



Airlake Airport (LVN)

Environmental Assessment

DRAFT September 22, 2026



ENVIRONMENTAL ASSESSMENT (EA)
FOR
RUNWAY EXTENSION AND ASSOCIATED IMPROVEMENTS
at Airlake Airport in Lakeville, Minnesota

Prepared by Mead & Hunt, Inc.
under contract with the Metropolitan Airports Commission

September 2026

FAA CERTIFICATION:

This becomes a federal document when evaluated, signed, and dated by the Responsible FAA Official.

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Table of Contents

CONTENTS

1 - PURPOSE & NEED	1-1
1.1 Introduction	1-1
1.2 Project Purpose	1-2
1.3 Project Need	1-3
1.3.1 Reconstruct Runway 12/30 and Associated Connector Taxiways	1-3
1.3.2 Extend Runway 12/30 to 4,850 Feet	1-6
1.3.3 Minimize Incompatible On-Airport and Off-Airport Land Uses	1-12
1.3.4 Mitigate Runway 12/30 Airspace Penetrations	1-12
1.3.5 Meet Current FAA Airport Design Standards	1-12
1.3.6 Modify and/or Replace Navigational Aids and Instrument Procedures	1-13
1.3.7 Expand the Fixed Based Operator (FBO) Apron	1-13
2 - ALTERNATIVES	2-1
2.1 Process for Identifying Alternatives	2-1
2.2 Range of Alternatives Considered	2-1
2.2.1 No-Action Alternative	2-2
2.2.2 Alternate Existing Airports	2-2
2.2.3 Runway Alternatives	2-2
2.2.4 Taxiway Alternatives	2-7
2.2.5 Apron Alternatives	2-11
2.2.6 Stream Relocation Alternatives	2-13
2.3 Airport Sponsor's Proposed Project	2-15
3 - AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES ...	3-1
3.1 Introduction	3-1
3.1.1 Regulatory Setting	3-1
3.1.2 Affected Environment	3-1
3.1.3 Environmental Consequences	3-1
3.1.4 Area of Analysis	3-1
3.2 Environmental Categories Not Analyzed in Detail	3-2

3.2.1 Coastal Resources	3-2
3.2.2 Water Resources: Wild & Scenic Rivers	3-2
3.3 Aviation Emissions and Air Quality	3-3
3.3.1 Regulatory Setting	3-3
3.3.2 Affected Environment	3-3
3.3.3 Environmental Consequences	3-3
3.4 Biological Resources	3-4
3.4.1 Regulatory Setting	3-4
3.4.2 Affected Environment	3-5
3.4.3 Environmental Consequences	3-6
3.5 Department of Transportation Act Section 4(f) and Land and Water Conservation Fund	3-8
3.5.1 Regulatory Setting	3-8
3.5.2 Affected Environment	3-8
3.5.3 Environmental Consequences	3-8
3.6 Farmlands	3-9
3.6.1 Regulatory Setting	3-9
3.6.2 Affected Environment	3-9
3.6.3 Environmental Consequences	3-9
3.7 Hazardous Materials, Solid Waste, and Pollution Prevention	3-10
3.7.1 Regulatory Setting	3-10
3.7.2 Affected Environment	3-11
3.7.3 Environmental Consequences	3-11
3.8 Historical, Architectural, Archeological, and Cultural Resources	3-12
3.8.1 Regulatory Setting	3-12
3.8.2 Affected Environment	3-13
3.8.3 Environmental Consequences	3-13
3.9 Land Use	3-14
3.9.1 Regulatory Setting	3-14
3.9.2 Affected Environment	3-15
3.9.3 Environmental Consequences	3-15
3.10 Natural Resources and Energy Supply ...	3-18
3.10.1 Regulatory Setting	3-18

3.10.2	Affected Environment.....	3-19	Appendix D:	Air Quality, Greenhouse Gas, and Noise Analysis.....	6-D
3.10.3	Environmental Consequences.....	3-19	Appendix E:	IPaC, Bat Habitat Assessment, and USFWS Documentation.....	6-E
3.11	Noise and Noise Compatible Land Use..	3-20	Appendix F:	Farmland Documentation.....	6-F
3.11.1	Regulatory Setting.....	3-20	Appendix G:	Phase I Environmental Site Assessment (Hazardous Materials).....	6-G
3.11.2	Affected Environment.....	3-20	Appendix H:	Cultural Resources.....	6-H
3.11.3	Environmental Consequences.....	3-21	Appendix I:	Wetland Delineation and Correspondence	6-I
3.12	Socioeconomics and Children's Health and Safety Risk	3-22	Appendix J:	Agency Meeting Documentation and Scoping Comments...	6-J
3.12.1	Regulatory Setting.....	3-22	Appendix K:	Public Engagement Documentation.....	6-K
3.12.2	Affected Environment.....	3-23	Appendix L:	State Environmental Assessment Worksheet	6-L
3.12.3	Environmental Consequences.....	3-23			
3.13	Visual Effects.....	3-24			
3.13.1	Regulatory Setting.....	3-24			
3.13.2	Affected Environment.....	3-24			
3.13.3	Environmental Consequences.....	3-25			
3.14	Water Resources.....	3-26			
3.14.1	Groundwater.....	3-26			
3.14.2	Wetlands.....	3-27			
3.14.3	Floodplains	3-30			
3.14.4	Surface Water and Stormwater.....	3-32			
3.14.5	Water Resources Conclusion	3-36			
3.15	Summary	3-36			
4 -	AGENCY & PUBLIC ENGAGEMENT.....	4-1			
4.1	Scoping Letters & Meeting	4-1			
4.2	Agency Technical Advisory Panel Meetings & Other Agency Meetings.....	4-1			
4.3	Project Website	4-2			
4.4	Public Events.....	4-2			
4.5	Other Presentations & Public Engagement Opportunities	4-2			
5 -	PREPARERS	5-1			
5.1	Introduction.....	5-1			
5.2	Preparers & Qualifications	5-1			
6 -	APPENDICES	6-1			
Appendix A:	Operational Needs and Performance Documentation	6-A			
Appendix B:	Runway Exit Distance Analysis	6-B			
Appendix C:	Stream Relocation Technical Documentation	6-C			

FIGURES

Figure 1-1:	Existing Airport Layout.....	1-1
Figure 1-2:	2026 Pavement Condition Index Ratings.....	1-5
Figure 1-3:	Metropolitan Airports Commission (MAC) Airport System	1-8
Figure 1-4:	Runway Length Chart for Airplanes with a Maximum Certificated Takeoff Weight of more than 12,500 Pounds up to and including 60,000 Pounds	1-10
Figure 2-1:	2025 LTCP Recommended Alternative	2-5
Figure 2-2:	2035 LTCP Recommended Alternative and Post-LTCP Refinements.....	2-6
Figure 2-3:	Preferred Taxiway Alternatives (West End)	2-9
Figure 2-4:	Preferred Taxiway Alternatives (East End)	2-10
Figure 2-5:	Apron Alternatives.....	2-12
Figure 2-6:	Stream Relocation Alternatives .	2-14
Figure 2-7:	Airport Sponsor's Proposed Project.....	2-16
Figure 3-1:	Farmland to be Converted.....	3-10
Figure 3-2:	Airport Zoning	3-17
Figure 3-3:	Baseline Condition Noise Contours (2025).....	3-21
Figure 3-4:	No Action and Proposed Project Noise Contours.....	3-22
Figure 3-5:	Wetland Impacts	3-29
Figure 3-6:	Floodplains.....	3-31
Figure 3-7:	On-Airport Stream.....	3-33

TABLES

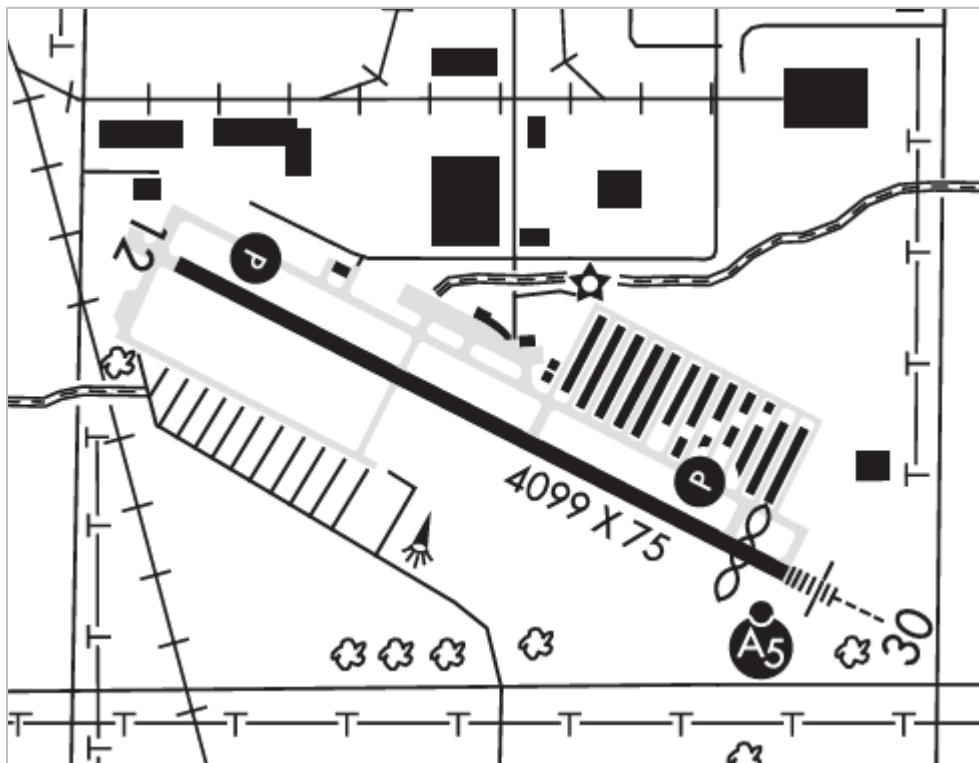
Table 1-1:	Standard Pavement Condition Index (PCI) Rating Scale.....	1-4
Table 1-2:	Airlake (LVN) Existing Pavement Condition Index (PCI) Ratings	1-4
Table 1-3:	Annual Aircraft Operations by Large Aircraft at LVN, 2017-2025.....	1-6
Table 1-4:	Aloft Aviation Historical and Projected Aircraft Operations at LVN	1-7
Table 1-5:	Annual Runway Length Critical Aircraft Operations at LVN, FCM, and STP	1-8
Table 1-6:	Gross Regional Product by County (2025 estimated in millions of 2017 dollars)	1-9
Table 1-7:	Projected Near-Term Annual Runway Length Critical Aircraft Operations.....	1-9
Table 1-8:	Existing and Proposed Declared Distances	1-11
Table 1-9:	Near-Term 4,850-foot Runway Length Critical Aircraft	1-11
Table 3-1:	Resource Category Study Areas	3-2
Table 3-2:	Hazardous Materials, Solid Waste, and Pollution Prevention Factors for Consideration	3-12
Table 3-3:	Population and Households	3-23
Table 3-4:	Income and Poverty	3-23
Table 3-5:	Delineated Wetlands	3-28
Table 3-6:	Water Resources Permits and Approvals	3-36
Table 3-7:	Summary of Environmental Consequences	3-37

1 - Purpose & Need

1.1 INTRODUCTION

Airlake Airport (Federal Aviation Administration (FAA) identifier LVN, or “the Airport”) is a general aviation (GA) airport located in Lakeville, Minnesota, approximately 20 miles south of Minneapolis-St. Paul International Airport (MSP). The Airport has one paved primary runway in a 12/30 configuration, as shown in **Figure 1-1** below. Runway 12/30 is 4,099 feet long and 75 feet wide. The Airport is owned by the Metropolitan Airports Commission (MAC, or “the Sponsor”) and has hangar, terminal, fixed base operator (FBO), and refueling facilities. LVN serves an important role within the MAC system of airports by relieving general aviation activity from MSP and serving the personal, recreational, aircraft management, business, charter, medical, and educational aviation needs of the southern metropolitan region. Total aircraft activity at LVN has been increasing in the past five years since the COVID-19 pandemic. According to data from the Metropolitan Airports Commission Noise and Operations Monitoring System (MACNOMS), total aircraft operations at LVN increased by 37 percent from 31,314 operations in 2020 to 42,921 operations in 2025.

Figure 1-1: Existing Airport Layout



Source: FAA Digital Chart Supplement NC, 9 JUL 2026 to 3 SEP 2026

The MAC completed a 2035 Long-Term Comprehensive Plan (LTCP) for LVN that was approved by the MAC Board in 2018. The LTCP evaluated all aspects of the Airport, including airside and landside facilities, and concluded that Runway 12/30 should be extended to better match the current and projected activity at the Airport. The MAC will comply with all local, state, and federal environmental regulations when implementing the recommendations of the LTCP.

Federal financial participation in projects through the Airport and Airway Improvement Act of 1982, which established the FAA Airport Improvement Program (AIP), requires environmental review under the National Environmental Policy Act (NEPA) 42 U.S.C. §§4321-4336f. An Environmental Assessment (EA) is a document prepared under NEPA that evaluates the effects of a proposed action on the surrounding natural, social, and economic environments. This EA is prepared under the requirements of Title V of Public Law 97-248 of the Airport and Airway Improvement Act of 1982; NEPA; FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures* (June 2025); and DOT Order 5610.1D, *DOT's Procedures for Considering Environmental Impacts*.

The Minnesota Environmental Policy Act (MEPA) also requires project proposers to consider environmental effects of their actions. Based on criteria contained in Minnesota Statutes §473.614, the MAC must prepare an Environmental Assessment Worksheet (EAW) for projects in the Commission's capital improvement program if they meet all the following conditions:

- A. The project is scheduled in the program for the succeeding calendar period.
- B. The project is scheduled in the program for the expenditure of \$5,000,000 or more at Minneapolis-St. Paul International Airport or \$2,000,000 or more at any other airport.
- C. The project involves the construction of a new or expanded structure for handling passengers, cargo, vehicles, or aircraft; or the construction of a new or the extension of an existing runway or taxiway.

Under Minnesota Rule 4410.1300, the MAC may circulate a federal EA in place of the EAW form, provided the EA addresses each of the environmental effects identified in the EAW form. This EA addresses most of the informational requirements specified in the EAW, incorporating Minnesota EAW content as outlined in Minnesota Rule 4410.1200 where it coincides with EA requirements. Some of the EAW components that are not required for the EA are included only in the EAW form. Informational requirements for each section of the EAW form are cross referenced with the appropriate sections of this EA, and supplemented in the EAW form as necessary, in **Appendix L**.

While this EA addresses both NEPA and MEPA, the document is hereinafter referred to as the "EA." The intent of the EA is to provide the environmental documentation necessary to assist local, state, and federal officials in evaluating the proposed action at LVN. This EA outlines the purpose and need for a proposed project and evaluates the proposed action and a full range of alternatives. The analysis also identifies and discusses measures to avoid, minimize, and mitigate possible environmental impacts.

The EA is prepared to comply with NEPA. When paired with **Appendix L**, this EA also complies with MEPA. The FAA will evaluate the EA under NEPA and, if the project does not have the potential for significant impacts, issue a Finding of No Significant Impact (FONSI), or if it does have significant impacts, prepare an Environmental Impact Statement (EIS). No other agencies are expected to play a cooperating role. As discussed in EA Section 3.14 the FAA consulted early with the US Army Corps of Engineers (USACE) St. Paul District Regulatory Division to ensure water resource impacts associated with the project are likely permissible. USACE has reviewed the Stream Functional Assessment Memo in EA Appendix C as a commenting agency and will independently review the final EA and FONSI as part of its Section 404 permit application evaluation. The MAC will evaluate the EA in conjunction with the EAW in **Appendix L** under MEPA and, if the project does not have the potential for significant impacts, issue a Negative Declaration on the Need for an EIS, or prepare a Minnesota EIS.

1.2 PROJECT PURPOSE

The purpose of the proposed action at Airlake Airport is to achieve planning goals outlined in the 2035 LTCP. These goals are to:

1. Better accommodate business aircraft needs by maximizing the airfield's operational capabilities.
2. Maintain or improve on-airport and off-airport land use compatibility.
3. Mitigate existing issues with vegetative growth and ground penetrating airspace surfaces, to the extent practical.

4. Verify and update the airfield layout to reflect current FAA airport design standards.

Under NEPA, a “major federal action” refers to activities that require federal involvement, such as approvals, funding, or permits. NEPA applies only when a federal agency has a decision to make, so it is important to identify these actions at the outset. For the proposed action, implementation will require the following major federal actions by the FAA:

- Approval of the revised Airport Layout Plan (ALP) to incorporate elements of the proposed project.
- Airspace review and approval for the new runway configuration and establishment of GPS-based instrument procedures to Runway 12.
- Airport Improvement Program (AIP) funding for eligible project elements.

These federal actions are necessary to support implementation of the proposed improvements and trigger the need for this EA.

1.3 PROJECT NEED

The need for the proposed action is to meet existing and projected airport user needs and create a safer operating environment at the Airport. The following seven objectives define the proposed action, as discussed in the following subsections:

1. Reconstruct existing Runway 12/30 and associated connector taxiway pavements.
2. Extend Runway 12/30 to 4,850 feet.
3. Minimize incompatible on-airport and off-airport land uses.
4. Mitigate Runway 12/30 airspace penetrations.
5. Meet current FAA airport design standards.
6. Modify and/or replace visual navigational aids.
7. Expand the fixed base operator (FBO) apron.

1.3.1 Reconstruct Runway 12/30 and Associated Connector Taxiways

Airlake Airport’s only runway, Runway 12/30, was originally constructed in 1966 and reconstructed in 2001. A pavement evaluation completed for the Airport in 2026 assigned average pavement condition index (PCI) ratings between 21 and 40 for the entire length of Runway 12/30 and its connector taxiways to Taxiway A, between 41 and 60 for its connector taxiways to Taxiway B, and between 61 and 80 for its parallel Taxiways A and B. The PCI indicates the condition of an airport pavement on a scale ranging from zero to 100 based on visual inspection, with zero representing pavements that are not usable because of advanced deterioration and 100 representing pavements in excellent condition. The standard PCI rating scale identified by FAA guidance is summarized in **Table 1-1**. The 2026 Airport PCI map is shown in **Figure 1-2**. Once pavement reaches fair condition, pavement deterioration begins to accelerate, and pieces of loose aggregate often become present in the airport operating environment. Loose aggregate can cause aircraft damage and personal injury by cutting aircraft tires, being ingested by aircraft engines, lodging in mechanisms affecting airport operations, or being thrown by aircraft propellers and engines. Once the PCI falls below 40, reconstruction is imminent.

The runway and connector taxiways at LVN were last reconstructed in 2001 and exhibit typical pavement distresses, including high severity transverse and longitudinal cracking and weathering, similar to other pavements at Minnesota airports constructed in a similar timeframe. The subgrade material for Runway 12/30 has been compromised over time. In addition, the freeze-thaw movements of the pavement in the spring and fall are causing a growing safety risk for Airport users and maintenance personnel, as cracks shift up and down, creating edges that can catch a snowplow blade. These pavement conditions require comprehensive rehabilitation or reconstruction. The existing PCI values on the airfield at LVN are summarized in **Table 1-2**.

Because Runway 12/30 and its connector taxiways are in poor/fair (41-60 PCI) to serious/very poor condition (21-40 PCI), the proposed action should include reconstructing the runway and taxiway pavement section to facilitate continued use throughout a 20-year design life. In pavement design, the term “design life” typically

refers to the period that the pavement can provide an acceptable level of service. The minimum FAA standard for airfield pavement design life is 20 years.

Table 1-1: Standard Pavement Condition Index (PCI) Rating Scale

PCI Rating	Condition
0-10	Failed
11-25	Serious
26-40	Very Poor
41-55	Poor
56-70	Fair
71-85	Satisfactory
86-100	Good

Source: FAA Advisory Circular 150/5380-7B, Airport Pavement Management Program.

Table 1-2: Airlake (LVN) Existing Pavement Condition Index (PCI) Ratings

Surface	PCI Rating
Runway 12/30	21-40 (Serious/Very Poor)
Taxiway A	61-80 (Fair/Satisfactory)
Taxiways A1-A5	21-40 (Serious/Very Poor)
Taxiway B	61-80 (Fair/Satisfactory)
Taxiways B1 & B2	41-60 (Poor/Fair)

Source: 2026 Pavement Maintenance Management Program Report.

Note: Runway 12/30, Taxiways A1-A5, B, and B1-B2, and portions of Taxiway A will be reconstructed by the proposed action.

Figure 1-2: 2026 Pavement Condition Index Ratings

Source: Short Elliott Hendrickson

1.3.2 Extend Runway 12/30 to 4,850 Feet

The existing 4,099-foot length of Runway 12/30 does not meet the needs of the Airport's most demanding users. Runway length requirements are based on the performance requirements of specific critical aircraft types, and can vary based on weather conditions, flight destination, and desired fuel, passenger, and cargo loads. The critical aircraft with respect to runway length is defined by FAA Advisory Circular (AC) 150/5000-17, *Critical Aircraft and Regular Use Determination*, as "the single aircraft, or grouping of aircraft with similar operational requirements, that have the longest runway length requirement that makes regular use of the runway." The FAA defines regular use by an aircraft, or grouping of aircraft, as 500 or more annual operations¹. The critical aircraft with respect to runway length at LVN is a grouping of large aircraft² with a maximum takeoff weight (MTOW) of less than 60,000 pounds. As shown in **Table 1-3**, between 2017 and 2025 there were from 53 to 319 annual documented operations by large aircraft at LVN, or an annual average of 151 operations.

In addition to the historical large aircraft operations summarized in **Table 1-3**, the Airport's fixed base operator (FBO), Aloft Aviation, plans to utilize its expanding fleet at LVN on a more frequent basis, as indicated in the letter of intent (LOI) included in **Appendix A** to this EA. As of 2026, Aloft Aviation operates two Citation C650 large aircraft (N682RS, N700LW), as well as one Citation C501 (N123KD) and one HondaJet HA-420 (N570JT). Aloft Aviation offers charter service directly from LVN with these aircraft, and bases the listed turbojet aircraft at LVN. Their LOI indicates that the existing runway length at LVN imposes takeoff weight restrictions on their aircraft in International Standard Atmosphere (ISA) conditions. The MAC confirmed the restrictions for the Citation C650 by consulting the FAA-approved Airplane Flight Manual (AFM) as detailed in **Appendix A**.

Table 1-3: Annual Aircraft Operations by Large Aircraft at LVN, 2017-2025

Aircraft Make/Model	MACNOMS Code	Maximum Takeoff Weight	2017	2018	2019	2020	2021	2022	2023	2024	2025
Turboprop Aircraft	-	-	-	-	-	-	-	-	-	-	-
Beech King Air 300	B300/BE30	14,000 lbs	1	0	0	2	2	2	6	0	2
Beech King Air 350	B350	15,000 lbs	62	44	65	146	43	8	6	4	0
Pilatus PC-24	PC24	18,300 lbs	0	0	0	0	0	0	0	0	0
Other Turboprop Aircraft	Various	>12,500 lbs	0	0	0	3	4	0	0	0	0
Subtotal	-	-	63	44	65	151	49	10	12	4	2
Turbojet Aircraft	-	-	-	-	-	-	-	-	-	-	-
Cessna CitationJet 3	C25B	13,870 lbs	2	0	0	0	2	6	0	4	6
Cessna Citation II/Bravo	C550/C55B	15,100 lbs	41	56	33	6	0	0	0	8	0
Raytheon Beechjet 400	BE40/BE45	16,100 lbs	5	3	0	0	0	4	4	0	0
Cessna Citation V	C560	16,300 lbs	5	37	60	60	2	0	1	4	4
Embraer Phenom 300	E55P	18,000 lbs	2	0	6	2	2	4	33	4	4
Cessna Citation Excel	C56X	20,200 lbs	0	2	3	0	0	0	2	4	6
Learjet 45	LJ45	21,500 lbs	0	0	0	0	0	0	0	0	0
Cessna Citation III/VI/VII	C650	23,000 lbs	71	25	29	95	29	29	158	34	27
Hawker 800XP	H25B	28,000 lbs	0	0	0	0	0	0	0	0	0
Other Jet Aircraft	Various	>12,500 lbs	5	2	4	5	1	0	6	4	4
Subtotal	-	-	131	125	135	168	36	43	204	62	51
Total Annual Operations by Large Aircraft	-	-	194	169	200	319	85	53	216	66	53

Source: Metropolitan Airports Commission Noise and Operations Monitoring System (MACNOMS)

¹ Takeoffs and landings each count as one operation, while a touch-and-go counts as two operations.

² Large aircraft are defined as those with a maximum takeoff weight greater than 12,500 pounds, while small aircraft are defined as those with a MTOW of less than or equal to 12,500 pounds.

There is current demand for charter service at LVN and Aloft Aviation has established a base at the Airport to conduct charter operations; however, due to short runway length, Aloft patrons must often depart from St. Paul Downtown Airport (STP) or Flying Cloud Airport (FCM) with longer runway lengths to fly non-stop to their destination. To help grow Part 135 charter operations at LVN, Aloft Aviation has purchased controlling interest in Executive Aviation, located at FCM. Their business plan will shift charter operations to LVN to accommodate patron needs and to alleviate the long drive from LVN to FCM. The minimum driving distance between LVN and FCM is 25 miles, which can take up to an hour to drive during typical rush hour traffic. Aloft intends to shift Citation C650 operations from FCM/STP to LVN once the runway extension is in place.

In its LOI, Aloft Aviation has indicated its historical annual operations at LVN from 2022 to 2025, as well as its projected annual operations at LVN in 2027 and 2028, as shown in **Table 1-4**. Aloft Aviation anticipates continued growth beyond these projections, and its commitment to serve LVN in the future is demonstrated by its recent construction of a 33,000 square foot hangar at the Airport. While the Citation C501 and HondaJet HA-240 aircraft both have an MTOW less than 12,500 pounds, the LOI indicates that Aloft does not currently operate these aircraft at LVN nearly as much as they would with a longer runway, as operations by all three aircraft types are weight-limited by the existing 4,099-foot runway.

