Melvin Lake Wind Project
Potential Common nighthawk Habitat
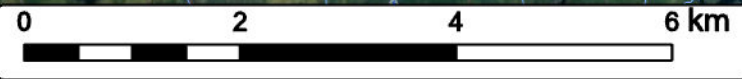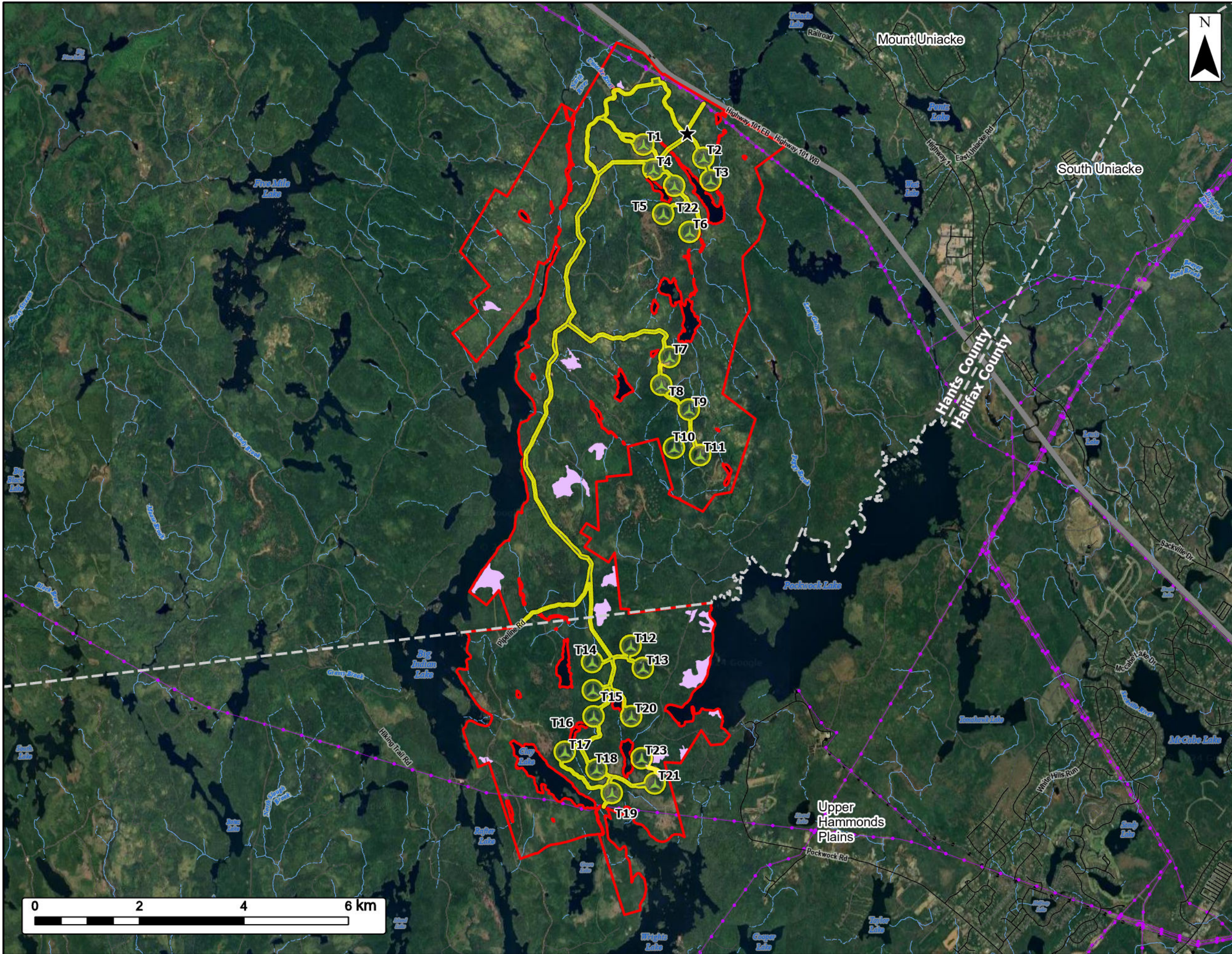
ABO ENERGY

Legend

Study Area	
Assessment Area	
Proposed Turbine Layout	
Substation	★
County Boundary Line	
Potential Common Nighthawk Habitat	

Transportation

Highway	
Road	
Unpaved Road	

Utilities (Line)

Existing Pipeline	
Existing Transmission Lines	

Water Features

Mapped Stream	
Mapped Indefinite Stream	

Coordinate System: NAD83 UTM Zone 20N

Sources: Google Basemaps, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date:	**Nov 2024**	Project #:	24-9856
Scale:	**1:70,000**	Drawing #:	
Drawn By:	P. Opra		**7.34**
Checked By:	H. Mosher		

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Melvin Lake Wind Project
Potential Eastern wood peewee Habitat

