Saratoga County Airport
Master Plan Phase I Projects

FINAL ENVIRONMENTAL ASSESSMENT

Prepared for:

Saratoga County Department of Public Works
3654 Galway Rd, Ballston Spa, NY 12020

Prepared by:

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This Environmental Assessment becomes a Federal document when evaluated and signed by the responsible FAA Official.

Responsible FAA Official — *Date* 7/2/2019

May 2019

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A	AA	Adjacent Area
	AC	Advisory Circular
	ACS	American Community Survey
	ALP	Airport Layout Plan
	AOA	Airport Operations Area
	ASA	Adirondack Soaring Association
	AST	Above Ground Storage Tank
	AWOS	Automated Weather Observing System
B	BA	Biological Assessment
	BMP	Best Management Practice
	BO	Biological Opinion
C	CAA	Clean Air Act
	CBRA	Coastal Barrier Resources Act
	CEQ	Council on Environmental Quality
	CFR	Code of Federal Regulations
	CH4	Methane
	CIR	Compression Ignition Report
	CO	Carbon Monoxide
	CRIS	Cultural Resources Information System
	CWA	Clean Water Act
D	dB	Decibel
	DEA	Draft Environmental Assessment
	DMA	Draft Management Agreement
	DPW	Department of Public Works
	DNL	Day Night Average Sound Level
E	EA	Environmental Assessment
	EAF	Environmental Assessment Form
	ECL	Environmental Conservation Law
	EIS	Environmental Impact Statement
	EPA	U.S. Environmental Protection Agency
	EO	Executive Order
	ERR	Environmental Radius Report
	ESA	Endangered Species Act
F	FAA	Federal Aviation Administration
	FAR	Federal Aviation Regulations
	FBO	Fixed Based Operator
	FEMA	Federal Emergency Management Agency
	FHA	Flood Hazard Area
	FIS	Flood Insurance Study
	FONSI	Finding of No Significant Impact

	FPPA	Farmland Protection Policy Act
G	GHG	Greenhouse Gas
	GIS	Geographic Information Systems
	GQS	Glide Path Qualification Slope
H	HC	Hydrocarbons
	HFC	Hydrofluorocarbons
	hp	Horsepower
	ILS	Instrument Landing System
	IPaC	USFWS Information, Planning and Consultation
	ISR	Indirect Source Review
	ITP	Incidental Take Permit
K	KBB	Karner Blue Butterfly
L	LL	Low Lead
	LPV	Localizer Performance with Vertical Guidance
M	MITL	Medium Intensity Taxiway Edge Lighting
	MJ	McFarland Johnson
	MOA	Memorandum of Agreement
	MPU	Airport Master Plan Update
N	NAAQS	National Ambient Air Quality Standards
	NAFS	North American Flight Services
	NEPA	National Environmental Policy Act
	NHPA	National Historic Preservation Act
	NLEB	Northern Long-Eared Bat
	NO_2	Nitrogen Dioxide
	NO_X	Nitrogen Oxides
	N2O	Nitrous Oxide
	NOI	Notice of Intent
	NOTAM	Notices to Airmen
	NPDES	National Pollution Discharge Elimination System
	NPIAS	National Plan of Integrated Airport Systems
	NRCS	Natural Resources Conservation Service
	NRHP	National Register of Historic Places
	NYCRR	New York Codes, Rules and Regulations
	NYNHP	New York State National Heritage Program
	NYPAD	New York Protected Areas Database
	NYSDEC	New York State Department of Environmental Conservation
	NYSDOT	New York State Department of Transportation
	NWI	National Wetlands Inventory
O	O_3	Ozone
	OAP	Obstacle Action Plan
	OHWM	Ordinary High Water Mark
	OPRHP	NYS Office of Parks, Recreation and Historic Preservation
P	PAPI	Precision Approach Path Indicator
	Pb	Lead

	PDD	Planned Development District
	PFC	Perfluorocarbons
	PM	Particulate Matter
R	RESS	Runway End Siting Surface
	RHA	Rivers and Harbors Appropriation Act
	RNAV	Satellite Guided Area Navigation
	ROD	Record of Decision
	ROFA	Runway Object Free Area
	RSA	Runway Safety Areas
	RPZ	Runway Protection Zone
S	SDWA	Safe Drinking Water Act
	SEQRA	New York State Environmental Quality Review Act
	SF6	Sulfur Hexafluoride
	SIP	State Implementation Plan
	SHPO	State Historic Preservation Office
	SO_2	Sulfur Dioxide
	SPDES	State Pollution Discharge Elimination System
	SSA	Saratoga Soaring Association
	SSA	Sole Source Aquifer
	SWPPP	Stormwater Pollution Prevention Plan
T	TERPS	Terminal Instrument Procedures
	TMDL	Total Maximum Daily Load
	TNC	The Nature Conservancy
	TNW	Traditional Navigable Water
	TOFA	Taxiway Object Free Area
	TSA	Taxiway Safety Area
U	USACE	U.S. Army Corps of Engineers
	USDA	U.S. Department of Agriculture
	USDOT	U.S. Department of Transportation
	USEPA	U.S. Environmental Protection Agency
	USFWS	U.S. Fish and Wildlife Service
	USGS	U.S. Geological Survey
V	VOC	Volatile Organic Compounds
W	WHA	Wildlife Hazard Assessment
	WHMP	Wildlife Hazard Management Plan
	WQC	Water Quality Certification
	WWPP	Wilton Wildlife Preserve and Park

1. INTRODUCTION

This Environmental Assessment (EA) addresses the potential social, economic, and environmental consequences associated with the proposed improvements at the Saratoga County Airport (the Airport), airport identifier 5B2, located at 3654 Galway Road, town of Milton, Saratoga County, New York. These improvements include the following major components: taxiway improvements, glider staging/run-up area improvements, land/easement acquisition, and tree obstruction removal.

Based upon the findings in previous studies/reports conducted for the Airport, these improvements are required by the Federal Aviation Administration (FAA) in order to meet FAA standards, improve safety by separating powered and non-powered traffic, and reduce wildlife strike potentials. Additionally, these improvements would increase the operational flexibility of the Airport. The studies in which these proposed improvements are based upon include:

- *Airport Master Plan Update* (MPU) (McFarland Johnson, Inc., May 2015)
- *Wildlife Hazard Assessment* (WHA) (McFarland Johnson, Inc., July 2015)
- *Wildlife Hazard Management Plan* (WHMP) (McFarland Johnson, Inc., January 2016)

This EA has been prepared in accordance with FAA guidelines and is in conformance with the National Environmental Policy Act (NEPA) of 1969; the Council on Environmental Quality (CEQ) regulations stated in 40 Code of Federal Regulations (CFR) Parts 1500-1508, the FAA Environmental Desk Reference dated October 2007, and FAA Orders 1050.1F, *Policies and Procedures for Considering Environmental Impacts,* and 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. Upon reviewing this document, the FAA will determine if any of the environmental or socioeconomic impacts identified herein are significant and warrant further study.

State and local officials will also be given the opportunity to review this document per U.S. Department of Transportation (USDOT) Order 4600.13, Intergovernmental Review of Department of Transportation Programs and Activities. If the potential impacts identified herein do not appear to be adverse or are such that they can be mitigated to a level below established significant impact thresholds, a Finding of No Significant Impact (FONSI) may be issued by the FAA. Otherwise, if the actions have been redefined to include mitigation measures necessary to reduce potentially significant impacts below significant levels, a FONSI/Record of Determination (ROD) may be necessary. Lastly, an Environmental Impact Statement (EIS) would be required when one or more environmental impacts of a Proposed Action would be significant and mitigation measures would not reduce the impact(s) below significant levels.

In addition, this document satisfies the environmental review requirements under the New York State Environmental Quality Review Act (SEQRA) 6 NYCRR Part 617. Under SEQRA, this EA will serve as the basis for the Airport sponsor to issue a Positive or Negative Declaration. The Proposed Action would be classified as a Type I Action. A Full Environmental Assessment Form (EAF) has

been completed and is included in **Appendix G**. The development projects that comprise the Proposed Action evaluated in this EA are listed below.

1.1. PROPOSED ACTION

The MPU identified a number of improvements that would be required in order to improve safety standards.

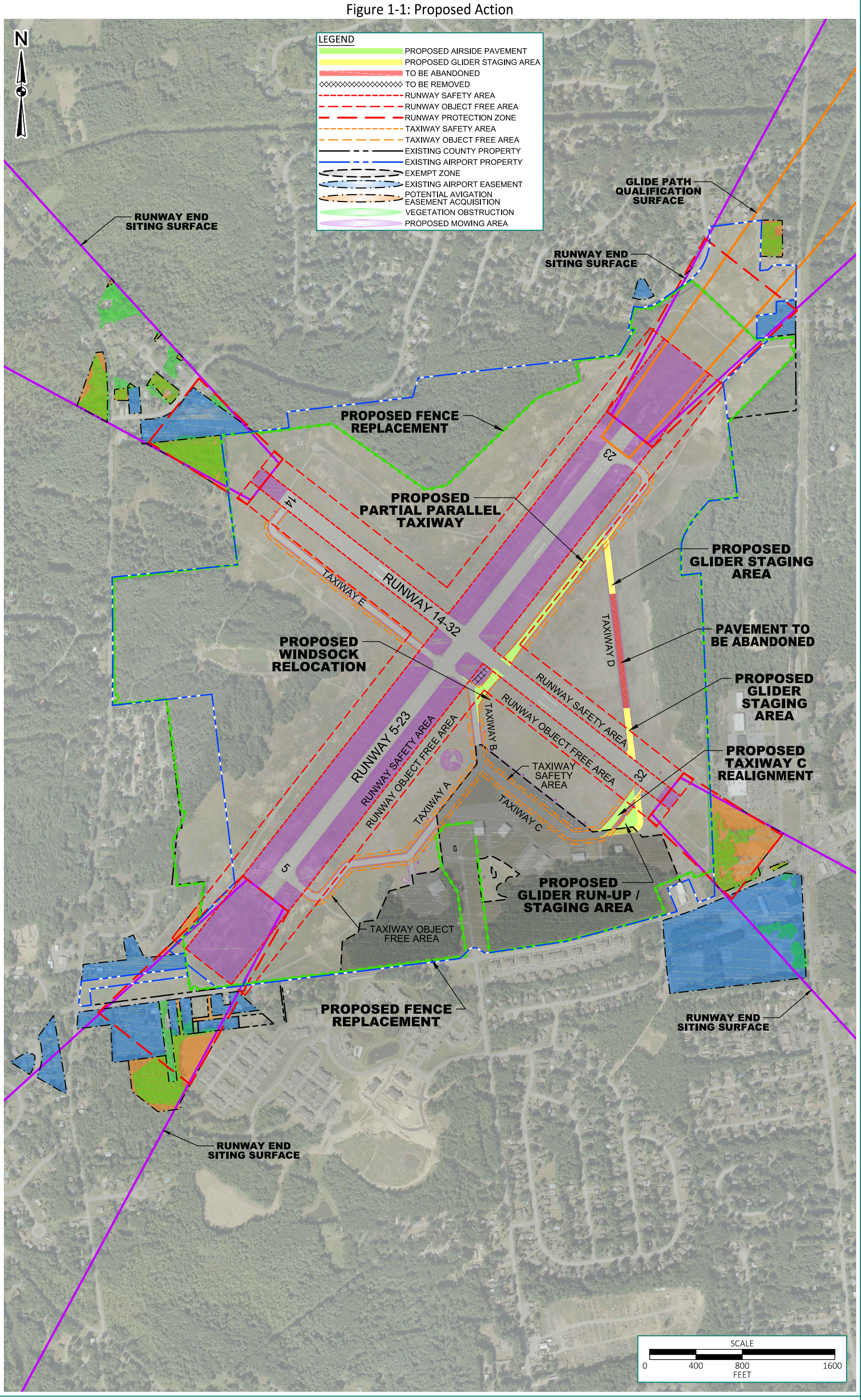
The Proposed Action, further detailed in Chapter 3, *Alternatives Analysis*, includes all the improvements required to meet FAA standards, improve safety by separating powered and non-powered operations, minimize wildlife impacts, while complying with current FAA and New York State Department of Transportation NYSDOT standards.

An overall plan of the Proposed Action is provided below (see **Figure 1-1**) and figures illustrating the Proposed Action covered herein are referenced throughout the EA.

The Proposed Action consists of the following elements, which are necessary to meet the overall purpose of improving safety and increasing operational efficiency and flexibility at the Airport:

- Taxiway modifications including:
  - Construction of a 1,650-foot partial-parallel taxiway to Runway 5-23,
  - Removal of a 0.42-acre portion of Taxiway B,
  - Abandonment of Taxiway D for glider staging areas,
  - Installment of taxiway lighting,
  - Installment of taxiway signage, and
  - Relocation of wind sock.
- Taxiway C improvements including:
  - Construction of new 400 feet of Taxiway C and
  - Abandonment of existing 250 linear feet of Taxiway C elbow for glider operations.
- Glider operation improvements including:
  - Construction of a 0.38-acre run-up/glider staging area.
- Wildlife Hazard Management Plan implementation:
  - Implement routine mowing of runway and taxiway safety areas, and
  - Replacement and installation of 10-foot tall perimeter wildlife fence and associated maintenance corridor.
- Land/easement acquisition land use control and vegetation obstruction removal including:
  - Land and/or easement acquisition for all runway ends, and
  - Vegetation obstruction removal both on and off-airport property.

Figure 1-1: Proposed Action



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2. PURPOSE AND NEED

The Purpose and Need Statement in a National Environmental Policy Act (NEPA) document is a formal statement of the overall goals and objectives of a Proposed Action. The statement documents the justification for the project and provides the basis for evaluating the effectiveness of alternatives.

2.1. BACKGROUND

The Saratoga County Airport (Airport) is located in the eastern portion of the town of Milton, Saratoga County, New York (see Figure 2-1, Location Map and Figure 2-2, Aerial Map). The Airport is owned by Saratoga County (the County). The Saratoga County Department of Public Works maintains the Airport. The Airport occupies a 559-acre site located approximately five miles west of the downtown area of the city of Saratoga Springs and less than three miles north of the village of Ballston Spa.

Development of the Airport began in 1942 as a Civil Aeronautics Administration project during World War II. In 1968 the County purchased the Airport for $25,000. Since the County's Airport ownership, many Airport enhancement projects have taken place, including the Runway 5-23 reconstruction, easement acquisition, obstruction removal, apron rehabilitation, and taxiway lighting rehabilitation.

North American Flight Services (NAFS) is the main Fixed Based Operator (FBO) at the Airport and serves as the day-to-day airport manager for the County. NAFS provides aircraft fuel (100 low lead and Jet A), hangar storage for based aircraft, transient aircraft parking, flight training, and aircraft airframe, power plant and avionics maintenance services. NAFS owns the main hangar located in the southwest corner of the Airport and leases two conventional hangars and two multi-aircraft T-hangars from the County. It also leases and manages the based aircraft tie-downs along Taxiway C.

The Airport reported approximately 38,550 operations,[1]. for the year ending June 15, 2017, which were comprised of local and itinerant operations. These include corporate/business activity, recreational flying, and glider operations. The Airport has two paved runways, designated Runways 5-23 and 14-32. Runway 5-23 is the primary runway and is 4,699 feet long and 100 feet wide. Runway 14-32 is the crosswind runway and is 4,000 feet long and 100 feet wide. Both runways have a published weight bearing capacity of 30,000 pounds single wheel. They are both lit by medium intensity runway edge lights and all except Runway 14 have runway end identifier lights. Runways 5 and 23 have a satellite guided area navigation (RNAV) non-precision approach procedure, whereas Runways 14 and 32 are visual approach runways. Runway 23 has a two-light precision approach path indicator (PAPI), which provides vertical guidance for approaching

[1] FAA Form 5010-1, Saratoga County Airport, AFD Effective Oct. 11, 2018, accessed Oct. 30, 2018.

aircraft. Existing facilities at the Airport include three conventional hangars ranging from 7,700 to 10,000 square feet in size. The Airport has an automated weather observing system (AWOS-III) and two T-hangar buildings, including 13 total hangar units. Saratoga Soaring Association (SSA) and Adirondack Soaring Association (ASA) lease land from the County for operations of their gliders. Based on the most current Federal Aviation Administration's (FAA) publications, there are 16 gliders at the Airport.[2] The Airport hosts the northern most glider clubs in Saratoga County and serves the area all the way north up to Lake Placid. Glider operations occur most frequently in the summer months.

The town of Milton provides fire fighting services from their facility located on Geyser Road, one-third of a mile from the Airport entrance. The existing airside and landside facilities are illustrated on the Airport Layout Plan (ALP) (see **Figure 2-3**).

The Airport is included in the National Plan of Integrated Airport Systems (NPIAS), the FAA system plan for the development of public use airports in the United States. An airport must be in the NPIAS to be eligible for FAA grants. The Airport is designated in the NPIAS as a general aviation airport, which serves non-scheduled flights.

The Airport serves a key transportation function for the Northern Region of New York State, to connect Saratoga County to other parts of the state, nation, and Canada and provide access to many popular tourist destinations in the area. The Airport is used in a number of ways including:

- Pilot training provided at the Airport and used by local flight schools at other airports;
- Alternative access to vacation and resort destinations in northern Saratoga County, Lake George, and the Adirondack Park, NY areas and western Vermont;
- Regional aircraft maintenance services including all major repairs to piston aircraft;
- Important support for the local economy and Saratoga County from business aircraft travel, including Global Foundries and General Electric research facilities;
- Important access point for local business development; and
- Closest airport to the Saratoga Race Track.

One major influence on the Airport operations includes the Saratoga Race Track. The Race Track, located in the city of Saratoga Springs, is approximately six miles from the Airport. The Race Track attracts a large influx of people every year to view and partake in horse racing activities, casino, and visiting the Saratoga Springs area. Many of these visitors arrive by private aircraft. The Saratoga Race Track season (Track Season) ranges from mid-summer until Labor Day. During that period, there is a major influx of corporate jet and turboprop activity, which accounted for 53 percent of the annual activity in 2012[3]. Prior years have similar activity levels. Accommodating this increased demand requires consideration for aircraft parking, fueling, and the glider operations, which occur simultaneously.

[2] FAA Form 5010-1, Saratoga County Airport, AFD Effective Dec. 10, 2015, accessed Jan. 22, 2016.
[3] Airport Master Plan Update, McFarland Johnson, Inc., 2015.

Figure 2-1: Airport - Location Map

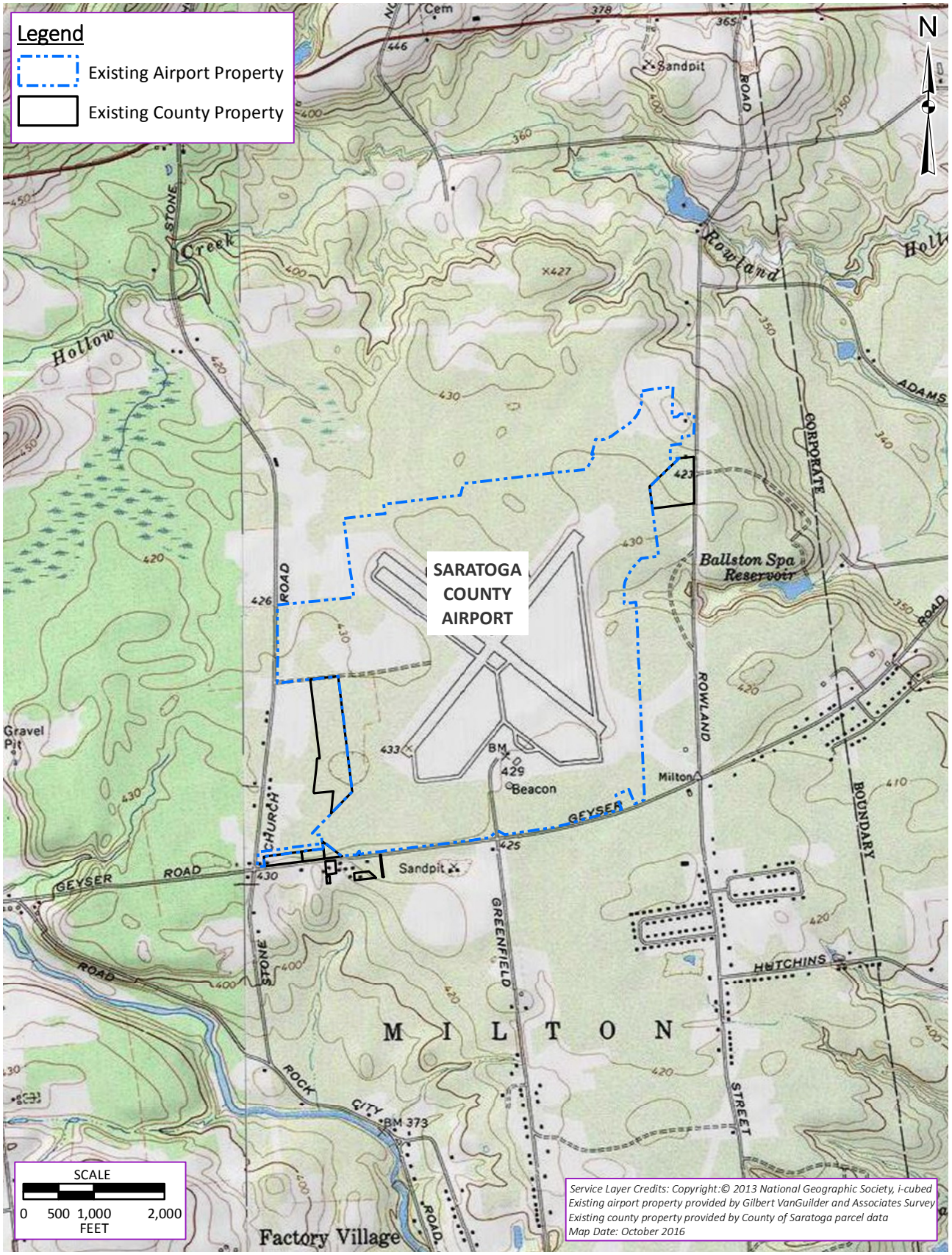

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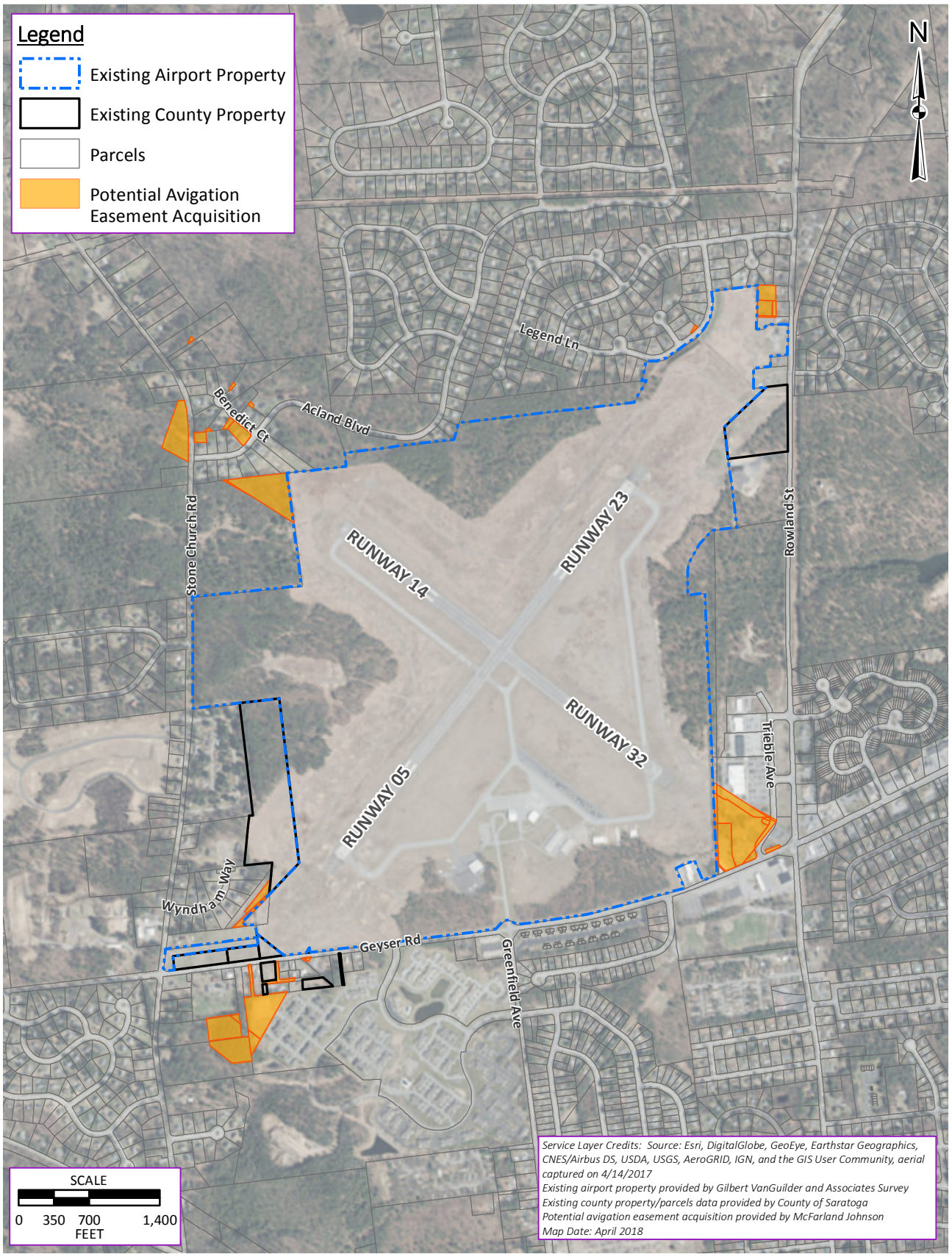
Figure 2-2: Airport - Aerial Map



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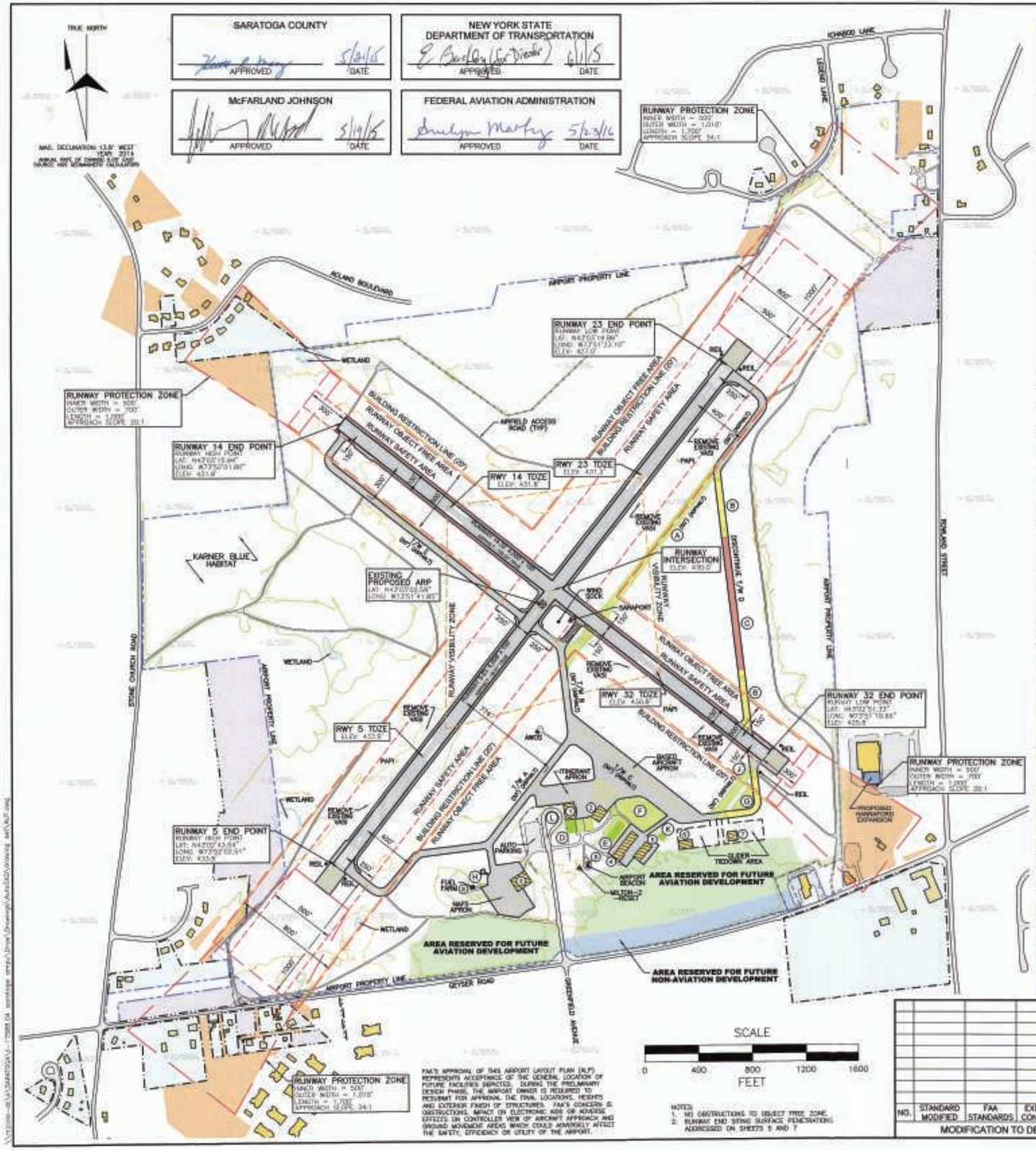
SARATOGA COUNTY		NEW YORK STATE DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE 5/19/16	APPROVED (for Director)	DATE 6/1/16
McFARLAND JOHNSON		FEDERAL AVIATION ADMINISTRATION	
APPROVED	DATE 5/19/16	APPROVED	DATE 5/23/16

TRUE NORTH

MAG. DECLINATION 13.8° WEST
YEAR: 2014
ANNUAL RATE OF CHANGE: 0.0°W/YR
SOURCE: NGS GEOMAGNETIC CALCULATOR



SCALE
0 400 800 1200 1600
FEET

FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED. DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACH AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.

NOTES:
1. NO OBSTRUCTIONS TO OBJECT FREE ZONE.
2. RUNWAY END SITING SURFACE PENETRATIONS ADDRESSED ON SHEETS 5 AND 7

NO.	STANDARD MODIFIED	FAA STANDARDS	EXISTING CONDITION	PROPOSED ACTION	DATE APPROVED
MODIFICATION TO DESIGN STANDARDS					

REV	DATE	DESCRIPTION	BY	SPONSOR

McFarland Johnson

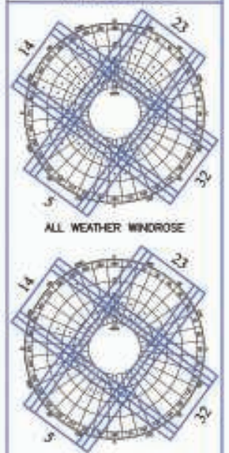
SARATOGA COUNTY AIRPORT
SARATOGA COUNTY, NEW YORK

AIRPORT LAYOUT PLAN

SCALE: 1" = 400' | DESIGN: DKS
DRAWN: RGT | PROJECT: 17588.04
CHECKED: JEP | DATE: MAY 2016

SHEET: 2

WIND COVERAGE



WIND COVERAGE		
KNOTS	ALL WEATHER	IFR
10.5	99.70%	99.83%
13.0	99.95%	99.98%
16.0	99.99%	100.00%

FACILITIES TABLE

EXISTING		
ID	FACILITY NAME	TOP ELEV.
1	MAFS HANGAR	444'
2	MAFS HANGAR	454'
3	MAFS HANGAR	456'
4	T-HANGAR	446'
5	T-HANGAR	441'
6	ADIRONDACK SOARING ASSOCIATION HANGAR	443'
7	SARATOGA SOARING ASSOCIATION HANGAR	443'
8	FUEL FARM	438'
9	ELECTRICAL VAULT	436'

PROPOSED		
ID	FACILITY NAME	TOP ELEV.
A	PARTIAL PARALLEL TAXIWAY (58')	N/A
B	GLIDER STAGING AREA	N/A
C	TAXIWAY D TO BE ABANDONED	N/A
D	HANGAR STORAGE EXPANSION	N/A
E	8-UNIT T-HANGAR	N/A
F	APRON DEVELOPMENT	N/A
G	RUN-UP AND GLIDER STAGING AREA	N/A
H	FUEL FARM IMPROVEMENTS	N/A
J	RELOCATE TAXIWAY C	N/A
K	SRE BUILDING	N/A
L	AUTO PARKING	N/A

AIRPORT DATA TABLE

AIPORT DATA		EXISTING	PROPOSED
AIRPORT ELEVATION/RUNWAY HIGH POINT (M.S.L.)		433.9'	433.9'
AIRPORT REFERENCE POINT (NAD 83)	LATITUDE	N43°03'02.58"	N43°03'02.58"
	LONGITUDE	W73°51'41.85"	W73°51'41.85"
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH		85°	85°
AIRPORT TERMINAL AREA NAVAIDS		BEACON, AWOS	BEACON, AWOS
MAGNETIC VARIATION (USING NGS GEOMAGNETIC CALCULATOR)		13.8 WEST	13.8 WEST
DATE OF MAGNETIC VARIATION		2014	2014
APIAS SERVICE LEVEL		GA	GA
STATE SERVICE LEVEL		N/A	N/A
COMBINED WIND COVERAGE (%)	ALL WEATHER	10.5 KNOTS – 99.70%	10.5 KNOTS – 99.70%
	IFR	10.5 KNOTS – 99.83%	10.5 KNOTS – 99.83%
RUNWAY DESIGN CODE (RDC)		C-II	C-II
DESIGN AIRCRAFT		CITATION SOVEREIGN	CITATION SOVEREIGN
TAXIWAY LIGHTING		MITL	MITL
TAXIWAY MARKING		BASIC	BASIC
TAXIWAY SURFACE TYPE		ASPHALT	ASPHALT

RUNWAY DATA TABLE

ITEM		RUNWAY 5-23 EXISTING	RUNWAY 14-32 EXISTING	RUNWAY 5-23 PROPOSED	RUNWAY 14-32 PROPOSED
EFFECTIVE RUNWAY GRADIENT		0.15%	0.15%	0.15%	0.15%
MAXIMUM GRADE CHANGE		0.42%	0.31%	0.42%	0.31%
WIND COVERAGE (%)	ALL WEATHER	10.5 KNOTS – 97.03%	10.5 KNOTS – 95.99%	10.5 KNOTS – 97.03%	10.5 KNOTS – 95.99%
	IFR	10.5 KNOTS – 99.30%	10.5 KNOTS – 97.99%	10.5 KNOTS – 99.30%	10.5 KNOTS – 97.99%
MAX. ELEVATION (MSL)		433.9'	431.8'	433.9'	431.8'
RUNWAY LENGTH		4,699'	4,000'	4,699'	4,000'
RUNWAY WIDTH		100'	100'	100'	100'
DISPLACED THRESHOLD		NONE	NONE	NONE	NONE
USABLE RUNWAY LENGTH		4,699'	4,000'	4,699'	4,000'
SURFACE TYPE		ASPHALT	ASPHALT	ASPHALT	ASPHALT
PAVEMENT STRENGTH	SINGLE WHEEL	30,000 LBS	30,000 LBS	30,000 LBS	30,000 LBS
	DUAL WHEEL	N/A	N/A	N/A	N/A
APPROACH SURFACE SLOPE		34:1 / 34:1	20:1 / 20:1	34:1 / 34:1	20:1 / 20:1
APPROACH MINIMUMS		428' 1 MILE / 314' 1 MILE	NONE / NONE	428' 1 MILE / 314' 1 MILE	NONE / NONE
VISUAL APPROACH AIDS		REIL, VASI / REIL, VASI	NONE / REIL, VASI	REIL, PAPI / REIL, PAPI	NONE / REIL, PAPI
INSTRUMENT APPROACH AIDS		NONE	NONE	NONE	NONE
DESIGNATED INSTRUMENT DEPARTURE RUNWAY		YES	NO	YES	NO
RUNWAY LIGHTING		MIRL	MIRL	MIRL	MIRL
RUNWAY MARKING		NON-PRECISION	VISUAL	NON-PRECISION	VISUAL
RUNWAY DESIGN CODE (RDC)		C-II	B-II	C-II	B-II
CRITICAL AIRCRAFT		CITATION SOVEREIGN	KING AIR	CITATION SOVEREIGN	KING AIR
TAXIWAY HOLD LINE DISTANCE		250'	150'	250'	150'
RUNWAY OBJECT FREE AREA (ROFA)					
	LENGTH BEYOND RUNWAY	1,000'	300'	1,000'	300'
	WIDTH	800'	500'	800'	500'
RUNWAY SAFETY AREA (RSA)					
	LENGTH BEYOND RUNWAY	1,000'	300'	1,000'	300'
	WIDTH	500'	150'	500'	150'
OBSTACLE FREE ZONE (OFZ)					
	LENGTH BEYOND RUNWAY	200'	200'	200'	200'
	WIDTH	400'	250'	400'	250'
FAR PART 77 CATEGORY		NPI / NPI	VIS / VIS	NPI / NPI	VIS / VIS
RUNWAY END COORDINATES	LATITUDE	5 – N43°03'43.54"	14 – N43°03'15.94"	5 – N43°03'43.54"	14 – N43°03'15.94"
	LONGITUDE	5 – W73°52'02.51"	14 – W73°52'01.80"	5 – W73°52'02.51"	14 – W73°52'01.80"
	LATITUDE	23 – N43°03'15.88"	32 – N43°02'51.33"	23 – N43°03'15.88"	32 – N43°02'51.33"
	LONGITUDE	23 – W73°51'33.10"	32 – W73°51'19.85"	23 – W73°51'33.10"	32 – W73°51'19.85"
RUNWAY END ELEVATIONS (MSL)		433.9' / 427.0'	431.8' / 425.8'	433.9' / 427.0'	431.8' / 425.8'
DISPLACED THRESHOLD ELEVATION (MSL)		N/A	N/A	N/A	N/A
TDZ ELEVATION (MSL)		433.9' / 431.3'	431.8' / 430.8'	433.9' / 431.3'	431.8' / 430.8'
LINE OF SIGHT RESTRICTIONS		NONE	NONE	NONE	NONE

RUNWAY SAFETY AREA DETERMINATION

RUNWAY END ID	STANDARD RSA LENGTH BEYOND RUNWAY END	ACTUAL RSA LENGTH BEYOND RUNWAY END	ACTUAL RSA VIOLATIONS TO RSA ALONG SIDE OF RUNWAY	RSA DETERMINATION	DATE APPROVED
5	1,000'	1,000'	NONE	N/A	
23	1,000'	1,000'	NONE	N/A	
14	300'	300'	NONE	N/A	
32	300'	300'	NONE	N/A	

LEGEND

DESCRIPTION	EXISTING	PROPOSED
RUNWAY CENTERLINE		N/A
HOLD LINE		
RUNWAY SAFETY AREA (RSA)		N/A
RUNWAY OBJECT FREE AREA (ROFA)		N/A
RUNWAY PROTECTION ZONE (RPZ)		N/A
RUNWAY VISIBILITY ZONE (RVZ)		N/A
BUILDING RESTRICTION LINE (25') (BRL)		N/A
AIRPORT REFERENCE POINT		N/A
AIRPORT PAVEMENT		
GROUND VEHICLE PAVEMENT		
GLIDER STAGING AREA	N/A	
AIRPORT BUILDINGS		
TO BE REMOVED	N/A	
TO BE ABANDONED	N/A	
MISCELLANEOUS BUILDINGS		N/A
AIRPORT PROPERTY		N/A
AIRPORT EASEMENT		
COUNTY OF SARATOGA PROPERTY		N/A
NGS MONUMENT		N/A
FENCE		N/A
TREE LINE		N/A
GROUND ELEVATION CONTOURS (10')		N/A

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Saratoga County completed an Airport Master Plan Update (MPU) for the Airport in 2015. The MPU made a number of recommendations for the 20-year planning horizon to assist the Airport in meeting current FAA design and safety standards and to accommodate forecast growth. The MPU identified land easements and obstruction removal to provide clear approaches and object height and land use control at the Airport. The MPU also involves extensive stakeholder and public review and input. The following section discusses the FAA design standards related to the proposed land easement acquisitions, land use control, and obstruction removal.

2.1.1. FAA Design Standards

FAA design standards are outlined in FAA advisory circular (AC) 150/5300-13A, *Airport Design*. The standards reviewed in detail below are directly related to the Proposed Action and include the approach runway end siting surface (RESS), glide path qualification slope (GQS), runway object free area (ROFA), and runway protection zone (RPZ).

Runway End Siting Surface (RESS)

The RESS is a surface which identifies where the landing threshold of a runway should be, depending upon local obstructions and terrain. The RESSs extend upward and outward from airport runways. These surfaces should not be penetrated by trees, buildings, or other objects. The RESSs have a slope of 20:1 for non-precision runways. A 20:1 slope rises one unit vertically for every 20 units horizontally. The use of RESS provides an acceptable level of safety while minimizing the environmental and community impact of tree removal in heavily wooded areas. Land use control over the surfaces prevents future penetrations to the surfaces and provides safe and proper clearance for landing and departing aircraft.

Additionally, the FAA published Memorandum on Aug. 18, 2015, *Reminder of Responsibilities for FAA Personnel and Airport Sponsors for Protecting Approach and Departure Surfaces,* which provides guidance to complete and maintain an up-to-date Obstacle Action Plan (OAP). The OAP should demonstrate phases necessary to accomplish the mitigation of obstacles penetrating the approach and/or departure surfaces in an expedited manner, actions taken to mitigate obstructions, and the sponsor's action plan to maintain clear surfaces. An OAP for the Airport was completed in March 2016 and stated that this EA will address obstructions.

Glide Path Qualification Slope (GQS)

The GQS is a 30:1 imaginary surface extending from the runway threshold. The GQS surface is applicable to runways where approach procedures with vertical guidance are currently in place or planned for future implementation. This is the case with Runway 23, where a non-precision GPS approach with vertical guidance, known as a Localizer Performance with Vertical Guidance (LPV), is currently published. The GQS identifies clearances to maintain a safe vertically guided instrument approach to Runway 23. The GQS is a narrow surface that primarily focuses on an area surrounding the runway centerline. Any obstructions to the surface would restrict the utilization of approach procedures with vertical guidance, such as the LPV approach, which provide improved guidance for pilots and enable increased utilization of the Airport by providing reduced visibility minimums.

Runway Object Free Area (ROFA)

FAA AC 150/5300-13A identifies the ROFA as an area centered on the ground on a runway, taxiway, or taxilane centerline to enhance the safety of aircraft operations by remaining clear of objects, except for objects that need to be located there for air navigation or aircraft ground maneuvering purposes. The ROFA clearing standard requires the removal of objects protruding above the ground.

The current ROFA for Runway 5-23 is 800 feet wide and extends 1,000 feet beyond each runway end. There are three small sections of the Runway 5-23 ROFA that extend beyond the Airport property boundary.

Runway Protection Zone (RPZ)

The RPZ is a large trapezoidal area off each runway end that underlies aircraft approach and departure paths. The RPZ is located 200 feet from the end of the runway and the dimensions of each RPZ for Runways 5-23 and 14-32 are shown in Table 2-1.

Table 2-1: Runway Protection Zone Dimensions

Runway End	Inner Width	Outer Width	Length
5	500’	1,010’	1,700’
23	500’	1,010’	1,700’
14	500’	700’	1,000’
32	500’	700’	1,000’

Source: FAA AC 150/5300-13A.

The RPZ is intended to enhance the protection of people and property on the ground. Certain land uses (e.g., residential, places of public assembly, and fuel storage) within these areas are prohibited by the FAA. Airport control of these areas is strongly recommended and is achieved through airport property acquisition, easements, or zoning to control development and land use activities. The Airport sponsor is required to comply with grant assurances, which includes maintaining and operating their facilities safely and efficiently. Airport land use control over the RPZ would protect the RPZ from future incompatible land uses.

FAA AC 150/5300-13A, *Airport Design*, identifies several land uses that are incompatible with an airport’s RPZ. In general, the RPZ should be clear of places of public assembly, including residences, schools, religious institutions, hospitals, and industrial buildings, recreational areas, transportation facilities (including roads), fuel and hazardous materials storage facilities, wastewater treatment facilities, and above-ground utility infrastructure. Acceptable land uses within the RPZ include agriculture meeting the minimum specified buffers, irrigation channels that do not attract birds, airport service roads, underground facilities, and unstaffed navigational aids and facilities. Roadways and parking lots have long been discouraged, but tolerated within RPZs. In recent years, however, FAA has become increasingly interested in controlling land use within the RPZ. This interest has been reflected in recent changes in FAA policy as expressed in AC 150/5300-13A, and in an FAA Memorandum *Interim Guidance on Land Uses within a Runway Protection Zone*, dated September 27, 2012. The memo “grandfathers” to some extent the use of runways with pre-

existing roadways or parking lots within RPZ, but places additional restrictions on the construction of new or extended runways that result in the inclusion of roadways within RPZ.