Table 1-4: Aloft Aviation Historical and Projected Aircraft Operations at LVN

Aircraft Make/Model	Maximum Takeoff Weight (MTOW)	Historical Operations				Projected Operations	
		2022	2023	2024	2025	2027	2028
Citation C650 series	23,000 lbs	27	118	29	27	268	295
Citation C501 series	11,850 lbs	26	0	0	0	100	110
HondaJet HA-240	11,244 lbs	0	16	51	43	53	64
Total Aloft Aviation Operations at LVN		53	134	80	70	421	469

Source: MACNOMS, Aloft Aviation

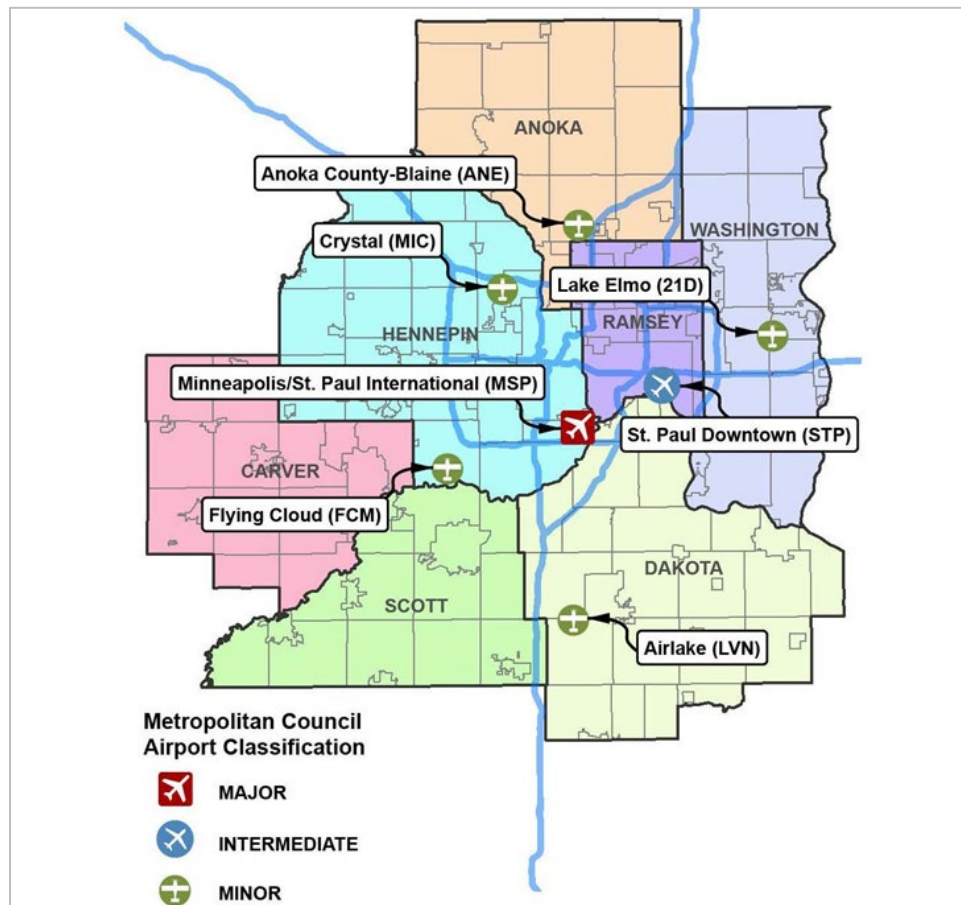
As detailed in **Appendix A**, over half of Citation C650 series aircraft operations are conducted at stage lengths of at least 800 nautical miles requiring at least a 4,850-foot runway length. After the runway extension, the Airport sponsor expects over 1,000 annual large aircraft operations at LVN will be conducted by Aloft Aviation and transient operators³ of many similar aircraft types with comparable runway requirements. Because at least half of these expected operations require at least 4,850 feet, the demand for the proposed runway extension exceeds the FAA's regular use threshold. Prospective operations by these similar aircraft are also considered by this EA as part of the justification for extending Runway 12/30. As shown in **Figure 1-3**, there are six reliever airports in the MAC system: LVN, FCM, STP, Anoka County Blaine Airport (ANE), Crystal Airport (MIC), and Lake Elmo Airport (21D). Airlake Airport primarily serves aircraft operators in Dakota and Scott Counties, but also serves some operators in neighboring Hennepin, Ramsey, and Washington Counties. Other reliever airports that serve these border counties are FCM and STP. As shown in **Table 1-5**, there were an average of 19,872 total annual aircraft operations conducted at LVN, FCM, and STP from 2022 to 2025 by the runway length critical aircraft for LVN (large aircraft less than or equal to 60,000 pounds). Of these operations, only one percent were conducted at LVN, while 57 percent were conducted at FCM and 42 percent were conducted at STP.

As shown in **Table 1-6**, Dakota County had an estimated gross regional product (GRP) representing approximately 11 percent of total GRP for the Minneapolis-St. Paul Metropolitan Area in 2025. As detailed in a letter from the MAC in **Appendix A**, aircraft operations have grown faster at LVN since 2020 than at any other MAC reliever airport, and local socioeconomic growth in the LVN service area has outpaced that of both the greater Twin Cities Metropolitan Area and the State of Minnesota as a whole. If a runway length of 4,850 feet was available at LVN, the MAC expects that at least five percent of operations by the runway length critical aircraft, or approximately 994 operations per year, would occur at LVN rather than at FCM or STP in the first year following construction of a runway extension.

³ Transient operators are entities using the Airport for temporary, occasional purposes with aircraft based at another airport that do not have a permanent hangar lease or assigned tie-down agreement at LVN.

When the projected Aloft Aviation and other transient aircraft operations discussed previously are added to the 2017-2025 historical average of 151 large aircraft operations per year, the Airport sponsor expects that total large aircraft operations at LVN will exceed the FAA regular use threshold of 500 annual operations⁴ in the first year following a runway extension (2028), as summarized in **Table 1-7**. This table also includes the operations by Aloft Aviation's aircraft with a MTOW less than 12,500 pounds, which are also weight-limited by the current 4,099-foot runway length.

Figure 1-3: Metropolitan Airports Commission (MAC) Airport System



Source: Airlake Airport Long-Term Comprehensive Plan

Table 1-5: Annual Runway Length Critical Aircraft Operations at LVN, FCM, and STP

Year	FCM	STP	LVN	Total
2022	11,814	9,075	53	20,942
2023	10,955	8,510	216	19,681
2024	10,897	8,862	66	19,825
2025	11,710	7,278	53	19,041
Average (Share)	11,344 (57.1%)	8,431 (42.4%)	97 (0.5%)	19,872
Maximum Available Runway Length	5,001 feet	6,491 feet	4,099 feet	-

Source: MACNOMS, FAA Airport Data and Information Portal (ADIP)

Note: All operations referenced in this table were conducted by aircraft with a MTOW greater than 12,500 pounds and less than or equal to 60,000 pounds. For a detailed listing of operations by aircraft make and model, see letter in Appendix A.

⁴ See discussion of the purpose and FAA definition of regular use at the beginning of this Section 1.3.2.

Table 1-6: Gross Regional Product by County (2025 estimated in millions of 2017 dollars)

County	Estimated 2025 GRP	Percentage Share of Twin Cities 2025 GRP
Hennepin	156,973.95	56.3%
Ramsey	44,776.87	16.0%
Dakota	30,134.86	10.8%
Anoka	17,368.69	6.2%
Washington	15,077.36	5.4%
Scott	8,109.25	2.9%
Carver	6,567.37	2.4%
Total	279,008.34	100%

Source: Woods & Poole Economics, Inc.

Table 1-7: Projected Near-Term Annual Runway Length Critical Aircraft Operations

Category	2027 Pre-Runway Extension	2028 Post-Runway Extension
Aircraft Type		
Baseline Large Aircraft Operations per Historical Use ⁵ (2017-2025)	151	151
Aloft Aviation Cessna C650 (anticipated additional operations)	268	295
Other Transient Large Aircraft (anticipated additional operations)	0	994
Total Large Aircraft Runway Length Critical Operations	419	1,440
Aloft Aviation Cessna C501	100	110
Aloft Aviation HondaJet HA-420	53	64
Total Small Aircraft Runway Length Critical Operations	153	174
TOTAL RUNWAY LENGTH CRITICAL OPERATIONS	572	1,614

Sources: MACNOMS, Aloft Aviation

Note: Anticipated additional operations in 2028 reflect those expected if there is a runway extension

According to FAA AC 150/5325-4B, *Runway Length Recommendations for Airport Design*, Section 103, “the design objective for the main primary runway is to provide a runway length for all airplanes that will regularly use it without causing operational weight restrictions.” The current 4,099-foot runway length does not meet Airport user needs associated with the critical aircraft. Aloft Aviation currently must limit the amount of fuel it carries on its C650 series aircraft and depart LVN with a 62 percent load factor ⁶ or less on the current runway length. This requires that the pilot make a fuel stop at FCM, which has a 5,000-foot runway, or at another enroute airport with a longer runway before proceeding to their ultimate destination. The current runway length is prohibitive to Aloft Aviation’s business model and is overly burdensome to transport their passengers from LVN to their final destination. The current LVN runway length limits C650 aircraft takeoff weight to shorter non-stop destinations such as Des Moines, Iowa (DSM, 187 NM). Customers using LVN demand flying to non-stop destinations requiring a greater load factor departing LVN. Commonly requested destinations include Dallas, Texas (DFW, 750 NM), New London, Connecticut (GON, 1,094 NM); Portland, Maine (PWM, 990 NM); Jacksonville, Florida (JAX, 1,010 NM); Fort Myers, Florida (FMY, 1,215 NM); Fort Lauderdale, Florida (FXE, 1,275 NM); West Palm Beach, Florida (PBI, 1,250 NM); and Salt Lake City, Utah (SLC, 860 NM). A 4,850-foot runway length is needed to depart LVN at the required takeoff weight to reach these destinations non-stop.

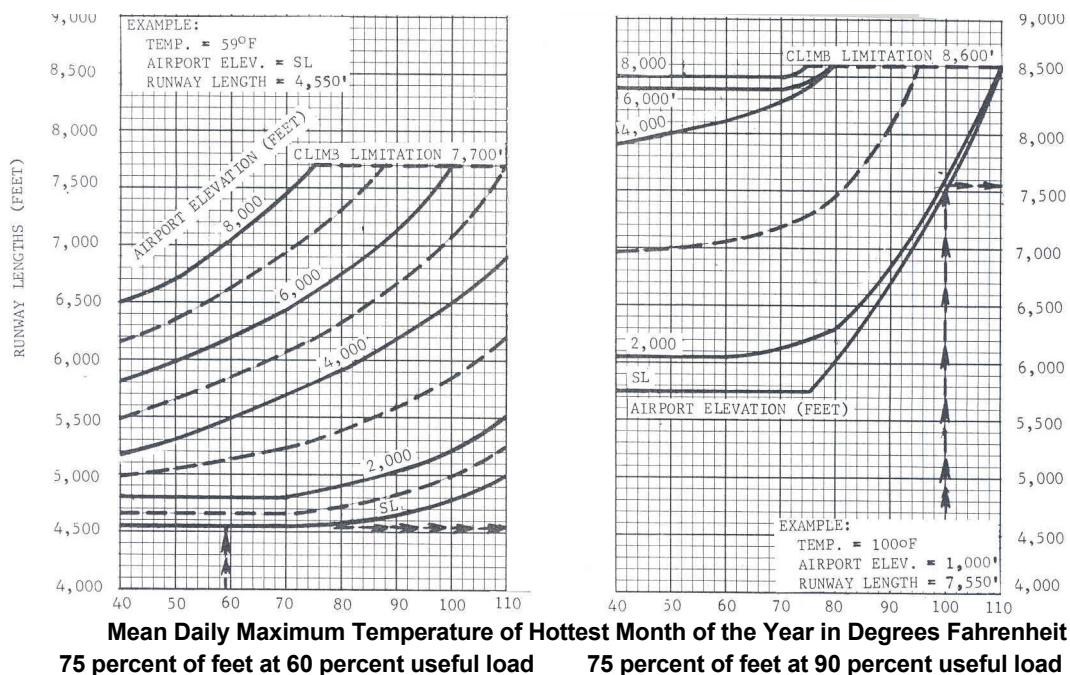
⁵ See Table 1-3.

⁶ FAA AC 150/5325-4B defines the “useful load factor” of an airplane as “the difference between the maximum allowable structural gross weight and the operating empty weight. A typical operating empty weight includes the airplane’s empty weight, crew, baggage, other crew supplies, removable passenger service equipment, removable emergency equipment, engine oil, and unusable fuel. In other words, the useful load then consists of passengers, cargo, and usable fuel.

Runway length limitations are exacerbated by the fact that Aloft Aviation is a Part 135 charter operator, which requires that they carry additional fuel to allow for potential diversion to an alternate airport when reaching their destination.

The family of aircraft with a MTOW of greater than 12,500 pounds but less than or equal to 60,000 pounds is the critical aircraft grouping used to calculate other transient aircraft runway length requirements for LVN. This grouping includes all 12 specific large aircraft types listed in **Table 1-3** but does not include the three small aircraft types operated by Aloft Aviation listed in **Table 1-4** and **Table 1-7**. AC 150/5325-4B divides this weight category into two fleet subcategories: “75 percent of fleet” and “100 percent of fleet.” The 100 percent of fleet subcategory includes those airplanes “that require at least 5,000-foot runways at mean sea level and at the standard day temperature of 59° F”. Airplanes in the 75 percent of fleet subcategory “require less than 5,000 feet for the same conditions.” According to Figure 3-1 of AC 150/5325-4B, FAA’s current guidance for recommended runway lengths at airports indicates that the primary runway length at LVN, before adjustments for runway gradient and wet and slippery conditions, should be approximately 4,700 feet to accommodate 75 percent of the fleet at a 60 percent useful load, as shown in **Figure 1-4**. Use of 60 percent useful load is more appropriate for LVN than 90 percent useful load based on the typical stage lengths expected for departures from LVN by the critical aircraft. An adjustment must be added for effective runway gradient of 10 feet per foot of elevation difference for takeoff operations⁷, yielding an adjusted required takeoff length of 4,800 feet. Additionally, 15 percent is added for wet and slippery conditions for landing operations by turbojet aircraft, yielding an adjusted required landing length of 5,405 feet. This length represents FAA’s current guidance for recommended runway length at LVN; however, this length is not feasible to construct at LVN because the Airport is constrained by surrounding development and Minnesota Statutes §473.641, Subdivision 4 prohibits MAC from extending runway length at its minor airports beyond 5,000 feet without prior legislative authorization. For these reasons, the airport sponsor’s preferred runway length for LVN is 4,850 feet. This is the maximum length and closest to ideal length feasible given the presence of a railroad near the west end of the runway and a major arterial roadway, Cedar Avenue, near the east end of the runway.

Figure 1-4: Runway Length Chart for Airplanes with a Maximum Certificated Takeoff Weight of more than 12,500 Pounds up to and including 60,000 Pounds



Source: FAA Advisory Circular 150/5325-4B, Runway Length Requirements for Airport Design

⁷ A 10-foot difference between the future runway end elevations was used, resulting in a 100-foot net increase in required runway length.

The airport sponsor proposes the use of declared distances under the proposed action to better meet design standards. Declared distances represent the maximum distances available and suitable for an aircraft's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements. The existing declared distances and the proposed declared distances for the preferred alternative selected in Chapter 2 are compared in **Table 1-8**.

Table 1-8: Existing and Proposed Declared Distances

Runway	TORA	TODA	LDA	ASDA
Existing 12	4,099'	4,099'	4,099'	4,099'
Proposed 12	4,850'	4,850'	4,459'	4,850'
Existing 30	4,099'	4,099'	3,707'	4,099'
Proposed 30	4,850'	4,850'	3,978'	4,850'

TORA: Takeoff Runway Available, LDA: Landing Distance Available, TODA: Takeoff Distance Available, ASDA: Accelerate Stop Distance Available

As shown in **Table 1-8**, the proposed runway extension would lengthen the Runway 12 and 30 TORA, TODA, and ASDA to 4,850 feet. Appendix H of FAA AC 150/5300-13B, *Airport Design* does not recommend reducing TORA to mitigate incompatible land uses and requires TODA to be no less than the TORA length. The proposed extension would also lengthen the Runway 12 LDA to 4,459 feet and the Runway 30 LDA to 3,978 feet. Although the lengthened LDAs are shorter than the lengthened TORA, TODA, and ASDA, critical aircraft operators have indicated that the Runway 12/30 TORA, TODA, and ASDA are more limiting factors for their operations than the Runway 12/30 LDA. This is the case for turbojet aircraft generally, despite the guidance in AC 150/5325-4B indicating that the required landing length is greater than the required takeoff length at LVN. For this reason, the proposed declared distances should not adversely affect critical aircraft operations at LVN.

This EA arrived at a proposed 4,850-foot runway length by applying FAA's guidance and considering the natural and built environment in the vicinity of the Airport, as proposed for the preferred alternative selected in Chapter 2. This length would significantly improve critical aircraft operator ability to use Runway 12/30 safely and efficiently when compared to the existing 4,099-foot length. In all cases, the pilot is in command of the aircraft and must make the final determination as to whether the pilot may safely operate the aircraft within the available runway length. Minnesota Statutes §473.641, Subdivision 4 prohibits MAC from extending runway length at its minor airports beyond 5,000 feet without prior legislative authorization.

In summary, as shown in **Table 1-9**, LVN is expected to have near-term regular use by aircraft types requiring at least 4,850 feet of runway length after the primary runway is extended.

Table 1-9: Near-Term 4,850-foot Runway Length Critical Aircraft

Aircraft Type	Runway Length Needed	Operations	
		2027	2028
Baseline Large Aircraft Operations per Historical Use	5,405 feet	151	151
Other Transient Large Aircraft Fleet	5,405 feet	0	994
Aloft Aviation Citation C650	4,850 feet	268	295
Total LVN Operations Requiring at least 4,850 feet		419	1,440
Regular Use by Aircraft Requiring at least 4,850 feet?		NO	YES

Sources: MACNOMS, Aloft Aviation, FAA AC 150/5325-4B

Note: Anticipated additional operations in 2028 reflect those expected if there is a runway extension.

1.3.3 Minimize Incompatible On-Airport and Off-Airport Land Uses

The Airlake Airport does not currently own or control all areas within its existing runway protection zones (RPZs), which contain a railroad and public roads. The RPZ is an FAA design standard that must be considered when there are land uses within the RPZ. An RPZ is a trapezoidal area prior to the runway threshold or beyond the runway end, the purpose of which is to enhance the safety and protection of people and property on the ground. The FAA Office of Airports (ARP) September 2012 memorandum, *Interim Guidance on Land Uses Within a Runway Protection Zone*⁸, states that coordination with the regional and national FAA offices is required when these specific incompatible land uses would enter the limits of an RPZ because of an airfield project such as a runway extension or runway shift. The purpose of this coordination is to minimize risk associated with location of incompatible land uses within the RPZ. As described in FAA's September 2012 RPZ guidance memorandum, "although the FAA recognizes that in certain situations the airport sponsor may not fully control land within the RPZ, the FAA expects airport sponsors to take all possible measures to protect against and remove or mitigate incompatible land uses."

A railroad line owned by Progressive Rail Incorporated, Highview Avenue, and 220th Street West are within the existing Runway 12 RPZ, and Cedar Avenue and 225th Street West are within the existing Runway 30 RPZ. As part of the recently completed LTCP⁹, the MAC completed an RPZ alternatives analysis and associated FAA coordination for the preferred LTCP development concept. In a letter dated January 5, 2017, the FAA concluded that, due to high costs and alignment of the railroad, it is not feasible to realign the railroad outside of the RPZ. An updated RPZ Alternatives Evaluation was completed and accepted by the FAA on September 17, 2025, reflecting a full-length Runway 12 TORA/TODA (4,850'). Highview Avenue and 220th Street have relatively low traffic volumes and would be costly to relocate. The intersection of 225th Avenue and Cedar Avenue is proposed to be relocated outside the Runway 30 approach and departure RPZs, mainly to clear the Federal Aviation Regulations (FAR) Part 77 primary surface for the proposed runway extension. The Airport will work with the respective road authorities to consider the installation of "Low Flying Aircraft/No Parking" signage on Cedar Avenue, Highview Avenue, and 220th Street West at the edges of the RPZs. If in the future the traffic on Cedar Avenue necessitates a roadway expansion, an RPZ alternatives analysis including relocation will be completed at that time.

1.3.4 Mitigate Runway 12/30 Airspace Penetrations

Any on-Airport trees and ground that penetrate the FAR Part 77 imaginary surfaces¹⁰ or United States Standard for Terminal Instrument Procedures (TERPS) surfaces¹¹ for each runway end will be removed, trimmed, and/or graded. The MAC desires to minimize impacts to the community by reducing the number of trees that must be removed and therefore does not propose any off-Airport trees be removed or trimmed¹². The Runway 12 displaced threshold¹³ should also be relocated such that the threshold siting surfaces clear the Progressive Railroad line by 23 feet, as required by FAA airport design standards.

1.3.5 Meet Current FAA Airport Design Standards

All proposed airport improvements must meet FAA airport design standards contained in AC 150/5300-13B, *Airport Design*, and other applicable FAA design guidance. FAA design standards that are not currently met and must be addressed to receive federal funding for the proposed action with respect to taxiways include but are not limited to taxiways providing 1) direct access from aircraft parking aprons to the runway, 2) high-energy

⁸ The original LVN RPZ Alternatives Evaluation and associated FAA coordination occurred in 2017 when the September 2012 memorandum was the active guidance. Current FAA RPZ Alternatives Evaluation guidance can be found in AC 150/5190-4B, *Airport Land Use Compatibility Planning*.

⁹ See Section 1.1 for discussion of the Airlake Airport 2035 Long-Term Comprehensive Plan (LTCP).

¹⁰ 14 CFR Part 77, *Safe, Efficient Use and Preservation of the Navigable Airspace*, establishes imaginary airspace surfaces and criteria used by the FAA to identify airspace obstructions to aircraft approaches and departures at civil airports in the United States.

¹¹ FAA Order 8260.3G, *United States Standard for Terminal Instrument Procedures* (TERPS), establishes imaginary airspace surfaces and criteria used by the FAA to formulate, review, approve, and publish instrument flight rules (IFR) approach and departure procedures for civil and military airports.

¹² An FAA aeronautical study will be requested to confirm obstructions to remain are not hazards to air navigation.

¹³ A displaced threshold is a landing threshold that is located at a point on the runway beyond the beginning of the runway.

crossings within the middle third of the runway¹⁴, 3) aircraft hold position markings outside the runway safety area and threshold siting surfaces, 4) in-line taxiways prior to runway ends, and 5) offset parallel taxiway alignments near runway entrance taxiways. FAA design standards that must be considered by the proposed action with respect to runways include but are not limited to 1) runway object clearing and gradient criteria, and 2) locating entrances to navigational aid access roads to avoid connecting to a runway. Proposed improvements should also include aircraft holding bays at each runway end to provide aircraft the ability to taxi past other aircraft performing engine run-ups and/or waiting for departure clearance prior to takeoff. The development of holding bays is recommended by FAA at airports that exceed 20,000 annual itinerant aircraft operations. This activity threshold is met at LVN, as the Airport served 42,921 aircraft operations in 2025.

1.3.6 Modify and/or Replace Navigational Aids and Instrument Procedures

Runway 12 at LVN currently supports a GPS-based instrument approach procedure and Runway 30 currently supports both ground-based instrument landing system (ILS) and GPS-based instrument approaches. The Runway 12 instrument approach will need to be revised and republished to correspond to the proposed Runway 12 displaced threshold, which needs to be located further down the runway to provide required clearance over a railroad. The Runway 30 instrument approaches will not need revisions because the existing Runway 30 displaced threshold location will not change. To maximize the effectiveness of these procedures and utilization of existing electronic navigational aids, several existing light stations of the Runway 30 Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) will be recessed into the runway pavement and other light station heights will be adjusted to conform to design standards contained in AC 150/5340-30J, *Design and Installation Details for Airport Visual Aids*. The High Intensity Runway Lighting and Medium Intensity Taxiway Lighting (HIRL/MITL) systems will also be adjusted to provide appropriate spacing along the reconstructed and extended runway length of 4,850 feet. The existing Precision Approach Path Indicator (PAPI) systems will be relocated to align with the runway aiming point pavement markings approximately 1,000 feet from the modified landing threshold locations on both runway ends. The Runway End Identifier Lights (REIL) serving Runway 12 will also be relocated to the modified runway end location.

1.3.7 Expand the Fixed Based Operator (FBO) Apron

The existing FBO¹⁵ aircraft parking apron¹⁶ at LVN is relatively small and often congested. The recently completed LTCP recommended that the FBO apron be sized to accommodate approximately 17 aircraft simultaneously to accommodate 60 percent of aircraft operating at the airport during the peak hour of the average day, and estimated a required apron size of approximately 14,700 square yards. The existing apron is approximately 9,400 square yards, approximately 5,300 square yards less than the estimated need. Therefore, an apron expansion should be considered to improve aircraft circulation and increase the number of tie-down locations on the FBO apron.

¹⁴ Eliminating high-energy runway crossings is a recommended practice per FAAAC 150/5300-13B, *Airport Design*.

¹⁵ A fixed base operator, or FBO, is a commercial business granted the right by an airport sponsor to operate on an airport and to provide aeronautical services such as aircraft fueling, maintenance, and storage, and flight instruction to the public.

¹⁶ An aircraft parking apron is a dedicated portion of the airfield that serves as an interface between the airside and landside environments. Aprons serve multiple functions, including loading and unloading of passengers, mail, and cargo; aircraft parking; aircraft fueling operations; and aircraft maintenance operations.

2 - Alternatives

The alternatives chapter of an Environmental Assessment (EA) is based on the purpose and need statement, and compares the no action, the proposed action, and reasonable alternatives (if any). This chapter compares a range of alternatives and evaluates them based on operational, implementation, and known environmental feasibility factors. The result of the evaluation is the selection of a proposed project and alternatives to be carried forward for further evaluation of environmental impacts, identified in Section 2.3. The alternatives are presented and analyzed in the following sections:

- Process for Identifying Alternatives, Section 2.1;
- Range of Alternatives Considered, Section 2.2; and
- Airport Sponsor's Proposed Action, Section 2.3.

2.1 PROCESS FOR IDENTIFYING ALTERNATIVES

In 2018, the MAC adopted a 2035 Long Term Comprehensive Plan (LTCP) for Airlake Airport (FAA identifier LVN, or "the Airport"), which replaced the 2025 LTCP completed in 2008. The 2035 LTCP revisited previous development proposals and updated them to better match airfield infrastructure to existing and forecasted activity levels. The goals of the 2035 LTCP study were the same as those described in Section 1.2 of this EA.

The MAC held two public information meetings in August 2017 to provide information about the draft 2035 LTCP to interested stakeholders. The initial public comment period on the 2035 LTCP closed on August 30, 2017. The Final Draft 2035 Airlake Airport LTCP narrative report was then submitted to the Metropolitan Council for review on November 27, 2017. The Metropolitan Council provided its determination of consistency with regional policies on March 21, 2018, followed by the MAC Board voting to formally adopt the Airlake Airport 2035 LTCP on April 23, 2018.

The LTCP process is a planning process. It does not involve selection of a project among alternatives, as NEPA and MEPA define those terms, and is not an environmental review process. As a result, when the MAC decided to move forward with actions at LVN, it began an environmental review process under NEPA and MEPA to refine, evaluate, and select among alternatives.

2.2 RANGE OF ALTERNATIVES CONSIDERED

FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures*, defines reasonable alternatives as those that are "technically and economically feasible, meet the purpose and need for the proposed action, and, where applicable, meet the goals of the applicant." The alternatives presented in this section are evaluated and compared in terms of their ability to meet the purpose and need explained in Chapter 1. In addition, this section discusses the reasons for eliminating certain alternatives and selecting other alternatives for further study. The range of alternatives considered by this EA includes the following:

- No-Action Alternative
- Alternate Existing Airports
- Runway Alternatives
- Taxiway Alternatives
- Apron Alternatives
- Stream Relocation Alternatives

2.2.1 No-Action Alternative

The No Action Alternative represents what would occur if the MAC maintains the existing 4,099-foot runway length and taxiway layout at Airlake Airport. Under this alternative, the MAC would continue routine maintenance along with programmed full-depth pavement rehabilitation and visual aid replacements to maintain structural integrity and operational safety. This alternative does not include any pavement reconfiguration or expansion, or any modifications to airfield lighting or signage, navigational aids, or stormwater infrastructure. The no-action alternative does not meet the purpose and need because it: 1) does not meet the runway length needs of Airport users, 2) does not correct conditions that do not align with FAA design standards, and 3) does not address aircraft parking apron needs. This alternative is not recommended by this EA because it would not meet the purpose and need. However, as NEPA requires, the no-action alternative is carried forward in this EA as a baseline for comparison with the other alternatives.

2.2.2 Alternate Existing Airports

This section considers meeting the purpose and need by using the MAC's other reliever airports, rather than making improvements at LVN. Airlake Airport is an important part of the MAC's general aviation reliever airports system and serves a vital function in helping MAC fulfill its legislative mandates under Minnesota Statutes §473.602, including:

- Promoting air navigation and transportation, international, national, state, and local, in and through the State of Minnesota.
- Promoting the efficient, safe and economic handling of air commerce and to assure the inclusion of the State in national and international programs of air transportation. To those ends, develop the full potentialities of the metropolitan area as an aviation center.