ABO ENERGY

Study Area	
Assessment Area	
Proposed Turbine Layout	
Substation	★
County Boundary Line	
Potential Eastern Wood Peewee Habitat	
Transportation	
Highway	
Road	
Unpaved Road	
Utilities (Line)	
Existing Pipeline	
Existing Transmission Lines	
Water Features	
Mapped Stream	
Mapped Indefinite Stream	

Coordinate System: NAD83 UTM Zone 20N

Sources: Google Basemaps, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date:	**Nov 2024**	Project #:	**24-9856**
Scale:	**1:70,000**	Drawing #:	
Drawn By:	**P. Opra**		**7.35**
Checked By:	**H. Mosher**		

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Melvin Lake Wind Project
Potential Evening grosbeak Habitat

ABO ENERGY
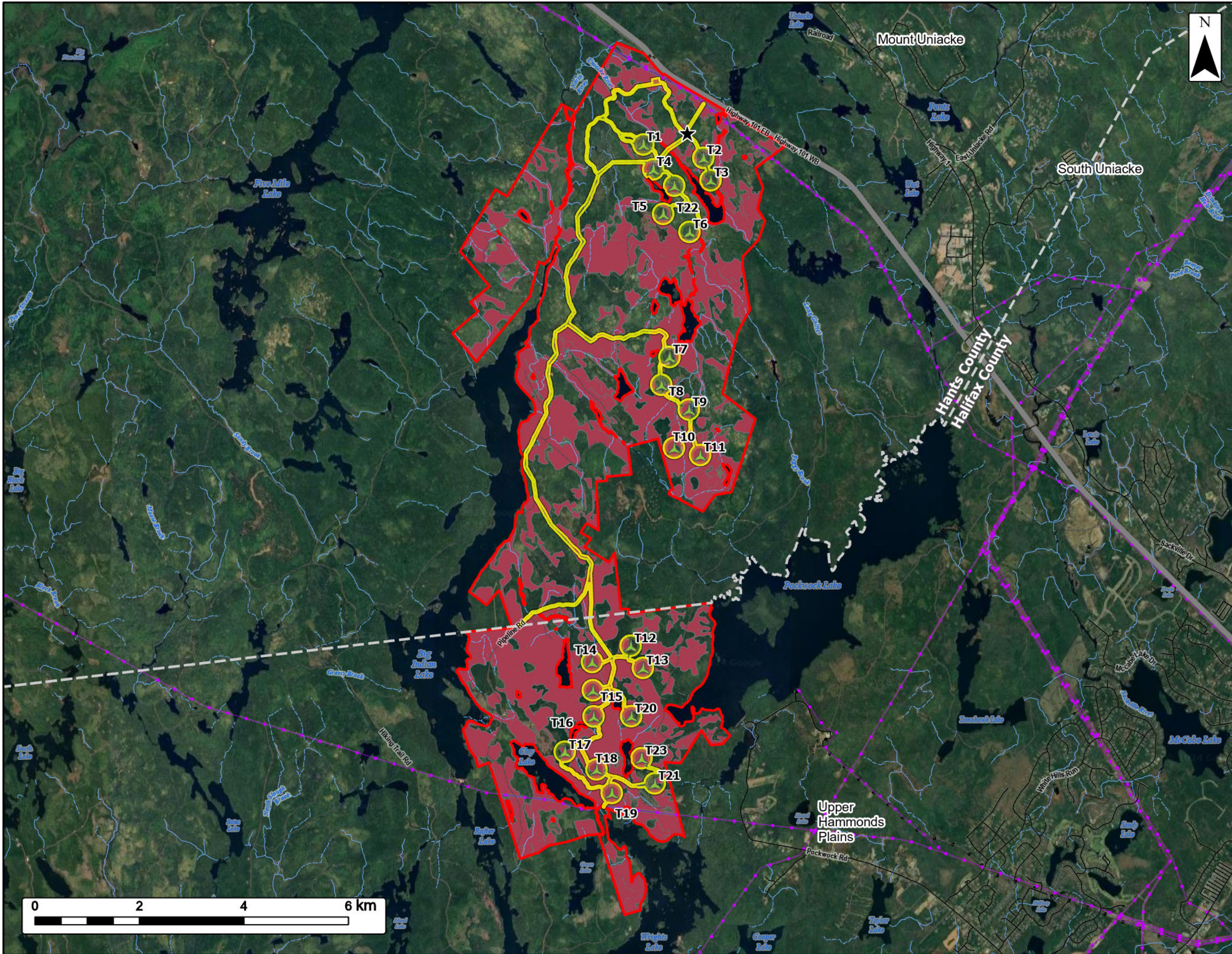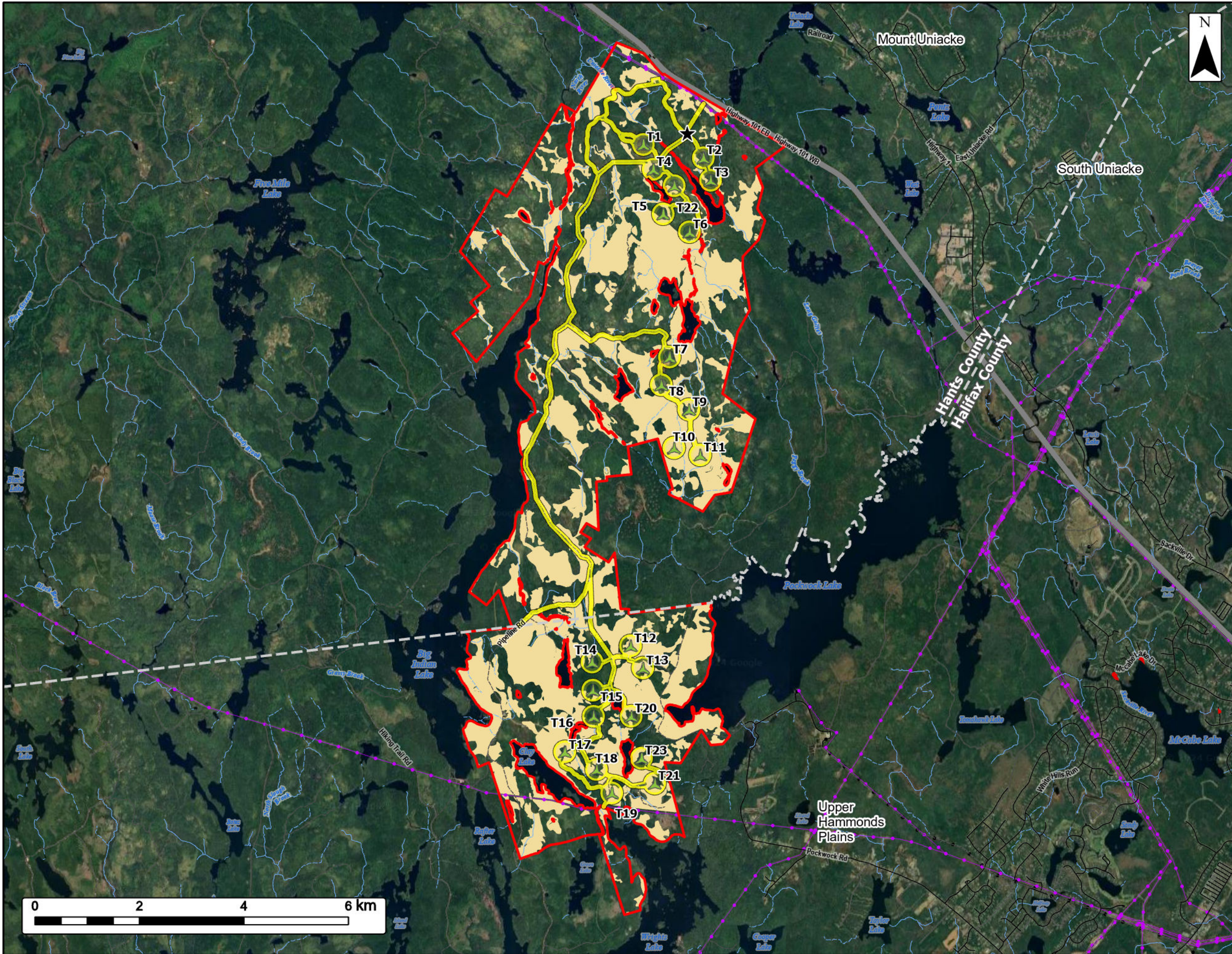
Study Area
Assessment Area
Proposed Turbine Layout
Substation
County Boundary Line
Potential Evening Grosbeak Habitat