2.1.2. Wildlife Hazard Management Plan

In July 2003, the FAA, the U.S. Air Force, the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Department of Agriculture - Wildlife Services signed a Memorandum of Agreement (MOA) to acknowledge their respective missions in protecting aviation from wildlife hazards. Subsequently, in accordance with the MOA, 14 Code of Federal Regulations (CFR) 139.337(b) and (c) and based on the Transportation Research Board Airport Cooperative Research Program Report 32: *Guidebook for Addressing Aircraft/ Wildlife Hazards at General Aviation Airports,* a Wildlife Hazard Assessment (WHA) was completed in July 2015. The WHA addresses concerns regarding airfield management restrictions due to the presence of the state and federally listed threatened and endangered species and wildlife hazards at the Airport. Management restrictions are outlined in a Draft Management Agreement (DMA), dated October 15, 2001, between the Airport and the New York State Department of Environmental Conservation (NYSDEC) (see Appendix A) to protect the state and federally listed endangered Karner blue butterfly (KBB) (*Lycaeides melissa samuelis*), state listed threatened frosted elfin butterfly (*Callophrys irus*), and state listed species of special concern mottled duskywing (*Erynnis martialis*). The DMA restricts mowing the airfield grass to once annually after the growing season ends (after October 15th) and restricts other operational activities, to protect habitat for the butterfly species listed above.

The WHA concluded that multiple wildlife strikes were the direct result of the Airport mowing restrictions. Restricted mowing allows the grass to grow to over 40 inches in certain places. The tall grass encourages wildlife habitat and prevents pilots from being able to see and avoid wildlife as it crosses paved areas, including runways and taxiways.

Based on the wildlife observations and documented strikes during the WHA, a Wildlife Hazard Management Plan (WHMP) was completed in January 2016 to provide wildlife hazard mitigation recommendations. As recommended by the FAA, the air operations area (AOA)[4] grass height should be maintained at a height of 6-12 inches as recommended by the FAA. Maintaining the runway safety areas (RSAs) and taxiway safety areas (TSAs) would allow pilots a greater ability to observe potential hazardous wildlife adjacent to the runways and taxiways and avoid potential wildlife strikes. Similarly, fencing around the Airport is inadequate and allows animals as large as deer to access the Airport and pose as wildlife strike hazards. The current Airport fencing is too short and incomplete, including large gaps near the Airport entrance access road and numerous gaps and dugouts were found along the perimeter fence during the WHA field work. In accordance with the FAA National Part 139 CertAlert No. 16-03 *Recommended Wildlife Exclusion Fencing* dated

[4] AOA is defined as portion of an airport in which security measures are carried out and includes aircraft movement areas, aircraft parking areas, loading ramps, and safety areas, and any adjacent areas (such as general aviation areas) that are not separated by adequate security systems, measures, or procedures.

August 3, 2016, new/improved wildlife fencing should be a priority to prevent wildlife strikes at airports.

The FAA accepted the WHMP and a MOA between the County Department of Public Works (DPW) and North American Flight Services has been executed.

In addition to the DMA, a Draft Operations Agreement for Glider Activity at the Saratoga County Airport, revised December 1995 and November 2001, between the County, Saratoga Soaring Association, and the NYSDEC, outlines procedures for glider activities, such as eliminating off-pavement activity, to minimize impacts to the butterflies and their habitat.

Consultation between the County, NYSDEC and USFWS regarding the presence of KBB habitat at the Airport has been ongoing since at least 1998. The USFWS issued a Biological Opinion (BO) in 2002 to address activities at the Airport affecting the KBB and their habitat. The 2002 BO was subsequently amended in 2008, 2009, and 2011 to include projects proposed at the Airport. The BO was last amended in December 2018 to address this EA's Proposed Action. The 2009, 2011, and 2018 BOs are included in Appendix A.

The DMA separates the Airport property into two areas; "Known Habitat Area" and "Exempt Area" (see Figure 4-2). The Known Habitat Area is subject to the management restrictions outlined in the DMA, while the Exempt Area is not. The most significant land use restrictions imposed on the Known Habitat Area include no motor vehicle traffic off paved or gravel surfaces and a seasonal mowing restriction from January 1 to October 15. In addition, only the areas within the Known Habitat Area immediately surrounding the taxiway lighting and signs are allowed to be mowed/maintained on a regular basis within the January 1 to October 15 window.

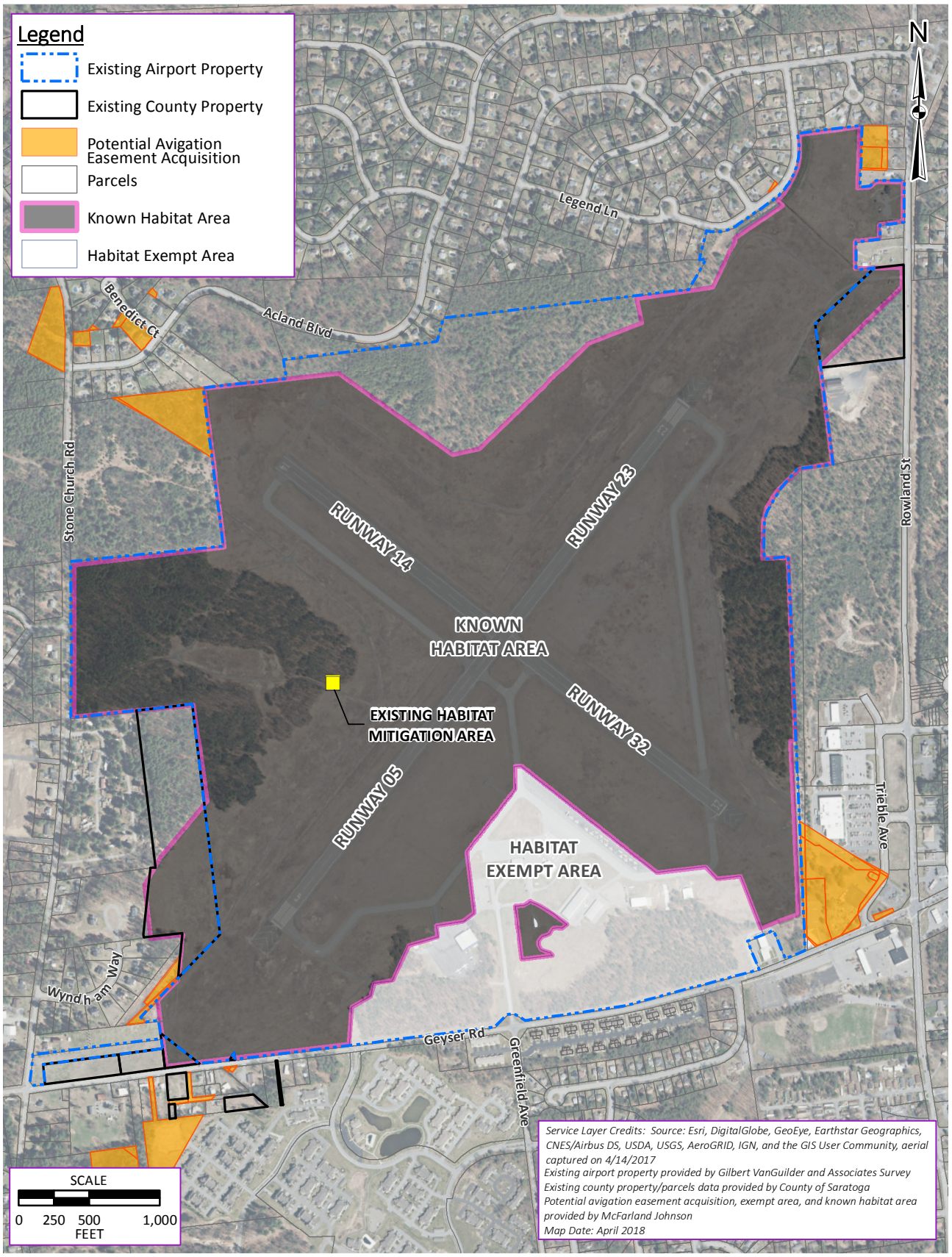
2.2. PURPOSE

The purpose of the Airport improvement projects of the Proposed Action is to maintain safe operating and meet expected near-term demand for on airport facilities, as further described below:

- Enhance safety by maintaining the approaches to Runways 5, 14, 23, and 32;
- Improve airfield operational efficiency and safety through improved segregation of glider and powered aircraft operations;
- Ensure that appropriate land use control measures are put in place to comply with FAA standards and to prevent future incompatible land use and future obstructions to airspace surrounding Runways 5-23 and 14-32;
- Comply with federal regulations and FAA design standards; and
- Provide safety of airport users in relation to wildlife hazards on Airport property.

The following sections present the need for each of the proposed projects.

Figure 2-4: Airport - Habitat Management Plan



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2.3. NEED

The need for the projects are described in detail below with each element of the project discussed separately.

As stated above, the projects discussed throughout the EA are based on the MPU, which evaluated the Airport facility requirements and approach RESSs obstructions to runway thresholds to meet the obstacle clearance requirements as set forth by the FAA.

2.3.1. Partial-Parallel Taxiway A Construction

The partial-parallel taxiway construction proposed is needed to meet current FAA standards and accommodate current demands and peak hour traffic during the Track Season and glider operations, while both powered and non-powered aircraft operate on the same runway.

Partial-parallel Taxiway A construction would:

- Separate powered from non-powered aircraft, improving safety;
- Provide shorter, more efficient taxiway access with fewer turns between Runway 23 and the FBO;
- Allow powered aircraft to bypass glider staging and/or recovery areas without blocking the use of Runway 5-23;
- Reduce queue times;
- Reduce fuel burn, exhaust, and greenhouse gas (GHG) emissions; and
- Reduce noise during taxi.

2.3.2. Taxiway C Improvements

The straightening of Taxiway C to provide right-angle access to Runway 14-32 is needed to meet current FAA design standards and accommodate current demands and peak hour traffic during the Track Season and glider operations, while both powered and non-powered aircraft operate on the same runway.

According to FAA AC 150/5300-13A, right-angle taxiways provide the best visual perspective to a pilot approaching an intersection with the runway to observe aircraft in both the left and right directions, on the runway and on approach. The right angle also provides the best orientation of the runway holding position signs so they are visible to the taxiing aircraft.

As a result of the realigned taxiway, the existing portion of Taxiway C would be abandoned, thus providing a staging area for gliders. The abandoned Taxiway C would separate powered from glider aircraft, improving safety and allowing powered aircraft to bypass glider staging and/or recovery areas without blocking the use of the runways or taxiways.

2.3.3. Glider Operations Improvements

As previously noted, during the summer months the Track Season and peak glider activities overlap which means a higher interaction of powered and non-powered aircraft operations. Glider operators generally prefer to operate on Runway 14-32 due to its proximity to the glider club's

hangars. Powered aircraft, especially business aircraft, prefer to operate on Runway 5-23 due its greater length and better approaches. Under existing conditions, taxiway access to these runways is shared. Glider staging and recovery areas are further constrained by the ROFA requirements and KBB habitat and must be conducted on paved surfaces (taxiways). As a result, powered aircraft are often forced to queue up and wait on the taxiway system when they encounter glider staging and recovery operations. These operations can take several minutes or more. Glider operations at the Airport typically require assistance by tow vehicles for travel to and from hangar areas, staging areas, and aircraft recovery. Tow planes are utilized for takeoff. All of these operations must be conducted on paved surfaces. Gliders are hooked up to the tow airplane with a towline and once the glider achieves the appropriate altitude, the glider pilot releases the towline. Gliders land on the runways. Once stopped, a tow vehicle proceeds to the glider and tows it off the runway to an appropriate staging area. Use of the runway for any operations is precluded during this aircraft recovery process.

The current glider operations increase powered aircraft taxi and waiting times, burn fuel, increase noise to the neighboring communities, and limit the Airport operations. The proposed turf run-up/staging area would provide a location off of the taxiway and runway system for gliders to stage and prepare for flights, reducing airfield congestion.

2.3.4. Wildlife Hazard Management Plan Implementation

The Airport's WHMP needs to be implemented due to the wildlife strikes at the Airport. Implementation of the WHMP will prevent/reduce the loss of human and animal lives and reduce costs to aircraft owners and insurance companies. Mowing and fencing improvement projects are being proposed and are discussed separately below.

2.3.4.1 Mowing Plan Improvements

Based on the WHA and WHMP, recommendations include updating the mowing plan to allow consistent mowing within the RSA and TSA to between six and 12 inches outside of the DMA mowing restriction (January 1 to October 15). Currently, the DMA allows regular, non-restricted mowing within the Known Habitat Area immediately surrounding the taxiway lighting and signs, which consists of an approximate 10-foot mowing width, and mowing of the automated weather observation station, which cumulatively amount to approximately 4.83 acres. The proposed non-restricted mowing of the RSA and TSA would consist of mowing approximately 67.5 acres within the Known Habitat Area.

RSAs and TSAs are areas surrounding a runway or taxiway designated to improve the safety of aircraft operations. The dimensions are based on the size and speed of aircraft operating at the Airport as represented by the runway's design code, which is directly related to characteristics of aircraft that use the Airport.

The safety areas are defined surfaces surrounding a runway or taxiway prepared for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway. According to FAA design standards (AC 150/5220-23), the safety areas must be cleared and graded and have no potentially hazardous ruts, humps, depressions or other surface variations. The surfaces should not permit water accumulation and, under dry conditions, should

be capable of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft. The safety areas should be free of objects higher than three inches, except for those objects that must be located in the area for air navigation or aircraft ground maneuvering purposes. **Table 2-2** summarizes the safety area requirements for both Runways.

Table 2-2 : Safety Areas Requirements

	Runway 5-23	Runway 14-32	Taxiways
Width	500'	150'	79'
Length Beyond Runway End	1,000'	300'	N/A
Length Prior to Threshold	600'	300'	N/A

Source: McFarland Johnson MPU.

2.3.4.2 Perimeter Fence Improvements

WHMP recommendations also include replacement of the Airport perimeter fence to prevent deer, foxes, coyotes, and other wildlife on the Airport. The majority of the current Airport fencing is six feet high, with the exception of a 4-foot section near the Airport access road roundabout. In addition, the existing perimeter fencing is incomplete, including large gaps near the Airport entrance access road and numerous gaps and dugouts were found along the perimeter fence during the 2013-2014 WHA. In addition, a majority of the existing perimeter fence has a maintenance corridor that is suitable for vehicle inspections. However, the corridor is not frequently maintained and/or mowed due to restrictions in the DMA and portions of the corridor cannot be accessed by vehicles due to tree/shrub vegetation obstructions. In accordance with the FAA National Part 139 CertAlert No. 16-03 *Recommended Wildlife Exclusion Fencing*, new/improved wildlife fencing should be a priority to prevent wildlife strikes at airports.

2.3.5. Land and/or Easement Acquisition Land Use Control and Vegetation Obstruction Removal

The land/avigation easement acquisition land use control and obstruction removal projects evaluated in this EA were presented in the 2015 MPU. Implementation of these projects is needed in order to obtain object height and land use control and remove obstructions now present, and to prevent the growth or construction of future obstructions and/or incompatible land use. The Proposed Action will facilitate the safe operation of aircraft at the Airport now and in the future, and allow the Airport to meet current demand and comply with FAA airport design standards for the existing facilities as outlined in FAA AC 150/5300-13A.

Throughout the MPU and EA process, the Airport Sponsor (Saratoga County) has maintained their policy for land and/or easement acquisitions consists of avoiding eminent domain unless there is a significant impact to operations or safety of the Airport. Willing sellers/landowners will be given priority for acquisition in fee or avigation easement. Prioritizing willing sellers would also avoid the potential of an unwilling landowner, if ownership were to change. In instances of pre-existing land uses in RPZs, acquisition through condemnation would not be necessary due to FAA's policy for pre-existing uses. Additionally, aside from acquisition in fee and avigation easement, a one-time access to remove (either completely removal or topping) vegetation obstructions on off-Airport property has been discussed with all affected landowners.

As part of this EA, off-Airport properties which contain airspace obstructions and/or are located in the ROFA and/or RPZ have been identified and all landowners have been contacted to discuss the need to remove or mitigate these obstructions. A majority of the impacted landowners have granted the County approval to include their property in this EA and to subsequently determine the owner's willingness to either grant an easement or sell their property. At the conclusion of this EA, the County will then proceed with the acquisition of easements or property, and with these measures in place, can then remove the obstructions.

The ROFA is a two-dimensional surface surrounding the runway that should be clear of objects, except for objects that need to be located within the area for aeronautical purposes. To ensure these safety requirements are met, portions of the Runway 5-23 ROFA extending beyond Airport property will be acquired in avigation easement or in full.

The FAA strongly recommends that an airport own or control the land within each RPZ and clear it of above-ground objects. Where this is impractical, airport owners, at a minimum, should maintain the RPZ clear of all facilities supporting incompatible activities. Land use control over the surfaces will prevent future penetrations to the surfaces and provide safe and proper clearance for landing and departing aircraft. All four RPZs have portions not controlled by the Airport.

The 2015 MPU identified trees located beyond all four of the runway ends at the Airport that present potential hazards to arriving and departing aircraft. The dimensions of each approach RESS for Runways 5-23 and 14-32 are shown in Table 2-3.

Table 2-3: Runway End Siting Surface Dimensions

Runway End	Offset	Inner Width	Outer Width	Length[1]	Slope[2]
5	200’	800’	3,800’	10,000’	20:1/30:1
23	200’	800’	3,800’	10,000’	20:1/30:1
14	200’	800’	3,800’	10,000’	20:1
32	200’	800’	3,800’	10,000’	20:1

[1]Two lengths indicate that the outer width is reached by the first length and stays that width for the second length. The total surface is the sum of the two lengths.
[2] Two slopes indicate that two RESSs apply to the runway end: Types 4 and 8. RESS Type 8 is equivalent to the GQS.
Source: FAA AC 150/5300-13A and McFarland Johnson.

All four approach RESSs are penetrated by trees which have the potential to impact approach minimums, night-time operations, and runway capability. In October 2013, the FAA temporarily suspended night-time operations at the Airport due to obstructions to the 20:1 visual surfaces to all four runways. The FAA approved night-time operations at Runway 23 after the removal of certain obstructions and installation of the PAPI on the Runway 23 end in 2014. Removal of the obstructions will greatly improve safety to Airport users. The land use controls to be obtained by the project, including acquisition of land underlying the approach RESS, will allow the Airport to maintain a safe airspace environment in compliance with FAA criteria. In addition, obstruction removal will improve Airport safety and operations.

Runway 5

The County currently has avigation easements on 19 separate parcels within the RPZ, approach, departure, and transitional surfaces totaling approximately 15 acres. Parcel acquisition of 7.78 acres on the Runway 5 end addresses land use control for properties located within the ROFA, RPZ, and approach RESS and obstructions to the 20:1 approach RESS. Land use within the Runway 5 RPZ and the 20:1 approach RESS not currently owned by the Airport consists of residential and commercial properties.

Approximately 0.65 acres of the Runway 5-23 ROFA on the Runway 5 end extend off Airport property. Two parcels, owned by the town of Milton and a private landowner, will be acquired in avigation easement to ensure the Airport has land use control and that FAA design standards are met.

Currently the Airport does not have land use control and/or ownership of six acres (20 percent) of the RPZ at the approach end of Runway 5. The land not controlled by the County or Airport includes 3.58 acres of a mix of occupied residential and vacant land, which is proposed to be acquired. Approximately 1.13 acres of easement acquisition is not proposed due to landowner unwillingness to consent. The remaining 1.29 acres is Geyser Road, which bisects the RPZ and is owned by the County. This section of Geyser Road is currently owned and maintained by Saratoga County, so acquisition is not required. Proposed acquisition of avigation easements for the Runway 5 RPZ includes six parcels. The land acquisition will result in Airport/County ownership or easement control of 96 percent of the RPZ.

The 20:1 approach RESS to Runway 5 is penetrated by trees that extend as much as 12 feet above the surface. Trees that obstruct the approach RESS to Runway 5 are hazards to aerial navigation. Removal of the obstructions will greatly improve safety to Airport users. Within the Runway 5 approach RESS, 6.59 acres of land will be acquired as avigation easements and approximately 4.10 acres of trees trimmed/removed to remove critical obstructions.

Runway 23

A majority (97 percent) of the Runway 23 RPZ is on Airport property. The remaining 0.81 acre of the Runway 23 RPZ overlies private property and Legend Lane. The land not controlled by the Airport includes 0.18 acre of occupied residential land, of which 0.04 acre is proposed for acquisition. The remaining 0.14 acres of occupied residential lands consist of the front yard of two residences and are unlikely to be further developed. The dwellings on these parcels are located outside the RPZ. To date, the property owners have been unwilling to consider easements on a willing seller basis. Given the very low probability of additional development on these parcels, obtaining easements in this area is not being considered at this time. Approximately 0.63 acres of Legend Lane bisect the corner of the RPZ and are owned by the Town of Milton. Relocation of Legend Lane out of the RPZ would require a long realignment and the relocation of residents and is therefore not being pursued.

The 30:1 GQS to Runway 23 is penetrated by trees that extend as much as six feet above the surface. The Proposed Action includes acquisition of 1.34 acres of land as avigation easements,

which will allow for the removal of critical tree obstructions and prevent future surface penetrations. Penetrations to the GQS are critical to the safety of the Airport and must be removed to provide safe operating conditions, maintain a safe vertically guided instrument approach, and lower visibility minimums, which provide pilot flexibility during cloudy and night-time operations.

Runway 14

Proposed land acquisition for the Runway 14 end totaling 7.03 acres, will result in Airport ownership or easement control of a majority of the RPZ and portions of the Runway 14 20:1 approach RESS out to approximately 2,400 feet from the runway end.

Runway 14 RPZ is approximately one third on Airport property, while the remaining portion overlies private property. The County has existing avigation easements on seven parcels within the RPZ and approach surface areas totaling 5.9 acres. Currently the Airport does not have land use control and/or ownership of 4.25 acres (30 percent) of the RPZ at the approach end of Runway 14. Easements have been acquired in the outer portion of the RPZ. However, there is no form of land use control in place on the remaining portion to prevent the owner from changing the land use so that it is no longer compatible with the RPZ and surfaces. Land use within the Runway 14 RPZ not currently owned by the Airport and proposed for acquisition consists of 3.52 acres of vacant undeveloped forested land. Approximately 0.67 acres of occupied residential lands is not proposed for acquisition due to landowners not participating in this EA. The remaining 0.06 acres are the right-of-way of Acland Boulevard, which clips the outer edge of the RPZ and is owned by the Town of Milton. The right-of-way area in the RPZ is small and inconsequential and is therefore not being pursued for acquisition.

The 20:1 approach RESS to Runway 14 is penetrated by trees that extend as much as 54 feet above the surface. The project proposes to acquire eight avigation easements and/or acquisition in fee, totaling approximately 6.83 acres. Land use within the Runway 14 approach RESS not currently owned by the Airport consists of 5.63 acres of vacant undeveloped forested land and 1.2 acres of occupied residential land. Removal of the 20:1 approach RESS obstructions, approximately 6.28 acres, will maximize runway utility and operational flexibility within existing physical constraints.

Runway 32

Proposed land acquisition for the Runway 32 end totaling 7.39 acres, will result in Airport ownership or easement control of a majority of the RPZ and portions of the Runway 32 20:1 approach RESS.

The RPZ was part of the Old Mill Planned Development District (PDD) zoning that lies off this runway end. The town of Milton redesigned the PDD to Town Center zoning but retained the requirements for the RPZ to assure consistency with protection of the RPZ and associated airspace from the previous PDD requirements.

The Runway 32 RPZ is approximately 48 percent (6.6 acres) on Airport property or an existing County easement, while the remaining portion (7.17 acres) overlies public and private property, including portions of Trieble Avenue and Geyser Road. Private property proposed for acquisition

includes an outdoor miniature golf course and a medical building. The FAA determined the medical building was an incompatible land use within the Runway 32 RPZ. However, analysis of alternatives to mitigate the incompatible land use determined that the existing building location and land use could remain. In addition, approximately 0.14 acres of Geyser Road bisect the corner of the RPZ. However, Geyser Road is owned by the County (Sponsor), so acquisition is not required. The land acquisition will result in Airport ownership or easement control of approximately seven acres of the Runway 32 RPZ.

The 20:1 approach RESS to Runway 32 is penetrated by trees that extend as much as 39 feet above the surface. Currently, there are approximately 4.06 acres of obstructions within the 20:1 Runway 32 approach RESS. Within the Runway 32 approach RESS, 7.24 acres of avigation easements are proposed to be acquired and trees trimmed and/or removed to mitigate surface obstructions. The County currently has an avigation easement on 22 acres of the Town of Milton property within the CFR Part 77 approach, transitional, and horizontal surfaces. Obstructions to the Runway 32 approach RESS exist on the Town property.

Land use within the Runway 32 RPZ and approach RESS proposed for acquisition consists of 7.12 acres of commercial property and 0.27 acre of Trieble Avenue. Proposed acquisition will improve safety, meet FAA design standards, and provide land use control.

2.4. SUMMARY

The Airport is an asset to the Saratoga County area and economy. The Track Season and summer glider activities are economic drivers for the Airport and its community and it is in the best interest of the Airport and its community to ensure safe and efficient aircraft operations.

For safe and efficient operations at the Airport, easement acquisition, obstruction removal, and separation of powered and non-powered aircraft should be addressed. Additionally, wildlife on the Airport should be minimized to reduce/prevent wildlife and aircraft strikes/accidents.

The proposed projects will significantly enhance the operational safety of the Airport by removing and mitigating obstructions affecting existing approach RESSs to Runways 5-23 and 14-32. Obtaining land in fee or through avigation easements beyond all runway ends provide land use control to manage and maintain the ROFA and RPZ areas and the RESSs free of obstructions in the future. Optimizing airfield operations through improvements to the taxiway and run-up and glider staging areas increases the Airport's safety and provides a more positive airport experience for its users.

3. ALTERNATIVES

The following is a summary of the alternatives considered during the evaluation process to select the Proposed Action at the Saratoga County Airport (Airport). The Proposed Action was selected based upon the evaluation of alternatives for each of the major project elements. The analysis is based on the Airport Master Plan Update (MPU). Alternatives, including the no build alternative, were evaluated for each of the proposed project elements in accordance with the criteria described below.

The Proposed Action consists of six elements including:

1. Partial-Parallel Taxiway Construction
2. Taxiway C Improvements
3. Glider Operations Improvements
4. Wildlife Hazard Management Plan (WHMP) Implementation – Mowing Plan Improvements
5. WHMP Implementation – Perimeter Fence Improvements
6. Land and/or Easement Acquisition Land Use Control and Vegetation Obstruction Removal

For purposes of this Environmental Assessment (EA), the alternatives were progressed at equivalent designs to provide a fair comparison of economic, social, and environmental consequences. A total of three alternatives have been considered for the partial-parallel taxiway, including the no build alternative. Two alternatives, the no build and build, and an alternative considered and dismissed, have been considered for the glider operations improvements. Two alternatives, the no action and action, and alternatives considered and dismissed, have been considered for the WHMP mowing plan improvements. Two alternatives, the no action and action, for the WHMP perimeter fence improvements have been considered. Lastly, two alternatives, the no action and action, have been considered for the land and/or easement acquisition and obstruction removal. Following is a summary of the alternatives developed for the project elements. Each of the alternatives, including the no build/no action alternatives, was evaluated in accordance with the criteria described below.

3.1. ALTERNATIVES EVALUATION CRITERIA

Factors considered in the development and evaluations of the alternatives were: fulfills the purpose and need, avoids community and environmental impacts, provides operational efficiency and flexibility, and meets Federal Aviation Administration (FAA) design standards. The feasibility of each of the alternatives was evaluated based upon how well they would meet these criteria as described below.

- **Fulfills Purpose and Need**: Does the alternative fulfill the purpose and needs of the Proposed Action?

- **Avoids Adverse Community Impact**: Would the alternative require property acquisitions? Is the alternative consistent with land use? Is the alternative compatible with the

surrounding community? Is this alternative likely to meet community acceptance? Does the alternative affect off-airport properties?

- Avoids Environmental Impact: How well does the alternative avoid and minimize environmental impacts? Can the impacts be mitigated?

- Provides Operational Efficiency and Flexibility: Does the alternative expedite movement of aircraft to and from the airfield facilities and provide an attractive airport with minimal delays, all weather access, safe operational conditions, and allow operational flexibility for both powered and non-powered aircraft?

- Meets FAA Design Standards: Does the alternative meet FAA design standards?

Due to the safety focus of this EA, costs were determined not to be a discriminating factor and will therefore not play a role in the evaluation of the alternatives.

3.2. PARTIAL-PARALLEL TAXIWAY CONSTRUCTION

The goal of the taxiway improvements is to improve aircraft safety by separating powered from non-powered aircraft, improve operational flexibility, and meet FAA design standards. In addition, it would be preferred if the alternative included the following:

- Provide shorter taxiway access between Runway 23 and the Fixed Base Operator (FBO);
- Allow powered aircraft to bypass glider staging and/or recovery areas, especially on Runway 14-32, without blocking the use of Runway 5-23;
- Reduce noise;
- Reduce queue times; and
- Reduce fuel burn, exhaust, and greenhouse gas emissions.

The taxiway alternatives considered are briefly summarized below:

- Taxiway Alternative 1 (No Build)
  - Taxiways remain the same in length, width, location, and orientation.

- Taxiway Alternative 2 (Full-Parallel)
  - Construct a full-parallel taxiway to Runway 5-23 with a width of 50 feet and a runway-taxiway centerline separation of 400 feet.

- Taxiway Alternative 3 (Partial-Parallel)
  - Construct a partial-parallel taxiway to Runway 5-23 with a width of 50 feet and a runway-taxiway centerline separation of 400 feet.

3.2.1. Taxiway A Alternative 1 (No Build)

The existing taxiway system serves both runways and provides access to all four runway ends. However, the taxiway system serving Runway 5-23 (Taxiways A, C, and D) requires a long, circuitous taxi distance to get to the terminal area and is not considered a parallel taxiway given its current configuration and therefore does not meet FAA standards. Additionally, when gliders

are towed to or from their hangars and the departing runway, this can create conflicts with powered aircraft that cannot directly access the runway ends due to limited maneuverability afforded by the current taxiway system. In certain cases, aircraft would back-taxi to the active runway in order to avoid the taxiway congestion, thus increasing their time on the runway and reducing the overall capacity of the runway system. Under the No Build Alternative, no changes are made to the taxiway system; the taxiways would remain the same in length, width, location, and orientation. The existing layout of this alternative is shown in **Figure 3-1**.

The Taxiway A Alternative 1 was evaluated as follows:

- **Fulfills Purpose and Need:** Taxiway Alternative 1 does not meet the existing or future needs of the Airport, as it fails to provide separation between powered and non-powered aircraft. Additionally, the No Build Alternative would not satisfy the recommended facility requirements regarding a parallel taxiway to Runway 5-23 as described in Chapter 2 of this EA and the MPU.

- **Avoids Adverse Community Impact**: Existing patterns of land use would remain both on- and off-airport property.

- **Avoids Environmental Impact:** There are no environmental impacts associated with this alternative.

- **Provides Operational Efficiency and Flexibility:** This choice limits the operational flexibility of the Airport due to the congestion related to both powered and non-powered aircraft operating on the same runways and taxiways.

- **Meets FAA Design Standards:** According to the new taxiway guidelines in FAA Advisory Circular (AC) 150/5300-13A, it is recommended that the existing taxiway system at Saratoga County Airport include a parallel taxiway to comply with FAA standards for runways with instrument approaches. However, the present taxiway system cannot efficiently operate as a true full-parallel taxiway.

3.2.2. Taxiway A Alternative 2 (Full-Parallel)

Taxiway Alternative 2 proposes a full-length parallel taxiway on the southeasterly side of Runway 5-23. This alternative is detailed in **Figure 3-2**. Alternative 2 offers a bypass option if gliders are on Taxiway C or D and cannot be moved. Aircraft can bypass Taxiways C and D altogether to get to Runway 23, which is the runway end with the most traffic. The stub taxiway connecting Taxiway B to Runway 14-32 would be removed. Alternative 2 would also abandon Taxiway D in place. The ends would be turned into staging for gliders to use, avoiding the need to stage on turf areas.

The following actions are necessary for implementation of Taxiway Alternative 2 (Full-Parallel):

- **Construct Full-Parallel Taxiway to Runway 23:** The full-parallel taxiway would connect with the existing portion of Taxiway D along the end of Runway 23 to Taxiway B, near the intersection of the Airport's two runways to Taxiway A on the Runway 5 end. The taxiway

would be 50 feet wide and have a runway-to-taxiway centerline separation of 400 feet, including 4.5 acres of new taxiway pavement.

- **Remove Taxiway B:** The portion of Taxiway B between Taxiway E and Runway 14-32 would be removed, which reduces overall pavement by approximately 0.24 acre.

- **Close/Reconfigure Taxiway D:** Taxiway D would be abandoned in place starting at the new parallel taxiway to Runway 32. The ends of this taxiway, approximately 420 and 470 linear feet each, would be marked as glider staging areas.

- **Install Medium Intensity Taxiway Edge Lighting (MITL):** Existing MITLs would be relocated and new MITLs would be installed on the parallel taxiway to provide guidance to pilots taxiing at the Airport during poor weather conditions or at night.

- **Install Taxiway Signage:** Existing taxiway signage would be relocated and new signage would be installed in conjunction with the construction and removal of related taxiways at the Airport.

- **Relocate Wind Sock:** The wind sock would be relocated northwest of the proposed parallel taxiway between Taxiway E and Runway 14-32.

- **Install Stormwater Practices:** Stormwater practices, such as an infiltration trench, would be constructed along both sides of the taxiway to accommodate stormwater runoff from the new impervious surface.

The full-parallel taxiway alternative assessment is as follows:

- **Fulfills Purpose and Need:** Taxiway Alternative 2 addresses the congestion and separation issues by allowing powered aircraft to circumvent the existing intersection between Runway 32 and Taxiway D. The segment of the proposed taxiway between existing Taxiways A and B is redundant to the existing taxiway system in this portion of the Airport, providing little operational benefit.

- **Avoids Adverse Community Impact:** The full-parallel taxiway alternative is compatible with existing on-airport land uses.

Figure 3-1: Taxiway A Alternative 1 - No Build

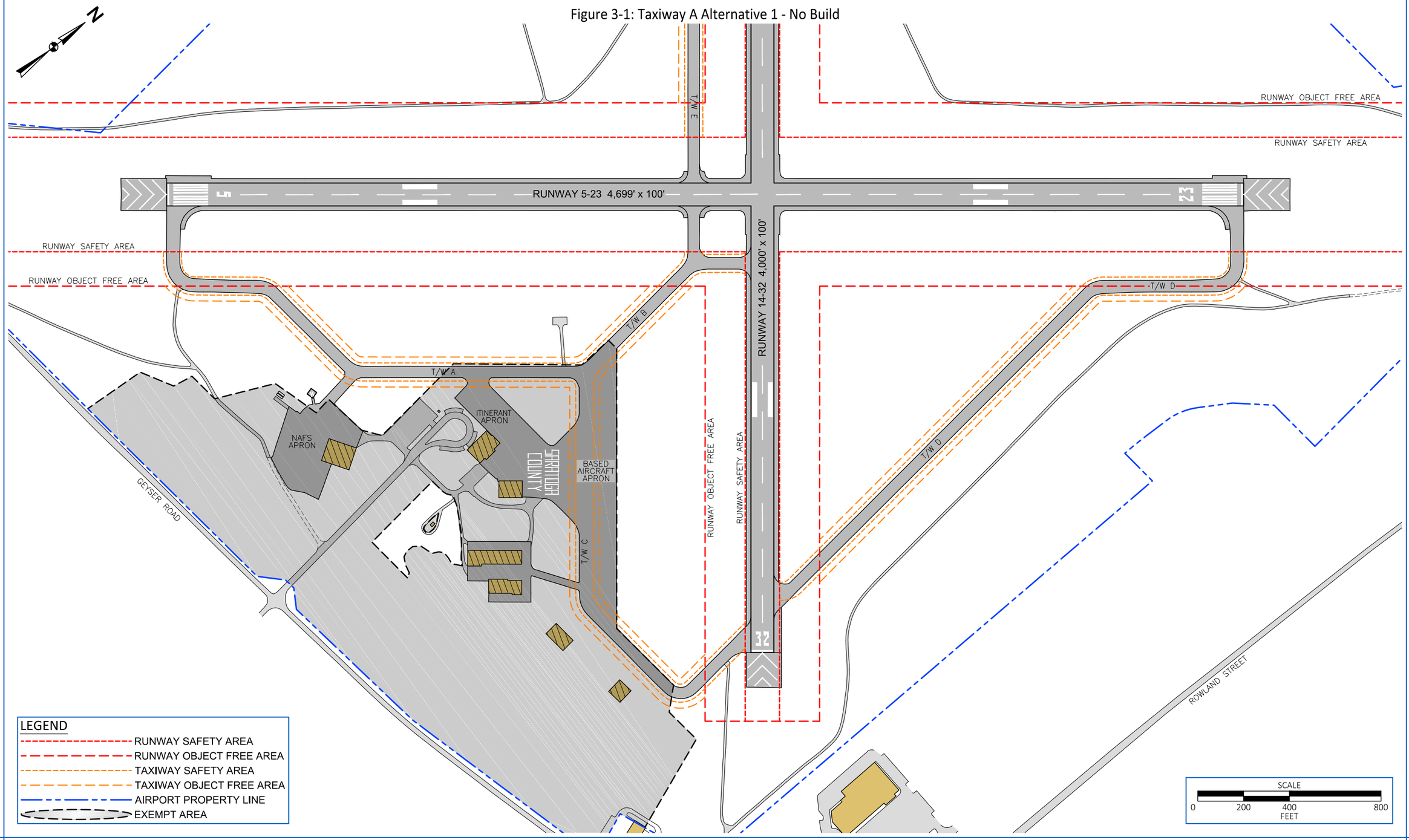

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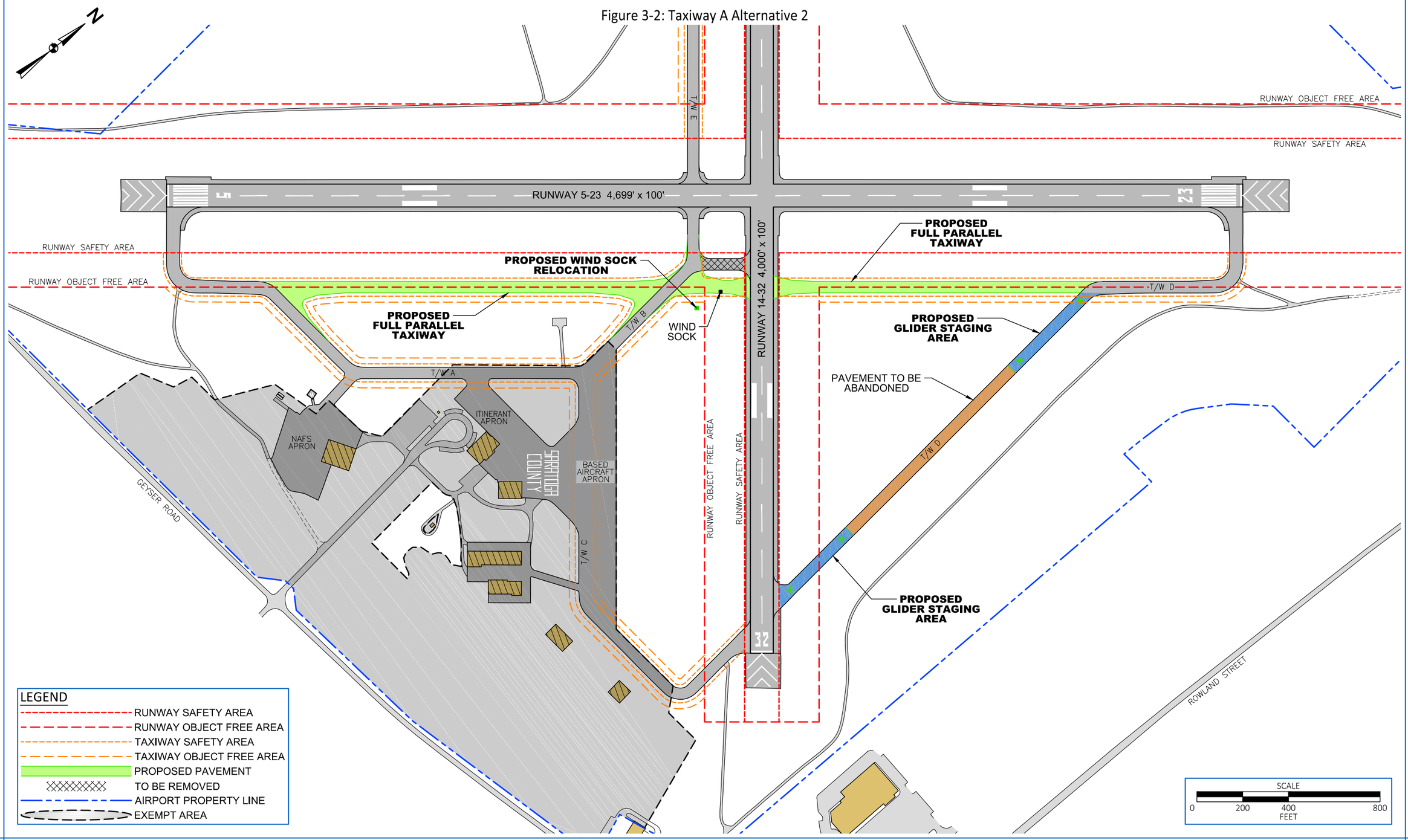
Figure 3-2: Taxiway A Alternative 2



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- **Avoids Environmental Impact:** The planned location of the full-parallel affects a minimum of 9.5 acres of Known Habitat Area of the endangered Karner blue butterfly (KBB) (*Lycaeides melissa samuelis)*. Permitting and off-airport habitat mitigation would be necessary for this alternative to be implemented. Obtaining environmental regulatory approvals for the full-parallel taxiway is expected to be difficult given the redundancy and limited operational benefit. As part of the alternative, the stub taxiway connecting Taxiway B to Runway 32 would be removed, reducing the overall pavement requirement of the alternative. Finally, the alternative decreases the overall emissions generated by aircraft as the full-parallel taxiway reduces taxi distance and alleviates congestion associated with gliders on the taxiway.

- **Provides Operational Efficiency and Flexibility:** By reducing the need to back-taxi should Taxiway D be blocked; the alternative allows for considerably enhanced flexibility from an operational standpoint and provides opportunity to adapt to future changes and developments at the Airport. However, the redundant portion of the taxiway imposes additional maintenance and snow removal burden on Saratoga County (the County) for little benefit.

- **Meets FAA Design Standards:** As proposed, Taxiway Alternative 2 adheres to the FAA design standards related to the width of 50 feet and a taxiway to runway centerline separation of 400 feet, which exceeds the required separation standard of 300 feet. Taxiway safety area (TSA) and taxiway object free area (TOFA) standards are also met under this alternative.

3.2.3. Taxiway A Alternative 3 (Partial-Parallel)

Taxiway Alternative 3 proposes a 1,650-foot partial-parallel taxiway on the southeasterly side of Runway 5-23 as shown in **Figure 3-3**. This alternative would provide a partial-parallel taxiway beginning at Taxiway B, crossing Runway 14-32, and continuing to Taxiway D, which connects to Runway 23 end. Alternative 3 offers a bypass option if gliders are on Taxiways C or D and cannot be moved. Aircraft can bypass Taxiways C and D altogether to get to Runway 23, which is the runway end with the most traffic. The stub taxiway connecting Taxiway B to Runway 14-32 would be removed, reducing the overall pavement requirement of this alternative. Alternative 3 would also abandon Taxiway D in place. The ends would be turned into staging for gliders to use, avoiding the need to stage on turf areas.

Implementation of Taxiway Alternative 3 would require the following actions:

- **Construct Partial-Parallel Taxiway to Runway 5-23:** The taxiway connects with the existing portion of Taxiway D near Runway 23 and intersects with Runway 14-32 where Taxiway B is located presently. The partial-parallel taxiway would be 50 feet wide and have a runway-to-taxiway centerline separation of 400 feet and include 2.11 acres of new taxiway pavement.

- **Remove Taxiway B:** The portion of Taxiway B between Taxiway E and Runway 14-32 would be demolished, approximately 0.42-acre, which reduces overall pavement by approximately 0.24 acre.

- **Close/Reconfigure Taxiway D:** Taxiway D would be abandoned in place starting at the new parallel taxiway to Runway 32. The ends of this taxiway, approximately 420 and 470 linear feet each, would be reconfigured as glider staging areas.

- **Install MITL:** Existing MITLs would be relocated and new MITLs would be installed and relocated where necessary along the proposed and existing taxiways to provide guidance to pilots taxiing at the Airport during poor weather conditions or at night.

- **Install Taxiway Signage:** Existing taxiway signage would be relocated, and new signage would be installed in conjunction with the construction and removal of related taxiways at the Airport.

- **Relocate Wind Sock:** The wind sock would be relocated northwest of the proposed parallel taxiway between Taxiway E and Runway 14-32.

- **Install Stormwater Practices:** Stormwater practices, such as infiltration trenches, would be constructed along both sides of the taxiway to accommodate stormwater runoff from the new impervious surface.

The partial-parallel taxiway alternative was evaluated as follows:

- **Fulfills Purpose and Need:** Taxiway Alternative 3 provides an efficient taxiway system that would allow independent operations by powered aircraft and gliders, thus meeting the needs identified in the MPU and Chapter 2 of this EA.

