



VISIBILITY ANALYSIS



**MILFORD EAST CT
425 OLD TAVERN ROAD
ORANGE, CT**

PREPARED FOR:



PREPARED BY:

**All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, CT 06320**

VISUAL ASSESSMENT & PHOTO-SIMULATIONS

Cellco Partnership, d/b/a Verizon Wireless ("Verizon Wireless") is seeking approval for the development of a new wireless communications facility (the "Facility") at 425 Old Tavern Road in Orange, Connecticut (the "Host Property"). All-Points Technology Corporation, P.C. ("APT") completed this assessment to evaluate the potential visual effects of the proposed Facility from within a two-mile radius (the "Study Area"). The municipal boundary between Orange and Milford bisects the Study Area.

Project Setting

The Host Property is a mostly wooded ±12-acre parcel located immediately north of the Town of Orange and the City of Milford municipal border. The proposed Facility would be located in the central portion of the Host Property ("Site"). The immediate area surrounding the Host Property is heavily wooded. Land use within the vicinity is primarily residential, with agricultural fields to the east and north. Commercial development associated with Boston Post Road extends generally northeast to southwest to the southeast of the Site, beyond the residential development.

The topography within the Study Area consists of relatively level terrain. Ground elevations range from approximately 1 foot above mean sea level ("AMSL") approximately 1 mile southeast of the Site along the Indian River to approximately 254 feet AMSL approximately 1.8 miles northwest of the Site. Tree cover (consisting primarily of mixed deciduous hardwoods) occupies approximately 3,834 acres (or ±47.67%) of the 8,042-acre Study Area.

Project Undertaking

Based on information contained in CT Siting Council Drawings (prepared by On Air Engineering, LLC, dated June 7, 2024), the proposed Facility would be located at a ground elevation of approximately 128 feet AMSL and include a 120-foot-tall monopole. Associated ground-mounted equipment would be placed within a 35' by 90' gravel based fenced compound surrounded by an 8-foot-high chain link fence. Verizon Wireless would install antennas at a centerline of 117' above ground level ("AGL"). The Facility has been designed to accommodate multiple service providers. A new gravel access drive would be constructed off Woodruff Road extending north to the proposed compound.

Methodology

APT used the combination of a predictive computer model, in-field analysis, and various data sources to evaluate the visibility associated with the proposed Facility on both a quantitative and qualitative basis. The predictive model provides a measurable assessment of visibility throughout the entire Study Area, including private properties and other areas inaccessible for direct observations. The in-field analysis consisted of a balloon float and field reconnaissance of the Study Area to record existing conditions, verify results of the model, inventory seasonal and year-round view locations, and provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

Preliminary Computer Modeling

To conduct this assessment, a predictive computer model was developed specifically for this project using ESRI's ArcMap GIS¹ software and available GIS data. The predictive model incorporates Project- and Study Area-specific data, including the Site location, its ground elevation and the proposed Facility height, as well as the surrounding topography, existing vegetation, and structures (the primary features that can block direct lines of sight).

A digital surface model ("DSM"), capturing both the natural and built features on the Earth's surface, was generated for the extent of the Study Area utilizing State of Connecticut 2016 LiDAR² LAS³ data points. LiDAR is a remote-sensing technology that develops elevation data by measuring the time it takes for laser light to return from the surface to the instrument's sensors. The varying reflectivity of objects also means that the "returns" can be classified based on the characteristics of the reflected light, normally into categories such as "bare earth," "vegetation," "road," "surface water" or "building." Derived from the 2016 LiDAR data, the LAS datasets contain the corresponding elevation point data and return classification values. The Study Area DSM incorporates the first return LAS dataset values that are associated with the highest feature in the landscape, typically a treetop, top of a building, and/or the highest point of other tall structures.

Once the DSM was generated, ESRI's Viewshed Tool was utilized to identify locations within the Study Area where the proposed Facility may be visible. ESRI's Viewshed Tool predicts visibility by identifying those cells⁴ within the DSM that can be seen from an observer location. Cells where visibility was indicated were extracted and converted from a raster dataset to a polygon

¹ ArcMap is a Geographic Information System desktop application developed by the Environmental Systems Research Institute for creating maps, performing spatial analysis, and managing geographic data.

² Light Detection and Ranging

³ An LAS file is an industry-standard binary format for storing airborne LiDAR data.

⁴ Each DSM cell size is 1 square meter.

feature which was then overlaid onto aerial photograph and topographic base maps. Since the DSM includes the highest relative feature in the landscape, isolated “visible” cells are often indicated within heavily forested areas (e.g., from the top of the highest tree) or on building rooftops during the initial processing. It is recognized that these areas do not represent typical viewer locations and overstate visibility. As such, the resulting polygon feature is further refined by extracting those areas. The viewshed results are also cross-checked against the most current aerial photographs to assess whether significant changes (a new housing development, for example) have occurred since the time the LiDAR-based LAS datasets were captured.

The results of the preliminary analysis are intended to provide a representation of those areas where portions of the Facility may potentially be visible to the human eye without the aid of magnification, based on a viewer eye-height of five (5) feet above the ground and the combination of intervening topography, trees and other vegetation, and structures. However, the Facility may not necessarily be visible from all locations within those areas identified by the predictive model, which has its limitations. For instance, the computer model cannot account for mass density, tree diameters and branching variability of trees, or the degradation of views that occurs with distance. As a result, some areas depicted on the viewshed maps as theoretically offering potential visibility of the Facility may be over-predictive because the quality of those views is not sufficient for the human eye to recognize the Facility or discriminate it from other surrounding or intervening objects.

Seasonal Visibility

Visibility also varies seasonally with increased, albeit obstructed, views occurring during “leaf-off” conditions. Beyond the variabilities associated with density of woodland stands found within any given Study Area, each individual tree also has its own unique trunk, pole timber and branching patterns that provide varying degrees of screening in leafless conditions which, as introduced above, cannot be precisely modeled. Seasonal visibility is therefore estimated based on a combination of factors including the type, size, and density of trees within a given area; topographic constraints; and other visual obstructions that may be present. Considering these dynamics, areas depicting seasonal visibility on the viewshed maps are intended to represent locations from where there is a potential for views through intervening trees, as opposed to indicating that leaf-off views will exist from within an entire seasonally-shaded area.

Balloon Test and Field Reconnaissance

To supplement and fine tune the results of the computer modeling efforts, APT completed in-field verification activities consisting of a balloon test, vehicular and pedestrian reconnaissance, and photo-documentation. The balloon test and field reconnaissance were completed on April 4, 2023. The balloon test consisted of raising a brightly-colored (red), approximately 4-foot

diameter, helium-filled balloon tethered to a string height of ± 120 feet AGL⁵ at the proposed Site. Weather conditions were favorable for the in-field activities with calm winds and mostly sunny skies. APT conducted a reconnaissance of the Study Area by driving along roads and other publicly accessible locations to document and inventory where the balloon could be seen above and through the tree canopy and other visual obstructions.

Photographic Documentation and Simulations

Visual observations from the reconnaissance were used to evaluate the results of the preliminary visibility mapping, including identifying any discrepancies in the initial modeling, and to obtain photo-documentation from representative locations within the Study Area. Photographs were taken with a Canon EOS 6D digital camera body⁶ and Canon EF 24 to 105 millimeter ("mm") zoom lens. The coordinates of the balloon (i.e., the proposed tower location) were entered as a "waypoint" into a handheld global positioning system ("GPS") device, with the "find" tool on the GPS unit then used to provide the distance and orientation to the flag position. The geographic coordinates of each photo location were recorded as meta data using GPS technology internal to the camera.

APT typically uses a standard focal length of 50 mm to present a consistent field of view. On occasion, photos are taken at lower focal lengths to provide a greater depth of field and to provide context to the scene by including surrounding features within the photograph. During this evaluation, four (4) photographs presented in the attached photo-documentation were taken at a 35 mm focal length and one (1) photograph was taken at a 24 mm focal length, as noted in Table 1 - Photo Locations attached to this report.

Photographic simulations were generated to portray scaled renderings of the proposed Facility from 13 locations presented herein where the Facility may be recognizable above or through the trees. Using field data, site plan information and 3-dimensional (3D) modeling software, spatially referenced models of the Site and Facility were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo-simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs, which were ultimately composited and merged with the existing conditions photographs (using Adobe Photoshop image editing software). The scale of the subjects in the photograph (the balloon) and the corresponding simulation (the Facility) is proportional to their surroundings. In some instances, where the balloon was visible but heavily obscured by

⁵ The bottom of the balloon represented the top of the monopole.

⁶ The Canon EOS 6D is a full-framed camera which includes a lens receptor of the same size as the film used in 35 mm cameras. As such, the images produced are comparable to those taken with a conventional 35 mm camera.

intervening vegetation, simulations were not produced. These photos are labeled as “obscured” on the attached Photo Locations table and the photographs attached to this report.

For presentation purposes in this report, the photographs were produced in an approximate 7-inch by 10.5-inch format. When reproducing the images in this format size, we believe it is important to present the largest view while providing key contextual landscape elements (existing developments, street signs, utility poles, etc.) so that the viewer can determine the proportionate scale of each object within the scene. Photo-documentation of the field reconnaissance and photo-simulations of the proposed Facility are presented in the attachment at the end of this report. The field reconnaissance photos that include the balloon in the view provide visual reference points for the approximate height and location of the proposed Facility relative to the scene. The corresponding photo-simulations depict the proposed monopole and antennas. The photo-simulations are intended to provide the reader with a general understanding of the different view characteristics associated with the Facility from various locations. Photographs were taken from publicly accessible areas and unobstructed view lines were chosen wherever possible.

Table 1 – Photo Locations (provided as attachment) summarizes the photographs and simulations presented in this report, and includes a description of each location, view orientation, distance from where the photo was taken relative to the Site, and the general characteristics of the view. The photo locations are depicted on the photolog and viewshed maps provided as attachments to this report.

Final Visibility Mapping

Information obtained during the field reconnaissance was incorporated into the mapping data layers, including observations of the field reconnaissance, the photograph locations, areas that experienced recent land use changes and those places where the initial model was found to over or under-predict visibility. Once the additional data was integrated into the model, APT recalculated the visibility of the proposed Facility within the Study Area.

Conclusions

As presented on the attached viewshed maps and verified during the balloon float, seasonal visibility accounts for most of the visibility in the Study Area. Representative seasonal views of the Facility are depicted in photos 3, 7, 12, and 20. Due to the dense vegetation in the immediate vicinity of the Site, it will be difficult to discern the Facility as it would be obscured by intervening trees. (See Photos 8 and 19.)

Year-round visibility of the Facility would be limited to small pockets of the Study Area, generally over open fields to the east/northeast of the Site, and along roadways within 0.5-mile of the site to the west, southwest, and east of the Site. The monopole would only extend modestly above the tree canopy to a maximum height of 40 feet (see Photos 2, 5, 10, 15, and 17).

The combined predicted visibility associated with the proposed Facility totals ± 260 acres, or $\pm 3.23\%$ of the 8,042-acre Study Area. Seasonal visibility (± 252 acres) accounts for approximately 97% of that total.

The results of the viewshed modeling and balloon test photographs demonstrate that much of the Facility's visibility would be limited to areas within 0.5-mile of the Site ($\pm 92.3\%$). As is the case with the overall character of visibility in the Study Area, residential properties in the Site vicinity will experience primarily seasonal views.

Proximity to Schools And Commercial Child Day Care Centers

No schools or commercial child day care centers are located within 250 feet of the proposed Facility. Platt Technical High School is approximately 0.61-mile southwest of the Site at 600 Orange Avenue in Milford. The Holly Hill Childcare & Learning Center is located approximately 0.87-mile east of the Site at 308 Peck Lane in Orange. It is not anticipated that the Facility will be visible from either location.

Limitations

The viewshed maps presented in the attachment to this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of five (5) feet above the ground and intervening topography, tree canopy, and structures. This analysis may not account for all visible locations, as it is based on the combination of computer modeling, incorporating aerial photographs, and in-field observations from publicly accessible locations. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The photo-simulations provide a representation of the Facility under similar settings as those encountered during the field review and reconnaissance. Views of the Facility can change throughout the seasons and the time of day, and are dependent on weather and other atmospheric conditions (e.g., haze, fog, clouds); the location, angle and intensity of the sun; and the specific viewer location. Weather conditions on the day of the field review included calm winds and partly cloudy skies.

ATTACHMENTS

Table 1 - Photo Locations

Photo	Location	Orientation	Distance	Visibility
1	CLEMENT LANE AT MICHAEL COURT	ESE	+/- 0.35 MILE	NOT VISIBLE
2	MICHAEL COURT	ESE	+/- 0.34 MILE	YEAR ROUND
3	CLEMENT LANE	ESE	+/- 0.18 MILE	SEASONAL
4	ANN ROSE DRIVE	E	+/- 0.14 MILE	SEASONAL
5	TALMADGE DRIVE	E	+/- 0.24 MILE	YEAR ROUND
6	WOODRUFF ROAD AT ANN ROSE DRIVE	E	+/- 0.17 MILE	SEASONAL
7	WOODRUFF ROAD*	ENE	+/- 497 FEET	SEASONAL
8	WOODRUFF ROAD**	NNW	+/- 421 FEET	OBSCURED
9	NARROW LANE*	WNW	+/- 0.21 MILE	NOT VISIBLE
10	OLD TAVERN ROAD*	W	+/- 0.15 MILE	YEAR ROUND
11	TREAT LANE*	S	+/- 0.22 MILE	NOT VISIBLE
12	ANN ROSE DRIVE	SE	+/- 0.31 MILE	SEASONAL
13	TREAT LANE AT MICHAEL COURT	SE	+/- 0.43 MILE	NOT VISIBLE
14	ORANGE AVENUE	ESE	+/- 0.43 MILE	NOT VISIBLE
15	ORANGE AVENUE AT WOODRUFF ROAD	E	+/- 0.42 MILE	YEAR ROUND
16	CHERYL ANN DRIVE	ENE	+/- 0.34 MILE	NOT VISIBLE
17	CHERYL ANN DRIVE AT TALMADGE DRIVE	ENE	+/- 0.30 MILE	YEAR ROUND
18	CHERYL ANN DRIVE	NE	+/- 0.20 MILE	YEAR ROUND
19	BURNT PLAINS ROAD AT ALEXANDER ROAD	N	+/- 0.30 MILE	OBSCURED
20	BURNT PLAINS ROAD	NNW	+/- 0.18 MILE	SEASONAL
21	COLONY ROAD AT GREEN MEADOW ROAD	NNW	+/- 0.46 MILE	NOT VISIBLE
22	SAWMILL ROAD AT TUMBLEBROOK DRIVE	NW	+/- 0.47 MILE	OBSCURED
23	RITA LANE	WNW	+/- 0.36 MILE	NOT VISIBLE

* Photograph was taken at 35 mm focal length.

** Photograph was taken at 24 mm focal length.

Table 1 - Photo Locations Continued

Photo	Location	Orientation	Distance	Visibility
24	LAVIOLA LANE AT NARROW LANE	WNW	+/- 0.39 MILE	OBSCURED
25	MILES ROAD	W	+/- 0.42 MILE	NOT VISIBLE
26	HOTCHKISS ROAD	WSW	+/- 0.48 MILE	NOT VISIBLE
27	OLD TAVERN ROAD	SW	+/- 0.42 MILE	YEAR ROUND
28	OLD TAVERN ROAD	SW	+/- 0.29 MILE	OBSCURED

* Photograph was taken at 35 mm focal length.
 ** Photograph was taken at 24 mm focal length.

