Angara wetlands

16 messages

saralruss <saralruss@gmail.com>
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

To Whom It May Concern,
I would like to voice my concerns regarding the large development planned for this location. I would like to say that I have no objection to the type of development proposed, just the location. My concern is the destruction and removal of almost 300 trees, countless vegetation, small reptiles, and countless wildlife that new construction will destroy. The building on and around high quality wetlands and the impact on the wildlife and surrounding homes and communities will never be made whole again. The filling in of wetland A and wetland B, plus drilling through the current pond is inexcusable. **Profit before nature should never be part of the Rochester Hills community. Greed is an ugly thing**

I own property south of this proposed development and already see issues with flooding has had on surrounding property. The IDD community deserves the proper foundation on which to build their homes. They are investing a significant amount of money to provide for their loved ones.

As for the easement that has been obtained south of the construction site to drill through to connect the development, who is going to replace the damage that will be done? Will tiny saplings replace 100 plus old trees?
I am attaching a report that I obtained on the Egle website so planning and the IDD community can make a more informed decision. It looks like the one planning hasn't included the full report and pictures taken.

Sara Russ

Auburn Angara Wetland Report 7.24.2024_v1 (2).pdf
10709K

Planning Dept Email <planning@rochesterhills.org> Wed, Oct 16, 2024 at 3:05 PM
To: saralruss <saralruss@gmail.com>
Cc: Chris McLeod <mcleodc@rochesterhills.org>

Hello Sara -

Thank you for your comments, they will be provided to City Council for the Preliminary site condominium and Wetland Use permit requests, the Tree Removal Permit and the Natural Features Setback modification were approved last night by the Planning Commission.

The expected date for City Council is November 11th.

Jennifer MacDonald
Planning Specialist

ROCHESTER HILLS MICHIGAN
innovative by nature

Planning & Economic Development
248-656-4660
rochesterhills.org

[Quoted text hidden]

saralruss <saralruss@gmail.com> Wed, Oct 16, 2024 at 3:46 PM
To: Planning Dept Email <planning@rochesterhills.org>

Thank you for returning my email. If I understand what this means it will, **minimize impacts from development on the natural feature** and help ensure the long-term health of the natural feature

Does this mean you will be putting in a retention pond to cover the damages? Or does it mean something else? I would appreciate it if you could clarify for me.
thank you

Sara Russ

[Quoted text hidden]
[Quoted text hidden]

Planning Dept Email <planning@rochesterhills.org> Thu, Oct 17, 2024 at 12:34 PM

Planning Dept Email <planning@rochesterhills.org>
To: saralruss <saralruss@gmail.com>
Bee: Chris McLeod <mcleodc@rochesterhills.org>, Jennifer MacDonald <macdonaldj@rochesterhills.org>

Mon, Oct 21, 2024 at 8:34 AM

Hi Sara-

The City did thorough reviews of the wetlands and their associated natural features setbacks as a part of the many site plan reviews this development underwent. Our wetland consultant, who has been with the City for a significant amount of time and fully understands the City's stance on the environment, guided us through what impacts may be allowable and which would not be. Our consultants ultimately determined that the proposed impacts would be acceptable based on the latest set of plans. As a part of their review, they were also coordinating with the City's staff, including Engineering, to ensure that stormwater is captured from the proposed development. There is a proposed stormwater pond towards the rear (south end) of the site that will collect stormwater generated from the development and then it will be discharged into the wetland at the south end of the site at a rate that is deemed acceptable and after the stormwater has been cleaned. Again, this overall system has been reviewed in tandem with our environmental consultants and city engineering staff and has been found to be acceptable in its configuration.

Jennifer MacDonald
Planning Specialist

ROCHESTER HILLS
MICHIGAN

Planning & Economic Development

248-656-4660
rochesterhills.org

saralruss <saralruss@gmail.com> Mon, Oct 21, 2024 at 12:43 PM
To: Planning Dept Email <planning@rochesterhills.org>

Thank you for getting back to me so soon. One more question is how wide is the easement going to be going through the south end to connect the sewer line? We are the house north of this and it looks very close to our property line with mature trees.

Sara Russ

Jennifer MacDonald <macdonaldj@rochesterhills.org>

- - - Forwarded message ---------
From: **Jason Boughton** <boughtonj@rochesterhills.org>
Date: Tue, Oct 22, 2024 at 7:29 AM
Subject: Sanitary Sewer Question for Angara Oaks
To: <saralruss@gmail.com>
Cc: Chris McLeod <mcleodc@rochesterhills.org>

Good Morning Sara

The Planning Department asked me to respond to your question with regards to the sanitary sewer installation. For the proposed sewer extension, there will be a 20 foot wide easement that exits the southern end of the Auburn Angara Oaks project, extends through the vacant property (15-32-201-007) to the south, then will head east, along the northern property line of 3270 Devondale to Devondale Road, but wholly on the 3270 Devondale property. This is currently the proposed route for the sewer extension and it is our understanding easements have already been secured from these 2 landowners. Full engineering review and permitting will be necessary to ensure that the proposed sewer line route is viable and can ultimately be approved. The sewer extension is proposed to be directionally drilled through these properties which should limit disturbances to these properties. With directional drilling, the need for trenching or excessive digging should be limited. An area where the sewer line switches from running north and south, to east and west will need to be excavated to install a manhole (and associated manhole structure). The sewer will generally be approximately 10 feet in depth. All the permitting processes will take a better part of a year. As the time comes for constructing the condominium, this would be the best time to do a quick video of your shared property line just in case it is needed if a dispute occurs. If you have any more questions with regards to the utilities please feel free to respond to me. Thank you and have a great day.

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innovativetoinature

Jason Boughton
Engineering Utility Specialist
Department of Public Services

248-841-2490
rochesterhills.org

resourceful. naturally.
engineering and environmental consultants

BARR

July 24, 2024

Bruce Michael
Three Oaks Communities
P.O. Box 8307
Ann Arbor, MI 48107

Re: Wetland Delineation Report – Angara Drive (Parcels 15-32-201-001; -002; -003; -004; -006)
City of Rochester Hills, Oakland County, Michigan

Dear Mr. Michael:

At your request, Barr Engineering Co. (Barr), conducted a wetland delineation of the approximately 7.36-acre above-referenced property. The purpose of this report is to summarize the results of the wetland delineations conducted on May 30 and re-evaluated on July 9, 2024, and to provide a professional opinion as to potential Michigan Department of Environment, Great Lakes, and Energy (EGLE) and City of Rochester Hills jurisdiction over the identified wetland areas. Prior to the July 9 site visit, the City of Rochester Hills consultant, Kyle Hottinger of ASTI, Inc., was on site to address an action taken by a neighbor regarding the hydrology between the site and the neighboring property. A culvert drained this area of the site to the property to the northeast and that culvert had been blocked over the last winter season resulting in water ponding onto the site.

1.0 Area of Investigation Description

The Area of Investigation (AOI) is located west of Crooks Road and south of Auburn Road. The land cover within the AOI consists of mowed lawn, two houses and two garages, and a woodlot. The surrounding land use is comprised of residential development and vacant land.

1.1 Desktop Review

Barr conducted a desktop review to evaluate digital imagery for topography, soil types, and mapped wetlands within the AOI prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS; Figure 1), Michigan Final Wetlands Inventory (MFWI; Figure 2), and aerial photography (Attachment 1).

A review of aerial photography shows evidence of past disturbance on parcel 15-32-201-006, the eastern most parcel of the site. It appears that from approximately 2014 to approximately 2019 the northern portion of this parcel was used as a landscaping storage and staging yard, and the previous owner brought in large cobble to establish a parking and storage area.

According to the WSS (Figure 1), the AOI includes well drained Fox sandy loam, till plain, 2 to 6 percent slopes (18B); somewhat poorly drained Thetford loamy fine sand, 0 to 3 percent slopes (35A); very poorly drained Granby loamy sand, 0 to 2 percent slopes (39); and well drained Urban land-Spinks complex, 0 to 8 percent slopes (62B). The Granby soil is the hydric (wetland) soil mapped within the AOI. Hydric soils are

soils that developed under prolonged periods of saturation or inundation and typically support wetland habitats in an undrained condition.

The MFWI (Figure 2) shows the AOI to contain wetland in the southeastern corner of the property as identified by the National Wetland Inventory (NWI) and Michigan Resource Inventory System (MIRIS) maps. It also shows the central and southwestern portions of the AOI to contain soil areas which include wetland soils.

Figure 1. NRCS Web Soil Survey

Figure 2. Michigan Final Wetlands Inventory

1.2 Methodology

The wetland delineation was conducted in a manner consistent with the *Corps of Engineers Wetlands Delineation Manual (USACE 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, USACE 2010)*. The wetland delineation procedures outlined in these manuals require the evaluation of on-site vegetation, soils, and hydrologic characteristics.

The wetland boundaries were flagged in the field with alpha numerically labeled pink flagging tape and pin flags. The wetland boundaries were subsequently surveyed by Monument Engineering Group Associates, Inc. Site observations are described in the sections below.

1.3 Results

The AOI includes palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) habitats. The on-site investigation identified two wetlands. These wetlands were labeled as Wetland A and Wetland B. The wetland and upland areas within the AOI are described below.

Vegetation, Soil, and Hydrology

Wetland A

Wetland A is a PEM/PSS wetland located within the central portion of the AOI. Wetland A continues off-site, both east and west of the AOI. The on-site portion of Wetland A is approximately **1.8** acres in size. The vegetation identified within the wetland included species such as lake sedge (*Carex lacustris*), skunk cabbage (*Symplocarpus foetidus*), common buckthorn (*Rhamnus cathartica*), and American elm (*Ulmus americana*). During the July 9th reevaluation of the wetlands, five (5) soil pits and data forms were completed at five (5) sampling points on the north edge of Wetland A, attached are data forms SP1 through SP5, along with a photolog showing the location of the sampling points. The eastern end of Wetland A exists on previously disturbed land and soil pits could not be dug due to the presence of large cobble at the surface. Hydric soil and primary and secondary wetland hydrology indicators were observed in other areas of Wetland A. The boundaries of this wetland were identified using flags A1 through A57.

Wetland B

Wetland B is a PFO wetland located in the southern portion of the AOI. Wetland B continues off-site south of the AOI. The on-site portion of Wetland B is approximately **0.2** acres in size. The vegetation identified within the wetland included species such as silver maple (*Acer saccharinum*). Hydric soil was assumed to be present within Wetland B. A soil pit was not dug because the soil surface was inundated by 6 inches of water. Primary and secondary wetland hydrology indicators were observed in Wetland B. The boundaries of this wetland were identified using flags B1 through B12.

Upland

The upland areas of the site were characterized by mowed lawn and scrub-shrub areas and woods. The upland areas of the site contained species such as white clover (*Trifolium repens*), dandelion (*Taraxacum officinale*), multiflora rose (*Rosa multiflora*), Japanese barberry (*Berberis thunbergia*), prickly ash (*Zanthoxylum americanum*), common buckthorn, Morrow's honeysuckle (*Lonicera morrowii*), black locust (*Robinia pseudoacacia*), and black cherry (*Prunus serotina*). Hydric soils and wetland hydrology indicators were not observed in the upland areas of the site.

The attached Site Survey depicts the location of the wetland areas encountered on the site. Wetland Determination Data Forms are attached for further detailed information on the wetland and upland areas within the AOI.

1.4 Conclusions

Based on observations of topography, vegetation, soil, and indicators of hydrology, Barr has determined that wetland habitat is present within the AOI. These wetland areas were identified as a PEM, PSS, and PFO wetland habitat types. According to Part 303, Wetlands Protection, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, wetlands regulated by the State of Michigan include wetlands that are:

1. Located within 500 feet of, or having a direct surface water connection to, an inland lake, pond, river, or stream; or
2. Greater than 5 acres in size; or
3. Located within 1,000 feet of, or having a direct surface water connection to, the Great Lakes or Lake St. Clair; or
4. A water of the United States as that term is used in section 502(7) of the Federal Water Pollution Control Act, 33 USC 1362; or

5. Known to have a documented presence of an endangered or threatened species under Part 365 of State of Michigan 1994 PA 451, as amended or the Federal Endangered Species Act of 1973, Public Law 93-205; or
6. Rare or imperiled.

Wetland A may be regulated under Part 303 because it continues off-site, beyond the limits of the AOI. The total size of Wetland A was not determined. If Wetland A is greater than 5 acres in size it would be regulated.

Wetland B may be regulated under Part 303 because it is part of a larger wetland complex that extends off-site and may be greater than 5 acres in total size. If Wetland B is greater than 5 acres in size it would be regulated.

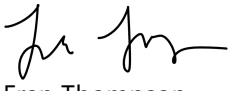
The City of Rochester Hills regulates all wetlands regulated by EGLE and, in addition, regulates noncontiguous wetlands two acres in size or greater. The City of Rochester Hills also regulates noncontiguous wetlands less than two acres in size if the wetlands are deemed essential to the preservation of the natural resources of the city. Wetland A and Wetland B are likely to be regulated by the City of Rochester Hills because they appear to be greater than 2 acres in size.