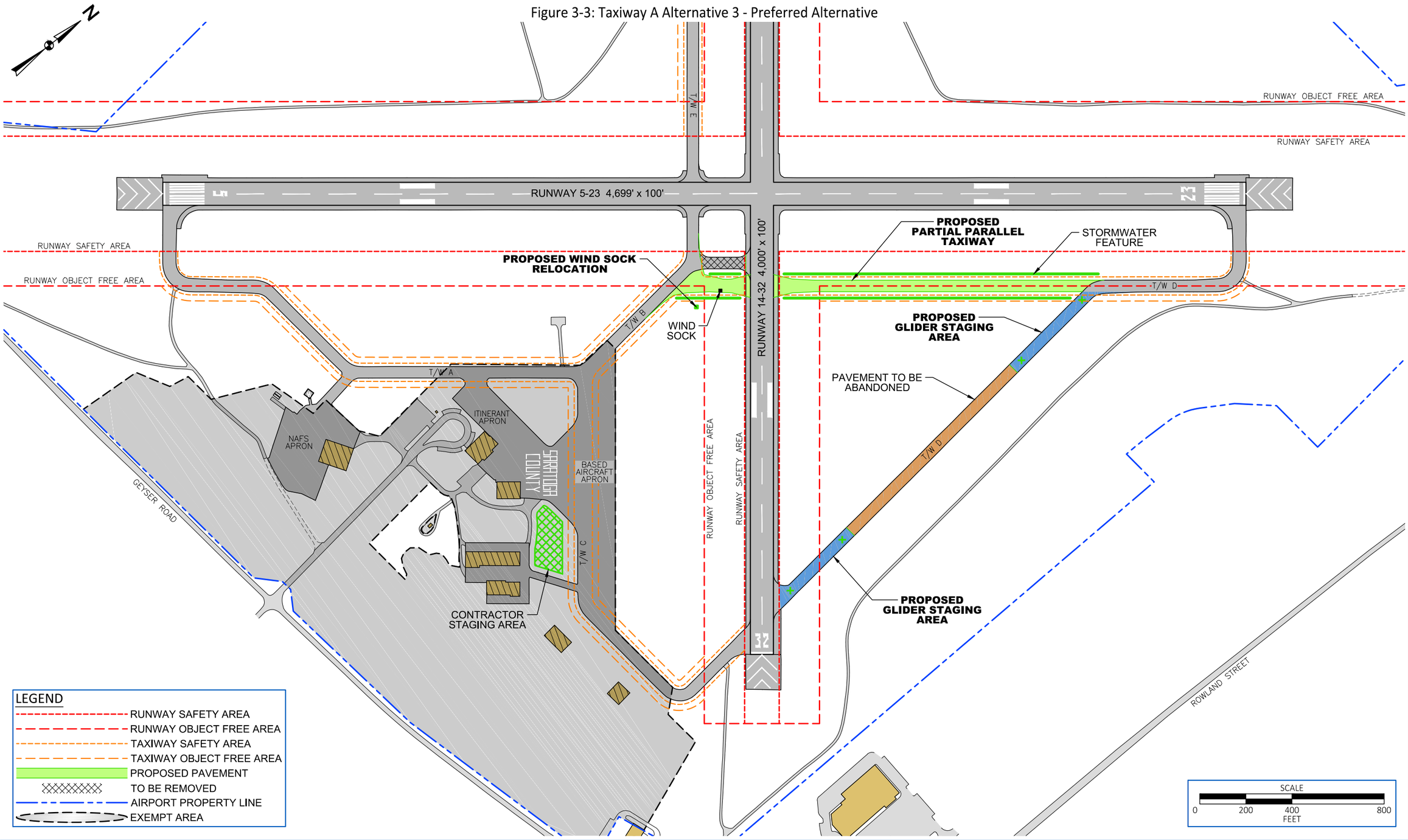
- **Avoids Adverse Community Impact:** The partial-parallel alternative is compatible with existing on-airport land use. The development option employs use of the existing taxiway system south of Runway 14-32.

- **Avoids Environmental Impact:** Taxiway Alternative 3 would affect approximately 4.68 acres of KBB habitat. Similar to Taxiway Alternative 2, permitting and off-airport habitat mitigation for impacts to KBB and their habitat would be necessary for this alternative to be implemented. The alternative decreases the overall exhaust emissions generated by aircraft, since the partial-parallel taxiway reduces the overall taxi distance and alleviates potential congestion associated with gliders on the taxiway.

- **Provides Operational Efficiency and Flexibility:** Taxiway Alternative 3 eliminates the need to back-taxi on the runways should Taxiway D be blocked for any reason, thus allowing for considerably enhanced flexibility from an operational standpoint.

- **Meets FAA Design Standards:** As proposed, Taxiway Alternative 3 adheres to FAA design standards related to a width of 50 feet and a taxiway to runway centerline separation of 400 feet, which exceeds the required separation standard of 300 feet. TSA and TOFA standards are also met under this alternative.

Figure 3-3: Taxiway A Alternative 3 - Preferred Alternative



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3.2.4. Taxiway A Alternatives Summary

The descriptions of the taxiway alternatives have included an evaluation based on five criteria: 1) the ability of the alternative to fulfill the purpose and need, 2) potential community impacts, 3) potential environmental impacts, 4) operational efficiency and flexibility, and 5) the ability to meet FAA design standards. 3.2.4 summarizes the above analysis.

Table 3-1: Summary of Taxiway A Alternatives

Alternative	Taxiway Alt 1 (No Build)	Taxiway Alt 2 (Full-Parallel)	Taxiway Alt 3 (Partial-Parallel)
Fulfills Purpose and Need	No	Yes	Yes
Avoids Adverse Community Impacts	No Change	Compatible	Compatible
Avoids Environmental Impacts	None	9.5 acres of KBB habitat; reduced emissions	4.68 acres of KBB habitat; reduced emissions
Provides Operational Efficiency & Flexibility	None	Improved; Increases pavement maintenance requirements for little benefit compared to Alt 3.	Improved
Meets FAA Design Standards	No	Yes	Yes

Source: McFarland Johnson analysis.

Taxiway Alternative 3 is the preferred alternative as it provides improved operational flexibility with fewer environmental impacts than Taxiway Alternative 2 (Full-Parallel). It is compatible with the community, fulfills the purpose and needs, and meets FAA design standards.

3.3. TAXIWAY C IMPROVEMENTS

The goal of the Taxiway C project is to improve operational efficiency and meet FAA design standards. This alternative straightens Taxiway C and provides a right-angle intersection with the Runway 32 end.

The taxiway alternatives considered are briefly summarized below:

- Taxiway Alternative 1 (No Build)
  - Taxiway remains the same in length, width, location, and orientation.
- Taxiway Alternative 2 (Build)
  - Construct a right-angle taxiway intersection to Runway 32.

3.3.1. Taxiway C Alternative 1 (No Build)

The existing section of Taxiway C provides access to the Runway 32 end and also serves glider operations. However, the current configuration of a greater than 90-degree angle intersection does not meet FAA standards and does not provide for safe operating conditions. Additionally, gliders would continue to operate on this section of Taxiway C causing conflicts with powered aircraft. Under the No Build Alternative, no changes are made to the taxiway; the taxiway would remain the same in location and orientation. The existing layout of this alternative is shown in Figure 3-4.

The Taxiway C Alternative 1 (No Build) was evaluated as follows:

- Fulfills Purpose and Need: Taxiway C Alternative 1 does not meet the existing or future needs of the Airport, as it fails to provide safer operating conditions for powered and glider aircraft at the intersection with Runway 32.
- Avoids Adverse Community Impact: Existing patterns of land use would remain both on- and off-airport property.
- Avoids Environmental Impact: There are no environmental impacts associated with this alternative.
- Provides Operational Efficiency and Flexibility: This choice limits the operational efficiency of the taxiway system due to the continued obtuse angled runway entrance. Additionally, gliders would continue to operate on Taxiway C causing congestion for both powered and glider aircraft operating on the same runways and taxiways.
- Meets FAA Design Standards: According to the new taxiway guidelines in FAA AC 150/5300-13A, it is recommended that the existing taxiway be straightened to provide a right-angle intersection with the runway to comply with FAA standards, which would not be the case for the No Build alternative.

3.3.2. Taxiway C Alternative 2 (Build)

Taxiway C Alternative 2 proposes straightening Taxiway C to provide a 400-foot right-angle intersection with Runway 32, as shown in Figure 3-5. This alternative would connect the taxiway from the edge of the apron to the Runway 32 threshold. The taxiway would be 50 feet wide and approximately 185 feet shorter than the existing taxiway, resulting in 0.50 acre of asphalt. Stormwater practices, such as infiltration trenches, would be constructed along the taxiway to accommodate stormwater runoff from the new impervious surface.

Existing MITLs would be relocated and new MITLs would be installed and relocated where necessary along the proposed and existing taxiway to provide guidance to pilots taxiing at the Airport during poor weather conditions or at night. Existing taxiway signage would be relocated and new signage would be installed. The existing taxiway section between the apron and the Runway 32 threshold would be abandoned and utilized for glider operations, which would allow aircraft to bypass gliders to get to Runway 32.

Figure 3-4: Taxiway C Alternative 1 - No-Build

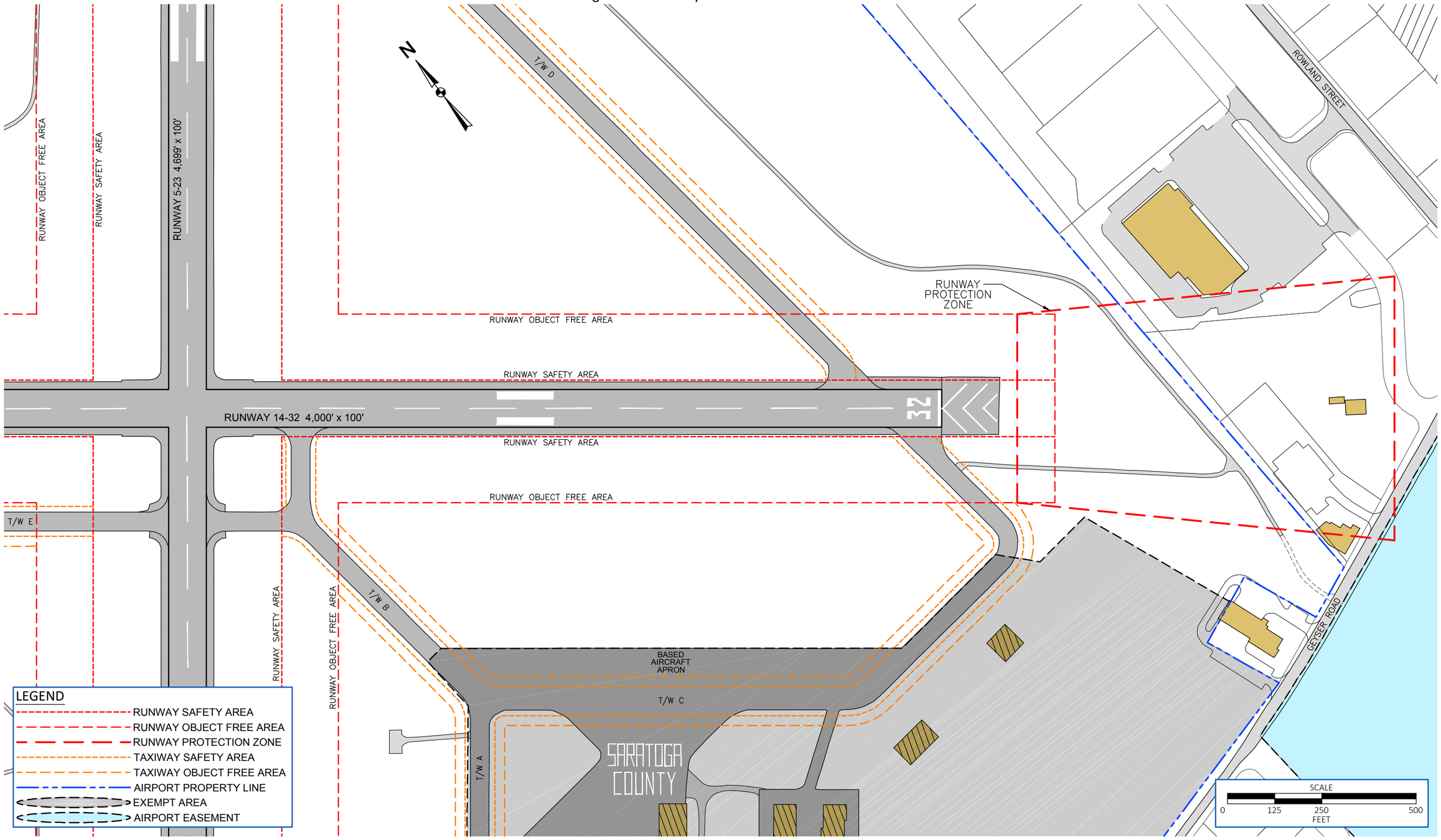

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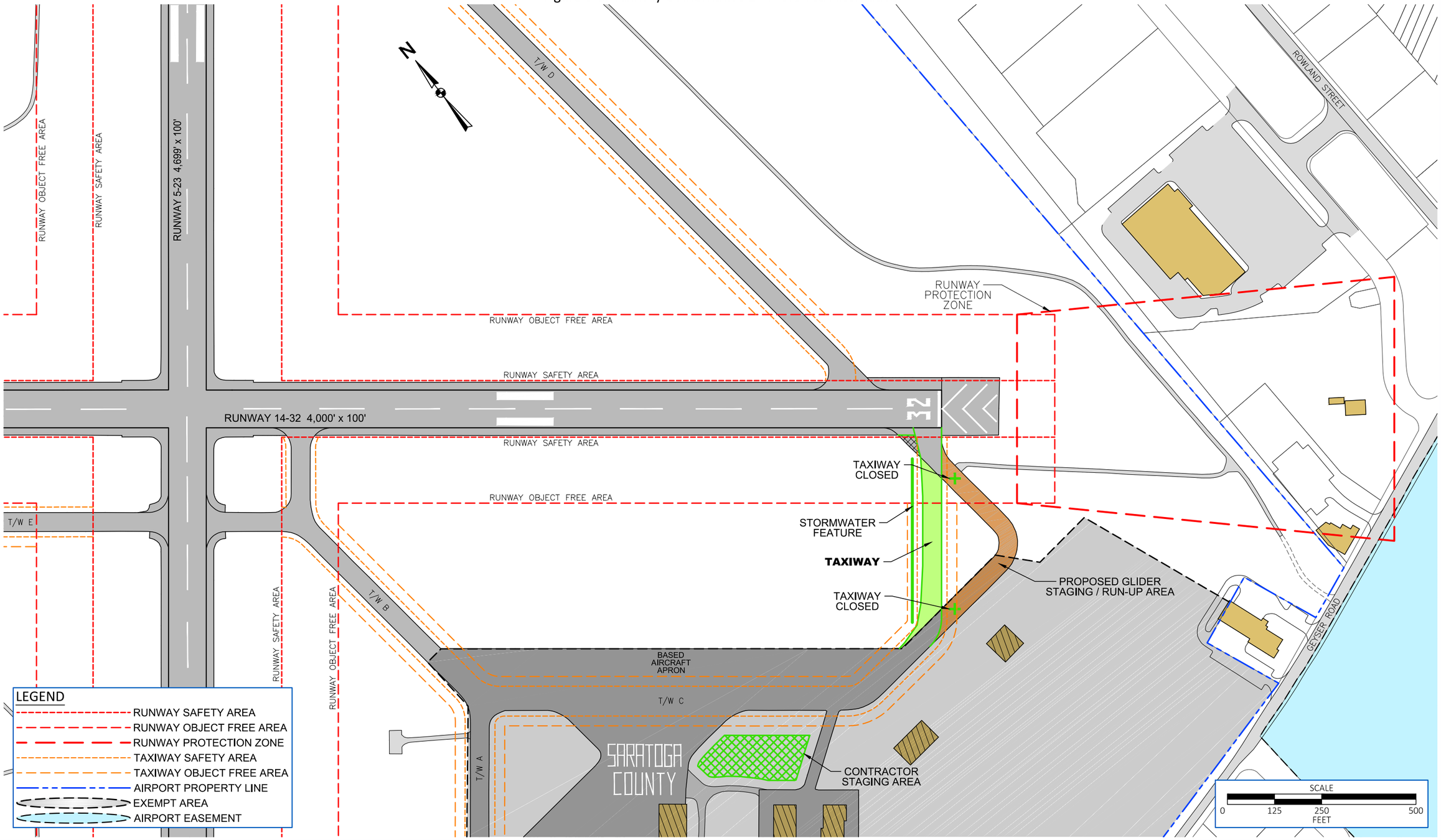
Figure 3-5: Taxiway C Alternative 2 - Preferred Alternative



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The Taxiway C Improvements Build Alternative was evaluated as follows:

- **Fulfills Purpose and Need:** Taxiway C Alternative 2 provides an efficient taxiway system that would allow safer operating conditions by improving visibility for pilots. In addition, the alternative would allow for independent operations by powered aircraft and gliders.

- **Avoids Adverse Community Impact:** The alternative is compatible with existing on-airport land use and would not displace people or disrupt community character.

- **Avoids Environmental Impact:** Alternative 2 would affect approximately 0.81 acre of KBB habitat. Similar to Taxiway Alternative 3, permitting and off-airport habitat mitigation for impacts to KBB and their habitat would be necessary for this alternative to be implemented. The alternative would result in a minor decrease in exhaust emissions generated by aircraft, since the project alleviates potential congestion associated with gliders on the taxiway.

- **Provides Operational Efficiency and Flexibility:** Taxiway Alternative 2 would allow efficient entrance to Runway 32 from the proposed right-angle taxiway. The alternative would also separate glider and powered aircraft, thus allowing for enhanced flexibility from an operational standpoint.

- **Meets FAA Design Standards:** According to the taxiway guidelines in AC 150/5300-13A, it is recommended that the existing taxiway system at the Airport straighten Taxiway C to intersect with Runway 14-32 in a perpendicular fashion. The alternative would provide the best visual perspective to a pilot approaching an intersection with the runway to observe aircraft in both the left and right directions, on the runway and on approach.

3.3.3. Taxiway C Alternatives Summary

The descriptions of the taxiway alternatives have included an evaluation based on five criteria: 1) the ability of the alternative to fulfill the purpose and need, 2) potential community impacts, 3) potential environmental impacts, 4) operational efficiency and flexibility, and 5) the ability to meet FAA design standards. **Table 3-2** summarizes the above analysis.

Table 3-2: Summary of Taxiway C Alternatives

Alternative	Taxiway C Alt 1 (No Build)	Taxiway C Alt 2 (Build)
Fulfills Purpose and Need	No	Yes
Avoids Adverse Community Impacts	No Change	Compatible
Avoids Environmental Impacts	None	0.81 acre of KBB habitat; reduced emissions
Provides Operational Efficiency & Flexibility	None	Improved
Meets FAA Design Standards	No	Yes

Source: McFarland Johnson analysis.

Taxiway C Alternative 2 is the preferred alternative as it would meet FAA design standards and provide improved operational efficiency. It is compatible with the community and fulfills the purpose and needs.

3.4. GLIDER OPERATIONS IMPROVMENTS

The MPU identified two glider alternatives, the no build and turf runway. An additional glider alternative was developed during the alternatives refinement process to address glider operator concerns while providing an alternative with fewer environmental impacts. The following glider alternatives have been developed to facilitate glider operations at the Airport:

- Glider Operations Improvements Alternative 1 (No Build)
  - Glider staging remains in its current location.
- Glider Operations Improvements Alternative 2 (Construct Run-Up/Glider Staging Area)
  - Construct a run-up/glider staging apron.

The turf runway alternative was considered and dismissed and is only briefly discussed as part of this EA.

3.4.1. Glider Operations Improvements (Turf Runway – Considered and Dismissed)

As part of the 2015 MPU, a turf runway, spanning 880 feet long by 100 feet wide, was considered. This runway would be solely used by glider operations and therefore separate powered and non-powered traffic. This turf runway would be located parallel to Runway 14-32 between the runway and Taxiway C toward the Runway 32 end. The length would not be able to accommodate all glider towing operations, it would be located within Runway 14-32's runway object free area (ROFA), and it would require additional land/easement acquisition to provide required runway safety area (RSA) and runway protection zone (RPZ). Additionally, the turf runway would impact 9.4 acres of KBB habitat and require a difficult regulatory review process. Based on the above and the limited

utility of the turf runway, this option would not be considered as an alternative for the purposes of this EA.

3.4.2. Glider Alternative 1 (No Build)

This alternative is the same as the other No Build alternative (Taxiway Alternative 1) (see **Figure 3-6**). The current layout at the Runway 32 threshold would remain the same including a bend in Taxiway C.

The no build glider alternative was evaluated as follows:

- **Fulfills Purpose and Need:** Glider Alternative 1 does not meet the existing or future needs of the Airport, as it fails to provide separation between powered and non-powered aircraft. Additionally, the No Build alternative does not satisfy the recommended facility requirements as outlined in Chapter 5 of the MPU.

- **Avoids Adverse Community Impacts:** Existing patterns of land use would remain both on- and off-airport property.

- **Avoids Environmental Impact:** There are no environmental impacts associated with this alternative.

- **Provides Operational Efficiency and Flexibility:** This alternative limits the operational flexibility of the Airport due to the congestion related to both powered and non-powered aircraft operating on the same runways and taxiways.

- **Meets FAA Design Standards:** There are no design standards associated with this alternative.

3.4.3. Glider Alternative 2 (Construct Run-Up/Glider Staging Area)

Alternative 2 includes construction of a run-up/glider staging area at the current bend in Taxiway C to provide a way for powered aircraft to by-pass gliders. The proposed glider staging area would be turf marked with retroreflective markers. The alternative would eliminate the need for glider run-up and staging on active airfield areas.

The glider build alternative was evaluated as follows and is shown in **Figure 3-6.**

- **Fulfills Purpose and Need:** Glider Alternative 2 meets the existing and future needs of the Airport, as it provides separation between powered and non-powered aircraft.

- **Avoids Adverse Community Impact:** This alternative provides the ability to segment future taxiway construction into phases. Existing patterns of land use would remain both on- and off-airport property.

- **Avoids Environmental Impact:** Alternative 2 would affect approximately 0.38 acre of KBB habitat. However, the proposed glider staging/run-up area would prevent current incidental glider operations off of paved areas. Temporary impacts associated with

construction are not included in this estimate. Similar to preferred taxiway alternatives, permitting and off-airport habitat mitigation for impacts to KBB and their habitat would be necessary for this alternative to be implemented. The alternative provides a designated staging/run-up area with appropriate marking to prevent gliders from operating outside of the designated area and potentially impacting KBB and their habitat.

- **Provides Operational Efficiency and Flexibility:** This alternative allows for enhanced operational flexibility by providing by-pass areas for powered aircraft around non-powered aircraft. Glider Alternative 2 also provides opportunity to adapt to future changes and developments at the Airport.

- **Meets FAA Design Standards:** The alternative meets FAA design standards for operations outside of the taxiway and runway OFAs.

3.4.4. Glider Operations Improvements Alternatives Summary

The descriptions of the Glider Operations Improvements Alternatives have included an evaluation based on the previously noted five criteria, results of which are summarized in **Table 3-3**.

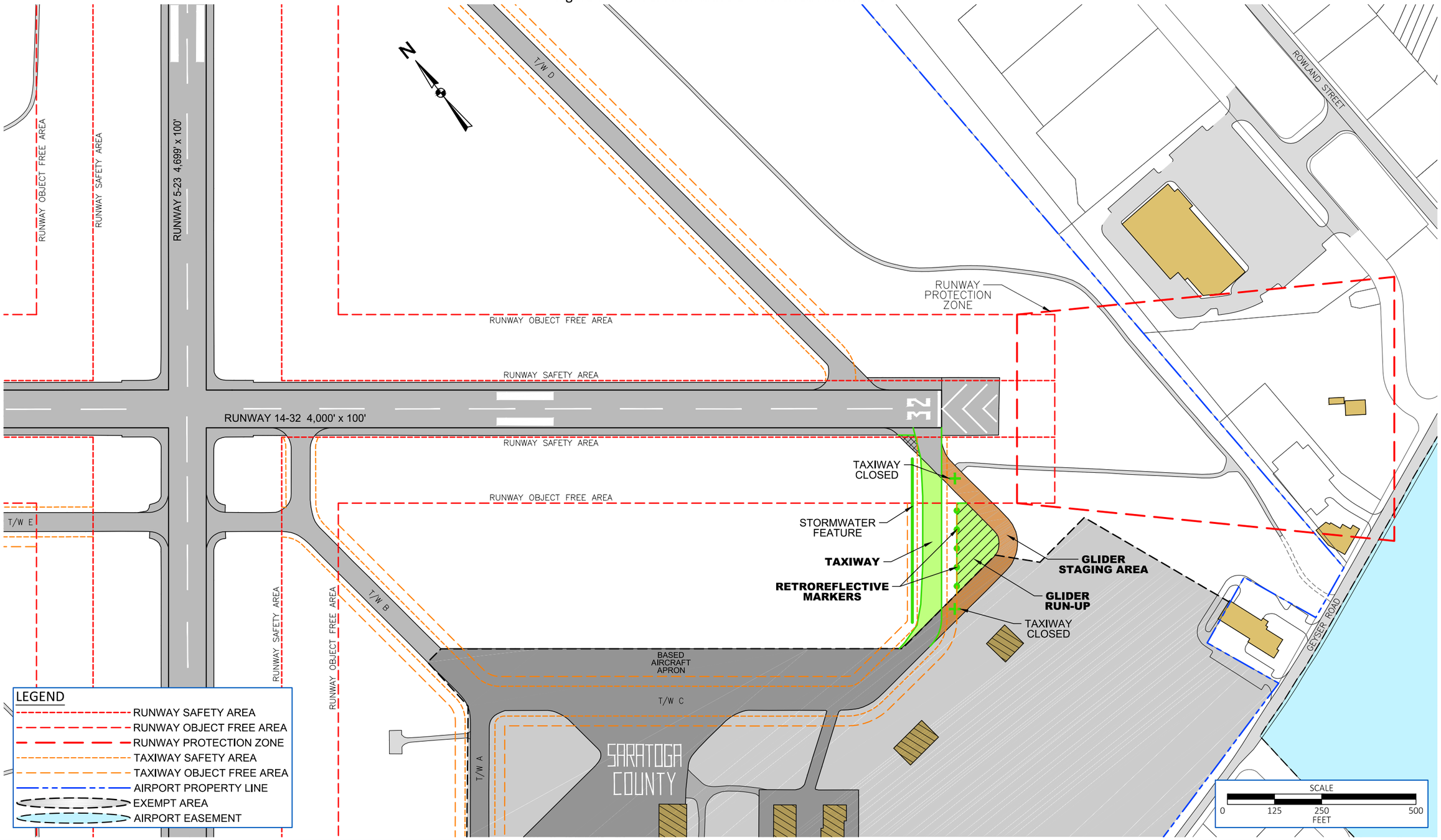
Table 3-3: Summary of Glider Operations Improvements Alternatives

Alternative	Glider Alt 1 (No Build)	Glider Alt 2 (Construct Run-Up/Glider Staging Area)
Fulfills Purpose and Need	No	Yes
Avoids Adverse Community Impacts	No Change	Compatible
Avoids Environmental Impacts	None	0.38 acre of KBB habitat
Provides Operational Efficiency & Flexibility	None	Improved
Meets FAA Design Standards	None	Yes

Source: McFarland Johnson analysis.

The glider action alternative (Alternative 2) is the preferred alternative as it fulfills the purpose and need, is compatible with the community, meets FAA design standards, and provides improved operational flexibility compared to Glider Alternative 1.

Figure 3-6: Glider Alternative 2 - Preferred Alternative



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3.5. WILDLIFE HAZARD MANAGEMENT PLAN IMPLEMENTATION

The following WHMP alternatives have been developed to maintain a safe operating environment and implement WHMP recommendations at the Airport:

Mowing Plan Improvements:

- Mowing Plan Improvements Alternative 1 (No Action)
  - Maintain the current mowing plan.
- Mowing Plan Improvements Alternative 2 (Action)
  - Expand mowing plan to include TSAs and RSAs.

Perimeter Fence Improvements:

- Perimeter Fence Improvements Alternative 1 (No Action)
  - Maintain the existing perimeter fence.
- Perimeter Fence Improvements Alternative 2 (Action)
  - Replace the existing perimeter fence and install additional perimeter fencing.

3.5.1. WHMP – Mowing Plan Improvements

3.5.1.1 Mowing Plan Improvements Alternatives Considered and Dismissed

The unrestricted mowing of 20 feet, approximately two parallel mower passes and twice the distance currently allowed around taxiway lighting and signage, beyond the existing runway and taxiway paved surfaces was considered as part of the alternatives analyses. This alternative was dismissed, as it was deemed insufficient to provide a significant reduction of wildlife hazards and does not meet the safety area design standards outlined in AC 150/5220-23.

In addition, the unrestricted mowing of turfed surfaces to the ROFA and TOFA limits was considered as part of the alternatives analyses. However, it was dismissed given the ecological impacts associated with protected butterflies and their habitat out-weighed the potential wildlife hazard reduction benefits derived.

3.5.1.2 Mowing Plan Improvements Alternative 1 (No Action)

This alternative maintains current conditions for habitat management at the Airport. This includes limited mowing restricted to January 1 through October 15 in accordance with the Draft Management Agreement (DMA) between the New York State Department of Environmental Conservation (NYSDEC), United States Fish and Wildlife Service (USFWS), and County. The existing mowing plan within the Known Habitat Area consists of mowing immediately around the taxiway lighting and signs, which consists of an approximate 10-foot mowing width and mowing of the automated weather observation station (AWOS-III), which cumulatively amounts to approximately 4.83 acres. The existing mowing plan is shown on **Figure 3-7**.

The no action alternative was evaluated as follows:

- **Fulfills Purpose and Need:** The No Action Alternative does not meet the existing or future needs of the Airport, as it fails to provide any reduction and potential increase of wildlife on the Airport. This is an unsafe condition and could increase loss of lives and damage.

- **Avoids Adverse Community Impacts:** There are no community impacts associated with this alternative.

- **Avoids Environmental Impact:** There are no environmental impacts associated with this alternative.

- **Provides Operational Efficiency and Flexibility:** This alternative does not provide operational flexibility as wildlife on the Airport may reduce operational use of certain airfield pavements.

- **Meets FAA Design Standards:** This alternative does not address the FAA's goal of mitigating the risks of wildlife strikes on or near the Airport and implementing recommendations made in the FAA approved WHMP.

3.5.1.3 Mowing Plan Improvements Alternative 2 (Action)

This alternative implements recommendations made in the WHMP to maintain safe operating conditions at the Airport. The FAA approved WHMP recommends mowing the runway and taxiway safety areas to reduce wildlife hazards.

Currently, in accordance with the DMA, the County cannot mow between January 1 and October 15 to allow the endangered and threatened butterflies present at the Airport to fully carry out their life functions and allow essential habitat plants, including wild blue lupine, to complete life cycles. As discussed above, regular unrestricted mowing within the Known Habitat Area surrounding the taxiway lighting and signage and AWOS-III is allowed and amount to approximately 4.83 acres.

This Action Alternative would allow unrestricted mowing of the RSAs and TSAs based on the WHMP recommendations and FAA recommendation of a grass height of 6-12 inches in turfed airport operations areas (AOA). Maintaining the RSAs and TSAs would allow pilots a greater ability to observe potential hazardous wildlife adjacent to the runways and taxiways and avoid potential wildlife strikes. The proposed safety area mowing plan is shown on **Figure 3-8.**

Based on the taxiway and runway dimensions, approximately 14.5 feet on each side of the taxiways would be mowed, varying slightly in the fillet areas. Safety area mowing for Runway 14-32 would include a 5-foot wide area on both sides of the runway, 300 feet off of the Runway 14 end and approximately 150 feet off of the Runway 32 end. Mowing of safety areas on Runway 5-23 would consist of 180-foot wide area on both sides of the runway and 800 feet from the edge of pavement on the runway ends. Mowing would continue to take place around all taxiway and runway lighting and signage for safety purposes. Overall, this alternative for the RSA/TSA mowing plan would involve mowing 67.5 acres.

Figure 3-7: Existing Mowing Plan

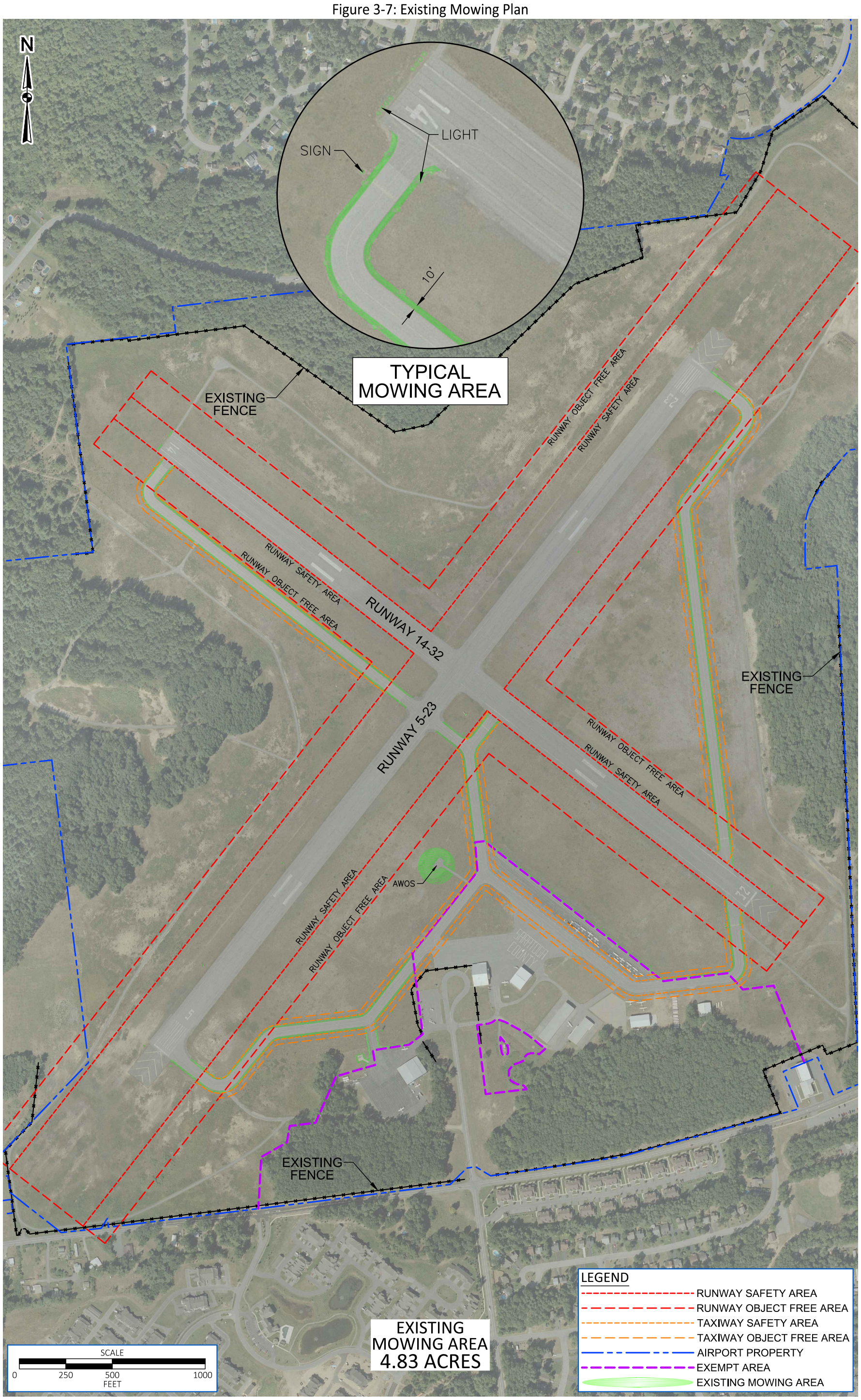

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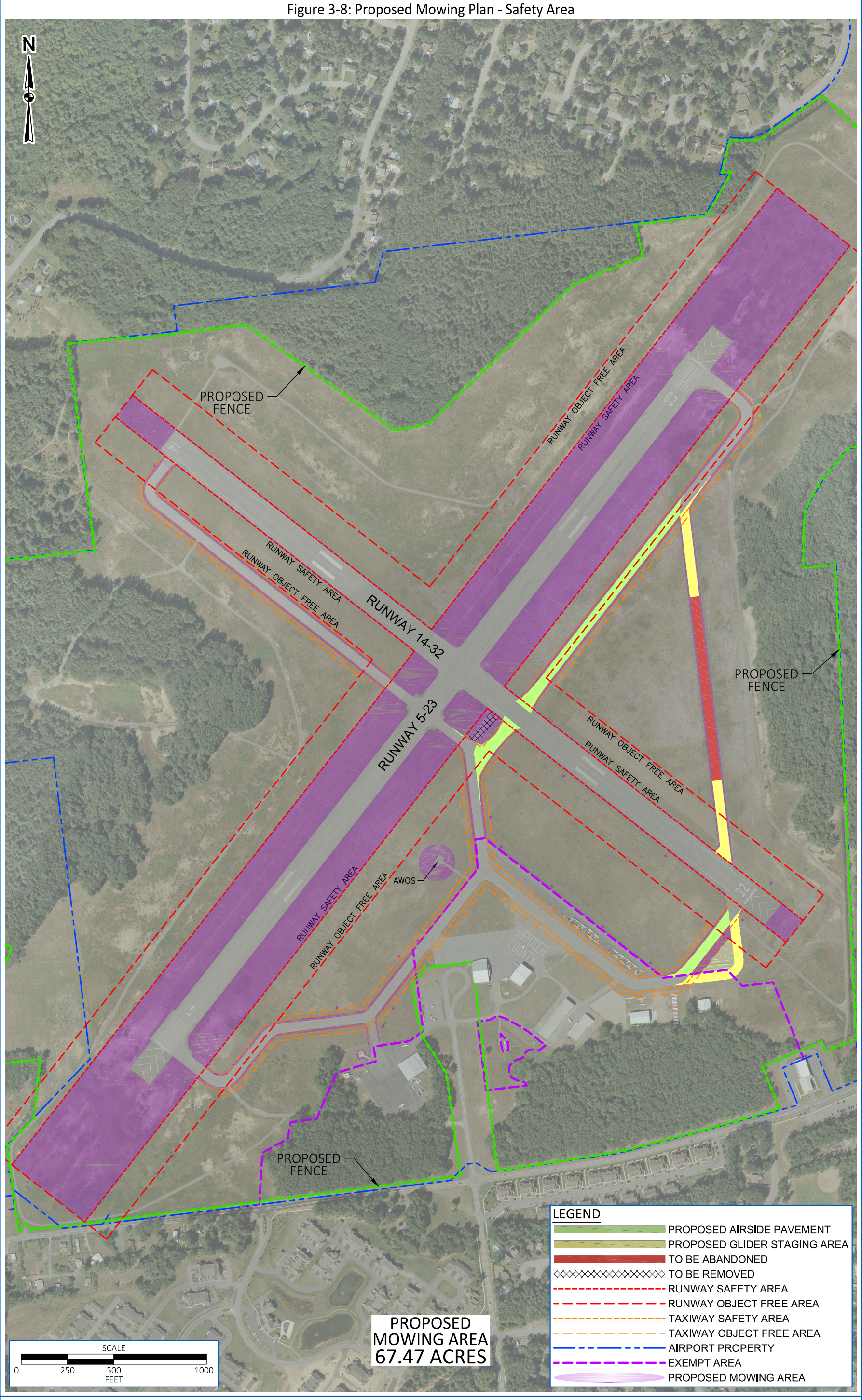
Figure 3-8: Proposed Mowing Plan - Safety Area



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The mowing plan improvements action alternative was evaluated as follows:

- **Fulfills Purpose and Need:** Alternative 2 meets the existing and future needs of the Airport, as it provides wildlife hazard mitigation and therefore prevents/reduces wildlife on the Airport and allow pilots a greater ability to observe potential hazardous wildlife adjacent to the runways and taxiways and avoid potential wildlife strikes.

- **Avoids Adverse Community Impact:** There is no community impact associated with this alternative.

- **Avoids Environmental Impact:** Additional mowing of on-airport grasses reduces KBB habitat. The RSA/TSA mowing plan would permanently impact approximately 67.5 acres.

- **Provides Operational Efficiency and Flexibility:** This alternative reduces the potential for wildlife strikes by aircraft, thus improving safety for Airport users.

- **Meets FAA Design Standards:** FAA recommendations for maintaining AOA grass height and mitigating wildlife hazards would be met.

3.5.1.4 WHMP – Mowing Plan Improvements Alternatives Summary

The descriptions of the WHMP Mowing Plan Improvements Alternatives have included an evaluation based on the previously noted five criteria, results of which are summarized in **Table 3-4.**

Table 3-4: Summary of WHMP Mowing Plan Improvements Alternatives

Alternative	Mowing Plan Alt 1 (No Action)	Mowing Plan Alt 2 (Action)
Fulfills Purpose and Need	No	Yes
Avoids Adverse Community Impacts	No Change	No Change
Avoids Environmental Impacts	None	67.5 acres of permanent impact to KBB habitat
Provides Operational Efficiency & Flexibility	None	Improved
Meets FAA Design Standards	No Change	Improved

Source: McFarland Johnson analysis.

WHMP Mowing Plan Improvements Alternative 2 is the preferred alternative as it fulfills the purpose and need, avoids adverse impacts to the community, and improves operational flexibility for the Airport.

3.5.2. WHMP – Perimeter Fence Improvements

3.5.2.1 Perimeter Fence Improvements Alternative 1 (No Action)

This alternative also maintains current conditions for habitat management at the Airport. The existing perimeter fencing is six feet high, with the exception of a 4-foot section near the Airport access road roundabout. In addition, the existing perimeter fencing is incomplete, including large gaps near the Airport entrance access road and numerous gaps and dugouts. A majority of the existing perimeter fence has a maintenance corridor that is suitable for vehicle inspections. However, the corridor is not frequently maintained and/or mowed due to restrictions in the DMA and portions of the corridor have tree/shrub vegetation obstructing vehicle access.

The perimeter fencing no action alternative was evaluated as follows:

- Fulfills Purpose and Need: The No Action Alternative does not meet the existing or future needs of the Airport, as it fails to provide any reduction and potential increase of wildlife on the Airport. This is an unsafe condition and could increase loss of lives and damage.
- Avoids Adverse Community Impacts: There are no community impacts associated with this alternative.
- Avoids Environmental Impact: There are no environmental impacts associated with this alternative.
- Provides Operational Efficiency and Flexibility: This alternative does not provide operational flexibility as wildlife on the Airport may reduce operational use of certain airfield pavements.
- Meets FAA Design Standards: This alternative does not address the FAA's goal of mitigating the risks of wildlife strikes on or near the Airport and implementing recommendations made in the FAA approved WHMP.

3.5.2.2 Perimeter Fence Improvements Alternative 2 (Action)

This alternative implements recommendations made in the WHMP to maintain safe operating conditions at the Airport. The alternative includes improvements to the Airport perimeter fence to more effectively keep wildlife off Airport.

This alternative would include the installation of a 10-foot high fence with barbed wire outrigger, buried 18 to 24 inches below grade, around the entire AOA. Additionally, gates would be replaced as needed and ground surface gaps would be minimized through asphalt berms, addition of fence skirting, or through physical adjustments to minimize burrowing. An 8-foot wide grass corridor would be maintained (mowed) along the interior side of the perimeter fence to allow for unrestricted motor vehicle access for fence integrity inspections and repairs. The proposed perimeter fence is shown on **Figures 1-1, Proposed Action; 3-8 Proposed Mowing Plan – Safety Area; and 5-1, Proposed Impacts**.

The perimeter fence improvements would involve the replacement of a total of approximately 25,800 linear feet of existing fence, including five access gates. Approximately 80 percent of perimeter fence replacement would take place within the Known Habitat Area. A majority of the fence replacement would occur within grass/turf areas and the remainder would be located in forested areas on the eastern and western portions of the Airport property, and along Geyser Road on County owned property. Within the Known Habitat Area, approximately 25 percent (6,700 linear feet) of the fence replacement project is located in these forested areas. Minor tree removal, approximately 1.2 acres, along the more densely wooded areas would be required to replace the fence and provide an 8-foot wide fence maintenance corridor.

The fence improvements action alternative was evaluated as follows:

- **Fulfills Purpose and Need:** Alternative 2 meets the existing and future needs of the Airport, as it provides wildlife hazard mitigation and therefore prevents/reduces wildlife on the Airport.

- **Avoids Adverse Community Impact:** There is no community impact associated with this alternative.

- **Avoids Environmental Impact:** The fence replacement project would impact approximately 3.64 acres of KBB habitat; 2.44 acres for the maintenance corridor mowing of turf areas and 1.2 acres resulting from impacts due to construction equipment. Replacement of the perimeter fence components, including posts and foundations, would have negligible permanent impacts because the new fence would be installed in the same location as the existing fence. As discussed in Chapter 4, the range of the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*) covers the vicinity of the Airport. Subsequently, measures would be taken to avoid potential impacts as a result of the removal of trees for construction of the fence. Tree clearing would be conducted between October 1 and March 31 to prevent any potential direct impacts to the NLEB.

- **Provides Operational Efficiency and Flexibility:** This alternative reduces the potential for wildlife strikes by aircraft, thus improving safety for Airport users.

- **Meets FAA Design Standards:** FAA recommendations for mitigating wildlife hazards would be met.