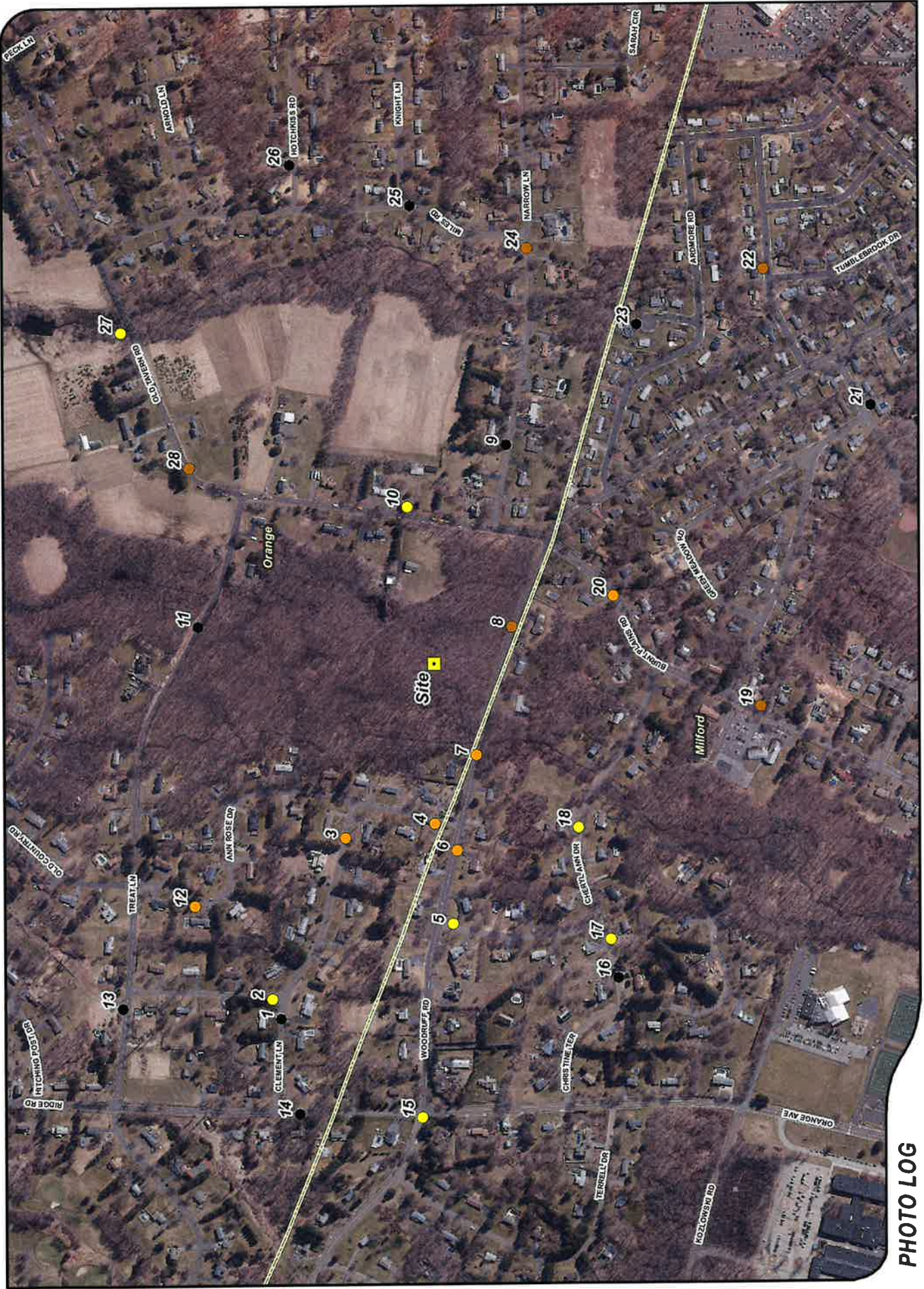
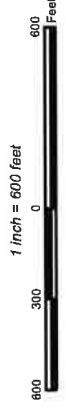


PHOTO LOG

- Legend**
- Site
 - Seasonal
 - Obscured
 - Not Visible
 - Year-Round
 - Municipal Boundary



EXISTING

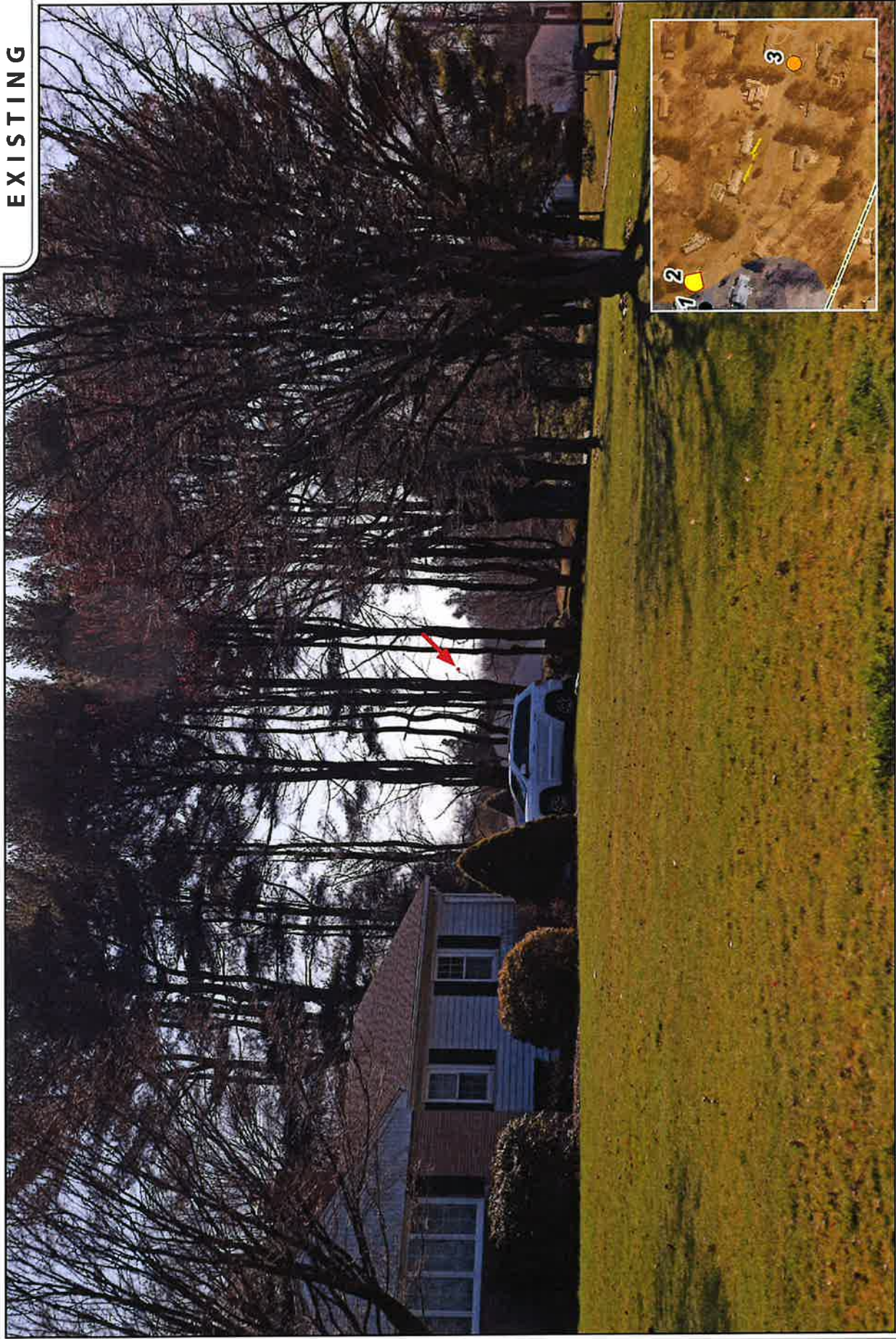


PHOTOGRAPHED ON 11/1/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	CLEMENT LANE AT MICHAEL COURT	ESE	+/- 0.35 MILE	NOT VISIBLE