Please be advised that EGLE, and the City of Rochester Hills, has regulatory authority regarding the wetland boundary location(s) and jurisdictional status of wetlands on this site. Barr's wetland determination was performed in general accordance with accepted procedures for conducting wetland determinations. Barr provides no warranty, guarantee, or other agreement in respect to the period of time for which this wetland determination will remain valid. Barr's conclusions reflect our professional opinion based on the site conditions within the AOI observed during the site visit. Discrepancies may arise between current and future wetland determinations and delineations due to changes in vegetation and/or hydrology as the result of land use practices or other environmental factors, whether on-site or on adjacent or nearby properties. We recommend our wetland boundary determination and jurisdictional opinion be reviewed by EGLE prior to undertaking any activity within any identified wetlands.

Thank you for the opportunity to provide this wetland delineation. If you have any questions, please contact me at your convenience at 810-247-1229 or Fthompson@barr.com.

Sincerely,

BARR ENGINEERING CO.



Fran Thompson
Ecologist

References

U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual.* Washington, DC.

USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*

Figure:
Site Survey

Attachments:
Attachment 1 – Historic Aerial Photography
Attachment 2 – USACE Wetland Determination Data Sheets

UTILITY CROSSING NOTE

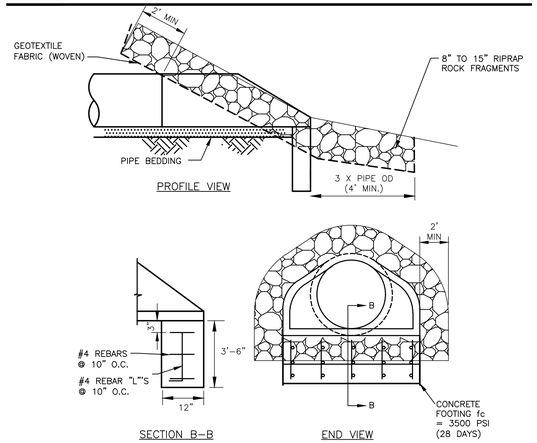
SANITARY SEWER CROSSING OF THE WETLAND B MUST BE SLEEVED TO PROTECT THE WETLAND. ALL OTHER WETLANDS TO BE CROSSED BY UTILITIES ARE PROPOSED TO BE FILLED. SEE PLAN FOR LOCATION.

UTILITY CROSSINGS			
WETLAND	SANITARY	WATERMAIN	STORM SEWER
WETLAND A	248 LF – 8" SEWER	245 LF – 8" WATER MAIN	247 LF – 36" STORM SEWER 125 LF – 12" STORM SEWER
WETLAND B	112 LF – 8" SEWER (DIRECTIONAL DRILL)	NA	12 INCH OUTLET W/ RIPRAP

25' NATURAL FEATURES SETBACK DISTURBANCES			
WETLAND	LENGTH OF 25' SETBACK	LENGTH OF DISRUPTION OF 25' SETBACK	REDUCTION
WETLAND A – DISTURBANCE 1	1,201 LF	632 LF	20,396 SF (PERMANENT)
WETLAND A – DISTURBANCE 2	1,201 LF	123 LF	2,704 SF (TEMP RESTORED)
WETLAND B	344 LF	344 LF	2,122 SF (PERMANENT) 3,318 SF (TEMP RESTORED)

WETLAND DISTURBANCES			
WETLAND	AREA OF WETLAND (ONSITE)	AREA OF DISRUPTION OF WETLAND	WETLAND VOLUME
WETLAND A – DISTURBANCE 1	78,062 SF	29,356 SF	5,522 CY (FILL)
WETLAND A – DISTURBANCE 2	78,062 SF	25 SF	<1 CY (FILL)
WETLAND B – DISTURBANCE 1	9,367 SF	361 SF	79 CY (FILL)
WETLAND B – DISTURBANCE 2	9,367 SF	69 SF	1 CY (CUT)

END SECTION DETAIL - WITH FOOTING



RIGHT OF WAY LINE LEGEND

EX. RIGHT OF WAY LINE/EASEMENT

PR. RIGHT OF WAY LINE/EASEMENT

IMPACT LEGEND

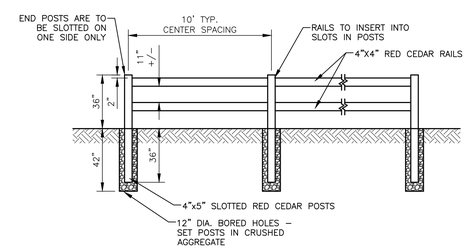
WETLAND FILL

NATURAL FEATURES 25' SETBACK IMPACT

WETLAND NOTES

1. MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY PERMIT WILL BE REQUIRED FOR FILLING IN THE THE WETLAND AS SHOWN ON THIS PLAN. OAKLAND COUNTY WATER RESOURCE COMMISSIONER PERMIT WILL BE REQUIRED FOR DISCHARGING THE STORM WATER EFFLUENT INTO THE LEUDER'S DRAIN.
2. POST CONSTRUCTION, A CITY-APPROVED WETLAND SEED MIX COMPRISED OF NATIVE MICHIGAN SPECIES MUST BE INSTALLED IN ANY AREAS OF UNPLANNED IMPACTS TO WETLANDS, AS WELL AS ALONG THE WETLAND SIDE OF THE FINAL RETAINING WALL STRUCTURES.
3. CITY APPROVED WETLAND SOIL AND SEED MIXTURE SHALL BE USED TO RESTORE ANY IMPACTS TO WETLANDS A AND B IDENTIFIED ON THIS PLAN.
4. PRIOR TO ANY WORK BEING PERFORMED WITHIN THE WETLANDS OR NATURAL FEATURES SETBACKS ON THIS PROJECT:
   - 4.1. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CITY ENGINEER. WORK SHALL NOT COMMENCE UNTIL CONSENT HAS BEEN OBTAINED FROM THE CITY MAYOR.
   - 4.2. WORK SHALL BE CONDUCTED USING BEST MANAGEMENT PRACTICES (BMP'S) TO ENSURE FLOW AND CIRCULATION PATTERNS AND CHEMICAL AND BIOLOGICAL CHARACTERISTICS OF THE WETLANDS ARE NOT IMPACTED.
   - 4.3. THE WORK SHALL BE CONDUCTED SUCH THAT ALL IMPACTS TO THE AQUATIC ENVIRONMENT ARE MINIMIZED.

FENCE DETAIL - SPLIT RAIL - 2 RAIL



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THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO REPRESENTATION IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT :

AUBURN ANGARA OAKS, LLC

14496 N SHELDON RD
SUITE 230
PLYMOUTH, MI 48170
BRUCE MICHAEL
(248) 703-4653

WETLAND PLAN

AUBURN ANGARA OAKS

PART OF SEC. 32, T3N, R11E
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MI

PLAN SUBMITTALS/REVISIONS	DATE
REVISED SITE PLAN SUBMITTAL	04/28/2023
REVISED SITE PLAN SUBMITTAL	08/23/2023
RESUBMIT TO MDOT	09/13/2023
REVISED SITE PLAN SUBMITTAL	01/22/2024
REVISED SITE PLAN PER CITY AND MDOT	03/14/2024
REVISED SITE PLAN PER MDOT	03/28/2024
PRELIMINARY SITE PLAN TO CITY	05/16/2024
REVISED SITE PLAN / WETLAND FLAGS	07/23/2024

ORIGINAL ISSUE DATE: 05/19/2022

PROJECT NO: 22–051

SCALE: 1" = 50'
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DESIGN BY: KM
CHECK BY: AP