3.5.2.3 WHMP – Perimeter Fence Improvements Alternatives Summary

The descriptions of the WHMP Perimeter Fence Improvements Alternatives have included an evaluation based on the previously noted five criteria, results of which are summarized in **Table 3-5.**

Table 3-5: Summary of WHMP Perimeter Fence Improvements Alternatives

Alternative	Perimeter Fence Alt 1 (No Action)	Perimeter Fence Alt 2 (Action)
Fulfills Purpose and Need	No	Yes
Avoids Adverse Community Impacts	No Change	No Change
Avoids Environmental Impacts	None	3.64 acres of permanent impact to KBB habitat
Provides Operational Efficiency & Flexibility	None	Improved
Meets FAA Design Standards	No Change	Improved

Source: McFarland Johnson analysis.

WHMP Perimeter Fence Improvements Alternative 2 is the preferred alternative as it fulfills the purpose and need, avoids adverse impacts to the community, and improves operational flexibility for the Airport.

3.6. ACQUISITION OF LAND AND/OR EASEMENTS LAND USE AND VEGETATION OBSTRUCTION REMOVAL

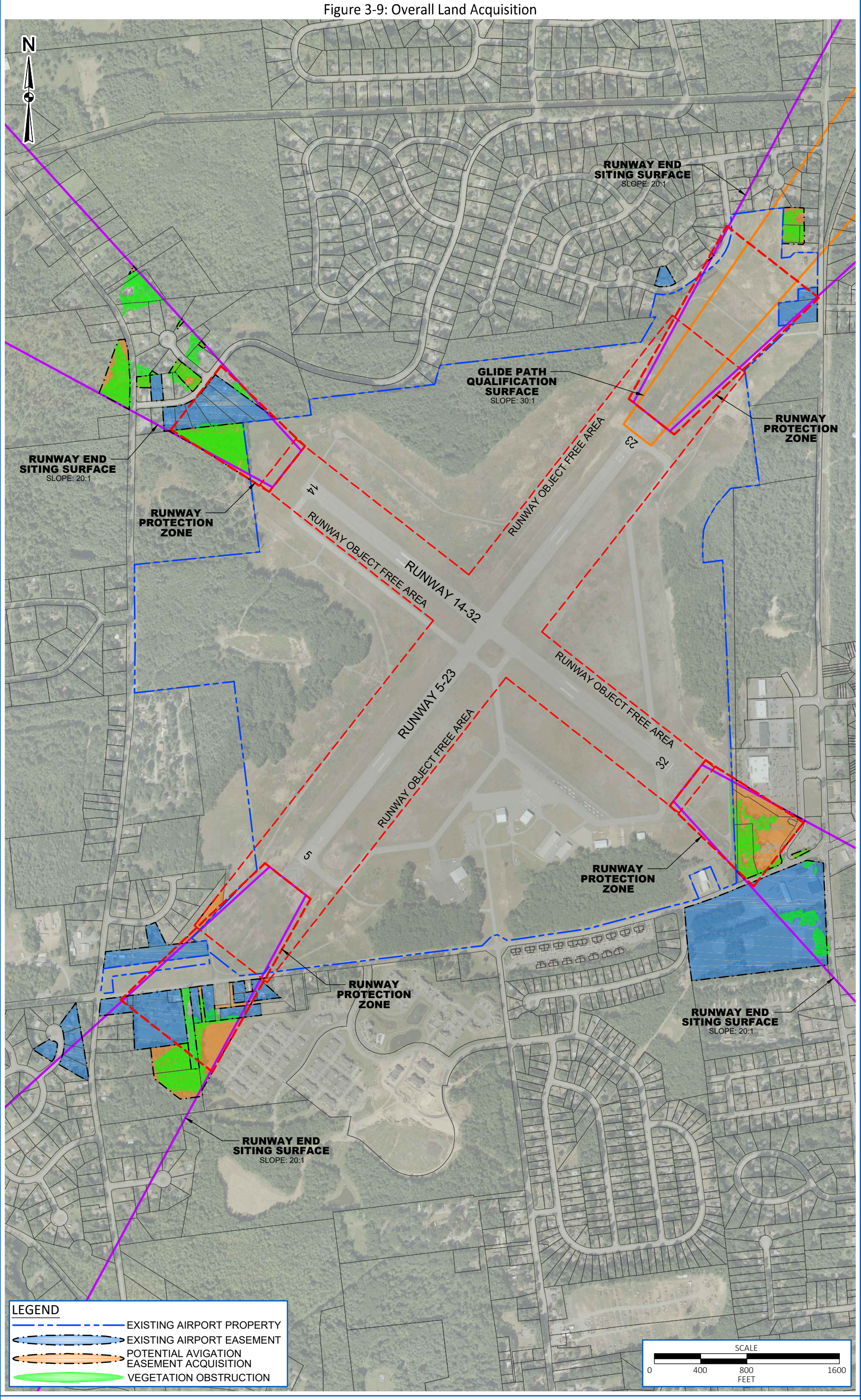
The following acquisition alternatives have been developed to meet safety area and airspace requirements at the Airport:

- Acquisition Alternative 1 (No Action)
  - Airport property and Airport easements remain the same as they currently are.
- Acquisition Alternative 2 (Action)
  - Acquire land/easements to meet FAA design standards and provide control over Airport safety areas and surfaces and remove obstructions.

3.6.1. Acquisition and Obstruction Removal Alternative 1 (No Action)

On and off-airport property, easements and obstructions remain the same for the No Build Alternative. Existing easement and proposed land/easement acquisition are shown on **Figure 3-9**.

Figure 3-9: Overall Land Acquisition



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Under this alternative, existing obstructions to the 20:1 approach runway end siting surfaces (RESS) and the 30:1 glide path qualification slope (GQS) would continue to obstruct the airspace. If obstructions cannot be removed, there are several options, including prohibition of night operations or an increase in approach weather minimums (cloud height and visibility requirements), in the case of an existing instrument approach and displacement of the runway thresholds[1] to provide a clear approach and thus reducing the overall runway length. In accordance with the FAA AC 150/5300-13A, displacement of a runway threshold (reducing overall runway landing length), may be required when an object that obstructs the airspace required for landing and/or departing airplanes is beyond the Airport owner's power to remove, relocate, or lower. Displacement of a runway threshold impacts the airport design and limits the operational use of the runway, by reducing landing length. The reduction in landing length would result in operational impacts, especially during wet or snow/ice conditions and would inhibit the ability of the Airport to accommodate existing traffic. It is crucial to maintain the visual and instrument approaches and not limit the operational utility of the runways.

This No Build Acquisition Alternative 1 was evaluated as follows:

- **Fulfills Purpose and Need:** Acquisition Alternative 1 does not meet the existing or future needs of the Airport, as it fails to provide land use control of all Airport safety areas and does not address existing obstructions to approach RESS and GQS.

- **Avoids Adverse Community Impact:** Existing patterns of land use would remain both on- and off-airport property, therefore there would be no community impacts.

- **Avoids Environmental Impact:** There are no environmental impacts associated with this alternative.

- **Provides Operational Efficiency and Flexibility:** There are no changes to operational flexibility provided with this alternative. This alternative would negatively affect operational flexibility if airspace obstructions remain and contribute to loss of operational use of the runways. Potential loss of night-time approaches and displaced thresholds are not practicable.

- **Meets FAA Design Standards:** According to AC 150/5300-13A, it is recommended that existing safety areas, such as RPZs and ROFAs, should be owned in full or controlled through easements. This alternative does not meet these design standards.

3.6.2. Acquisition and Obstruction Removal Alternative 2 (Action)

This alternative includes the acquisition of land within the Airport's RPZ, ROFA, GQS and Approach RESS and associated vegetation obstruction removal. At this point in the acquisition process, it has not been determined what type of acquisition (i.e. avigation easement, in lieu-fee) the interested

[1] Threshold is the beginning of that portion of the runway available for landing. It is located to provide proper clearance for landing aircraft over existing obstacles on approach to landing.

landowners would prefer. Additionally, there would be the option for a one-time access for tree topping and/or removal for landowners with vegetation obstructions. As discussed in Chapter 2, Section 2.3.5, for purposes of this EA, interested landowners only are included and ultimately acquisition of willing sellers would be a priority for Saratoga County. The County would not consider condemnation unless there is a critical impact to the safety or operations of the Airport. In instances of pre-existing land uses in RPZs, acquisition through condemnation would not be necessary due to FAA's policy for pre-existing uses.

All four runway ends include land and/or easement acquisition and obstruction removal.

Runway 5

Runway 5 acquisitions include 7.78 acres of acquisition of land and/or easement and 4.1 acres of vegetation obstruction removal on six existing and six proposed properties. Proposed parcel acquisitions within the RPZ, ROFA, and RESS overlap in some instances, and therefore the overall acreage of acquisition, 7.78 acres, is most important. Land proposed for acquisition includes mostly commercial and residential land and a small portion of vacant public services land owned by the town of Milton.

The Airport currently has avigation easements on 19 separate parcels within the RPZ, approach, departure, and transitional surfaces totaling approximately 15 acres. The removal of vegetation obstructions totaling 0.5-acre, on six existing avigation easements is proposed. The areas to be acquired in easement and where obstruction removal would take place are shown in **Figure 3-10**.

The Airport does not have land use control and/or ownership of six acres (20 percent) on six parcels within the RPZ. The land not controlled by the County or Airport includes 3.58 acres of a mix of occupied residential and vacant land, which is proposed to be acquired. Approximately 1.13 acres of easement acquisition is not proposed due to the landowner not participating in the EA. The remaining 1.29 acres is Geyser Road, which bisects the RPZ and is owned and maintained by Saratoga County, so acquisition is not required. The land acquisition would result in Airport/County ownership or easement control of 96 percent of the RPZ.

A majority of the Runway 5-23 ROFA is owned by the Airport. However, approximately 0.65 acre extends off Airport property. The vacant land owned by the town of Milton and commercial land, privately owned, would be acquired in avigation easement to ensure the Airport has land use control and that FAA design standards are met.

Under this alternative, parcels would be acquired to remove tree obstructions and gain land use control within the 20:1 Approach RESS to Runway 5. Within the Runway 5 Approach RESS, 6.59 acres of land would be acquired as avigation easements and approximately 4.10 acres of trees trimmed/removed to remove critical obstructions.

Runway 23

Runway 23 acquisitions include five properties covering 1.38 acres of acquisition of land and/or easement and 1.02 acres of vegetation obstruction removal on four proposed properties. The areas to be acquired and where obstruction removal would take place are shown in **Figure 3-11**.

Figure 3-10: Runway 5 Land Acquisition

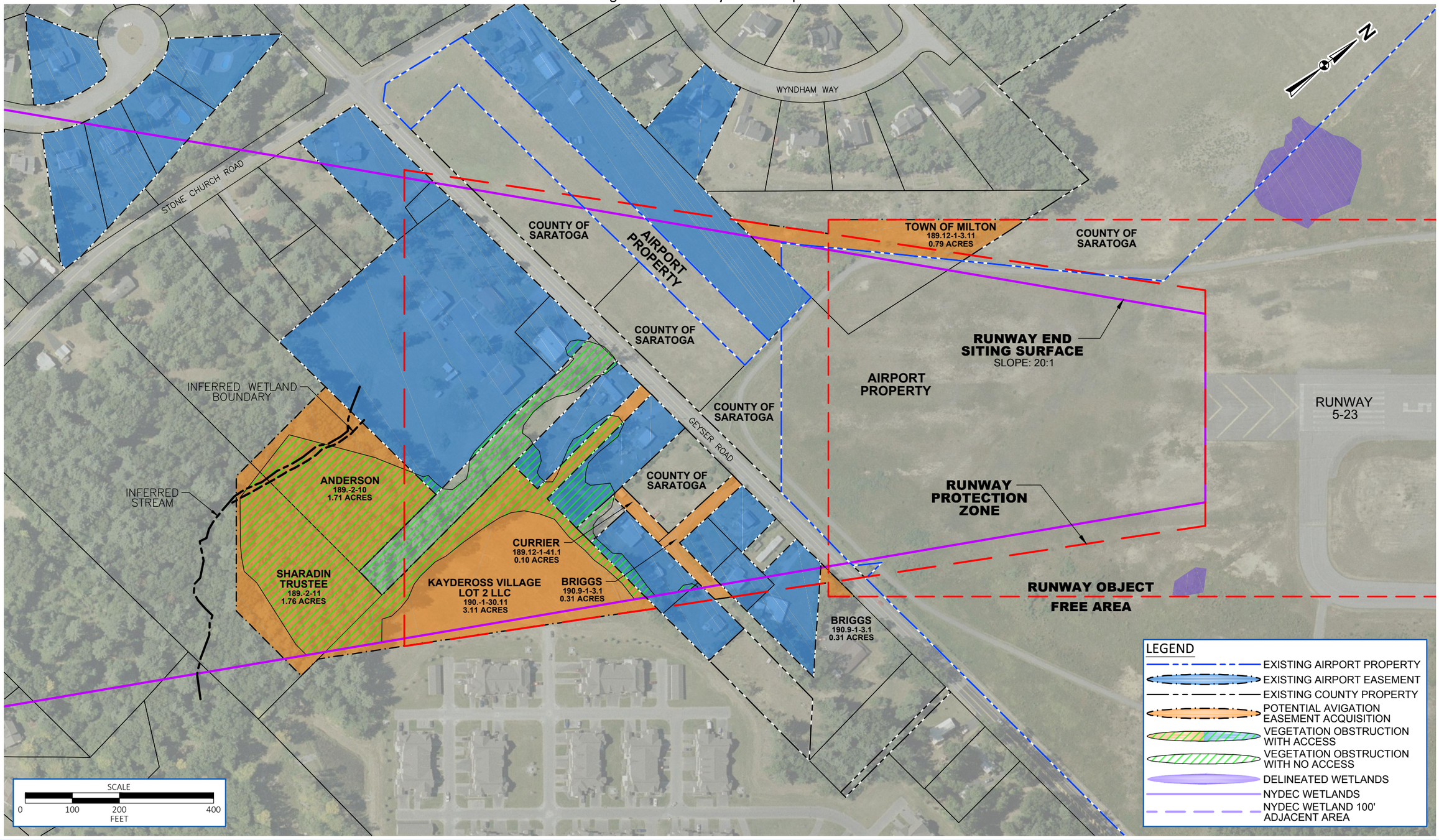

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Figure 3-11: Runway 23 Land Acquisition

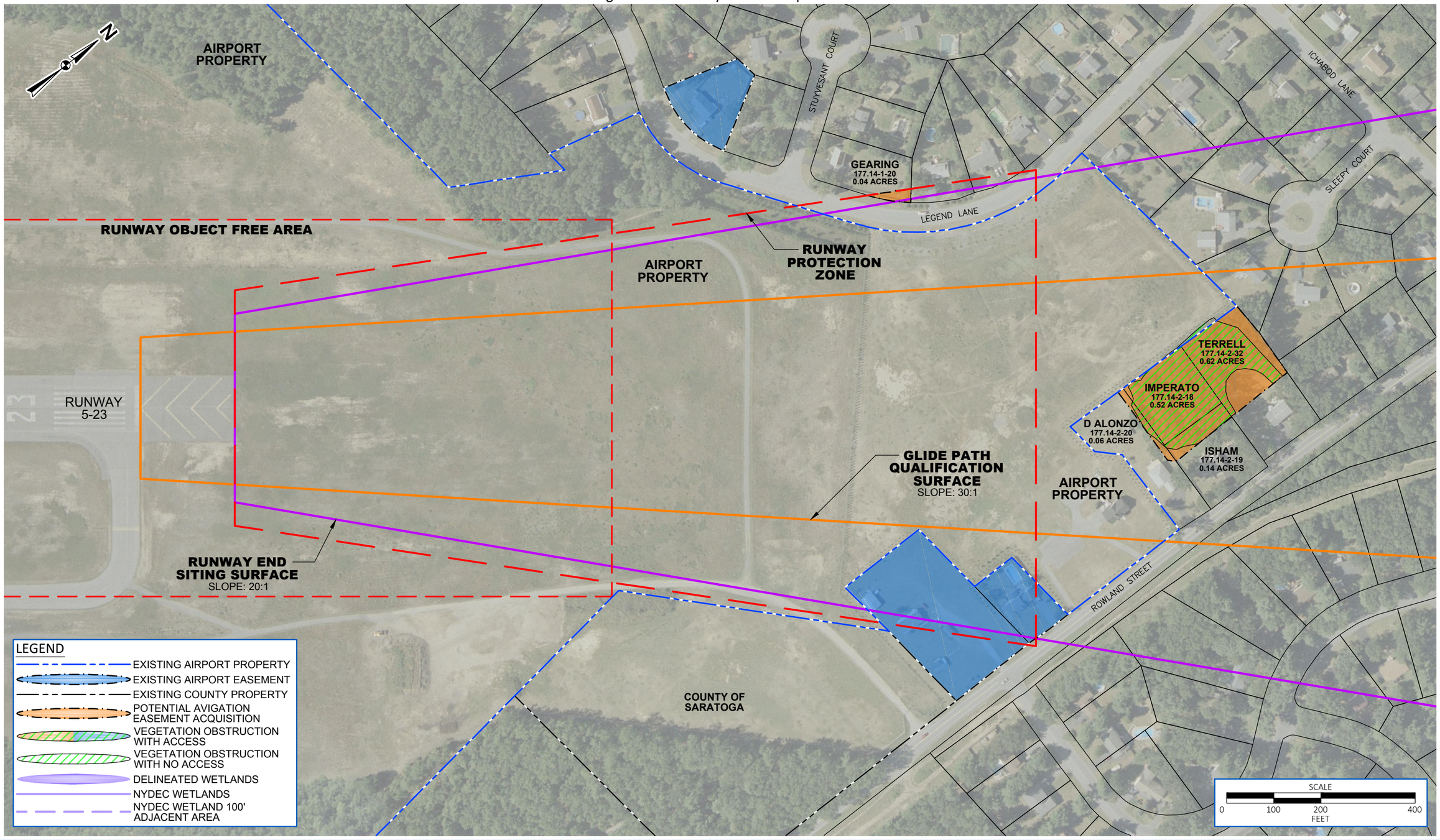

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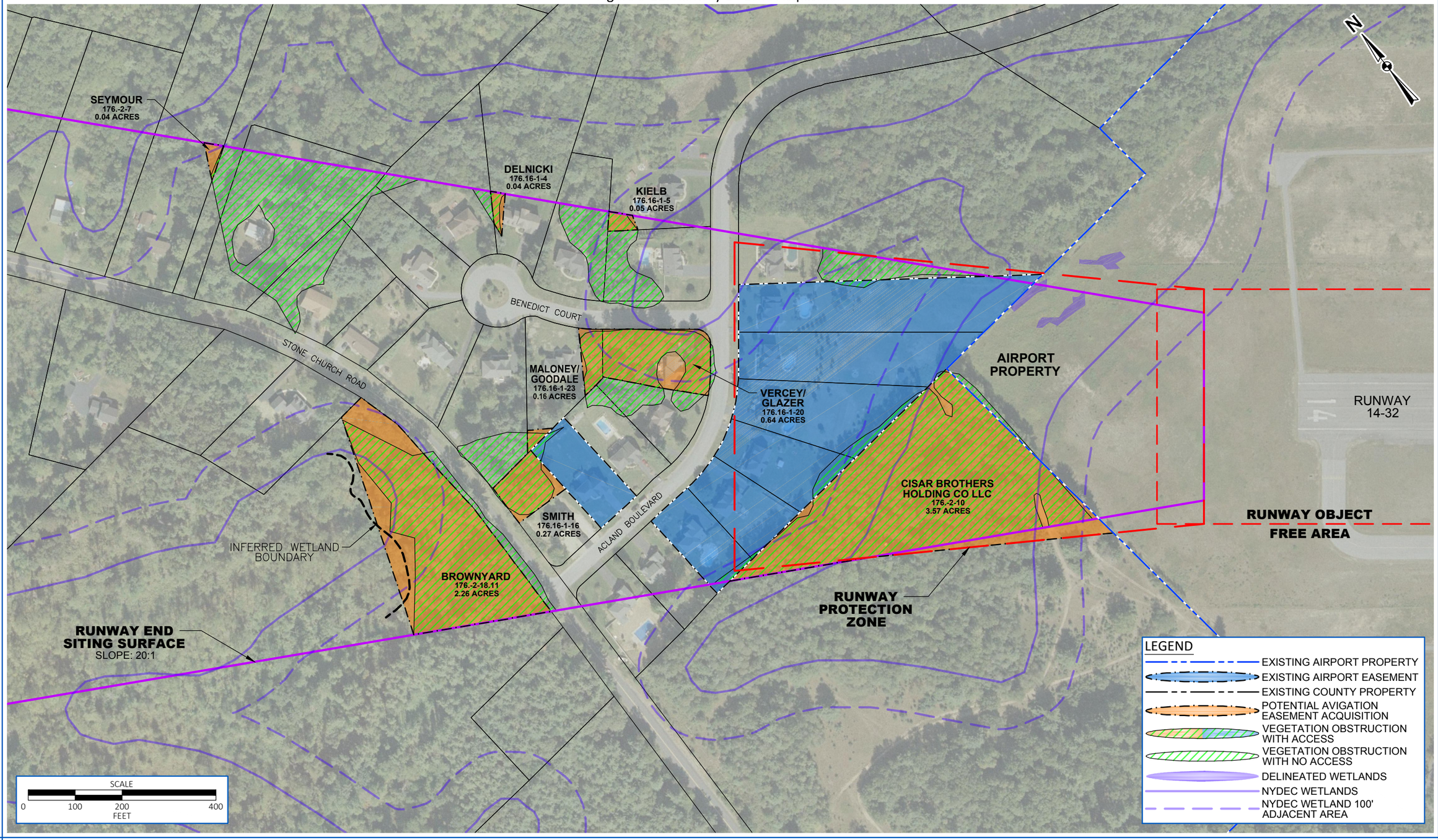
Figure 3-12: Runway 14 Land Acquisition



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The Airport owns a majority (97 percent) of the Runway 23 RPZ. The remaining 0.81 acre of the Runway 23 RPZ overlay private land and Legend Lane. The land not controlled by the Airport includes 0.18 acre of occupied residential land, of which 0.04 acre are proposed for acquisition. The remaining 0.14 acre of occupied residential lands are not proposed for acquisition due to landowners not participating in this EA. The remaining 0.14 acre consist of residential lawn area and are unlikely to be developed; therefore, this area is not critical to the safety of the Airport. Legend Lane bisects the corner of the RPZ, 0.63 acre, and is owned by the town of Milton. Relocation of Legend Lane out of the RPZ would require a long realignment and the relocation of residents and is therefore not being pursued.

The 30:1 GQS to Runway 23 is penetrated by trees that extend as much as six feet above the surface. Acquisition of 1.34 acres of land is proposed to remove tree obstructions and gain land use control within the 30:1 GQS and 20:1 Runway 23 Approach RESS. Approximately 1.02 acres of vegetation obstructions would be trimmed/removed to remove critical obstructions to the primary runway.

Runway 14

Proposed land acquisition for the Runway 14 end totaling 7.03 acres, would result in Airport ownership or easement control, of a majority of the RPZ and portions of the Runway 14 20:1 Approach RESS out to approximately 2,400 feet from the runway end. In addition, approximately 6.28 acres of vegetation obstruction removal is proposed. Out of the 6.28 acres, approximately 0.21-acre of obstruction removal is proposed on seven existing avigation easements. Proposed parcel acquisitions within the RPZ and RESS overlap in some instances, and therefore the overall acreage of acquisition, 7.03 acres on eight parcels, is most important. The areas to be acquired and where obstruction removal would take place are shown in **Figure 3-12.**

The County has existing avigation easements on seven parcels within the RPZ and approach surface areas totaling 5.9 acres. Under this alternative, through land acquisition, the Airport would have land use control or own 95 percent of the Runway 14 RPZ. Currently, the Airport does not have land use control and/or ownership of 4.25 acres (30 percent) of the RPZ. Land use within the RPZ not currently owned by the Airport and proposed for acquisition consists of 3.52 acres of vacant undeveloped forested land. The remainder, 0.73 acre, consists of occupied residential lands and Acland Boulevard right-of-way. The residential land, 0.67 acre, is not proposed for acquisition due to landowners not participating in this EA. The right-of-way of Acland Boulevard (0.06 acre) clips the outer edge of the RPZ and is owned by the town of Milton. The right-of-way area in the RPZ is small and inconsequential and is therefore not being pursued for acquisition.

The project proposes to acquire eight avigation easements and/or acquisition in fee within the Runway 14 20:1 Approach RESS, totaling approximately 6.83 acres. Land proposed for acquisition consists of 5.63 acres of vacant undeveloped forested land and 1.2 acres of occupied residential land. Approximately 6.28 acres of vegetation obstructions to the 20:1 Approach RESS would be removed. Proposed vegetation obstruction removal on the west side of Stone Church Road would potentially take place within the NYSDEC regulated 100-foot adjacent area (AA) of the wetland. If necessary, tree removal within the regulated wetland area would not include grubbing and would be conducted via hand held equipment (chainsaws) and/or low-ground-pressure (tracked) vehicles to minimize ground disturbance.

Runway 32

Runway 32 acquisition includes ten properties from five different owners. This includes total easement acquisition of 7.39 acres, 4.04 acres of off-airport vegetation obstruction removal, and 0.11 acre of on-airport vegetation obstruction removal. Proposed parcel acquisitions within the RPZ and RESS overlap in some instances, and therefore the overall acreage of acquisition, 7.39 acres, is most important. Proposed acquisition would result in Airport ownership or easement control, of a majority of the RPZ and portions of the Runway 32 20:1 Approach RESS. The areas to be acquired, and where obstruction removal would take place, are shown in **Figure 3-13**.

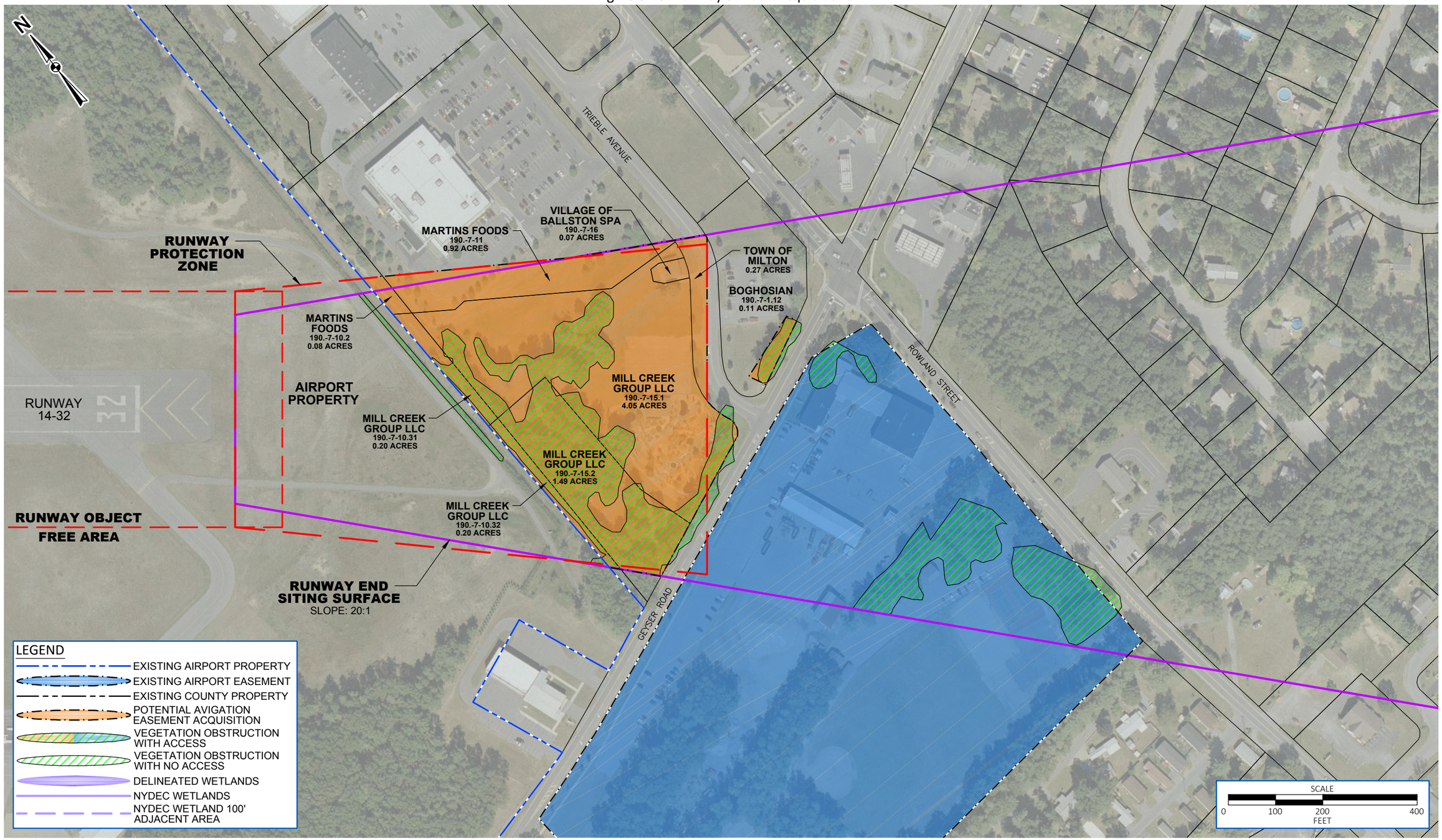
The Airport currently owns or has an avigation easement on approximately 48 percent (6.6 acres) of the Runway 32 RPZ. Proposed acquisition includes 4.09 acres of recreational/entertainment land, currently a mini golf business, 0.07 acre of property consisting of the Village of Ballston Spa water pump station, 2.62 acres of developed commercial property, and the remaining 0.25 acre of Trieble Avenue and 0.14-acre Geyser Road. Geyser Road is owned by the County, so acquisition is not required. Following the proposed land acquisition, the Airport would have ownership or easement control of 99 percent of the Runway 32 RPZ.

Currently there are approximately 4.15 acres of obstructions within the 20:1 Runway 32 Approach RESS on five proposed easement properties, 1 existing easement and on-airport property. Vegetation obstructions on-airport property total 0.11 acre and 1.41 acres on an existing avigation easement on property owned by the town of Milton. The remainder of tree obstructions (2.63 acres) occurs on developed commercial and recreation/entertainment property. Within the 20:1 Approach RESS, 7.24 acres of avigation easements are proposed to be acquired and trees trimmed and/or removed to mitigate surface obstructions.

3.6.3. Acquisition and/or Easement and Obstruction Removal Alternatives Summary

Overall, the acquisitions would provide for land use control and height control of objects in the Runways 5, 14, 23, and 32 RPZs; 20:1 Approach RESSs; and the Runway 23 GQS. The FAA *Interim Guidance on Land Uses Within a Runway Protection Zone* dated September 27, 2012, states that if the Airport cannot fully control land within the RPZ, it should take all possible measures to protect against incompatible land uses. There are no feasible alternatives to the action alternative. Displaced runway thresholds or any other reduction in the utility of the runways would unnecessarily hamper Airport operations and contradict the MPU documented need for acquisitions and obstruction removal. Additionally, a threshold displacement of the primary runway, Runway 5-23, would reduce the length of the runway significantly and restrict aircraft usage.

Figure 3-13: Runway 32 Land Acquisition



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The proposed acquisitions have been included in this EA based on landowners' willingness to discuss acquisition and obstruction removal options in the future. Removal of the obstructions would greatly improve safety to Airport users. As done in the past, evergreen tree screenings would be planted between the airfield and residences to mitigate potential effects from tree removal. Total land and/or easement acquisition for all runway ends is approximately 23.58 acres on 28 parcels and total obstruction removal is approximately 15.44 acres off-airport on 22 parcels, 13 existing avigation easements, and 0.11 acre on-airport, totaling 15.55 and shown in **Table 3-6**.

Table 3-6: Summary of Proposed Acquisition & Obstruction Removal

Runway End	Land/Easement Acquisition	Vegetation Obstruction Removal
5	7.78 Acres	4.10 Acres
23	1.38 Acres	1.02 Acres
14	7.03 Acres	6.28 Acres
32	7.39 Acres	4.15 Acres
Total	23.58 Acres	15.55 Acres

Source: McFarland Johnson analysis.

The Acquisition Alternative 2 (Action Alternative) was evaluated as follows:

- **Fulfills Purpose and Need:** Acquisition Alternative 2 provides all safety areas on Airport property and reduces existing obstructions to the 20:1 Approach RESS and GQS.

- **Avoids Adverse Community Impact:** This alternative includes land and/or easement acquisition of areas around the Airport. Proposed acquisitions have been included in this EA under the consent of the landowners.
- **Avoids Environmental Impact:** If necessary, a NYSDEC Article 24 permit for tree clearing within the wetland 100-foot AA located off of the Runway 32 end would be acquired. Obstructions on the Runway 5 end are in close proximity to a stream and bordering wetland. Overall, obstruction removal can occur during winter months when the ground is frozen to minimize temporary wetland disturbance in areas where wetlands are present. As stated previously, the NLEB may be present in the vicinity of the Airport, and therefore, measures would be taken to avoid potential impacts as a result of the removal of tree obstructions. Tree clearing would be conducted between October 1 and March 31 to prevent any potential direct impacts to the NLEB. See Chapter 5 for a detailed discussion of wetland impacts, permitting, and habitat impact avoidance measures.

- **Provides Operational Efficiency and Flexibility:** The obstruction removal and acquisition of safety areas allows the Airport to improve or maintain approach procedures and therefore increases operational flexibility.

- **Meets FAA Design Standards:** This alternative improves the Airport's situation to comply with design standards through the land/easement acquisition of safety areas and land below the 20:1 Approach RESS, 30:1 GQS, and removal of obstructions.

3.6.4. Acquisition Alternatives Summary

The descriptions of the Acquisition Alternatives have included an evaluation based on the previously noted five criteria, results of which are summarized in **Table 3-7**.

Table 3-7: Summary of Acquisition Alternatives

Alternative	Acquisition Alt 1 (No Build)	Acquisition Alt 2 (Acquire Land/Easement)
Fulfills Purpose and Need	No	Yes
Avoids Adverse Community Impacts	No Change	Requires acquisition of land and/or easements from property owners
Avoids Environmental Impacts	None	Potential wetland permitting for tree removal in 100' AA and avoidance/mitigation measures for potential NLEB habitat impacts.
Provides Operational Efficiency & Flexibility	None	Improved
Meets FAA Design Standards	No	Yes

Source: McFarland Johnson analysis.

Acquisition Alternative 2 is the preferred alternative as it fulfills the purpose and need, meets FAA design standards, and provides improved operational flexibility.

3.7. ALTERNATIVES SUMMARY AND CONCLUSION

Based upon the alternatives analysis, purpose and need, and recommendations of the MPU, the preferred alternative would consist of the following:

- Partial-Parallel Taxiway A Alternative 3
- Taxiway C Improvements Alternative 2 (Build Alternative)
- Glider Operations Improvements Alternative 2 (Build Alternative)
- WHMP Mowing Plan Improvements Alternative 2(Action Alternative)
- WHMP Perimeter Fence Improvements Alternative 2(Action Alternative)
- Acquisition of Land and/or Easements Land Use and Vegetation Obstruction Removal Alternative 2 (Action Alternative)

The taxiway improvements, glider operations improvements, and acquisition of land and/or easements and obstruction removal projects evaluated in this EA were developed during the MPU process. The preferred alternatives meet the purpose and needs of the Proposed Action to provide safe operating conditions to allow for enhanced safety, comply with federal regulations and FAA

design standards, separate powered and non-powered aircraft, provide safety of Airport users in relation to wildlife hazards, and ensure appropriate land use control measures.

The Taxiway A Alternative 3 and Glider Operations Improvements Alternative 2 provide the most cost-effective solution to enhancing safety, complying with federal regulations and FAA design standards, and separating powered and non-powered aircraft, especially during the Track Season. Alternative 2 of the WHMP Mowing Plan Improvements and Perimeter Fence Improvements alternatives provide safety of Airport users in relation to wildlife hazards. Acquisition of Land and/or Easements and Obstruction Removal Alternative 2 ensures appropriate land use control measures and safety through obstruction removal and easement acquisition of critical off-airport areas.

Habitat mitigation is proposed for the Preferred Alternatives permanent impacts to the protected butterfly habitat. Proposed habitat mitigation would take place on off-airport properties owned by Saratoga County in the towns of Wilton and Northumberland. As part of the EA process, the County considered habitat mitigation, consisting of silvicultural thinning of forested areas, on Airport property. However, based on consultation with the NYSDEC and USFWS, off-airport mitigation is being proposed to create a more suitable and protected habitat for the butterfly species. Further details regarding the off-airport mitigation sites are described in Chapter 4, Affected Environment, and details regarding the wildlife and habitat impacts and the proposed off-airport mitigation are described in Chapter 5, Environmental Consequences, and the BA (see Appendix E).

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4. AFFECTED ENVIRONMENT

This chapter describes the environmental and social settings of the Saratoga County Airport (Airport), proposed off-airport habitat mitigation sites, and the surrounding areas. Information pertaining to the affected environment was obtained through on-site investigations, a review of published information, agency correspondence, and discussions with Airport personnel and public officials. Unless the results are similar, the sections below have been further divided into "Airport" for discussion of Airport improvement projects and surrounding areas and "Off-Airport Mitigation" for the proposed off-airport mitigation sites and surrounding areas. As discussed in Section 3.7, off-airport habitat mitigation is proposed for the Preferred Alternatives impacts to protected Karner blue butterfly habitat on Airport property. The location of the off-airport habitat mitigation sites is shown on Figure 4-1. The information presented herein serves as a basis for the assessment of environmental, social, and economic consequences (refer to Chapter 5) associated with the Proposed Action.

4.1. BIOTIC RESOURCES

Biotic resources refer to the various types of flora (plants) and fauna (fish, birds, reptiles, amphibians, mammals, etc.), including state and federally listed threatened and endangered species, in a particular area. It also encompasses the habitats supporting the various flora and fauna including rivers, lakes, wetlands, forests, and other ecological communities. Airport projects can affect these ecological communities and thereby affect vegetation and wildlife populations.

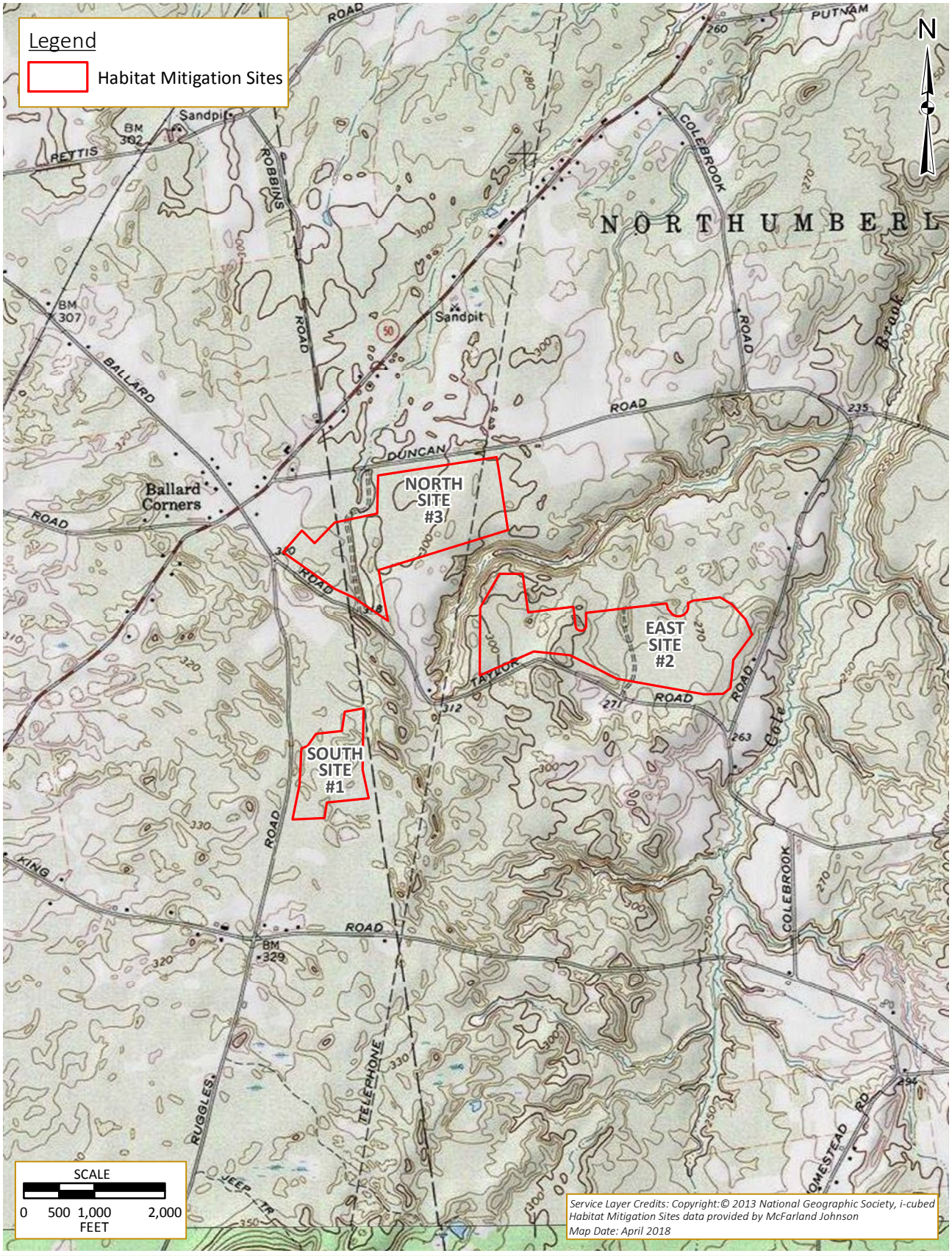
4.1.1. Ecological Communities

Airport

Most of the Airport and adjacent areas have been significantly disturbed by past Airport construction and the surrounding residential and commercial development. The majority of the habitat at the Airport consists of maintained grassland, forested upland, and small isolated wetlands, interspersed with paved airfield surfaces. The airport operations area (AOA) consists primarily of grasslands dominated by grasses and forbs that are mowed according to a strict mowing plan, which is discussed in more detail below.

McFarland Johnson, Inc. (MJ) conducted a yearlong Wildlife Hazard Assessment (WHA) at the Airport from November 2013 to October 2014 in accordance with 14 Code of Federal Regulations (CFR) 139.337(b) and (c), and based on the Transportation Research Board Airport Cooperative Research Program Report 32: *Guidebook for Addressing Aircraft/ Wildlife Hazards at General Aviation Airports*. The WHA was recommended by the Federal Aviation Administration (FAA) in response to ongoing concerns regarding airfield management restrictions due to the presence of state and federally listed threatened and endangered species at the Airport. The WHA inventoried the ecological setting at and in the vicinity of the Airport, wildlife utilizing the Airport, and the wildlife strike history at the Airport. The results of the 2013-2014 WHA were summarized in a

Figure 4-1: Off-Airport Habitat Mitigation - Location Map



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report and submitted to the FAA, United States Fish and Wildlife Service (USFWS), and New York State Department of Environmental Conservation (NYSDEC) for review.

Based on the findings of the WHA, MJ prepared a Wildlife Hazard Management Plan (WHMP) to address wildlife hazard management at the Airport. The WHMP was reviewed and approved by the FAA and Saratoga County (the County). The FAA acceptance letter is included in **Appendix B**. The USFWS and NYSDEC have been given the opportunity to review the WHMP and agency comments are being considered and/or incorporated into this Environmental Assessment (EA) and subsequently a Biological Assessment (BA) (see **Appendix D**).

As stated in Chapter 2, the Airport has been operating under the conditions of a non-executed, but generally complied with, Draft Management Agreement (DMA) with the NYSDEC (see **Appendix A**). The DMA restricts mowing and other operational activities at the Airport to protect habitat for the state and federally-listed endangered Karner blue butterfly (KBB) (*Lycaeides melissa samuelis)*. The DMA also includes protection for the state threatened frosted elfin butterfly *(Callophrys irus),* and state species of special concern mottled duskywing (*Erynnis martialis*). The DMA separates the Airport property into two areas: "Known Habitat Area" and "Exempt Area" (see **Figure 2-4**). Based on language in the DMA and conversations with the NYSDEC, the Known Habitat Area has been extended out to the airport perimeter fence. The Known Habitat Area is subject to the management restrictions outlined in the DMA, while the Exempt Area is not. More frequent mowing and certain other necessary activities are allowed to take place within the Exempt Areas. The most significant land use restrictions imposed on the Known Habitat Area include no motor vehicle traffic off paved or gravel surfaces and a seasonal mowing restriction from January 1 to October 15. In addition, only the areas within the Known Habitat Area immediately surrounding the taxiway lighting and signage are allowed to be maintained on a regular basis.

Most of the project areas consist of seasonally maintained grassland. According to the WHA, these grasslands are dominated by little bluestem (*Schizachyrium scoparium*), a warm season grass. The grasslands host a variety of herbaceous vegetation that provide food and shelter for a variety of insects, reptiles, amphibians, birds, and small mammals. Mixed forests are located on the north, east, south, and west portions of the Airport property, with the exception of the runway approach areas. The dominant trees in the mixed forests are pitch pine (*Pinus rigida*), white pine (*P. strobus*), red oak (*Quercus rubra*), and black oak (*Q. velutina*). The mixed forest and understory provide habitat for a variety of wildlife species including, but not limited to, white- tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), hawks, and wild turkeys (*Meleagris gallopavo*). Section 4.1.1.1 below provides information on state and federally listed threatened and endangered species within and in the vicinity of the Airport.