EXISTING



PHOTOGRAPHED ON 1/17/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	MICHAEL COURT	ESE	+/- 0.34 MILE	YEAR ROUND

PROPOSED



PHOTO

2

LOCATION

MICHAEL COURT

ORIENTATION

ESE

DISTANCE TO SITE

+/- 0.34 MILE

VISIBILITY

YEAR ROUND

EXISTING



PHOTO
3

LOCATION
CLEMENT LANE

ORIENTATION
ESE

DISTANCE TO SITE
+/- 0.18 MILE

VISIBILITY
SEASONAL

PROPOSED



PHOTO

3

LOCATION

CLEMENT LANE

ORIENTATION

ESE

DISTANCE TO SITE

+/- 0.18 MILE

VISIBILITY

SEASONAL

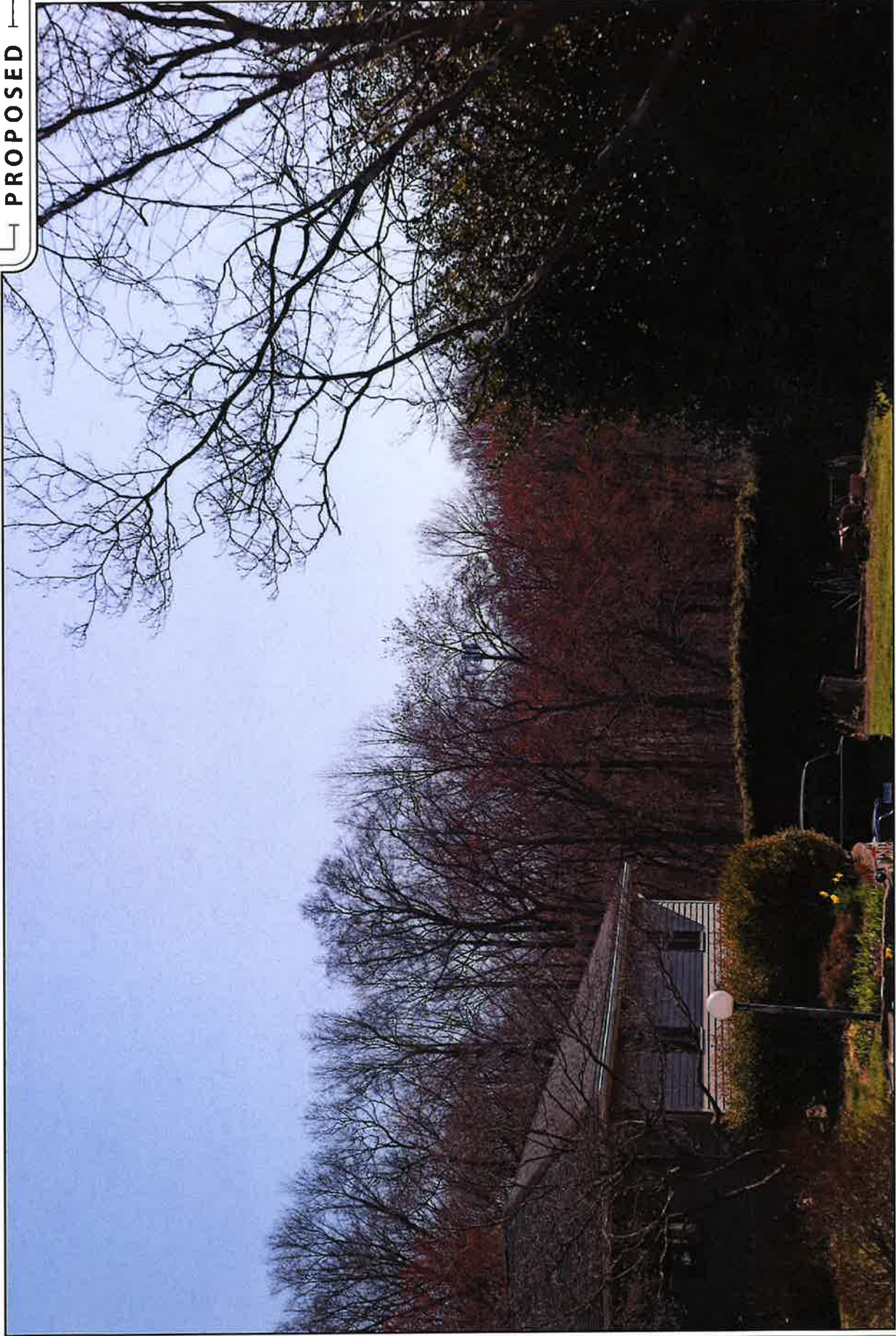
EXISTING



PHOTOGRAPHED 04/11/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	ANN ROSE DRIVE	E	+/- 0.14 MILE	SEASONAL

PROPOSED



PHOTO

4

LOCATION

ANN ROSE DRIVE

ORIENTATION

E

DISTANCE TO SITE

+/- 0.14 MILE

VISIBILITY

SEASONAL

EXISTING

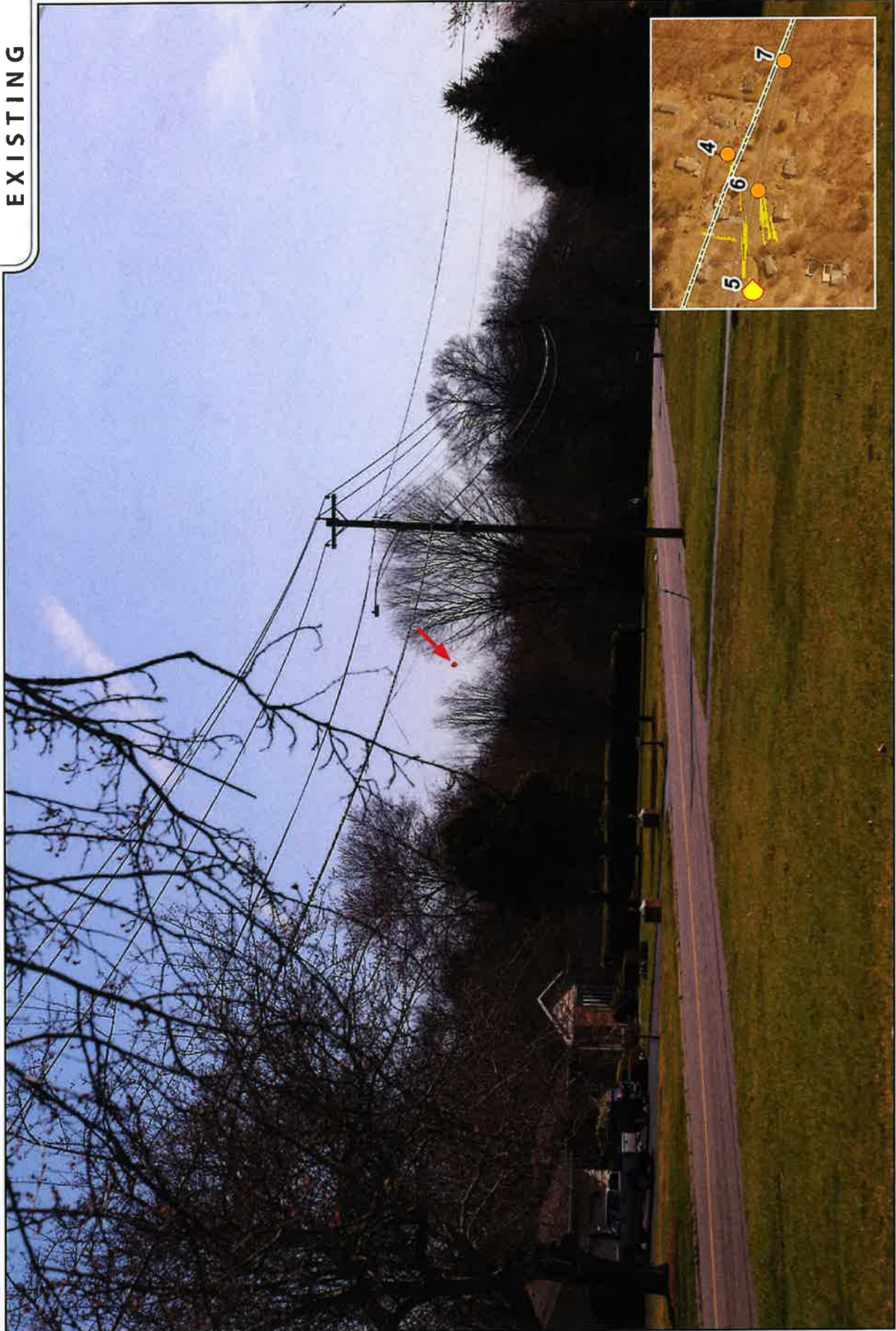
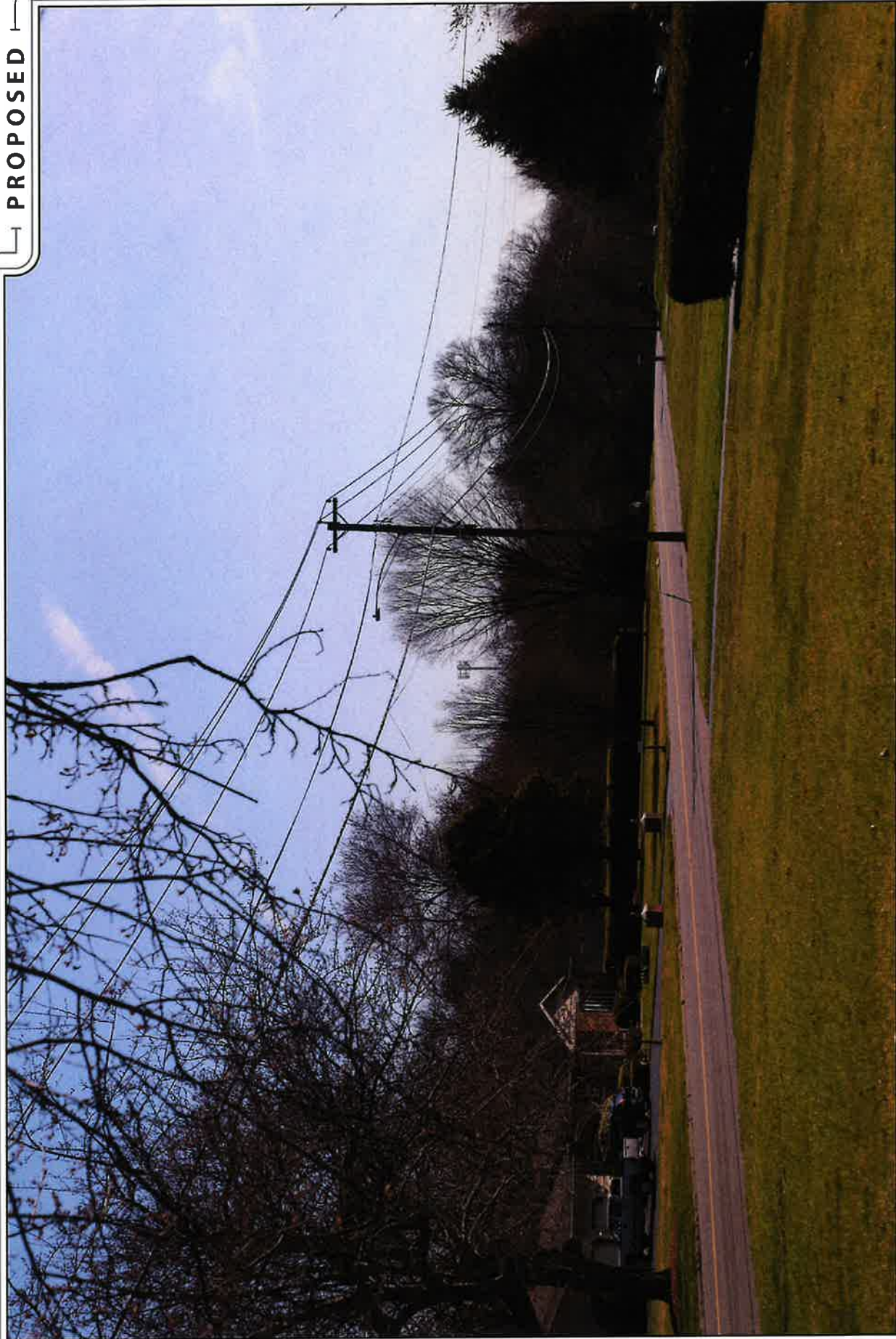


PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	TALMADGE DRIVE	E	+/- 0.24 MILE	YEAR ROUND

PROPOSED



PHOTO

5

LOCATION

TALMADGE DRIVE

ORIENTATION

E

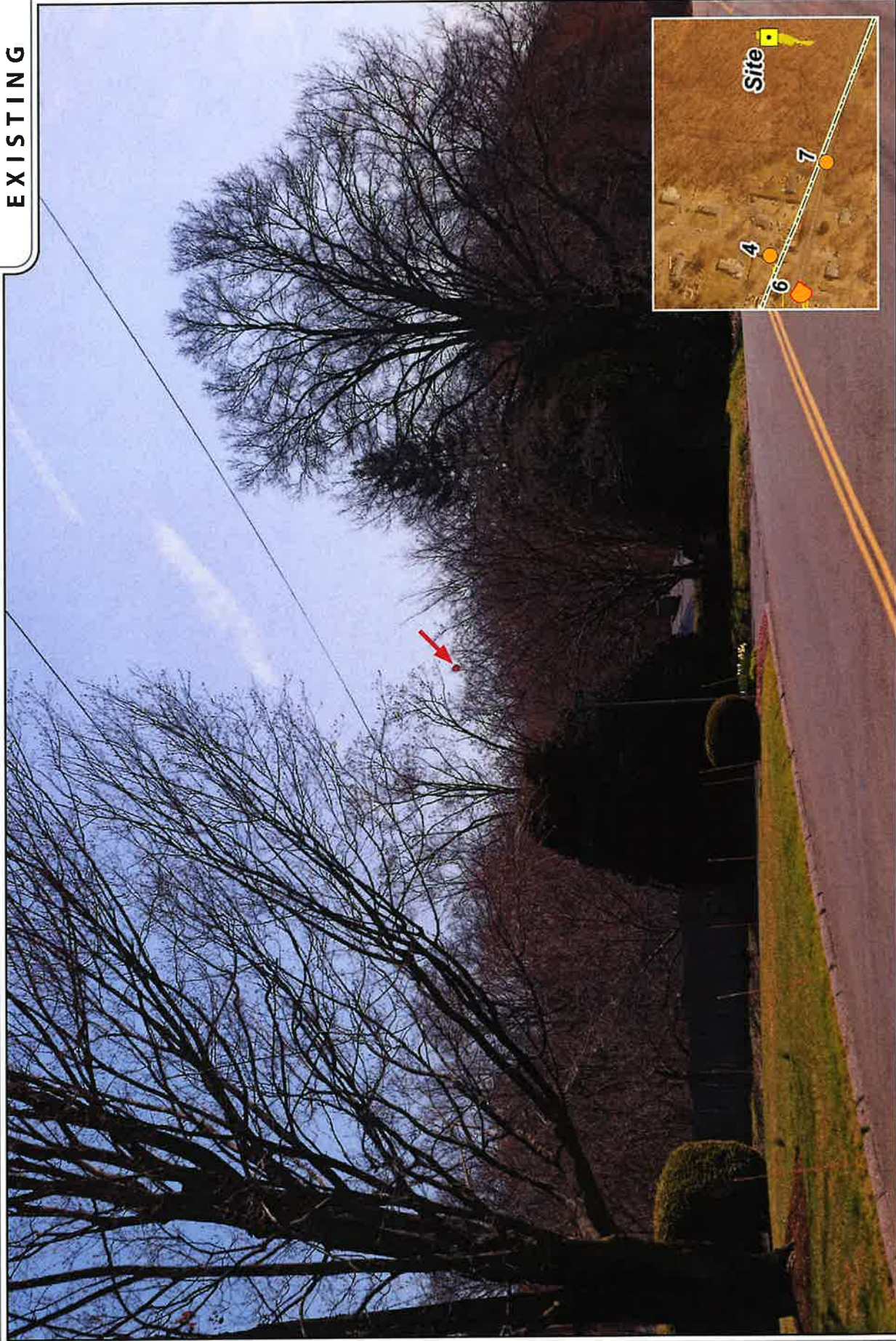
DISTANCE TO SITE

+/- 0.24 MILE

VISIBILITY

YEAR ROUND

EXISTING



PHOTOGRAPHED ON 1/1/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	WOODRUFF ROAD AT ANN ROSE DRIVE	E	+/- 0.17 MILE	SEASONAL