The MAC operates LVN and five other general aviation airports as reliever airports for Minneapolis-St. Paul International Airport (MSP). The five other reliever airports in the Twin Cities metropolitan area are St. Paul Downtown (STP), Anoka County-Blaine (ANE), Flying Cloud (FCM), Crystal (MIC), and Lake Elmo (21D). The purpose of these airports is to relieve congestion at MSP by providing infrastructure to accommodate the region's general aviation needs. Airlake Airport primarily serves aircraft operators in Dakota County, but also serves some operators in bordering Hennepin, Ramsey, Washington, and Scott Counties. As noted in Chapter 1, the minimum driving distance from the other reliever airports closest to LVN – FCM and STP – can be up to an hour during typical rush hour traffic. Use of the other reliever airports in lieu of improving LVN would not address the needs of the MAC's airport system and would detract from each airport's ability to serve its intended purpose and geographic area within the system.

In addition, use of alternate existing airports in lieu of improving LVN would not meet the project purpose, as it would not: 1) address failing, end-of-life infrastructure, 2) enhance safety for Airport users and neighbors, or 3) improve facilities for the family of aircraft using the Airport. For these reasons, using MAC's five other reliever airports in lieu of making the improvements at LVN does not meet the purpose and need and is not considered further in this EA.

2.2.3 Runway Alternatives

This section provides an overview of the primary runway alternatives screened by the LTCP and supplemental alternatives generated at the outset of the NEPA/MEPA process. Each alternative is evaluated to determine which alternatives should be discarded and which should be analyzed further. This includes the following list of alternatives:

- 2025 LTCP Recommended Alternative
- 2035 LTCP Recommended Alternative
- Declared Distance Refinements to 2035 LCTP Recommended Alternative (Preferred Alternative)

2.2.3.1 2025 LTCP Recommended Alternative

The recommended Runway 12/30 alternative from the 2025 LTCP (completed and approved by the MAC in 2008) proposed extending the runway length to 5,000 feet with a 901-foot extension to the Runway 30 end (**Figure 2-1**). This alternative also proposed extending the parallel taxiway, reconstructing the existing runway, and realigning both Cedar Avenue and 225th Street outside of the extended runway safety area (RSA) and runway object free area (ROFA). Unlike the 2035 LTCP Recommended Alternative, the 2025 LTCP Recommended Alternative did not contemplate the use of declared distances and therefore would relocate the Runway 30 displaced threshold to the new extended Runway 30 end. The 2025 LTCP Recommended Alternative also did not contemplate any reconfiguration of the taxiway system.

The 2025 LTCP Recommended Alternative would realign both Cedar Avenue and 225th Street through the relocated Runway 30 runway protection zone (RPZ), which would represent a triggering event requiring an RPZ Alternatives Analysis under current FAA guidance. Relocating Cedar Avenue completely outside the extended runway RPZ to comply with FAA guidance would be an extensive undertaking. The 2035 LTCP states that a rough order of magnitude (ROM) cost for this relocation would be more than \$16 million in 2018 dollars, or \$21.5 million in 2026 dollars. This cost estimate does not include the nearly 40 acres of property acquisition that would be required for road right-of-way. These 40 acres are nearly all large lot properties within the limits of the City of Lakeville that are zoned for industrial use along a major highway corridor, and therefore would likely cost more than \$10 million in 2026 dollars to acquire, increasing the overall project cost above \$30 million. This alternative would also require additional modifications to the taxiway system as it does not meet current FAA design standards. Finally, relocating Cedar Avenue as proposed by this alternative is no longer practicable nor technically and economically feasible due to the construction of multiple large warehousing facilities on the east side of Cedar Avenue since the 2025 LTCP was prepared, one of which is shown in **Figure 2-1**. For these reasons, the EA does not further consider or analyze the 2025 LTCP Recommended Alternative.

2.2.3.2 2035 LTCP Recommended Alternative

This alternative would extend Runway 12/30 to 4,850 feet with a 271-foot extension on the Runway 12 end and a 480-foot extension on the Runway 30 end, and the use of declared distances ¹⁷ (**Figure 2-2**). These are the maximum runway extensions that can be provided while meeting all runway safety area (RSA) and runway object free area (ROFA) standards without relocating any roads or railroads. The Runway 12 displaced threshold would be shifted 120 feet to the east to allow the approach surface to clear an adjacent railroad, while the Runway 30 displaced threshold would be maintained in its existing location. Like the existing condition, declared distances would be used to mitigate for approach surface obstructions beyond the runway ends, meaning that not all 4,850 feet of runway pavement would be available for landing and takeoff movements in both directions.

There are currently multiple roads and a railroad in the RPZs on both runway ends and this alternative would modify the location of the departure RPZs on both runway ends, which represents a triggering event for an RPZ Alternatives Analysis under the current FAA guidance at the time. Relocating roadways entirely out of the RPZs was considered by the 2035 LTCP and found to be neither technically nor economically feasible. The FAA supported this conclusion with its RPZ Alternatives Analysis approval discussed in Section 1.3.3. The one exception to this is relocating 225th Street, which would fall within the Federal Aviation Regulations (FAR) Part 77 primary surface following the proposed extension on the Runway 30 end. The intersection of Cedar Avenue and 225th Street is also positioned within the proposed Runway 30 RPZ. Relocating 225th Street to the south would both remove it from the extended FAR Part 77 primary surface and relocate its intersection with Cedar Avenue outside of the Runway 30 RPZ. The FAA concurred with this approach and documented it in a letter dated January 5th, 2017.

¹⁷ Declared distances represent the maximum distances available and suitable for an aircraft's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements, and are employed to mitigate existing runway shortcomings and thus better meet design standards.

There is an existing intermittent stream, located approximately 150 feet south of the Runway 12 threshold and crossing underneath Taxiway B1, that would need to be partially relocated for this alternative. Additional information on stream relocation alternatives and associated agency coordination can be found in Section 2.2.6 and **Appendix C**.

2.2.3.3 Declared Distance Refinements to 2035 LTCP Recommended Alternative (Preferred Alternative)

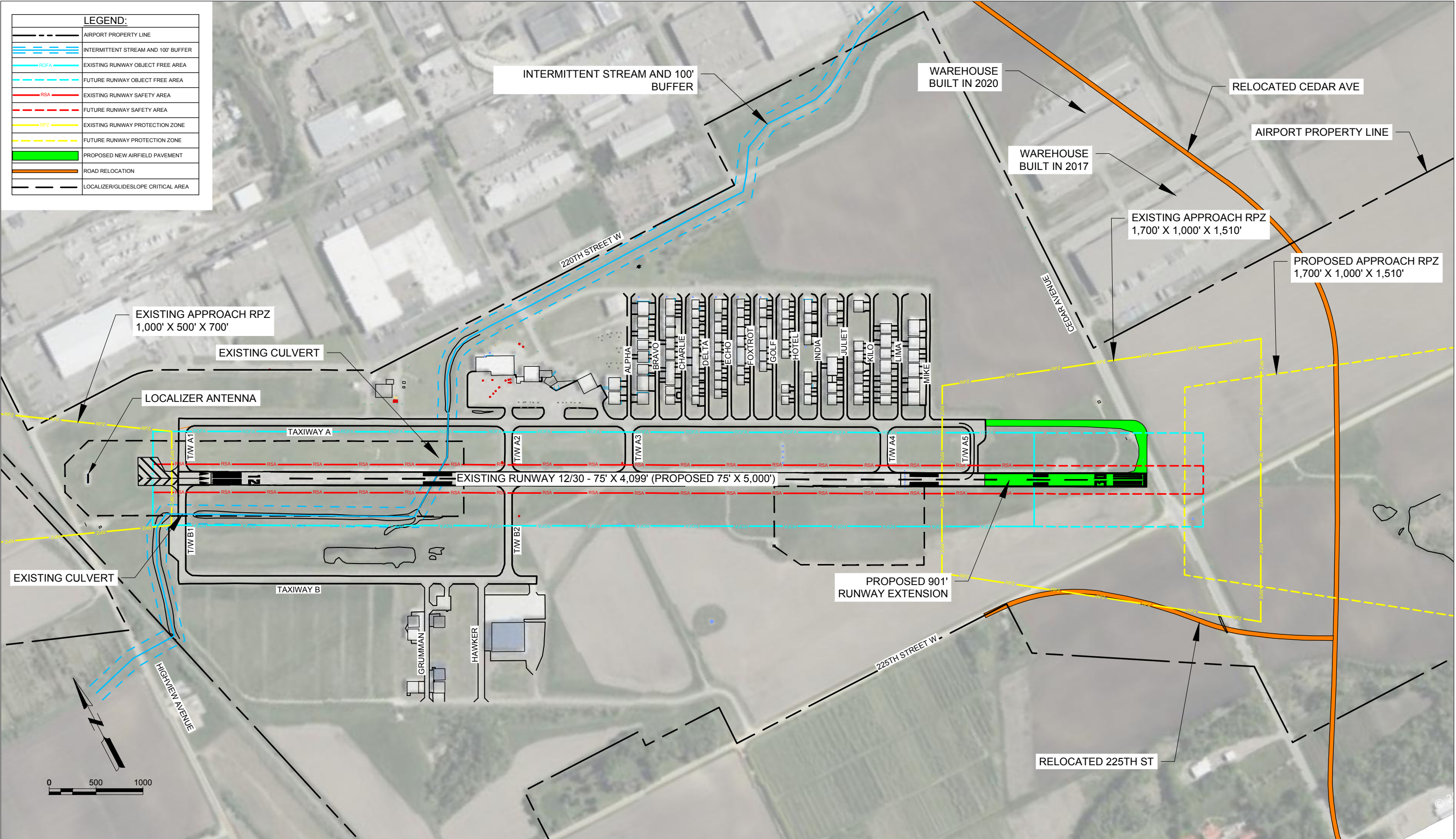
Additional conversations between the MAC and the FAA took place in 2025, the result of which refined the alternative to allow for greater takeoff length. Shown in **Figure 2-2**, this alternative expands the takeoff run available (TORA) and takeoff distance available (TODA) to the full proposed runway length of 4,850 feet. This is an improvement to these declared distances in both directions on Runway 12/30. The primary considerations when extending the TORA and TODA are the associated changes to the RPZ and departure surfaces, respectively.

Except for the road and railroad rights-of-way, the RPZs for this alternative would be contained entirely on Airport property. An updated RPZ Alternatives Evaluation was completed and accepted by the FAA on September 17, 2025, reflecting a full-length Runway 12 TORA of 4,850 feet.

The departure surface is a shallow 40:1 surface¹⁸ starting at the end of the TODA which is intended to protect departing aircraft from obstacles in their flight path. As documented in a notice email from FAA dated September 10th, 2025, FAA Flight Procedures does not expect any instrument flight rules (IFR) effects on either of the future Runway 12 or 30 departure ends when the departure end of runway (DER) is shifted to the proposed extended runway ends. Therefore, subject to a favorable aeronautical study, the entire planned runway length can be used as TORA and TODA in both directions. The FAA will revise the takeoff obstacle notes in the published instrument departure procedures with new survey data following construction.

The refined 2035 LTCP Recommended Alternative will be carried forward through the EA as the preferred runway alternative because it best meets the purpose and need while minimizing environmental impacts compared to the other runway alternatives.

¹⁸ The FAA defines the slope of approach and departure (takeoff climb) surfaces as a ratio of horizontal distance to vertical rise (run:rise), meaning for every specified number of feet traveled horizontally away from the runway, the imaginary surface rises by one foot vertically.



AIRLAKE AIRPORT
LAKEVILLE, MINNESOTA

2838700-220268.01
MAY, 2026

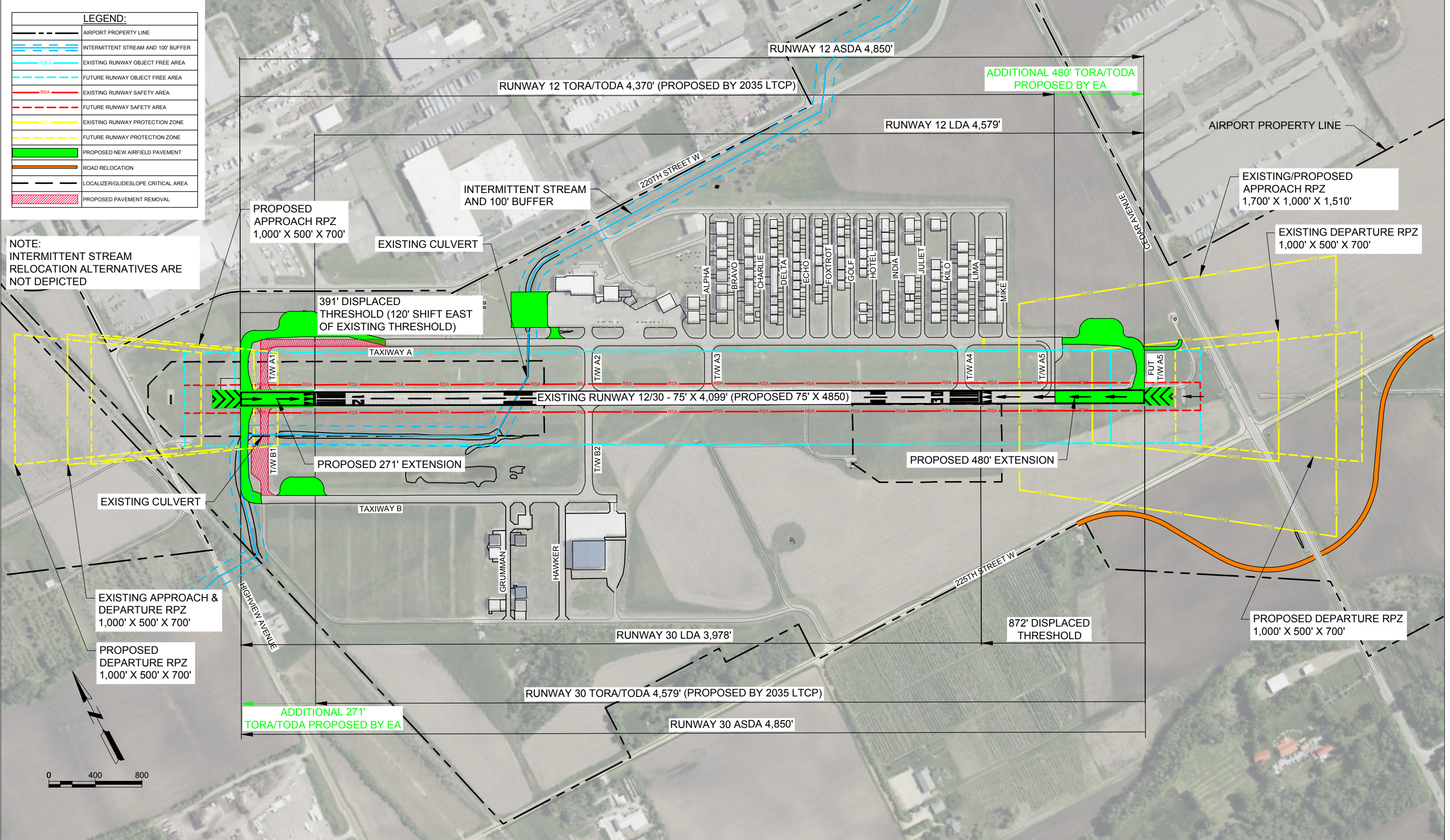
2025 LTCP RECOMMENDED RUNWAY ALTERNATIVE

**Mead
& Hunt**

FIGURE 2.1

LEGEND:	
	AIRPORT PROPERTY LINE
	INTERMITTENT STREAM AND 100' BUFFER
	EXISTING RUNWAY OBJECT FREE AREA
	FUTURE RUNWAY OBJECT FREE AREA
	EXISTING RUNWAY SAFETY AREA
	FUTURE RUNWAY SAFETY AREA
	EXISTING RUNWAY PROTECTION ZONE
	FUTURE RUNWAY PROTECTION ZONE
	PROPOSED NEW AIRFIELD PAVEMENT
	ROAD RELOCATION
	LOCALIZER/GLIDESLOPE CRITICAL AREA
	PROPOSED PAVEMENT REMOVAL

NOTE:
INTERMITTENT STREAM
RELOCATION ALTERNATIVES ARE
NOT DEPICTED



9/9/2026 10:48:22 AM
X:\2025\10022268\01\TECH\A\2025 LTCP FIGURE 2.2.DWG



AIRLAKE AIRPORT
LAKEVILLE, MINNESOTA

2838700-220268.01
MAY 2026

2035 LTCP RECOMMENDED RUNWAY ALTERNATIVE AND
POST-LTCP REFINEMENTS (PREFERRED ALTERNATIVE)



FIGURE 2.2

2.2.4 Taxiway Alternatives

The taxiway alternatives considered by this EA largely originate from the 2035 LTCP but additional alternatives and refinements have been developed since that time. This section summarizes both the alternatives proposed in the 2035 LTCP, as well as proposed aircraft holding bays at the ends of the parallel taxiways, and other proposed taxiway modifications to align with current FAA standards. Each of the changes discussed in this section are shown in the preferred taxiway alternatives, **Figure 2-3** and **Figure 2-4**.

2.2.4.1 2035 LTCP Recommended Alternatives

The following taxiway system modifications proposed by the 2035 LTCP are included in the proposed action for this EA.

Eliminate Direct Access Taxiways (Preferred).

To comply with FAA guidance prohibiting taxiways that directly connect an apron to a runway, the portion of Taxiway A2 that connects Taxiway A to the terminal apron would be removed and relocated to the northwest edge of the existing apron. Relocating the taxiway connection 130 feet to the northwest would eliminate the direct apron to runway connection while requiring minimal modifications to the taxiway system. The relocated taxiway would impact a small 0.02-acre artificial wetland that would be replaced as part of the stream relocation element of the overall runway, taxiway, and apron project.

Relocate Runway Holding Position Markings and Enhance Taxiway Lighting and Signage (Preferred).

All taxiways connecting the runway to parallel Taxiways A and B currently have holding position markings at 250 feet from the runway centerline. This leaves a minimal amount of room for aircraft to turn and hold, which can obstruct the parallel taxiway and prevent direct pilot line-of-sight to both runway ends. The LTCP recommended relocating the holding positions to 200 feet from the runway centerline to resolve these issues. Taxiway edge lighting, additional markings, and lit signage would also be added to all connector taxiways to aid wayfinding and reduce the risk of runway incursions.

2.2.4.2 Refinements to 2035 LTCP Recommended Alternatives

The following refinements to the taxiway system were considered following publication of the 2035 LTCP and are included in the proposed action for this EA.

Realign Portion of Parallel Taxiway A (Preferred).

Taxiway A is currently parallel to Runway 12/30 for the full length of the runway. According to AC 150/5300-13B, it is a recommended practice to provide a 50-foot to 100-foot parallel taxiway offset within 1,500 feet of the runway end. The MAC considered several alternatives for implementing this recommended practice for Taxiway A on the Runway 12 end because, in the current fully parallel configuration, many aircraft types penetrate the approach threshold siting surface (TSS)¹⁹ when at the holding position marking on Taxiway A1. The MAC proposes providing a 50-foot parallel taxiway offset to eliminate this TSS penetration. The holding position marking on Taxiway A1 would be relocated from 250 to 234 feet from the runway centerline, which is as close as the holding position can be without infringing on the Runway 12 approach TSS. Holding position markings on all other connector taxiways would be relocated from 250 to 200 feet from the runway centerline to allow aircraft to turn and hold perpendicular to the runway, as recommended by the 2035 LTCP. A parallel taxiway offset is not needed on Taxiway B south of the Runway 12 end because it is further separated from the runway centerline than Taxiway A, and a similar offset is not needed on Taxiway A north of the Runway 30 end because the displaced threshold is located further from the runway end than on the Runway 12 end, resulting in no TSS penetrations at the holding position markings for Taxiway B1 or A5.

¹⁹ Threshold siting surfaces are imaginary airspace surfaces established by FAA AC 150/5300-13B, *Airport Design*, to properly locate runway thresholds to provide obstacle clearance for landing and departing aircraft.

Construct Aircraft Holding Bays (Preferred).

Holding bays increase runway capacity and aid taxiway circulation by allowing aircraft to hold for conducting engine run ups and/or awaiting departure clearances while not obstructing other traffic. The MAC proposes two holding bays on the Runway 12 end, one on each side of the runway adjacent to Taxiways A and B, and a single holding bay on the Runway 30 end on the north side of the runway adjacent to Taxiway A.

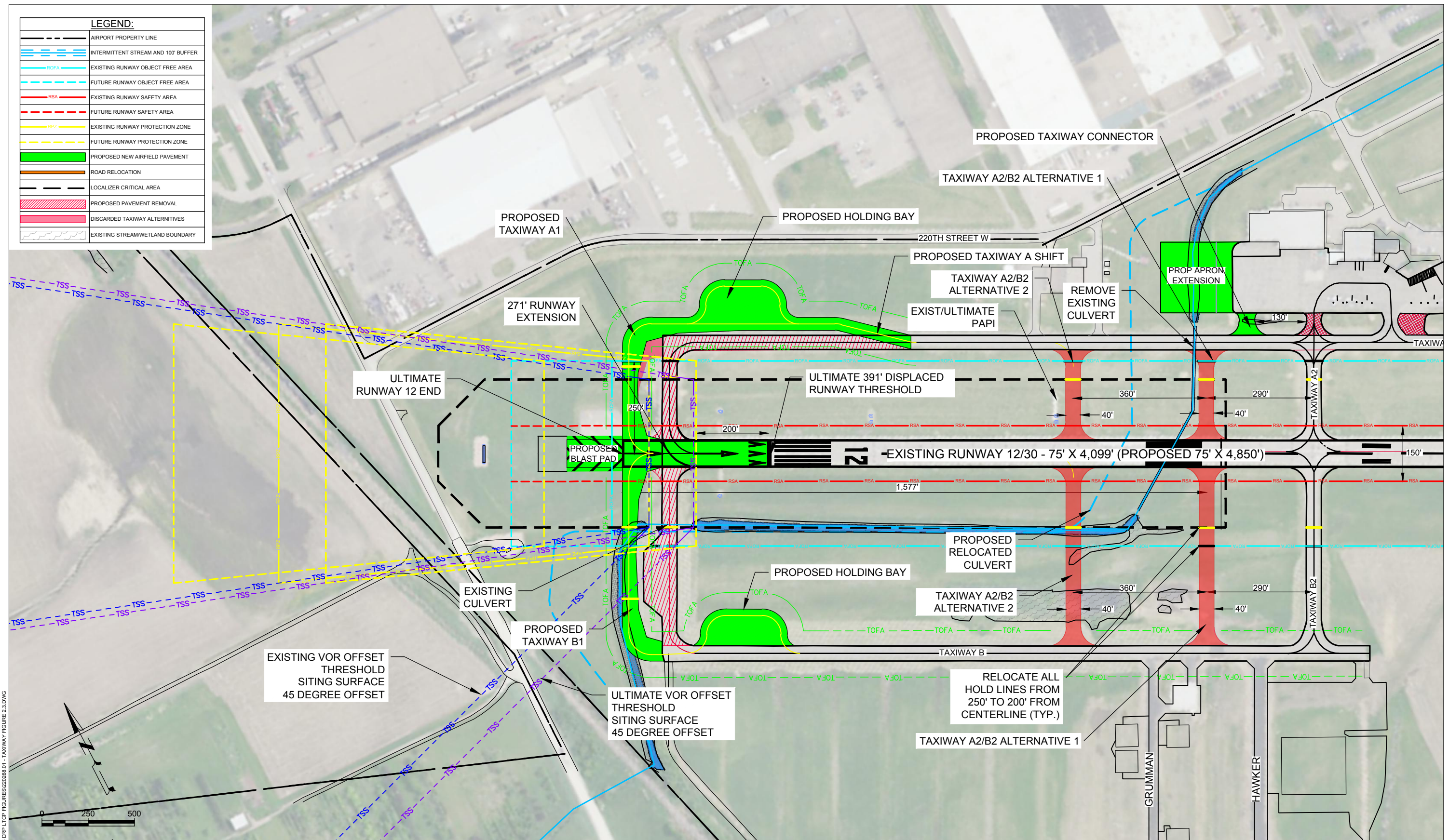
2.2.4.3 Crossing Taxiway in Middle Third of Runway

Taxiways A2 and B2 currently cross the runway from the terminal apron north of the runway to the hangar area south of the runway. According to FAA AC 150/5300-13B, it is a recommended practice to locate exit taxiways outside the middle third of the runway. The FAA considers the middle third of the runway the “high-energy portion” of the runway associated with the speed of accelerating and decelerating aircraft. However, modifying the taxiway exit locations would potentially affect runway capacity and safety. Ineffectively placed exits require aircraft to taxi additional distances along the runway after slowing to an appropriate exit speed. This translates to aircraft spending additional time on the runway and reducing the ability of additional aircraft to take off or land on the runway. As Taxiways A2 and B2 are primarily used as exit taxiways by aircraft landing on Runway 30, an evaluation of related capacity impacts was completed to analyze existing and proposed runway exit locations based on the specific airport fleet mix and environmental conditions at LVN. The full study is available in **Appendix B** while a summary is provided below. As shown in **Figure 2-3**, two alternatives that propose relocating Taxiways A2 and B2 were considered, while a third alternative that would keep the existing runway exit locations in place was also considered.

Alternative 1 would relocate Taxiways A2 and B2 290 feet closer to the Runway 12 end, which is the furthest distance that the taxiway can be moved without impacting the intermittent stream that crosses underneath the runway. Under this alternative, the relocated Taxiway A2/B2 centerline would be positioned just outside the middle third of the proposed runway length. This would largely comply with FAA guidance discouraging runway crossings in the “high-energy” portion of the runway, although a portion of the eastern edge of the paved taxiway surface would be within the middle third of the runway. Alternative 2 would relocate Taxiway A2/B2 650 feet closer to the Runway 12 end, which is the furthest distance that the taxiway can be moved without impacting the Runway 12 precision approach path indicator (PAPI). This alternative would be well outside the middle third of the runway. Alternative 3 would keep the existing runway exit taxiways in place.

Based on the capacity analysis in **Appendix B**, relocating Taxiway A2/B2 as proposed by either Alternative 1 or Alternative 2 would not provide significant safety or capacity benefits that outweigh adverse cost and environmental factors, as the existing runway exit configuration provides a similar level of safety and capacity to the other alternatives. For these reasons, Alternative 3 was selected as the preferred crossing taxiway alternative.

LEGEND:	
	AIRPORT PROPERTY LINE
	INTERMITTENT STREAM AND 100' BUFFER
	EXISTING RUNWAY OBJECT FREE AREA
	FUTURE RUNWAY OBJECT FREE AREA
	EXISTING RUNWAY SAFETY AREA
	FUTURE RUNWAY SAFETY AREA
	EXISTING RUNWAY PROTECTION ZONE
	FUTURE RUNWAY PROTECTION ZONE
	PROPOSED NEW AIRFIELD PAVEMENT
	ROAD RELOCATION
	LOCALIZER CRITICAL AREA
	PROPOSED PAVEMENT REMOVAL
	DISCARDED TAXIWAY ALTERNATIVES
	EXISTING STREAM/WETLAND BOUNDARY



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X:\2838700\220268\01\TECH\A0\2026 DRP LTP FIGURES\220268.01 - TAXIWAY FIGURE 2.3.DWG



AIRLAKE AIRPORT (LVN)
LAKEVILLE, MINNESOTA

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MAY 2026

TAXIWAY ALTERNATIVES (WEST END)

2.2.5 Apron Alternatives

An expansion to the existing terminal aircraft parking apron would better accommodate existing and future itinerant aircraft activity. The existing apron has an estimated deficiency of approximately 47,700 square feet and either an extension or additional apron should be considered. As shown in **Figure 2-5**, three different apron alternative sites were considered in the 2035 LTCP.