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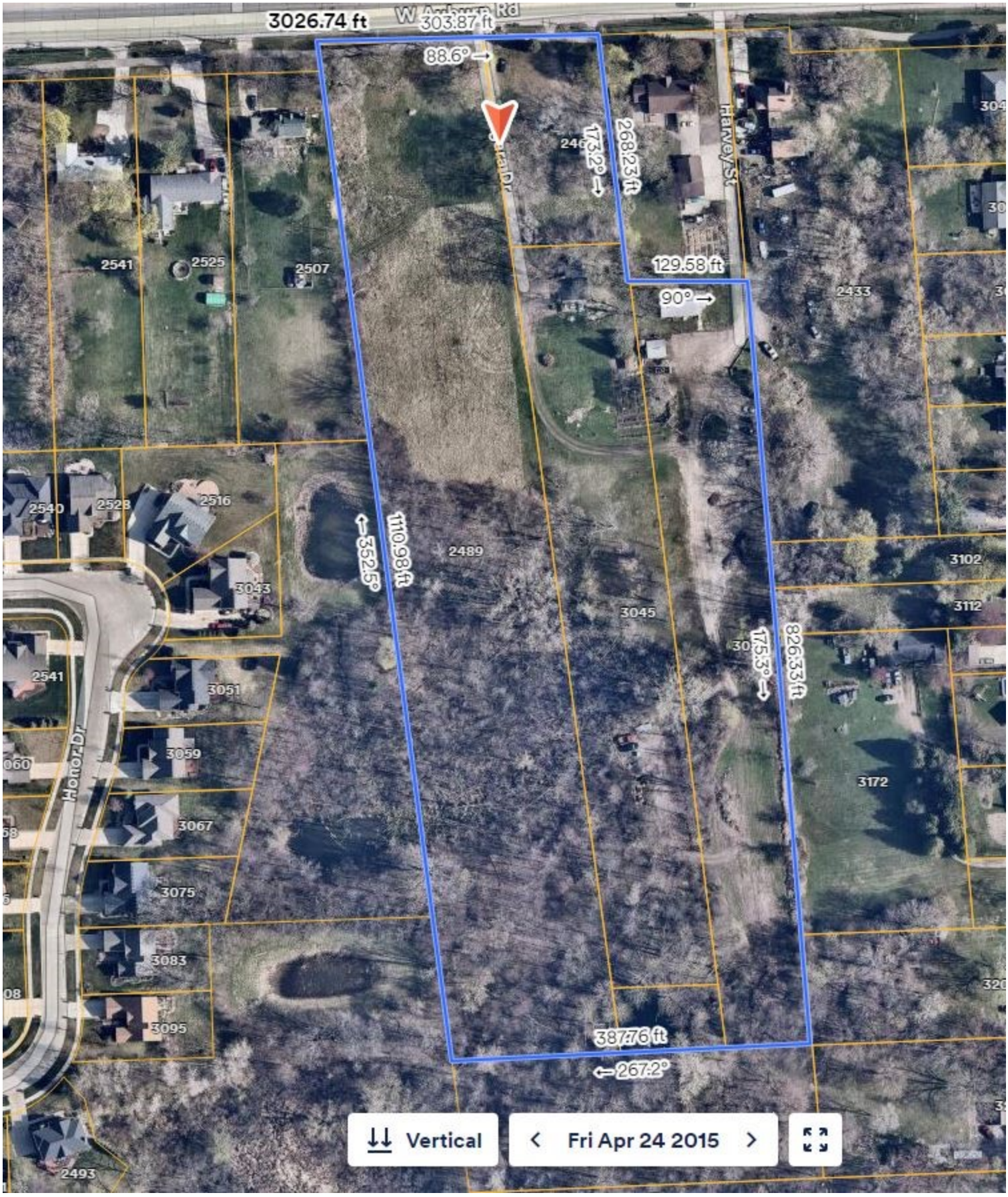
Attachments 1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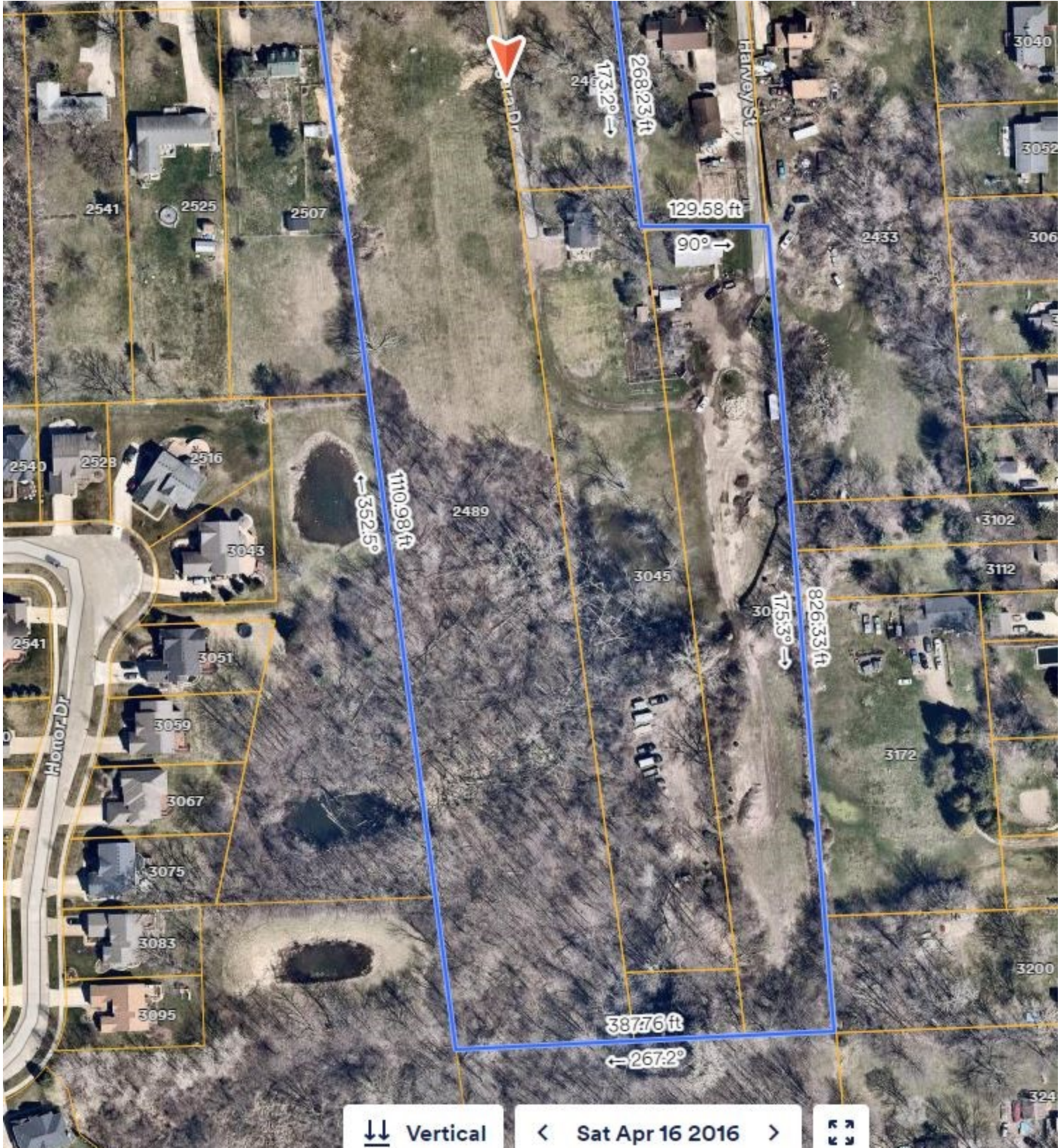
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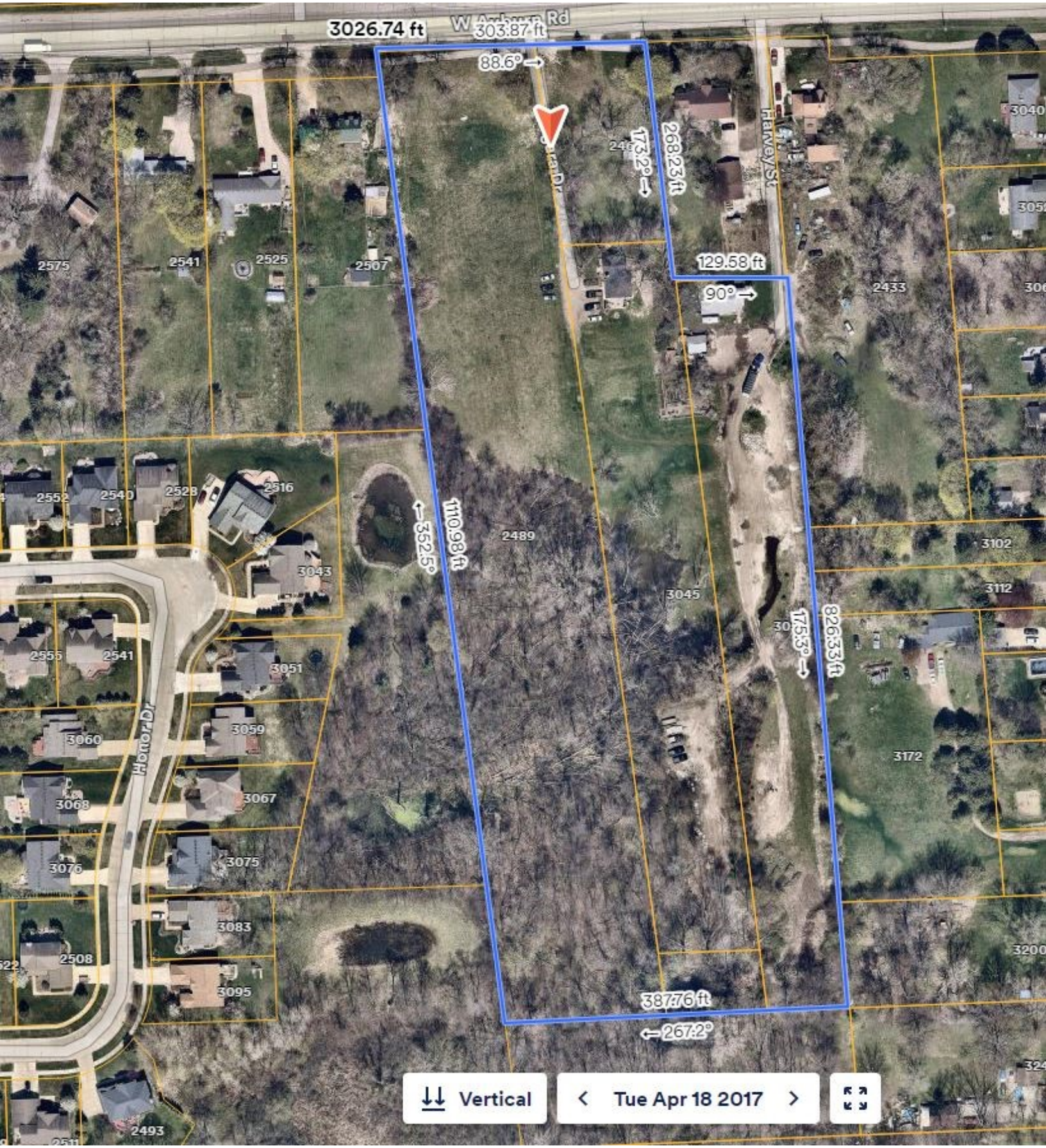
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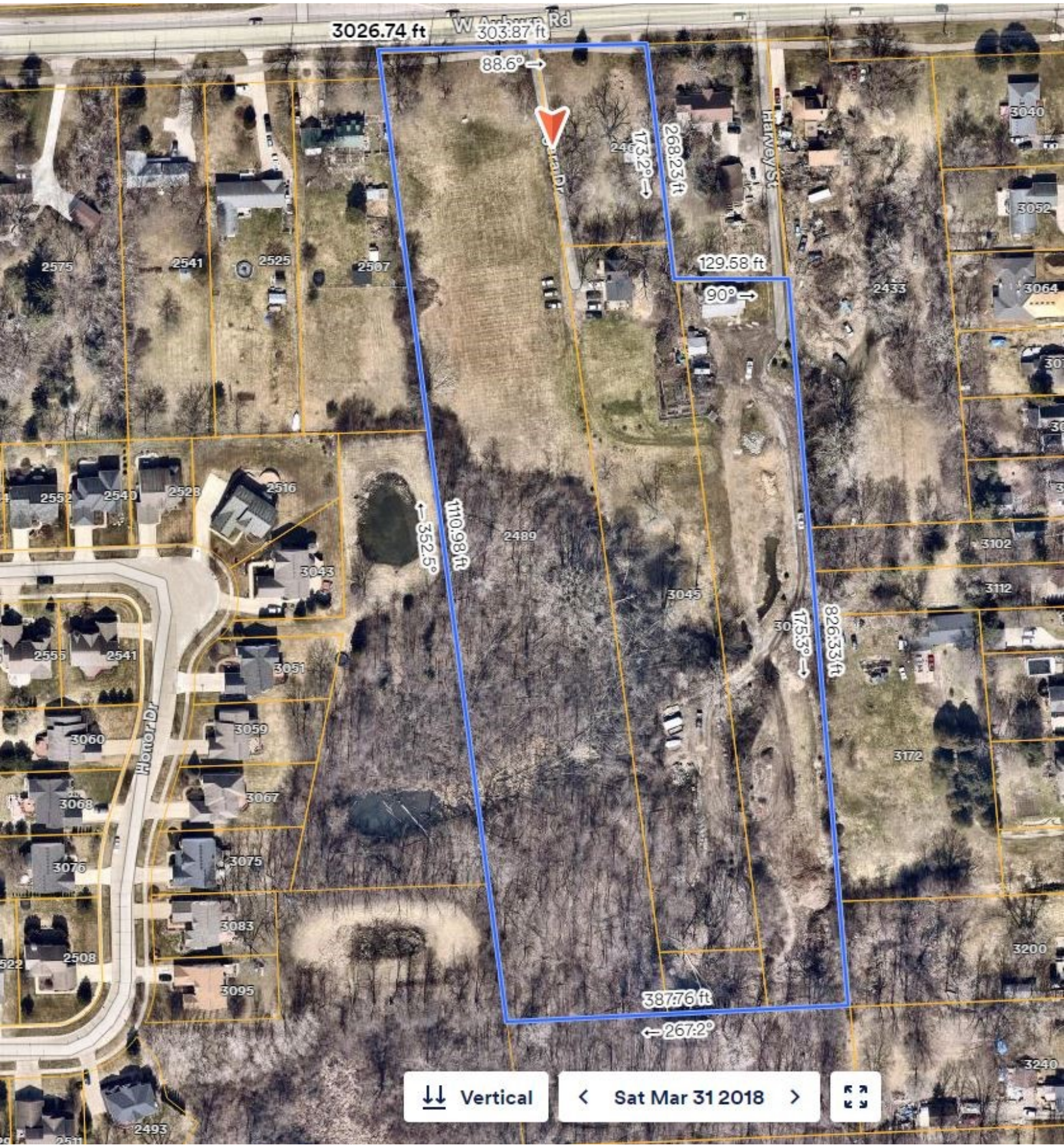
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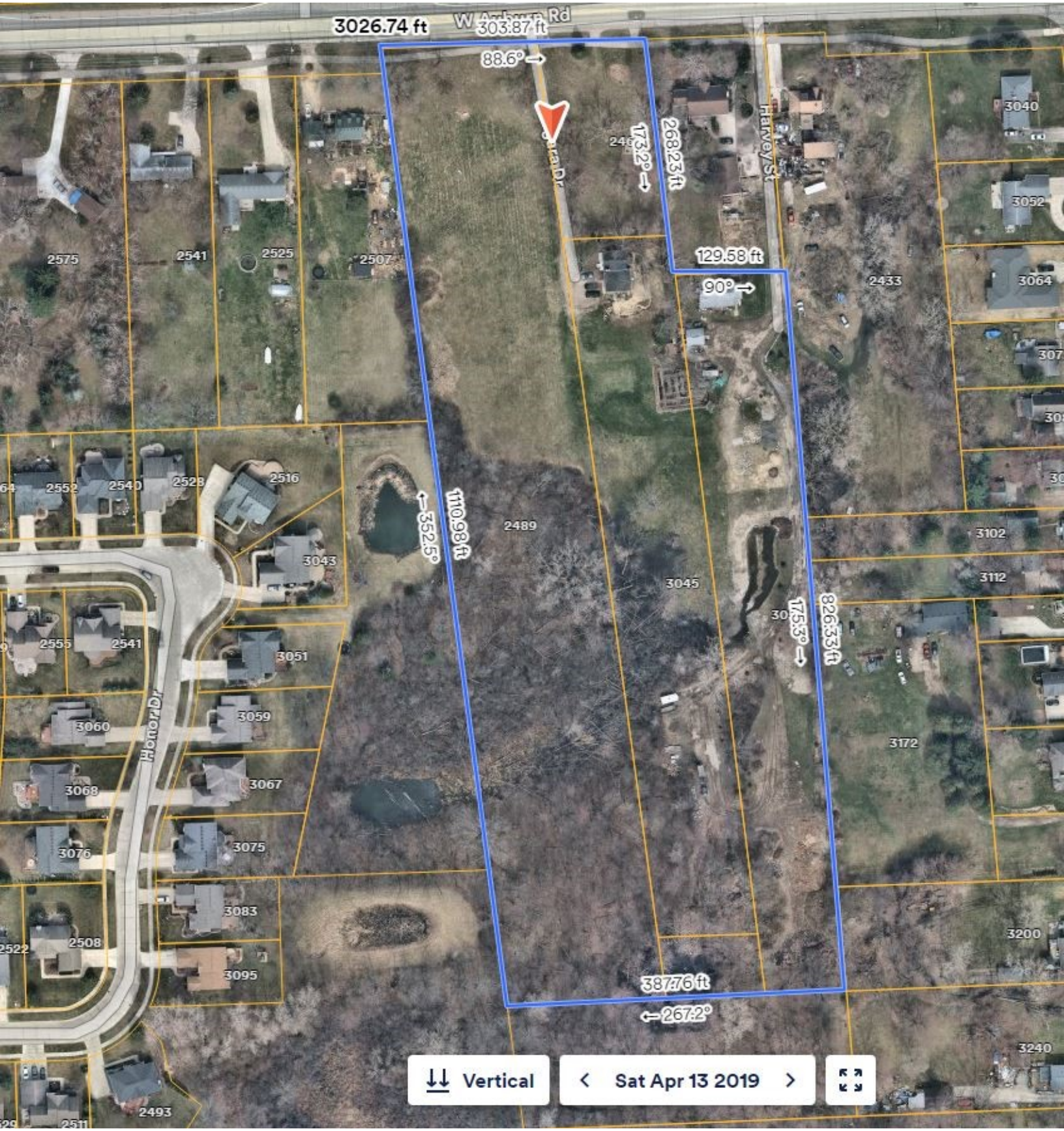
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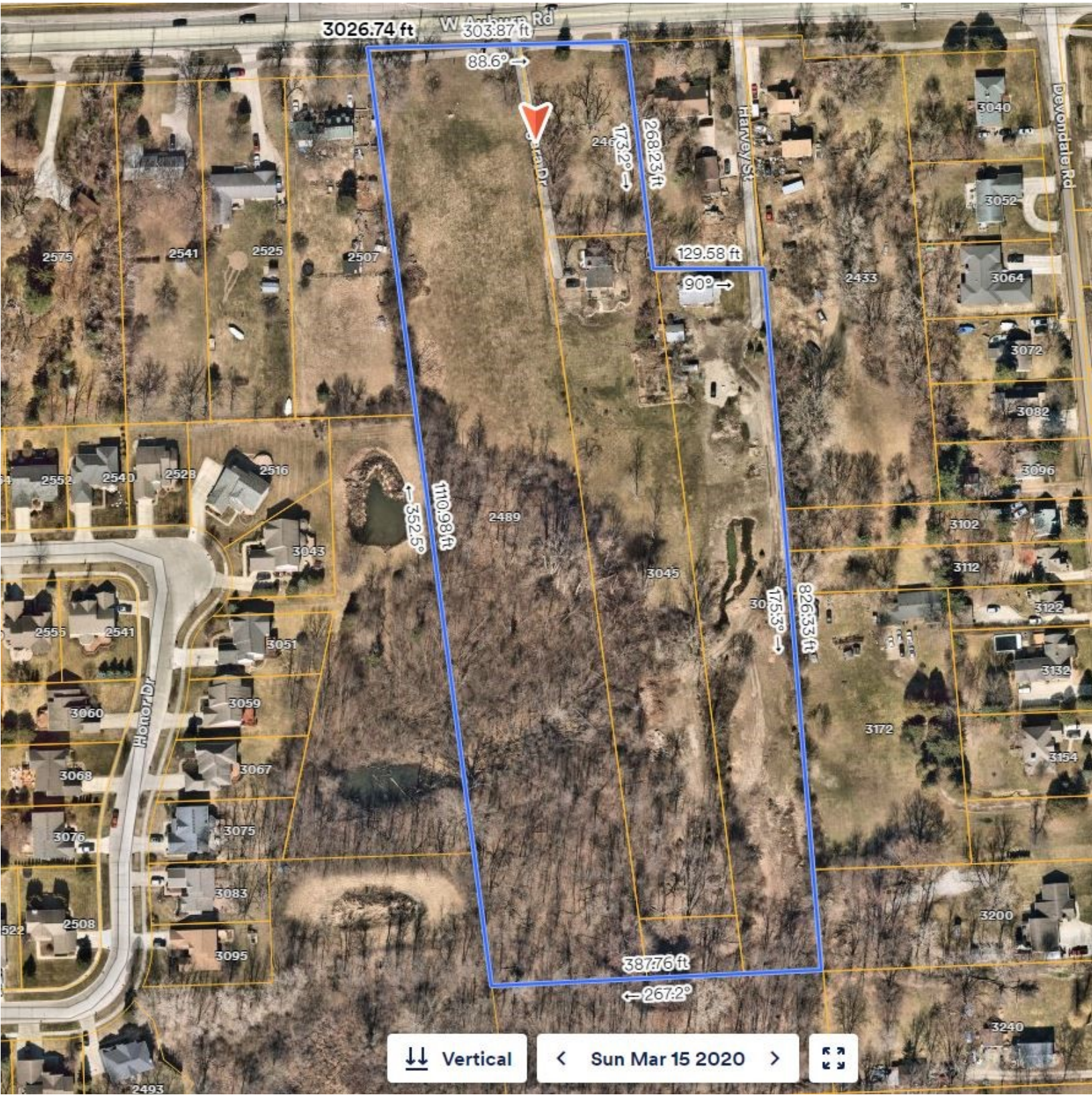