PROPOSED



PHOTO

6

LOCATION

WOODRUFF ROAD AT ANN ROSE DRIVE

ORIENTATION

E

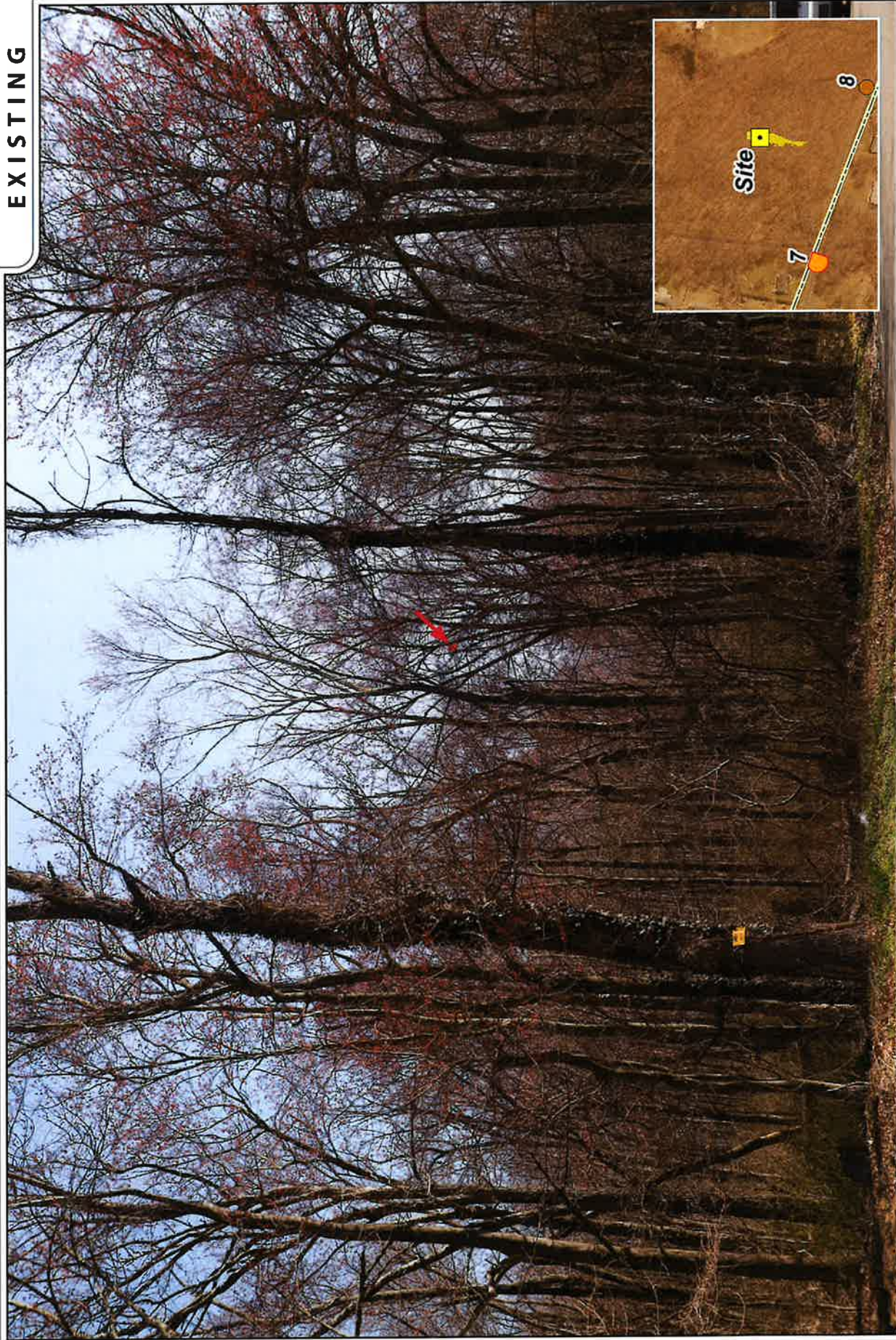
DISTANCE TO SITE

+/- 0.17 MILE

VISIBILITY

SEASONAL

EXISTING



PHOTOGRAPHED ON 4/1/2023
35mm focal length

PHOTO

7

LOCATION

WOODRUFF ROAD

ORIENTATION

ENE

DISTANCE TO SITE

+/- 497 FEET

VISIBILITY

SEASONAL

PROPOSED



PHOTO
7

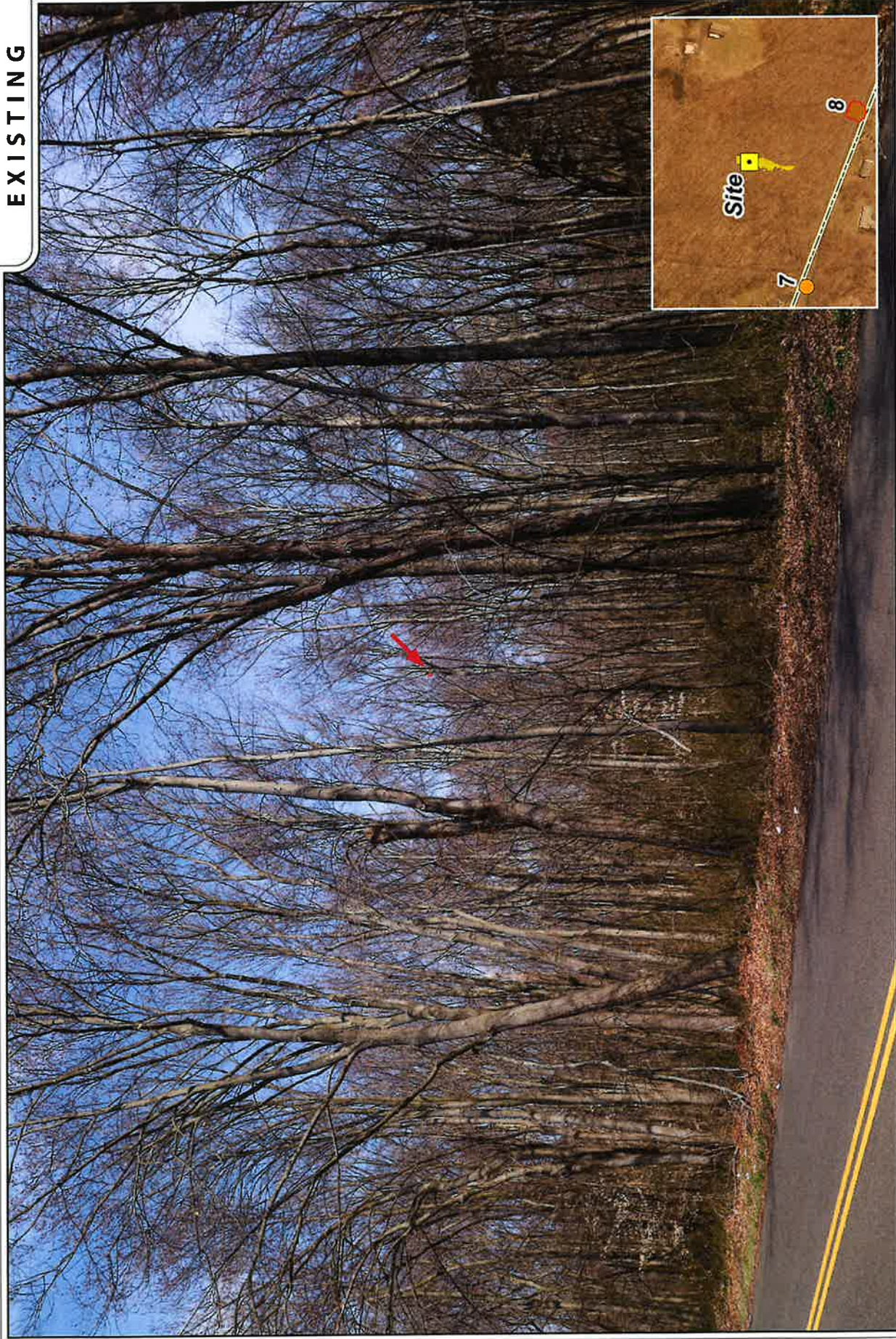
LOCATION
WOODRUFF ROAD

ORIENTATION
ENE

DISTANCE TO SITE
+/- 497 FEET

VISIBILITY
SEASONAL

EXISTING



PHOTOGRAPHED ON 1/1/2023
2 from focal length

PHOTO
8

LOCATION
WOODRUFF ROAD

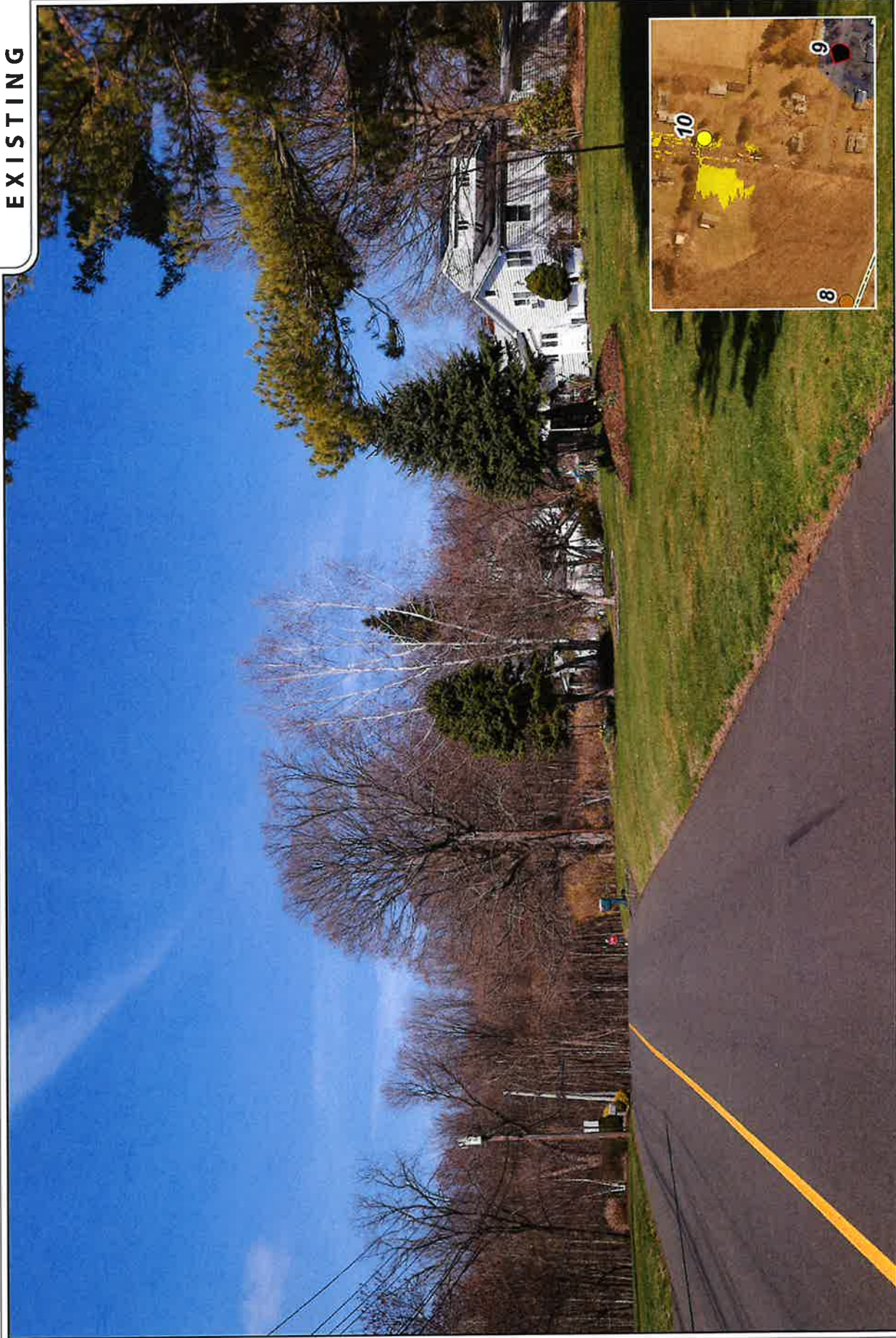
ORIENTATION
NNW

DISTANCE TO SITE
+/- 421 FEET

VISIBILITY
OBSCURED



EXISTING



PHOTOGRAPHED ON 4/1/2023
35mm Focal Length

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	NARROW LANE	WNW	+/- 0.21 MILE	NOT VISIBLE

EXISTING



PHOTOGRAPHED ON 11/17/23
35mm focal length

PHOTO
10

LOCATION
OLD TAVERN ROAD

ORIENTATION
W

DISTANCE TO SITE
+/- 0.15 MILE

VISIBILITY
YEAR ROUND

PROPOSED



PHOTO

10

LOCATION

OLD TAVERN ROAD

ORIENTATION

W

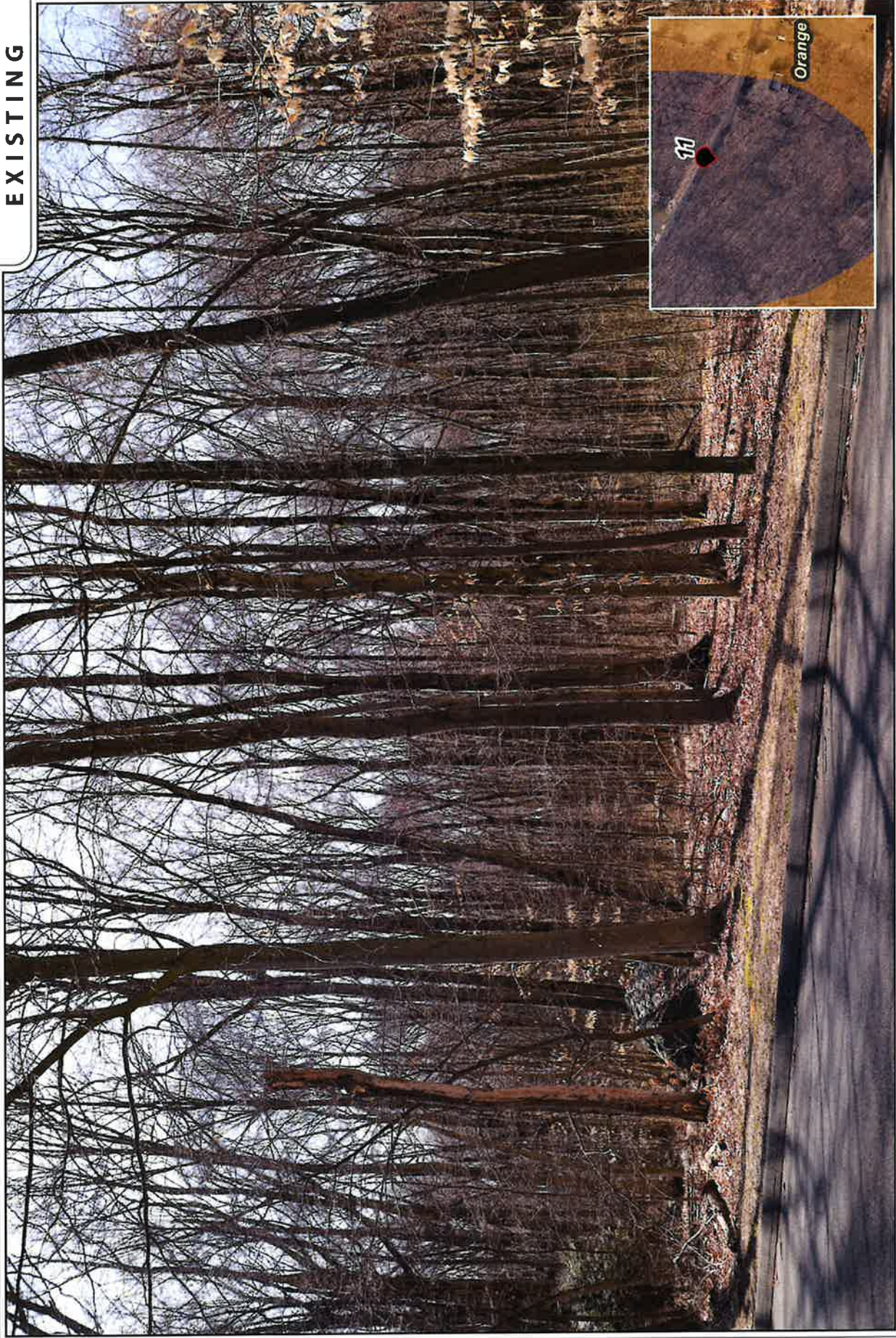
DISTANCE TO SITE

+/- 0.15 MILE

VISIBILITY

YEAR ROUND

EXISTING



PHOTOGRAPHED ON 1/1/2023
35mm focal length

PHOTO
11

LOCATION
TREAT LANE

ORIENTATION
S

DISTANCE TO SITE
+/- 0.22 MILE

VISIBILITY
NOT VISIBLE

EXISTING



PHOTOGRAPHED ON 1/1/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	ANN ROSE DRIVE	SE	+/- 0.31 MILE	SEASONAL

PROPOSED



PHOTO
12

LOCATION
ANN ROSE DRIVE

ORIENTATION
SE

DISTANCE TO SITE
+/- 0.31 MILE

VISIBILITY
SEASONAL

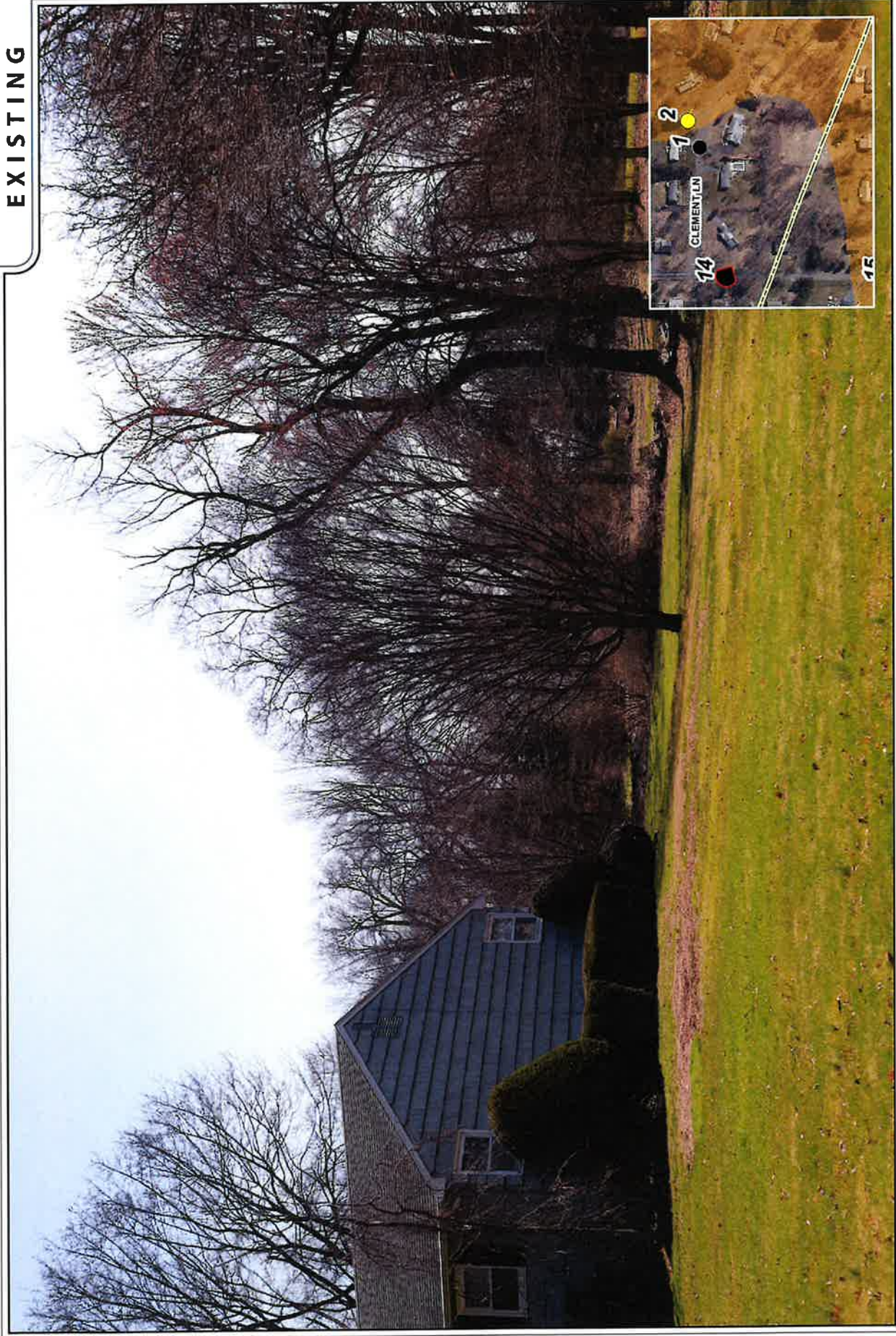
EXISTING



PHOTOGRAPHED ON 11/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	TREAT LANE AT MICHAEL COURT	SE	+/- 0.43 MILE	NOT VISIBLE