Transportation
Highway
Road
Unpaved Road

Utilities (Line)
Existing Pipeline
Existing Transmission Lines

Water Features
Mapped Stream
Mapped Indefinite Stream

Coordinate System: NAD83 UTM Zone 20N

Sources: Google Basemaps, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: **Nov 2024**	Project #: **24-9856**
Scale: **1:70,000**	Drawing #:
Drawn By: **P. Opra**	**7.36**
Checked By: **H. Mosher**	

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Melvin Lake Wind Project
Potential Olive-sided flycatcher Habitat

ABO ENERGY

Legend	
Study Area	
Assessment Area	
Proposed Turbine Layout	
Substation	★
County Boundary Line	
Potential Olive-sided Flycatcher Habitat	
Transportation	
Highway	
Road	
Unpaved Road	
Utilities (Line)	
Existing Pipeline	
Existing Transmission Lines	
Water Features	
Mapped Stream	
Mapped Indefinite Stream	

Coordinate System: NAD83 UTM Zone 20N

Sources: Google Basemaps, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date:	**Nov 2024**	Project #:	24-9856
Scale:	**1:70,000**	Drawing #:	**7.37**
Drawn By:	P. Opra		
Checked By:	H. Mosher		

strum CONSULTING
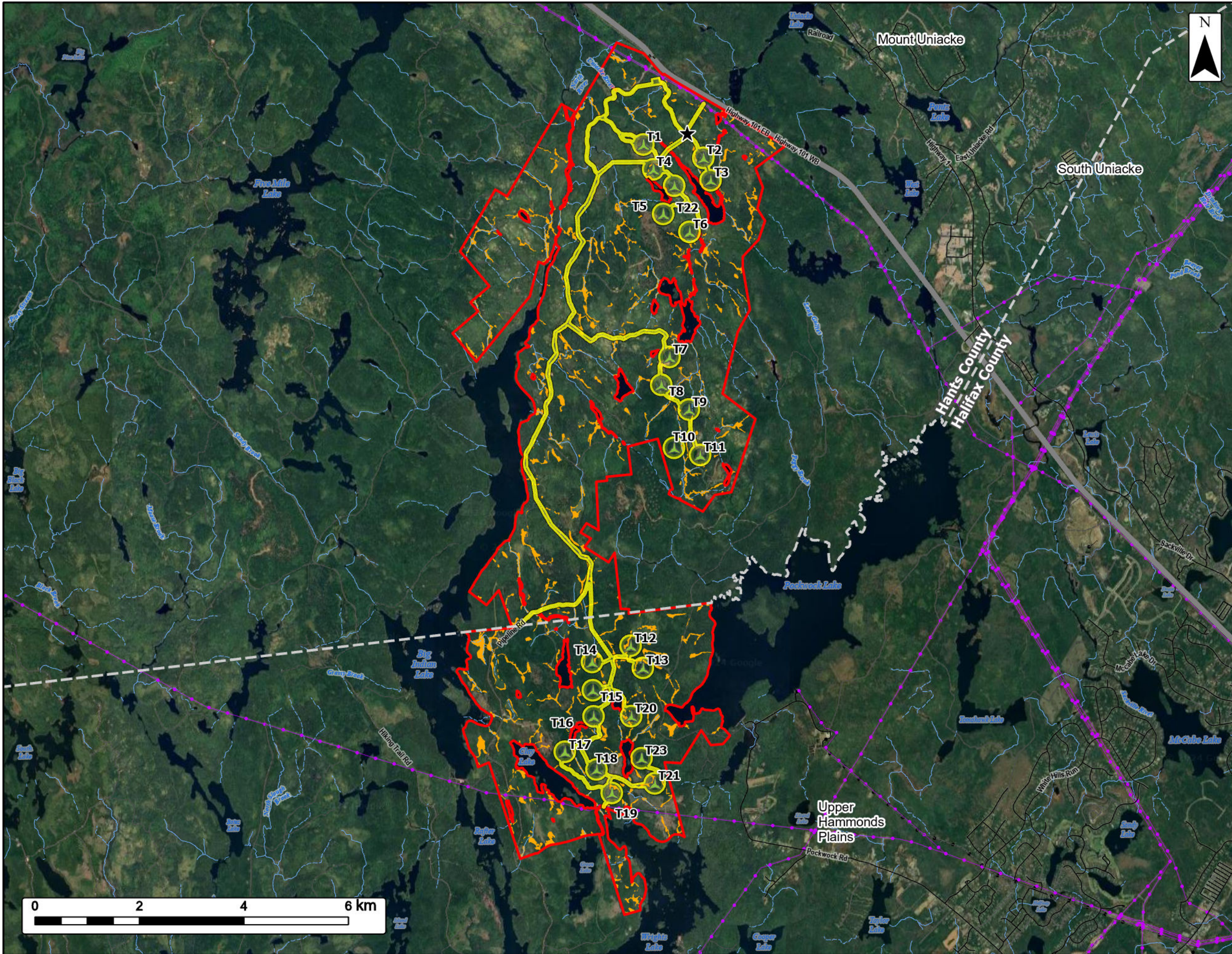
Melvin Lake Wind Project
Potential Rusty blackbird Habitat

ABO ENERGY

N

Legend

Symbol	Description
	Study Area
	Assessment Area
	Proposed Turbine Layout
★	Substation
	County Boundary Line
	Potential Rusty Blackbird Habitat

Transportation
- Highway
- Road
- Unpaved Road

Utilities (Line)
- Existing Pipeline
- Existing Transmission Lines

Water Features
- Mapped Stream
- Mapped Indefinite Stream

Coordinate System: NAD83 UTM Zone 20N

Sources: Google Basemaps, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date:	**Nov 2024**	Project #:	24-9856
Scale:	**1:70,000**	Drawing #:	**7.38**
Drawn By:	P. Opra		
Checked By:	H. Mosher		