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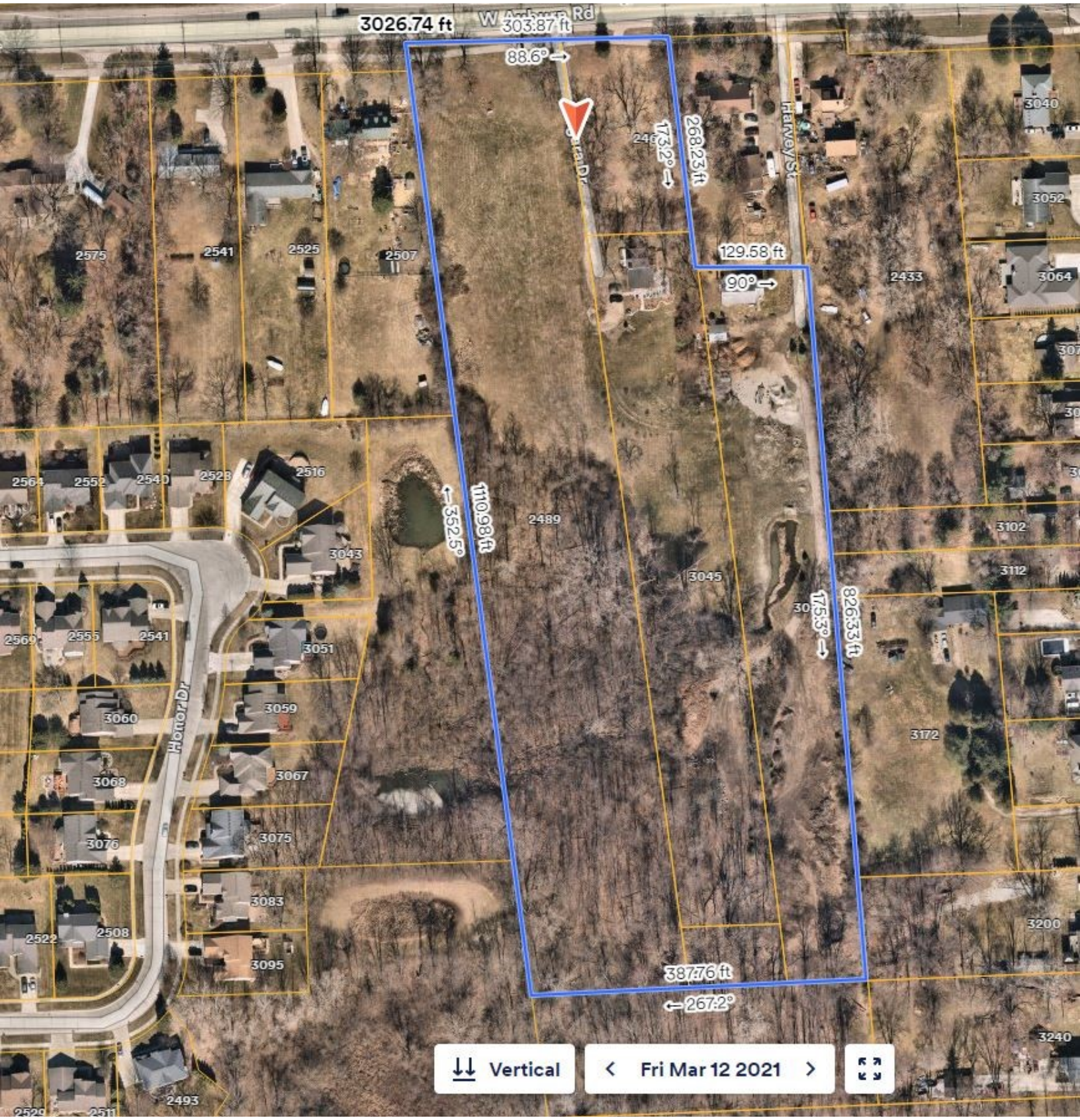
Sun Mar 15 2020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303.87 ft
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173.2°
268.23 ft
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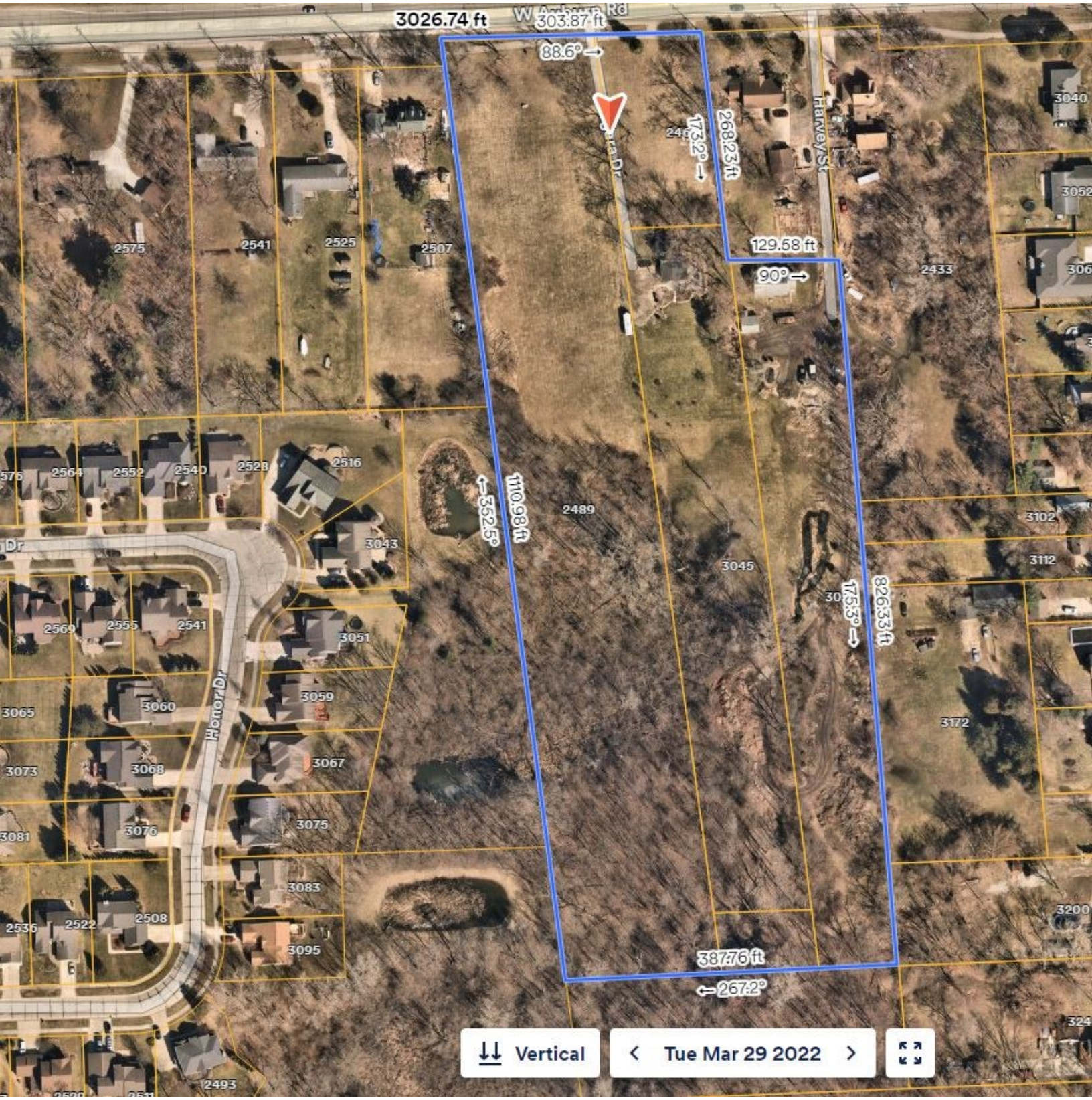
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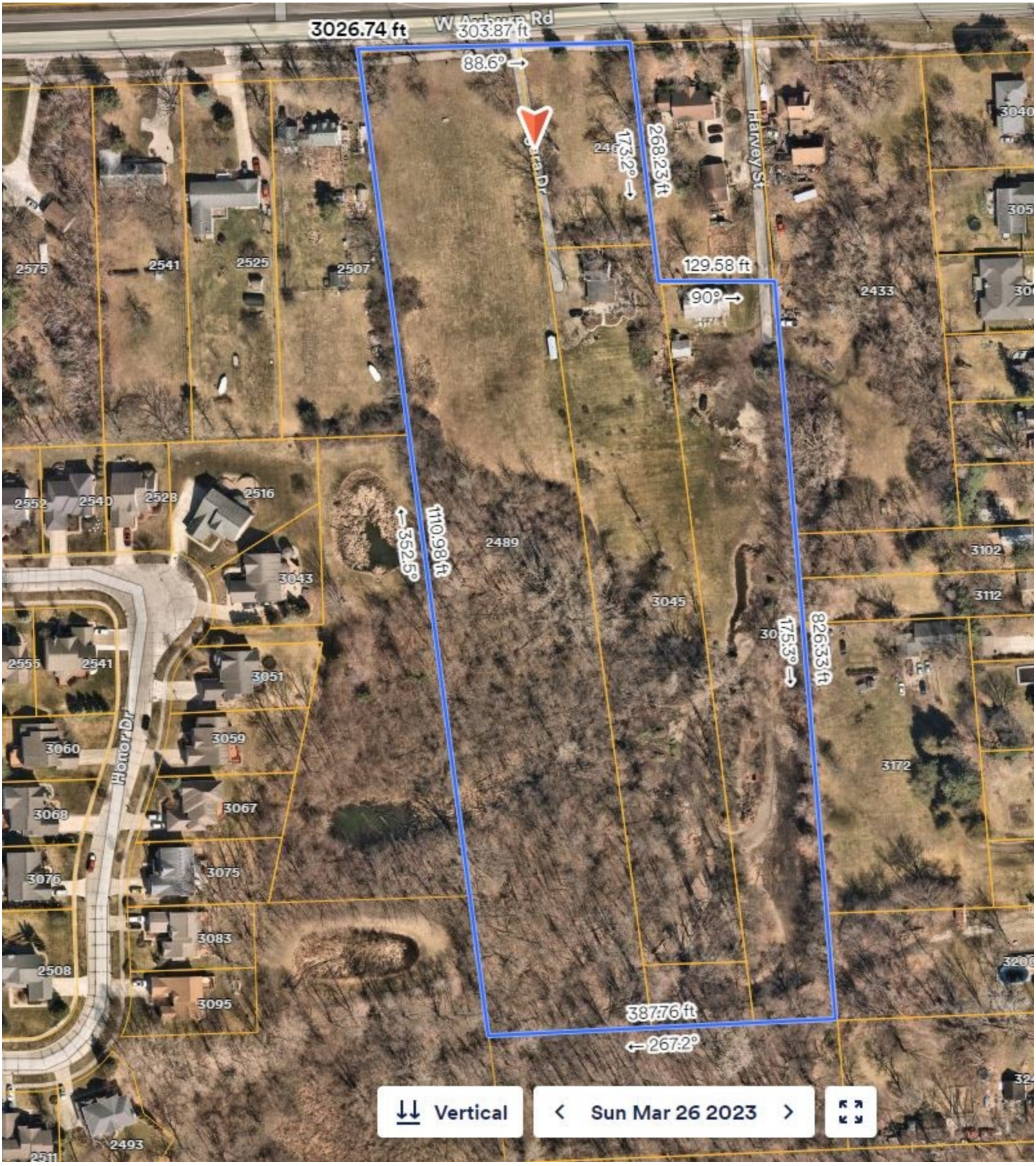
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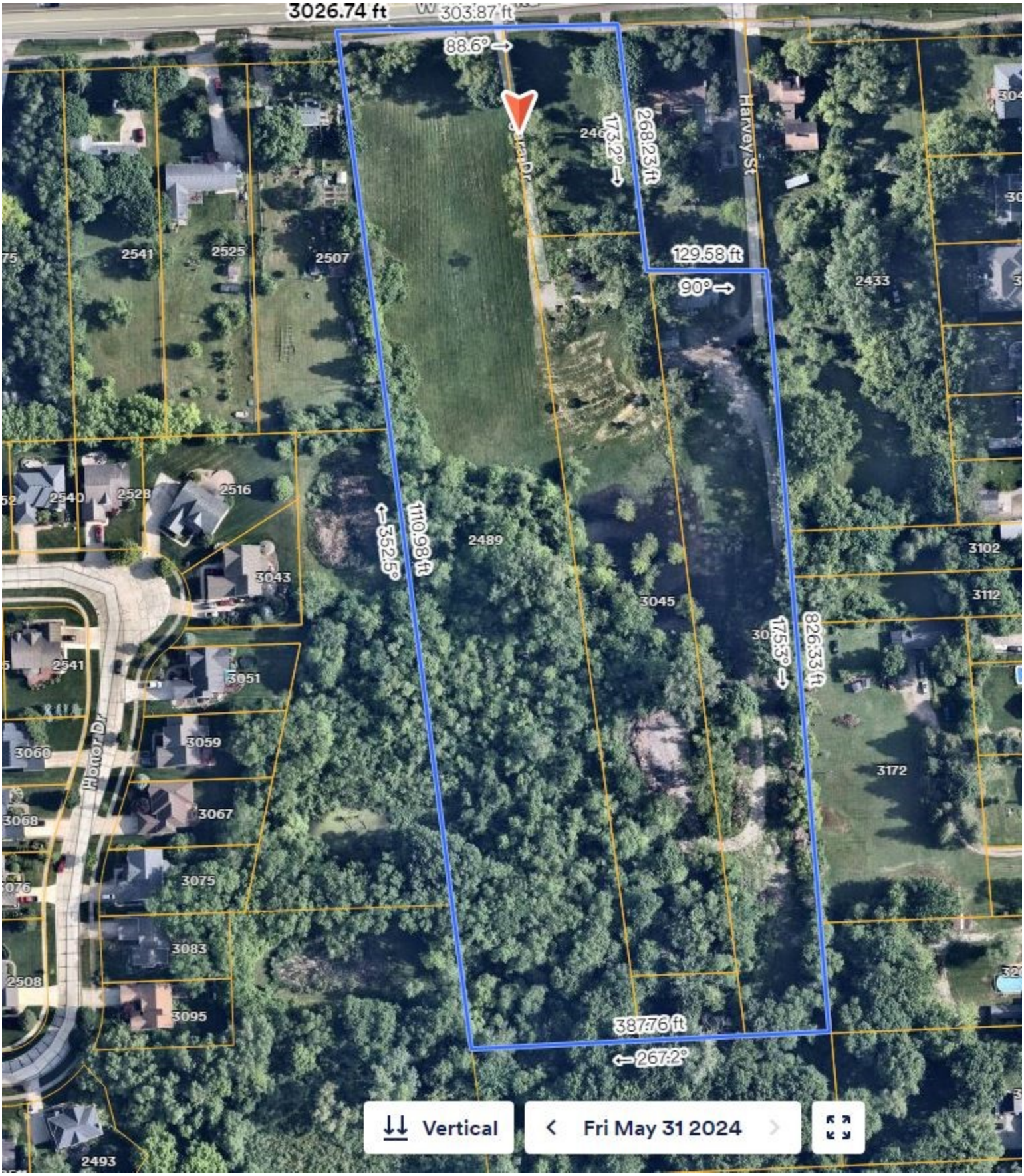
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Vertical
Fri May 31 2024