EXISTING



PHOTOGRAPHED ON 1/1/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	ORANGE AVENUE	ESE	+/- 0.43 MILE	NOT VISIBLE



EXISTING

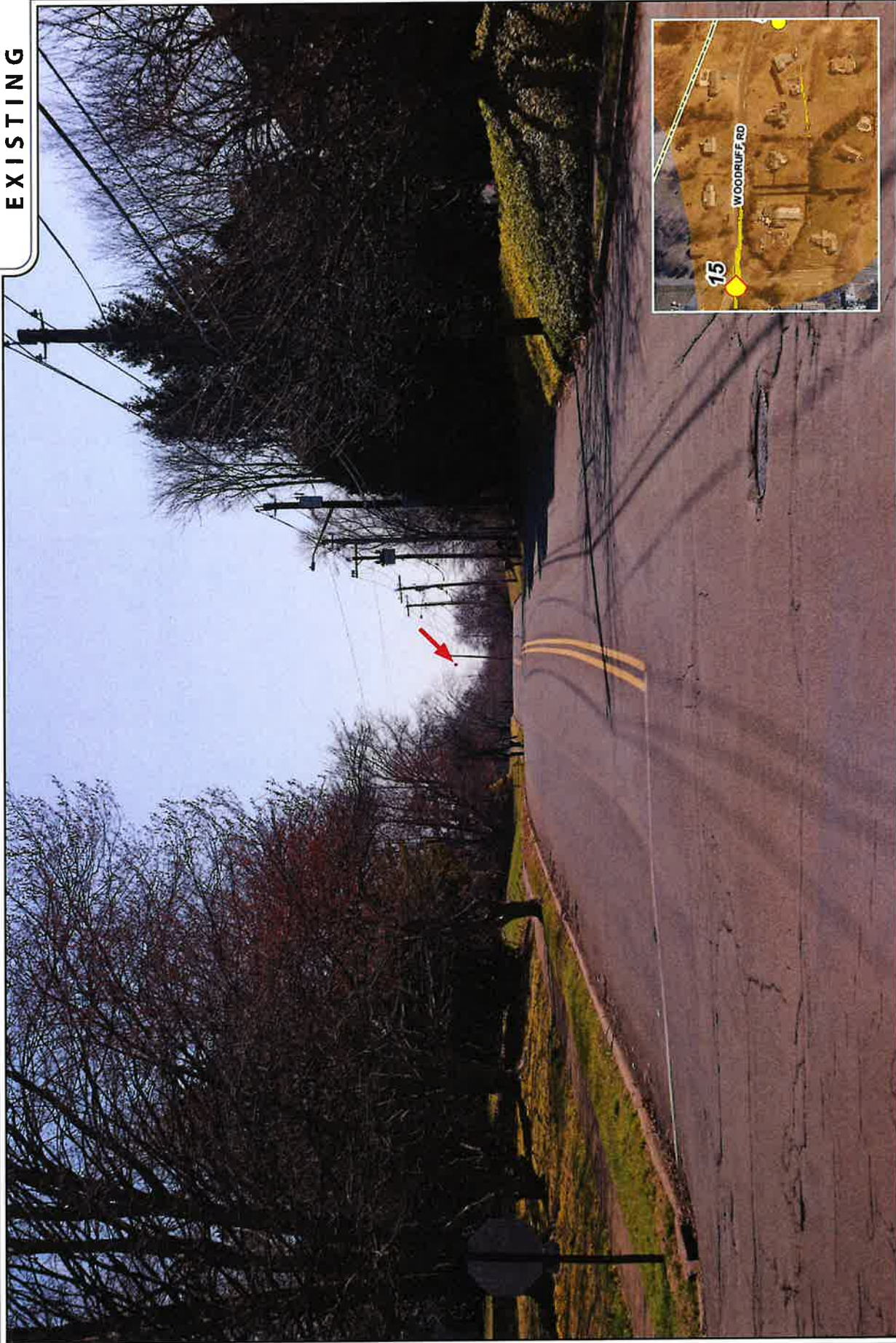
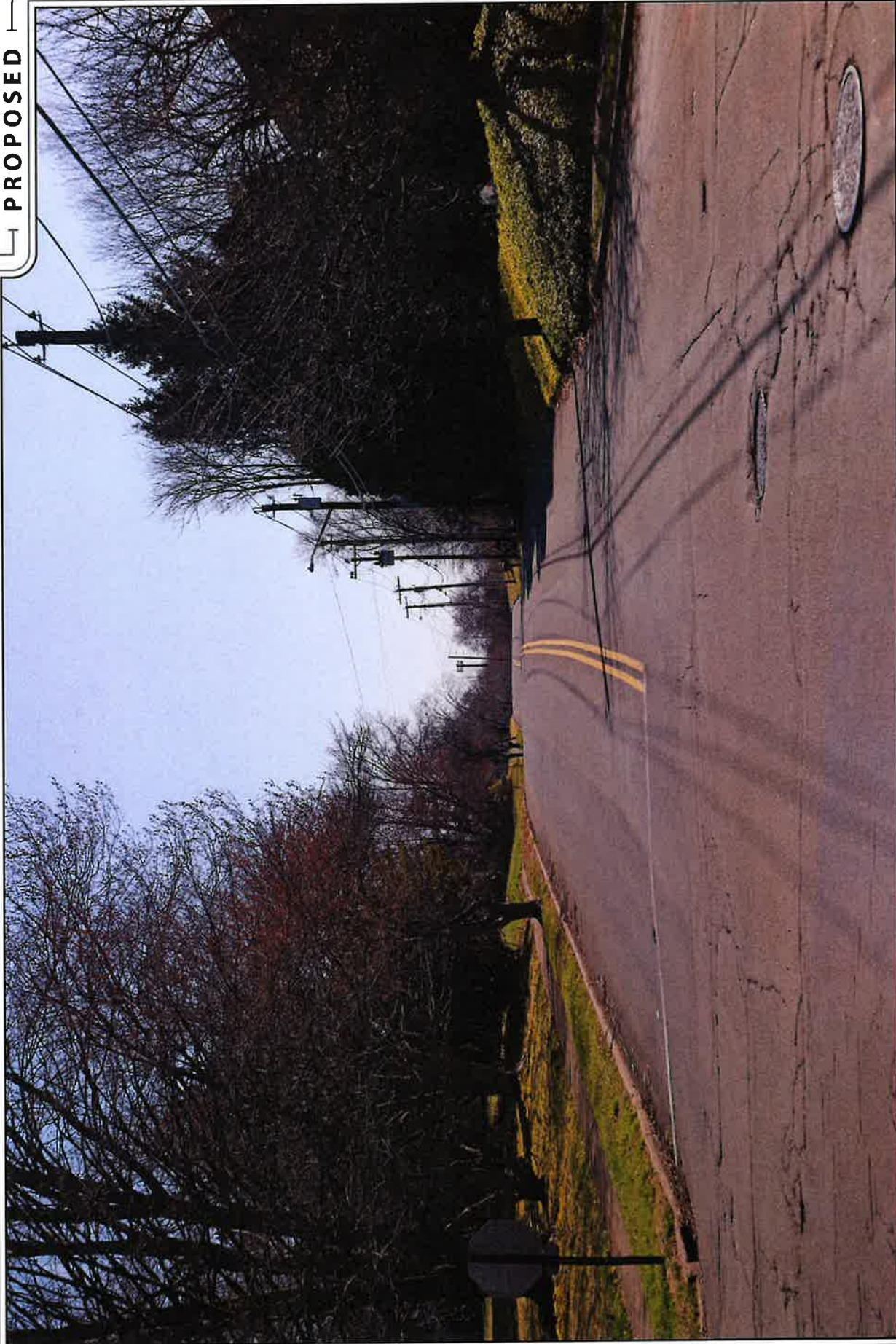


PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	ORANGE AVENUE AT WOODRUFF ROAD	E	+/- 0.42 MILE	YEAR ROUND

PROPOSED



PHOTO

15

LOCATION

ORANGE AVENUE AT WOODRUFF ROAD

ORIENTATION

E

DISTANCE TO SITE

+/- 0.42 MILE

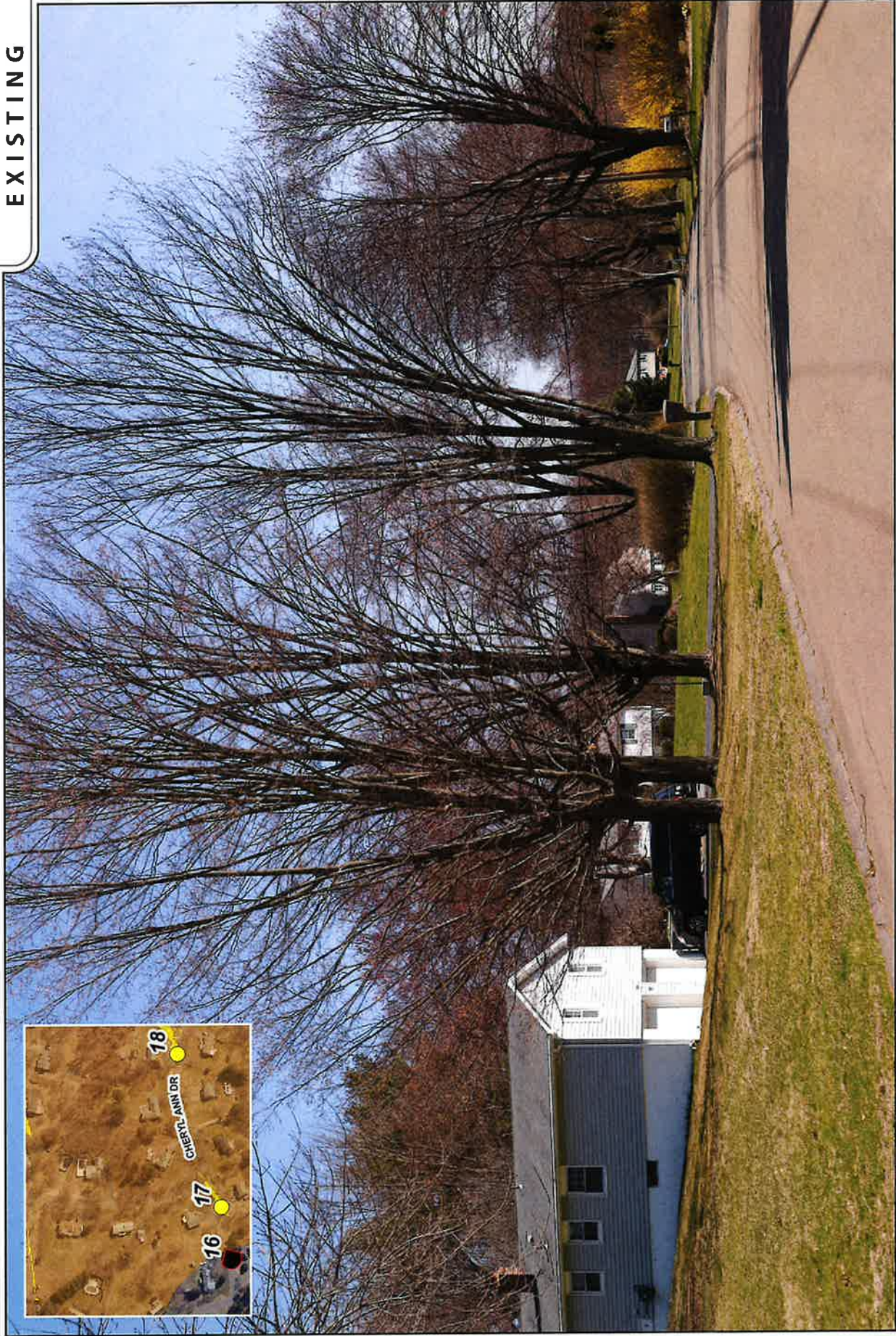
VISIBILITY

YEAR ROUND



verizon

EXISTING



PHOTOGRAPHED ON 11/2023

PHOTO
16

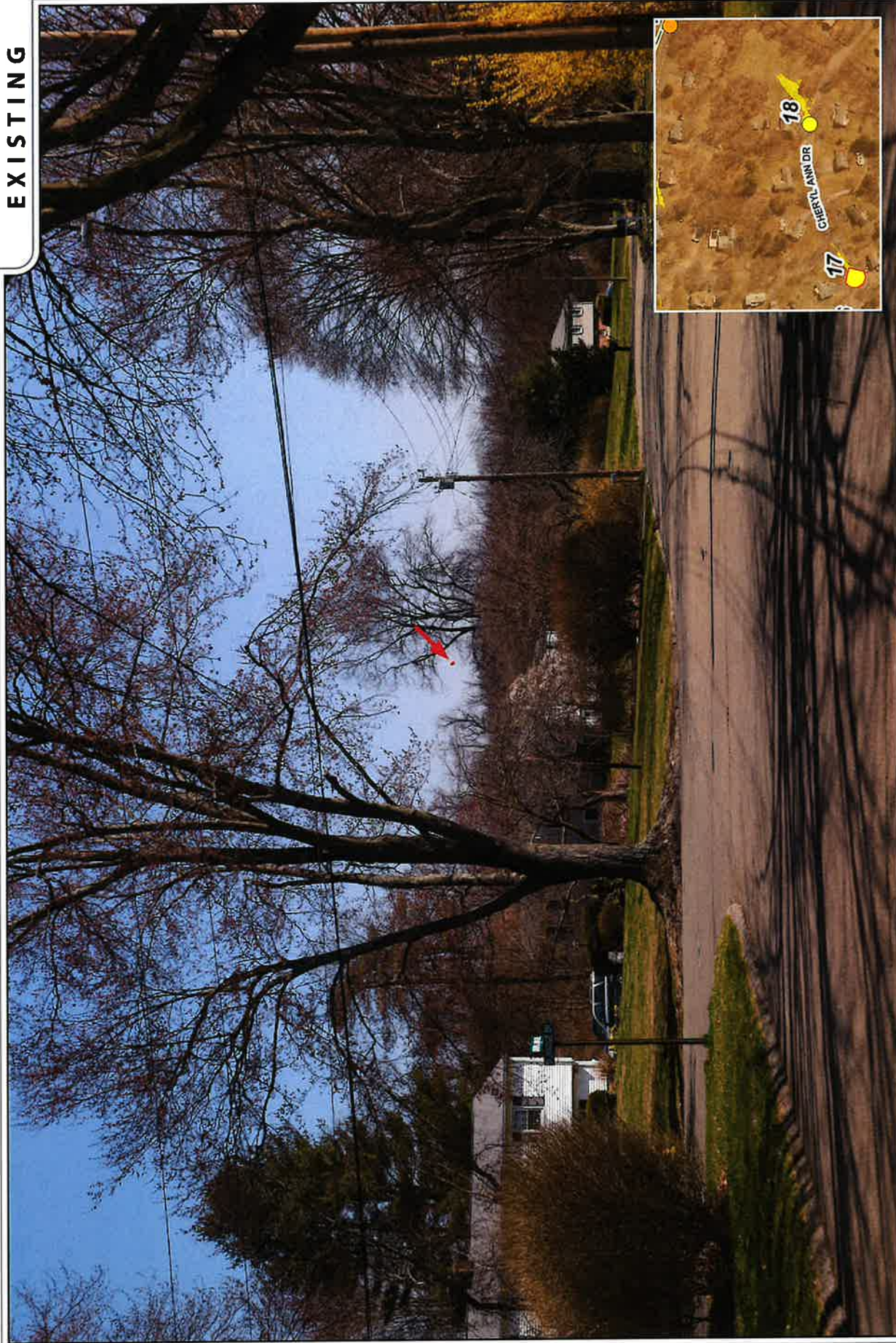
LOCATION
CHERYL ANN DRIVE

ORIENTATION
ENE

DISTANCE TO SITE
+/- 0.34 MILE

VISIBILITY
NOT VISIBLE

EXISTING



PHOTOGRAPHED ON 11/2/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	CHERYL ANN DRIVE AT TALMADGE DRIVE	ENE	+/- 0.30 MILE	YEAR ROUND