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0   2   4   6 km

Melvin Lake Wind Farm

Shadow Flicker Hours per Year - Worst Case Scenario

ABO ENERGY

Existing Dwelling / Receptor within 2km of Turbine	🏠
Existing Pockwock Turbine	🔺
Proposed Turbine Location	🌳

Shadow Flicker Hours per Year (Worst Case Scenario)

- 10-29
- 30-99
- 100+

Water Features

- Mapped Stream
- Mapped Indefinite Stream
- Mapped Lakes and Rivers

Transportation

- Highway
- Road
- Unpaved Road

Utilities (Line)

- Existing Pipeline
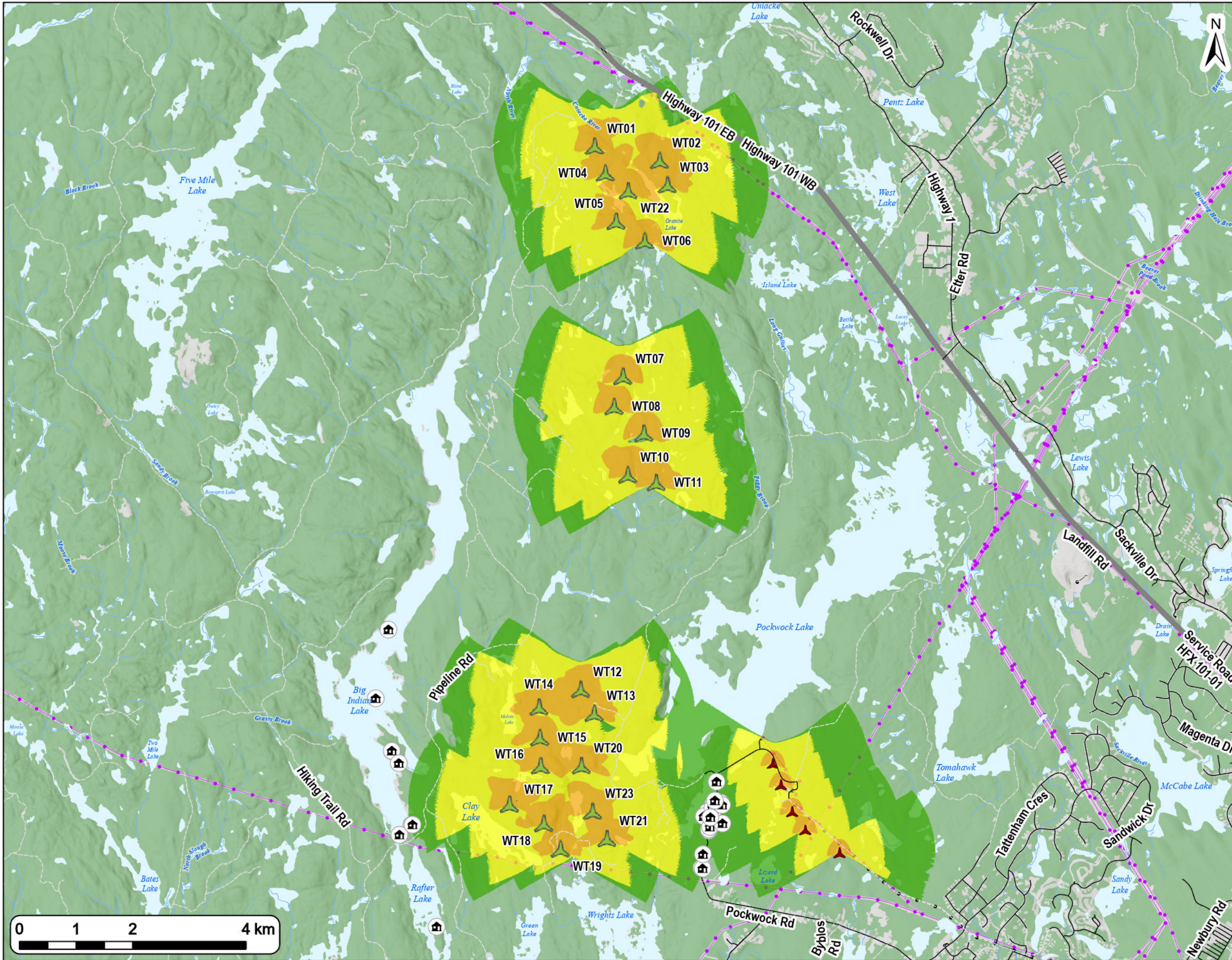- Existing Transmission Lines

Note: Shadow flicker was modelled using using **WindPRO v4.0** software. Worst case scenario shadow flicker assumes the sun is shining from sunrise to sunset 365 days of the year.