Land surrounding the Airport and off-airport obstruction removal areas consists of mixed oak-pine forests interspersed with residential and commercial development.

Off-Airport Mitigation

The three off-airport habitat mitigation sites consist of oak-pine forested lands. According the Ecological Communities of New York State, dated March 2014, the sites are classified as Appalachian oak-pine forest. All three sites have been utilized for silvicultural practices, including

timber harvesting, by Saratoga County in the past, most recently in 2016 on the East Site. Timber harvesting haul roads, landings, and skid trails are located throughout the sites. The off-airport sites are designated as South Site – 1, East Site – 2, and North Site – 1, as shown on **Figure 4-1.**

The canopy is dominated by a mixture of oaks and pines, including black oak, red oak, white oak (*Q. alba*), and scarlet oak (*Q. coccinea*). The pines consist of mostly white pine, with some pitch pine and red pine (*P. resinosa*). Common nondominant tree species consists of red maple (Acer rubrum), eastern hemlock (*Tsuga canadensis*), American beech (*Fagus grandifolia*), quaking aspen (*Populus tremuloides*), and black cherry (*Prunus serotina*). The shrub layer includes saplings of canopy trees and witch hazel (*Hamamelis virginiana*) and serviceberry (*Amelanchier arborea*). The groundlayer is relatively sparse except in open areas, such as logging roads, and is comprised of Canada mayflower (*Maianthemum canadense*), star flower (*Trientalis borealis*), partridge berry (*Mitchella repens*), bracken fern (*Pteridium aquilinum var. latiusculum*), and woodferns (*Dryopteris intermedia, D. marginalis*).

The forested areas host a variety of vegetation that provide food and shelter for a variety of insects, reptiles, amphibians, birds, and mammals.

Areas surrounding the mitigation sites consist of similar ecological communities, including other County managed forest lands. The mitigation sites are located within the Wilton Wildlife Preserve and Park (WWPP), which consists of lands protected and managed for the conservation of endangered and threatened species, including KBB. In addition, property located to the west of the South Site has recently undergone habitat creation efforts for the KBB and other butterfly species. NYSDEC oversaw the conversion of the site from an oak-pine forest to an oak-pine barren. The remainder of surrounding areas consist of a mix of residential and forested land, with a few agricultural fields to the north and east.

4.1.1.1 State and Federal Listed Threatened and Endangered Species

The Endangered Species Act (ESA) directs all federal agencies to work to conserve endangered and threatened species and to use their authorities to further the purposes of the ESA. Section 7 of the ESA, titled “Interagency Cooperation,” is the mechanism by which federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species. Endangered species are those which are in danger of extinction throughout their range or a significant portion of its range. Threatened species are those which are likely to become endangered within the foreseeable future throughout all or a significant portion of their range. Candidate species are species which the USFWS has sufficient information on the biological vulnerability and threats to support issuance of a proposal list, but issuance of a proposed rule is currently precluded by higher priority listing actions. Candidate species do not receive substantive or procedural protection under the ESA. However, USFWS does encourage federal agencies and other appropriate parties to consider these species in the planning process.

New York State authority over threatened and endangered species is promulgated under regulation 6 of New York Codes, Rules and Regulations (NYCRR) Part 182, which prohibits the take or engagement in any activity that is likely to result in a take of any state-listed threatened or endangered species. In accordance with Part 182, 'Take' or 'Taking' means the pursuing, shooting, hunting, killing, capturing, trapping, snaring, and netting of any species listed as endangered or

threatened, and all lesser acts such as disturbing, harrying, or worrying. Species listed as endangered in New York are native species in imminent danger of extirpation or extinction in New York, or are species listed as endangered by the U.S. Department of the Interior. Species listed as threatened in New York are native species that are likely to become an endangered species within the foreseeable future in New York. Species listed as species of special concern are native species that are at risk of becoming threatened in New York. Fauna classified as species of special concern do not qualify as either endangered or threatened but have been determined by the NYSDEC to require some measure of protection to ensure that the species does not become threatened in the future. Species of special concern are considered "protected wildlife" under Article 11 of the Environmental Conservation Law (ECL).

Airport

A review of the USFWS Information, Planning and Consultation (IPaC) system was conducted on April 20, 2018. The USFWS database indicated the state and federally-listed endangered KBB is known to exist at the Airport. The range of the federally threatened northern long-eared bat (*Myotis septentrionalis*) (NLEB) also covers the vicinity of the Airport. The Official Species List from the USFWS is included in Appendix B.

A response from the NYSDEC New York Natural Heritage Program (NYNHP), dated September 9, 2016, indicated that the KBB, state threatened frosted elfin butterfly, and state species of special concern mottled duskywing have been documented in the project area. In addition, the state threatened mock-pennyroyal (*Hedeoma hispida*) has been documented in the project area. A copy of this correspondence has been included in Appendix B. Table 4-1 lists the species on or within the vicinity of Airport property.

Both the USFWS and the NYSDEC have been heavily involved with previous projects at the Airport regarding impacts to the KBB and its habitat. In 2009, USFWS issued a Biological Opinion (BO) for activities at the Airport affecting the KBB and their habitat. The BO was amended in 2011 to address the rehabilitation of the taxiway lighting system, installation of Precision Approach Path Indicator (PAPI) lights, and reconstruction of the based aircraft apron. Most recently, a BO was issued for the Proposed Action in this EA. The 2009, 2011, and 2018 Bos are including in Appendix A. Additionally, an NYSDEC Incidental Take Permit (ITP) for the latter project was issued on September 30, 2013. The ITP expired on September 30, 2016 and subsequently, a request for a permit extension was submitted to complete the based aircraft apron reconstruction project. An approximate 1,000 square foot area of habitat mitigation was constructed on Airport property to compensate for impacts to the KBB resulting from the project.

Consultations with the USFWS and the NYSDEC were initiated at the beginning of the EA process and are ongoing to discuss the Proposed Action and potential effects on federal or state listed threatened or endangered flora or fauna in the vicinity of the Airport.

All of the aforementioned butterfly species primarily rely upon the maintained grasslands at the Airport. The grasslands also provide an abundance of wild blue lupine (*Lupinus perennis*). Wild blue lupine serves as the sole larval stage food source of the KBB and the frosted elfin. The mottled duskywing's preferred food plant is New Jersey tea, a small deciduous shrub that is also present throughout the airfield.

The NLEB was listed as threatened under the ESA in May 2015. This species is found across much of the eastern and north central U.S. The NLEB can be found across much of the eastern and north central United States and into Canada. The primary threat to the northern long-eared bat is white-nose syndrome, which was previously mentioned as detrimental to the Indiana bat as well. Populations of the northern long-eared bat in the Northeast U.S. have declined by 99 percent since symptoms of white-nose syndrome were first observed in 2006.

A final 4(d) rule, published in the *Federal Register* on January 14, 2016, describes measures necessary to provide for the conservation of the NLEB. Tree removal within 150 feet of a known occupied maternity roost tree from June 1 through July 31 or within 0.25 mile of a hibernaculum at any time is considered an "incidental take" and is prohibited. The response from USFWS is to have a time of year restriction, October 1 – March 31, for tree removal to avoid potential impacts to the northern long-eared bat.

Off-Airport Mitigation

A review of the IPaC system was conducted on April 13, 2018. The USFWS database indicated the state and federally-listed endangered KBB may exist within the project area. The range of the federally threatened NLEB also covers the vicinity of the mitigation sites. The Official Species List from the USFWS is included in Appendix B.

A response from the NYSDEC NYNHP, dated May 3, 2018, indicated that the KBB, state threatened frosted elfin butterfly, and state threatened blanding's turtle (*Emydoidea blandingii*) have been documented on or within the vicinity of the project area. In addition, a significant natural community, Appalachian oak-pine forest, has been documented adjacent to the project area. The NYNHP states that the Appalachian oak-pine forest is in good condition and occurs in large patches in the landscape. A copy of this correspondence has been included in Appendix B. Table 4-1 lists the species on or within the vicinity of Airport and mitigation projects.

4.1.2. Biotic Resources Summary

The majority of the Airport Proposed Action project area consists of maintained airfield grasslands for on-airport projects and forested residential areas for proposed off-airport obstruction removal. The off-airport mitigation sites consist of managed forested uplands. Off-airport habitat mitigation sites consist of County managed forest land surrounded by a mix of residential and forested lands.

Both federal and state threatened and endangered species are located on or within the vicinity of the project areas. Table 4-1 lists the species, their federal and state status, and whether they are associated with the Airport of off-airport mitigation sites.

Table 4-1: Threatened and Endangered Species

Common Name	Scientific Name	Project Location	Federal/State Status
Fauna			
Karner blue butterfly	*Lycaeides melissa samuelis*	Airport & Mitigation Sites	Endangered/Endangered
Frosted elfin butterfly	*Callophrys irus*		Not Applicable/Threatened
Mottled duskywing	*Erynnis martialis*		Not Applicable/Special Concern
Northern long-eared bat	*Myotis septentrionalis*	Airport & Mitigation Sites	Threatened/Threatened
Blanding's turtle	*Emydoidea blandingii*	Mitigation Sites	Not Applicable/Threatened
Flora			
Mock-pennyroyal	*Hedeoma hispida*		Not Applicable/Threatened

Source: USFWS IPaC dated April 13 & 20, 2018 and NYNHP correspondence dated September 9, 2016 and May 3, 2018.

See Section 5.7 for further information regarding potential impacts to state and federally listed threatened and endangered species.

4.2. COASTAL ZONES AND BARRIERS

Coastal Barrier Resources Act (CBRA) protects and improves the nation's coastal barrier islands. The Airport and off-airport habitat mitigation sites are not located in the New York Coastal Barrier Area. CBRA regulations do not apply to the Proposed Action.

4.3. SECTION 4(F) RESOURCES

Airport

There are no wildlife or waterfowl refuges in the immediate vicinity of the Airport. However, there are numerous public recreation parks located in the vicinity of the Airport. In the immediate vicinity, the Burgess-Kimball Memorial Park, including Suzanne's Playground, is located south of the Airport across Geyser Road near the Milton Town Hall. In addition, there are various parks and areas for public recreation in the vicinity of the Airport.

The parks and their approximate location from the Airport are listed below:

- Woods Hollow Nature Preserve, 1.1 miles southeast
- Geyser Park, 1.5 miles northeast
- Morale Welfare and Recreation Ball Fields, 1.5 miles southwest
- Saratoga Spa State Park and Golf Course, 2.5 miles east
- Kayaderosseras Creek Nature Trail, 3 miles west

- Boice Family Park, 3.6 miles west

Off-Airport Mitigation

The three proposed off-airport mitigation sites are located within the NYSDEC Saratoga Sandplains Wildlife Management Area, which includes the USFWS KBB recovery area, and the WWPP. The WWPP and surrounding area is home to KBB and frosted elfin populations. The WWPP is comprised of several parcels owned by the town of Wilton, county of Saratoga, state of New York, and The Nature Conservancy. The WWPP has numerous recreational trails. In addition, County Forest property is located 1.5 miles north of the North Site, on Pettis Road in the town of Northumberland, New York.

Parks and other areas for recreational activity within an approximate one-mile radius of the mitigation areas include:

- Town of Northumberland playground, Terrel Way, 0.22 miles south
- State of NYSDEC State Forest, Colebrook Road, 0.82 miles north
- Brampton Woods Homeowners Association park, Brampton Lane, 1-mile northeast

4.4. FARMLANDS

Airport

There are no active farmlands and/or agricultural fields surrounding the Airport. However, a majority of soils within the Airport project areas, including the proposed easement acquisition properties, are classified by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as mostly Farmland of Statewide Importance with a small portion as Prime Farmland.

The County regulates land use management practices within two agricultural districts which were set up to protect farmland from potentially conflicting projects, land zoning that is restrictive against farming, and harmful tax assessments. The agricultural districts are not located within the immediate vicinity of the Airport (see **Figure 4-2**).

Off-Airport Mitigation

The mapped soil units within the off-airport mitigation sites are classified by the USDA NRCS as Prime Farmland or Farmland of Statewide Importance.

Agricultural District 1 of Saratoga County is located within a half mile of the off-airport mitigation sites. Towns located in District 1 include, Northumberland, Wilton, Moreau, Stillwater, and Saratoga (see **Figure 4-3**).

The agricultural districts are not located within the immediate vicinity of the Airport and therefore are not discussed further.

Figure 4-2: Airport - Agricultural District

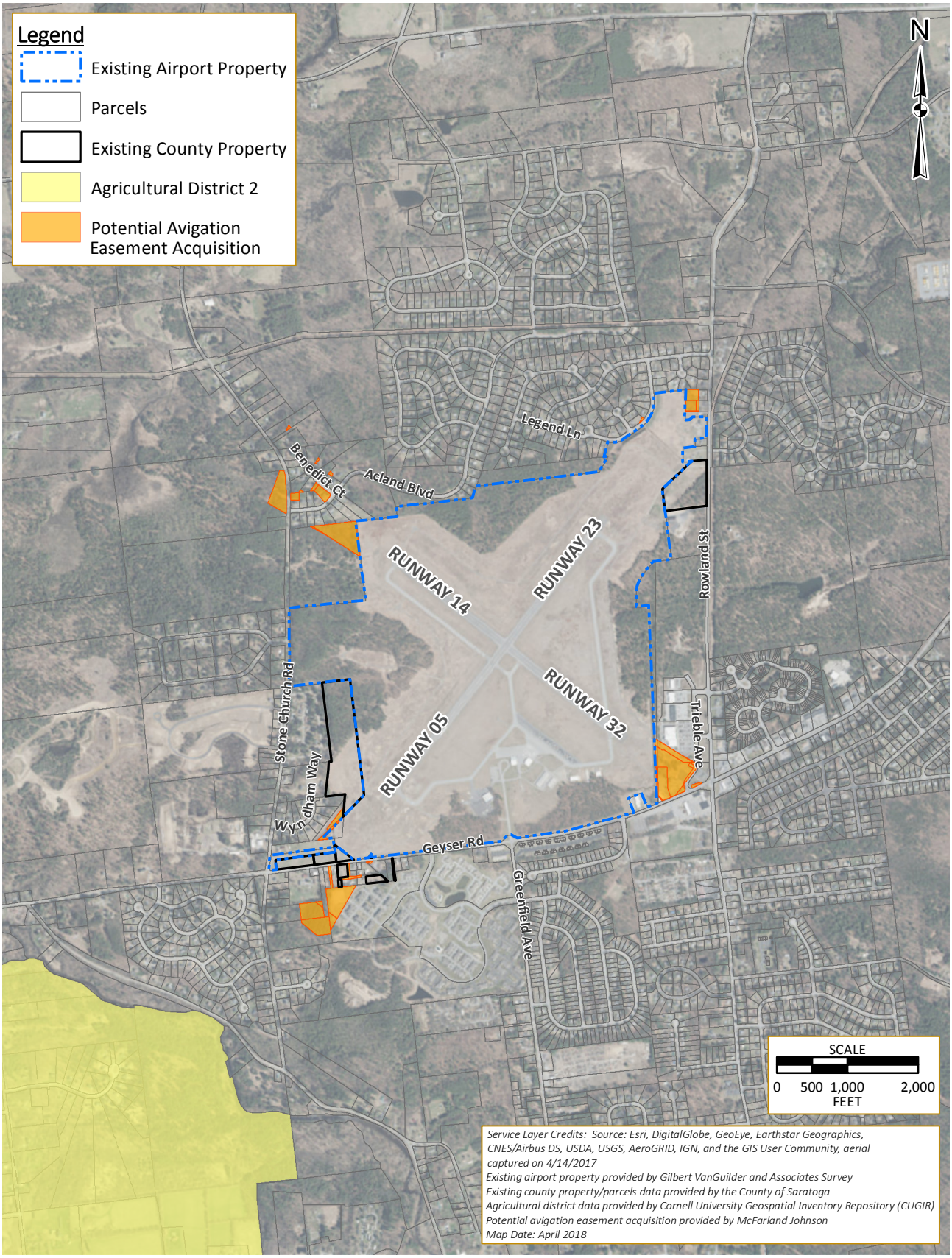

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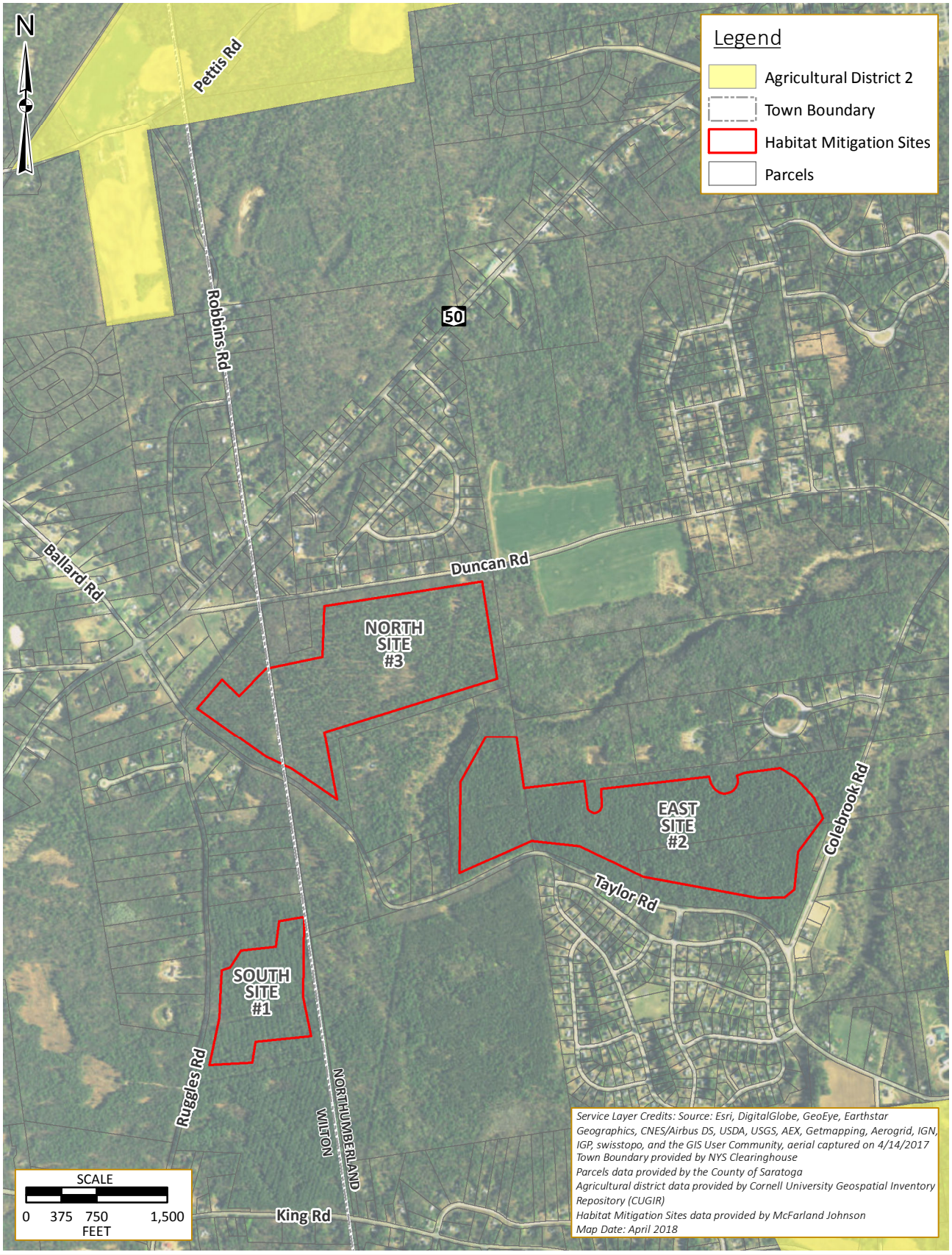
Figure 4-3: Off-Airport Habitat Mitigation - Agricultural District



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4.5. HISTORIC AND ARCHEOLOGICAL RESOURCES

The National Historic Preservation Act (NHPA) Section 106 requires that federal agencies such as the FAA consider the effects of their actions on historic properties via consultation with the State Historic Preservation Office (SHPO). According to 36 CFR Part 800, an historic property is "any prehistoric or historic district, site, building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places (NRHP)." The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) is responsible for maintaining historical, archaeological, and cultural resources sites throughout the state.

Airport

A project review was conducted through the SHPO Cultural Resources Information System (CRIS). According to CRIS, there are no historic or cultural resources or archaeological sensitive areas on or in the immediate vicinity of the Airport. Consultation with SHPO was initiated to determine the impacts on historical or cultural resources as a result of the Proposed Action on Airport property and off-airport property associated with the proposed land and/or easement acquisitions. A response from SHPO, dated November 21, 2016, states they have reviewed the project and determined historic properties would not be affected by the Proposed Action (see **Appendix B**).

Off-Airport Mitigation

Consultation with OPRHP was initiated to determine the impacts on historical or cultural resources as a result of the proposed off-airport habitat mitigation. According to CRIS, there are no historic or cultural resources or archaeological sensitive areas on or in the immediate vicinity of the off-airport mitigation sites. Consultation with OPRHP was initiated to confirm the mitigation project would not impact potential historical or cultural resources. A response from OPRHP, dated May 7, 2018, states they have reviewed the project and determined that no historic properties will be affected by the mitigation project. The OPRHP letter is provided in **Appendix B**).

4.6. LAND USE

Airport

The Airport is a public general aviation facility located five miles southwest of downtown Saratoga Springs, in the town of Milton in Saratoga County, New York. The Airport is 169 miles south of Montreal, Canada; 28 miles north of Albany, New York; and 30 miles west of the Vermont border. The Airport can be accessed via Interstate 87, NY State Route 50, and County Route 43 from the north and south and from NY State Route 67 from the west. **Figure 2-1, Location Map** and **Figure 2-2, Aerial Map** show the Airport and its vicinity.

The 559 acres of Airport property owned and operated by Saratoga County are classified as public services land use. The County owns an additional 30 acres surrounding the Airport but not included as Airport property on the Airport Layout Plan (ALP). The town of Milton is made up of mostly suburban residential properties. Most industrial and commercial uses in the area are located along County Route 43 (Geyser Road), becoming denser to the east near the city of Saratoga Springs. Land uses immediately adjacent to the Airport property include residential, public service, and

vacant land to the north and east along Rowland Street, commercial, community service, recreation/entertainment and residential to the south along Geyser Road and Rowland Street near the intersection of Geyser Road, and vacant and residential to the west along Stone Church Road, as shown on Figure 4-4. Industrial and commercial uses are discussed further in Section 4.6.

As of the date of the Environmental Assessment (EA), a town salt shed was constructed between the Airport property and Rowland Street and a few single-family homes were constructed off Stone Church Road. In addition, the layout and infrastructure for a residential subdivision on the west side of Stone Church Road was recently constructed. There were no other known planned developments in the vicinity of the Airport according to officials with the town of Milton. Development within the Town is guided by the existing Land Use Plan, the Town Zoning Codes, and the Town Subdivision Codes. More specifically, land use surrounding the Airport is regulated by the town of Milton's Airport District and Runway Protection Zone Overlay District. The Saratoga County Planning Board also reviews projects to assist in the administration of the Town's land use ordinances. Figure 4-5 depicts the zoning in the vicinity of the Airport.

Off-Airport Mitigation

The proposed off-airport mitigation sites are comprised of multiple parcels owned by Saratoga County, and total approximately 351 acres located in the towns of Wilton and Northumberland. The mitigation sites are located approximately 11 miles (as the crow flies) northeast of the Airport. The North Site is bordered by Duncan Road and Taylor Road, the East Site by Taylor Road and Colebrook Road, and the South Site by Ruggles Road.

The land comprising the sites is categorized as County Forest and has been utilized for silviculture purposes, such as timber harvesting, and is undeveloped with the exception of logging roads. The sites are part of the approximate 2,400-acre WWPP, which consists of land owned by the town of Wilton, Saratoga County, state of New York, and The Nature Conservancy. The WWPP uses include conservation, education, and recreation, including trails throughout the properties.

The Town of Wilton published the *Open Space, Recreation and Pathways Plan,* prepared by The Open Space Committee and the LA group, in 2007. The goal of the plan is to "set forth a compelling strategy for preserving these elements for the enjoyment of future generations" and specifies for open spaces within the WWPP Study Area that "a parcel contribute to a public purpose, have habitat preservation value, and/or provide a vital trail link to a local, regional or statewide trail system" The proposed habitat mitigation aligns with the goals outlined by the town of Wilton's open space plan.

The surrounding area is primarily comprised of residential properties, with agricultural and undeveloped land as well.

The off-airport mitigation parcels are zoned in the towns of Wilton and Northumberland as Saratoga County lands. Zoning around the off-site mitigation areas consists primarily of residential zones and Saratoga County Forest. Figure 4-6 depicts land uses and Figure 4-7 depicts zoning on and in the vicinity of the off-airport habitat mitigation sites.

Figure 4-4: Airport - Land Use

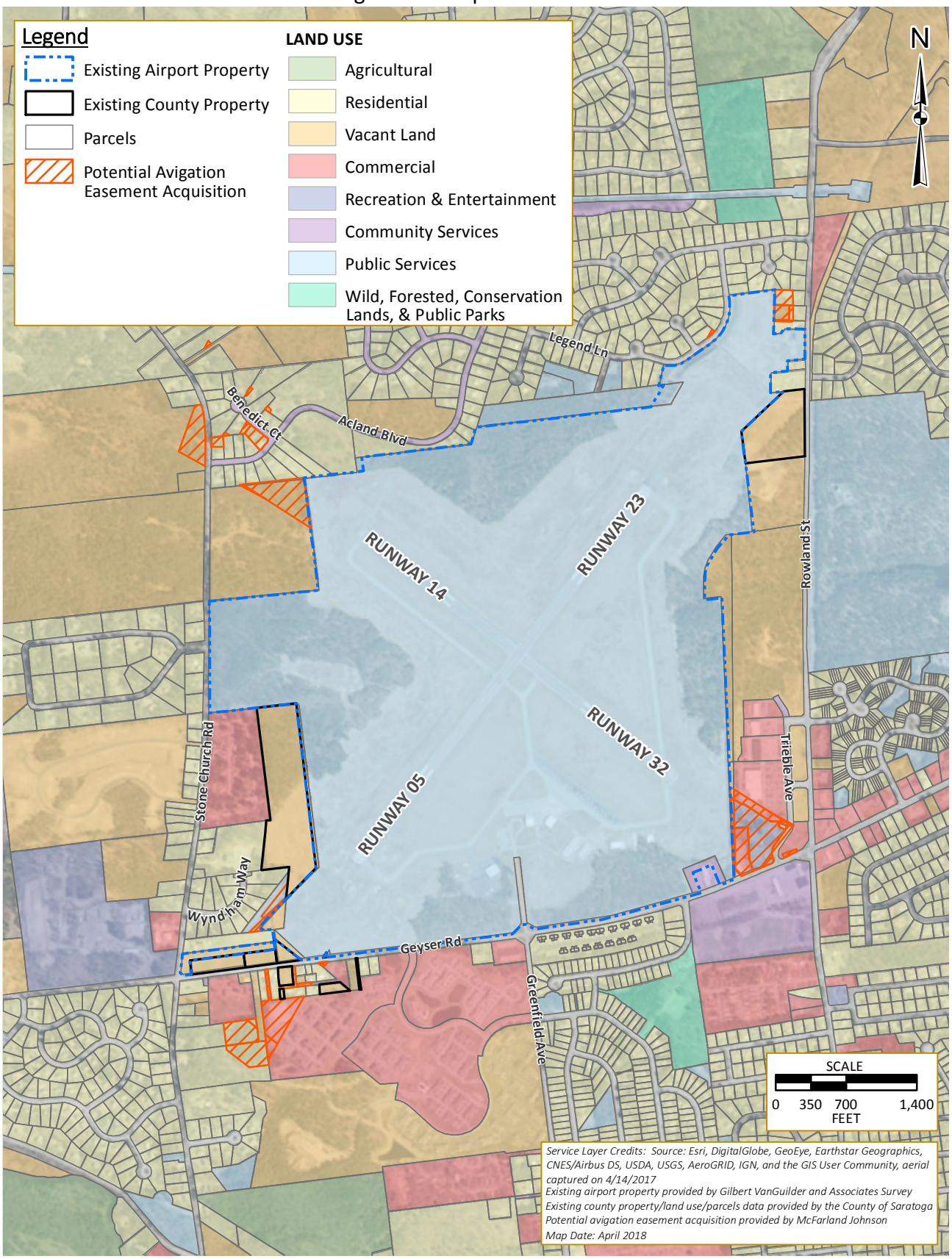

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Figure 4-5: Airport - Zoning

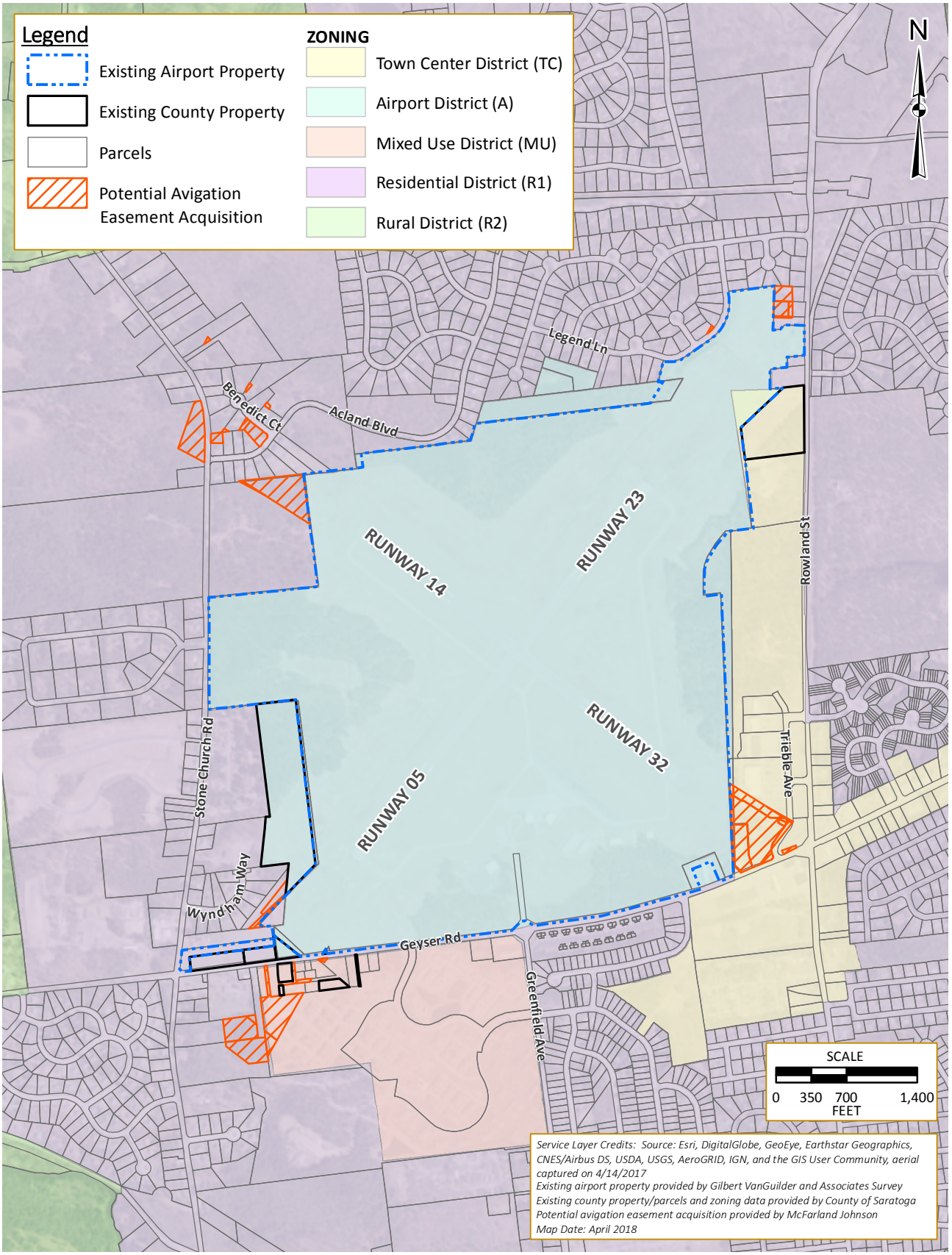

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Figure 4-6: Off-Airport Habitat Mitigation - Land Use

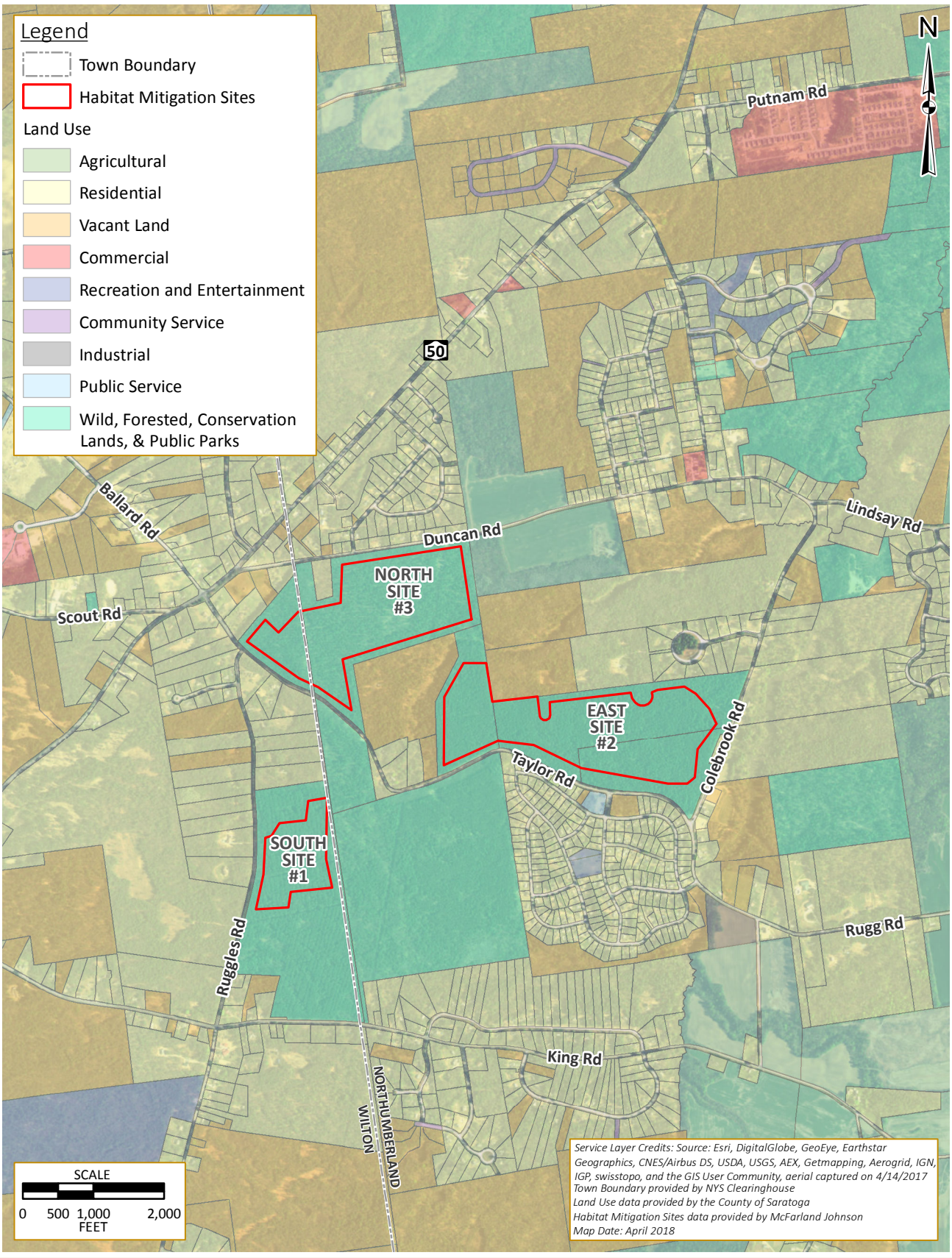

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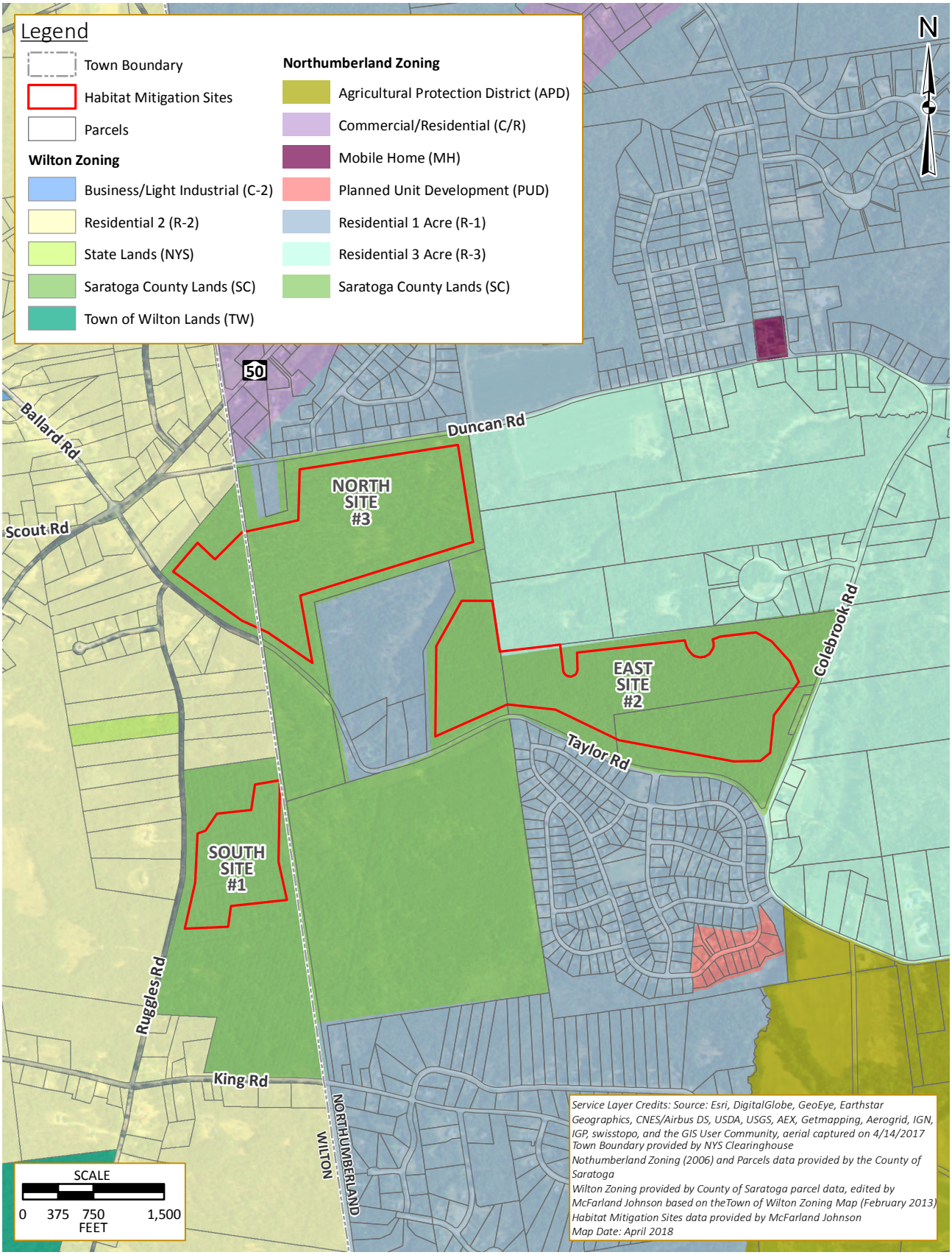
Figure 4-7: Off-Airport Habitat Mitigation - Zoning



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4.6.1. Industrial and Commercial Activities Characteristics

Airport

Within the town of Milton in the area of the Airport, there are many small commercial uses and two industrial use parcels. Immediately east of Airport property on Trieble Avenue is a supermarket, restaurant, hardware store, discount tire store, and other commercial businesses. Immediately south of the Airport along Geyser Road is a commercial office building and Mill Creek Miniature Golf. Southeast of Airport property, along Geyser Road, there are several small businesses including two gas stations, several fast food restaurants, a liquor store, a salon, healthcare offices, banks, and other small commercial businesses. To the west along Middle Line Road is a sand and gravel use property owned by Stone Church Road, LLC. Approximately 1.3 miles northeast, between Adams Road and the railroad, there are several industrial activities, including INX International Ink, Logistics One, and SCA Tissue North America, and a printing and manufacturing operation owned by Quad Graphics, Inc. Palette Stone Corporation, a concrete plant and quarry, is located further north along Washington Street (NY State Route 29).

Additional industrial and commercial properties within one mile of Airport property consist of, but are not limited, to the following:

- Dunkin' Donuts
- TCT Federal Credit Union
- Adirondack Veterinary Clinic
- Rowland Street Garage
- Ballston Spa National Bank
- Stylish Creations, a salon
- Upstate Transit
- Geyser Vacuum Center
- Studio 404 Hair Salon
- Destination Bride
- Premier Automobile Services
- Sherman Tile Co., Inc

Off-Airport Mitigation

There are no commercial or industrial uses within the immediate vicinity of the mitigation sites. There are two auto body shops located along NYS Route 50 and a mine/quarry on Colebrook Road owned by Land Associates, LLC. There are no additional industrial or commercial properties within one mile of the off-airport mitigation sites.

4.6.2. Residential Areas, Schools, Places of Worship, Outdoor Areas

Airport

Residential areas, schools, elderly care facilities, and publicly owned outdoor areas are found in the immediate vicinity of the Airport. The Gateway House of Peace, a charitable hospice center, is located adjacent to Airport property, northeast of Runway 23. Old Stone Church is located

approximately one-mile northwest of Runway 14 and the Saratoga Abundant Life Church is located 1.5 miles southeast. Geyser Elementary School is located just over one mile from the Airport, on Geyser Road. Several residential neighborhoods are immediately adjacent to the Airport including Winner's Circle at Saratoga, a condominium complex to the south as well as the Creek and Pines Mobile Home Community, situated one half mile to the southwest on Geyser Road. Parks and recreational areas in the vicinity of the Airport are discussed in Section 4.3 below.

Off-Airport Mitigation

Residential areas are located within the immediate vicinity of the off-airport mitigation sites. There are no schools or places of worship within a one-mile radius of the sites. Parks and recreational areas in the vicinity of the sites are discussed in Section 4.3.

4.7. SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIORNMENTAL HEALTH AND SAFETY RISKS

This section provides information on the socioeconomic characteristics of the area surrounding the Airport. The most recent statistics from the U.S. Census Bureau's American Factfinder were used to examine the population profile, characteristics and trends for the region.

According to the American Factfinder American Community Survey, population has increased by almost 10 percent since 2000 in Saratoga County, from 200,635 in 2000 to 219,607 in 2012. In addition, the population of Milton increased by over eight percent between 2000 and 2012, from approximately 17,103 people in 2000 to 18,575 in 2012.

Table 4-2 below is a brief compilation of demographic profiles for the town of Milton, the city of Saratoga Springs and Saratoga County. As shown on the table, the socioeconomic characteristics included are population, racial/ethnic composition, median household income, travel time to work, and population in the labor force.

Table 4-2: Demographics

	Town of Milton	Town of Wilton	Town of Northumberland	City of Saratoga Springs	Saratoga County
Population	18,985	16,653	5,151	27,447	224,929
Race Data					
White	17,780	15,480	4,766	24,541	205,458
Hispanic or Latino	313	399	213	921	6,431
Black or African American	199	252	63	570	3,582
Asian	242	308	10	875	5,991
	Town of Milton	Town of Wilton	Town of Northumberland	City of Saratoga	Saratoga County

				Springs	
Native Hawaiian or other Pacific Islander	0	0	0	0	57
American Indian/ Alaska or Hawaiian	138	0	30	27	392
Other	6	56	34	102	1,012
Minority Percentage	6%	7%	7.5%	10.6%	8.7%
Economic Data					
Median Household Income	$64,946	$81,130	$72,372	$73,661	$74,080
Mean Travel Time to Work (minutes)	25.9	26.1	27.4	23.0	25.1
In Labor Force	71.2%	69.0%	66.3%	62.8%	67.2%

Source: 2012-2016 American Community Survey 5-Year Estimates.

The town of Northumberland grew approximately 9.5 percent since 2000 and 2010, from 4,603 in 2000 to 5,087 in 2010. The town of Wilton grew by approximately 22.6 percent between 2000 and 2010, from 12,511 in 2000 to 16,173 in 2010. Both the towns of Wilton and Northumberland are located in Saratoga County.

4.8. WATER RESOURCES

4.8.1. Wetlands

The United States Army Corps of Engineers (USACE) regulates activities in wetlands that have a significant nexus to traditional navigable waters (TNWs) under Section 404 of the Clean Water Act (CWA). The USACE requires that an area have hydrophytic vegetation, hydric soils, and wetland hydrology present in order to be considered a wetland. The National Wetland Inventory (NWI) mapping is typically used to determine the potential presence of federal wetlands prior to any site reconnaissance. NWI mapping indicates potential wetland areas identified by the USFWS using aerial photography. These maps do not have any regulatory consequence, but rather indicate areas that may meet federal wetland criteria.