PROPOSED

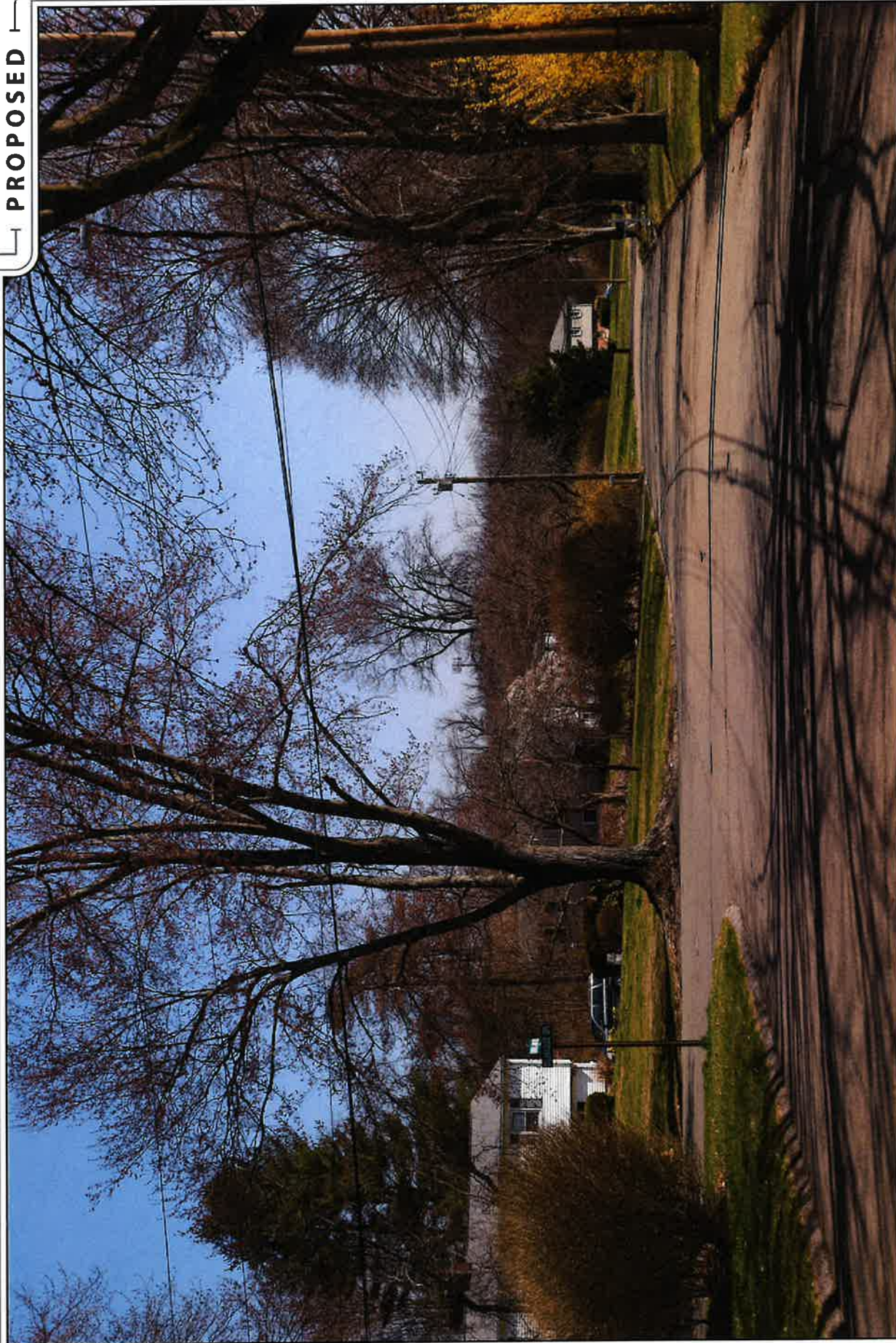


PHOTO
17

LOCATION

CHERYL ANN DRIVE AT TALMADGE DRIVE

ORIENTATION

ENE

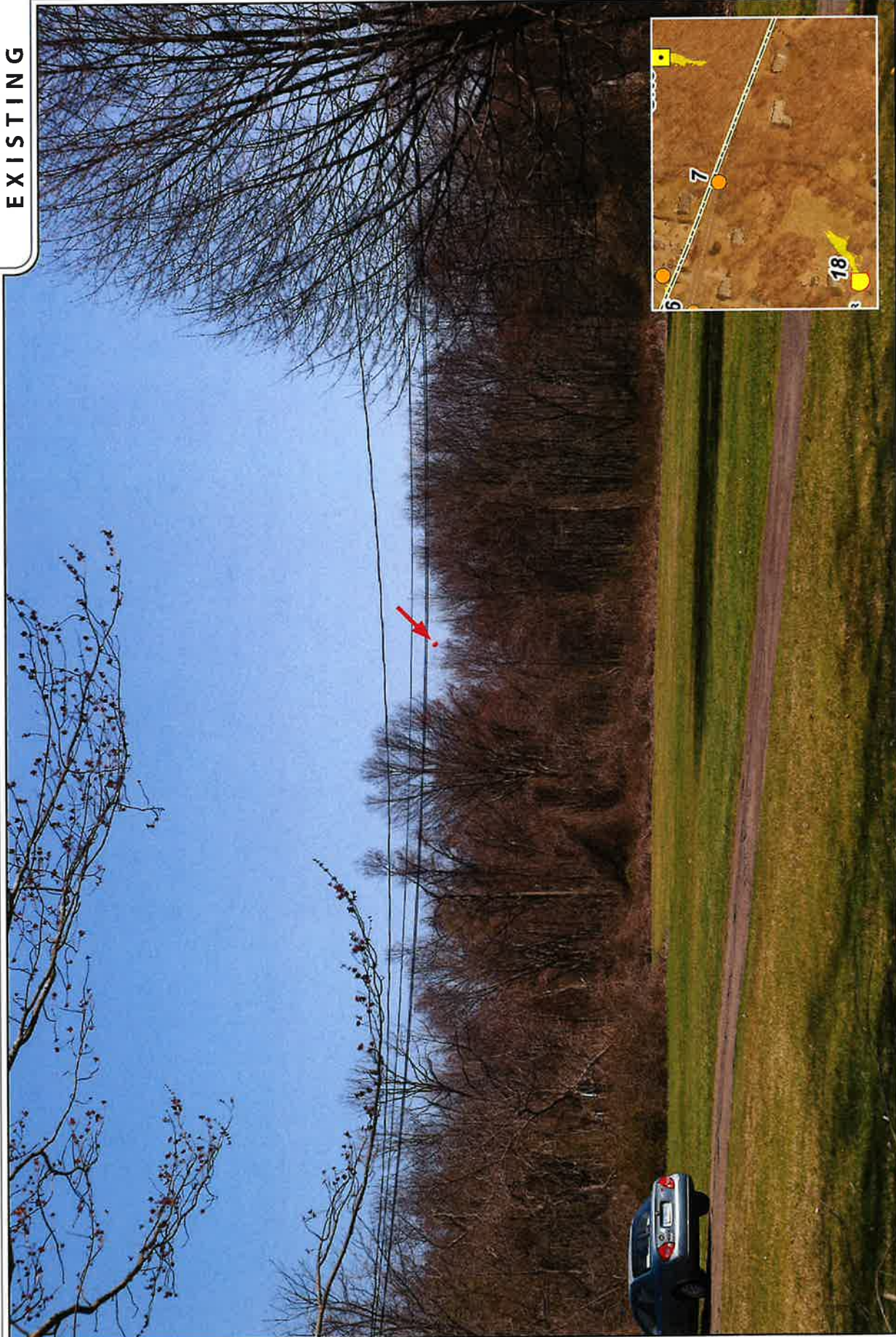
DISTANCE TO SITE

+/- 0.30 MILE

VISIBILITY

YEAR ROUND

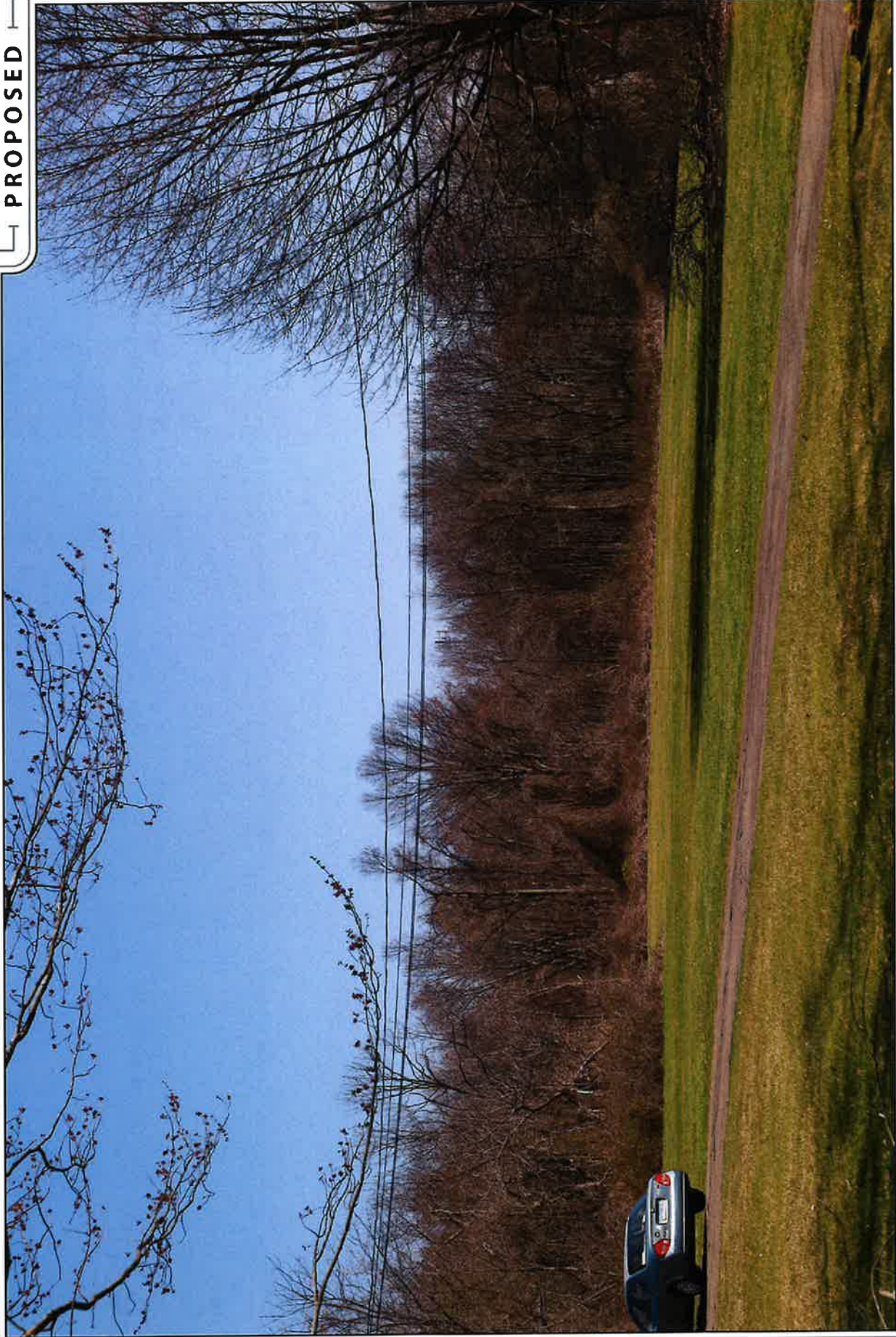
EXISTING



PROGRAMMED ON 4/1/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	CHERYL ANN DRIVE	NE	+/- 0.20 MILE	YEAR ROUND

PROPOSED



PHOTO

18

LOCATION

CHERYL ANN DRIVE

ORIENTATION

NE

DISTANCE TO SITE

+/- 0.20 MILE

VISIBILITY

YEAR ROUND

PHOTOGRAPHED 03/14/2023

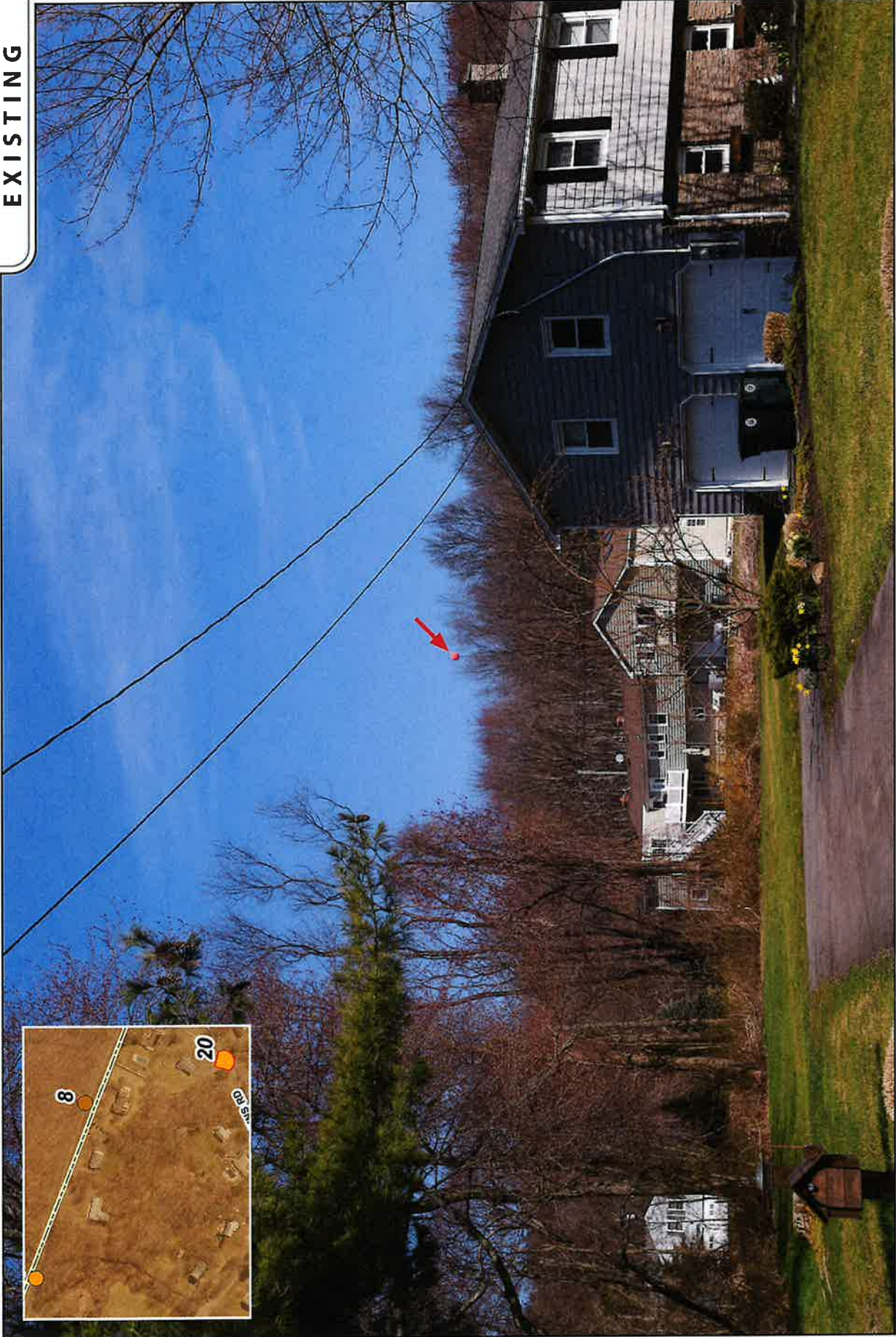
EXISTING



PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	BURNT PLAINS ROAD AT ALEXANDER ROAD	N	+/- 0.30 MILE	OBSCURED



EXISTING



PHOTOGRAPHED ON 4/1/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
20	BURNT PLAINS ROAD	NNW	+/- 0.18 MILE	SEASONAL