Coordinate System: NAD83 UTM Zone 20N
File: 24-9856_MVL_WindPRO.aprx

Sources: ESRI Basemaps, GeoNOVA, NSTD, HERE, Garmin, USGS, NRCan

Date: November 18, 2024	Project #: 24-9856
Scale: 1:65,000	Drawing #:
Drawn By: E. Johnson	**10.1A**
Checked By: H. Mosher	

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Scale: 0 1 2 4 km

Melvin Lake Wind Farm
Shadow Flicker Minutes per Day - Worst Case Scenario

ABO ENERGY

Existing Dwelling / Receptor within 2km of Turbine

Existing Pockwock Turbine

Proposed Turbine Location

Shadow Flicker Minutes per Day (Worst Case Scenario)
10-29
30-99
100+

Water Features
Mapped Stream
Mapped Indefinite Stream
Mapped Lakes and Rivers

Transportation
Highway
Road
Unpaved Road

Utilities (Line)
Existing Pipeline
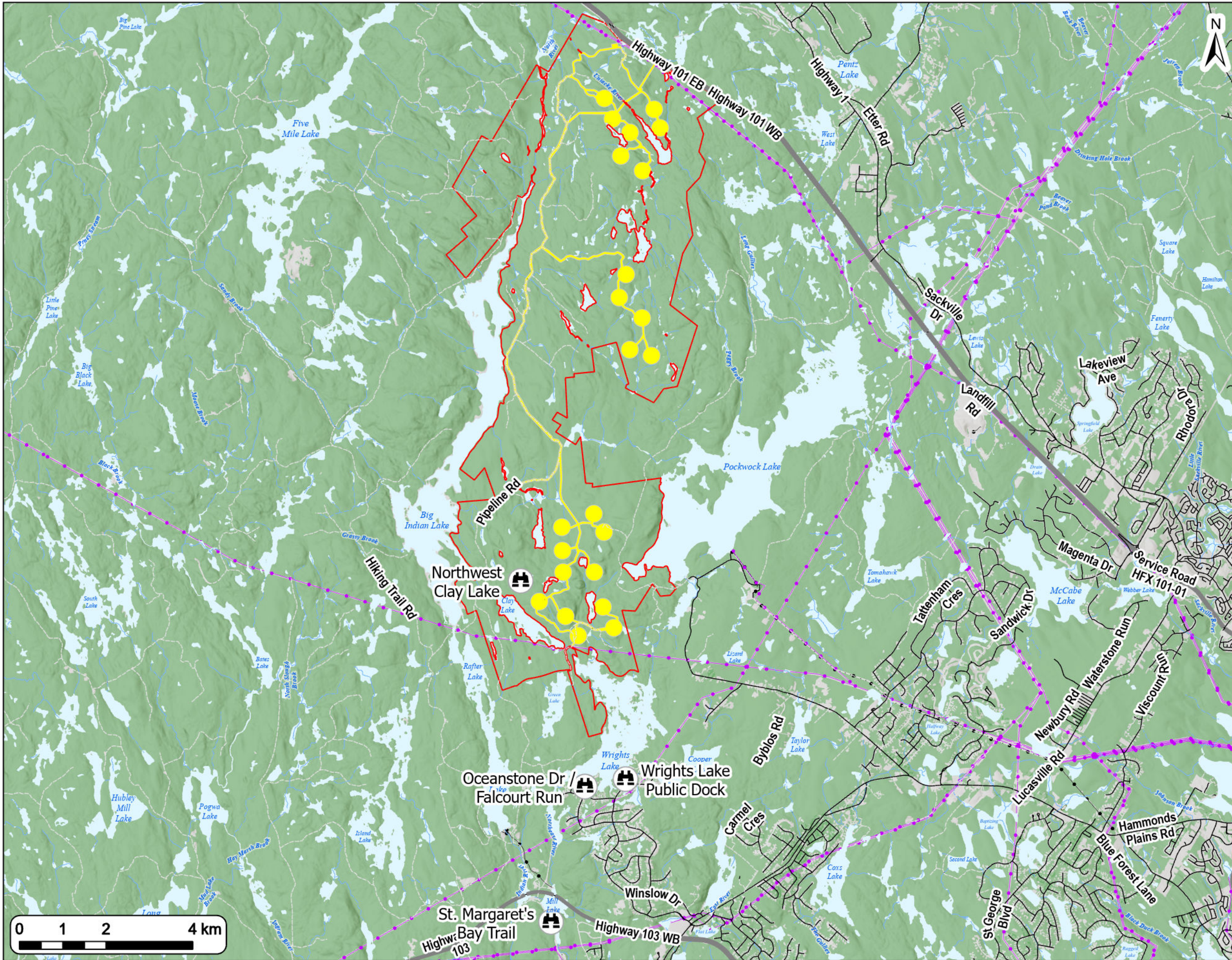Existing Transmission Lines

Note: Shadow flicker was modelled using using **WindPRO v4.0** software. Worst case scenario shadow flicker assumes the sun is shining from sunrise to sunset 365 days of the year.