The NYSDEC regulates certain wetlands within New York State under the Article 24 of the ECL, often referred to as the "Freshwater Wetlands Act". The NYSDEC regulates those wetlands within the State that are larger than 12.4 acres (5 hectares) in size, and certain smaller wetlands of unusual local importance. The NYSDEC also regulates a 100-foot Adjacent Area (AA) to provide a buffer for the wetland.

Airport

Review of the NWI mapping of the Airport indicated the potential presence of wetlands or waterways on Airport property and in the vicinity of the properties proposed for acquisition and/or obstruction removal on the Runway 14 end, as shown on **Figure 4-8**. Review of the NYSDEC Freshwater Wetlands Map of the Airport area indicated that NYSDEC Freshwater Wetland S-18 is mapped on the northwest corner of Airport property and a property proposed for acquisition. Additionally, wetland M-17 and the 100-AAs of wetland M-17 and S-18 are mapped on properties proposed for acquisition on the Runway 14 end (see **Figure 4-9**).

Site walkovers of the lands proposed for acquisition and/or obstruction removal were performed by McFarland Johnson in April and May 2016. During the site walkovers, a preliminary wetland investigation was performed to determine if proposed vegetation obstruction removal would impact wetlands areas. One wetland area and a stream and bordering wetland were identified in close proximity to proposed obstruction removal areas. One state regulated wetland area is located on the Brownyard property located west of Stone Church Road on the Runway 14 end. The federally regulated stream and bordering wetland are located on the Anderson and Sharadin properties on the Runway 5 end. The stream and bordering wetland extend in a north-south direction across these properties and are located in the vicinity of the proposed obstruction removal. Approximate locations of the two wetlands and stream are shown on **Figure 4-10**.

McFarland Johnson performed a wetlands and waterways delineation in August 2013. The wetland delineations were conducted through field investigations of vegetation, soils and hydrology in accordance with the 1987 *USACE Wetlands Delineation Manual* (1987 USACE Manual) and 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (2012 Regional Supplement). NYSDEC freshwater wetlands were mapped in the vicinity of the Proposed Action, therefore, the 1995 *New York State Freshwater Wetlands Delineation Manual* (1995 NYSDEC Manual) was also consulted. A total of six wetlands, all less than one acre in size each were identified at the Airport. Locations of delineated wetlands are shown on **Figure 4-10**.

Detailed information regarding the delineated wetlands and their locations are presented in the Wetlands and Waterways Delineation Report in **Appendix C**. See Section 5.14 for information regarding wetland permitting.

Off-Airport Mitigation

Review of the NWI mapping of the off-airport mitigation sites indicated the presence of potential wetlands and waterways within and in the vicinity of the off-airport mitigation sites. Review of the NYSDEC Freshwater Wetlands Map of the area indicated that NYSDEC Freshwater Wetland Q-32 is mapped between the North and East Sites. Additionally, NYSDEC Freshwater Wetland GA-23 is mapped on the North Site parcel. (see **Figure 4-11**).

Figure 4-8: Airport - NWI Wetlands

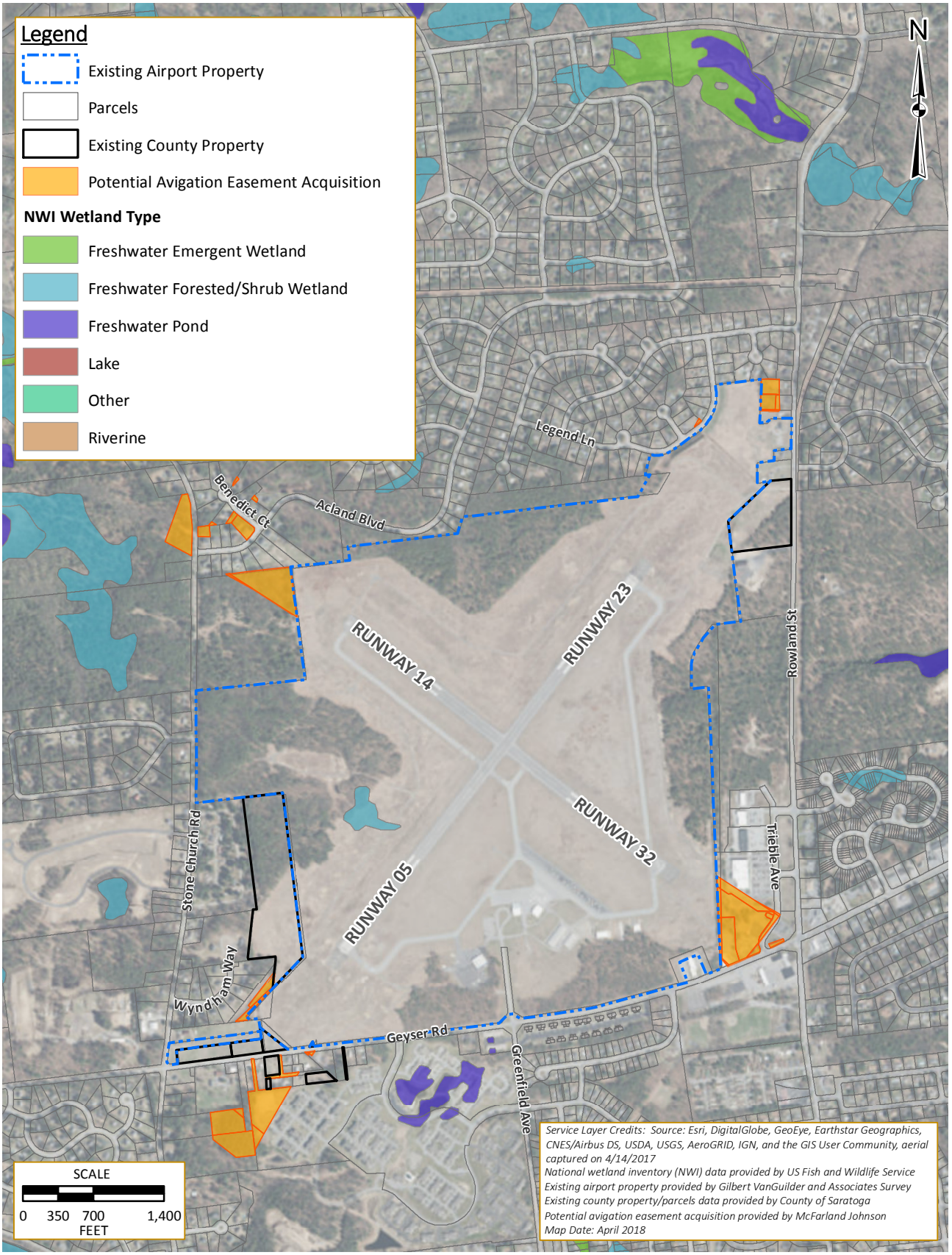

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Figure 4-9: Airport - NYSDEC Wetlands

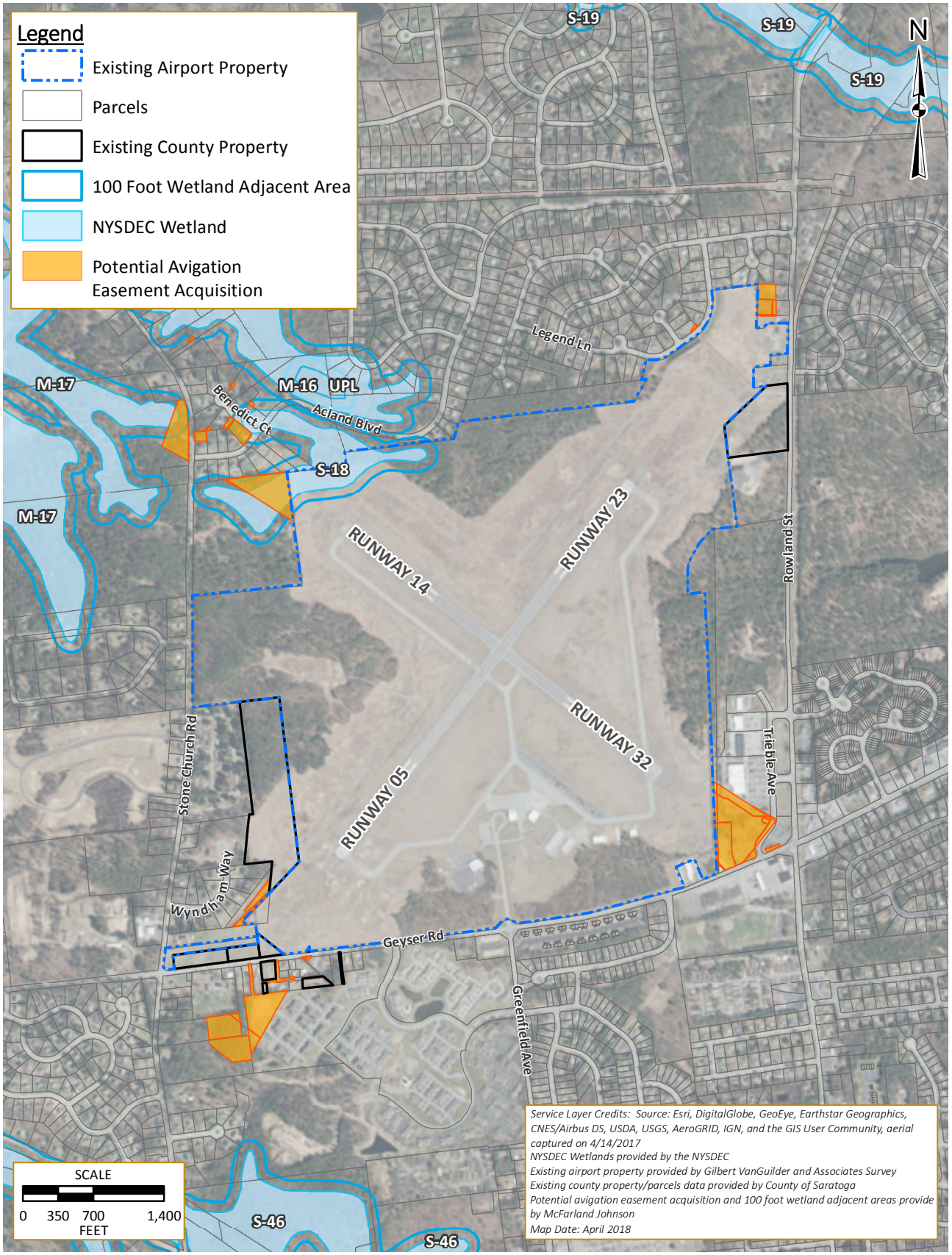

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Figure 4-10: Airport - Delineated Wetlands

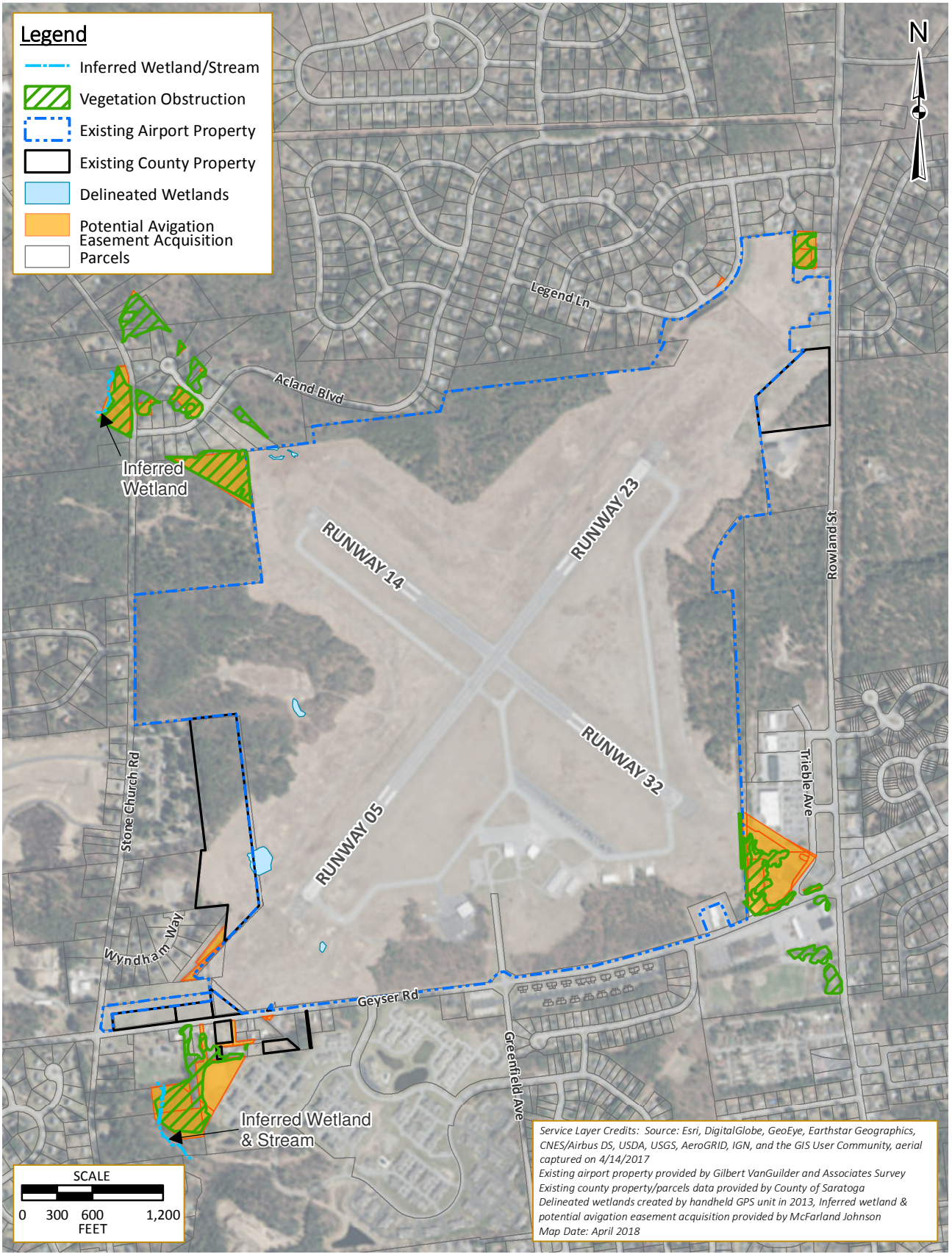

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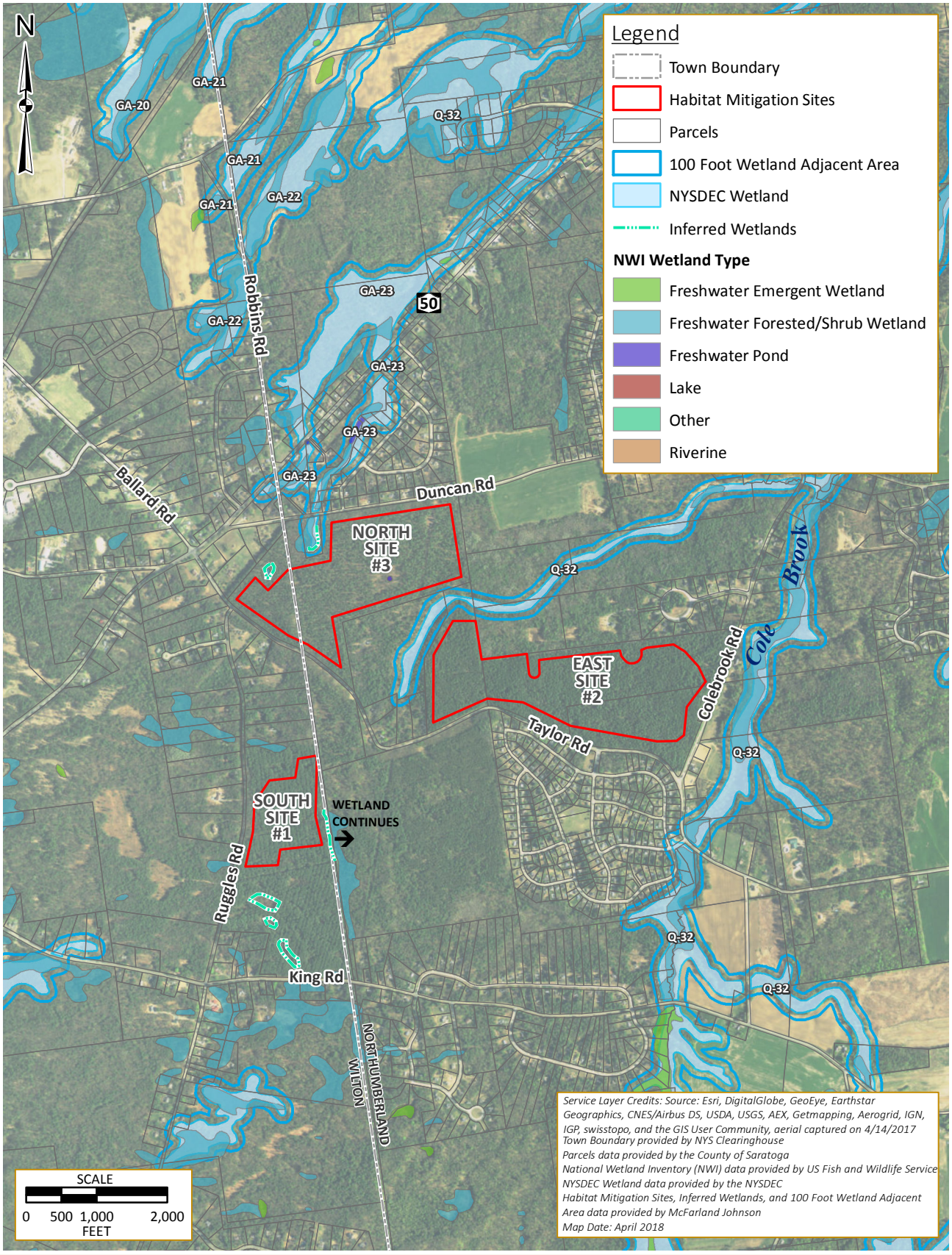
Figure 4-11: Off-Airport Mitigation Habitat - Wetlands and Waterways



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4.8.2. Floodplains

The Federal Emergency Management Agency (FEMA) is an agency with a primary purpose of coordinating the response to a disaster that has occurred and overwhelms the resources of local and state authorities. Additionally, FEMA designates special flood hazard areas.

Airport

A Flood Insurance Study (FIS) for all jurisdictions within Saratoga County, including the town of Milton, was published by FEMA on August 16, 1995. According to the Flood Insurance Rate Map (FIRM) panel depicting the Airport (FIRM 36091C0436); also published August 16, 1995, the entire Airport property is classified as Zone X. FEMA defines Zone X as areas of minimal flood hazard and outside the 500-year flood level. Therefore, the Airport is not located in a FEMA floodplain area. The nearest 100-year floodplain is associated with the Kayaderosseras Creek and is located approximately 1,800 feet southwest of a proposed easement acquisition off of the Runway 5 end. The FEMA 100-year flood area is shown on Figure 4-12.

Off-Airport Mitigation

A Flood Insurance Study (FIS) for all jurisdictions within Saratoga County, including the towns of Wilton and Northumberland, was published by FEMA on August 16, 1995. According to the Flood Insurance Rate Map (FIRM) Saratoga County Map Index, there are no special flood hazard areas on or in the vicinity of the off-airport mitigation sites. The nearest 100-year floodplain is associated with the Hudson River, which is located approximately 3.5 miles east of the proposed mitigation area.

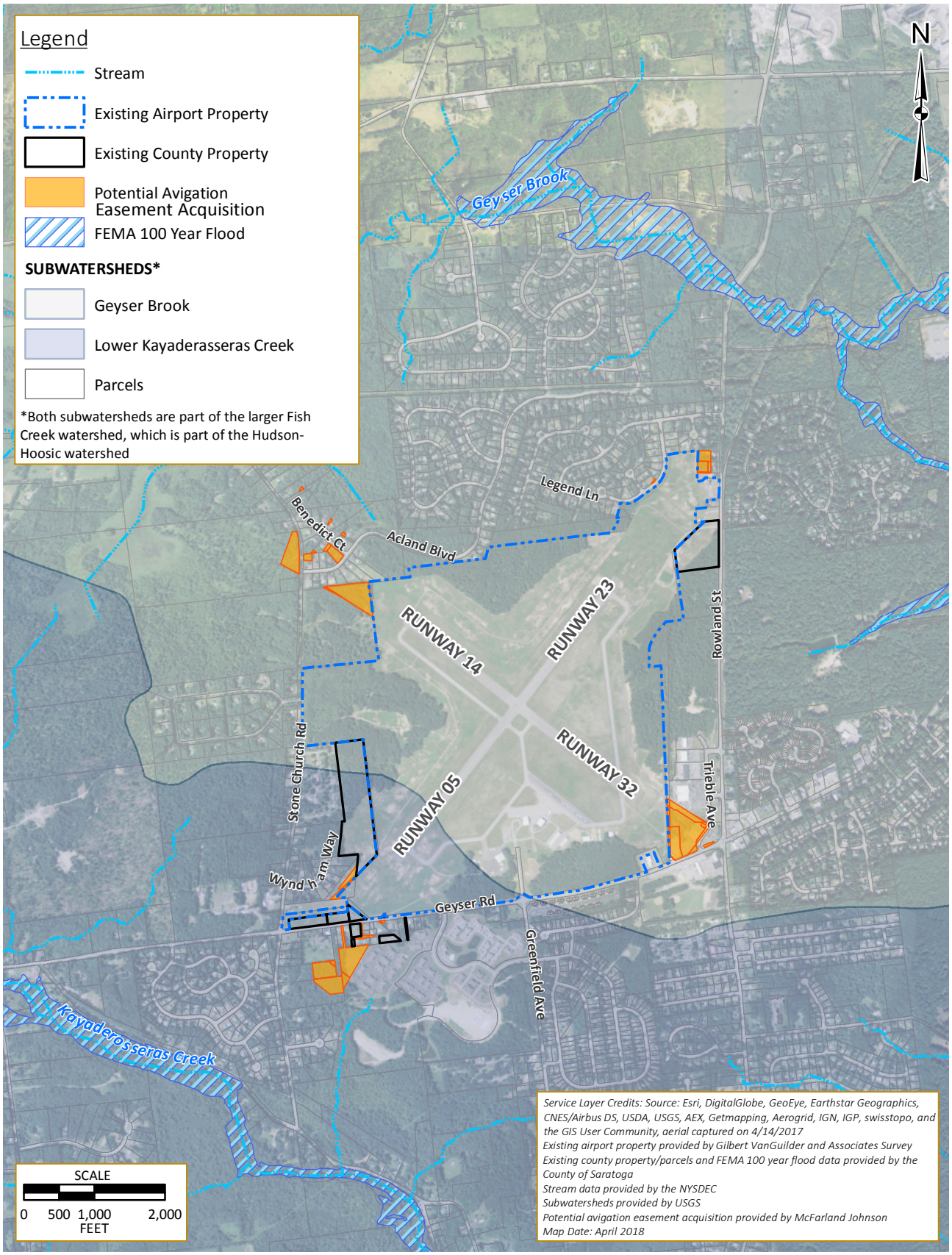
4.8.3. Surface Waters

The USACE regulates surface waters under Section 10 of the Rivers and Harbors Appropriation Act (RHA) that are considered to be a TNW as defined specifically there within. The USACE also regulates surface water bodies through Section 404 of the CWA that have a significant nexus to a TNW as defined in Section 10 of the RHA or a TNW as defined Section 404 of the CWA. A significant nexus is generally defined as having more than an insubstantial or speculative effect on the chemical, physical, or biological integrity of a downstream TNW. Surficial open waterbodies, including streams, ponds, and lakes are delineated by their Ordinary High Water Mark (OHWM) as defined in Title 33, Code of Federal Regulations, Part 328 (33 CFR 328).

All applicants for a federal license or permit must obtain a Section 401 Water Quality Certification (WQC) if the proposed activity may result in any discharge in navigable waters, including all wetlands, watercourses, and natural and man-made ponds.

NYSDEC regulates surface waters under Article 15 of the ECL. All waters of the state have a class and standard designation based on existing or expected best usage of each water or waterway segment. Small ponds and lakes with a surface area of 10 acres or less, located within the course of a stream, are considered to be part of a stream and are subject to regulation under Article 15.

Figure 4-12: Airport - FEMA Flood Hazard



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NYSDEC also protects impaired waters as required under the CWA Section 303(d). The state assesses water quality of waters of the state and compiles a list of impaired waters that do not meet water quality standards and where designated uses are not fully supported and where a Total Maximum Daily Load (TMDL) plan is necessary to address the impairment.

Airport

A majority of the Airport property and proposed acquisitions are located in the Geyser Brook subwatershed with the exception of the southwestern portion, which is located in the Lower Kayaderasseras Creek subwatershed. Both subwatersheds are located within the Fish Creek watershed, which is part of the larger Upper Hudson River watershed. There are no streams located on Airport property or the areas proposed for acquisition and/or tree obstruction removal. However, a stream is located on an area proposed for acquisition off of the Runway 5 end. Streams on and within the vicinity of the Airport projects are shown on Figure 4-13.

Off-Airport Mitigation

The off-airport mitigation sites are located within the Snook Kill subwatershed, which is part of the Upper Hudson River watershed. There are no streams located on the mitigation sites. However, as discussed previously, there is a tributary of Cole Brook situated between the North and East Sites and flows in a west-east direction. The tributary is a NYSDEC regulated stream with a C(T) classification, which indicates the stream is designated as a trout water and best usage for fishing, that runs southwest-northeast between the north and east mitigation sites. The stream is not listed as a Section 303(d) impaired water. Streams on and within the vicinity of the mitigation sites are shown on Figure 4-11.

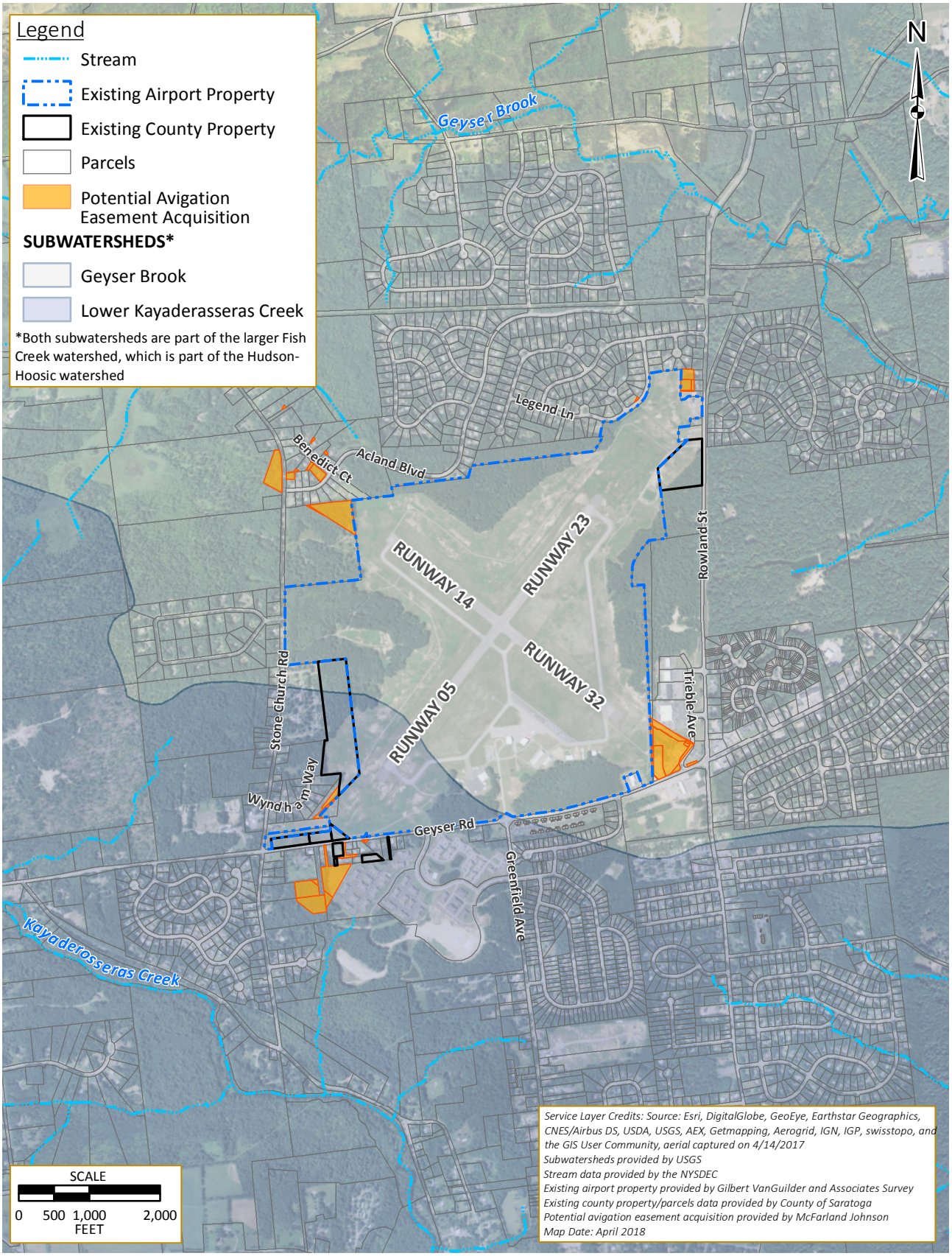
4.8.4. Groundwater

Groundwater serves as an important potable water supply for many individual households, small communities, and larger municipalities. Potential impacts from airport development projects can include reduced groundwater recharge and potential contamination through chemical, toxin or other pollutant releases.

The Environmental Protection Agency (EPA) Sole Source Aquifer (SSA) program was established under the Safe Drinking Water Act (SDWA). According to the EPA, a SSA is defined as one that supplies at least 50 percent of the drinking water for its service area, and wherein which there is no reasonably available alternative drinking water sources should the aquifer become contaminated. The SSA program allows for EPA review of federally funded projects that have the potential to affect designated SSAs and their source areas.

According to the EPA SSA Geographic Information Systems (GIS) data, there are no SSAs located on or within the vicinity of the Airport property. A majority of the soils in the area of the Airport are classified as well drained sandy soils. There are no SSAs located on or within the vicinity of the off-airport mitigation sites. The majority of soils mapped in the mitigation sites are classified as well-drained loamy fine sands.

Figure 4-13: Airport - Surface Waters



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According to the NYSDEC Division of Water Bureau of Water Resource Management Water Well Program GIS data dated June 2016; multiple water wells are located in the vicinity of the Airport property. The wells appear to be associated with commercial and residential land uses. Property owned by Rowland Hollow Water Works, located immediately north of the Airport, is used for public water supply. The property consists of five drinking water wells and a water pump station building. Wells and aquifers located on and in the vicinity of the Airport are shown on **Figure 4-14**.

There are two water wells located adjacent to the off-airport mitigation sites, one south of the North Site and one west of the East Site. The wells appear to be associated with residential land uses.

4.8.5. National and State Forests, Wilderness Areas, and Wild and Scenic Rivers

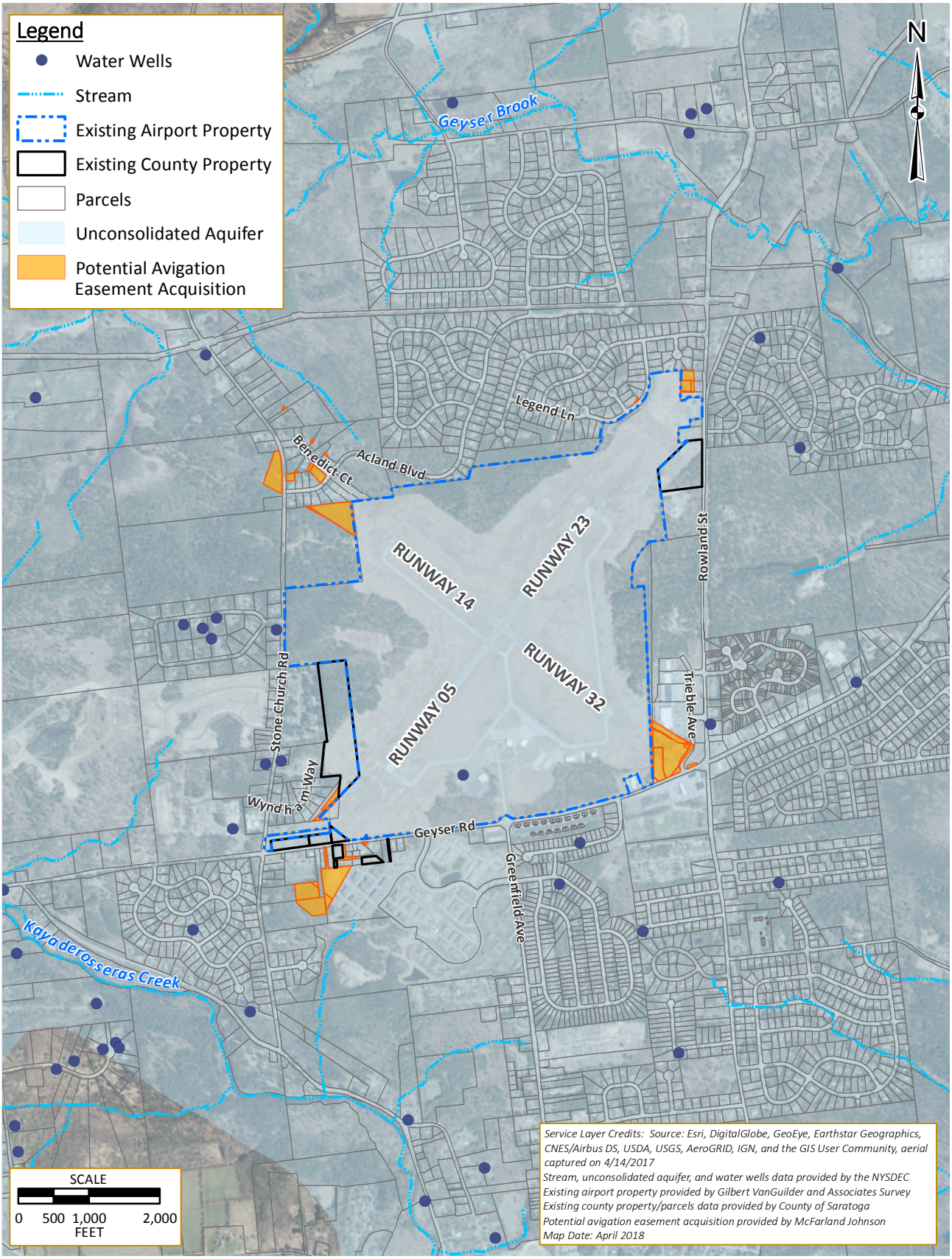
Airport

There are no national or state forests, wilderness areas, or wild and scenic rivers in the vicinity of the Airport. The state forest closest to the Airport is Middle Grove State Forest, located approximately seven miles northwest.

Off-Airport Mitigation

The off-airport mitigation sites are located within the WWPP, which is comprised of parcels owned by the state, county, town, and The Nature Conservancy. The Moreau Lake State Park is approximately 5.1 miles north-northwest of the mitigation sites and the Lincoln Mountain State Forest is approximately 5.6 miles west-northwest of the mitigation sites

Figure 4-14: Airport - Wells and Aquifer



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5. ENVIRONMENTAL CONSEQUENCES

Chapter 5 describes the anticipated environmental, social, and economic consequences of the Proposed Action. Information pertaining to the environmental consequences was obtained through an evaluation of the conceptual design plans, on-site investigations, review of published information, agency correspondence, and discussions with Saratoga County Airport (Airport) personnel and public officials. Unless the results are similar or are not applicable to the off-airport mitigation sites, the sections below have been further divided into "Airport" for discussion of Airport improvement projects and "Off-Airport Mitigation" for the proposed off-airport mitigation sites.

Each environmental impact category has conditions that normally indicate a threshold beyond which the impact is considered significant and an Environmental Impact Statement (EIS) is required for the Proposed Action. However, if mitigation measures included as part of the Proposed Action reduce the impacts below significant threshold levels, an EIS would not be necessary and the action may be concluded with a Finding of No Significant Impact (FONSI) or FONSI/Record of Decision (ROD).

5.1. RESOURCES NOT AFFECTED

The following resources are not affected by the Proposed Action due to their absence within the project area as well as their absence in the surrounding area.

- Coastal Zones
- Coastal Barriers
- Floodplains
- Historic, Architectural, Archaeological, and Cultural Resources
- Wild and Scenic Rivers

5.2. AIR QUALITY

Under the Clean Air Act Amendments of 1990 (CAA), the Environmental Protection Agency (EPA) promulgated the General Conformity regulations of 1993. Under the CAA, the EPA monitors the nation's primary ambient air quality parameters as specified in the National Ambient Air Quality Standards (NAAQS) which specifies criteria for six air pollutants. These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), lead (Pb), particulate matter ($PM_{2.5}$ and PM_{10}), and sulfur dioxide (SO_2). Depending upon the continual air quality monitoring results, the status of every area or county is designated as in attainment, non-attainment, or maintenance for each of these six pollutants. The status for each area or county in the United States is reported in the monthly release of "*The Green Book Nonattainment Areas for Criteria Pollutants*." Any area that does not exceed NAAQS air quality standards for any of the six monitored pollutants is considered in attainment. Saratoga County (the County) is not located within a nonattainment or maintenance area according to the EPA Green Book dated September 22, 2016 (https://www3.epa.gov/airquality/greenbook/anayo_ny.html).

The procedures for determining whether a proposed airport development would significantly affect air quality are described in the *Aviation Emissions and Air Quality Handbook Version 3, Update 1 (Report No. DOT/FAA/AEE/2015-01).* The three overlapping regulatory processes, briefly described below, applicable to assessing the air quality affects from airport development are Indirect Source Review (ISR), NAAQS Assessment, and Transportation or General Conformity.

Indirect sources of pollution are locations (airports, highways, parking lots, etc.) that attract or may attract sources of pollutions (automobiles) and thereby indirectly cause or increase air contaminant emissions. An ISR is not required in New York, except for projects in the southern portion of New York County (Manhattan), and is thus not applicable to this project in Saratoga County.

General Conformity is required under CAA Section 176(c) for Federal actions, including Federal Aviation Administration (FAA) actions, to meet the state's applicable State Implementation Plan (SIP) to achieve or maintain the NAAQS within CAA timeframes. Saratoga County is not located with a nonattainment or maintenance area; therefore, the General Conformity Rules do not apply to this project.

The NEPA assessment is used to analyze airport development projects in states without ISR. An operational emissions inventory is utilized, when appropriate, to compare increases or decreases in emissions for improvements that are anticipated to affect air quality. Upon review of *Aviation Emissions and Air Quality Handbook Version 3, Update 1,* Figure 4-5 (Air Quality Assessment Examples), it was determined that the improvements considered within the Preferred Alternative, including taxiway modifications, glider improvements, wildlife hazard management plan implementation, the acquisition of land (or avigation easements) and removal of obstructions, were not likely to lead to any changes in operational emissions at the Airport. With respect to the taxiway modifications, the improvements would not create additional vehicle traffic and/or operating emissions but is intended to reduce taxiing route length and queue times for aircraft. These improvements to reduce taxi times and idling should result in reduced air emissions from aircraft. The remaining improvements generally revolve around the one-time removal of obstructions and operational improvements including additional law mowing activities and the addition of a staging area for gliders.

5.2.1. Air Quality Construction Impacts

Potential impacts to air quality during construction were also considered for nitrous oxides (NOx), volatile organic compounds (VOC)/hydrocarbons (HC), particulate matter (PM), and carbon monoxide (CO). The equipment shown in **Table 5-1** is likely to be used for construction of the proposed improvements.

Table 5-1: Construction Emission Usage Summary

Equipment	Assumed Equipment Horsepower (hp)	Usage in Days based on 10-Hour Work Days	Projected Hours To Be Used
Excavator	380	72	720
Backhoe	128	74	740
Bulldozer	175	79	790
Skid Steer	95	170	1700
Roller	137	112	1120
Paver	225	18	180
Water Truck	250	155	1550
End-Dump Truck	285	110	1100
Dump Truck	325	431	4310
Concrete Truck	400	9	90
Lift Truck	95	75	750
Trenching Machine	95	9	90
Milling Machine	450	1	10

Source: McFarland-Johnson Analysis.
Note: May include multiple pieces of same equipment within one 10-hour work day

Emission amounts are directly related to the horsepower (hp), therefore, several sources including manufacturers' data and the *AED Green Book Compilation of Nationally Averaged Rental Rates & Model Specifications for Construction Equipment* was used to estimate hp for each type of equipment used. Engine hp varies according to the engine size, make, model, and year of manufacture; therefore, assumptions were based on the project's dimensions and industry generalizations. By assuming a ten (10) hour workday, it was estimated each piece of equipment would be used for a certain number of days and hours.

The EPA *Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling – Compression-Ignition Report No. NR-009C (CIR)* was used to determine emission factors for many types of equipment. The equipment list was taken from CIR Table F6. Emission testing has not been completed for each type of equipment; therefore, Table F6 was also used to assess each equipment type's emission factor by designating them as backhoe, excavator, or crawler dozer type emission. Table F6 designated the paver, roller, water truck, trenching machine, milling machine, and bulldozer as having crawler dozer type emissions, the backhoe was designated as a backhoe, and the excavator was categorized as an excavator. The emission factors for the on-road trucks, the end-dump and paint trucks, were found separately in the EPA *Emissions Standards Reference Guide for Heavy-Duty*

Highway Compression-Ignition Engines and Urban Buses – Exhaust Emissions Standards. The EPA *Emissions Standards Reference Guide for Heavy-Duty Highway Compression-Ignition Engines and Urban Buses – Exhaust Emissions Standards* provides the regulated emissions standards for HC, NOx, PM, and CO. The emission standards calculated use the 2004 factors without new standard engines because they were higher than the 2010 factors and would subsequently develop a worst-case emission value. Construction equipment emissions factors utilized in this assessment are available in Table 5-2.

Table 5-2: Construction Emission Usage Summary

	Pollutant	Representative Equipment	Emissions Factor ((g/(hp*hr))
Excavator	HC	John Deere 6101 (average of three tests)	0.67
	NOx		0.40
	CO		4.92
	PM		0.171
Crawler Dozer	HC	Consolidated Diesel 4039 (2)	1.22
	NOx	John Deere 4039 (3)	11.7
	CO	Caterpillar 3116 (2)	7.3
	PM	Consolidated Diesel 6TA-830 (2)	0.805
Backhoe Loader	HC	Consolidated Diesel 4039 (2)	2.89
	NOx	John Deere 7076 (2)	14.35
	CO	Consolidated Diesel 6TA-830 (2)	9.86
	PM		1.698
On-Road Trucks	HC	2004 Emissions Factors	0.50
	NOx		2.00
	CO		15.5
	PM		0.10

Source: EPA Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling – Compression-Ignition Report No. NR-009C (CIR) 2004, EPA Emission Standards Reference Guide (Heavy-Duty Highway Compression-Ignition Engines and Urban Buses – Exhaust Emission Standards).

The equation below was used to determine the amount of pollutant emitted for each piece of equipment.

Tons HC / NOx / CO / PM emitted = (emission factor HC/NOx/CO/PM g/(hp*hr)) * hp * length of use (hours) * 0.00000110231 (grams to tons conversion factor)

Thus, the total amounts emitted due to activities associated with the Proposed Action are 3.20 tons of HC, 19.97 tons of NOx, 39.48 tons of CO, and 1.51 tons of PM. This assessment assumes that all construction efforts associated with the taxiways and glider staging areas would occur concurrently as opposed to construction occurring over several phases over several years. Therefore, this assessment represents the "worst case scenario". For comparison, the total construction emissions for each pollutant type are below the de minimis thresholds set for nonattainment areas inside of the ozone transport region. Construction emission totals are shown on Table 5-3.

Construction contractors would be required to use properly maintained and operated construction equipment and use tarp covers on trucks transporting refuse and construction materials to and from the site. These best management practices would minimize any air quality effects associated with construction of the project.

As noted previously, Saratoga County is not located within a non-attainment or maintenance area according to the EPA Green Book for meeting the National Air Quality Standards. This project is not of a magnitude that would jeopardize attainment status.

In addition, the Proposed Action has been considered within the context of Greenhouse Gas (GHG) Emissions based upon FAA Order 1050.1E, Change 1, Guidance Memo #3. There are currently no standards for GHG emission applicable to aviation. See Section 5.4 for further discussion of GHGs and climate.

Table 5-3: Construction Emissions Totals

Equipment	Horsepower	Total Hours	Emission Factor (g/(hp*hr))				Total Emissions (tons)			
			HC	NOx	CO	PM	HC	NOx	CO	PM
Excavator	380	720	0.67	4.92	0.40	0.17	0.20	1.48	0.12	0.05
Backhoe	128	740	2.89	14.35	9.86	1.70	0.30	1.50	1.03	0.18
Bulldozer	175	790	1.22	11.70	7.30	0.81	0.19	1.78	1.11	0.12
Skid Steer	95	1,700	2.89	14.35	9.86	1.70	0.51	2.55	1.76	0.30
Roller	137	1,120	1.22	11.70	7.30	0.81	0.21	1.98	1.23	0.14
Paver	225	180	1.22	11.70	7.30	0.81	0.05	0.52	0.33	0.04
Water Truck	250	1,550	1.22	11.70	7.30	0.81	0.52	5.00	3.12	0.34
End-Dump Truck	285	1,100	0.50	2.00	15.50	0.10	0.17	0.69	5.36	0.03

Dump Truck	325	4,310	0.50	2.00	15.50	0.10	0.77	3.09	23.93	0.15
Concrete Truck	400	90	0.50	2.00	15.50	0.10	0.02	0.08	0.62	0.00
Lift Truck	95	750	2.89	14.35	9.86	1.70	0.23	1.13	0.77	0.13
Trenching Machine	95	90	1.22	11.70	7.30	0.81	0.01	0.11	0.07	0.01
Milling Machine	450	10	1.22	11.70	7.30	0.81	0.01	0.06	0.04	0.00
Total Construction Emissions:							**3.2**	**19.97**	**39.48**	**1.51**
De Minimis Threshold (Tons/Year)							**50**	**100**	**100**	**100**

Source: EPA Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling – Compression-Ignition Report No. NR-009C (CIR) 2004, EPA Emission Standards Reference Guide (Heavy-Duty Highway Compression-Ignition Engines and Urban Buses – Exhaust Emission Standards).