PROPOSED



PHOTO

20

LOCATION

BURNT PLAINS ROAD

ORIENTATION

NNW

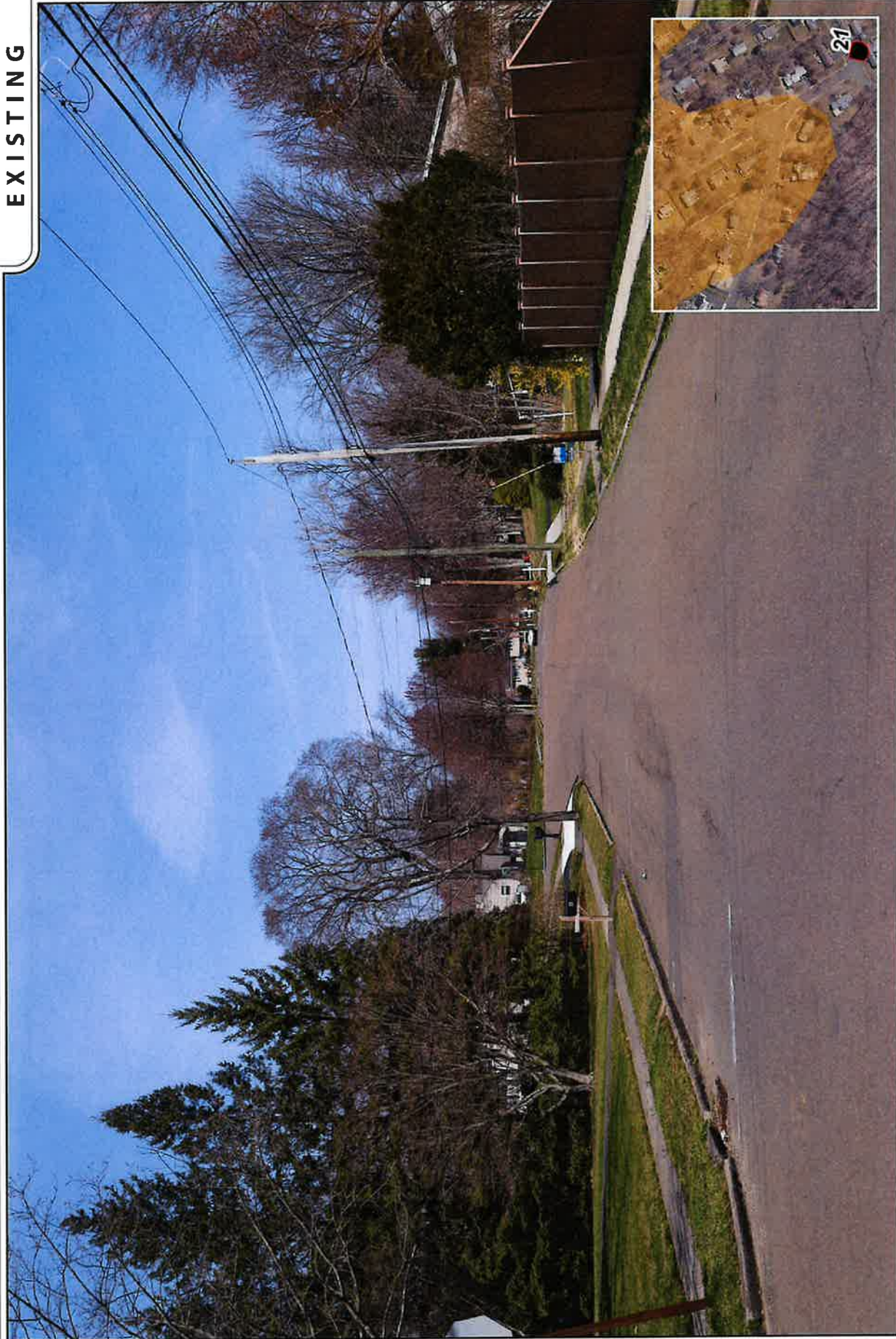
DISTANCE TO SITE

+/- 0.18 MILE

VISIBILITY

SEASONAL

EXISTING



PHOTOGRAPHED ON 11/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	COLONY ROAD AT GREEN MEADOW ROAD	NNW	+/- 0.46 MILE	NOT VISIBLE