Coordinate System: NAD83 UTM Zone 20N
File: 24-9856_MVL_WindPRO.aprx

Sources: ESRI Basemaps, GeoNOVA, NSTD, HERE, Garmin, USGS, NRCan

Date: November 18, 2024

Project #: 24-9856

Scale: 1:65,000

Drawing #: **10.1B**

Drawn By: E. Johnson

Checked By: H. Mosher

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Melvin Lake Wind Farm
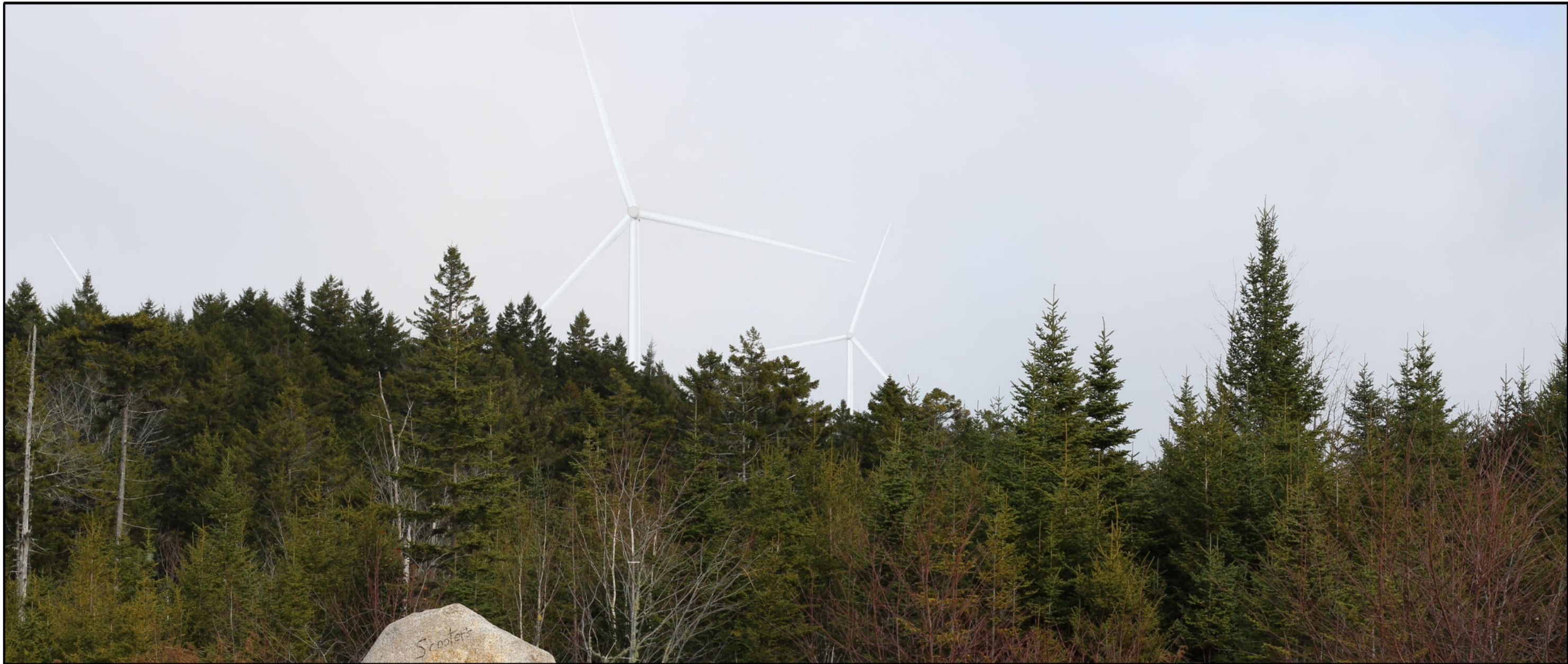*Visual Simulation Locations*