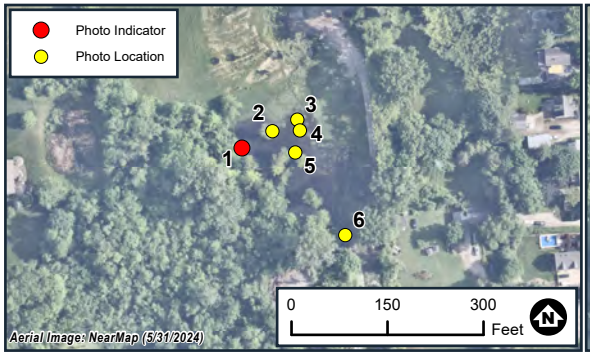
Attachment 2

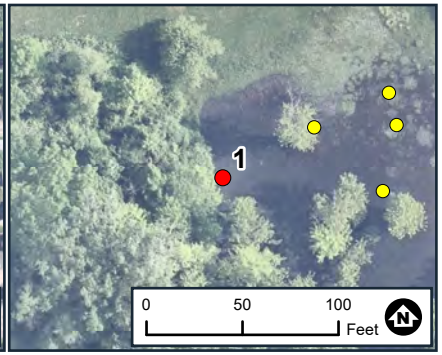
SP1 facing west

SP1 facing south

SP1 facing east

SP1 facing north





Date: 7/9/2024

Sample Point ID:
SP1

Flag No:
A20

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

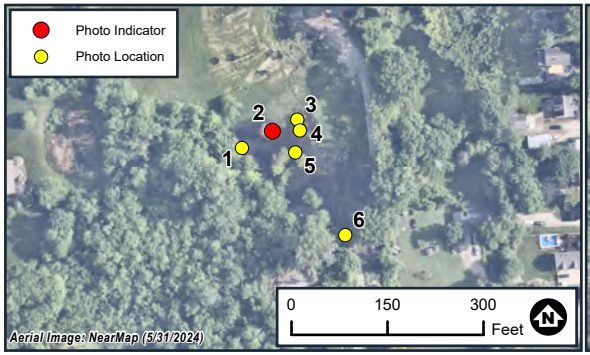
BARR

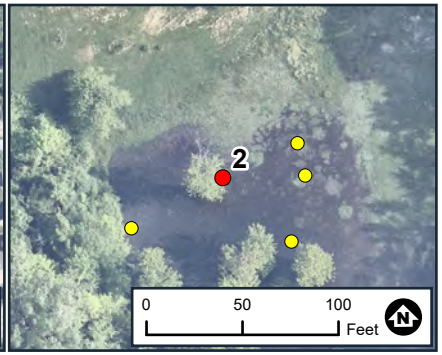
SP2 facing west

SP2 facing south

SP2facing east

SP2 facing north





Date: 7/9/2024

Sample Point ID:
SP2

Flag No:
A27

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

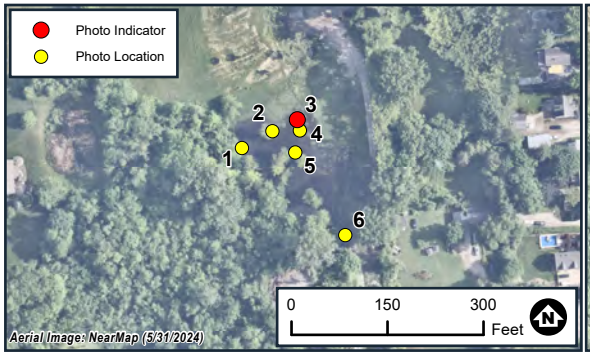
BARR

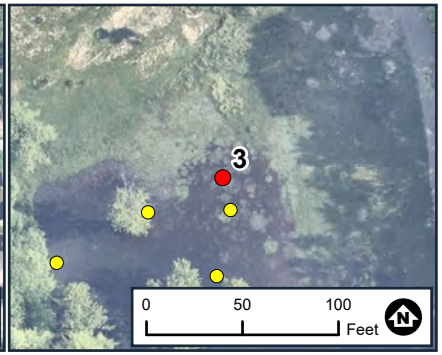
SP3 facing east

SP3 facing south

SP3 facing west

SP3 facing north





Date: 7/9/2024

Sample Point ID:
SP3

Flag No:
A29

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

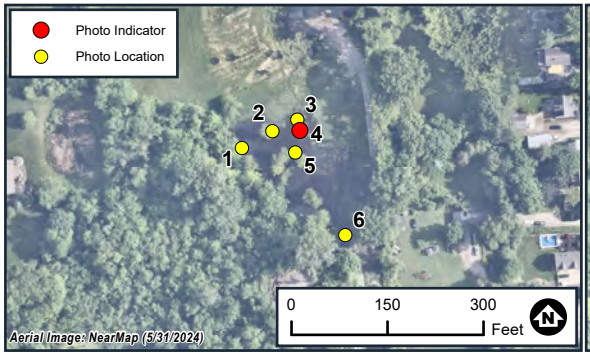
BARR

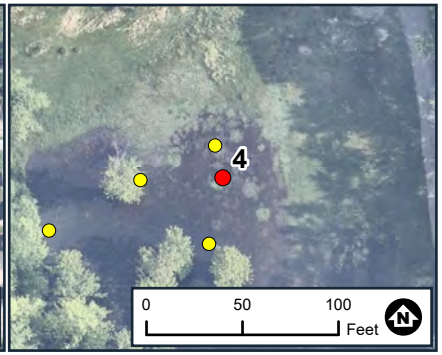
SP4 facing west

SP4 facing north

SP4 facing east

SP4 facing south





Date: 7/9/2024

Sample Point ID:
SP4

Flag No:
A30

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

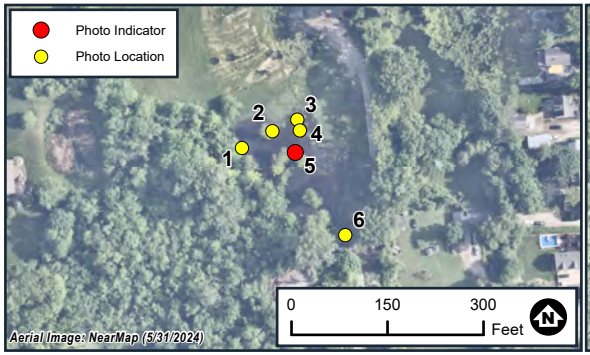
BARR

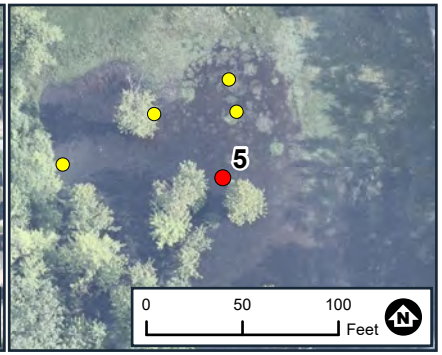
SP5 facing west

SP5 facing north

SP5 facing east

SP5 facing south





Date: 7/9/2024

Sample Point ID:
SP5

Flag No:
A30

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

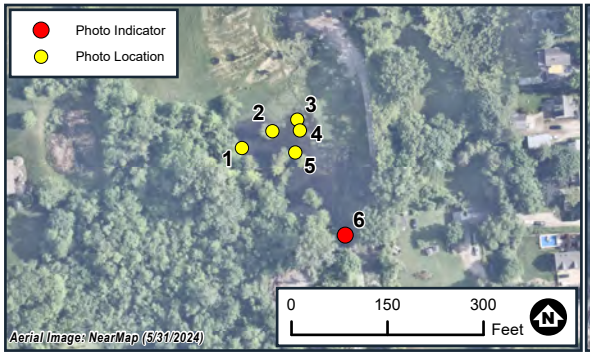
BARR

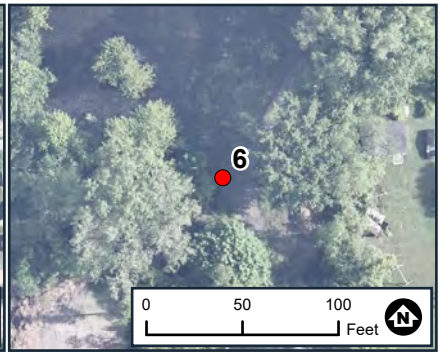
WETLAND A east side of swale

WETLAND A facing west

WETLAND A facing east

WETLAND A facing north





Date: 7/9/2024

Sample Point ID:
Overview

Flag No:
A

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

BARR

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 5/30/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: A56 UPL