5.2.2. Air Quality Summary

The No Action alternatives for the proposed projects would not impact air quality and the existing air quality and emissions would remain the same.

Based on the above assessment, no significant impacts to air quality are expected to result from the Proposed Action.

5.3. BIOLOGICAL RESOURCES

As discussed in Chapter 4 of this EA, continued consultation has occurred between the County, New York State Department of Environmental Conservation (NYSDEC), and United States Fish & Wildlife Service (USFWS) over the years due to the known presence of the Karner blue butterfly (KBB) (*Lycaeides melissa samuelis)* and its habitat at the Airport. USFWS issued a Biological Opinion (BO), most recently in December 2018, for activities at the Airport affecting the KBB and their habitat, including this EA's Proposed Action. In addition, the Airport has been operating under the conditions of a Draft Management Agreement (DMA) with the NYSDEC. The DMA includes protection for the KBB, frosted elfin butterfly *(Callophrys irus)* and mottled duskywing (*Erynnis martialis*) and restricts mowing and other operational activities at the Airport to protect their habitat. In addition to the DMA, a Draft Operations Agreement for Glider Activity at the Airport (DOA), between the County, Saratoga Soaring Association, and the NYSDEC, outlines procedures for glider activities to minimize impacts to the butterflies and their habitat. As a result of the Proposed Action habitat impacts and coordination with the NSYDEC and USFWS, the DMA and DOA are being combined and renamed the Habitat Management and Protection Plan for the Saratoga County Airport (HMPP). The HMPP has been reviewed by the USFWS and NYSDEC as part of this EA and the Draft Biological Assessment (BA). Comments from the NYSDEC and USFWS have been addressed and incorporated into the HMPP. The final version of the HMPP is provided in **Appendix D** and the BA is provided in **Appendix E**.

Early coordination and pre-consultation with the USFWS and NYSDEC for the Proposed Action was conducted during a series of site visits, meetings, email exchanges, and telephone conversations. Furthermore, consultation with the USFWS in compliance with Section 7 of the Endangered Species Act (ESA) was conducted to address the Proposed Action and its impacts on any threatened, endangered, or proposed species, or the destruction or adverse modification of critical habitat. A Draft BA was prepared to assist the USFWS with their Section 7 assessment of the Proposed Action and their determination of whether the project is likely to jeopardize a listed species or its critical habitat. In addition, the Draft BA is used to assist NYSDEC with their assessment of wildlife impacts and issuance of an Incidental Take Permit in accordance with Article 11 of the Environmental Conservation Law (ECL).

The majority of the on-airport project areas consist of maintained airfield grasslands and off-airport obstruction removal areas consist of forested land and treed residential. The off-airport mitigation sites consist of managed forested lands. All of these habitats are demonstrably secure and abundant in the vicinity of the project areas and within New York State.

Based on consultation with the NYSDEC New York Natural Heritage Program (NYNHP) and the USFWS Information for Planning and Consultation (IPaC) system, the state and federally-listed endangered KBB, state threatened frosted elfin butterfly, and state species of special concern mottled duskywing have been documented in the Airport project area. In addition, the state threatened mock-pennyroyal (*Hedeoma hispida*) has been documented in the Airport project area. The KBB, frosted elfin butterfly, and the state threatened blanding's turtle (*Emydoidea blandingii*) have been documented on or within the vicinity of the off-airport habitat mitigation project sites. In addition, a significant natural community, Appalachian oak-pine forest, has been documented adjacent off-airport habitat mitigation project sites.

In addition, the USFWS indicated the potential presence of the federally threatened northern long-eared bat (*Myotis septentrionalis*) at or in the vicinity of the Airport and off-airport habitat mitigation sites. No critical habitat has been designated for the species. Copies of the NYNHP correspondence and the USFWS Official Species Lists are included in Appendix B.

5.3.1. Protected Butterfly Species

Airport

In 2011, it was reported that the Airport, at that time, had the largest acreage of KBB habitat in the entire state.[1] Most of the open grassed areas at the Airport provide habitat or potential habitat for KBB. The Karner blue and frosted elfin populations are dependent on wild blue lupine (*Lupinis perennis)*. Detailed mapping of wild blue lupine or nectar species plants at the Airport has not been conducted. However, concentrations of wild lupine have been identified at the Airport. All grassland areas outside of the Exempt Areas are considered to be viable habitat. However, the actual amount of habitat acreage within the grassland areas is less than what is actual habitat due to Airport activities and lupine plant distribution.

[1] U.S. Fish and Wildlife Service. Biological Opinion Update issued to Saratoga County Airport, July 22, 2011 17 p.

According to the USFWS BO for the Airport and correspondence with NYSDEC and USFWS, the Airport does not provide a diverse habitat for the protected butterfly species thus limiting their survival capability. Habitat at the Airport is homogeneous and lacks diversity in structure and topography to protect butterflies from weather events, such as frost and high winds. Additionally, food sources for the butterflies are poorly distributed throughout the site. As discussed in the DMA, restrictions within the Known Habitat Area include no mowing from January 1 to October 15 with the exception of mowing around navigation aids (i.e. lights, signs, AWOS-III). More frequent mowing and certain other necessary activities are allowed to take place within the Exempt Areas. Therefore, impacts discussed below are limited to the Known Habitat Area. Also, consistent with the 2011 BO, project impacts were evaluated based on the acreages of open grassy areas (turf) affected.

The Proposed Action includes impacts to the protected butterflies and their habitat within the existing Known Habitat Area, which are summarized below in Table 5-4.

The partial-parallel taxiway project and Taxiway C realignment project would result in an approximate net increase of 2.37 acres of new asphalt and a total of 5.49 acres of permanent impacts to KBB habitat. Taxiway project Impacts other than new asphalt includes areas that would be disturbed for minor taxiway grading, wind sock relocation, stormwater practices, removal and installation of all ground lighting and signage, construction equipment activity and other miscellaneous ancillary work.

The proposed glider staging/run-up area near the Runway 32 Approach End would result in 0.38 acre of turf that would need to be maintained and mowed on a regular basis and would therefore be considered permanent habitat impacts. If possible, construction of the glider staging/run-up area would take place from the taxiway and the proposed staging/run-up area footprint; therefore, impacts from construction equipment is not anticipated.

The perimeter fence improvements would involve the replacement of a total of approximately 25,800 linear feet of existing fence, including five access gates on Airport and County owned property. Approximately 80% of perimeter fence replacement would take place within the Known Habitat Area. Approximately 25 percent of the fence replacement project is located in forested areas on the eastern and western portions of the Known Habitat Area. The remainder is located along turf areas within the Known Habitat Area, including a few sections with evergreen tree screening on the inside of the fence. The proposed 8-foot wide grass maintenance corridor would be mowed regularly for daily fence inspection access. Regular mowing and vehicular activities within the fence maintenance corridor adjacent to Known Habitat Area turf only are considered habitat impacts. The proposed fence replacement and maintenance corridor adjacent to forested areas were not considered impacts to the Known Habitat Area. Therefore, approximately 3.64 acres of habitat would be permanently impacted along turf areas only, including areas with evergreen screening. The 3.64 acres of impacts takes into account impacts from construction equipment along the entire length of the project area adjacent to turf areas only within the Known Habitat Area. In addition, minor tree removal, approximately 1.2 acres, along the more densely wooded areas would be required to replace the fence and provide the 8-foot wide maintenance corridor. Lastly, proposed year-round routine mowing of the runway and taxiway safety areas would impact approximately 67.5 acres of habitat. Habitat impact areas are shown on Figure 5-1 and outlined in Table 5-4.

Table 5-4: Habitat Impacts Summary

Project Element	Construction Equipment Impacts (Acres)	Permanent Impact (Acres)	Total Permanent (Acres)
Partial-Parallel Taxiway	1.07	3.61	4.68
Taxiway C Realignment	0.19	0.62	0.81
Glider Staging/Run-up Area	---	0.38	0.38
Safety Area Mowing Plan	---	67.47	67.47
Fence Replacement/Maintenance Corridor Mowing	1.2	2.44	3.64
Total	2.46	74.52	76.98

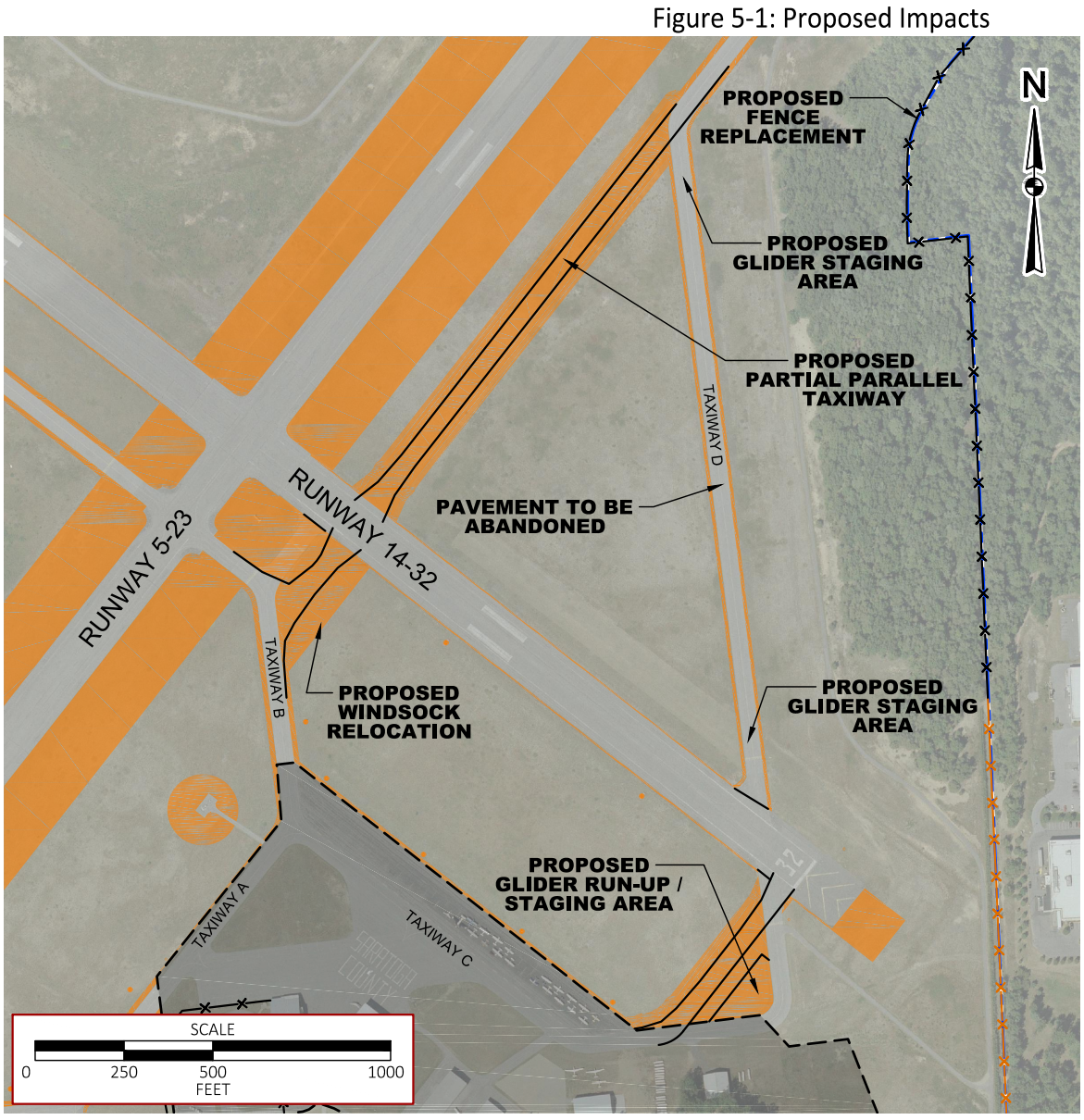
Source: McFarland Johnson.

Conservation measures would be taken to avoid, minimize, or eliminate adverse effects or enhance beneficial effects on the impacted species. The proposed conservation measures are based on conversations with the USFWS, NYSDEC, FAA, Saratoga County, and other stakeholders and as proposed by the USFWS in the BO. The following conservation measures would be implemented during the construction, operation, and management of the proposed projects:

- When feasible, work would be conducted from asphalt and gravel surfaces;
- Construction vehicles would be limited to defined project work limits;
- Work limits would be demarcated with orange fencing and/or orange cones to prevent activity from occurring outside of the project work limits;
- A construction monitor would be onsite during construction full-time to ensure compliance with the conservation measures;
- Post-mounted signs (4-foot by 8-foot) will be placed at the entrance to the active haul roads (within exempt or temporary construction impact areas) with instructions to remind drivers to remain on the existing gravel and paved areas;
- Construction staging areas would be located on closed sections of the existing taxiways, aprons, Airport access roads, or asphalt/gravel surfaces;
- NYSDEC would be notified prior to commencement of construction activities and immediately after completion of construction. Ongoing coordination with NYSDEC during construction would be conducted, if necessary;
- All construction, operation, and management of activities would be under the management of County personnel;
- The County would be responsible for implementing a Mitigation Management and Protection Plan for KBB habitat creation.

Additional conservation measures for all operations and maintenance activities are included in the HMPP.

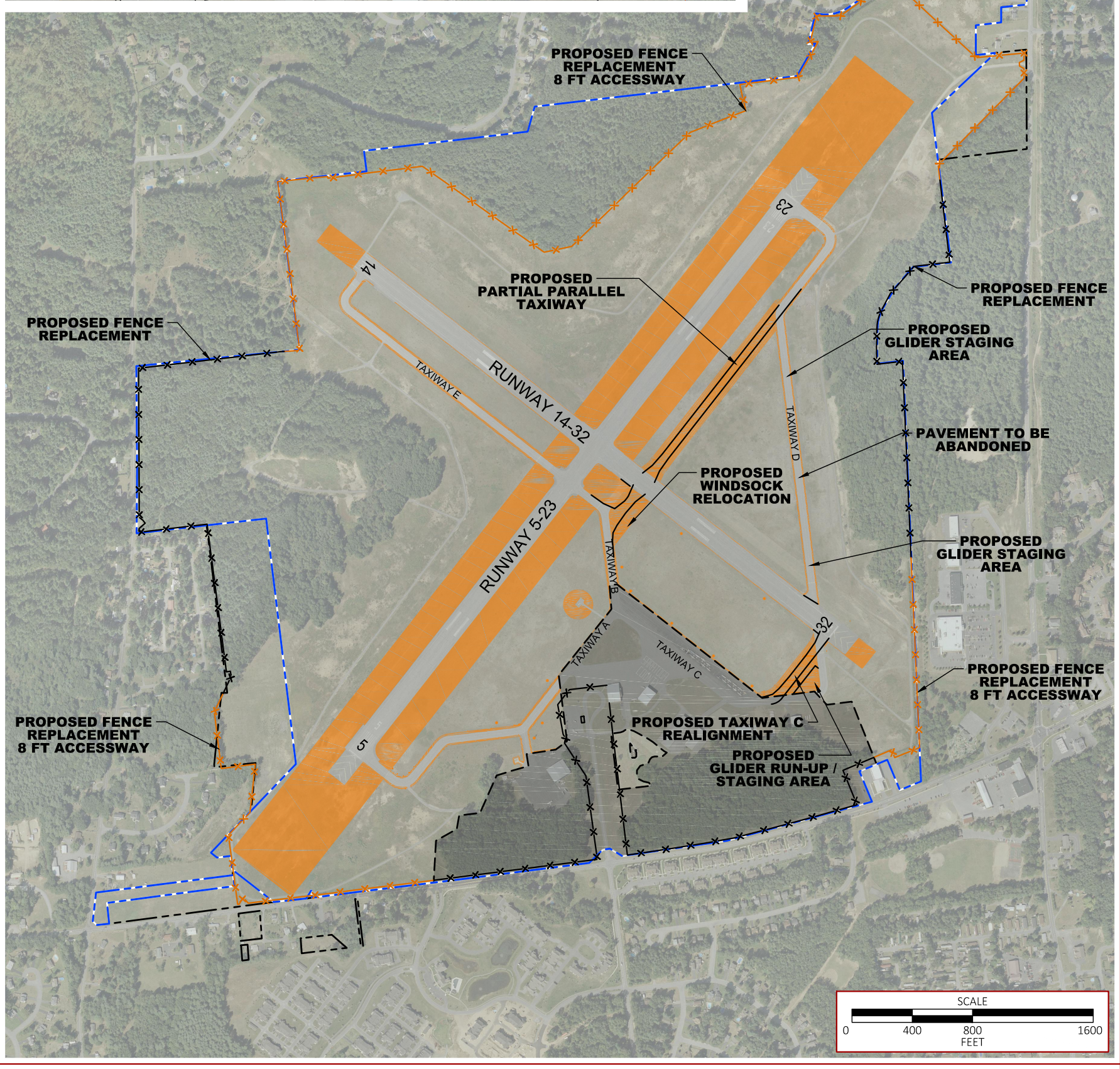
Figure 5-1: Proposed Impacts



LEGEND

- PERMANENT IMPACTS
- PERMANENT FENCE IMPACTS
- EXISTING COUNTY PROPERTY
- EXISTING AIRPORT PROPERTY
- EXEMPT AREA

ITEM	WIDTH
RUNWAY	140' (TYP)
RUNWAY 5-23 RSA	500'
RUNWAY 14-32 RSA	150'
TAXIWAY	50' (TYP)
TAXIWAY SAFETY AREA	79'



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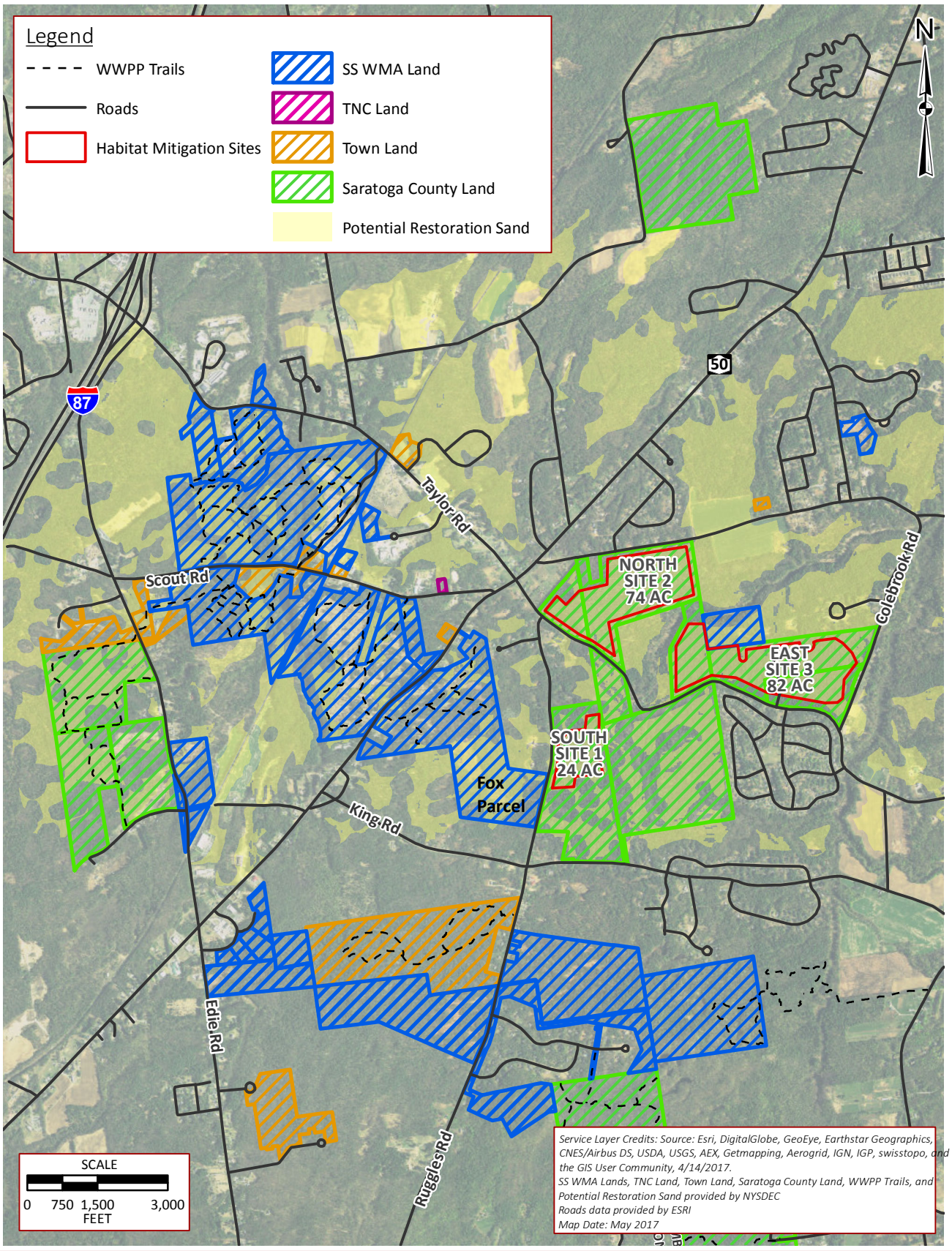
Habitat mitigation is proposed for the approximately 77 acres of permanent impacts to the Known Habitat Area as discussed above. Proposed habitat mitigation for impacts to the protected butterfly habitat would take place on off-airport properties owned by Saratoga County in the towns of Wilton and Northumberland. As part of the EA process, the County considered habitat mitigation, consisting of silvicultural thinning of forested areas, on Airport property. However, based on consultation with the NYSDEC and USFWS, off-airport mitigation is being proposed to create a more suitable and protected habitat for the butterfly species. Further details regarding the wildlife and habitat impacts and the proposed off-airport mitigation are described in the Draft BA (see Appendix E).

Off-Airport Mitigation

Proposed habitat mitigation would take place on approximately 180 acres on three separate sites located 15 miles northeast of the Airport. The proposed off-airport mitigation sites, South Site – 1, East Site – 2, and North Site – 3, and the surrounding area are shown on Figure 5-2. The three partially contiguous sites are located wholly and/or partially within an area classified by The Nature Conservancy (TNC) as a Priority Conservation Area. The sites are also located within the Wilton Wildlife Preserve and Park (WWPP) and in the vicinity of the NYSDEC Saratoga Sand Plains Wildlife Management Area (WMA), which includes USFWS KBB recovery areas. According to USFWS, the goal to establish a viable population in the Saratoga Sandplains Recovery Unit is 320 acres of KBB habitat. Currently the Saratoga Sandplains has 140 acres of habitat. With the addition of the proposed 180 acres of habitat creation, the Saratoga Sandplains Recovery Unit would meet the goal of 320 acres. The WWPP and surrounding area is home to KBB and frosted elfin populations. TNC currently partners with the town of Wilton, NYSDEC, and Saratoga County to protect, manage and restore butterfly habitat at the WWPP. The WWPP, totaling over 2,400 acres, is a conservation, education, and recreational facility, with a mission to "conserve ecological systems and natural settings while providing opportunities for environmental education and outdoor recreation." The TNC and NYSDEC, with the help of the WWPP, actively restore and manage KBB habitat in the vicinity of the proposed mitigation sites and more recently on the "Fox Parcel", which is located west of a proposed mitigation site. In addition, an existing KBB habitat restoration site and future site is located to the north and east of the proposed mitigation sites. It is anticipated that the existing nearby populations would easily migrate and colonize the proposed mitigation sites as indicated by the natural population expansion/migration onto the Fox Parcel.

Off-airport habitat mitigation would include silvicultural thinning of unsuitable tree species with remaining tree species to include pitch pine (*Pinus rigida)*, red pine (*Pinus resinosa*), and scrub oak (*Quercus ilicifolia*). Silvicultural thinning would be followed by restoration planting of blue lupine and other nectar plants. Blue lupine sources would include locally derived native seed sources and/or seed harvested from the Airport, WWPP lands, and/or the Albany Pine Bush. Seeding would include a combination of seed drilling and non-mechanized hand-seeding. The process would convert oak-pine forest areas to a more open pine savannah ecosystem where grasses and forbs dominate the ground vegetation. NYSDEC and USFWS would be consulted during the development of the habitat mitigation plan. As stated previously, the existing habitat within the maintained airfield does not provide ideal habitat or long-term population viability due to lack of habitat diversity (i.e. no overstory cover or shade, open flat area) and ongoing Airport operations. Therefore, successful completion of the proposed heterogeneous habitat mitigation would create

Figure 5-2: Off-Airport Habitat Mitigation - Vicinity Map



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a more conducive habitat and improve the population viability by minimizing threats associated with weather conditions and Airport operations.

A Mitigation Management and Protection Plan (MMPP) would be instituted to establish criteria to implement, monitor and measure the success of the habitat mitigation, including protocols for monitoring butterflies, lupine, and nectar species within the mitigation sites. As discussed with the USFWS and NYSDEC, habitat mitigation sites must meet published KBB success criteria prior to initiation of any component of the revised mowing plan. According to the USFWS and NYSDEC, it typically takes three (3) years for sites to become vegetated with nectar plant species and colonized by KBB. Project phasing of construction and implementation would occur to ensure habitat mitigation success and to phase the amount of habitat impacts over a longer period to limit large scale impacts and provide the butterfly population time to relocate or recover from the proposed activities. Conceptual project phasing provided in the Draft BA will be updated to include appropriate timing for restoration success as discussed above. The updated project schedule will be provided to the USFWS and NYSDEC.

Consultation with the USFWS is required to address impacts to and mitigation for federally-listed plants and animals. USFWS has issued a BO, based on the Draft BA, EA, correspondence, field investigations, etc., stating that the Proposed Action is not likely to jeopardize the continued existence of the KBB (see BO in **Appendix B**). Conditions related to mitigation for such impacts would also be included in other permits. Based on the above measures to avoid, minimize, and mitigate impacts, it is anticipated that the Proposed Action is not likely to jeopardize the continued existence of the protected butterflies at the Airport.

5.3.2. Northern Long-Eared Bat

The proposed project involves the removal of approximately 15.55 acres of tree obstructions, including forested areas and scattered trees in residential areas, to mitigate obstructions to the runway end siting surfaces (RESS) and the glide slope qualification surface (GQS) at the Airport. In addition, off-airport habitat mitigation proposes silvicultural thinning of 180 acres. Subsequently, preliminary habitat assessments for northern long-eared bats (NLEB) were conducted by MJ staff in Spring 2016 and October 2017. There are no documented caves or abandoned mines in the vicinity of the Proposed Action that could serve as hibernacula for NLEB. There are scattered dead snags, primarily pitch pine (*Pinus rigida*), white pine (*Pinus strobus*), red oak (*Q. rubra*), and black oak (*Q. velutina*) that could serve as summer roosting habitat for northern long-eared bats. Therefore, the areas proposed for tree obstruction removal can be assumed to be suitable roosting habitat for NLEB.

Although suitable foraging and limited suitable roosting habitat for NLEB is present within the project areas, including the off-airport mitigation sites, the nearest NLEB hibernacula is located northwest of the Airport and southwest of the off-airport mitigation sites, in the town of Greenfield. Therefore, given the distance between the Proposed Action (>6 miles), NLEB are highly unlikely to be present in the vicinity of the project area. However, tree removal would be limited to October 1 through March 31 to avoid direct impacts to potential occupied roost trees.

Based on the aforementioned information and the USFWS final 4(d) rule, the Proposed Action will not result in any prohibited incidental take of the NLEB. The USFWS concurred with the FAA finding

and determined the FAA has satisfied their responsibilities under the ESA section 7(a)(2) for the Proposed Action. The USFWS determination is included on pages 1 and 2 of the 2018 BO (see Appendix A).

5.3.3. Biological Resources Summary and Mitigation

The No Action alternatives for the proposed projects would not impact any biological resources. The KBB and their habitat and potential NLEB habitat would remain the same. Wildlife would continue to be a hazard to airport users if the proposed mowing improvements and perimeter fence replacement is not implemented.

The majority of the Proposed Action project area consists of maintained airfield grasslands for on-airport projects and forested residential areas for proposed off-airport obstruction removal. The on-airport projects would occur within habitat of the protected butterfly species and potential bat habitat. Conservation measures would be taken to avoid, reduce, or eliminate adverse effects or enhance beneficial effects on the impacted species.

The Proposed Action would impact approximately 77 acres of KBB habitat. Off-airport habitat mitigation is being proposed in the towns of Wilton and Northumberland, approximately 15 miles northeast of the Airport on County owned land. The mitigation sites, totaling approximately 180 acres, are located in the vicinity of known KBB habitat and viable populations. The off-airport mitigation sites are forested County owned properties that are currently being managed for timber harvesting. Proposed habitat impacts and mitigation have been approved by the USFWS as indicated in the 2018 BO. Additionally, the impacts will require approval from the NYSDEC with an Incidental Take Permit.

Mitigation of potential impacts to NLEB as a result of off-airport obstruction removal would include time of year restrictions for tree removal. In addition, mitigation for impacts to the KBB would include measures to avoid and minimize impacts during construction and creation of butterfly habitat at off-airport mitigation sites. Projects would be phased to ensure butterfly habitat mitigation success and to phase the amount of habitat impacts to limit large scale impacts and provide the butterfly population time to relocate or recover from proposed activities. Phasing for the design and construction of the projects would be dependent on federal grant funding with the exception of the glider run-up staging area which would be funded privately.

The Proposed Action may affect and is likely to adversely affect the federally-listed endangered KBB. However, based on the measures to avoid, minimize, and mitigate impacts, the USFWS determined that the Proposed Action is not likely to jeopardize the continued existence of the protected butterflies at the Airport and their habitat. In addition, it is anticipated that the NYSDEC would issue an Incidental Take Permit under Article 11 of the ECL for impacts to the KBB and their habitat.

5.4. CLIMATE

Climate change is a global phenomenon that has been attributed to increasing concentrations of greenhouse gases (GHGs) in the atmosphere. GHGs include carbon dioxide (CO2), methane (CH4),

nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6).

Under Executive Order 13693, *Planning for Federal Sustainability*, federal agencies must make efforts to measure, report, and reduce their GHGs emissions from direct and indirect activities.

The FAA has not identified a significance threshold for GHG emissions as there is no current accepted method of determining the level of significance applicable to airport projects given the small percentage of emissions they contribute. The Proposed Action would not create additional vehicle traffic and/or operating emissions but is intended to reduce taxiing route length and queue times for aircraft. These improvements to reduce taxi times and idling should result in reduced air emissions from aircraft. Any potential increase in emissions of GHGs would be considered negligible in comparison with U.S. annual emissions and therefore would not have a significant impact on global climate change.

5.5. SECTION 4(F) RESOURCES

Section 4(f) of the Department of Transportation Act of 1966 states that federal approval will not be given to projects requiring the use of any land from a public park, recreation area, wildlife/waterfowl refuge, or historic site unless there is no feasible or prudent alternative to the use of such land, and the project includes all possible planning to minimize harm resulting from use.

Airport

According to the New York Protected Areas Database (NYPAD), there are no parks, recreation, or conservation lands on Airport property. New York State protected areas in the vicinity of the Airport are shown on Figure 5-3.

North of the Airport is forested land owned by Saratoga County; according to the NYPAD this is protected conservation land. East of the Airport and Rowland Street is the Ballston Spa Reservoir, which is a water resource owned by the Village of Ballston Spa. There are a few small water resource lands around the immediate Airport vicinity, which are deemed protected lands for flood control purposes. Finally, along the north end of the Airport property is the Rowland Hollow Waterworks Company, which is also a protected water resource according to NYPAD.

The only area that qualifies as Section 4(f) are the Burgess Kimball Memorial Park because it is publicly owned, open to the public, and major purpose is a park/recreation area. Recreational facilities at the park include but are not limited to, a playground, tennis courts, basketball courts, beach volleyball, baseball field, and pavilion. Vegetation obstruction removal is proposed on part of the parkland. However, the Proposed Action would not use or cause any substantial impacts to the park and therefore, impacts are not anticipated.

Figure 5-3: Airport - NYS Protected Areas

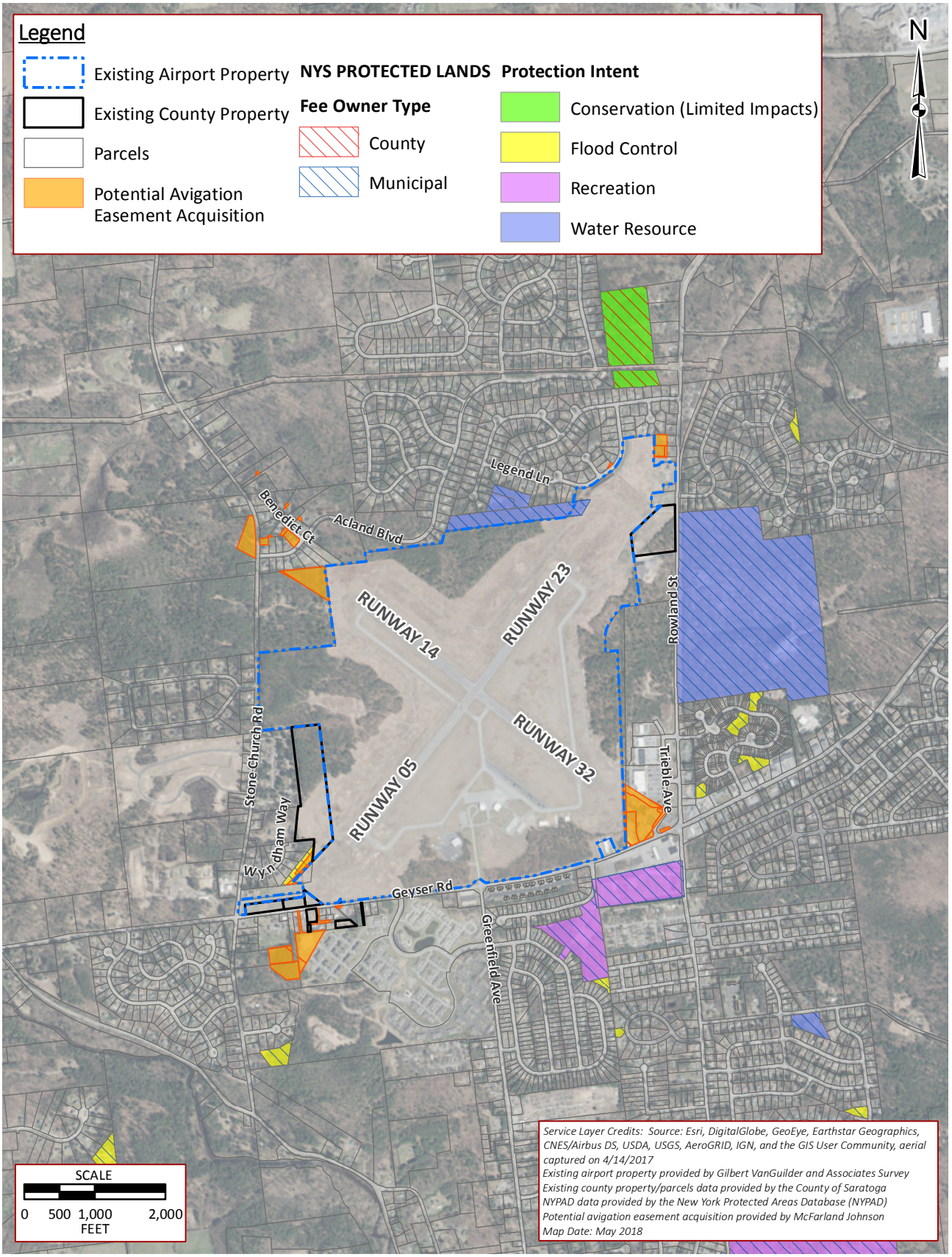

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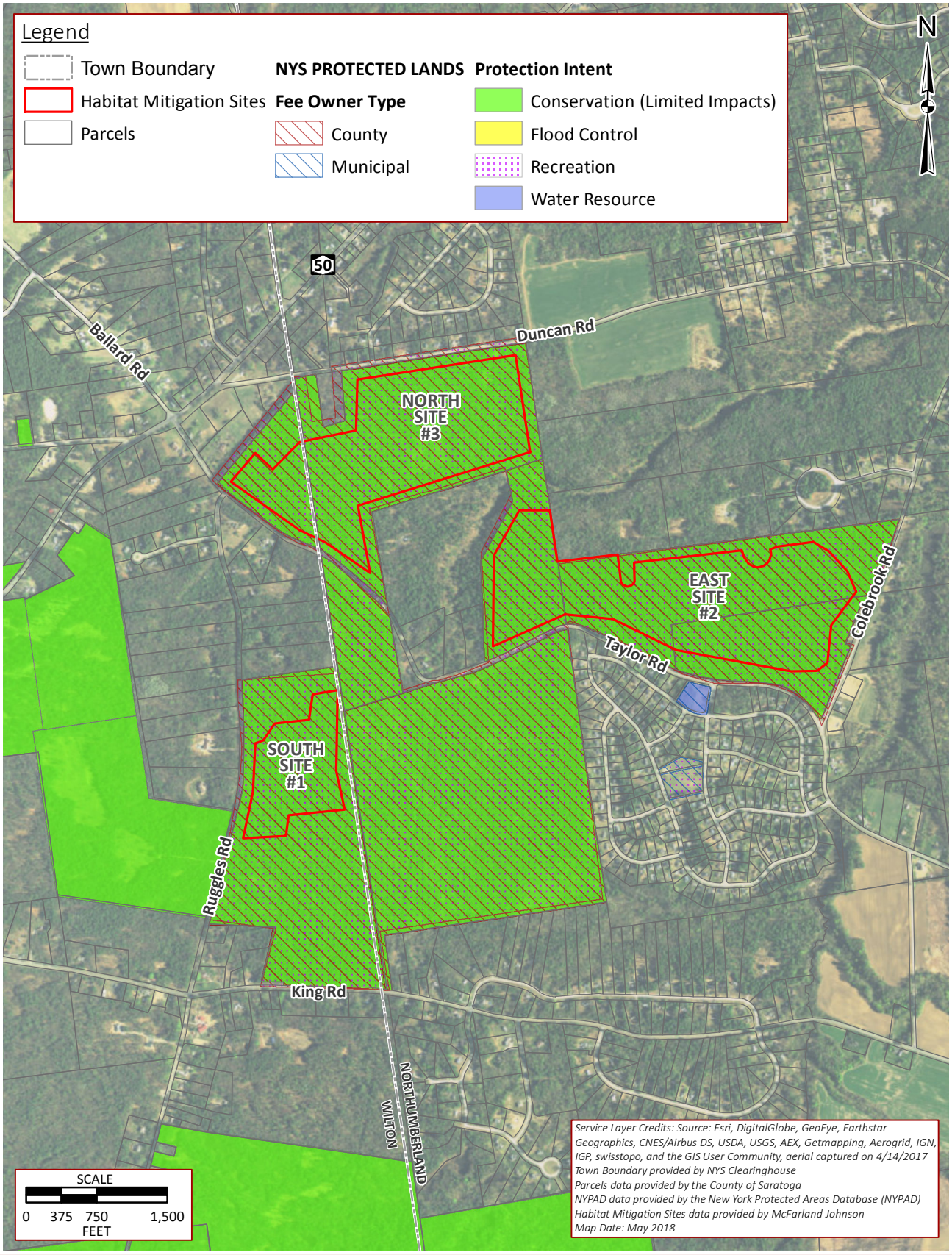
Figure 5-4: Off-Airport Habitat Mitigation - NYS Protected Areas



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Off-Airport Mitigation

Proposed habitat mitigation would take place on approximately 180 acres on three separate sites located 15 miles northeast of the Airport. The three sites are located on land classified by New York State as County owned recreational lands. Conservation lands are located adjacent to and in the vicinity of the mitigation sites. In addition, the mitigation sites and lands in the vicinity are located within the WWPP. State protected areas in the vicinity of the off-airport habitat mitigation sites are shown on Figure 5-4.

The proposed habitat mitigation is not expected to result in negative impacts to the WWPP but is instead aligned with the mission of the WWPP and would meet the goals of the WWPP and the KBB recovery unit.

In accordance with Section 5.3.1 of FAA 1050.1F Desk Reference, there would be no physical taking of the properties as a result of the proposed habitat mitigation. The properties would remain protected under NY CNT Section 219 for the purpose of recreation. In addition, portions of the parcels outside of the mitigation areas would continue to be harvested for timber. Upon completion of the mitigation, the project area would remain available for recreational uses as currently occurs (i.e. hiking, hunting, mountain biking, etc.).

The Executive Director of WWPP and the County of Saratoga has reviewed the proposed mitigation and is supportive of increasing the habitat within the WWPP. Supporting documentation submitted to the FAA is included in Appendix B.

Based on the above, it has been determined that the proposed mitigation would have a "*de minimis*" impact and would not adversely affect the features, recreation, or protection of the land under Section 4(f).

5.6. FARMLAND

Airport

Land use surrounding the Airport is a mixture of residential, commercial, community service, vacant, and public services. However, a majority of soils within the project areas are classified by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as farmland.

Off-Airport Mitigation

A majority of soils within the sites are classified by the USDA NRCS as Prime Farmland and approximately ten percent are classified as Farmland of Statewide Importance. Land use surrounding the mitigation sites is a mixture of vacant forested land, residential, and agricultural.

At both the federal and state level, there are regulations in place to protect farmland. This section explains the laws in place and the Proposed Action's compliance with farmland protection laws.

5.6.1. Federal Farmland Protection

The Agriculture and Food Act of 1981, Public Law 97-98, contained the Farmland Protection Policy Act (FPPA), which regulates Federal actions with the potential to convert farmland to non-agricultural uses. The FPPA requires Federal agencies to consider the adverse effects their programs may have on the preservation of farmland and to review alternatives that could minimize any unnecessary and irreversible conversions of farmland. If the proposed Federal project action involves the acquisition of farmland that would be converted to nonagricultural use, it must be determined whether any of that land is eligible for protection under the FPPA. Land subject to the provisions of the FPPA is not necessarily actively farmed. Rather, the FPPA applies to the soils present on a property. Farmland protected by the FPPA is either prime farmland, unique farmland, or farmland of statewide or local importance.

There are a number of exemptions to the FPPA; however, exemptions are not applicable if any of the following conditions apply:

- The land was purchased prior to August 6, 1984, for purposes of being converted,
- Acquisition does not directly or indirectly convert farmland,
- The land is not prime farmland as defined in the FPPA,
- The land is not unique farmland,
- The land is not farmland of statewide or local importance, or
- Already committed to urban development or water storage.

The aforementioned exemptions to the FPPA are further detailed in its implementation guidelines. The FPPA does not apply to land that has already been committed to non-agricultural development in a zoning ordinance or comprehensive plan or prime farmland planned for industrial or commercial use.

Airport

The Airport, constructed in the 1940s, is already developed for aviation use and is therefore exempt from the FPPA. The properties proposed for easement and acquisition in fee are currently zoned Residential, Mixed Use District, and Town Center District. The land use types of these properties are currently commercial, residential, vacant, recreation and entertainment and public services. The majority of proposed acquisitions consist of developed residential and commercial properties. There are no actively or recently farmed areas proposed for acquisition. Based on the zoning and existing land use, the FPPA does not apply to the proposed easement and land acquisition.

Off-Airport Mitigation

The mitigation sites are currently owned by Saratoga County and part of the WWPP. The land use types of these properties are currently silvicultural in nature, and intended to be selectively thinned followed by restoration planting of butterfly nectar species to create habitat for the KBB. There are no actively or recently farmed areas on the mitigation sites. Based on the existing and proposed land uses, the FPPA does not apply to the proposed mitigation.

5.6.2. New York State Agriculture and Markets

The New York State Agriculture and Markets Law protects farmland in agricultural districts by requiring a notice of intent (NOI) and public review procedure for the acquisition of more than one acre from any actively operated farm in an Agricultural District, or a cumulative total of more than 10 acres in any Agricultural District. There are no agricultural districts in the immediate vicinity of the Airport and off-airport habitat mitigation parcels, as shown in **Figure 4-2** and **Figure 4-3**.

5.7. HAZARDOUS MATERIALS

A hazardous or contaminated environmental condition is the presence or likely presence of any hazardous substances or petroleum products (including products currently in compliance with applicable regulations) on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

Airport

The hazardous waste and contaminated materials screening conducted for the Airport included a review of available historical topographical maps, aerial photographs, and EPA and NYSDEC environmental databases files. In addition, a visual inspection of the on-airport project areas and proposed acquisition/easement areas was conducted during site walkovers by McFarland Johnson in April and May 2016.