2.2.5.1 Apron Alternative Site A (Preferred Alternative)

This alternative would expand the existing apron by 200 feet to the northwest, for a total apron expansion of approximately 40,000 square feet, but would be constrained by the existing intermittent stream adjacent to the apron. As a first phase, the apron could be expanded approximately 50 feet towards the stream while still retaining the required 50-foot stream buffer, yielding approximately 10,000 square feet of additional apron area. However, this would not fully meet the purpose and need. Any further expansion beyond 50 feet would require relocating the stream or installing a culvert underneath the expanded apron.

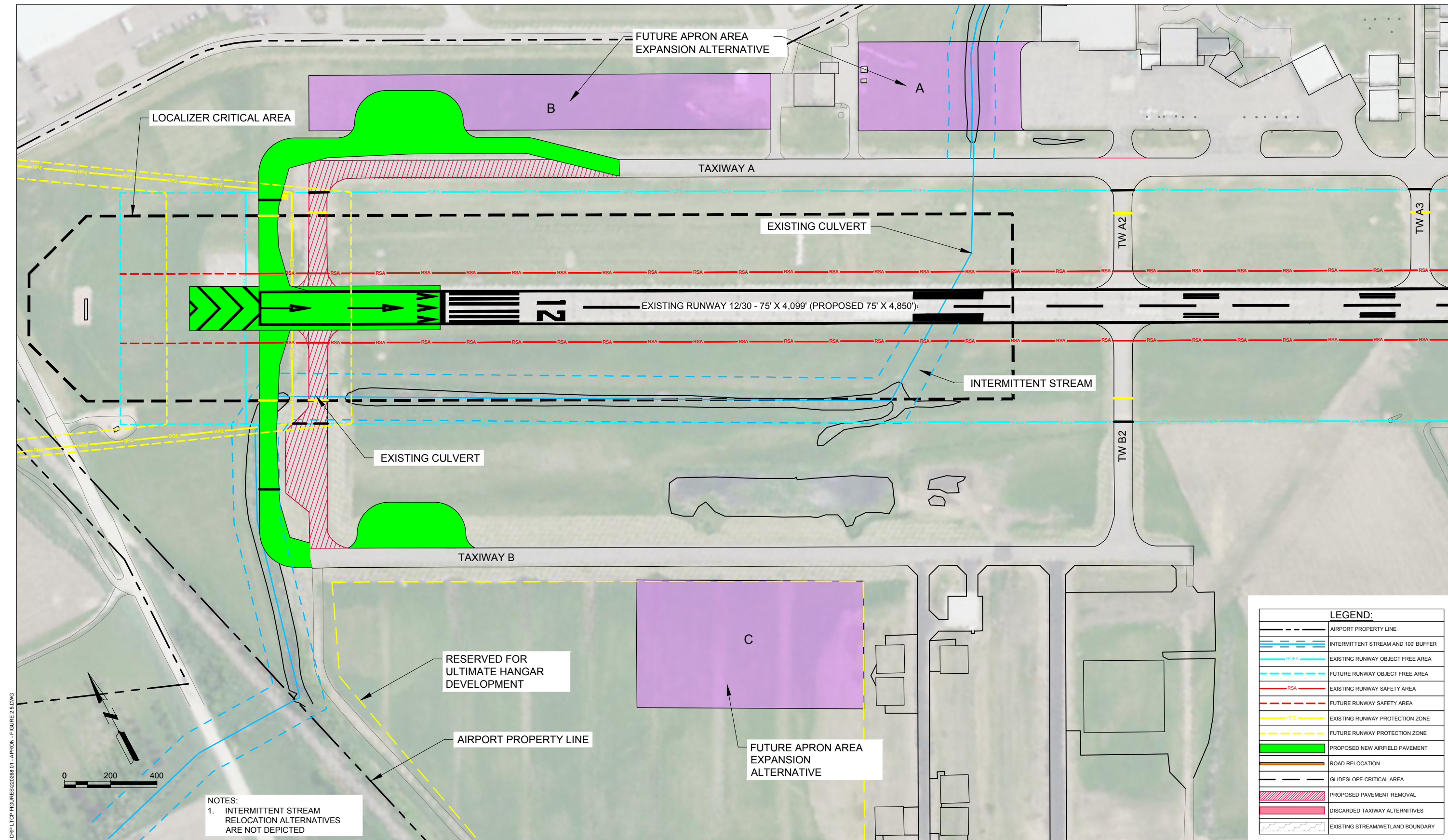
The LTCP selected Site A as the best option to meet the purpose and need for an expanded apron. Site A will be carried forward through the EA as the preferred apron alternative. Sites B and C, described below, were not selected due to their distant locations, their lack of ready accessibility and/or visibility from the FBO, and their existing or planned development for other uses. Due to the required stream relocation for Site A, additional coordination with resource agencies and local governments was conducted and multiple stream relocation alternatives were evaluated. Additional information on stream relocation alternatives and associated agency coordination can be found in Section 2.2.6 and **Appendix C**.

2.2.5.2 Apron Alternative Site B

This alternative would construct a new apron adjacent to Taxiway A on the west side of the stream and MAC maintenance building. Based on surrounding constraints, this site would only allow construction of a long, linear apron with limited operational flexibility due to reduced separation between Taxiway A and a public roadway (219th Street). This site would also complicate operations as it is not contiguous to or visible from the FBO, and the lack of existing security fencing may make some pilots reluctant to leave their aircraft there while unattended. The proposed Taxiway A offset described in the previous section would also reduce the available area for an apron well below what was available when this alternative was first considered by the 2035 LTCP.

2.2.5.3 Apron Alternative Site C

Located to the south of the runway, this alternative site is adjacent to Taxiway B in the hangar area south of the runway. The site considered by the 2035 LTCP has since been developed for a large corporate hangar; therefore, an alternate site was identified in the south hangar area as shown in **Figure 2-5**. However, this location is currently planned for future hangar development. Furthermore, an apron south of the runway would not be contiguous to the existing FBO, complicating passenger and pilot debarkation as well as aircraft parking, fueling, and service. The separation of this alternative from the FBO would also result in increased runway crossings, which are not desirable for safety reasons.



NOTES:
1. INTERMITTENT STREAM
RELOCATION ALTERNATIVES
ARE NOT DEPICTED

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X:\2838700\220268\01\TECH\CD\2026 DRP LTOP FIGURES\220268.01 - APRON - FIGURE 2.5.DWG



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LAKEVILLE, MINNESOTA

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MAY 2026

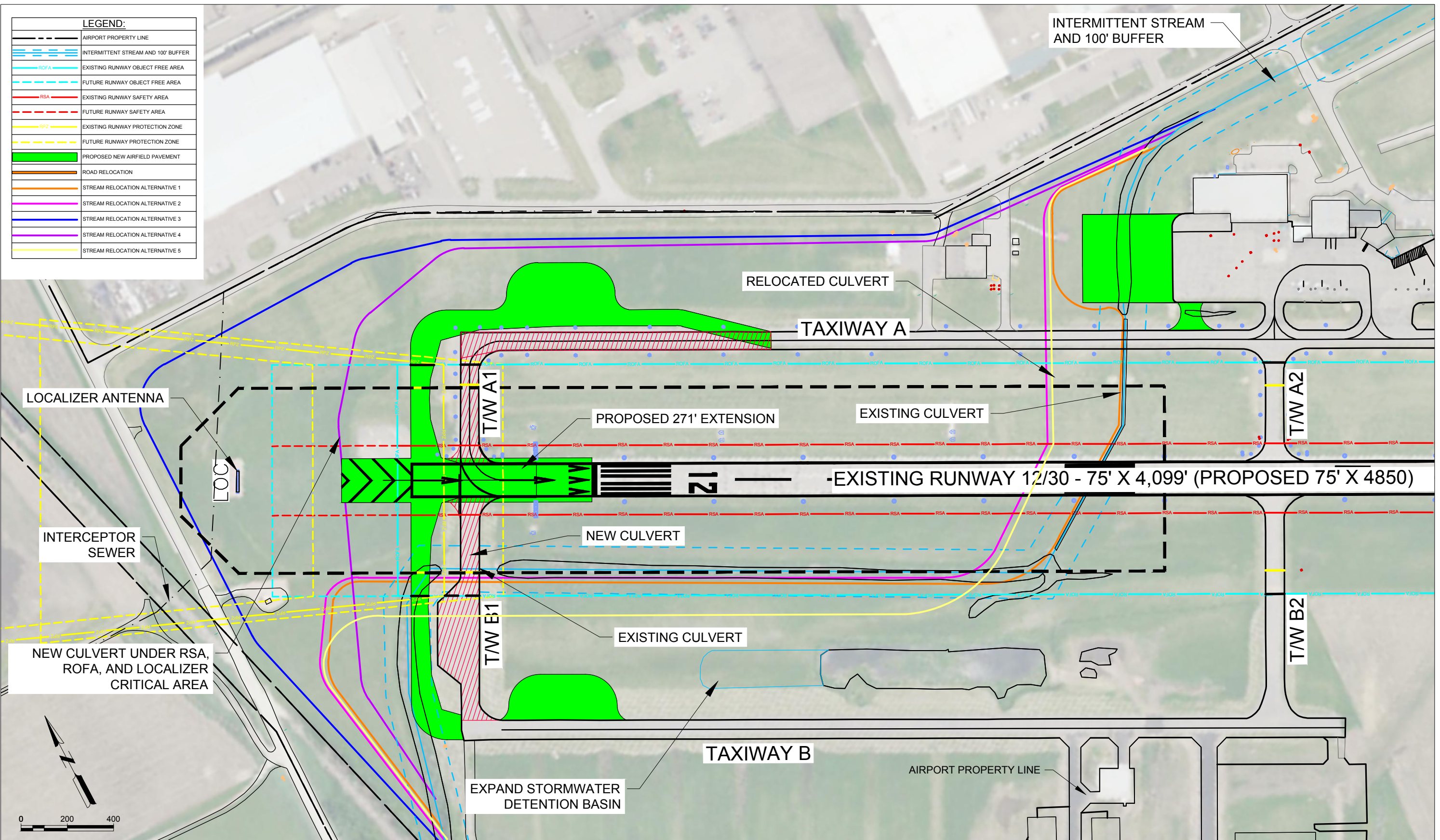
APRON ALTERNATIVES

2.2.6 Stream Relocation Alternatives

As noted above, two segments of an existing intermittent stream would need to be relocated to accommodate the preferred runway, taxiway, and apron alternatives. The first segment is located approximately 150 feet south of the Runway 12 threshold and crosses underneath Taxiway B1. The second segment starts at the inlet to the culvert crossing Runway 12/30 and Taxiway A, and ends north of the FBO.

Five stream relocation alternatives were developed and evaluated in consultation with the City of Lakeville, the Vermillion River Watershed Joint Powers Organization, the Minnesota Department of Natural Resources (MnDNR), and the U.S. Army Corps of Engineers. The stream relocation alternatives are depicted in **Figure 2-6** and a detailed analysis of the five alternatives can be found in **Appendix C**. The MAC selected Alternative 2, shown in **Figure 2-6** and described in **Appendix C**, as the preferred alternative. This alternative would realign the stream around the relocated Taxiway B1, relocate the culvert under Taxiway B1 to the new Taxiway B1 location, replace the culvert crossing Runway 12/30 and Taxiway A, and shift the culvert crossing to the west to avoid the proposed extension of the aircraft parking apron north of the runway. This alternative would minimize wetland impacts, avoid reduction in stream length, satisfy shoreland vegetative buffer requirements, minimize wildlife hazard potential, eliminate the need for additional underground stream conveyances, and minimize modifications to the stream channel. It would also avoid impacts to multiple pieces of critical infrastructure potentially affected by other alternatives, including the FAA-owned localizer antenna array, the MAC maintenance building and refueling area, and a Metropolitan Council interceptor sewer line.

LEGEND:	
	AIRPORT PROPERTY LINE
	INTERMITTENT STREAM AND 100' BUFFER
	EXISTING RUNWAY OBJECT FREE AREA
	FUTURE RUNWAY OBJECT FREE AREA
	EXISTING RUNWAY SAFETY AREA
	FUTURE RUNWAY SAFETY AREA
	EXISTING RUNWAY PROTECTION ZONE
	FUTURE RUNWAY PROTECTION ZONE
	PROPOSED NEW AIRFIELD PAVEMENT
	ROAD RELOCATION
	STREAM RELOCATION ALTERNATIVE 1
	STREAM RELOCATION ALTERNATIVE 2
	STREAM RELOCATION ALTERNATIVE 3
	STREAM RELOCATION ALTERNATIVE 4
	STREAM RELOCATION ALTERNATIVE 5



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X:\2838700\220268.01\TECH\CD\2026 DRP LTP FIGURES\220268.01 - STREAM FIGURE 2.6.DWG



AIRLAKE AIRPORT
LAKEVILLE, MINNESOTA

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MAY 2026

STREAM RELOCATION ALTERNATIVES



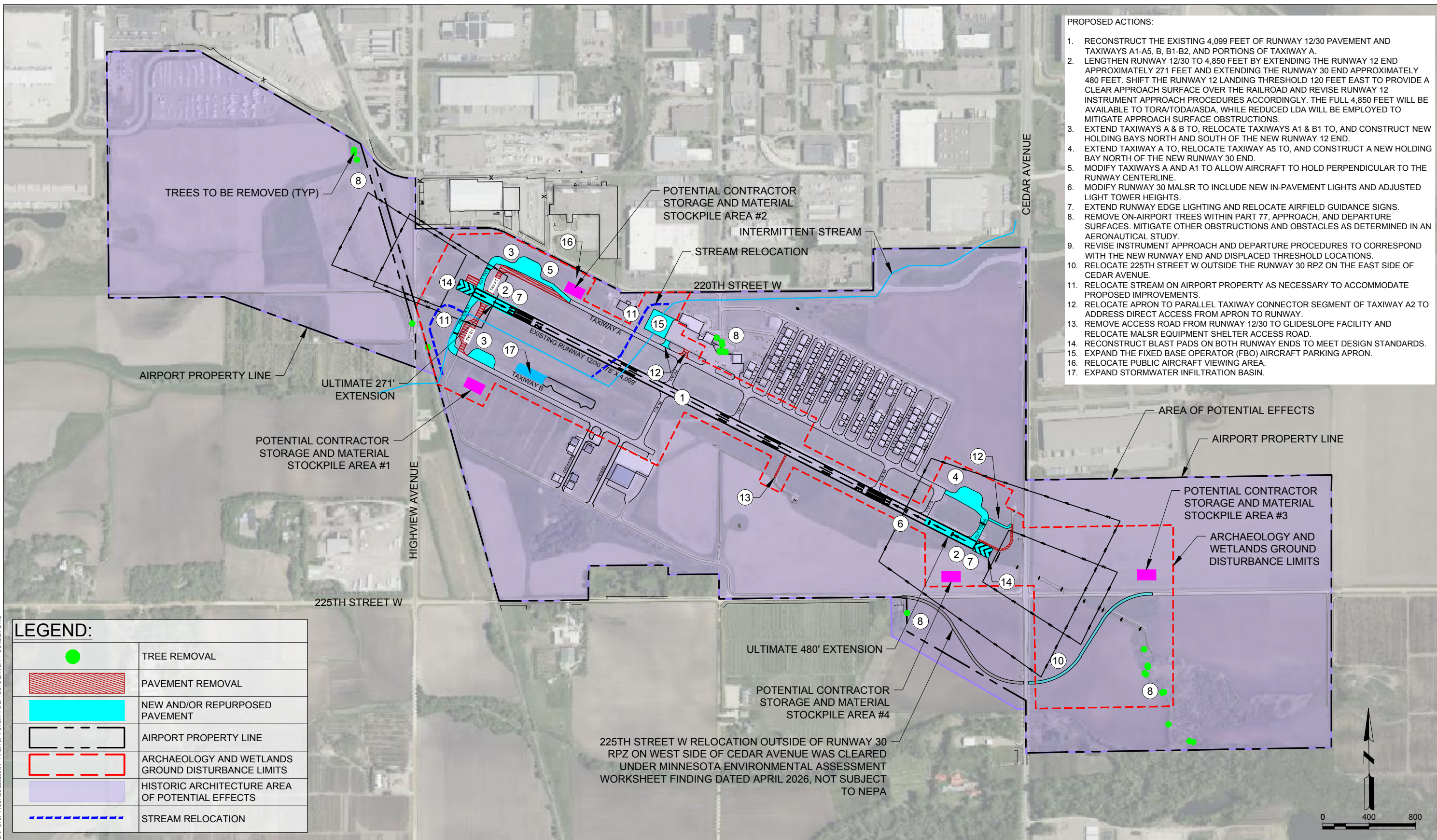
FIGURE 2.6

2.3 AIRPORT SPONSOR'S PROPOSED PROJECT

Major elements of the airport sponsor's proposed action, along with ancillary or associated projects, are presented below. This is a concise list of the actions needed to complete the project and/or obtain federal funding and is intended to provide a link between the descriptions in Chapters 1 and 2 to what is shown in the proposed action figure on the next page, **Figure 2-7**.

1. Reconstruct the existing 4,099 feet of Runway 12/30 pavement and Taxiways A1-A5, B, B1-B2, and portions of Taxiway A.
2. Lengthen Runway 12/30 to 4,850 feet by extending the Runway 12 end approximately 271 feet and extending the Runway 30 end approximately 480 feet. Shift the Runway 12 landing threshold 120 feet east to provide a clear approach surface over the railroad and revise instrument approach procedures accordingly. The full 4,850 feet will be available to TORA/TODA/ASDA, while reduced LDA will be employed to mitigate approach surface obstructions.
3. Extend Taxiways A & B to, relocate Taxiway A1 & B1 to, and construct new holding bays north and south of the new Runway 12 end.
4. Extend Taxiway A to, relocate Taxiway A5 to, and construct a new holding bay north of the new Runway 30 end.
5. Modify Taxiways A and A1 to allow aircraft to hold perpendicular to the runway centerline.
6. Modify the Runway 30 medium intensity approach lighting system with runway alignment indicator lights (MALSR) to include new in-pavement lights and adjusted light tower heights.
7. Extend runway edge lighting and relocate airfield guidance signs.
8. Remove on-airport trees within FAR Part 77, approach, and departure surfaces. Mitigate other obstructions and obstacles as determined in an aeronautical study.
9. Revise instrument approach and departure procedures to correspond with the new runway end and displaced threshold locations.
10. Relocate 225th Street W outside the Runway 30 RPZ on the east side of Cedar Avenue.
11. Relocate stream on Airport property as necessary to accommodate proposed improvements.
12. Relocate apron to parallel taxiway connector segment of Taxiway A2 to address direct access from apron to runway.
13. Remove access road from Runway 12/30 to glideslope facility and relocate MALSR equipment shelter access road.
14. Reconstruct blast pads on both runway ends to meet design standards.
15. Expand the fixed base operator (FBO) aircraft parking apron.
16. Relocate public aircraft viewing area.
17. Expand stormwater infiltration basin.

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X:\2025\10022268\01\TECH\A\2026\01-AREA OF POTENTIAL EFFECTS EXHIBIT FIGURE 2.7.DWG



AIRLAKE AIRPORT
LAKEVILLE, MINNESOTA

2838700-220268.01
MAY 2026

AIRPORT SPONSOR'S PROPOSED PROJECT

**Mead
& Hunt**

FIGURE 2.7

3 - Affected Environment & Environmental Consequences

3.1 INTRODUCTION

This chapter evaluates the environmental impacts of the Airport Sponsor's Proposed Action. During final design review, FAA Technical Operations may determine that additional modifications to the stream alignment are necessary to maintain required separation from FAA navigational aid facilities. Potential effects of this design refinement are discussed separately in Section 3.14.3.3, Surface Water. This includes appropriate analysis of all environmental impact categories required by FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures*. This chapter is organized by environmental resource impact categories that include a discussion of the regulatory setting, affected environment, mitigation, and significance determinations.

3.1.1 Regulatory Setting

The regulatory setting section under each resource category discusses the requirements for assessing the resource and applicable federal, state, and local laws and regulations.

3.1.2 Affected Environment

The Affected Environment section under each resource category describes the existing environment in which the project area takes place. This information establishes the baseline conditions for each resource category against which to evaluate potential impacts of the proposed action.

3.1.3 Environmental Consequences

The Environmental Consequences section under each resource category assesses the potential impacts of the no-action and the preferred alternative. Environmental consequences include all reasonably foreseeable effects, as well as significance and mitigation measures, if applicable.

3.1.3.1 Mitigation

Some resource categories include a mitigation subsection, which provides guidance on types of mitigation that may be used to reduce the potential impact of the proposed project.

3.1.3.2 Significance Determination

Some resource categories include a significance determination subsection, which considers the specific thresholds at which the FAA considers an environmental impact to be significant. This section summarizes factors to consider when evaluating the significance of potential environmental consequences.

3.1.4 Area of Analysis

Study areas for each resource category are defined in each section and summarized in **Table 3-1**. Where the study area is not self-evident (e.g., the Area of Potential Effect for cultural resources, modeled noise contours, or jurisdictional boundaries), the applicable resource section further describes the study area and the basis for its selection. Study areas were established using FAA Order 1050.1G, the FAA Desk Reference, agency guidance, and professional judgment based on the nature of the potential effect being evaluated.

Table 3-1: Resource Category Study Areas

Resource Category	Study Area
Air Quality	Dakota County
Biological Resources	Project boundary
Department of Transportation Section 4(f)	- Project boundary - Areas directly adjacent to the Airport
Farmland	Project boundary
Hazardous Materials, Solid Waste, and Pollution Prevention	Area of potential ground disturbance
Historic, Architectural, Archaeological, and Cultural Resources	- Area of Potential Effect for above ground resources - Area of potential ground disturbance for below ground resources
Land Use	1-mile radius of project boundary
Natural Resources and Energy Supply	Project boundary
Noise and Compatible Land Use	Area within 65 decibel day-night average sound level (DNL) contour
Socioeconomics and Children's Environmental Health and Safety	- Dakota County - City of Lakeville - Eureka Township - Areas directly adjacent to the Airport
Visual Effects	- Project boundary - Areas directly adjacent to the Airport
Surface Waters and Stormwater	- Project boundary - Stream downstream from on-airport segment
Floodplains	Project boundary
Wetlands	Project boundary

3.2 ENVIRONMENTAL CATEGORIES NOT ANALYZED IN DETAIL

During initial analysis, the following resources were found to be not present, or the proposed action was found to have either minimal impact or no impact on these resource categories.

3.2.1 Coastal Resources

The Coastal Resources section is not analyzed in detail because the resource is not present on or near the Airport.

3.2.2 Water Resources: Wild & Scenic Rivers

The Water Resources: Wild & Scenic Rivers section was not analyzed in detail because the airport is not located on or near a Wild or Scenic River.²⁰

²⁰ National Wild and Scenic River System: <https://www.rivers.gov/carp/map>

3.3 AVIATION EMISSIONS AND AIR QUALITY

3.3.1 Regulatory Setting

Under the Clean Air Act (CAA), the Environmental Protection Agency (EPA) regulates levels of certain pollutants that in high enough concentrations affect air quality and can harm human health, affect crops and vegetation, and cause property damage. These pollutants, called criteria pollutants, include ground-level ozone (O₃), particulate matter (PM), carbon monoxide (CO), lead (Pb), sulfur dioxide (SO₂), and nitrogen dioxide (NO₂). According to the FAA Air Quality Handbook, “an EA or EIS typically includes an air quality assessment commensurate with the project air quality impact to help evaluate and disclose the potential effects on air quality associated with the project.”

3.3.2 Affected Environment

When determining air quality impacts, it is necessary to determine whether the project study area is in attainment or nonattainment for the National Ambient Air Quality Standards (NAAQS). This area of Dakota County is currently designated as *in attainment* for all NAAQS criteria pollutants. Portions of the county were historically designated nonattainment for carbon monoxide (1971 standard), sulfur dioxide (1971 standard), and lead (1978 standard), and were redesignated to attainment with approved maintenance plans in 1999, 1997, and 1994, respectively. The required maintenance plan periods for these areas have since concluded, and the project area is no longer subject to maintenance area requirements for these pollutants.

Existing emissions in the study area are associated with general aviation aircraft operations, ground support equipment, and vehicle traffic accessing the Airport. Air emissions from the Airport primarily result from aircraft engine exhaust during takeoff, landing, taxiing, and idling, as well as fuel combustion from ground vehicles and maintenance equipment. Overall activity levels at the Airport are typical of a general aviation facility, and emissions are relatively minor and localized in nature.

3.3.3 Environmental Consequences

Under the No Action Alternative, described in Section 2.2.1, the existing 4,099-foot runway and associated taxiways would undergo programmed pavement rehabilitation and visual aid replacements to maintain structural integrity and operational safety. These activities would generate temporary construction-related emissions from construction equipment, material hauling, and associated construction activities. Runway reconstruction comprises approximately 46 percent of the total disturbance area evaluated for the Proposed Action. As a result, a substantial portion of the construction-related emissions identified for the Proposed Action would also occur under the No Action Alternative. However, emissions associated with runway extension, roadway relocation, stream relocation, utility modifications, stormwater improvements, and other elements of the Proposed Action would not occur under the No Action Alternative. Airport operations would continue under the existing airfield configuration, and the incremental operational emissions associated with the Proposed Project would not occur.

The Proposed Project would result in temporary construction-related emissions and minor operational emissions associated with the airfield improvements. Operational emissions under the Proposed Action would be associated with aircraft taxiing, takeoff, landing, and idling; ground support equipment; and vehicle traffic accessing the Airport. Compared with the No Action Alternative, the Proposed Project may result in localized increases in emissions at LVN due to changes in aircraft activity and fleet mix. However, as described in Chapter 1, a portion of future operations is expected to consist of activity that would otherwise occur at airports such as Flying Cloud Airport or St. Paul Downtown Airport, rather than newly generated operations. As a result, while the Proposed Action may result in localized increases at LVN, these changes would largely reflect a redistribution of existing regional aviation activity rather than a net increase in overall emissions within the metropolitan area. Operations at LVN would remain consistent with its role as a general aviation reliever facility, and the Proposed Project would not substantially increase regional aviation emissions.

Potential air quality impacts were evaluated consistent with the procedures and attainment-area screening methodology FAA Aviation Emissions and Air Quality Handbook; the supporting analysis is found in **Appendix D**. The screening analysis considered changes in aircraft operations, aircraft delay, ground access vehicle travel, and construction activity to determine the appropriate level of analysis for each emissions source. The Proposed Action would result in approximately 1,229 additional annual aircraft operations compared to the No Action Alternative, which is well below the applicable FAA screening thresholds.

The Proposed Action would not increase aircraft delays and is not expected to generate vehicle travel approaching FAA screening thresholds. As a result, operational emissions were screened out from further quantitative analysis under FAA's attainment-area screening methodology and no significant operational air quality impacts are anticipated.

Because the Proposed Action could exceed FAA screening thresholds for construction equipment, consistent with the next step in the Handbook process, a quantitative construction emissions inventory was completed. Construction-related emissions were estimated at approximately 34.6 tons per year of carbon monoxide (CO), 3.77 tons per year of volatile organic compounds (VOC), 5.05 tons per year of nitrogen oxides (NO_x), 0.109 tons per year of sulfur dioxide (SO₂), 4.15 tons per year of particulate matter less than 10 microns (PM₁₀), and 0.31 tons per year of particulate matter less than 2.5 microns (PM_{2.5}). All estimated emissions are substantially below the applicable emissions thresholds used to evaluate potential air quality impacts.

The Proposed Action would not cause or contribute to a violation of a NAAQS, increase the frequency or severity of an existing violation, or delay attainment of any air quality standard. Construction-related emissions would be temporary and localized, occurring only during active construction activities. Any operational emission increases would remain localized and would not affect the attainment status of Dakota County.

