ensure they are avoided. If it is determined during final design that there will be impacts to any wells during project implementation, the wells will be relocated in accordance with state and local regulations.

9. PUBLIC INVOLVEMENT

Describe the public review process and any comments received. Include copies of Public Notices and proof of publication.

Resource agencies and Native American tribes were contacted at the beginning of the project and given the opportunity to provide comment on the proposed action. A copy of the early coordination letters received are found in **Appendix A – Early Agency and Tribal Coordination**. Specific information and direction received from responding agencies is noted and addressed in the appropriate resource sections above where appropriate.

Upon issuance of the Draft Short Form EA, the document was made available for public and agency review and comment for a minimum of 30 days. Following the public review period, a public meeting was advertised and held. Written comments from the regulatory agencies and the public were considered and incorporated into the Final Short Form EA where applicable. See **Appendix O - Public and Agency Review of the Draft EA** for details of the public meeting and agency comments received including Airport responses.

10. LIST OF ATTACHMENTS

The following appendices represent supporting technical studies and field work used to evaluate the potential impacts of the Preferred Alternative. The appendices were incorporated in various sections of this Short Form EA and include:

- Appendix A – Early Agency and Tribal Coordination
- Appendix B – 2020 ALP Update Narrative Report
- Appendix C – Obstructions and Property Parcel Boundaries
- Appendix D – Land Use and Zoning
- Appendix E – RPZ Analysis
- Appendix F – Section 4(f) Resources
- Appendix G – Air Quality
- Appendix H – Biological Resources
- Appendix I – Farmland
- Appendix J – Hazardous Materials
- Appendix K – Section 106 Report
- Appendix L – EJScreen Community Report
- Appendix M – Wetlands
- Appendix N – Groundwater
- Appendix O - Public and Agency Review of the Draft EA

Project Title: Runway 8/26 Shift, Shortening, and Approach Clearing

Identifier: Y47

11. PREPARER CERTIFICATION

I certify that the information I have provided above is, to the best of my knowledge, correct.

William Ballard — 05/07/2024

Signature — Date

William Ballard, AICP

Name

Project Manager

Title

Mead & Hunt, Inc. — 517-908-3105

Affiliation — Phone #

12. AIRPORT SPONSOR CERTIFICATION

I certify that the information I have provided above is, to the best of my knowledge, correct. I also recognize and agree that no construction activity, including but not limited to site preparation, demolition, or land disturbance, shall proceed for the above proposed project(s) until FAA issues a final environmental decision for the proposed project(s), and until compliance with all other applicable FAA approval actions (e.g., ALP approval, airspace approval, grant approval) and special purpose laws has occurred.

Cheryl Bush (May 7, 2024 16:27 EDT)

Signature — Date

Cheryl Bush

Name

Manager of Aviation

Title

Oakland County Airports — 248-666-3900

Affiliation — Phone #