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 0-2 Lat: 42.63213 Long: -83.18170 Datum: NAD 83

Soil Map Unit Name: Granby loamy sand NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
All three wetland criteria are not met. Sampling point is upland. This sampling point represents the upland areas adjacent to Wetlands A and B.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	35	Yes	FACU
2. *Robinia pseudoacacia*	30	Yes	FACU
3.			
4.			
5.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rhamnus cathartica*	25	Yes	FAC
2. *Lonicera morrowii*	15	Yes	FACU
3. *Berberis thunbergii*	5	No	FACU
4.			
5.			
	45	=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Rhamnus cathartica*	20	Yes	FAC
2. *Rosa multiflora*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	45	x 3 =	135
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	140 (A)		515 (B)
Prevalence Index = B/A =			3.68

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A56 UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					Loamy/Clayey	
12-18	10YR 5/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 5/30/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: A56 WET

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 0-2 Lat: 42.63231 Long: -83.18180 Datum: NAD 83

Soil Map Unit Name: Granby loamy sand NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	20	Yes	FACW
2.			
3.			
4.			
5.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica*	25	Yes	FAC
2. *Cornus amomum*	10	Yes	FACW
3.			
4.			
5.			
	35	=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex lacustris*	20	Yes	OBL
2. *Symplocarpus foetidus*	15	Yes	OBL
3. *Glyceria striata*	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	40	=Total Cover	
Woody Vine Stratum (Plot size: NA)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	30	x 2 =	60
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		175 (B)

Prevalence Index = B/A = 1.84

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A56 WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/2	100					Loamy/Clayey	
10-16	10YR 4/1	80	10YR 4/6	20	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 1
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 5/30/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: B4 WET

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): convcave

Slope (%): 0-2 Lat: 42.63187 Long: -83.18106 Datum: NAD 83

Soil Map Unit Name: Granby loamy sand NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
All three wetland criteria are met. Sampling point is wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *cer saccharinum*	80	Yes	FACW
2.			
3.			
4.			
5.			
	80 =Total Cover		
Sapling/Shrub Stratum (Plot size: NA)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: NA)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	=Total Cover		
Woody Vine Stratum (Plot size: NA)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	80 (A)		160 (B)
Prevalence Index = B/A =			2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: B4 WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Sampling point was inundated with 6 inches of standing water. Due to the depressional landscape position, predominance of silver maple trees, and inundation of the sampling point with water, the soil is assumed to be hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 6
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP1

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave

Slope (%): 0-1 Lat: 42.6332694 Long: -83.1809722 Datum: WGS

Soil Map Unit Name: Fox sandy loam, till plain, 2 to 6 percent slopes NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Hydrology on site has been altered.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *ces saccharinum*	10	Yes	FACW
2.			
3.			
4.			
5.			
	10	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *grostis stolonifera*	95	Yes	FACW
2. *cer rubrum*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	105	x 2 =	210
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		225 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/2	100					Sandy	unmasked sand grains/ Salt Pepper

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP2

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): toe slope Local relief (concave, convex, none): concave

Slope (%): 0-2 Lat: 42.63213 Long: -83.18170 Datum: WGS

Soil Map Unit Name: Fox sandy loam, till plain, 2 to 6 percent slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Sample Point taken at flag A27. Hydrology has been altered on site

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *cer saccharinum*	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rhamnus cathartica*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *grostis stolonifera*	80	Yes	FACW
2. *uncus articulatus*	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	85	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	95	x 2 =	190
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	105 (A)		210 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Mucky Loam/Clay	
2-6	10YR 5/2	80	10YR 6/8	20	C	M	Loamy/Clayey	Prominent redox concentrations
6-15	10YR 2/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 9
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 5

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP 3

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): convex

Slope (%): 1-2 Lat: 42.63325278 Long: -83.18079722 Datum: WGS

Soil Map Unit Name: Granby loamy sand NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Sample Point taken north of Flag 30.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *leocharis oli acea*	25	Yes	OBL
2. *C perus esculentus*	20	Yes	FACW
3. *grostis stolonifera*	10	No	FACW
4. *S mph otrichum lateriflorum*	5	No	FACW
5. *Phalaris arundinacea*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	65 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	40	x 2 =	80
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	65 (A)		105 (B)

Prevalence Index = B/A = 1.62

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Loamy/Clayey	
2-13	7.5YR 4/1	50	10YR 3/2	40			Loamy/Clayey	
			10YR 5/6	10	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Large gravel angular rock at 13 inches below the surface

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP4

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): back slope Local relief (concave, convex, none): concave

Slope (%): 01 Lat: 42.6332222 Long: -83.1807778 Datum: WGS

Soil Map Unit Name: Granby loamy sand NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *grostis stolonifera*	60	Yes	FACW
2. *C perus esculentus*	5	No	FACW
3. *cer rubrum*	1	No	FAC
4. *Bidens frondosa*	1	No	FACW
5. *grostis gigantea*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	72 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	71	x 2 =	142
FAC species	1	x 3 =	3
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	72 (A)		145 (B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	10					Loamy/Clayey	
3-11	10YR 4/3	90	10YR 5/6	10	C	M	Loamy/Clayey	Distinct redox concentrations
11-15	7.5YR 5/2	70	7.5YR 5/6	30	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP5

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): toe slope Local relief (concave, convex, none): concave

Slope (%): 0-1 Lat: 42.6331833 Long: -83.1808972 Datum: WGS

Soil Map Unit Name: Granby loamy sand NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *cer saccharinum*	30	Yes	FACW
2.			
3.			
4.			
5.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Lud i ia palustris*	15	Yes	OBL
2. *rostis stolonifera*	5	Yes	FACW
3. *Lemna minor*	5	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	35	x 2 =	70
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	55 (A)		90 (B)

Prevalence Index = B/A = 1.64

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100					Mucky Loam/Clay	
3-15	10YR 5/2	80	7.5YR 5/8	20	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 9
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 6

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample Point taken south at flag A31. Hydrology has been altered on site

Planning Dept Email <planning@rochesterhills.org>

Rochester Hills Planning Commission meeting October 15, 2024

1 message

Wycoff, Alec <alec@hfgllc.com> Fri, Oct 11, 2024 at 10:47 AM
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Dear Deborah Brnabic and Rochester Hills Planning Commission,

My name is Alec Wycoff. I am writing to express my favorability of the requested one family residential detached condominium plan, wetland use permit, and tree removal permit that are included in the Tuesday, October 15, 2024, Planning Commission meeting. Should the requests be approved, my sister Nicle Wycoff will be a resident of one of the multi-unit condominium buildings.

I strongly believe that this Preliminary Site Plan and recommendation will satisfy the requirements of the Planning Commission. Furthermore, the additional housing is needed in Rochester Hills and will provide a long-term solution for my and others loved ones. The removed trees will be replaced on site as well as via the City's Tree Fund. I look forward to the approval of the mentioned requests and applaud the construction of additional housing in southwest Rochester Hills.

Sincerely,

Alec Wycoff

Alec Wycoff | Paraplanner

HFG
Herbert Financial Group

T: 248.482.2600 | **F:** 248.482.2601

2701 Cambridge Court, Suite 530 | Auburn Hills, MI 48326

alec@hfgllc.com | www.hfgllc.com | vCard

2 attachments

image002.png
46K

Request for Condominium Construction.pdf
398K

Planning Dept Email <planning@rochesterhills.org>

Upcoming Planning Commission meeting dated October 15, 2024

HANA LEWIS <lewishana@yahoo.com> Thu, Oct 10, 2024 at 11:57 AM
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Hana Lewis

ROCHESTER HOUSING SOLUTIONS

rochesterhousingsolutionsmi.org

Please Approve the Auburn Oaks Project

Joanne Avery <averyjma@gmail.com>
To: planning@rochesterhills.org

Fri, Oct 11, 2024 at 7:46 PM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Joanne Avery

Auburn Oaks

Jowan S <jowans2004@yahoo.com>
To: planning@rochesterhills.org

Thu, Oct 10, 2024 at 1:05 PM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Jowan Salem, Pharm.D.

Auburn Oaks Development

Larry Collette <lcollette@specialdreamsfarm.org> Mon, Oct 14, 2024 at 11:06 AM
To: "planning@rochesterhills.org" <planning@rochesterhills.org>
Cc: Larry Collette <lcollette@specialdreamsfarm.org>

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

This is a project that the city of Rochester Hills will truly be proud of.

Respectfully

Larry, Mary, and Gregory Collette

Planning Dept Email <planning@rochesterhills.org>

Wetlands

1 message

Marge Huggard <mahuggard1021@gmail.com> Tue, Oct 15, 2024 at 6:30 AM
To: planning@rochesterhills.org

Please maintain our wetlands for our wildlife and trees. I realize the desire for more housing : and expansion but we need to protect our community and the air/wetlands!

Marge Huggard
248-345-4980-

RAYMOND T. ROWE
DEBORAH ROWE
3280 Fairgrove Terrace
Rochester Hills, MI 48309

October 14, 2024

planning@rochesterhills.org

Dear Rochester Hills Planning Commission,

We are writing to express our full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community. Our daughter, who is disabled, is looking forward to be a resident at that project.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

We strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Very truly yours,

Raymond T. Rowe

Deborah Rowe

Auburn Oaks Development

Rosemary Rangi <rcrangi@yahoo.com> Sun, Oct 13, 2024 at 11:36 AM
To: planning@rochesterhills.org
Cc: Rochester Solutions <rmihousingsolutions@gmail.com>

Planning committee-

As a longtime resident of Oakland County of fifty years, as well as a mother of an adult son who has an intellectual developmental disability, I ask for both your whole-hearted approval and support of the Auburn Oaks project.

I, like many other parents who have walked the road filled with challenges of having family member with special needs, have fears of what the future holds for our loved ones, once we are no longer here. This project, along with the Walton Oaks development, will provide an answer to address many of our concerns.

I am confident you will see, as both of these ground-breaking housing communities come to fruition, it will set both Rochester Hills and Oakland County, to be seen in a very positive and progressive light, not only in the State of Michigan, but in the United States as well.

I hope I can rely on your support of approval. Thank you.

Sincerely,

Rosemary Rangi

Qualified support for Angara Oaks project

Yazbeck, Thomas <yazbeckt@msu.edu> Fri, Oct 11, 2024 at 4:17 PM
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Greetings, Rochester Hills Planning Department,

I am writing to express my support of the proposed Auburn Angara Oaks development which will be deliberated on by Planning Commission on the 15th. More development along west Auburn Rd is very welcome & it is crucial to have more attached housing options, especially for populations such as disabled people. I especially appreciate the important detail of connecting this development with Harvey St.

Unfortunately, I'm not so keen on devoting 99 parking spaces to this site when there are only about 2/3 that number of units. Although transportation options for non-drivers are (currently) limited in R. Hills, it still would be great to foster walkability & alternative mobility by reducing space for parking - space which could be put to better use. This is still a good project which I hope PC approves, but I would like to see parking provision reduced for future residential development.