ABO ENERGY

Study Area
Assessment Area

Visual Simulation Location

Transportation
Highway
Road
Unpaved Road

Utilities (Line)
Existing Pipeline
Existing Transmission Lines

Water Features
Mapped Stream
Mapped Indefinite Stream
Mapped Lakes and Rivers

Coordinate System: NAD83 UTM Zone 20N
File: 24-9856_MVL_WindPRO.aprx

Sources: ESRI Basemaps, GeoNOVA, NSTD,
HERE, Garmin, USGS, NRCan

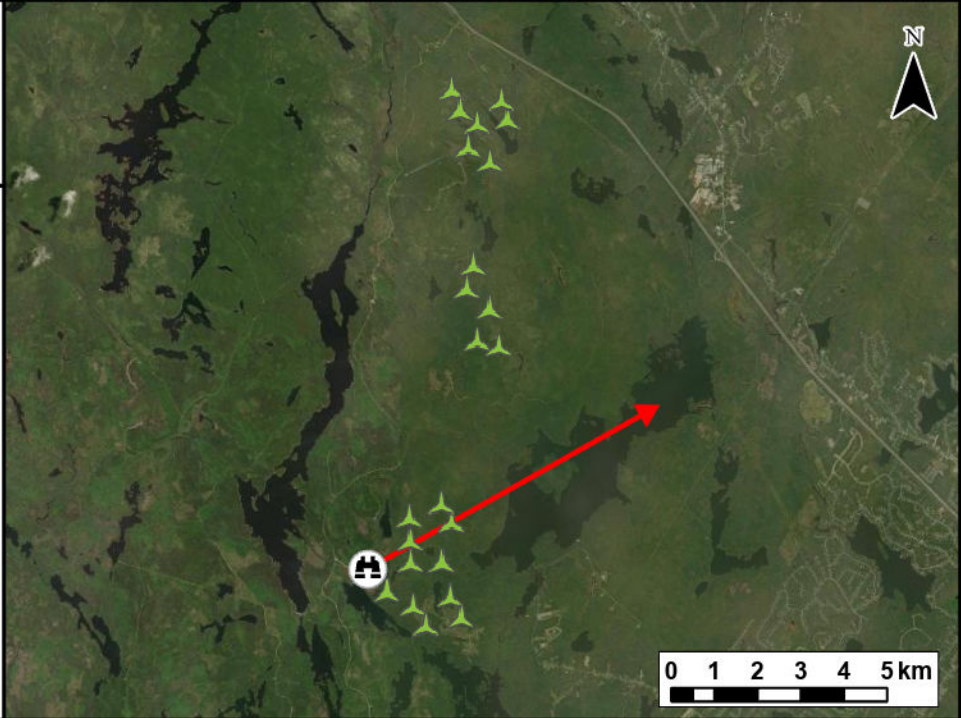|	
Date: November 18, 2024	Project #: 24-9856
Scale: 1:85,000	Drawing #:
Drawn By: E. Johnson	**10.2A**
Checked By: H. Mosher	

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Labels on map:
Big Pine Lake, Five Mile Lake, Pine Stream, Little Pines Lake, Big Black Lake, Moose Brook, Candy Brook, Big Indian Lake, Grassy Brook, Black Brook, Hiking Trail Rd, South Lake, Bates Lake, North Stands Brook, Pogwa Lake, Hubley Mill Lake, Island Lake, Hay Marsh Brook, Mill Lake, St. Margaret's Bay Trail, Highway 103, Winslow Dr, Highway 103 WB, Oceanstone Dr / Falcourt Run, Wrights Lake, Wrights Lake Public Dock, Cooper Lake, Carmel Cres, Byblos Rd, Taylor Lake, Northwest Clay Lake, Clay Lake, Rafter Lake, Goose Lake, Pipeline Rd, Lizard Lake, Pockwock Lake, Tomahawk Lake, Lucas Gilliss, Triangle Brook, North River, Highway 101 EB, Highway 101 WB, Highway 1, Pentz Lake, West Lake, Etter Rd, Drinking Hole Brook, Beaver Pond Brook, Sackville Dr, Lewis Lake, Landfill Rd, Square Lake, Hamilton Lake, Fenerty Lake, Lakeview Ave, Springfield Lake, Rhodo Dr, Magenta Dr, McCabe Lake, Webber Lake, Service Road HFX 101-01, Tattenham Cres, Sandwick Dr, Newbury Rd, Waterstone Run, Viscount Run, Lucasville Rd, St George Blvd, Hammonds Plains Rd, Blue Forest Lane, Coxs Lake, Second Lake, Black Duck Brook, Feny Brook, Long Lake

Inset map: New Brunswick, PEI, Gulf of St. Lawrence, Bay of Fundy, Nova Scotia, Atlantic Ocean, 0 50 100 200 km

Scale: 0 1 2 4 km

→ Camera Bearing

⚲ Proposed Turbine Location

(H) Camera Location

TECHNICAL INFORMATION

Visual Simulation Location:	Northwest of Clay Lake
View Coordinates:	Latitude: 44° 46' 33.0" N
	Longitude: 63° 54' 27.0" W
	Easting: 428189.29m
	Northing: 4958437.70m
Distance to Nearest Turbine:	1.07km
Direction of View:	Northeast, Heading 60°
Camera Make/ Model:	Canon EOS REBEL T7
Lens:	50 mm
Image Resolution:	6000 x 4000
Weather Conditions	Overcast
Date of Photo:	2024/11/14
Time of Photo:	12:57
Photo Credit:	Strum Consulting

Melvin Lake Wind Farm - Visual Simulation Northwest of Clay Lake

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CONSULTING

Date: Nov 2024	Project #: 24-9856
Scale: 1:175,000	Drawing #:
Drawn By: E. Johnson	**10.2B**
Checked By: H. Mosher	

0 1 2 3 4 5 km