3.3.3.1 Mitigation and Minimization

Operational emissions would not warrant further quantitative analysis or mitigation because the anticipated changes in aircraft operations, aircraft delay, and ground access vehicle travel would remain below the applicable FAA attainment-area screening criteria. Construction emissions were quantified and would remain below applicable emissions thresholds. Therefore, no air quality mitigation measures are required. Emissions associated with project construction would be reduced through use of voluntary best management practices (BMPs), such as engine idling restrictions and maintenance requirements, and other control strategies identified in the U.S. EPA Diesel Emission Restriction Checklist.

3.3.3.2 Significance Determination

The FAA considers air quality impacts to be significant if an action will cause pollutant emissions in excess of annual *de minimis* thresholds, or cause pollutant concentrations to exceed one or more of the NAAQS for any of the time period analyzed or increase the frequency or severity of any existing violations. The proposed project is not expected to result in any of the above, therefore there are no significant impacts to air quality as a result of the proposed project.

3.4 BIOLOGICAL RESOURCES

Biological resources are defined as the various types of flora and fauna in a particular area as well as rivers, lakes, wetlands, forests, upland communities, and other habitats supporting flora and aquatic and avian fauna. The EA biological resources section also addresses effects on federal- and state-listed rare or unique species and their habitats.

3.4.1 Regulatory Setting

The primary federal regulation for biological resources is the Endangered Species Act (ESA), 16 USC §§ 1531-1544, administered by the U.S. Fish and Wildlife Service (USFWS). The ESA requires all federal agencies to

conserve threatened and endangered species and, in consultation with the USFWS, to ensure federal actions do not jeopardize the existence or destroy critical habitat of threatened and endangered species. Overall coordination on species and habitats of concern is administered under Section 7 of the ESA, which requires federal agencies to consult the USFWS and appropriate state fish and wildlife agencies when a federal project may adversely affect fish or wildlife resources.

Additional federal regulations of wildlife include the Migratory Bird Treaty Act, 16 USC §§ 703-712, administered by the USFWS, which prohibits taking, selling, or other activities that harm migratory birds, bird eggs, or nests unless authorized by a special USFWS permit. In addition, the Bald and Golden Eagle Protection Act, 16 USC §§ 668-668d, provides protection to eagles and nests from unauthorized capture, purchase, or transportation.

On the State level, Minnesota's Endangered Species Act, Minn. Stat. § 84.0895 and the associated Rules, Minn. R. 6212.1800-6212.2300, impose a variety of restrictions, a permit program, and several exemptions pertaining to species designated as endangered or threatened. A person may not take, import, transport, or sell any portion of an endangered or threatened species.

3.4.2 Affected Environment

According to the USFWS Information for Planning and Consultation (IPaC) search tool, the following federally listed species may be present in the project area:

- Tricolored Bat (*Perimyotis subflavus*) – Proposed Endangered
- Whooping Crane (*Grus americana*) – Experimental Population, Non-Essential
- Monarch Butterfly (*Danaus Plexippus*) – Proposed Threatened
- Western Regal Fritillary (*Argynnis idalia occidentalis*) – Proposed Threatened

In addition to these federally listed species, 6 migratory birds protected under the Migratory Bird Treaty Act, and the bald eagle (*Haliaeetus leucocephalus*), protected under the Eagle Act, have been documented near the project area. The full list of federally endangered species and migratory birds is found in **Appendix E**.

A field-based habitat assessment was conducted in 2022 to evaluate potential summer roosting habitat for northern long-eared bat within areas of proposed tree clearing. This study was reviewed in 2026 against the current project limits and proposed tree-clearing areas and was determined to remain applicable to the Proposed Action. The assessment included evaluation of 30 individual tree locations grouped into 11 assessment areas and found that none of the trees exhibited characteristics associated with potentially suitable bat roost habitat, such as suitable size, exfoliating bark, or cavities. Although the northern long-eared bat is no longer identified on the USFWS IPaC species list for this project, the assessment findings can be extrapolated to apply to the tricolored bat, which has similar habitat requirements for summer roosting. Based on the absence of suitable roost trees within the areas of proposed clearing and the limited extent of tree removal, the project area is not considered to provide suitable roosting habitat for tricolored bat.

The Minnesota Department of Natural Resources (DNR) Natural Heritage Information System (NHIS) is a collection of databases containing information about rare and natural resources in Minnesota and is maintained by the DNR Division of Ecological and Water Resources. A review of the NHIS through the Minnesota Conservation Explorer (Project ID MCE-00507) noted the potential for the state-threatened Blanding's turtle (*Emydoidea blandingii*) within the vicinity of the study area. The review also noted the potential for bat roosting habitat and indicated that the study area overlaps a Rusty Patched Bumble Bee (*Bombus affinis*, RPBB) High Potential Zone. The RPBB is a federal listed endangered species; however, the geographic area originally submitted for DNR review was larger than the action area used to evaluate potential effects to biological resources and listed species. A small portion of the initial DNR review area overlaps the High Potential Zone to the northwest of the airport, but the Proposed Action's construction limits, tree-clearing areas, and other areas within the defined project area that may experience direct or indirect effects are not within the High Potential Zone. The USFWS IPaC review was rerun in September 2026 to verify the official species list and High Potential Zone relationship. The RPBB was not identified on the updated official species list for the project area. The Minnesota DNR NHIS review will be updated using the current project boundary for inclusion in the Final EA.

3.4.3 Environmental Consequences

Under the No Action Alternative, reconstruction of existing pavement could result in temporary disturbance within previously developed portions of the Airport but would not result in impacts to listed species or other protected biological resources. The No Action Alternative would not include tree removal, stream relocation, wetland impacts, or conversion of agricultural land and therefore would not involve disturbance of potential bat roosting habitat, aquatic habitat, or other areas evaluated for federally or state-listed species.

The Proposed Project would include excavation of earth and vegetation for extending pavement areas and limited removal of on-airport trees. Permanent land-cover changes would include approximately 43 acres of farmland conversion, approximately 0.455 acres of wetland impact, and approximately five acres of net new impervious surface. Project activities would occur within or adjacent to existing airport infrastructure, mowed turf, agricultural land, developed areas, and previously disturbed airport property. Tree removal of approximately 0.7 acres would be limited to areas necessary to maintain compliance with airport design standards and clear Federal Aviation Regulation (FAR) Part 77, approach, and departure surfaces. A portion of the proposed tree removal would occur within wetland areas, resulting in a reduction of existing vegetation and less than 5,000 square feet of temporary wetland disturbance including access and mats. These areas are generally small, fragmented, and located within an active airport environment. Potential impacts to wetland resources, including wetland acreage and function, are evaluated separately in Section 3.14.1: Wetlands.

The Proposed Project would also include work in and near an intermittent stream and associated riparian areas. These activities could temporarily disturb aquatic and riparian habitat through grading, culvert replacement, stream relocation, vegetation removal, erosion, sedimentation, changes in flow management, and construction access. Potential effects to aquatic resources, stream function, and water quality are evaluated in Section 3.14: Water Resources.

3.4.3.1 Federal Listed Species

The USFWS IPaC Minnesota-Wisconsin Determination Key, an agency-developed consultation tool used to evaluate project effects on federally listed species and document ESA Section 7 effect determinations, documented “No Effect” determinations for the monarch butterfly and whooping crane for the project. The western regal fritillary is not covered by a determination key, but based on the absence of suitable habitat within the project area, including lack of native prairie vegetation and host plants, the Proposed Project would also have no effect on western regal fritillary.

For the tricolored bat, the Northern Long-Eared Bat and Tricolored Bat Range-wide Determination Key resulted in a “May Affect” determination, for which additional coordination with the USFWS was completed. Based on the limited extent of tree removal, the habitat assessment finding that evaluated trees lacked suitable roost characteristics, and the lack of suitable habitat within airport culverts, the FAA submitted a request for a “May Affect, Not Likely to Adversely Affect” determination for tricolored bat. The USFWS concurred on July 21, 2026. The Habitat Assessment and Coordination with USFWS is found in **Appendix E**.

The RPBB High Potential Zone identified through the Minnesota DNR review applies to a broader review area, not the final action area associated with the proposed project. The construction limits, tree-clearing areas, and other areas that may be directly or indirectly affected by the Proposed Action do not overlap the High Potential Zone. An updated IPaC review using the current action area did not identify the rusty patched bumble bee on the official species list. Accordingly, no effect to the rusty patched bumble bee is anticipated. The NHIS review will be updated using the current project boundary for inclusion in the Final EA.

Migratory birds protected under the Migratory Bird Treaty Act may use trees, shrubs, grassland, or other vegetated areas within or near the Airport for nesting, foraging, or movement. The Proposed Project would remove approximately 0.7 acre of trees and disturb additional vegetation within areas of grading and construction. Most disturbance would occur within or adjacent to existing Airport infrastructure, regularly maintained turf, agricultural land, developed areas, and previously disturbed Airport property. The affected tree stands are small and fragmented and are located within an active airport environment.

Tree or vegetation removal during the nesting season could result in disturbance or loss of active nests, eggs, or young if present within the construction area. These effects would be localized to the areas of vegetation removal and temporary construction disturbance. Potential effects would be minimized by limiting vegetation removal to the extent necessary for construction and conducting tree clearing during the winter, outside the primary migratory bird nesting season. Because the area of tree removal is limited, surrounding vegetated areas would remain available, and clearing would occur outside the nesting season, the Proposed Project is not expected to result in unauthorized take of migratory birds or substantial effects on migratory bird populations or available habitat.

3.4.3.2 State Listed Species

The DNR NHIS Review identified Blanding's turtle, a state-listed threatened species, as documented in the vicinity of the proposed project and stated that the project could potentially impact the species through direct fatalities and habitat disturbance or destruction. Construction activities involving grading, equipment movement, stream work, wetland work, or disturbance of open upland areas could affect individual turtles if present within the construction area. The project will incorporate applicable MnDNR avoidance measures.

3.4.3.3 Mitigation and Minimization

To minimize potential impacts to the tricolored bat, tree removal would be limited to the extent necessary to meet FAA design standards and maintain required approach surfaces. Tree removal would be conducted during winter months, outside of the active roosting season to avoid potential impacts to individuals. In addition, the habitat assessment determined that trees proposed for removal do not exhibit characteristics of suitable roost habitat, further reducing the potential for impacts. Similarly, potential impacts to migratory birds would be minimized by conducting tree and vegetation removal to the extent necessary for construction and conducting tree clearing during the winter, outside of the primary nesting season.

To minimize potential impacts to Blanding's turtle, the project would incorporate applicable MnDNR avoidance measures, described in **Appendix E**. These measures include contractor education on species identification and protection, pre-construction site inspections, implementation of wildlife-friendly erosion control materials, and procedures for stopping work and contacting appropriate agencies if individuals are encountered during construction.

Construction activities in and near the intermittent stream and associated riparian areas would implement standard erosion and sediment control measures to minimize disturbance to adjacent habitat and reduce the potential for sedimentation or degradation of downstream resources. Additional measures related to water quality and stream protection are described in Section 3.14: Water Resources.

3.4.3.4 Significance Determination

FAA has not established specific significance thresholds for biological resources. However, the FAA considers applicable USFWS determinations under the Endangered Species Act and whether an action would result in long-term or permanent loss of unlisted species, adversely affect special-status species or their habitats, substantially interfere with wildlife movement, substantially diminish habitat, or introduce or promote invasive species.

The USFWS IPaC review resulted in "No Effect" determinations for monarch butterfly and whooping crane, and USFWS concurred with FAA's "May Affect, Not Likely to Adversely Affect" determination for tricolored bat on July 21, 2026. FAA also determined that the Proposed Action would have no effect on western regal fritillary based on the absence of suitable native prairie habitat and host plants within the proposed disturbance area. The Proposed Action would disturb primarily developed or previously disturbed Airport property and remove approximately 0.7 acre of trees. With implementation of seasonal clearing restrictions and applicable Minnesota DNR avoidance measures, the Proposed Action would not substantially diminish habitat, interfere with wildlife movement, cause long-term or permanent loss of an unlisted species, or promote invasive species. Therefore, the Proposed Action would not result in significant impacts to biological resources.

3.5 DEPARTMENT OF TRANSPORTATION ACT SECTION 4(F) AND LAND AND WATER CONSERVATION FUND

3.5.1 Regulatory Setting

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C. § 303) affords protection to publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic sites of national, state, or local significance by limiting their use for transportation projects unless there is no feasible and prudent alternative and all possible planning to minimize harm has been undertaken.

Section 6(f) of the Land and Water Conservation Fund (LWCF) Act (54 U.S.C. § 200305) applies to parks, recreation areas, and open space lands that have been acquired or developed with Land and Water Conservation Fund assistance. These properties are subject to restrictions on conversion to non-recreational uses, which require approval from the National Park Service and the provision of replacement land of equal value and utility.

3.5.2 Affected Environment

The Section 4(f) study area includes the project boundary and surrounding lands within approximately 0.5 mile of proposed construction limits where direct or constructive use of protected resources could occur. A review of publicly available mapping resources did not identify any publicly owned parks, recreation areas, wildlife or waterfowl refuges, or historic sites within approximately 0.5 mile of the project area that would qualify as Section 4(f) resources.

An aircraft viewing area is located on Airlake Airport property and is open to the public for aircraft observation and informal recreation. This facility is owned and maintained by the MAC as part of airport operations. Section 4(f) of the U.S. Department of Transportation Act applies to publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic sites of national, state, or local significance. The aircraft viewing area is not formally designated or managed as a public park or recreation area by a state or local agency and, therefore, is not considered a Section 4(f) property. Implementation of the Proposed Project would temporarily disrupt and require relocation of the existing aircraft viewing area to accommodate airfield improvements. Because the viewing area is not a protected Section 4(f) resource, the Proposed Action would not constitute a use of a Section 4(f) property.

No LWCF resources are located within one mile of the project.²¹

3.5.3 Environmental Consequences

No 4(f) properties would be impacted by the No Action Alternative or the Proposed Project.

3.5.3.1 Mitigation and Minimization

Although not required under Section 4(f), the MAC has committed to relocating the viewing area as part of the Proposed Action to provide continued public access consistent with existing conditions.

²¹ The Land and Water Conservation Fund Past Projects Map, <https://lwcf.tplgis.org/mappast/>

3.5.3.2 Significance Determination

Section 4(f) of the U.S. Department of Transportation Act applies to the use of publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic sites of national, state, or local significance. The aircraft viewing area affected by the Proposed Action is not a protected Section 4(f) resource, and no other Section 4(f) properties are located within the project area or would be affected by the Proposed Action.

Because the Proposed Action would not result in the use of a Section 4(f) resource, no further evaluation under Section 4(f) is required.

3.6 FARMLANDS

3.6.1 Regulatory Setting

According to the 1050.1 Desk Reference, the FAA defines farmland as those agricultural areas considered important and protected by federal, state, and local regulations. Important farmlands include all pasturelands, croplands, and forests (even if zoned for development) considered to be prime, unique, or of statewide or local importance.

Projects involving impacts to farmland require coordination with the US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), including submittal of USDA Farmland Conversion Impact Rating Form AD-1006. These actions are necessary to follow the guidelines set forth in the Farmland Protection Policy Act (FPPA) of 1984. FPPA is intended to minimize unnecessary and irreversible conversion of farmland to non-agricultural use by federal actions.

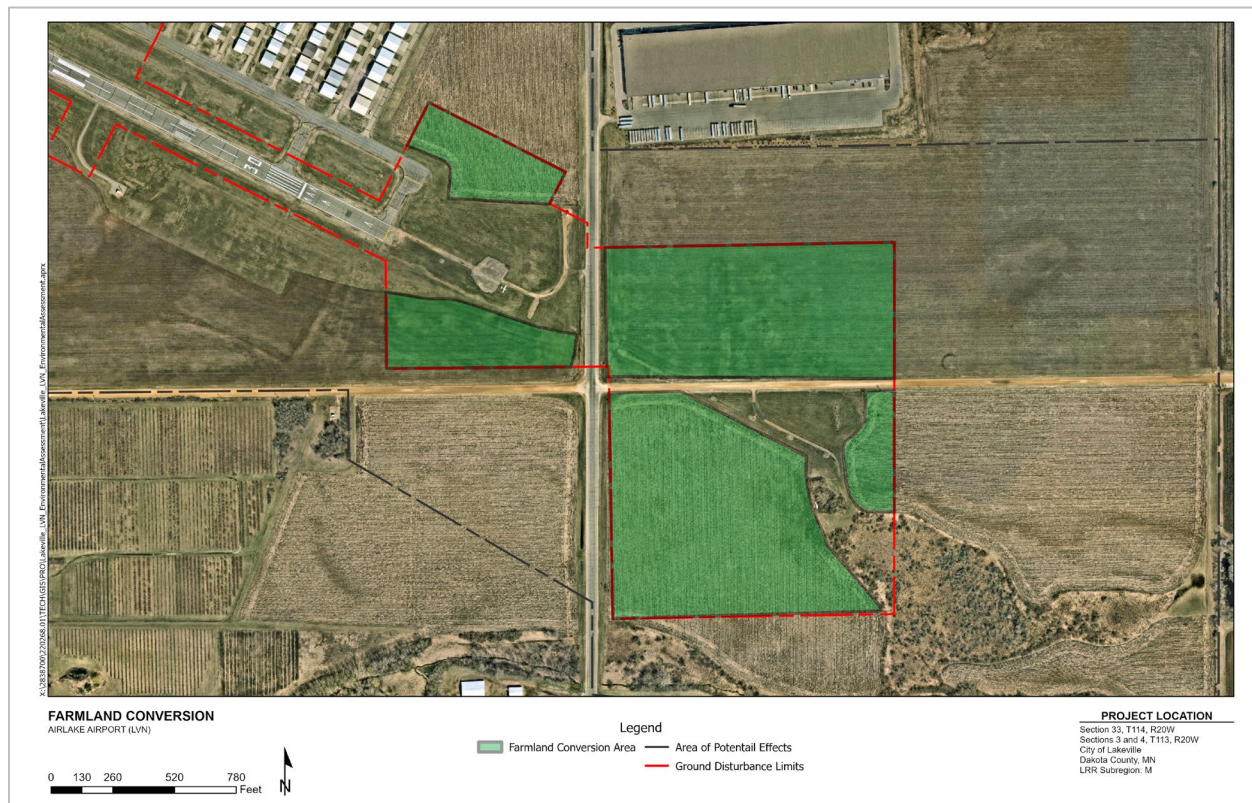
3.6.2 Affected Environment

Much of the project area is comprised of Waukegan silt loam soils, which are defined by the USDA as deep, well-drained soils formed in silty glacial deposits over sandy outwash. According to the Web Soil Survey the majority of the proposed project area is considered prime farmland. Prime farmland is land that does not flood frequently and has the best chemical and physical characteristics for producing food, feed, fiber, oilseed crops, and forage. Prime farmland's soil allows both water and air to pass through and has the characteristics needed to produce and sustain high yields of crops. The surrounding land use south and east of the airport within Eureka Township is zoned for agricultural use, while the airport itself and surrounding lands in Lakeville are largely designated as industrial.

3.6.3 Environmental Consequences

Under the No Action Alternative, reconstruction would occur within the existing airfield footprint and would not convert farmland to non-agricultural use.

The Proposed Project will include approximately 43 acres of farmland conversion, shown in **Figure 3-1**. In June 2026, information regarding farmland to be converted was provided to the local NRCS office. A copy of the completed Form AD-1006 is included in **Appendix F**. The Proposed Project received a total combined score of 154.75, which is below the 160-point level identified in applicable farmland-conversion guidance for additional consideration of alternatives. The score is also below FAA's significance threshold of 200 to 260 points identified in Appendix A, Exhibit A-1 of FAA Order 1050.1G.

Figure 3-1: Farmland to be Converted

3.6.3.1 Significance Determination

Farmland impacts are considered significant if the project receives a total combined farmland conversion impact rating of between 200 and 260. Based on a farmland score of 154.75, calculated in coordination with the USDA NRCS, there are no significant impacts associated with either the no-action or the proposed scenario, as defined by the FPPA and NEPA.

3.7 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

3.7.1 Regulatory Setting

Hazardous materials are substances or materials that can pose unreasonable risks to health, safety, and property when transported in commerce. Hazardous materials include both hazardous wastes and hazardous substances, as well as petroleum and natural gas substances and materials.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) establishes requirements for the investigation and cleanup of hazardous waste sites. Hazardous waste management is regulated under the federal Resource Conservation and Recovery Act (RCRA). The Minnesota Pollution Control Agency (MPCA) administers Minnesota's authorized hazardous waste program and implements applicable RCRA requirements within the state through the Minnesota Hazardous Waste Rules, including requirements for generator identification numbers issued by the MPCA.

Minnesota also regulates demolition debris, defined in state law as waste generated from the demolition of buildings or structures. Such debris must be disposed of at a permitted solid waste facility or an approved temporary disposal site.

3.7.2 Affected Environment

The study area for hazardous materials, solid waste, and pollution prevention includes the project area and surrounding properties. Existing conditions were evaluated through a Phase I Environmental Site Assessment (ESA) completed in 2022 (**Appendix G**). This study was reviewed compared to the project boundary in 2026 and was found to remain valid. Airlake Airport is an active general aviation facility that includes paved airfield infrastructure, maintenance areas, aircraft fueling operations, and associated support facilities. Hazardous materials present at the Airport are typical of aviation operations and may include fuels, oils, lubricants, and maintenance-related materials. These materials are stored, handled, and managed in accordance with applicable federal and state regulations. Winter maintenance activities at the Airport include snow and ice control on airfield pavements. Pavement deicing and anti-icing materials may be used periodically to maintain safe operating conditions during winter weather events. Airlake does not maintain dedicated aircraft deicing facilities or aircraft deicing collection systems.

The Phase I ESA identified past uses within the project area that included limited industrial activities and a former law enforcement firing range. The firing range area was previously investigated and remediated, and is considered a controlled recognized environmental condition (CREC) due to historical soil contamination that has been addressed and is subject to regulatory closure. No ongoing impacts to groundwater or surface water were identified. Several underground and aboveground utilities, including petroleum and natural gas pipelines, are located within the Airport property. Review of available records and site reconnaissance found no evidence of active releases or leaks associated with these facilities.

Surrounding land uses include airport facilities, industrial and commercial development, agricultural land, and transportation infrastructure. Although off-site facilities within the broader area have historically managed hazardous materials, no active releases or conditions were identified that would be expected to impact the project area. A search of the MN Pollution Control Agency (MPCA) "What's In My Neighborhood" tool was conducted in June 2026, and no new leaks or conditions arising since the 2022 ESA were found. A search of the EPA's EnviroAtlas in September 2026 focused on RCRA sites reporting to the EPA, superfund site, and sites on the Toxic Release inventory, and also did not show any new leaks nor known contamination.

Pollution prevention practices at the Airport include standard procedures for spill prevention, material handling, and waste management consistent with regulatory requirements.

3.7.3 Environmental Consequences

Under the No Action Alternative, reconstruction of existing runway and taxiway pavements would generate construction debris and involve the use of fuels, lubricants, and other construction materials. These materials would be managed in accordance with applicable requirements, and no disturbance of known contamination would be anticipated.

The Proposed Project would involve construction activities such as grading, excavation, pavement removal, and installation of new airfield infrastructure. These activities have the potential to expose subsurface materials and generate construction-related waste.

Based on the Phase I ESA, one controlled recognized environmental condition associated with a former firing range was identified within the project area. This site has been remediated and is subject to regulatory closure and associated controls. Construction activities are not expected to disturb this area in a manner that would result in exposure or release. No currently active recognized environmental conditions are present within the project area, and no evidence of ongoing releases was identified. Although impacts are not anticipated, there is potential to encounter unknown subsurface materials during construction. If contamination is encountered, materials would be managed in accordance with applicable federal and state regulations, including proper characterization, handling, and disposal. Construction of the Proposed Action would generate typical construction debris, including removed pavement materials, soils, and miscellaneous waste. These materials would be managed in accordance with applicable regulations, and recycling or reuse (e.g., crushed pavement) would be implemented where practicable. Hazardous materials used during construction, such as fuels and

lubricants, would be handled in accordance with standard industry practices, including spill prevention and response procedures to minimize the potential for releases.

3.7.3.1 Mitigation and Minimization

Standard construction best management practices would be implemented to minimize the potential for impacts related to hazardous materials, solid waste, and pollution prevention. These practices include proper storage and handling of fuels and other materials, implementation of spill prevention and response procedures, and management of waste materials in accordance with applicable federal and state regulations. To the extent practicable, construction materials would be reused or recycled to reduce waste generation.

In the event that unknown or contaminated materials are encountered during construction, work would be managed in accordance with applicable regulatory requirements, including appropriate characterization, handling, and disposal.

3.7.3.2 Significance Determination

The FAA has not established a significance threshold for hazardous waste, solid waste, or pollution prevention. However, there are factors to consider when evaluating potential environmental impacts for hazardous materials, solid waste, or pollution prevention.

Table 3-2: Hazardous Materials, Solid Waste, and Pollution Prevention Factors for Consideration

Factors with the potential to:	Applicability to Proposed Project
Violate applicable federal, state, tribal, or local laws or regulations	No laws or regulations regarding hazardous waste would be violated
Involve a contaminated site	No contaminated sites are located within the proposed project boundary
Produce an appreciably different quantity or type of hazardous waste	There would be no hazardous waste generated by the proposed project
Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity	It is anticipated that the local disposal facility would have enough capacity to handle solid wastes that are generated by the proposed project
Adversely affect human health and the environment	Based on the Phase I ESA results and the above information, the proposed project is not anticipated to adversely affect human health and the environment

Based on the absence of active contamination and the limited potential for exposure pathways, the Proposed Action would not result in adverse impacts related to hazardous materials, solid waste, or pollution prevention. There are no significant hazardous materials, solid waste, or pollution prevention impacts anticipated with the proposed project.

3.8 HISTORICAL, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

3.8.1 Regulatory Setting

Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to consider the effects of their undertakings on historic properties. Historic properties include those listed on or eligible for listing in the National Register of Historic Places (NRHP). If a project has no potential to affect historic properties, no further Section 106 review is required.

3.8.2 Affected Environment

The Area of Potential Effect (APE) is the area where an undertaking may affect a historic property, either directly or indirectly. The direct effects APE includes all areas of ground disturbance and construction associated with the undertaking, as depicted in **Figure 2-7**. The indirect effects APE was established in consultation with cultural resource specialists and encompasses areas where visual, audible, or atmospheric effects from the undertaking could alter the characteristics of historic properties. This includes the full extent of the existing Airlake Airport property boundary and a small area southwest of the Cedar Avenue/225th Street intersection, consistent with the APE defined in the Architectural History Phase I survey. A Phase I archaeological survey and Phase I architectural history survey were completed in August 2022. Defined APE maps are included in cultural survey documentation in **Appendix H**.

Archaeological investigations conducted by Mississippi Valley Archaeology Center (MVAC) in 2022 included records review, pedestrian survey, and shovel testing within areas of proposed ground disturbance; no archaeological sites or cultural materials were identified. A 2026 literature review was completed to evaluate revised project areas, including a review of the Office of the State Archaeologist (OSA) Portal and other archival sources. This updated review found no previously recorded archaeological sites located within the project area or within one mile. Based on the results of the Phase I survey and 2026 literature review and given the extensive disturbance evident within the developed project area, there is low potential for intact cultural materials. No further archaeological investigation was recommended.