Thomas Yazbeck
1707 Devonwood Dr,
Rochester Hills

Auburn Oaks Planning Commission Meeting

Harriet Stuart <hsstuart18@gmail.com>
To: planning@rochesterhills.org

Tue, Oct 15, 2024 at 11:06 AM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Harriet Stuart

Auburn Oaks project

John & Leslie Bargiel <jnlbargiel79@aol.com> Tue, Oct 15, 2024 at 11:34 AM
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Dear Rochester Hills Planning Commission,

We want to share our full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will offer an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Leslie and John Bargiel

Auburn Oaks Planning Commission Meeting

Michael Stuart <mlstuart4@gmail.com>
To: planning@rochesterhills.org

Tue, Oct 15, 2024 at 11:00 AM

Dear Rochester Hills Planning Commission,

I am writing to express my full support for the Auburn Oaks project, which is up for preliminary site plan approval by the Planning Commission on October 15. This neuro-inclusive neighborhood is thoughtfully designed to provide safe, sustainable, and integrated housing for adults with disabilities, while also welcoming residents from the broader community.

With backing from Rochester Housing Solutions, a 501(c)3 non-profit, the Oakland County Housing Trust Fund, and other local partners, Auburn Oaks promises to offer a remarkable level of family and community support. This initiative will create an exceptional living experience for both residents and the community as a whole.

Alongside Walton Oaks, which recently broke ground, Auburn Oaks will be among the most forward-thinking and inclusive developments in the country—an achievement that aligns perfectly with the City's vision for the future.

I strongly urge the Planning Commission to approve the preliminary site plan for Auburn Oaks.

Sincerely,

Michael Stuart

ROCHESTER HOUSING SOLUTIONS

rochesterhousingsolutionsmi.org

Oct. 15 Planning Commission meeting

Sophia Lada <sophialada28@gmail.com> Tue, Oct 15, 2024 at 3:07 PM
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Good afternoon,

My name is Sophia Lada. I am writing to express my favorability of the requested one family residential detached condominium plan, wetland use permit, and tree removal permit that are included in the Tuesday, October 15, 2024, Planning Commission meeting. Should the requests be approved, my sister-in-law Nicole Wycoff will be a resident of one of the multi-unit condominium buildings.

I strongly believe that this Preliminary Site Plan and recommendation will satisfy the requirements of the Planning Commission. Furthermore, the additional housing is needed in Rochester Hills and will provide a long-term solution for my and others loved ones. The removed trees will be replaced on site as well as via the City's Tree Fund. I look forward to the approval of the mentioned requests and applaud the construction of additional housing in southwest Rochester Hills.

Sincerely,

Sophia Lada

Auburn Angara Oaks

THERESA POUNDERS <thepounders@comcast.net> Tue, Oct 15, 2024 at 11:43 AM
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

I would like to voice my concerns regarding the large development planned for this location. First, I would like to say that I have no objection to the type of development proposed, just the location. I think the IDD community would be the ultimate neighbors. My concern in the destruction and removal of 279 trees, building on and around high quality wetlands and the impact on the wildlife and surrounding homes and communities. I own property next to this proposed development and already have had issues with flooding on the southwest end of my property. The IDD community deserves the proper foundation on which to build their homes. They are investing a significant amount of time and money provide for their loved ones. They deserve better than this! I an attaching a report that I obtained on the Egle website so planning and the IDD community can make a more informed decision. It looks like the one planning has didn't include the full report and pictures taken,

Thanks,
Theresa Pounders

Auburn Angara Wetland Report 7.24.2024_v1 (3).pdf
10709K

resourceful. naturally.
engineering and environmental consultants

BARR

July 24, 2024

Bruce Michael
Three Oaks Communities
P.O. Box 8307
Ann Arbor, MI 48107

Re: Wetland Delineation Report – Angara Drive (Parcels 15-32-201-001; -002; -003; -004; -006)
City of Rochester Hills, Oakland County, Michigan

Dear Mr. Michael:

At your request, Barr Engineering Co. (Barr), conducted a wetland delineation of the approximately 7.36-acre above-referenced property. The purpose of this report is to summarize the results of the wetland delineations conducted on May 30 and re-evaluated on July 9, 2024, and to provide a professional opinion as to potential Michigan Department of Environment, Great Lakes, and Energy (EGLE) and City of Rochester Hills jurisdiction over the identified wetland areas. Prior to the July 9 site visit, the City of Rochester Hills consultant, Kyle Hottinger of ASTI, Inc., was on site to address an action taken by a neighbor regarding the hydrology between the site and the neighboring property. A culvert drained this area of the site to the property to the northeast and that culvert had been blocked over the last winter season resulting in water ponding onto the site.

1.0 Area of Investigation Description

The Area of Investigation (AOI) is located west of Crooks Road and south of Auburn Road. The land cover within the AOI consists of mowed lawn, two houses and two garages, and a woodlot. The surrounding land use is comprised of residential development and vacant land.

1.1 Desktop Review

Barr conducted a desktop review to evaluate digital imagery for topography, soil types, and mapped wetlands within the AOI prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS; Figure 1), Michigan Final Wetlands Inventory (MFWI; Figure 2), and aerial photography (Attachment 1).

A review of aerial photography shows evidence of past disturbance on parcel 15-32-201-006, the eastern most parcel of the site. It appears that from approximately 2014 to approximately 2019 the northern portion of this parcel was used as a landscaping storage and staging yard, and the previous owner brought in large cobble to establish a parking and storage area.

According to the WSS (Figure 1), the AOI includes well drained Fox sandy loam, till plain, 2 to 6 percent slopes (18B); somewhat poorly drained Thetford loamy fine sand, 0 to 3 percent slopes (35A); very poorly drained Granby loamy sand, 0 to 2 percent slopes (39); and well drained Urban land-Spinks complex, 0 to 8 percent slopes (62B). The Granby soil is the hydric (wetland) soil mapped within the AOI. Hydric soils are

soils that developed under prolonged periods of saturation or inundation and typically support wetland habitats in an undrained condition.

The MFWI (Figure 2) shows the AOI to contain wetland in the southeastern corner of the property as identified by the National Wetland Inventory (NWI) and Michigan Resource Inventory System (MIRIS) maps. It also shows the central and southwestern portions of the AOI to contain soil areas which include wetland soils.

Figure 1. NRCS Web Soil Survey

Figure 2. Michigan Final Wetlands Inventory

1.2 Methodology

The wetland delineation was conducted in a manner consistent with the *Corps of Engineers Wetlands Delineation Manual (USACE 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, USACE 2010)*. The wetland delineation procedures outlined in these manuals require the evaluation of on-site vegetation, soils, and hydrologic characteristics.

The wetland boundaries were flagged in the field with alpha numerically labeled pink flagging tape and pin flags. The wetland boundaries were subsequently surveyed by Monument Engineering Group Associates, Inc. Site observations are described in the sections below.

1.3 Results

The AOI includes palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) habitats. The on-site investigation identified two wetlands. These wetlands were labeled as Wetland A and Wetland B. The wetland and upland areas within the AOI are described below.

Vegetation, Soil, and Hydrology

Wetland A

Wetland A is a PEM/PSS wetland located within the central portion of the AOI. Wetland A continues off-site, both east and west of the AOI. The on-site portion of Wetland A is approximately **1.8** acres in size. The vegetation identified within the wetland included species such as lake sedge (*Carex lacustris*), skunk cabbage (*Symplocarpus foetidus*), common buckthorn (*Rhamnus cathartica*), and American elm (*Ulmus americana*). During the July 9th reevaluation of the wetlands, five (5) soil pits and data forms were completed at five (5) sampling points on the north edge of Wetland A, attached are data forms SP1 through SP5, along with a photolog showing the location of the sampling points. The eastern end of Wetland A exists on previously disturbed land and soil pits could not be dug due to the presence of large cobble at the surface. Hydric soil and primary and secondary wetland hydrology indicators were observed in other areas of Wetland A. The boundaries of this wetland were identified using flags A1 through A57.

Wetland B

Wetland B is a PFO wetland located in the southern portion of the AOI. Wetland B continues off-site south of the AOI. The on-site portion of Wetland B is approximately **0.2** acres in size. The vegetation identified within the wetland included species such as silver maple (*Acer saccharinum*). Hydric soil was assumed to be present within Wetland B. A soil pit was not dug because the soil surface was inundated by 6 inches of water. Primary and secondary wetland hydrology indicators were observed in Wetland B. The boundaries of this wetland were identified using flags B1 through B12.

Upland

The upland areas of the site were characterized by mowed lawn and scrub-shrub areas and woods. The upland areas of the site contained species such as white clover (*Trifolium repens*), dandelion (*Taraxacum officinale*), multiflora rose (*Rosa multiflora*), Japanese barberry (*Berberis thunbergia*), prickly ash (*Zanthoxylum americanum*), common buckthorn, Morrow's honeysuckle (*Lonicera morrowii*), black locust (*Robinia pseudoacacia*), and black cherry (*Prunus serotina*). Hydric soils and wetland hydrology indicators were not observed in the upland areas of the site.

The attached Site Survey depicts the location of the wetland areas encountered on the site. Wetland Determination Data Forms are attached for further detailed information on the wetland and upland areas within the AOI.

1.4 Conclusions

Based on observations of topography, vegetation, soil, and indicators of hydrology, Barr has determined that wetland habitat is present within the AOI. These wetland areas were identified as a PEM, PSS, and PFO wetland habitat types. According to Part 303, Wetlands Protection, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, wetlands regulated by the State of Michigan include wetlands that are:

1. Located within 500 feet of, or having a direct surface water connection to, an inland lake, pond, river, or stream; or
2. Greater than 5 acres in size; or
3. Located within 1,000 feet of, or having a direct surface water connection to, the Great Lakes or Lake St. Clair; or
4. A water of the United States as that term is used in section 502(7) of the Federal Water Pollution Control Act, 33 USC 1362; or

5. Known to have a documented presence of an endangered or threatened species under Part 365 of State of Michigan 1994 PA 451, as amended or the Federal Endangered Species Act of 1973, Public Law 93-205; or
6. Rare or imperiled.

Wetland A may be regulated under Part 303 because it continues off-site, beyond the limits of the AOI. The total size of Wetland A was not determined. If Wetland A is greater than 5 acres in size it would be regulated.

Wetland B may be regulated under Part 303 because it is part of a larger wetland complex that extends off-site and may be greater than 5 acres in total size. If Wetland B is greater than 5 acres in size it would be regulated.

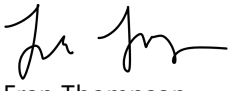
The City of Rochester Hills regulates all wetlands regulated by EGLE and, in addition, regulates noncontiguous wetlands two acres in size or greater. The City of Rochester Hills also regulates noncontiguous wetlands less than two acres in size if the wetlands are deemed essential to the preservation of the natural resources of the city. Wetland A and Wetland B are likely to be regulated by the City of Rochester Hills because they appear to be greater than 2 acres in size.

Please be advised that EGLE, and the City of Rochester Hills, has regulatory authority regarding the wetland boundary location(s) and jurisdictional status of wetlands on this site. Barr's wetland determination was performed in general accordance with accepted procedures for conducting wetland determinations. Barr provides no warranty, guarantee, or other agreement in respect to the period of time for which this wetland determination will remain valid. Barr's conclusions reflect our professional opinion based on the site conditions within the AOI observed during the site visit. Discrepancies may arise between current and future wetland determinations and delineations due to changes in vegetation and/or hydrology as the result of land use practices or other environmental factors, whether on-site or on adjacent or nearby properties. We recommend our wetland boundary determination and jurisdictional opinion be reviewed by EGLE prior to undertaking any activity within any identified wetlands.

Thank you for the opportunity to provide this wetland delineation. If you have any questions, please contact me at your convenience at 810-247-1229 or Fthompson@barr.com.

Sincerely,

BARR ENGINEERING CO.



Fran Thompson
Ecologist

References

U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual.* Washington, DC.

USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*

Figure:
Site Survey

Attachments:
Attachment 1 – Historic Aerial Photography
Attachment 2 – USACE Wetland Determination Data Sheets

UTILITY CROSSING NOTE

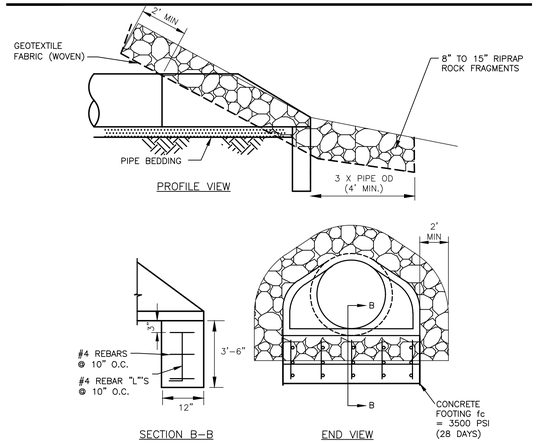
SANITARY SEWER CROSSING OF THE WETLAND B MUST BE SLEEVED TO PROTECT THE WETLAND. ALL OTHER WETLANDS TO BE CROSSED BY UTILITIES ARE PROPOSED TO BE FILLED. SEE PLAN FOR LOCATION.