EXISTING

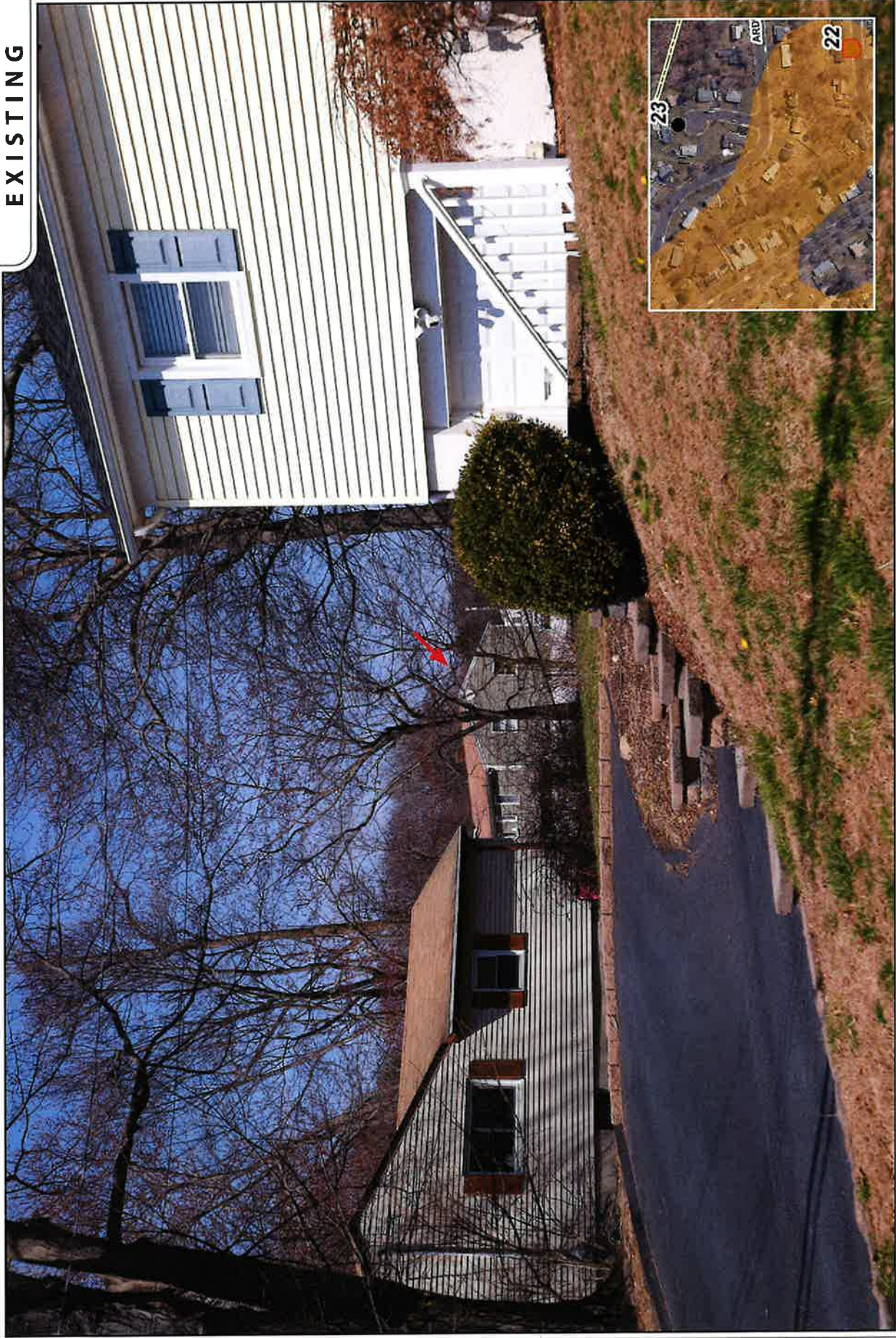


PHOTO
22

LOCATION

SAWMILL ROAD AT TUMBLEBROOK DRIVE

ORIENTATION

NW

DISTANCE TO SITE

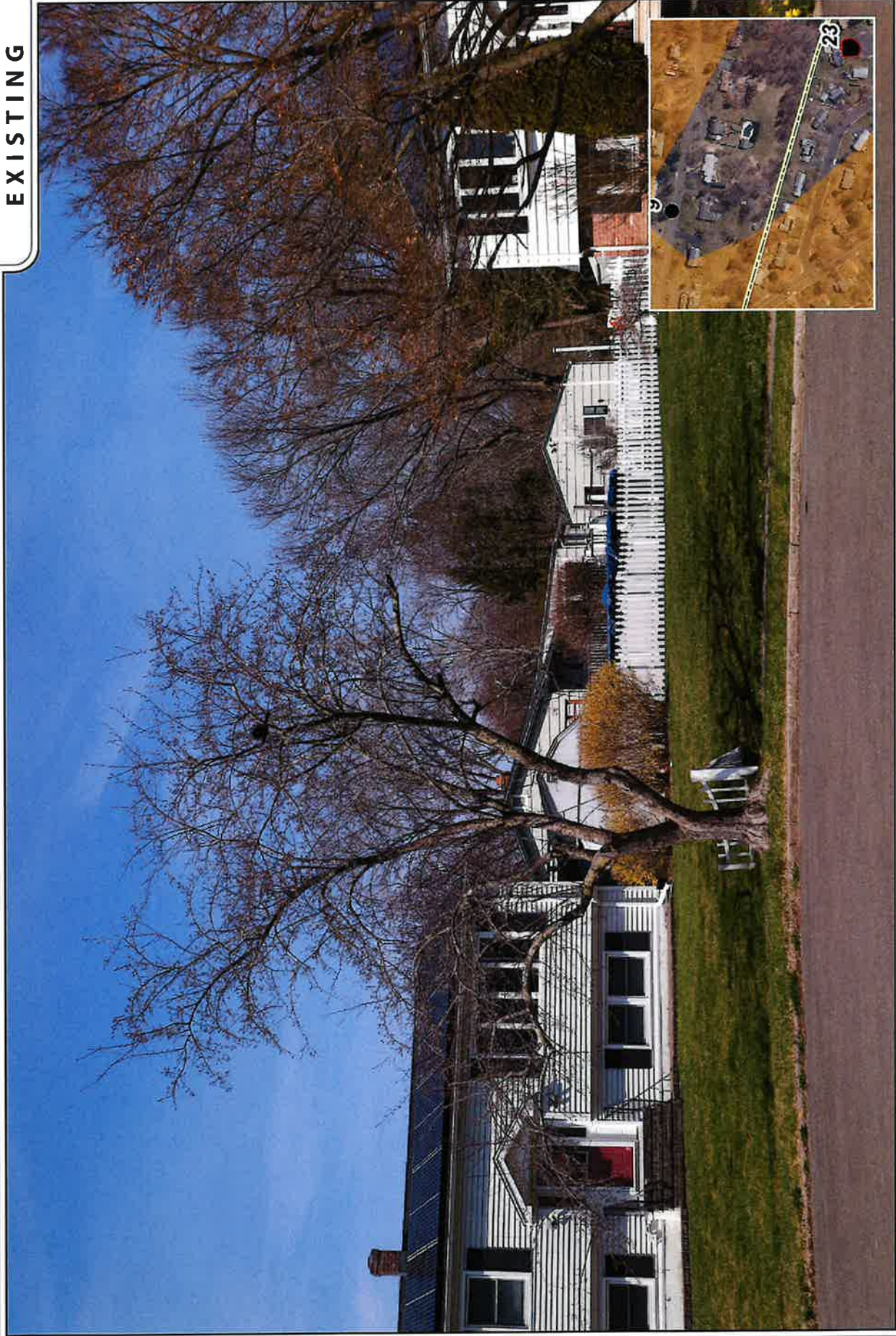
+/- 0.47 MILE

VISIBILITY

OBSCURED

PHOTOGRAPHED ON 11/1/2023

EXISTING



PHOTOGRAPHED ON 1/1/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	RITA LANE	WNW	+/- 0.36 MILE	NOT VISIBLE

EXISTING



PHOTOGRAPHED ON 4/1/2023

PHOTO
24

LOCATION
LAVIOLA LANE AT NARROW LANE

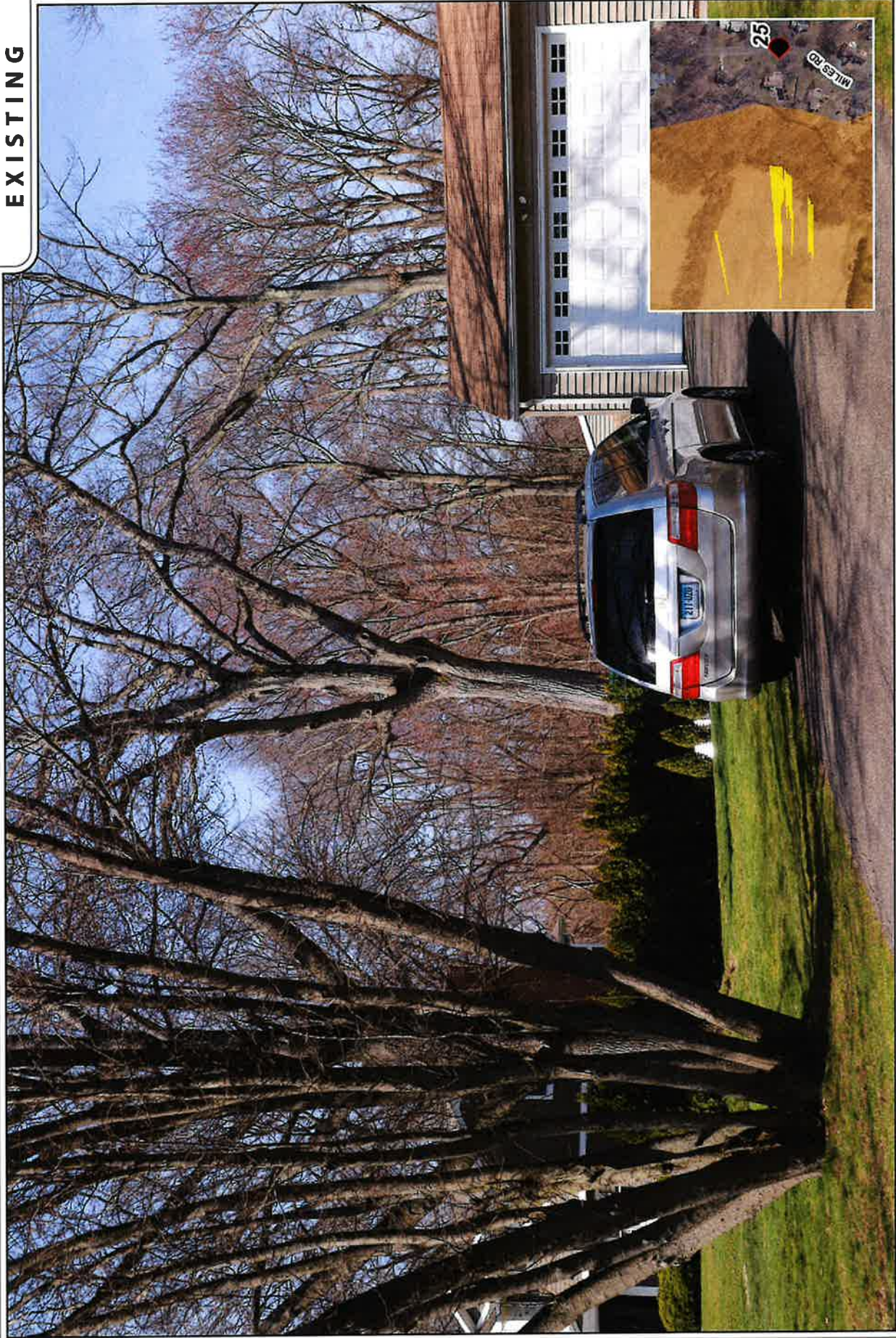
ORIENTATION
WNW

DISTANCE TO SITE
+/- 0.39 MILE

VISIBILITY
OBSCURED



EXISTING



PHOTOGRAPHED ON 4/1/2023

PHOTO
25

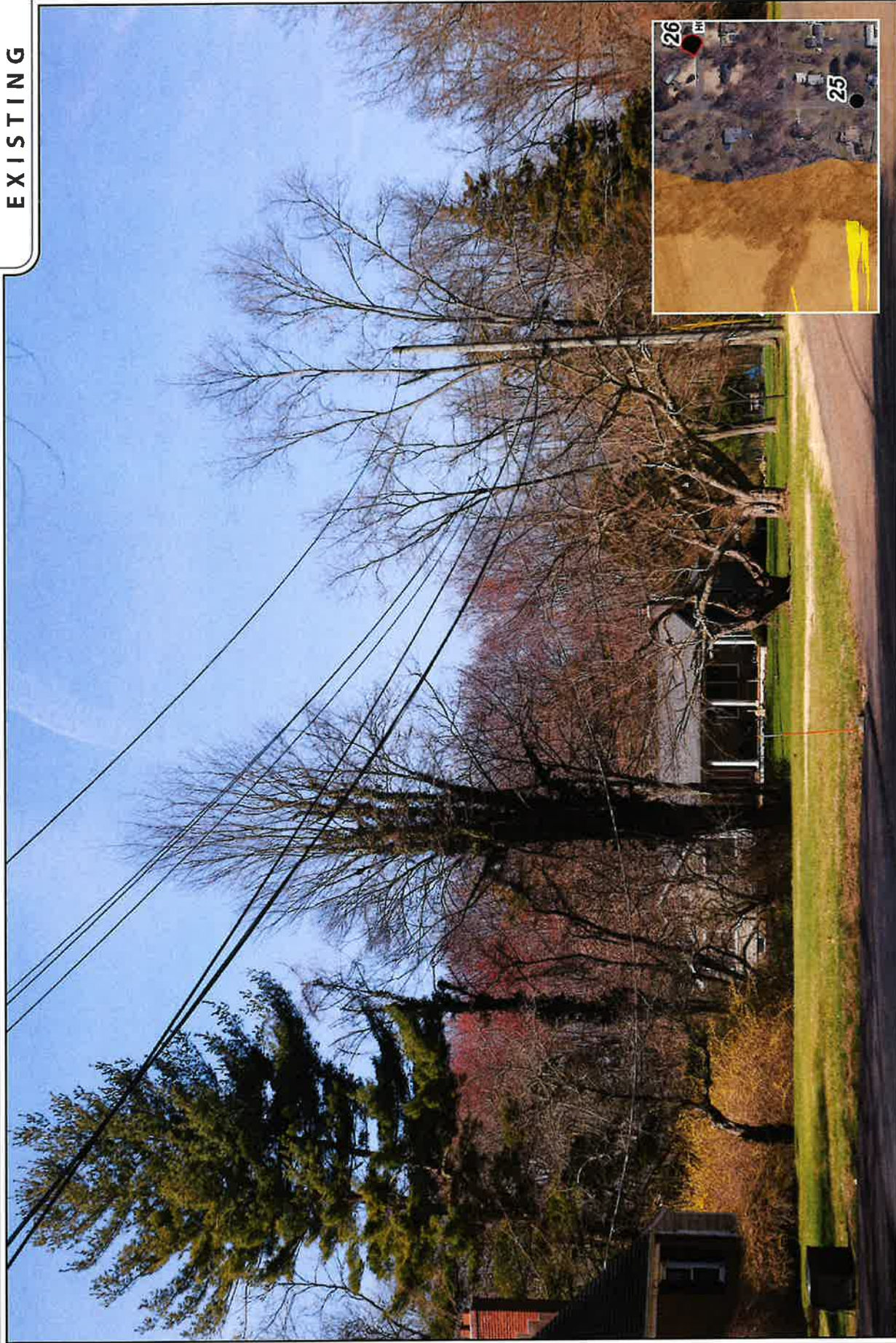
LOCATION
MILES ROAD

ORIENTATION
W

DISTANCE TO SITE
+/- 0.42 MILE

VISIBILITY
NOT VISIBLE

EXISTING



PHOTOGRAPHED ON 11/1/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
26	HOTCHKISS ROAD	WSW	+/- 0.48 MILE	NOT VISIBLE

EXISTING



PHOTOGRAPHED ON 1/17/2023

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
27	OLD TAVERN ROAD	SW	+/- 0.42 MILE	YEAR ROUND



PROPOSED



PHOTO

27

LOCATION

OLD TAVERN ROAD

ORIENTATION

SW

DISTANCE TO SITE

+/- 0.42 MILE

VISIBILITY

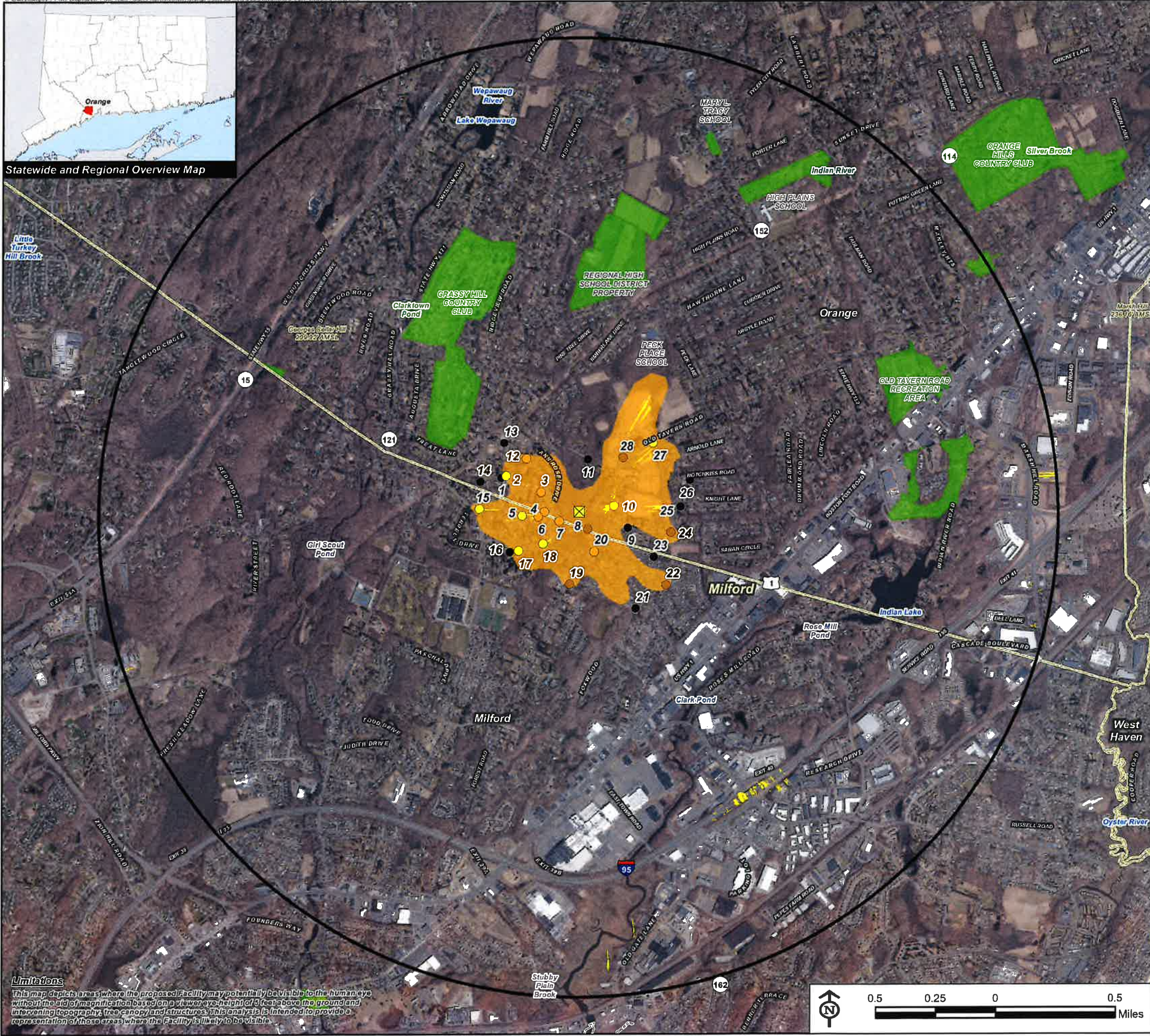
YEAR ROUND

EXISTING



PHOTOGRAPHED ON 11/1/2023

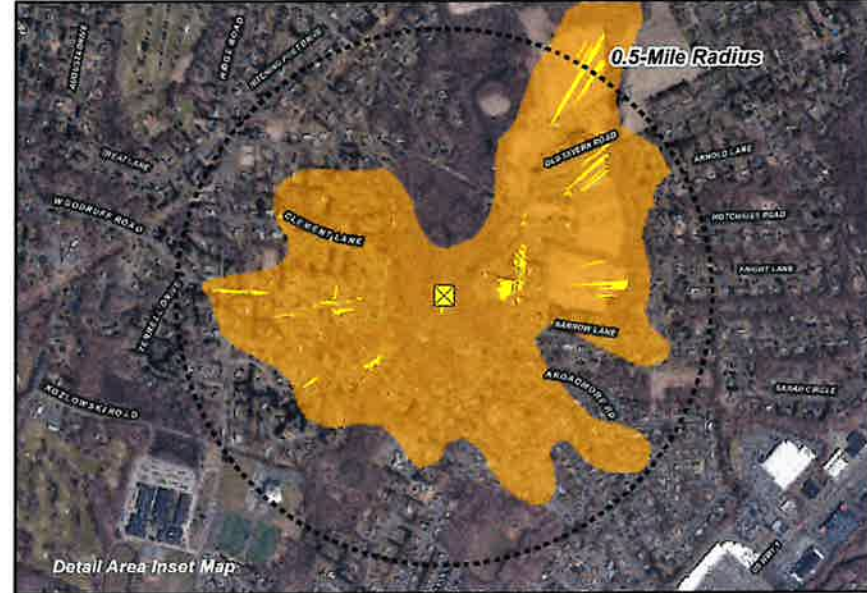
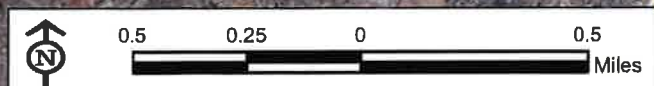
PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
28	OLD TAVERN ROAD	SW	+/- 0.29 MILE	OBSCURED



Statewide and Regional Overview Map

Little Turkey Hill Brook

Limitations
 This map depicts areas where the proposed facility may potentially be visible to the human eye without the aid of magnification based on a tower eye height of 120 feet above the ground and intervening topography, tree canopy and structures. This analysis is intended to provide a representation of those areas where the facility is likely to be visible.



Viewshed Analysis Map

Milford East CT
 425 Old Tavern Road
 Orange, Connecticut

Proposed facility height is 120 feet AGL.
 Forest canopy height is derived from LIDAR data.
 Study area encompasses a two-mile radius and includes 8,042 acres.
 Existing conditions field verified by APT on April 4, 2023
 Base Map Source: 2019 Aerial Photograph (CTECO)
 Map Date: January 2024

Legend

- Proposed Site
- Study Area (2-Mile Radius)
- Photo Locations (April 4, 2023)**
- Not Visible
- Seasonal
- Obscured
- Year-Round
- Predicted Year-Round Visibility (8 Acres)
- Areas of Potential Seasonal Visibility (252 Acres)
- Municipal Boundary
- Trail
- Scenic Highway
- DEEP Boat Launches
- Municipal and Private Open Space Property
- State Forest/Park
- Protected Open Space Property**
- Federal
- Land Trust
- Municipal
- Private
- State

Data Sources:

Physical Geography / Background Data
 A digital surface model (DSM) was created from the State of Connecticut 2016 LIDAR LAS data points. The DSM captures the natural and built features on the Earth's surface.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

Dedicated Open Space & Recreation Areas
 Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007); Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)

Connecticut Forest & Parks Association, Connecticut Walk Books East & West

Other
 CTDOT Scenic Strips (based on Department of Transportation data)

Notes
 **Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.