Architectural history investigations identified three historic-age resources (40 years of age or more) within the APE: the Airlake Airport Terminal/FBO Office, an Airlake Airport Hangar, and a segment of the Minneapolis St. Paul Rochester & Dubuque Electric Traction Company (MStPR&DETC) Railroad Corridor. A literature review of Minnesota SHPO records indicated the Railroad Corridor was previously surveyed (within the last 10 years) and determined not eligible for listing in the National Register of Historic Places (National Register); thus, no site form was prepared, and no further study is necessary. Qualified historians from Mead & Hunt evaluated and recommended not eligible for listing in the National Register of Historic Places the two additional historic-age resources. In 2026, Mead & Hunt historians reviewed the initial findings, took updated photos of the surveyed properties, and revised the subject report and associated inventory forms to meet current standards. As part of this effort, Airlake Airport itself was inventoried and evaluated, and was found not eligible for listing. Records for individual properties were submitted via Minnesota's Statewide Historic Inventory Portal (MnSHIP).

3.8.3 Environmental Consequences

Under the No Action Alternative, the MAC would continue routine maintenance activities and reconstruction of existing runway and connector taxiway pavement within previously disturbed portions of the Airport. Because these activities would remain within existing developed airfield areas and would not alter historic properties or disturb previously undisturbed areas with archaeological potential, no impacts to cultural resources would be expected.

No archaeological resources were identified during Phase I investigations or subsequent literature review, and the project area exhibits extensive prior disturbance and low potential for intact deposits. All identified architectural history properties within the APE have been evaluated and recommended not eligible for listing in the National Register of Historic Places. The undertaking will not alter characteristics of any historic properties that would qualify them for inclusion in the National Register. Based on the cultural resource survey results summarized above, the FAA made a Section 106 No Historic Properties Affected determination for this project. The FAA sent a request for concurrence with this determination to the Minnesota State Historic Preservation Officer (SHPO) on June 22, 2026. On August 19, 2026, SHPO concurred with FAA's finding. SHPO correspondence and the Phase I survey reports are located in **Appendix H**.

3.8.3.1 Significance Determination

The FAA does not have a significance threshold for Cultural Resources but does consider whether a finding of adverse effect is made under Section 106 of the NHPA.

No historic or archaeological resources are present within the area of disturbance, nor would be impacted indirectly by the proposed project. Neither the No Action Alternative nor the Proposed Project would have a significant impact on cultural resources.

3.9 LAND USE

3.9.1 Regulatory Setting

Federal funding for airport development is conditioned on the airport sponsor's compliance with grant assurances established under 49 U.S.C. § 47107. These assurances include provisions requiring the sponsor to take appropriate action, to the extent reasonable, to restrict existing and planned land uses in the vicinity of the airport to those compatible with safe airport operations.

3.9.1.1 Local Zoning Ordinances

The Airport property sits partially within the City of Lakeville limits and partially within unincorporated Eureka Township. The airfield and most of the Runway 12 inner approach area are within the City of Lakeville and are zoned by the City as I-3, Airport Industrial District. The City of Lakeville administers shoreland zoning within its boundaries, including on airport property. The Runway 30 inner approach area and a small portion of the Runway 12 inner approach area are within unincorporated Eureka Township and are zoned by the Township as Agricultural. These zoning designations are depicted in **Figure 3-2**. Although Dakota County only administers shoreland and floodplain zoning in Eureka Township, the County designates Airport property within Eureka Township and north of 225th Street West as Industrial and Airport property south of 225th Street West as Agriculture.

3.9.1.2 FAA Land Use Guidance

Land use regulations near airports typically focus on safety for airport users and the surrounding community, along with minimizing negative impacts such as noise disturbance, and zoning regulations generally discourage or prohibit land use that is incompatible with airports. The authority to enact zoning codes lies at the local level. However, the FAA offers guidance documents and grants that fund airport planning and land use studies.

FAA guidance addresses the compatibility of land uses in the vicinity of airport facilities, including Runway Protection Zones (RPZs). FAA Advisory Circular (AC) 150/5300-13B, Airport Design, and AC 150/5190-4B, Airport Land Use Compatibility Planning, identify land uses that are generally considered compatible or incompatible with airport operations and establish expectations for airport sponsors when airport projects result in RPZ changes. Additional information regarding RPZ requirements and the proposed RPZ modifications associated with the Proposed Action is provided in Sections 1.1.3 and 2.2.3.3.

3.9.1.3 State of Minnesota Land Use Guidance and Joint Airport Zoning Board

The State of Minnesota, under Minn. Stat. §360.063, grants authority to all municipalities to enforce airport zoning ordinances restricting land uses, population density, and the location, size, and height of buildings and other structures within an airport hazard area. Minn. Stat. §360.063 authorizes the MAC to “request creation of one joint airport zoning board (JAZB) for each airport operated under its authority.” The JAZB for a given MAC system airport consists of representatives from the MAC and affected municipalities that join in its creation.

Minnesota Administrative Rules 8800.2400 establishes the Minnesota Department of Transportation (MnDOT) Commissioner's Standard for the zoning of public airports, which is reflected in the MnDOT Office of Aeronautics model airport zoning ordinance. Under Minn. Stat. §360.0655 and §360.0656, the JAZB may adopt either the Commissioner's Standard zoning ordinance or a custom zoning ordinance of its own creation. As of the writing of this EA, a JAZB has not been convened, and an airport zoning ordinance has not been adopted for Airlake Airport.

Under Minnesota Statutes §473.165 and §473.611, the Metropolitan Council must review and comment on all MAC LTCPs to ensure consistency with the metropolitan development guide including Thrive MSP 2040 and the Transportation Policy Plan. At its regular meeting on March 21, 2018, the Metropolitan Council found that the Airlake Airport LTCP conforms to the metropolitan aviation system plan and is consistent with Council policy.

3.9.2 Affected Environment

A one-mile radius of the project boundary was analyzed for this resource category. Land use in the project boundary is made up of paved airport facilities, mowed short grasses on Airport property, agricultural uses, and local roadways. Shoreland zoning is in effect surrounding the intermittent stream that flows across airport property. Lands adjacent to the project boundary to the south are primarily agricultural use, while lands adjacent to the project boundary to the north are primarily industrial use.

Planned Land Use

The City of Lakeville 2040 Land Use Plan map dated April 2, 2026, shows nearly all areas surrounding the Airport to the west, north, and east as either Industrial or Warehouse/Light Industrial. The only exception is a parcel bordering the west side of the Airport that is mostly dedicated for stormwater detention and is shown on the 2040 Land Use Plan as Restricted Use and is zoned as Public/Open Space. The City is currently in the process of updating its Comprehensive Plan, which is expected to be adopted in May 2027.

The Eureka Township 2040 Comprehensive Plan was adopted in May 2018. The 2040 Planned Land Use map in the Plan shows all areas surrounding the Airport to the south as Agricultural.

The Dakota County 2040 Comprehensive Plan as adopted in June 2019. The 2030 Land Use Forecast in the Plan shows land use designations consistent with those shown in the City of Lakeville 2040 Land Use Plan map and the Eureka Township 2040 Planned Land Use map.

Transportation

There are currently roads in the RPZs for both runway ends and a railroad in Runway 12 RPZs. The proposed project would modify the location of the departure RPZs on both runway ends. Relocating roadways entirely out of the RPZs was considered by the 2035 LTCP but found not feasible. The one exception to this is relocating 225th Street, which would fall within the Federal Aviation Regulations (FAR) Part 77 primary surface following the proposed extension on the Runway 30 end. The intersection of Cedar Avenue and 225th Street is also positioned within the proposed Runway 30 RPZ. The proposed project relocates 225th Street to the south and removes it from the extended FAR Part 77 primary surface and relocates its intersection with Cedar Avenue outside of the Runway 30 RPZ.

Utilities

Several underground and aboveground utilities, including petroleum and natural gas pipelines, are located within the Airport property.

Wildlife Hazards

Wildlife attractants in the vicinity of Airlake Airport include vegetated areas, agricultural fields, and surface water associated with drainage features and the intermittent stream that may provide habitat for birds and other wildlife. The Airport manages vegetation and land use within the airfield in accordance with FAA guidance to minimize wildlife attractants and reduce the potential for wildlife hazards to aircraft operations.

3.9.3 Environmental Consequences

Under the No Action Alternative, the existing airfield configuration, roadway network, utilities, and surrounding land uses would generally remain unchanged. Because Airlake Airport is not currently subject to an airport zoning ordinance, a Joint Airport Zoning Board (JAZB) would be convened, and an airport zoning ordinance

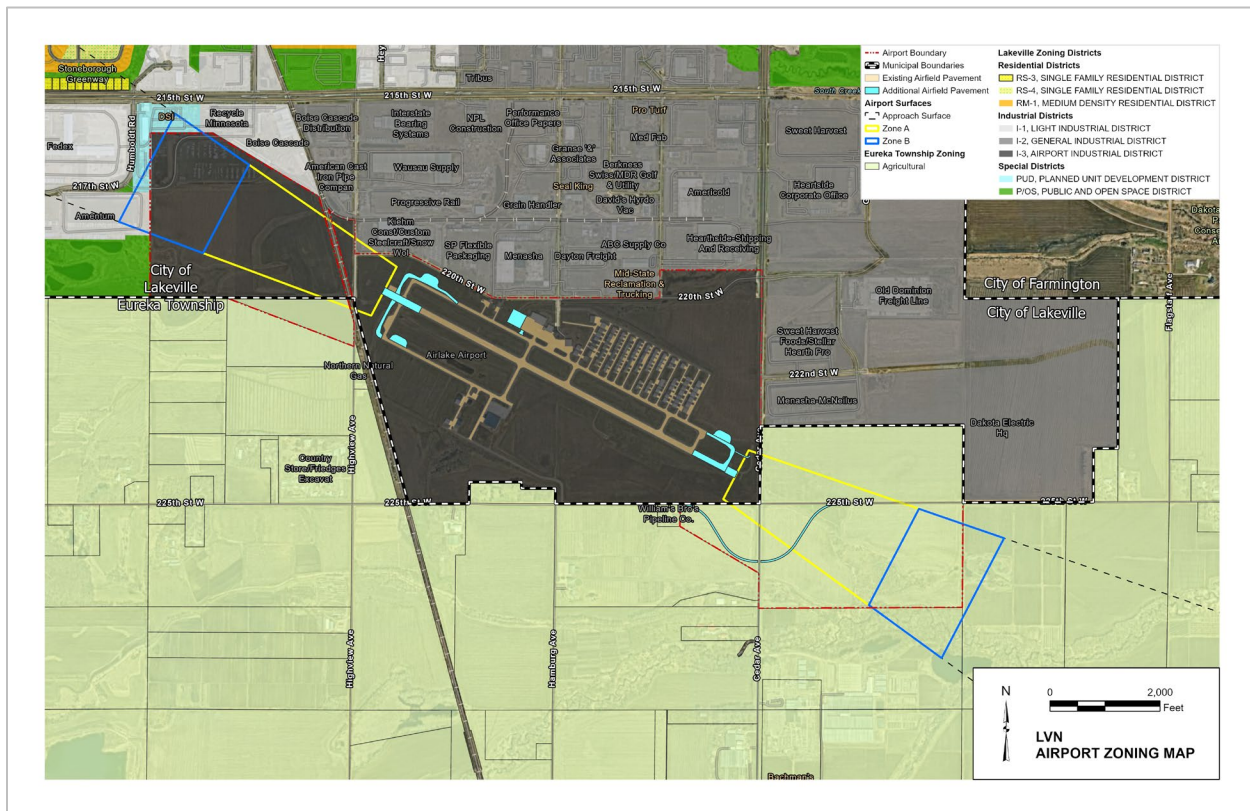
would be adopted, consistent with Minnesota law. However, the resulting safety zones would likely affect a slightly smaller area than under the Proposed Action because the existing runway length would be retained.

Land Use and Zoning

Concurrent with design and construction of the proposed action, the MAC would convene a JAZB to formulate and adopt an airport zoning ordinance for Airlake Airport. Members of the JAZB are expected to include representatives from the City of Lakeville, the City of Farmington, Eureka Township, Castle Rock Township, Sciota Township, and Scott County. It is also expected that the JAZB would adopt either the Commissioner's Standard zoning ordinance or a custom ordinance that is less restrictive.

Minnesota Rules 8800.2400 establishes the following safety zones for each runway, which are provided by the Commissioner's Standard ordinance:

- **Safety Zone A:** in the FAR Part 77 approach surface of a runway, Commissioner's Standard Safety Zone A extends outward from the end of the primary surface a distance equal to two-thirds the runway length or planned runway length, or 4,000 feet, whichever is less. Land within this zone must not contain buildings or exposed transmission lines and must be restricted to uses that will not create, attract, or bring together an assembly of persons. Commissioner's Standard Safety Zone A for the preferred alternative is contained almost entirely on Airport property on both ends of the runway as shown in **Figure 3-2**.
- **Safety Zone B:** in the FAR Part 77 approach surface of a runway, Commissioner's Standard Safety Zone B extends outward from Safety Zone A a distance equal to one-third the runway length or planned runway length, or 2,000 feet, whichever is less. Land within this zone is subject to lot size minimums, building site ratios, and population density restrictions. Most of Commissioner's Standard Safety Zone B for the preferred alternative is contained on Airport property on both ends of the runway as shown in **Figure 3-2**. Areas of Safety Zone B extending beyond Airport property are zoned for Light Industrial use on the Runway 12 end and Agricultural use on the Runway 30 end.
- **Safety Zone C:** Commissioner's Standard Safety Zone C includes all land within the perimeter of the FAR Part 77 horizontal zone. This zone prohibits any use of land that creates or causes interference with airport radio and electronic communications; results in visual hazards for pilots; or otherwise endangers the landing, taking off, or maneuvering of aircraft.

Figure 3-2: Airport Zoning

Under the No Action Alternative, the MAC would also convene a JAZB to adopt an airport zoning ordinance, but the ordinance adopted by the JAZB would likely affect a slightly smaller area due to the shorter runway length in the existing condition.

Shoreland zoning would need to be updated by the City of Lakeville following stream relocation. Further details about stream relocation are found in Section 3.14.3 of this EA.

Transportation

The Proposed Project would include a minor realignment of a segment of 225th Street West to enhance airfield safety and route the road around the RPZ. This realignment would result in localized changes in roadway configuration and access patterns for nearby properties, including rural residences and adjacent community and commercial uses along Cedar Avenue. Access to these properties would be maintained, though travel routes may be slightly altered. These changes would be limited and would not result in displacement of residents, businesses, or community facilities, nor would they substantially affect regional access or circulation. No additional congestion is anticipated, and no new traffic will be generated.

On August 10, 2026, Eureka Township approved a Joint Powers Agreement with the City of Lakeville and the MAC that included a provision that both Eureka Township and the City agreed to vacate their respective prescriptive easement interests in the portion of the road to be aligned by the project.

The relocation of 225th Street West on the west side of Cedar Avenue was approved under the Minnesota Environmental Policy Act via an Environmental Assessment Worksheet Finding dated April 2026.

Utilities

Four existing gas pipelines run underneath the runway pavement at LVN. In a letter recorded with Dakota County on April 29, 2026, the MAC certified that the current depth, location, and type of pipe meets current regulatory standards and guidelines; that monitoring of the in-place equipment can be conducted virtually,

without the need for on-site activities; that there are no near of long-term needs or plans to replace existing pipeline infrastructure; that should pipeline replacement be required in the future, boring in-place is a viable option and would not disturb the taxiways or runway pavement; and that the proposed runway project and fleet mix of aircraft are compatible with the pipeline companies' existing and future needs. The pipeline companies' utilities can be properly serviced and maintained without disturbing operations at LVN, including during and after the construction of the runway project. In a letter dated June 22, 2026, the FAA concurred with the MAC's determination that existing pipelines are compatible with the airport relative to the Proposed Project.

There is an unrecorded electric easement running alongside 225th Street West. Road construction may require relocation of the line and modification of the easement.

Wildlife Hazards

The Proposed Project would not create new wildlife attractants or substantially increase existing wildlife hazards at Airlake. Stream relocation and associated drainage improvements would be designed to maintain continuous flow and avoid the creation of standing water that could attract waterfowl or other wildlife hazardous to aircraft operations. Vegetation established within and adjacent to the relocated stream corridor would consist of species compatible with airport wildlife hazard management objectives and would be maintained to discourage use by wildlife. The wildlife hazard evaluation incorporated coordination with USDA APHIS Wildlife Services. Recommendations from USDA APHIS included maintaining continuous stream flow, minimizing open water and ponding, using airport-compatible vegetation, and ensuring future access for wildlife management activities. The Proposed Action was developed with these recommendations in mind and is not expected to increase wildlife hazards to aircraft operations.

Modifications to stormwater management features, including expansion of the existing stormwater basin, would be designed in accordance with applicable FAA wildlife hazard guidance, including FAA Advisory Circular 150/5200-33, *Hazardous Wildlife Attractants on or Near Airports*. As a result, the proposed project is not expected to increase the potential for wildlife hazards to aircraft operations. Additional information regarding stream relocation, stormwater management, and related environmental impacts is provided in Surface Water and Stormwater Resources, Section 3.14.3.

3.9.3.1 Mitigation and Minimization

Because no substantial project-related impacts to land use are expected, no mitigation is required as part of the proposed project.

3.9.3.2 Significance Determination

The FAA has not established a significance threshold for land use, or factors to consider when determining significance of a project's effect on land use. The Proposed Project is consistent with applicable state and local land use plans and would not cause a substantial change in nor disrupt existing land uses; therefore, impacts to land use would not be significant.

3.10 NATURAL RESOURCES AND ENERGY SUPPLY

3.10.1 Regulatory Setting

FAA environmental review guidance requires consideration of a proposed project's energy and natural resource requirements in NEPA documents. This includes evaluation of potential changes in demand for construction materials, local utility services (such as electric, natural gas, and water), and fuel consumption associated with aircraft and ground vehicle operations.

3.10.2 Affected Environment

Airport facilities require energy and natural resources to support ongoing operations, including electricity for airfield lighting and navigational equipment, as well as fuel for aircraft and ground support vehicles. Airfield lighting systems, including runway and taxiway edge lighting, approach lighting systems, and visual navigational aids, are the primary consumers of electricity on the airfield. These systems operate in accordance with FAA requirements and are supported by the local electrical utility. The Airport does not rely on natural gas or water to support airfield operations, although these utilities are available in the surrounding area for landside facilities. Fuel use at the Airport is associated with aircraft operations and ground vehicle activity and is typical of general aviation airports of similar size and function.

Construction materials required for airport operations and maintenance, such as aggregate, asphalt, and concrete, are readily available from regional suppliers within the Twin Cities metropolitan area. No known constraints on the availability of these materials exist within the project area.

3.10.3 Environmental Consequences

Under the No Action Alternative, reconstruction of existing runway and taxiway pavements would require construction materials, equipment fuel, and temporary energy use. The No Action Alternative would not include the additional pavement, lighting, navigational-aid modifications, or operational changes associated with the Proposed Project.

The Proposed Project would result in the use of natural resources and energy supplies during both construction and operation of the project. Construction activities would require typical materials such as concrete, asphalt, and aggregate, as well as fuel for construction equipment. These materials are expected to be sourced from regional suppliers within the Twin Cities metropolitan area, where availability is well established.

Temporary increases in fuel consumption would occur during construction due to the operation of heavy equipment and transport of materials. If construction activities require temporary rerouting of airport vehicles or changes in access, minor increases in vehicle travel distances and associated fuel use could occur; however, these effects would be short-term and limited in duration.

Operation of the proposed improvements may result in minor changes in energy demand associated with airfield lighting and navigational aids. Any such changes are expected to be minor and consistent with typical airport operations. The Proposed Project may result in a localized increase in fuel consumption associated with projected changes in aircraft activity at Airlake Airport; however, these changes would primarily reflect a redistribution of operations within the MAC system rather than a substantial increase in overall regional aviation activity. LVN currently represents a relatively small share of total operations within the southern metropolitan airport system, and projected growth would result in only a minor change in overall energy demand.

3.10.3.1 Mitigation and Minimization

Construction BMPs would be implemented to minimize the use of natural resources and energy supplies. These practices may include efficient construction scheduling, use of locally sourced materials where practicable, and minimization of equipment idling. To the extent practicable, the contractor may incorporate practices such as recycling or reusing materials (e.g., crushing existing pavement for use as base material), to reduce the demand for new resources.

Where new or replacement lighting systems are included in the Proposed Action, energy-efficient technologies such as LED lighting may be used to reduce long-term energy consumption. No additional mitigation measures are anticipated, as impacts to natural resources and energy supply are expected to be minimal.

3.10.3.2 Significance Determination

FAA has not established a specific significance threshold for natural resources and energy supply. However, impacts may be considered significant if the Proposed Action would result in demand that exceeds available or planned supplies of energy or natural resources.

The Proposed Action would result in temporary increases in material use and energy consumption during construction and minor changes in operational energy demand. However, these changes would be short-term or minimal in magnitude and would not exceed the capacity of regional suppliers or local utility systems. Based on these considerations, the Proposed Action would not result in significant impacts to natural resources or energy supply.

3.11 NOISE AND NOISE COMPATIBLE LAND USE

3.11.1 Regulatory Setting

The Aviation Safety and Noise Abatement Act of 1979 directed the FAA to establish a system for measuring noise and exposure to noise, and to identify land uses compatible with different exposure levels. According to the FAA 1050.1 Desk Reference, noise is defined as unwanted sound that can disturb routine activities like sleep or conversation. Certain land uses, such as residential areas, are more sensitive to airport noise than others. In many cases, the FAA requires a noise analysis during environmental review.

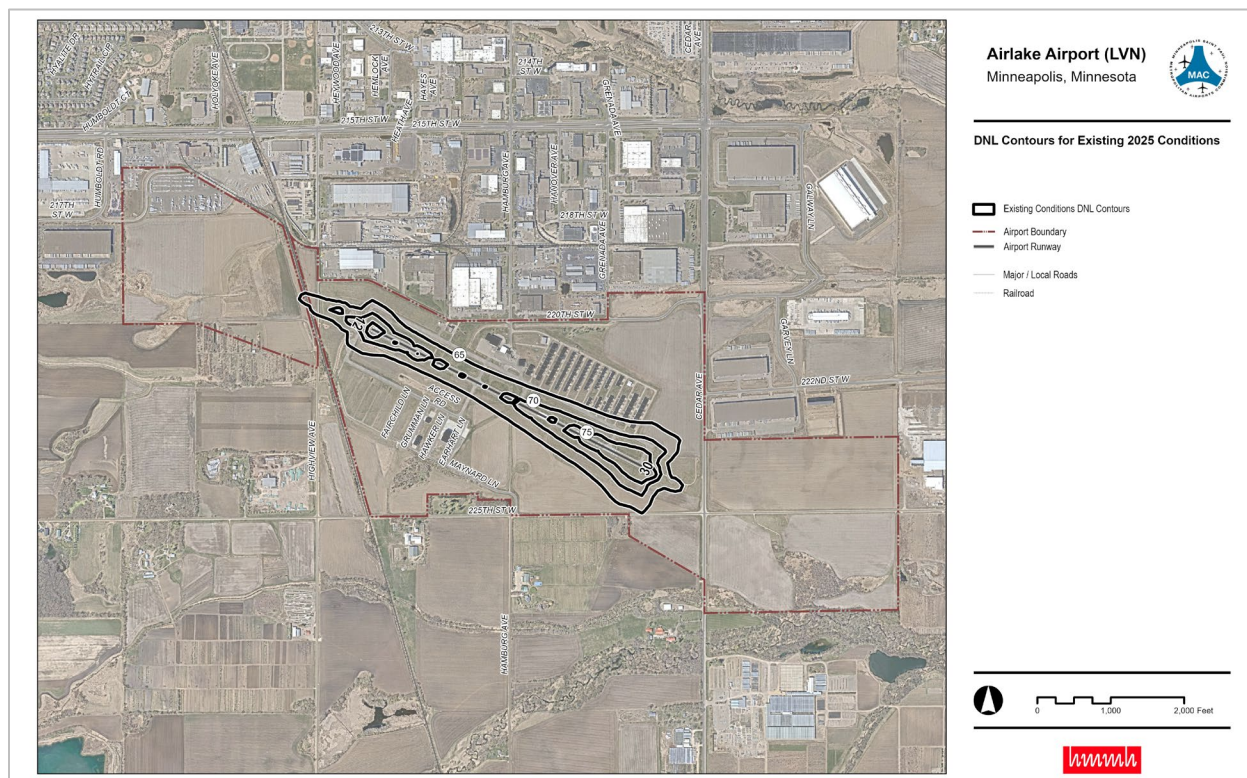
The FAA Office of Environment and Energy recognizes that the environmental consequences stemming from aircraft operations – primarily noise, emissions, and fuel consumption – are highly interdependent and occur simultaneously throughout all phases of flight. The Aviation Environmental Design Tool (AEDT) is the FAA-approved software system that dynamically models aircraft performance in space and time to produce fuel burn, emissions, and noise estimates. AEDT is designed to estimate the long-term effects of noise using average annual input conditions. The model uses the Federal Aviation Regulations (FAR) Part 150 (14 CFR Part 150) yearly day-night average sound level (DNL) metric, which is measured in decibels. DNL is a cumulative noise metric that represents the average daily noise level, accounting for the added intrusiveness of noise at night compared. A nighttime penalty (equivalent to increasing decibel levels by ten) for increased annoyance is added to flights occurring between 10:00 p.m. and 7:00 a.m.

Existing and projected noise contours were evaluated using the FAA-approved AEDT Version 4a. HMMH modeled existing conditions (2025), the future No Action Alternative (2033), and the future Proposed Action Alternative (2033). The noise analysis incorporated aircraft operations, fleet mix, runway utilization, flight tracks, stage length assumptions, and average annual day operations consistent with FAA guidance for NEPA noise analyses.

3.11.2 Affected Environment

Consistent with FAA Order 1050.1G and the Desk Reference, the noise study area focuses on the area within and adjacent to the modeled 65 DNL contour because FAA identifies that contour as the threshold for assessing noise compatibility impacts. Land use in the vicinity of the Airport is generally compatible with airport operations. Surrounding properties consist primarily of airport-related uses, agricultural land, industrial and commercial development, and transportation infrastructure, with residential and other sensitive uses located at greater distances from the airfield.

Existing noise conditions were modeled using calendar year 2025 aircraft activity data. As of 2025, the 65 DNL noise contour is contained within airport property apart from where the contour goes across roadway and rail rights of way, as shown in **Figure 3-3**. The 65 DNL contour does not extend over noise-sensitive land uses. As a result, no residential areas, schools, churches, or other noise-sensitive receptors are located within the 65 DNL contour. Detailed noise modeling inputs and results are provided in **Appendix D**.