Review of the available historical United States Geological Survey (USGS) topographical maps (1934, 1942, 1949, 1963, 1969, and 1977) and aerial photographs of the site (1964, 1995, 2001, 2004, 2006, 2009, 2011, and 2013) indicated that the area surrounding the Airport has historically largely consisted of agricultural lands and forested areas. The available USGS topographical maps and aerial photographs did not indicate the presence of any specific structures, buildings, or activities that had the potential to create environmental concerns within the vicinity of the project area.

A NETROnline Environmental Radius Report (ERR) queried on November 7, 2016, indicated 16 spill reports involving chemical or petroleum releases occurring within one mile of the center of the Airport property. The ERR did not indicate any other sites located within the vicinity of the project area that had the potential to have previously released or have the threat of a release of any hazardous substances or petroleum products into structures within the project area or into the ground, ground water, or surface water within the project area.

Review of the NYSDEC Spills Incidence (1978-Current), Environmental Site Remediation and Bulk Storage Databases conducted on November 7, 2016, indicated the 16 reports as noted above. All reported spills have been closed by the NYSDEC. The database did not indicate the presence of a historic or current environmental remediation sites under any of the NYSDEC's Department of Remediation remedial programs at or in the immediate vicinity of the Airport.

No suspected hazardous wastes or contaminated materials were identified within or adjacent to the project area during the course of the preliminary hazardous waste and contaminated materials

screening of the project area. Although the potential risk for involvement with documented or undocumented inactive hazardous waste or contaminated materials is considered to be unlikely, if hazardous materials are encountered during project construction, appropriate state and federal agencies would be notified and the material would be disposed of in accordance with applicable regulations.

Off-Airport Mitigation

Review of the NYSDEC Spills Incident (1978-Current) for the off-airport mitigation sites conducted on April 12, 2018 indicated three reports involving releases. All reported spills have been closed by the NYSDEC. The database did not indicate the presence of historic or current environmental remediation sites under any of the NYSDEC's Department of Remediation remedial programs at or in the immediate vicinity of the off-airport mitigation sites. In addition, a visual inspection of the off-airport mitigation parcels was conducted during the site walkovers by McFarland Johnson in October 2017. There was no evidence of hazardous materials on the mitigation sites.

5.7.1. Solid Waste

Increased use of the Airport would trigger a corresponding increase in the quantity of refuse generated by Airport users. The Proposed Action is expected to create some construction and demolition waste during the construction of the proposed projects.

Wood debris would be generated from the tree obstruction removal project associated with obstruction removals and silvicultural thinning as part of the off-airport habitat mitigation. The contractor would be responsible for all cut material. Unsuitable material would be disposed of at an appropriately licensed landfill. Additionally, the contractor would be responsible for disposal and reuse in accordance with all applicable local, state, and federal rules and regulations.

All solid waste from the Airport is handled by County Waste and Recycling based out of Clifton Park, New York. County Waste and Recycling transports waste to the County Landfill, located on 1319 Loudon Road, Cohoes, New York. Following completion of construction, the proposed improvements are not expected to result in a significant increase in solid waste.

5.8. LAND USE

Airport development projects have the potential to cause off-airport land use impacts. The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of an airport's noise impacts. However, it can also be associated with disruptions of the surrounding community, residential or business relocations, changes in vehicular traffic patterns, induced socioeconomic effects, and even off-airport effects from on-airport facilities such as lighting units, which are addressed in Sections 5.11 and 5.12. Noise effects are regulated under *49 U.S. Code Section 47501, et seq.* (formerly the *Aviation Safety and Noise Abatement Act* of 1979) and addressed in Section 5.11. According to the *Airport and Airway Improvement Act* of 1982 (section 511(a) (5)), the EA shall include documentation that demonstrates that the Airport sponsor has, to the extent reasonable, taken the appropriate measures to place restrictions on the use of land, adjacent to or in the immediate vicinity of the Airport, to ensure that existing and

planned land-uses would remain compatible with normal airport operations, including the landings and takeoffs of aircraft.

In planning future airport developments, it is important to identify early in the planning process existing and planned land uses that could affect or be affected by the Airport improvements to avoid or minimize effects that would disrupt land use compatibility with the Airport. Sensitive land uses generally include residences, schools, religious institutions, parks and recreation areas, and other public places. Potential impacts to these sensitive receptors include noise generated by aircraft and ground traffic and safety hazards. Other potentially incompatible land uses near airports include facilities that generate high levels of electrical transmissions or bright lights, wildlife habitat that attracts birds and other animals with the potential to interfere with airport operations, and tall structures or other objects obstructing navigable airspace.

Airport

The Airport is located in a generally flat area and presently occupies approximately 559 acres, which includes airfield and landside facilities and undeveloped areas. Airport property is located in the town of Milton, which has existing zoning ordinances, land use codes, and a Land Use Plan. According to the Saratoga County Planning Office, the Airport property is classified as "Airport" land use and "Airport District" for zoning purposes. Properties west and north of the Airport are zoned as R1 – Residential. Properties east of the Airport are within the Town Center District Zoning. To the south of the Airport, properties are R1 – Residential, Town Center District, and Mixed-Use zones. A town salt shed was constructed between the Airport property and Rowland Street and two single family homes were constructed off Stone Church Road. In addition, a residential subdivision is being constructed on the west side of Stone Church Road. According to officials at the planning offices of the town of Milton, as of September 2016, there are no other known planned developments in the vicinity of the Airport. As stated in Section 4.6, development within the town of Milton is guided by the existing Land Use Plan, the Town Zoning Codes, and the Town Subdivision Codes. More specifically, the town of Milton's Site Plan Review regulates improvements within FAA Code of Federal Regulations (CFR) Part 77 surfaces and the Airport District and Runway Protection Zone Overlay District. The Saratoga County Planning Board also reviews projects to assist in the administration of the Town's land use ordinances. Land use and zoning in the vicinity of the Airport are shown on **Figure 4-4** and **Figure 4-5**.

The closest noise receptors to the Airport are residential properties located to the north, west, and south of the Airport property. The closest residences to runway ends include houses on Geyser Road approximately 1,300 feet from the Runway 32 threshold, houses on Wyndham Way approximately 950 feet from the Runway 5 threshold, houses on Acland Boulevard located approximately 1,000 feet from the Runway 14 threshold (within the approach path), and houses on Legend Lane located within 1,200 feet of the Runway 23 threshold.

As discussed in Chapter 3 of this EA, it is recommended that approximately 23.58 acres of land be acquired in easements to protect for the runway object free area (ROFA), runway protection zones (RPZs), RESSs, and GQS of the Airport. Additionally, approximately 15.55 acres of vegetation obstruction removal (both on- and off-airport) are recommended. This includes the trimming and/or removal of trees and shrubs penetrating the airspace surfaces surrounding the Airport.

Obstruction removal and land easement/acquisition would allow the Airport to own or control the land in the approach surfaces and RPZs, thus improving land compatibility and preventing future incompatible activities. The remaining land use surrounding the Airport would remain compatible, and no adverse effects are anticipated. Implementation of the Proposed Action would not disrupt the community or relocate residences, induce negative socioeconomic impacts. Overall, no significant impact to land use compatibility is anticipated with implementation of the airport improvement projects.

Off-Airport Mitigation

The proposed mitigation sites are located on County owned land totaling approximately 351 acres, classified as County Forest. In addition, the sites are part of the KBB recovery unit and WWPP, which land uses include conservation, habitat creation, recreation, education, and recreational trails. Land use and zoning in the vicinity of the off-airport mitigation sites are shown on Figure 4-6 and Figure 4-7.

The proposed mitigation land use would be compatible with planned land uses and goals of the WWPP and the KBB recovery unit. In addition, the mitigation construction would be conducted in phases to ensure a successful KBB habitat and phase the amount of silvicultural thinning. Overall, no significant impact to land use compatibility is anticipated with implementation of the off-airport habitat mitigation.

5.9. NATURAL RESOURCES AND ENERGY SUPPLY

The projects would use a relatively small amount of readily available natural resources for construction and demolition of taxiways and obstruction removal. As noted in Section 5.12 of this EA, lighting of proposed taxiways would be essentially the same as the lights to be removed/no longer used from the closed taxiways. Overall, the proposed improvements are not of the scale or type to have a significant effect on natural resources or energy supply.

5.10. NOISE

Aircraft noise emissions, inherent to the operation of an airport, can adversely impact land use compatibility between an airport and surrounding properties, particularly in the presence of noise-sensitive receptors. Residences, places of worship, hospitals, schools, parks, and amphitheaters are receptors that are sensitive to elevated noise levels. Therefore, it is important to predict any change in noise levels associated with airport development and to determine the significance, if any, of the impact to noise sensitive land uses. Then, abatement measures can be incorporated into airport development plans to avoid or minimize the impacts.

The proposed projects in this EA are to be completed to provide enhanced safety to aircraft utilizing the Airport and are not anticipated to increase aircraft operations. As detailed in the 2015 Master Plan Update, the noise contours at 65, 70, and 75 decibels (dB) utilizing the Day-Night Average Level (DNL) are anticipated to remain well within the Airport property based on forecasted operations through 2032. As a result, an increase in aircraft noise levels is not expected.

5.10.1. Noise Aircraft Impacts

Noise emissions generated by aircraft and the operation of an airport can have an impact on land uses surrounding an airport. Some land uses are more susceptible to noise impacts than others. Typically, places of religious worship, hospitals, schools, parks, amphitheaters, and residential structures are considered noise-sensitive land uses, while recreational land uses are moderately noise-sensitive. Noise levels inherent to airports are generally compatible with most industrial, commercial, and agricultural land uses. Therefore, it is important to measure or model existing noise levels and then predicts future noise levels to determine if impacts would occur to any noise-sensitive land uses near the airport.

The FAA has developed the Aviation Environmental Design Tool (AEDT) to evaluate the noise impacts of aviation activity on surrounding areas. The current version of AEDT, 2d, was utilized in this study. This program models cumulative aircraft noise expressed in decibels (dB), using the Day-Night Average Sound Level (DNL). Decibels are measured in A-weighted units, which approximate the range of human hearing. The DNL is the average daily noise level, with an additional 10-dB weight for nighttime aircraft operations (between 10:00 pm and 7:00 am). 65 dB DNL is considered by FAA to be the threshold of impact for noise sensitive land uses. Once the mean aircraft operations were calculated, noise contours were computed.

The FAA's threshold of significance is a 1.5 dB DNL increase in noise over any noise sensitive area located within the 65 dB DNL contour. Therefore, if the proposed FAA action results in an increase within the 65 dB DNL of 1.5 dB DNL or greater on any noise sensitive area, it would be necessary to do further analysis using DNL contours to express in more detail the impact on specific areas. Table 5-5 presents DNL levels associated with common land uses in order to put the 65 dB DNL into perspective.

Table 5-5: Typical Outdoor Day-Night Noise Levels

DNL Day-Night Noise level (dB)	Location
50 dB	Residential area in a small town or quiet suburban area
55 dB	Suburban residential area
60 dB	Urban residential area
65 dB	Noisy urban residential area
70 dB	Very noisy urban residential area
80 dB	City noise (downtown of major metropolitan area)
88 dB	Third floor apartment in a major city next to a freeway

Source: "Noise Fundamentals Training Document, Highway Noise Fundamentals," FAA

Noise exposure levels at the Airport were determined for the Baseline (2019) No-Build Scenario and the Proposed (2019) Build Scenario. The baseline scenario assumes that current operations would grow in line with the approved aviation forecast conducted as part of the 2015 MPU. The 65, 70, and 75 dB DNL contours were calculated for both scenarios using AEDT Version 2d.

Data input for AEDT included aircraft operations, operational fleet mix, operations by time of day, runway length and orientation, and runway use as discussed in the following sections. The output included metric results for noise and emissions by aircraft operations.

Aircraft Operations

Aircraft operations are defined as the total number of takeoffs and landings at an airport. The operations used in the AEDT study for the Airport were based on the 2015 Master Plan Update (MPU). The MPU forecast listed 38,550 operations for 2012 with a projected increase to 42,302 annual operations in 2032. This rate of growth was maintained and operations for 2017 were adjusted for actual counts from the Airport's FAA Form 5010-1 – Airport Master Record. As a result, the baseline scenario assumed 38,909 total operations in 2019.

Operational Mix

Operational mix represents the type of aircraft (and representative model) utilized in this study to analyze operations at the airport. The mix of specific aircraft models within each aircraft category was determined by review of existing operations, the 2015 MPU, FAA Traffic Flow Management System Counts (TFMSC), and projections based on industry aircraft fleet trends. Table 5-6 shows the aircraft categories and the selected aircraft used in the AEDT model.

Table 5-6: Aircraft Fleet Mix and Representative Aircraft

Aircraft Type	Aircraft
GA – Single Engine	Cessna 172 Skyhawk
GA – Multi Engine	Cessna 310
GA – Turboprop	Pilatus PC-12
GA – Jet	Cessna Citation Sovereign
	Dassault Falcon 2000
	Bombardier Lear 35
	Gulfstream G280
Military	C-130
Helicopter	Sikorsky S76

Source: McFarland Johnson, 2018

Operations by Time of Day

Forecasts for daily operations are made by aircraft type for daytime (7:00 am through 10:00 pm) and nighttime operations (10:00 pm through 7:00 am). Currently, the majority of the operations at the Airport occur during daytime hours. It was assumed that in Build and No-Build scenarios, 90 percent of all operations would continue to be conducted in the daytime and the remaining 10 percent would be conducted at night.

Runway and Length and Orientation

Runway 5-23 is 4,699 feet long and 100 feet in width. Aircraft operations were assumed to depart and land on tracks generally aligned with Runway 5-23. Runway 14-32 is 4,000 feet long and 100 feet in width and aircraft operations were assumed to depart and land on tracks generally aligned with Runway 14-32.

Runway Use

Runway use is generally dictated by wind direction, with pilots favoring operations into the wind. This noise analysis estimated the runway use percentage as follows:

- Runway 5: 15%
- Runway 23: 60%
- Runway 14: 5%
- Runway 32: 20%

Metric Results

The results of the noise analysis for the two scenarios: (1) Baseline 2019 No-Build, and (2) Proposed 2019 Build, are described below and illustrated on **Figure 5-5** and **Figure 5-6**.

5.10.2. Noise Construction Impacts

Temporary noise effects would result from obstruction removal, construction activities, and tree and vegetation removal for off-airport habitat mitigation and include noise generated from heavy equipment, truck traffic, and other construction activity. Obstruction removal, construction activities, and tree and vegetation removal for off-airport habitat mitigation would be carried out during normal daylight hours.

Construction of the proposed projects would be phased over an estimated 5-10 years, depending on funding availability. Anticipated construction duration, weather dependent, for the projects are as follows: perimeter fence replacement is anticipated to be phased with each phase being two months; partial-parallel taxiway construction is anticipated to be three to four months; Taxiway C improvement is anticipated to be two months; the glider staging/run-up area is anticipated to be two months; and the off-airport habitat mitigation is anticipated to be phased with each phase being four months. Obstruction removal would be phased, and duration of tree removal activity would be dependent on the amount of tree clearing on the property and could range from 1 to 30 days.

Figure 5-5: Noise Contours - 2019 No-Build

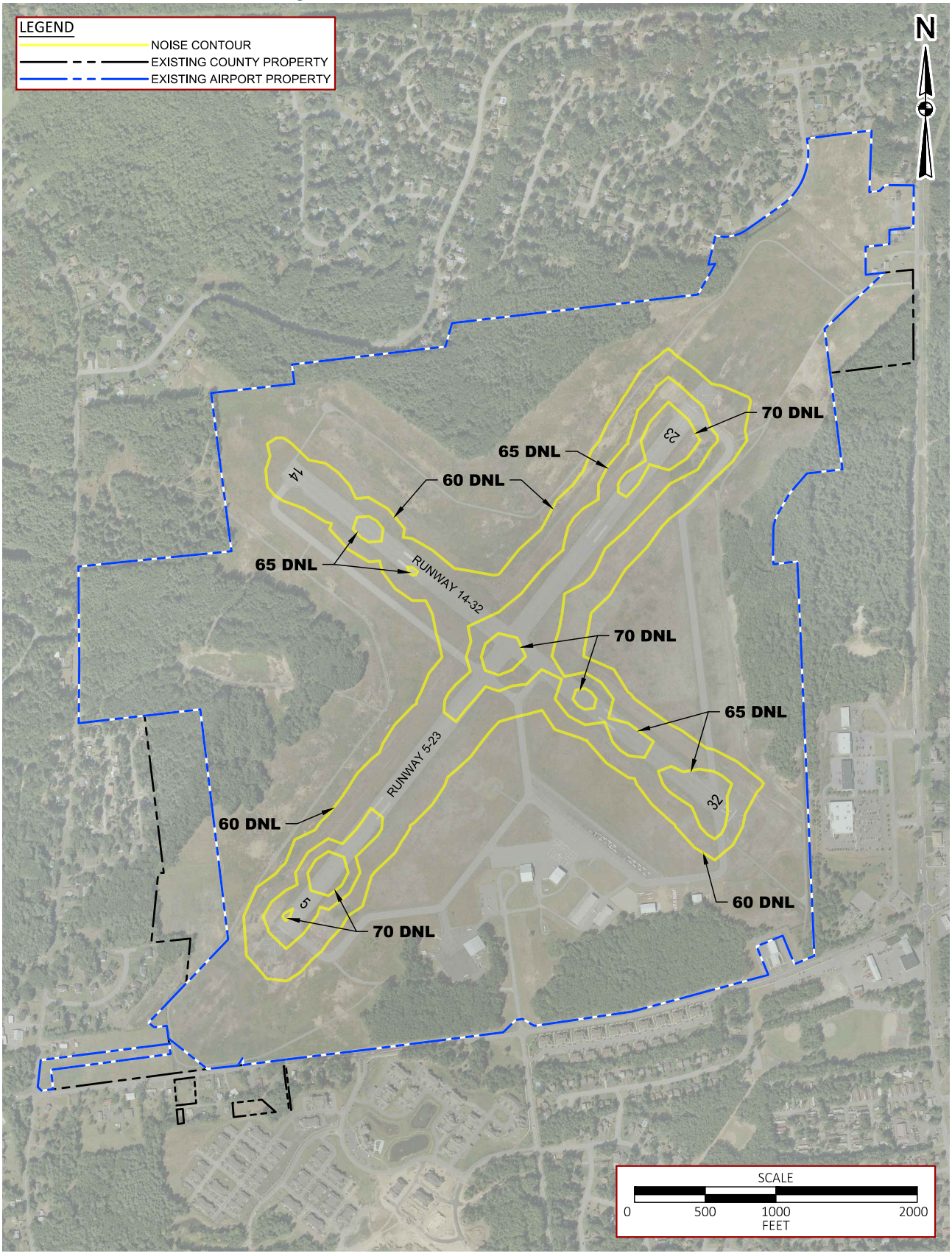

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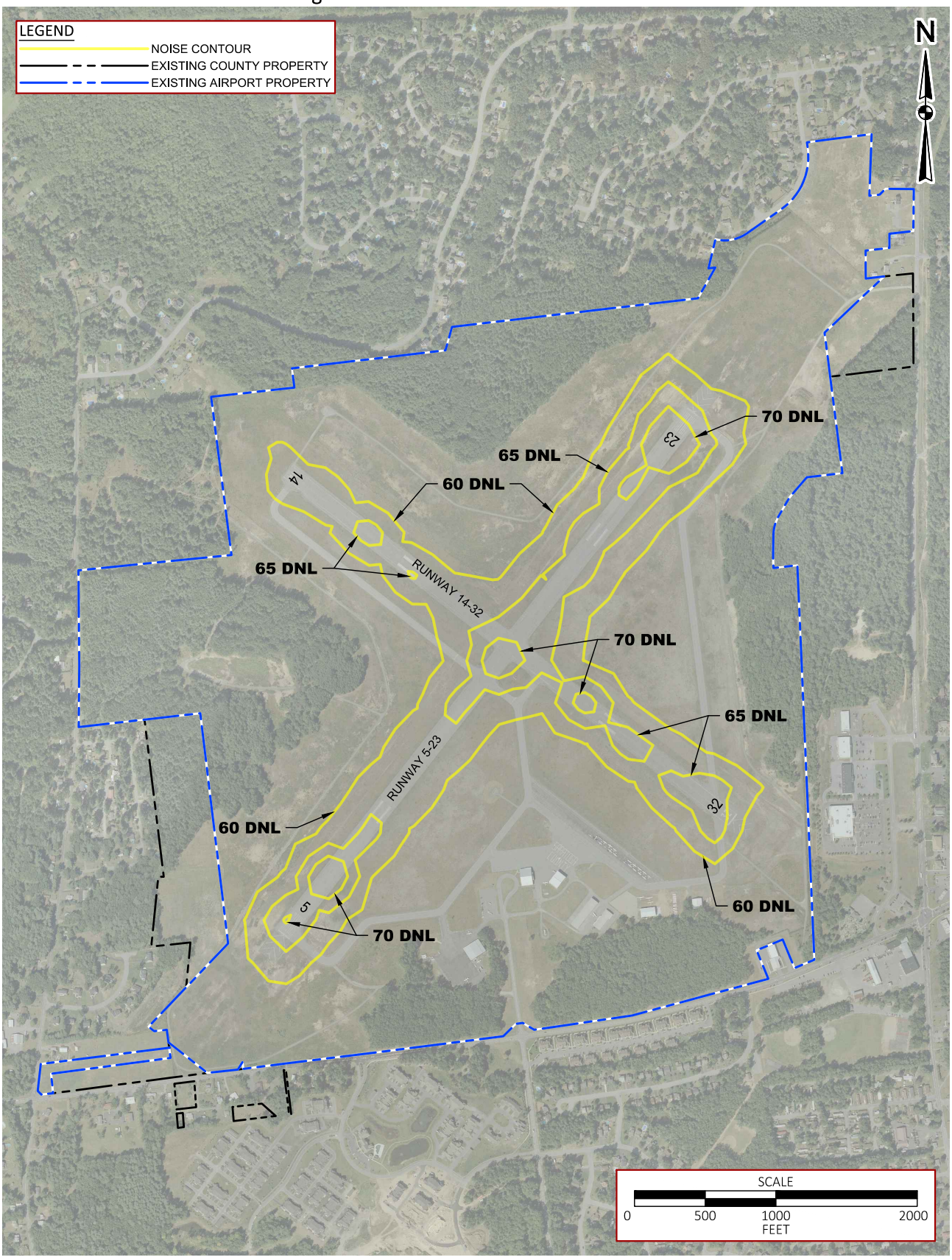
Figure 5-6: Noise Contours - 2019 Build



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Obstruction removal projects would take place on residential and commercial properties and in some instances tree removal would be located in close proximity to a residence or business. However, tree removal would be short-term in duration. The nearest residential noise receptors to the remaining proposed projects are located on the south side of the Airport, south of Geyser Road, approximately 900 feet from the proposed Taxiway C and Glider Staging/Run-up project area. The nearest business receptor to the same project is located on the north side of Geyser Road approximately 750 feet to the south. Construction activities would occur during daylight hours and may be audible from nearby residences and businesses. However, the effects are considered to be temporary and depend upon the nature of the operation. Construction noise would be intermittent, depend on the location and functions of the equipment, and would be temporary and short-term in duration. Construction contract documents would require construction equipment to be properly equipped and maintained so as to minimize off-site construction noise impacts.

Airside construction activities would have minimal impacts on the operation of the Airport. As a result of the proposed construction activities, closures to pavements throughout the construction period are anticipated, which would lead to variations in air traffic and operations. The existing taxiways would remain operational throughout the duration of the partial-parallel taxiway and Taxiway C construction. However, construction of the taxiways would have a temporary effect on aircraft taxiing patterns during construction when tying into existing taxiways or runways. Construction activities would be carefully coordinated with Airport Fixed Base Operator (FBO) and the contractor(s). Notices to Airmen (NOTAM's) would be issued by Airport management as needed. The construction sites would be marked and barricaded in accordance with current FAA standards.

Based on this analysis, it can be concluded that the Proposed Action would not result in any significant noise impacts during any phases of construction.

5.11. SOCIOECONOMIC, ENVIRONMENTAL JUSTICE, AND CHILDREN'S HEALTH AND SAFETY RISKS

Aviation infrastructure projects have the potential to directly or indirectly affect socioeconomic conditions in surrounding communities. The Federal Council on Environmental Quality (CEQ) regulations at 40 CFR 1500 require that the "human environment" be addressed concerning the relationship of people with their natural and physical environments. These effects may include, but are not necessarily limited to, shifts in populations, incomes, and growth patterns; public service demands; business and economic activity; creating a notable change in employment; and disruption to established neighborhoods. Federal regulations at 40 CFR 1508.27(b) require Federal agencies to consider any significant effects from a project due to its intensity and context. Most adverse socioeconomic impacts that are associated with aviation infrastructure result in the disruption of established neighborhoods or transportation patterns. These changes can require alterations to public services including fire and police protection, education and utility services, businesses, or employment opportunities. This section describes potential changes to local industry, employment, income, and the tax base.

5.11.1. Industry, Employment, and Income

According to the U.S. Census Bureau American Community Survey (ACS) 2012-2016 5-year Estimates, the Saratoga County population was 224,929 by the end of 2016. By December 2016, the average unemployment rate was 7.5 percent in New York State and 7.4 percent nationally. Overall unemployment in Saratoga County is lower than the state or national average and was at 5.4 percent in December 2016.

By the end of 2016, the median household income for Saratoga County was $74,080, compared to $60,741 for the State of New York, and nationally from 2012-2016 the median household income was $55,322. The average household income in Saratoga County is higher than both the state median and the national average.

5.11.2. Community Tax Base

For purposes of this EA, it is assumed the Proposed Action would involve the acquisition of land and/or avigation easements. Affected landowners have not yet determined whether they would prefer an avigation easement or in-fee acquisition. Acquisitions would be conducted in accordance with FAA Order 5100.37 *Land Acquisition and Relocation for Airport Development Projects.* According to the New York State Office of Real Property Tax Services as of November 2017, the Saratoga County Total Tax Levy was $54,170,081 in 2018[2]. More specifically, the Town of Milton's Tax Levy was $ 1,250,506 in 2017[3], the Town of Wilton's Tax Levy was $1,978,044[4] in 2017, and the Town of Northumberland's Tax Levy was $377,425[5] in 2017.

The Proposed Action would take place on Airport property and include acquisition of land and/or avigation easement. There would be a small loss of community tax base due to the proposed acquisitions. However, the proposed acquisitions would not produce a substantial change in the community tax base loss.

5.11.3. Environmental Justice

An environmental justice analysis considers the potential of federal actions, including those involving federally obligated airports, to cause a disproportionate and adverse effect upon low-income or minority populations. Physically, Saratoga County Airport is within the town of Milton, adjacent to the City of Saratoga Springs approximately half a mile to the northwest. The off-airport

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[2] Saratoga County Final 2018 Tentative Assessment Rolls: <http://www.saratogacountyny.gov/wp/wp-content/uploads/2017/11/2018-Tentative-Budget.pdf > accessed April 25, 2018.

[3] Town of Milton Final 2017 Assessment Rolls: <http://www.saratogacountyny.gov/wp/wp-content/uploads/2017/06/FINLROLL42.pdf > accessed April 25, 2018.

[4] Town of Wilton Final 2017 Assessment Rolls: <http://www.saratogacountyny.gov/wp/wp-content/uploads/2017/06/FINLROLL56.pdf> accessed April 25, 2018

[5] Town of Northumberland Final 2017 Assessment Rolls: < http://www.saratogacountyny.gov/wp/wp-content/uploads/2017/06/FINLROLL46.pdf> accessed April 25, 2018

habitat mitigation sites are located within the towns of Wilton and Northumberland, which are part of Saratoga County,

As shown on Table 5-7, recorded the town of Milton having a total population of 18,784, with 94 percent white and 7.7 percent below the poverty threshold. When considering median household income, the median in Milton is $64,464, which is approximately $9,142 above the national median household income, and approximately $9,134 below the county median household income.

The NYSDEC Environmental Justice Preliminary Mapping showing the locations of such minority population was accessed on April 23, 2018. The mapping did not identify any areas of concern in the vicinity of the Airport or off-airport mitigation sites for populations that are potentially sensitive to environmental justice.

Environmental justice areas in Saratoga County are remote from the project area and no high and adverse effects are anticipated from the project. Therefore, it can be concluded that disproportionately high and adverse human health or environmental effects are not anticipated to occur among minority or low-income populations as a result of the Proposed Action.

Table 5-7: Demographic Profile Surrounding the Saratoga County Airport

Census Category	Town of Milton	Town of Wilton	Town of Northumberland	City of Saratoga Springs	Saratoga County
Total Population	18,985	16,653	5,151	27,447	224,929
White Population	94%	93%	93%	89%	91%
Minority Population	6%	7%	7.5%	10.6%	8.7%
Population Under Age 5	6%	6.8%	5.9%	4.1%	5.2%
Population Age 65 & Older	12.2%	11.8%	11.3%	18.2%	15.8%
Individuals Below Poverty Level	7.7%	5.1%	7.9%	6.5%	6.4%
Median Household Income	$64,464	$81,130	$72,372	$73,661	$74,080
Non-English Speaking Households	3.7%	4.2%	3.9%	10.1%	7.0%

Source: U.S. Census American Factfinder, 2012-2016 5-Year Estimates.

5.11.4. Children's Health and Safety Risks

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, defines the risks to children's safety that are attributable to products or substances that the child is likely to touch or ingest including the air we breathe, the food we eat, the water we drink or use

for recreation, and the soil we use to grow food. The proposed alternatives have been evaluated for their potential to have a disproportionate effect on children's environmental health or safety. It has been concluded that the Proposed Action is not of the nature or magnitude to have an adverse effect upon the health and safety of children. Mitigation is not proposed.

5.11.5. Traffic

Airport

All of the Proposed Action construction would occur on Airport property or on County property in the case of the off-airport mitigation. Only vegetation obstruction removal would be conducted off-airport property and would not impact the level of service of any roadways. Therefore, any impacts to traffic as a result of the Proposed Action during construction are expected to be negligible and temporary in nature.

5.11.6. Conclusion

No relocation of residences or businesses is proposed. The Airport improvement projects may stimulate the local economy to some extent, by creating construction jobs and demand for readily available construction materials, resulting in increased tax revenue to the community. The increase in the community tax base is not expected to be significant. The project would not have any disproportionate effects on minority and low-income populations and would not adversely affect health and safety of children.

5.12. LIGHT EMISSIONS AND VISUAL EFFECTS

There are no special purpose laws, permits, or certificates for light emissions or their visual effects. However, light emissions or resulting visual effects from any proposed development action have the potential to affect nearby residential areas or properties covered under Section 4(f) of the USDOT Act, the Land and Water Conservation Fund Act, and Section 106 of the National Historic Preservation Act.

The FAA is required to consider the potential for lighting associated with a proposed development action to become an annoyance to people in the vicinity or interfere with their normal activities. Because most air navigational systems and other airport development actions produce relatively low levels of light intensity compared to background levels, adverse effects on human activity or the use or characteristics of protected properties, when present, are unlikely.

The Proposed Action would increase the amount of airside and landside lighting in certain areas and decrease it in other areas of the Airport. The changes are discussed in the following sections.

5.12.1. Proposed Airside Lighting

Airside lighting changes with the Proposed Action would include the following:

- The proposed partial-parallel taxiway would be lighted with medium intensity taxiway lights (MITL), which are blue in color and have low light emission. This would include approximately 1,700 linear feet of new taxiway pavement to be lit with approximately 85

lights. The associated closure of Taxiway D would eliminate approximately 1,900 linear feet (53 lights) of MITL. The closure of the taxiway stub to Runway 14-32 would reduce MITL by approximately 200 linear feet

- The proposed straightened portion of Taxiway C taxiway would be lighted with approximately 420 linear feet of MITL and 16 lights. The associated closure of Taxiway C would eliminate 15 MITLs over 652 linear feet.
- It is anticipated that the glider staging areas would be marked with either apron lights or reflectors.

5.12.2. Summary of Lighting Effects and Mitigation

Much of the proposed airfield lighting is not high intensity lighting. Taxiway light illumination is comparable to about a 40-watt lamp bulb. As such, it would not be intrusive to existing homes, especially since the new lighting would be closer to the Airport's midfield than previously. The impact of the proposed lighting is not anticipated to be greater than the existing lighting impact.

Land surrounding the obstruction removal areas consists of a mix of land uses. Obstruction removal on the Runway 14 and 23 ends would remove trees located between Airport property and residential properties. The residencies on the Runway 23 end are located approximately 0.40 mile from the runway and taxiway lighting that significant lighting emission effects from the Airport operations are not anticipated. Few residencies on the Runway 14 end would have a view of the runway and taxiway lighting as a result of obstruction removal. As done in the past, evergreen tree screenings would be planted between the airfield and residences to mitigate visual and lighting effects from tree removal. Further discussions with affected residents and business owners would take place as the project moves forward.

Based on the above, no significant visual impacts would result from the proposed projects, including vegetation obstruction removal.

5.13. WATER RESOURCES

The EA must demonstrate that compliance with the State's water quality standards and federal, state, and local permit requirements can be achieved. Design considerations, controls during construction, and other mitigation measures can be implemented to avoid significant impacts to water quality. If the EA and appropriate consultation, with regulating and permitting agencies, demonstrates that water quality standards can be met (i.e., that no special water problem exists and there is no indication of anticipated permit difficulty), it may be assumed that the project would have no significant impact on water quality. The EA shall reflect the results of consultation with regulating and permitting agencies and include a list of permits that would be required by the project.

Overall, the primary concern regarding water quality is during the construction phase. See Section 5.13.4 for a discussion of potential water quality impacts during the construction phase.

5.13.1. Wetlands

Impacts to NYSDEC regulated wetlands and 100-foot adjacent areas are regulated under Article 24 of the ECL. The NYSDEC issues Article 24 Freshwater Wetlands Permits for impacts to State-regulated wetlands and adjacent areas.

Impacts to Waters of the U.S., including federally regulated wetlands, are regulated by the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). The USACE issues activity specific Nationwide Permits (NWP) for wetland disturbances meeting specific conditions. If a proposed project does not meet the conditions of any of the USACE NWPs, an USACE Letter of Permission or Individual Permit is required before any work that causes disturbance in protected wetlands can commence.

Section 401 of the CWA provides the authority to ensure that federal agencies do not issue permits or licenses that violate their water quality standards. The NYSDEC implements Section 401 compliance through a certification process called Water Quality Certification (WQC). The NYSDEC has issued blanketed WQC for many of the NWPs, providing certain special conditions are met. Individual WQCs are required from the NYSDEC for USACE Letters of Permission, Individual Permits, those NWPs where the NYSDEC has not issued blanketed WQCs, and on projects qualifying for a NWP, but where the blanket WQC special conditions cannot be met.

In addition, when impacts to wetlands cannot be avoided, an Executive Order (EO) 11990 "Wetland Finding" must be prepared to document compliance with the order and that the wetland impacts are justified.

Airport

The on-airport projects would avoid impacts to freshwater wetlands. However, there is the potential for impacts to wetlands from off-airport obstruction removal. As discussed in Section 4.8.1, a NYSDEC regulated wetland and associated 100-foot adjacent area are located in the vicinity of proposed tree obstruction removal on the Runway 14 end. In addition, a USACE regulated stream and bordering wetland are located in the vicinity of proposed tree obstruction removal on the Runway 5 end. In order to avoid and minimize ground disturbance within wetlands, grubbing, for tree obstruction removal, would not take place within wetland areas and vegetation removal would be conducted in the winter when frozen ground conditions exist and/or would be accomplished with manual and low-pressure equipment.

Observations made during the site walkovers indicate that trees proposed for removal appear to be outside of the wetland areas on the Runway 5 and 32 ends. However, if necessary, a NYSDEC Article 24 Freshwater Wetlands Permit for tree clearing within the wetland and/or 100-foot AA would be acquired. Tree removal within wetland areas would not involve grubbing or grading, therefore tree removal activities within USACE wetlands would not be regulated by the USACE.

Wetlands identified on the Airport and in the vicinity of the obstruction removal areas are shown on Figure 4-10.

Off-Airport Mitigation

The off-airport mitigation sites were designed to avoid impacts to freshwater wetlands. In addition, a 100-foot buffer from the edge of wetlands was incorporated to avoid and/or minimize indirect impacts. Wetland identified on the off-airport mitigation properties are shown on **Figure 4-11**.

Overall, the Proposed Action is not expected to cause any significant impacts to wetlands in the project areas during the operation or construction phases of the project.

5.13.2. Surface Water

Airport

In general, the majority of surface water on the southwestern portion of the Airport property and Proposed Action project areas drains to tributaries of the Kayaderosseras Creek. The remainder of the Airport property and Proposed Action project areas drains into tributaries of Geyser Brook. According to the *Wetlands and Waterways Delineation Report* (see **Appendix C**) and site inspections performed by McFarland Johnson, no streams were identified within the Proposed Action project areas.

The Airport property consists of very sandy soils and therefore, stormwater management on Airport property is generally characterized as an open system using sheet flow, vegetated swales, and stone trenches that infiltrate stormwater onsite.

Pursuant to Section 402 of the CWA, stormwater discharges from certain construction activities are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or a similar state permitting program. New York's Stormwater Pollutant Discharge Elimination System (SPDES) is a NPDES approved program administered by the NYSDEC, with permits issued in accordance with the State's ECL. The SPDES Stormwater Discharges from Construction Activity General Permit (GP-0-15-002) requires that the operator covered under the permit implement a Stormwater Pollution Prevention Plan (SWPPP) developed specifically for the project area. As part of the SWPPP, all SPDES permit sites must develop an Erosion and Sediment Control plan to control stormwater discharge during construction, through the implementation of Best Management Practices (BMPs). Following development of the SWPPP, a Notice of Intent is filed with the NYSDEC to obtain permit coverage.

The proposed projects would disturb more than one acre of land and therefore, would require SPDES permits. The projects would be designed in accordance with the SPDES permit, current NYSDEC New York State Standards and Specifications for Erosion and Sediment Control, and the current New York State Stormwater Management Design Manual. Appropriate BMPs would address potential impacts to water quality from stormwater runoff. Also, temporary erosion and sediment controls would be implemented to avoid impacts to water quality during the construction of the proposed projects.

Post-construction stormwater management practices would be required to enhance water quality and provide water quantity control through peak flow attenuation. The proposed taxiway projects would result in an approximate net increase of 2.4 acres of impervious areas, thus stormwater

runoff must be addressed. To meet the goal of no-net increase in peak stormwater runoff from pre-project conditions, BMPs must compensate for the increase in runoff resulting from additional impervious surfaces. Proposed stormwater infiltration trenches and a stormwater basin would accommodate additional runoff from new impervious surfaces. The selected BMPs would be incorporated into the final design to control water quality and quantity and fulfill the peak flow attenuation requirements of the permit. Likewise, BMPs determined feasible for the site would be designed as part of the SWPPP, which would be implemented during construction and properly maintained thereafter, to ensure optimal performance in meeting water quality standards. The BMPs, proposed for the site, would be designed to accommodate the water quality volume. It is inherent in the design of BMPs that by meeting the water quality volume requirements, a project would meet water quality objectives by default. The stormwater management plan would comply with FAA Advisory Circular (AC) 150/5200-33B, *Hazardous Wildlife Attractants on or Near Airports*. Based on the SWPPP developed for the Airport and the application of proper BMPs, no difficulty is expected in obtaining a stormwater permit.

The primary impact to surface water quality from the Proposed Action would be increased runoff resulting from the expansion of impervious surfaces. Therefore, drainage improvements and associated BMPs would be installed to manage stormwater runoff.

Due to the implementation of a SWPPP during the construction phase and proper stormwater management during the operational phase, no significant impacts to water quality are expected to result from the Proposed Action during the operation or construction phases.

Off-Airport Mitigation

In general, the off-airport mitigation sites consist of very sandy soils and stormwater either infiltrates onsite or drains to the east to tributaries of Cole Brook, which is located within the Snook Kill subwatershed. There are no streams located on the mitigation sites. However, as discussed previously, there is a tributary of Cole Brook situated between the North and East Sites.

Proposed silvicultural thinning of the mitigation sites would require a SPDES Stormwater Discharges from Construction Activity General Permit for disturbance of greater than one acre. Appropriate BMPs would address potential impacts to water quality from stormwater runoff. Also, temporary erosion and sediment controls, such as silt fence and construction entrance, would be implemented to avoid impacts to water quality during the construction of the mitigation.

The project does not include impervious surfaces and the sites would be reestablished with a butterfly plants and little bluestem for erosion control. Due to the nature of the project, no significant impacts to water quality are expected to result from the off-airport mitigation during the construction phases or subsequent management.

5.13.3. Groundwater

Neither the Airport nor the off-airport mitigation sites rest over an EPA designated Sole Source Aquifer, or NYSDEC designated Primary or Principal Aquifer. The Proposed Action would not have a significant impact to a public drinking water supply.

The Airport's fuel storage needs are currently met by a 10,000 gallon above ground storage tank (AST) for 100 low lead (LL) aviation fuel, a 10,000-gallon AST containing Jet A fuel, both with secondary containment, a 1,000-gallon fuel truck with 100LL fuel, and a 3,000-gallon Jet A fuel truck. A spill kit receptacle contains moisture absorbent material for cleaning up small spills and is located near the fueling facility.

Overall, the Proposed Action is not expected to cause any significant impacts to groundwater quality in the project areas during the operation or construction phases of the project.

5.13.4. Water Quality Construction Impacts

Earth disturbance during construction can negatively affect water quality when sediment laden runoff is not prevented from leaving the construction site. Turbidity is the water quality parameter of greatest concern during the construction period. NYSDEC requires that there be no increase in visible turbidity when compared to natural conditions. Water quality impacts during the construction period would be minimized through the use of BMPs including appropriate erosion and sedimentation control measures tailored to specific site conditions.

A majority of the projects would disturb greater than one acre, including the off-airport habitat mitigation; therefore, a NYSDEC SPDES for Stormwater Discharges from Construction Activity General Permit (GP-0-15-002) would be required. In general, Best Management Practices (BMPs) would be utilized to assure that construction impacts are minimized to the extent practicable. Permit conditions and approvals would ensure the proposed activities would not violate water quality standards.

5.14. CUMULATIVE IMPACTS

In determining the significance of the impacts associated with the Proposed Action, it is also necessary to consider the overall cumulative impact of projects detailed in the EA and the consequences of other related projects. CEQ regulations, at 40 CFR 1508.7, define cumulative effects as the impact on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. According to the FAA, cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions". The geographic area of concern for this analysis is generally the Airport property, the properties affected by the proposed land and/or easement acquisition and tree obstruction removal, and the off-airport habitat mitigation sites. For some resources, such as socioeconomics, impacts may extend further and the geographic area of concern is larger. The time period for cumulative effects analysis is the cycle during which the project is expected to affect a resource, ecosystem, or human community.

Recently completed projects at the Airport have included completion of a MPU in 2015, WHA and WHMP in 2015 and 2016, tree obstruction removal, glider hangar construction, taxiway reconstruction, apron rehabilitation, and taxiway and visual aids lighting rehabilitation. The recent MPU identified potential Airport improvements that are foreseeable in the next 20 years. Most MPU projects planned for implementation in the next five years (Phase I) are included in the

There are no known future construction and/or development projects in the vicinity of the off-airport mitigation sites, with the exception of potential KBB habitat creation on NYSDEC owned property immediately north of the East Site.

Overall, projects in the foreseeable future that are not included in the Proposed Action are small in scale and unlikely to create notable environmental impacts. The environmental impacts of these potential future Airport projects would be analyzed in separate environmental documents. These projects would be designed to avoid or minimize impacts to sensitive resources on and off-airport property. It is not anticipated that implementation of these projects described in the MPU would contribute significantly to cumulative impacts.

5.15. PUBLIC PARTICIPATION

Public involvement for development of the Proposed Action and Draft EA was conducted in accordance with FAA Order 1050.1F. The Proposed Action was discussed at numerous meetings with the Saratoga County Buildings and Grounds Committee, Saratoga County Department of Public Works, Saratoga County Planning, USFWS, NYSDEC, FAA, and other stakeholders, including the Wilton Wildlife Park & Preserve.

Project kick-off meetings were held with the regulatory agencies, including the USFWS, NYSDEC, and FAA; the Airport sponsor; and other stakeholders, such as the town of Milton supervisor and town of Milton councilwoman. Meetings with landowners affected by the proposed land and/or easement acquisition were held in January 2016. The landowner meetings were held at the Saratoga County offices and were open to the public. The landowner meetings provided an overview of the EA and discussed the purpose and need for land and/or easement acquisition and the acquisition process. Subsequent meetings and coordination with the USFWS, NYSDEC, and FAA were conducted in the early stages of preparation of the EA and throughout to avoid and/or minimize environmental impacts.

A draft of the EA was made available for public review and comment and a public meeting was held on February 20, 2019 to provide the public with details of the Proposed Action and the opportunity to provide comments. According to the meeting sign-in sheets, forty people attended the public meeting. Public comments totaled 242, which included approximately 208 of a similar or identical comment. Responses to the public comments generally included further explanation of the project's safety improvements, future airport development plans, aircraft operations, and impacts to wildlife, especially the KBB. In addition, a *Saratoga County Airport Known Wildlife Strike History Summary,* created in response to the public comments, provides information on the airport wildlife strikes and is included in **Appendix G-1**. As a result of the feedback during the public meeting and public comments received, **Figures 1-1**, **Proposed Action** and **3-8, Proposed Safety Area Mowing Plan**, were revised to illustrate the proposed mowing improvement areas and pavement areas more clearly.

Public participation documentation including the public notice, public comments and response to public comments will be provided in **Appendix G** of this EA.

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