Figure 3-3: Baseline Condition Noise Contours (2025)

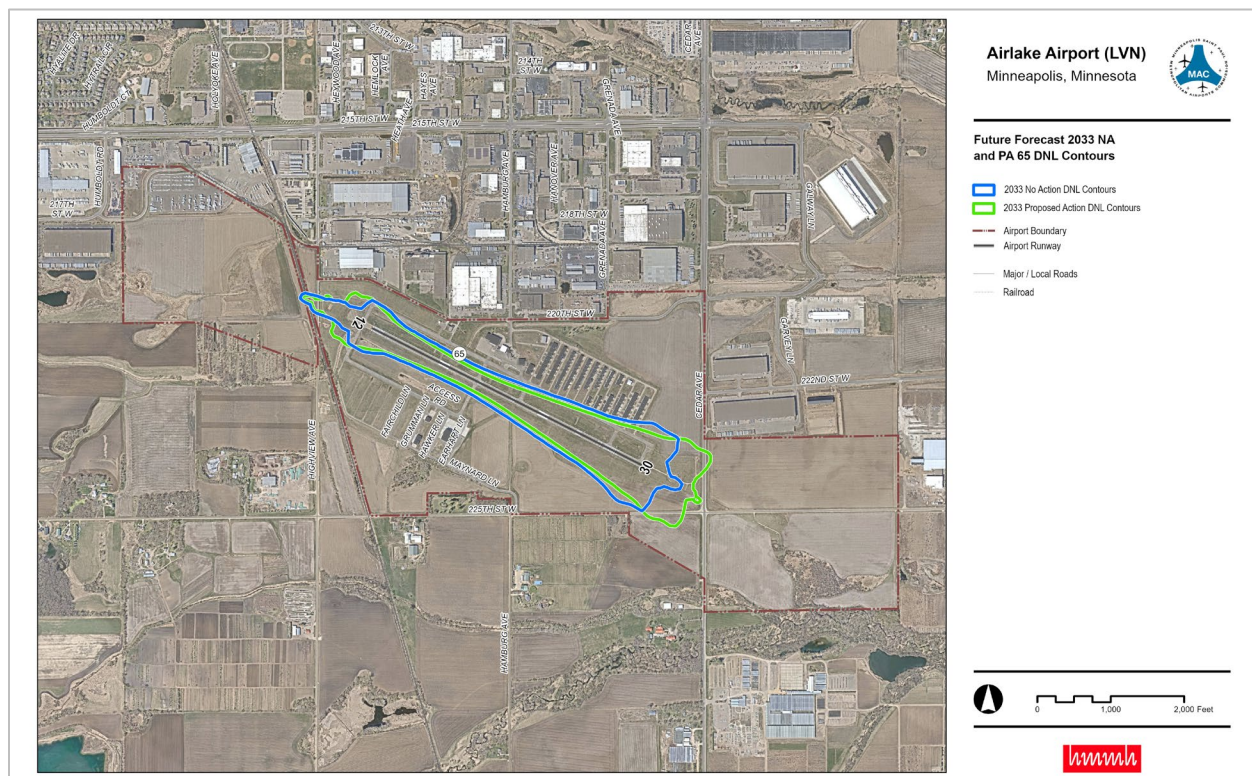
Source: Harris Miller Miller and Hanson, Inc.

3.11.3 Environmental Consequences

Potential noise impacts associated with the Proposed Project were evaluated considering future-year (2033) conditions under both the No Action Alternative and a Proposed Action, incorporating projected aircraft operations, fleet mix, and runway use.

The Proposed Action is forecast to result in approximately 49,280 annual operations in 2033 compared to 48,051 annual operations under the No Action Alternative, an increase of approximately 1,229 annual operations. The increase is primarily associated with additional business jet and general aviation activity anticipated to occur following the runway extension.

As Shown in **Figure 3-4**, under the No Action Alternative, the area within the 65 DNL contour or above would encompass approximately 73.2 acres and would contain no residents, housing units, or noise-sensitive land uses. Under the Proposed Action, the area within the 65 DNL contours or greater would encompass approximately 74.3 acres, increasing by 1.1 acres. Noise increases would occur along the extended runway, primarily south of the airport. The 65 DNL contour would remain primarily on airport property, with the exception of roadway and rail rights-of-way. The airport property newly affected to the south is under agricultural use; no residential land uses, schools, places of worship, or other noise-sensitive land uses would be located within the 65 DNL contour.

Figure 3-4: No Action and Proposed Project Noise Contours

Source: Harris Miller Miller and Hanson, Inc.

3.11.3.1 Mitigation and Minimization

No specific mitigation measures are required, as the Proposed Action would not result in noise levels of 65 DNL or greater over noise-sensitive land uses. However, the MAC has established voluntary noise abatement best practices to minimize aircraft noise impacts on surrounding communities. These practices include recommended departure and approach procedures, maintaining higher altitudes where practicable, and avoiding noise-sensitive areas during flight operations. Implementation of these measures is voluntary and consistent with FAA regulations that prioritize aircraft safety. Ongoing coordination between MAC, airport users, and the surrounding community would support continued compatibility between airport operations and adjacent land uses.

3.11.3.2 Significance Determination

FAA has established a threshold of significance for aircraft noise based on exposure of noise-sensitive land uses to noise levels of 65 DNL or greater. Although the Proposed Action would result in localized changes in aircraft noise exposure associated with the runway extension and additional forecast operations, the changes would not expose residents or noise-sensitive land uses to significant aircraft noise levels.

3.12 SOCIOECONOMICS AND CHILDREN'S HEALTH AND SAFETY RISK

3.12.1 Regulatory Setting

Statutes and policies related to socioeconomic impacts include the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA) and Title VI of the Civil Rights Act of 1964, which prohibit

discrimination in federally funded programs. Executive Orders and federal guidance have also been issued to address socioeconomic considerations and potential impacts to sensitive populations, including Executive Order 13045 on Protection of Children from Environmental Health Risks and Safety Risks.

3.12.2 Affected Environment

Socioeconomic characteristics of the study area were evaluated using U.S. Census Bureau data for Dakota County, the City of Lakeville, and Eureka Township, specifically the American Community Survey (ACS) 2024 5-year results. The socioeconomic study area includes the jurisdictions in which project effects could occur and that could experience temporary access, transportation, or construction-related effects. Key indicators include population, household characteristics, income levels, and poverty rates, as summarized in **Table 3-3** and **Table 3-4**. Median household income in the study area is relatively high compared to state and national averages, and poverty rates are low across all jurisdictions, indicating generally strong socioeconomic conditions. Population density varies from urban/suburban conditions in the City of Lakeville to rural conditions in Eureka Township, reflecting the mix of communities surrounding the Airport.

Table 3-3: Population and Households

Jurisdiction	Population	Households
Dakota County	453,156	178,554
City of Lakeville	77,971	25,685
Eureka Township	1,178	-

Table 3-4: Income and Poverty

Jurisdiction	Median Household Income	Poverty Rate
Dakota County	\$105,330	7.2%
City of Lakeville	\$130,795	3.7%
Eureka Township	\$100,000	5%

Airlake Airport supports general aviation activity and contributes to the local economy by providing facilities for aircraft storage, fueling, maintenance, and business aviation operations. On-airport tenants include a fixed base operator (FBO), flight training providers, and aviation-related businesses. These activities support local employment and economic activity and serve regional business and recreational aviation needs.

Access to the Airport is provided by 220th and 225th St W, and the surrounding transportation network supports both airport users and nearby industrial and commercial land uses. The Airport is located in a developed area with established infrastructure and access to regional transportation corridors.

Sensitive populations, including low-income populations as well as children, are present within the broader area. Based on ACS data, poverty rates in the study area are below state and national averages, indicating a relatively low proportion of low-income populations. Residential areas, schools, and other community facilities are primarily located away from the Airport.

3.12.3 Environmental Consequences

Under the No Action Alternative, reconstruction of the existing runway and taxiways could temporarily disrupt Airport operations and affect Airport users and tenants during construction. Following reconstruction, existing access, employment, aviation services, and community conditions would continue, and no long-term socioeconomic impacts would be anticipated.

The Proposed Project would not result in long-term changes to population, housing, or regional economic patterns within the study area. Airport-related economic activity, including employment and aviation services, would continue following completion of the project.

During construction, the temporary closure of the runway for approximately 60 days would disrupt normal airport operations. These disruptions may affect on-airport tenants, including fixed base operators, flight training providers, and other aviation-related businesses, as well as transient users of the Airport. Temporary impacts could include reduced business activity, limitations on aircraft operations, and potential shifts in activity to other airports within the MAC system. Some airport users and customers may temporarily use other regional airports during the construction period; however, these effects would be short-term and would not result in a permanent redistribution of economic activity. Upon completion of construction, full airport operations would resume, and any temporary disruptions are expected to be resolved.

The Proposed Project would also include a minor realignment of a segment of 225th Street West near the RPZ to enhance airfield safety. This realignment would result in localized changes in roadway configuration and access patterns for nearby properties, including rural residences and adjacent community and commercial uses along Cedar Avenue. Access to these properties would be maintained, though travel routes may be slightly altered. These changes would be limited and would not result in displacement of residents, businesses, or community facilities, nor would they substantially affect regional access or circulation.

3.12.3.1 Mitigation and Minimization

The MAC would coordinate with tenants and businesses throughout construction to minimize disruption to the extent practicable, including via the Airlake Airport Advisory Commission (ALAAC), which is comprised of airport users and community representatives. MAC would also coordinate with affected property owners and local agencies to maintain access to adjacent properties during construction in areas affected by the realignment of 225th Street West. Continued coordination between MAC, airport users, and the surrounding community would support the management of temporary construction-related disruption.

3.12.3.2 Significance Determination

FAA has not established specific thresholds for determining significance related to socioeconomic impacts; therefore, impacts are evaluated based on the context and intensity of the proposed action, including the extent of disruption to communities, businesses, and economic activity. The Proposed Action would not result in relocation of residents or businesses, changes in local land use, or long-term effects on employment or economic activity within the study area. Temporary impacts associated with the construction-related runway closure may affect airport users and on-airport businesses; however, these impacts would be short-term and would not result in lasting changes to the regional economy or community structure.

Because impacts would be temporary, limited in scope, and would not result in substantial disruption to community or economic conditions, the Proposed Action would not result in significant socioeconomic impacts.

3.13 VISUAL EFFECTS

3.13.1 Regulatory Setting

FAA environmental review guidance requires consideration of visual effects associated with airport development, including lighting and other features that may affect the surrounding environment. This includes evaluating the potential for light emissions to affect nearby sensitive receptors, interfere with normal activities, or alter the visual character of the area.

3.13.2 Affected Environment

The study area for visual effects includes Airlake Airport and immediately adjacent properties where a Proposed Action would be visible. No designated scenic views or vistas are located within or near the project area. The Airport is situated in a developed environment characterized by airfield infrastructure, industrial uses, and surrounding agricultural land. A residential area is located approximately one mile northeast of the existing

runway end along the runway centerline. Individual rural residences are located southeast of the Airport, with the closest more than 3,500 feet from the runway. A religious facility is located approximately 1,500 feet south of the Airport.

Existing visual conditions at the Airport are influenced by airfield lighting systems, including runway and taxiway edge lighting, approach lighting systems, and navigational aids such as precision approach path indicator (PAPI) lights and runway end identifier lights (REILs). These systems operate in accordance with FAA requirements and include pilot-controlled lighting that allows for adjustment of intensity levels during nighttime or low-visibility conditions. Existing lighting is consistent with typical general aviation airport operations and is concentrated within the airport boundary.

3.13.3 Environmental Consequences

Under the No Action Alternative, pavement reconstruction could result in temporary visual effects from construction equipment and staging, but the existing runway length, airfield-lighting configuration, and vegetative conditions would remain substantially unchanged. No permanent change in the visual character of the Airport or surrounding area would occur.

The Proposed Project includes modifications to airfield lighting systems to accommodate the extended runway and associated improvements. Changes in lighting configuration, including the relocation and extension of lighting at runway ends, may result in minor shifts in the location and extent of visible lighting. However, all lighting would be installed and operated in accordance with FAA design standards, which are intended to ensure safe aircraft operations while minimizing off-site light spill. Lighting intensity and operational characteristics would be consistent with existing conditions.

The Proposed Project includes limited tree removal within runway approach surfaces and near the expanded apron area to maintain compliance with FAA design standards. These changes would be minor and would occur in areas where vegetation is routinely maintained for airfield safety.

Construction activities would result in temporary visual effects, including the presence of construction equipment, staging areas, and temporary lighting, if required. These effects would be short-term and limited to the duration of construction.

Surrounding land uses are primarily industrial and agricultural, with limited nearby receptors. While minor changes in the location of airfield lighting may be perceptible from adjacent properties, these changes would occur within the context of existing airport operations. Overall, the visual character of the Airport and surrounding area would remain consistent with existing conditions.

3.13.3.1 Mitigation and Minimization

Temporary visual effects during construction would be minimized through standard construction practices, including limiting lighting to the extent necessary for safety and security. Permanent visual effects would be minimized through adherence to FAA design standards for airfield lighting and vegetation management. No additional mitigation measures are proposed.

3.13.3.2 Significance Determination

FAA has not established specific significance thresholds for visual effects. However, potential impacts are evaluated based on the context and intensity of the Proposed Action, including the degree to which light emissions would create annoyance, interfere with normal activities, or adversely affect the visual character of the surrounding area.

The Proposed Action would not introduce substantial new sources of lighting, create noticeable increases in light intensity, or alter the visual character of the area beyond existing conditions. Based on these considerations, the Proposed Action would not result in significant impacts to visual effects.

3.14 WATER RESOURCES

Water resources within the study area include wetlands, floodplains, surface waters, and stormwater infrastructure. These resources are interconnected and function together to convey, store, and manage water within and adjacent to LVN. The Proposed Action includes modifications to portions of this system, including stream relocation, culvert replacement, stormwater management improvements, and limited impacts to wetlands. The following sections describe existing conditions and potential impacts to each resource.

3.14.1 Groundwater

3.14.1.1 Regulatory Setting

Groundwater resources are protected under federal, state, and local laws and regulations intended to maintain groundwater quality and protect drinking water supplies. The Safe Drinking Water Act establishes federal requirements for protecting public drinking water sources and authorizes the U.S. EPA to establish drinking water quality standards. In Minnesota, groundwater appropriation and protection responsibilities are administered by the DNR, Minnesota Department of Health (MDH), and MPCA, as applicable. These agencies regulate activities including groundwater withdrawals, public water supply protection, contaminant releases, and management of wastes and pollutants that could affect groundwater.

3.14.1.2 Affected Environment

Groundwater is an important drinking water source in Dakota County, supplying more than 90 percent of drinking water used by County residents. Groundwater occurs in aquifers consisting of water-bearing sand, gravel, and bedrock formations. Dakota County notes that groundwater susceptibility varies based on land use, soil characteristics, and aquifer depth, and that contaminants associated with surface activities may reach groundwater in susceptible areas.

The groundwater study area includes the Proposed Action boundary where construction, changes in infiltration, or an accidental release could directly or indirectly affect groundwater. Existing land cover within the study area includes impervious airfield pavement and buildings, managed turf, agricultural land, wetlands, drainage features, and stormwater management facilities. Stormwater currently infiltrates through pervious areas or is conveyed through the Airport's stormwater management system to an unnamed intermittent stream.

Groundwater beneath the Airport is estimated to first occur approximately 10 to 35 feet below ground surface; however, groundwater depth may vary based on seasonal precipitation and other hydrogeologic conditions. The 2022 Phase I Environmental Site Assessment identifies the Prairie du Chien Group as the underlying bedrock formation and indicates an estimated groundwater-flow direction to the east, while noting that groundwater depth and flow direction beneath the site have not been directly established using surveyed monitoring wells. The Airport is not located within a Drinking Water Supply Management Area. A review of the Minnesota Department of Health County Well Index identified several sealed wells on Airport property and one commercial well on Airport property, identified as MDH Well ID 0000235585. Domestic and irrigation wells are located south of the Airport, indicating that groundwater is used locally for potable and agricultural purposes.

The Phase I Environmental Site Assessment identified a former shooting range in the southeastern portion of the Airport where elevated concentrations of lead and arsenic had previously been identified in soil, surface water, and groundwater. Response actions included removal of affected soils and installation of groundwater monitoring wells. Post response sampling indicated that groundwater and surface-water impacts were not present. See Section 3.7 of this chapter for more information about hazardous materials and contamination.

3.14.1.3 Environmental Consequences

Under the No Action Alternative, existing groundwater recharge and infiltration conditions would generally continue. Reconstruction of existing pavement could create temporary risks associated with releases of fuel,

lubricants, or other construction materials, but would not result in a substantial permanent increase in impervious surface. Standard construction controls would minimize the potential for pollutants to infiltrate into groundwater.

The Proposed Action would result in a net increase of approximately five acres of impervious surface associated with runway, taxiway, and apron improvements. New pavement would reduce infiltration within the specific areas converted from pervious cover. However, the added impervious area would represent a small portion of the approximately 145-acre project area. Stormwater improvements would incorporate infiltration and other BMPs designed to manage runoff from new impervious surfaces, maintain preconstruction runoff volumes for the 2-year, 24-hour storm event, and comply with applicable water-quality and volume-control requirements.

Construction would involve excavation, grading, pavement removal, material storage, equipment operation, and temporary staging. These activities could create a temporary potential for fuels, lubricants, sediment, or other construction-related materials to reach groundwater through infiltration. The Proposed Action would not include construction of new wells or otherwise increase operational groundwater withdrawals. Wells on airport property would not be impacted by construction activities. With implementation of stormwater controls and spill-prevention practices, the localized reduction in infiltration would not be expected to substantially affect groundwater recharge, availability, or quality. The Proposed Action would not be expected to exceed applicable groundwater-quality standards or adversely affect groundwater used by the on-airport commercial well or nearby domestic and irrigation wells.

Mitigation and Minimization

Potential impacts to groundwater would be avoided and minimized through implementation of erosion and sediment control, spill prevention, material handling, and stormwater management BMPs. Stormwater runoff from new impervious surfaces would be treated and managed through infiltration and other BMPs. If contaminated soil or groundwater is encountered during construction, work in the affected area would be managed in accordance with applicable federal and state requirements.

Significance Determination

The Proposed Action would not exceed applicable groundwater-quality standards, contaminate an aquifer used for public water supply such that public health may be adversely affected, or substantially diminish groundwater quantity or beneficial uses. Therefore, the Proposed Action would not result in significant impacts to groundwater.

3.14.2 Wetlands

3.14.2.1 Regulatory Setting

Wetlands and other waters are regulated under federal, state, and local authorities. At the federal level, Section 404 of the Clean Water Act (33 U.S.C. § 1344) regulates the discharge of dredged or fill material into waters of the United States, including jurisdictional wetlands. The U.S. Army Corps of Engineers (USACE) administers the Section 404 permitting program, with oversight from the U.S. Environmental Protection Agency (EPA). Section 401 of the Clean Water Act requires that proposed activities comply with state water quality standards, which are administered by the Minnesota Pollution Control Agency (MPCA).

At the state level, wetlands are regulated under the Minnesota Wetland Conservation Act (WCA) (Minnesota Statutes § 103G.221–103G.237), which requires avoidance and minimization of wetland impacts and replacement of unavoidable wetland losses. The WCA is administered at the local level by a designated Local Government Unit (LGU); for the project area, the City of Lakeville serves as the LGU responsible for implementing WCA requirements. Additional state oversight may be provided by the Minnesota Department of Natural Resources (MnDNR), particularly where wetlands are connected to public waters or where work occurs below the ordinary high-water level, which may require a Public Waters Work Permit under Minnesota Statutes § 103G.245.

Compliance with these regulations typically involves coordination with USACE, the City of Lakeville, and MnDNR, as applicable, to ensure that impacts to wetlands are avoided and minimized and that any unavoidable impacts are appropriately permitted and mitigated.

3.14.2.2 Affected Environment

A wetland delineation was conducted by Mead & Hunt within the project area during site visits on August 1-4 and September 8, 2022. A total of twelve (12) wetlands and three (3) stream segments were delineated within the AOI. The wetland summary map is included in **Appendix I**. A Technical Evaluation Panel (TEP) review occurred on 10/13/2022 to review wetland boundaries and types. The project area spans across the City of Lakeville and Eureka Township municipal boundaries. The City of Lakeville is the Local Governmental Unit (LGU) for wetlands within the City of Lakeville, and Eureka Township is the LGU for wetland within the Eureka Township. The TEP review resulted in boundary and type concurrence for all wetlands in both the City of Lakeville and Eureka Township. A wetland boundary and type Notice of Decision (NOD) was received from the City of Lakeville on 12/19/2022, and from Eureka Township on 12/08/2022. These NODs are included in **Appendix I**. A wetland boundary, type, and jurisdictional determination was requested from the U.S. Army Corp of Engineers (USACE) on 09/27/2022. A jurisdictional determination (AJD) was received from the USACE on 02/23/2023, which determined that wetlands 1, 4, 5, and 6 are federally jurisdictional. The AJD is included in **Appendix I**. Minnesota wetland regulation requires no net loss of Minnesota's wetlands; therefore, all delineated wetlands are considered jurisdictional at the state level.

The recorded wetlands were a mix of emergent (PEM1) and forested (PFO1) types. Wetlands are summarized in **Table 3-5**.

Table 3-5: Delineated Wetlands

Wetland ID	Cowardin Type	Circular 39 Type	AOI Area (acres)	AOI Area (sq. ft.)
1	PEM1	Fresh (Wet) Meadow (Type 2)	1.430	62,301.806
2	PFO1	Seasonally Flooded Basin (Type 1)	0.007	325.904
3	PEM1, PFO1	Shallow Marsh (Type 3), Seasonally Flooded Basin (Type 1)	0.156	6,802.402
4	PEM1	Seasonally Flooded Basin (Type 1)	0.379	16,487.931
5	PEM1	Seasonally Flooded Basin (Type 1)	0.310	13,484.724
6	PEM1	Seasonally Flooded Basin (Type 1)	0.125	5,462.343
7	PEM1	Seasonally Flooded Basin (Type 1)	0.020	866.497
Y8	PEM1	Seasonally Flooded Basin (Type 1)	0.900	39,192.208
9	PEM1	Seasonally Flooded Basin (Type 1)	0.058	2,035.089
10	PEM1	Seasonally Flooded Basin (Type 1)	0.014	597.999
11	PEM1	Seasonally Flooded Basin (Type 1)	0.021	900.480
12	PFO1	Seasonally Flooded Basin (Type 1)	0.193	8,390.295

3.14.2.3 Environmental Consequences

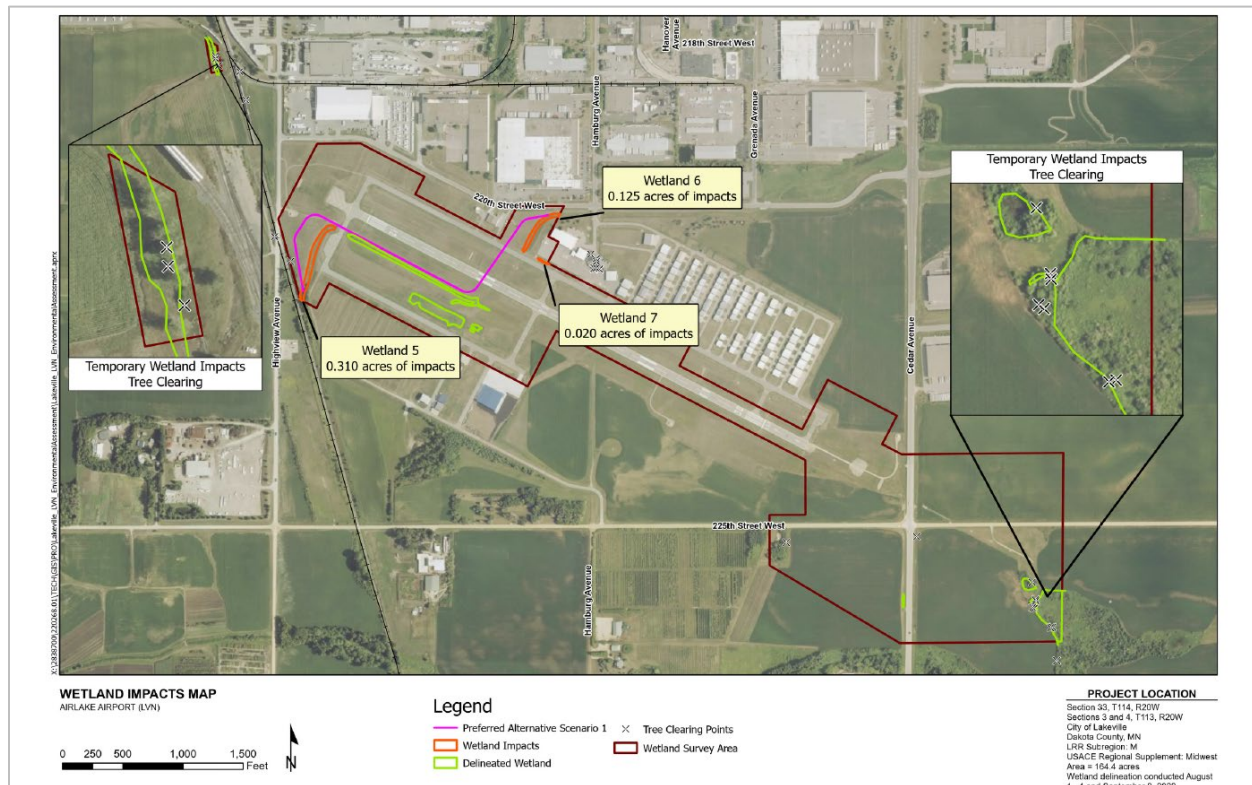
The no action alternative would not result in wetland impacts.

The Proposed Action would result in approximately 0.455 acres of permanent wetland impact to Wetlands 5, 6, and 7 as shown in **Figure 3-5**. Permanent impacts would result from grading and placement of fill for the proposed airfield improvements and stream relocation, converting the affected portions of these emergent wetlands to developed, non-wetland conditions.

Separate from permanent impacts, removal of up to 8 trees within delineated wetlands is necessary to clear trees that penetrate FAA approach, transitional, and departure surfaces. Tree removal in wetlands may incur temporary impacts to less than 5,000 square feet of wetlands, due to the potential placement of mats, access

roads, and/or stockpiles in wetlands during construction. Post construction, these temporary structures will be removed, and the area will be restored.

Figure 3-5: Wetland Impacts



Mitigation and Minimization

Avoidance and minimization measures will be implemented to reduce or eliminate impacts to wetlands to the greatest extent possible. In the design process, grading limits will be minimized to the highest possible extent while still meeting requirements. Soil erosion and sediment control measures during construction are discussed in Section 3.14.3, Surface Water and Stormwater.

Tree removals in wetlands and floodplains would leave stumps where possible and would aim to avoid clearing and grubbing. Trees would be removed during winter to minimize ground disturbance and would not result in a discharge of dredged or fill material to any wetlands. As required under WCA, the Airport will seek to avoid any degradation to the quality of wetlands potentially affected by tree removal.

Mitigation would be required for wetlands under the jurisdiction of the USACE. Wetland mitigation would also be required for any wetlands under the jurisdiction of the Minnesota WCA that are unavoidably impacted. WCA regulated wetlands would include any natural non-federal-jurisdictional wetlands, as identified by the State process. Impacts to these natural wetlands require mitigation under Executive Order 11990, which coincides with the WCA mitigation required wetlands.

The State refers to this mitigation as a Wetland Replacement Plan. The mitigation banking program is overseen by the State, who has divided the State into Bank Service Areas. Mitigation banks in Dakota County within the Mississippi River–Lake Pepin watershed (Bank Service Area 8) would be investigated first as part of any required wetland replacement plan.

Based on the above, the Proposed Project would mitigate for 0.435 acres of wetland impacts through wetland banking. The additional 0.02 acres are constructed wetlands not under USACE jurisdiction, and would not require replacement.

Significance Determination

The FAA Order 1050.1 desk reference notes that a significant impact would occur when the action would:

1. Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers;
2. Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected;
3. Substantially reduce the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety or welfare (the term welfare includes cultural, recreational, and scientific resources or property important to the public);
4. Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands;
5. Promote development of secondary activities or services that would cause the circumstances listed above to occur; or
6. Be inconsistent with applicable state wetland strategies.

Direct impacts to wetlands are anticipated to be below one acre and would be mitigated through replacement in appropriate wetland banks. Based on this and the additional minimization and avoidance strategies incorporated into the project, wetland impacts are not expected to be significant.

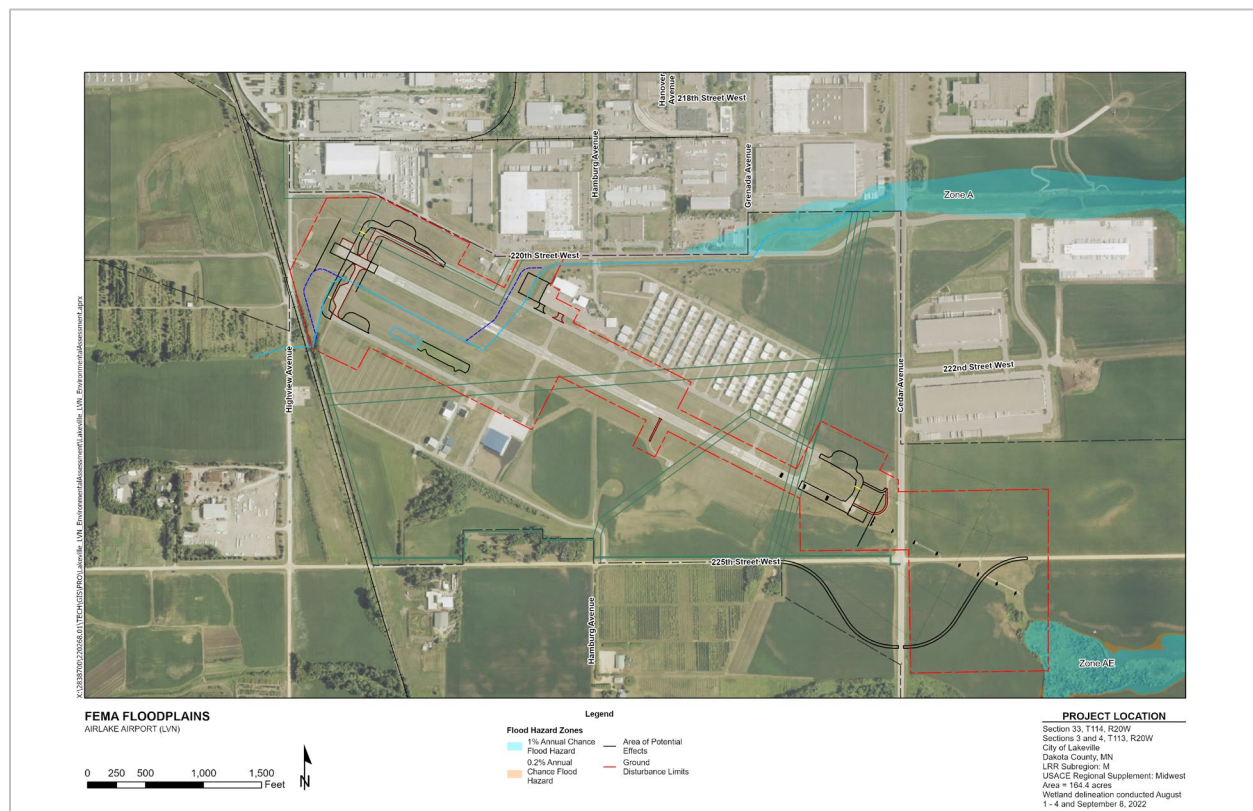
3.14.3 Floodplains

3.14.3.1 Regulatory Setting

Floodplains are regulated under federal, state, and local authorities. At the federal level, Executive Order 11988, *Floodplain Management*, requires federal agencies to avoid, minimize, and mitigate adverse impacts associated with the occupancy and modification of floodplains. The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) and prepares Flood Insurance Rate Maps (FIRMs), which identify areas subject to flooding, including the 100-year floodplain (1-percent annual chance flood).

At the state level, floodplain management is governed by Minnesota Statutes § 103F and implemented through regulations adopted by the MnDNR. These regulations establish minimum standards for development within designated floodplain areas to minimize flood damage and preserve flood conveyance and storage capacity.

Floodplain management in the project area is administered locally by the City of Lakeville, which participates in the NFIP and enforces floodplain development regulations consistent with state and federal requirements. Local floodplain ordinances regulate development within mapped floodplain areas and are intended to reduce risks to public health and safety and minimize flood-related damage.

Figure 3-6: Floodplains

3.14.3.2 Affected Environment

FEMA Flood Insurance Rate Maps (FIRMs) were reviewed for the study area. The majority of the Airlake Airport property and proposed airfield improvement areas are located outside of mapped floodplains. However, portions of the broader study area include FEMA-designated 1-percent annual chance flood hazard areas (100-year floodplains). A Zone A floodplain is located north of the Airport along a drainage corridor, and a Zone AE floodplain is located southeast of Cedar Avenue near the southern extent of the project area. Mapped floodplains are shown on **Figure 3-6**. Floodplain areas are located outside of the primary airfield improvement areas.

3.14.3.3 Environmental Consequences

Under the No Action Alternative, reconstruction would occur within the existing airfield footprint and would not encroach upon a mapped floodplain.

The Proposed Project is not anticipated to result in encroachment into mapped FEMA floodplains. Airfield improvements, including runway, taxiway, apron, and stream relocation activities, are located outside of mapped floodplain areas. Limited tree clearing may occur along the edge of the mapped Zone AE floodplain southeast of Cedar Avenue in association with the proposed 225th Street realignment. However, tree removal would be limited in extent and would not involve placement of fill, alteration of floodplain elevations, or modification of flood conveyance. Existing root systems and ground conditions would remain substantially intact. As a result, the Proposed Project is not expected to affect flood storage capacity, flood flows, or floodplain function. Therefore, adverse impacts to floodplains are not anticipated.

Mitigation and Minimization

The Proposed Action has been designed to avoid impacts to mapped FEMA floodplains to the extent practicable. During tree clearing, stumps would remain and existing ground conditions and root systems would remain substantially intact, minimizing the potential for erosion or changes in floodplain function. No additional mitigation measures are proposed.

Significance Determination

FAA evaluates floodplain impacts based on the extent to which a proposed action would induce development within a floodplain, reduce flood storage capacity, impede flood flows, or otherwise alter floodplain values and functions. The Proposed Action would not result in floodplain encroachment, loss of flood storage, alteration of flood conveyance, or development within a mapped floodplain. As a result, the Proposed Action would not result in significant impacts to floodplains.

3.14.4 Surface Water and Stormwater

3.14.4.1 Regulatory Setting

Surface waters and stormwater are regulated under federal, state, and local authorities. At the federal level, the CWA establishes the basic framework for water quality protection. Section 402 of the Clean Water Act authorizes the National Pollutant Discharge Elimination System (NPDES), which regulates stormwater discharges associated with construction and industrial activities. In Minnesota, the NPDES program is administered by the MPCA, which issues construction stormwater permits and establishes requirements for erosion and sediment control, as well as post-construction stormwater management. Section 401 of the CWA requires that activities receiving federal permits or approvals comply with state water quality standards. The MPCA administers Section 401 water quality certification in Minnesota and establishes water quality standards under Minnesota Rules Chapters 7050 and 7052.

At the state level, additional requirements related to surface water management may be administered by the DNR, particularly where projects involve alterations to public waters or watercourses, which require a Public Waters Work Permit under Minnesota Statutes §103G.245. The DNR also establishes shoreland management standards under Minnesota Rules Chapter 6120, which regulate land use and development near public waters to protect water quality, habitat, and natural resources.

Surface water and stormwater management within the project area are also governed by local regulations. The City of Lakeville administers local stormwater management requirements consistent with state and federal standards, as well as shoreland zoning ordinances that implement DNR standards for development adjacent to public waters. These requirements include implementation of stormwater BMPs to control runoff quantity and quality and protection of shoreland resources.

Figure 3-7: On-Airport Stream

3.14.4.2 Affected Environment

Surface water resources within the Proposed Action area include an unnamed intermittent stream and associated drainage features located on and adjacent to Airlake Airport. This stream is identified as a MnDNR public watercourse (M-049-012-001) and conveys stormwater runoff from portions of the Airport. The stream on Airport property is characterized as intermittent and includes segments that have been historically modified and realigned to accommodate airport development. The stream originates west of the Airport and flows east through the Airport property via a combination of vegetated ditches and culverts. Portions of the channel are conveyed beneath Runway 12/30 and associated taxiways before exiting the Airport to the east under 220th Street West and Cedar Avenue. Downstream of the Airport, the intermittent stream flows to South Creek, which ultimately drains to the Vermillion River approximately three miles downstream. South Creek and the Vermillion River are designated cold-water trout streams and are considered sensitive receiving waters.

Within the Airport, surface water features are integrated with the stormwater management system, which includes culverts, vegetated swales, and detention areas designed to convey and manage runoff. Several on-site wetlands function as stormwater storage areas, including constructed detention basins associated with previous airfield and hangar development. Stormwater runoff within the study area is influenced by a combination of impervious surfaces associated with airfield infrastructure and pervious areas, including managed turf and agricultural lands. Runoff from the Airport drains to the unnamed intermittent stream and its associated tributaries, which serve as the primary conveyance system for stormwater leaving the site.

3.14.4.3 Environmental Consequences

Impacts to surface water and stormwater would primarily result from stream realignment, temporary construction activities, and minor increases in impervious surface area.

Surface Water

Under the No Action Alternative, reconstruction of existing airfield pavement could result in temporary construction-related runoff, erosion, or sedimentation, which would be managed through standard construction controls. The intermittent stream would remain in its existing alignment.

The Proposed Project includes relocation of approximately 1,164 linear feet of the unnamed intermittent stream (DNR Public Watercourse M-049-012-001). The project would relocate two segments of the intermittent stream to accommodate airfield improvements. Based on preliminary design, impacts would include modification of channel alignment, replacement of existing culverts, grading within adjacent areas, and temporary disturbance to streambed and bank conditions during construction. The resulting stream length would be similar to existing conditions, with an anticipated increase of approximately 250 feet. The proposed relocation is expected to improve flow characteristics by reducing ponding areas and minimizing sharp channel bends that currently limit flow efficiency. Existing conditions include documented ponding adjacent to the Taxiway B1 culvert, which may be reduced by the project.

A Stream Functional Assessment memo was prepared to evaluate the effects of the proposed stream relocation on channel form and function, including channel dimension, pattern, profile, flow conveyance, stability, and habitat potential (**Appendix C**). The assessment was conducted to support U.S. Army Corps of Engineers Section 404 permitting and determine whether existing stream functions would be maintained following project implementation. Existing stream functions and values include hydrologic connectivity, surface water conveyance, stormwater attenuation and storage, sediment retention, water quality treatment, and riparian habitat. The memo concluded that the relocated stream could maintain the existing functions and values by preserving channel geometry and overall stream characteristics while also addressing existing operational deficiencies, including ponding adjacent to the Taxiway B1 culvert and bends in the existing runway culvert.

The relocated stream would maintain downstream hydrologic connectivity to South Creek and the Vermillion River, which are designated trout streams and represent sensitive receiving waters. Temporary construction-related impacts, including increased turbidity and sedimentation, may occur but would be minimized through implementation of best management practices (BMPs). Construction activities associated with stream relocation and culvert replacement may require temporary diversion of flow and localized dewatering within active work areas. Final construction methods have not yet been determined and will depend on the selected stream alignment and sequencing of airfield improvements. To maintain stream function during construction, the relocated stream channel is anticipated to be constructed and stabilized prior to disturbance of existing stream segments.

Potential FAA Technical Operations Design Refinements

Following completion of the EA and during final FAA Technical Operations review, additional separation from the Runway 12 localizer and/or glide slope critical area may be required. If determined necessary, the stream segment currently proposed to remain within the existing vegetated corridor parallel to the runway could be relocated further south. This potential design refinement would increase the stream relocation from approximately 1,164 linear feet to approximately 2,319 linear feet and would result in additional impacts to adjacent wetlands, including approximately 0.379 acre of additional impact to Wetland 4. The purpose of such a modification would be to satisfy FAA safety and operational requirements for navigational aid facilities.

Because the Airport Sponsor's Proposed Action avoids these additional impacts while meeting current project objectives, the further south stream alignment is not proposed at this time. If FAA Technical Operations determines that the modification is necessary during final design, FAA may evaluate the change through an appropriate NEPA review process, such as a Written Re-Evaluation or supplemental EA, prior to implementation.

Stormwater

The No Action Alternative would not result in an increase in impervious surface associated with the Proposed Project. Reconstruction of existing airfield pavement could result in temporary construction-related runoff, which would be managed through standard construction controls.

The Proposed Action would result in a net increase of approximately 5 acres of impervious surface associated with runway, taxiway, and apron improvements. Based on a comparative stormwater analysis completed for the project, runoff volume from the approximately 145-acre project area is expected to increase by approximately 0.57 acre-feet during the 2-year, 24-hour storm event and by approximately 1.33 acre-feet during

the 100-year, 24-hour storm event. At the primary downstream point of analysis, the increase in impervious surface represents less than one percent of the total contributing watershed area and approximately a 1.88 percent increase in overall watershed imperviousness. Relative to the size of the receiving watershed, project-related increases in runoff are expected to be minor. To comply with Vermillion River Watershed Joint Powers Organization (VRWJPO) standards, stormwater BMPs would be designed to capture and treat this increase in runoff volume and prevent post-construction runoff volumes from exceeding pre-construction conditions for the 2-year, 24-hour event.

Because runoff from the Airport ultimately reaches South Creek and the Vermillion River, both designated trout streams, potential thermal effects were considered as part of the stormwater analysis. The analysis concluded that the relatively small increase in impervious surface area, combined with implementation of stormwater BMPs and infiltration practices, would result in negligible thermal impacts and is expected to comply with VRWJPO requirements intended to protect temperature-sensitive receiving waters.

Mitigation and Minimization

The Proposed Project would be designed in a way to minimize impacts to surface and stormwater resources while maintaining the existing functions and values of the stream. Initial consultation with DNR was conducted to determine the preferred stream design to minimize any impacts to the existing stream. The MnDNR recommended maintaining the existing stream geometry to the greatest extent possible. The stream relocation will be designed in a way that generally maintains stream length, preserves the existing drainage pattern, and limits the extent of channel relocation required to accommodate the proposed airport improvements. The relocated stream will remain a predominantly open-channel system and will maintain connections to adjacent vegetated areas and wetland resources that currently contribute to stormwater attenuation, sediment retention, and water quality treatment functions. The preferred alternative will also remove the bends along the existing runway culvert and aim to address the documented ponding near the Taxiway B1 culvert.

Final stream design will be completed in coordination with the DNR and other regulatory agencies. Final design will incorporate channel dimensions, grades, stabilization measures, and vegetation restoration practices intended to maintain existing hydrologic, water quality, habitat, and geomorphic functions.

Stream relocation and culvert replacement activities would be designed and sequenced to maintain stream flow and downstream connectivity throughout construction where possible. To the extent practicable, the new stream alignment would be constructed and stabilized prior to disturbing existing stream segments. If temporary dewatering or flow diversion is required, such activities would be conducted in accordance with applicable federal, state, and local permit requirements. Additional measures may include temporary flow diversion structures, stabilization of disturbed streambanks, and phased construction techniques intended to reduce impacts to aquatic resources.

Temporary construction impacts to surface waters will be minimized through implementation of erosion and sediment control BMPs in accordance with applicable permit requirements. BMPs will include sediment control devices, stabilization of disturbed soils, and restoration of disturbed stream and riparian areas following construction. These measures will minimize sediment transport and protect downstream water resources during construction. Existing infiltration BMPs would be modified and expanded as necessary to accommodate the increase in impervious surface associated with the Proposed Action. Stormwater facilities would be designed to maintain pre-construction runoff volumes for the 2-year, 24-hour storm event, provide treatment of runoff from new impervious areas, and comply with applicable MPCA and VRWJPO requirements for volume control, water quality, peak rate control, and thermal protection. The project will comply with all applicable federal, state, and local permitting requirements.

Significance Determination

According to the FAA Order 1050.1 desktop reference, a significant impact to surface waters exists if a proposed project would cause surface water to exceed water quality standards established by a regulatory agency, or if a proposed project would contaminate public drinking water supply such that public health may be adversely affected. Other factors to consider include if an action would:

- Adversely affect natural and beneficial water resource values to a degree that substantially diminishes or destroys such values;
- Adversely affect surface waters such that the beneficial uses and values of such waters are appreciably diminished or can no longer be maintained and such impairment cannot be avoided or satisfactorily mitigated; or
- Present difficulties based on water quality impacts when obtaining a permit or authorization.

Based on the limited increase in impervious surface area, implementation of infiltration and stormwater BMPs, maintenance of stream function and downstream connectivity, and compliance with applicable MPCA, VRWJPO, DNR, and permitting requirements, the Proposed Project is not expected to adversely affect water quality, impair beneficial uses of downstream waters, or result in significant impacts to surface water or stormwater resources. The significance determination does not include the potential FAA Technical Operations design refinement.

3.14.5 Water Resources Conclusion

Overall, the Proposed Action would result in impacts to multiple components of the water resource system, including relocation of 1,164 linear feet of an intermittent stream, permanent impacts to approximately 0.455 acre of wetlands, and modifications to existing stormwater infrastructure. With implementation of avoidance, minimization, and stormwater management measures, impacts to water resources are expected to be limited and would not result in significant impacts to the overall water resource system.

3.14.5.1 Water Resources Permits and Approvals

Due to the components of the process impacting water resources, various permits and approvals will be required, Summarized in **Table 3-6** below.

Table 3-6: Water Resources Permits and Approvals

Agency	Permit/Approval	Trigger
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 Permit	Placement of fill in wetlands and/or waters of the U.S.
Minnesota Pollution Control Agency (MPCA)	Clean Water Act Section 401 Water Quality Certification	Impacts to waters/wetlands requiring a 404 permit
Minnesota Department of Natural Resources (MN DNR)	Public Waters Work Permit	Work within Public Watercourse M-049-012-001 including stream relocation and culvert replacement
Minnesota Pollution Control Agency (MPCA)	NPDES Construction Stormwater General Permit Coverage	Earth disturbance greater than one acre
City of Lakeville (LGU under WCA)	Wetland Conservation Act (WCA) Approval / Replacement Plan Approval	Impacts to wetlands
City of Lakeville	Shoreland Zoning	Work within regulated shoreland area adjacent to the public watercourse
City of Lakeville	Erosion and Sediment Control / Grading Permit	Land disturbance and grading activities

3.15 SUMMARY

A summary of the environmental impacts discussed above is presented in **Table 3-7**. The table includes the impacts from the no-action and proposed project scenarios 1 and 2, as well as any required mitigation, permits, or associated actions.

Table 3-7: Summary of Environmental Consequences

Environmental Impact Category		No-Action Alternative: Significant Impact?	Proposed Project	Permitting/Mitigation & Associated Actions
Aviation Emissions and Air Quality		No	No. Minimal impacts during construction	Voluntary EPA-recommended best management practices (BMPs) and emissions control strategies will be implemented during construction.
Biological Resources (including fish, wildlife, and plants)		No	No	-Tree removal will occur during winter months. -DNR Blanding’s turtle policies will be followed during construction.
Coastal Resources		No	No	None
DOT Section 4(f) and Land and Water Conservation Fund (Section 6(f))		No	No	None
Farmlands		No	No. 43 acres converted	None
Hazardous Materials, Solid Waste, and Pollution Prevention		No	No	-Materials will be reused on site where feasible. -Disposal of construction materials and solid waste will occur in accordance with state and local laws.
Historic, Architectural Archeological, and Cultural Resources		No	No	None
Land Use	Land Use and Zoning	No	No. Safety zoning adjusted for new runway ends	-JAZB will convene upon completion of environmental review -225 th St W would be removed from RPZ -Shoreland zoning update
	Utilities	No	No	-Unrecorded electric easement along 225 th St W to be adjusted
	Transportation	No	No. 225 th St W realigned around RPZ	-Road rights-of-way to be adjusted
	Wildlife Hazards	No	No	-Vegetation along relocated stream would discourage wildlife -Stream design would reduce standing water -Stormwater facilities to comply with AC 150/5200-33
Natural Resources and Energy Supply		No	No. Minor increase in energy and materials demand during construction	-Materials will be reused on site where feasible
Noise and Compatible Land Use		No	No	-Voluntary noise abatement practices in place
Socioeconomics and Children’s Health & Safety Risks		No	No. Temporary airport closure	-Coordination with MAC and ALAAC to minimize disruption to tenants would occur as feasible
Visual Effects and Visual Character		No	No	None
Water Resources	Surface Water & Stormwater	No	No. Relocation of 1,164 feet of stream length	- DNR Public Waters Permit - USACE Section 404 permit - -City of Lakeville Grading Permit an Erosion and Sediment Control Plan
	Floodplains	No	No. Minimal tree removal in floodplain	-Stumps and ground cover will remain to the extent practicable
	Groundwater	No	No	-Stormwater infiltration BMPs -Erosion, sediment, and spill controls
	Wetlands	No	No. 0.455 acres of permanent wetland impact	- Compensatory mitigation for 0.435 acres of wetlands in service Bank 8 - USACE Section 404 permit - MPCA Section 401 Permit - DNR Public Waters Permit - Lakeville WCA Wetland Replacement Plan Approval

4 - Agency & Public Engagement

This section outlines the various opportunities for agency and public engagement that were made available during the EA/EAW process.

4.1 SCOPING LETTERS & MEETING

Scoping letters were distributed to relevant federal, state, and local governments and agencies identified in consultation with the FAA. On April 13, 2026, Mead & Hunt solicited initial comments from the identified governments and agencies via electronic mail and simultaneously invited agency representatives to attend an agency scoping meeting on April 28, 2026. Agencies were asked to submit comments either during the scoping meeting or in writing by May 5, 2026, for consideration during the environmental review process. Agencies receiving this correspondence included the following:

- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- MN Environmental Quality Board
- MN Department of Agriculture
- MN Department of Commerce
- MN Department of Health
- MN Department of Natural Resources
- MN Department of Transportation
- MN Department of Transportation Aeronautics
- MN Pollution Control Agency
- MN Board of Water and Soil Resources
- MN Public Utilities Commission
- MN State Archaeologist
- MN Indian Affairs Council
- MN State Historic Preservation Office
- City of Lakeville
- Eureka Township
- Dakota County
- Vermillion River Watershed Joint Powers Organization
- Metropolitan Council

4.2 AGENCY TECHNICAL ADVISORY PANEL MEETINGS & OTHER AGENCY MEETINGS

On June 16, 2026, Mead & Hunt brought together a smaller group of interested agency representatives for an Agency Technical Advisory Panel (ATAP) meeting to present, compare and discuss the stream relocation alternatives; build consensus on the preferred stream relocation alternative; confirm the stormwater analysis methodology; and identify agency-recommended stream relocation design elements. Agencies invited to this meeting included the following:

- MN Board of Water and Soil Resources
- MN Department of Natural Resources
- MN Pollution Control Agency
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture Wildlife Services
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- City of Lakeville
- Dakota County
- Dakota County Soil & Water Conservation District
- Eureka Township
- Metropolitan Council
- Vermillion River Watershed Joint Powers Organization

The project team plans to reconvene the ATAP during the public comment period to understand and proactively address any additional agency comments or concerns.

In addition to these larger group meetings, the project team consulted the following agencies individually during the development of the EA and EAW to understand any agency-specific stream relocation design considerations: U.S. Army Corps of Engineers, City of Lakeville, Vermillion River Watershed Joint Powers Organization, U.S. Department of Agriculture Animal and Plant Health Inspection Service – Wildlife Services, MN Department of Natural Resources, and U.S. Fish & Wildlife Service.

Meeting summaries and presentation materials from the agency scoping and ATAP meetings, along with agency scoping comments received, are included in **Appendix J**.

4.3 PROJECT WEBSITE

A project website (<https://metroairports.org/lvn-environmental-assessment>) was launched on September 1, 2026, ahead of the first public meeting. The website contains an overview of the project, schedule, public engagement opportunities, frequently asked questions, information on public comments, and a project contact, and will be updated throughout the EA/EAW process.

4.4 PUBLIC EVENTS

A public open house was held on September 10, 2026, to:

- Introduce the Airlake Airport EA/EAW process.
- Provide an overview of the proposed action and project purpose and need.
- Showcase the alternatives evaluated.
- Share environmental findings and key considerations.
- Explain anticipated next steps leading to publication of the Draft EA and EAW.
- Provide an opportunity for public questions and comments.
- Identify community concerns and stakeholder interests.

4.5 OTHER PRESENTATIONS & PUBLIC ENGAGEMENT OPPORTUNITIES

The project team shared updates on the EA and EAW and progress completed to date with the Airlake Airport Advisory Commission (ALAAC) on June 11 and September 10, 2026.

Appendix K contains public meeting materials including the ALAAC presentations. Any public comments received during the Draft EA/EAW public comment period will be added to **Appendix K**, along with responses to those comments.

5 - Preparers

5.1 INTRODUCTION

The responsibility for the EA under NEPA rests with the FAA Dakota-Minnesota Airports District Office. This EA was prepared by Mead & Hunt, Inc. under contract with the Metropolitan Airports Commission.

5.2 PREPARERS & QUALIFICATIONS

The following Mead & Hunt staff members were directly responsible for preparing the contents of this document.

- **Evan Barrett, AICP, CM – Project Manager:** Mr. Barrett has nearly 20 years of experience with NEPA documentation, airfield planning studies, and airport master plans.
- **Colleen Bosold – Deputy Project Manager & Stakeholder Engagement Coordinator:** Ms. Bosold has 18 years of experience in the aviation consulting industry, focusing on planning, environmental documentation, community engagement, and communications.
- **Sarah Emmel, AICP – Environmental Planner:** Ms. Emmel is an airport planner with experience in environmental planning and NEPA, airport sustainability, land use planning, and stakeholder engagement.
- **Cole Kiernan – Environmental Planner:** Mr. Kiernan is an environmental planner with experience in wetland regulation, NEPA review, and state environmental review documentation.
- **Rob Sims, CM – Aviation Planner:** Mr. Sims is an aviation planner with over a decade of experience in the aviation industry. His areas of expertise include forecasting, project justification, and alternatives analysis.
- **Bridget Jensen – Cultural Resources Specialist:** Ms. Jensen is a historian with experience in conducting research and field surveys, preparing historic contexts and inventory forms, and preparing reports. She meets the Secretary of the Interior's Standards in history.

The following subcontractors were responsible for preparing specialty studies supporting the findings and conclusions of the EA and EAW.

- **Jean Dowiasch – Mississippi Valley Archaeology Center – Senior Research Archaeologist:** Ms. Dowiasch is a Senior Research Archaeologist at the Mississippi Valley Archaeology Center. She and her team conducted the Phase I Archaeological Survey and subsequent literature review for this EA.
- **Brenna Hyzy, M.S. – Western EcoSystems Technology, Inc. – Bat Biologist:** Ms. Hyzy is a federally permitted bat biologist with Western EcoSystems Technology, Inc. (WEST). She conducted the Northern Long-eared Bat Field Assessment for Summer Habitat Suitability for this EA.
- **Josh Kurtz, PE (MN) – Terracon – Project Manager:** Mr. Kurtz has 10 years of experience in environmental engineering in the aviation industry with experience in stormwater and NPDES compliance and permitting.
- **Michael Lower, PE (PA) – Terracon – Department Manager, Engineering:** Mr. Lower has 30 years of experience in water resources engineering. His areas of expertise include stream and wetland design, stormwater management design, hydrology and hydraulics, and environmental restoration construction.
- **Andrew Fisher, EIT – Terracon – Staff Civil Engineer:** Mr. Fisher has 4 years of experience in stormwater management design, erosion and sediment control design, and NPDES permitting and regulatory compliance.

- **Matthew Simon, Ph.D. – HMMH – Principal Consultant, Aviation Environmental & Sustainability:** Dr. Simon has 18 years of professional experience with transportation-related environmental impacts, particularly air quality.
- **Vincent Ma – HMMH – Managing Consultant, Aviation Environmental & Sustainability:** Mr. Ma has over 8 years of professional experience, including modeling noise impacts from aircraft operations. He is an experienced user of FAA's Aviation Environmental Design Tool.
- **David Crandall – HMMH – Principal Consultant, Aviation Environmental & Sustainability:** Mr. Crandall has 27 years of professional experience evaluating the environmental impacts of aircraft operations. He is an experienced user of FAA's Aviation Environmental Design Tool.
- **Tim Wegwerth, PE (MN, WI) – Short Elliott Hendrickson Inc. (SEH) – Senior Airport Engineer:** Mr. Wegwerth has 16 years of civil engineering consulting experience with nine years specifically spent on all aspects of airfield design and construction projects, ranging from general aviation to commercial service airports.