UTILITY CROSSINGS			
WETLAND	SANITARY	WATERMAIN	STORM SEWER
WETLAND A	248 LF – 8" SEWER	245 LF – 8" WATER MAIN	247 LF – 36" STORM SEWER 125 LF – 12" STORM SEWER
WETLAND B	112 LF – 8" SEWER (DIRECTIONAL DRILL)	NA	12 INCH OUTLET W/ RIPRAP

25' NATURAL FEATURES SETBACK DISTURBANCES			
WETLAND	LENGTH OF 25' SETBACK	LENGTH OF DISRUPTION OF 25' SETBACK	REDUCTION
WETLAND A – DISTURBANCE 1	1,201 LF	632 LF	20,396 SF (PERMANENT)
WETLAND A – DISTURBANCE 2	1,201 LF	123 LF	2,704 SF (TEMP RESTORED)
WETLAND B	344 LF	344 LF	2,122 SF (PERMANENT) 3,318 SF (TEMP RESTORED)

WETLAND DISTURBANCES			
WETLAND	AREA OF WETLAND (ONSITE)	AREA OF DISRUPTION OF WETLAND	WETLAND VOLUME
WETLAND A – DISTURBANCE 1	78,062 SF	29,356 SF	5,522 CY (FILL)
WETLAND A – DISTURBANCE 2	78,062 SF	25 SF	<1 CY (FILL)
WETLAND B – DISTURBANCE 1	9,367 SF	361 SF	79 CY (FILL)
WETLAND B – DISTURBANCE 2	9,367 SF	69 SF	1 CY (CUT)

END SECTION DETAIL - WITH FOOTING



RIGHT OF WAY LINE LEGEND

EX. RIGHT OF WAY LINE/EASEMENT

PR. RIGHT OF WAY LINE/EASEMENT

IMPACT LEGEND

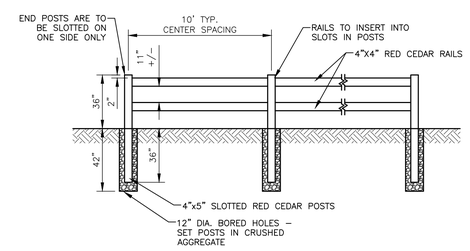
WETLAND FILL

NATURAL FEATURES 25' SETBACK IMPACT

WETLAND NOTES

1. MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY PERMIT WILL BE REQUIRED FOR FILLING IN THE THE WETLAND AS SHOWN ON THIS PLAN. OAKLAND COUNTY WATER RESOURCE COMMISSIONER PERMIT WILL BE REQUIRED FOR DISCHARGING THE STORM WATER EFFLUENT INTO THE LEUDER'S DRAIN.
2. POST CONSTRUCTION, A CITY-APPROVED WETLAND SEED MIX COMPRISED OF NATIVE MICHIGAN SPECIES MUST BE INSTALLED IN ANY AREAS OF UNPLANNED IMPACTS TO WETLANDS, AS WELL AS ALONG THE WETLAND SIDE OF THE FINAL RETAINING WALL STRUCTURES.
3. CITY APPROVED WETLAND SOIL AND SEED MIXTURE SHALL BE USED TO RESTORE ANY IMPACTS TO WETLANDS A AND B IDENTIFIED ON THIS PLAN.
4. PRIOR TO ANY WORK BEING PERFORMED WITHIN THE WETLANDS OR NATURAL FEATURES SETBACKS ON THIS PROJECT:
   - 4.1. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CITY ENGINEER. WORK SHALL NOT COMMENCE UNTIL CONSENT HAS BEEN OBTAINED FROM THE CITY MAYOR.
   - 4.2. WORK SHALL BE CONDUCTED USING BEST MANAGEMENT PRACTICES (BMP'S) TO ENSURE FLOW AND CIRCULATION PATTERNS AND CHEMICAL AND BIOLOGICAL CHARACTERISTICS OF THE WETLANDS ARE NOT IMPACTED.
   - 4.3. THE WORK SHALL BE CONDUCTED SUCH THAT ALL IMPACTS TO THE AQUATIC ENVIRONMENT ARE MINIMIZED.

FENCE DETAIL - SPLIT RAIL - 2 RAIL



INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS

Monument Engineering Group Associates, Inc. MEGA

298 VETERANS DRIVE
FOWLERVILLE, MICHIGAN 48836
(OFFICE) 517-223-3512
MONUMENTENGINEERING.COM

SERVICE DISABLED VETERAN OWNED SMALL BUSINESS (SDVOSB)

KEVIN C. MCDEVITT ENGINEER NO. 6201043260

Call MISS DIG
3 full working days before you dig:
Michigan's One-Call — Utility Notification Organization
1-800-482-7171
www.missdig.org

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO REPRESENTATION IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT :

AUBURN ANGARA OAKS, LLC

14496 N SHELDON RD
SUITE 230
PLYMOUTH, MI 48170
BRUCE MICHAEL
(248) 703-4653

WETLAND PLAN

AUBURN ANGARA OAKS

PART OF SEC. 32, T3N, R11E
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MI

PLAN SUBMITTALS/REVISIONS	DATE
REVISED SITE PLAN SUBMITTAL	04/28/2023
REVISED SITE PLAN SUBMITTAL	08/23/2023
RESUBMIT TO MDOT	09/13/2023
REVISED SITE PLAN SUBMITTAL	01/22/2024
REVISED SITE PLAN PER CITY AND MDOT	03/14/2024
REVISED SITE PLAN PER MDOT	03/28/2024
PRELIMINARY SITE PLAN TO CITY	05/16/2024
REVISED SITE PLAN / WETLAND FLAGS	07/23/2024

ORIGINAL ISSUE DATE: 05/19/2022

PROJECT NO: 22–051

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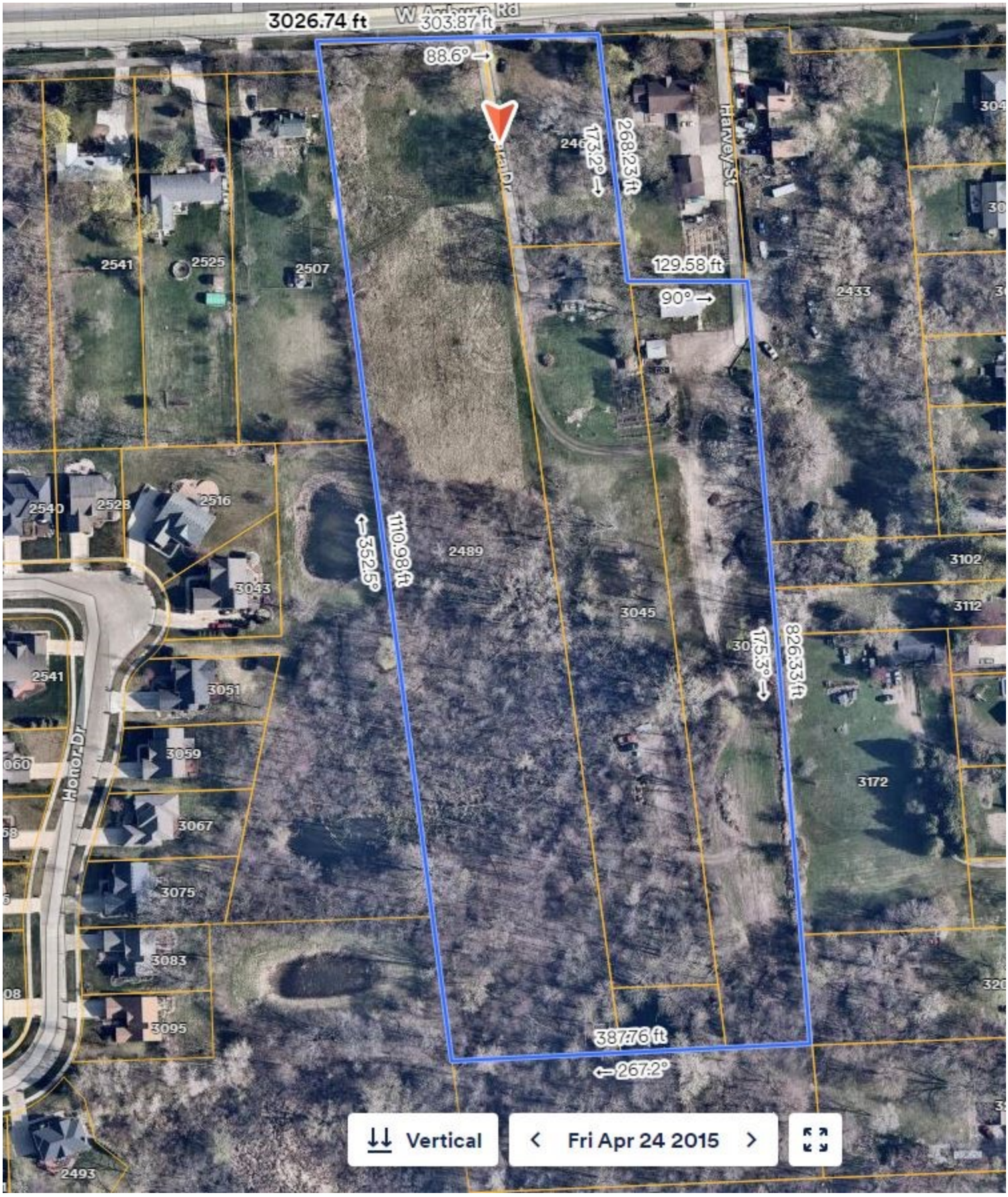
DRAWN BY: MN
DESIGN BY: KM
CHECK BY: AP

C-2.3

NOT FOR CONSTRUCTION

Attachments 1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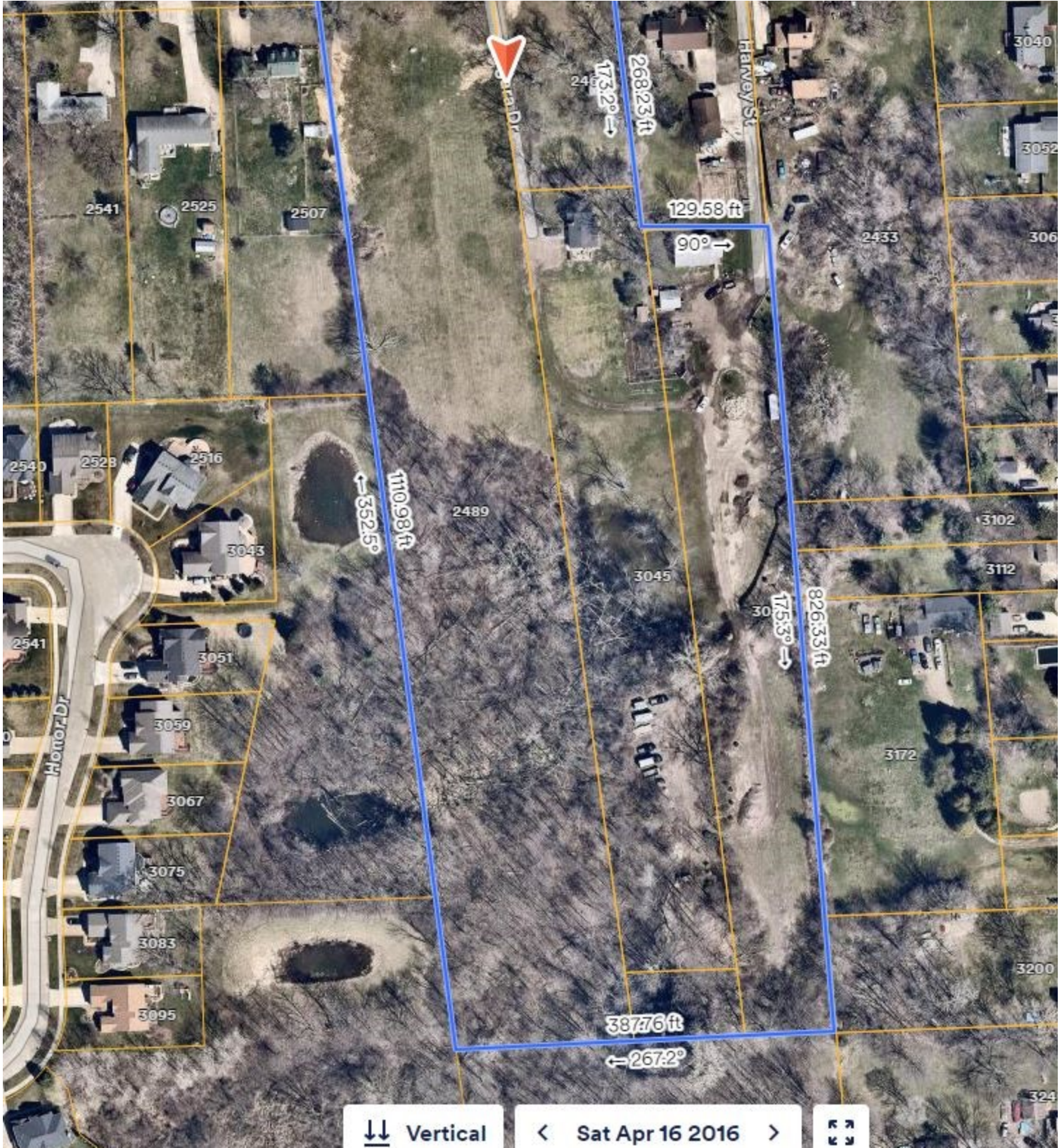
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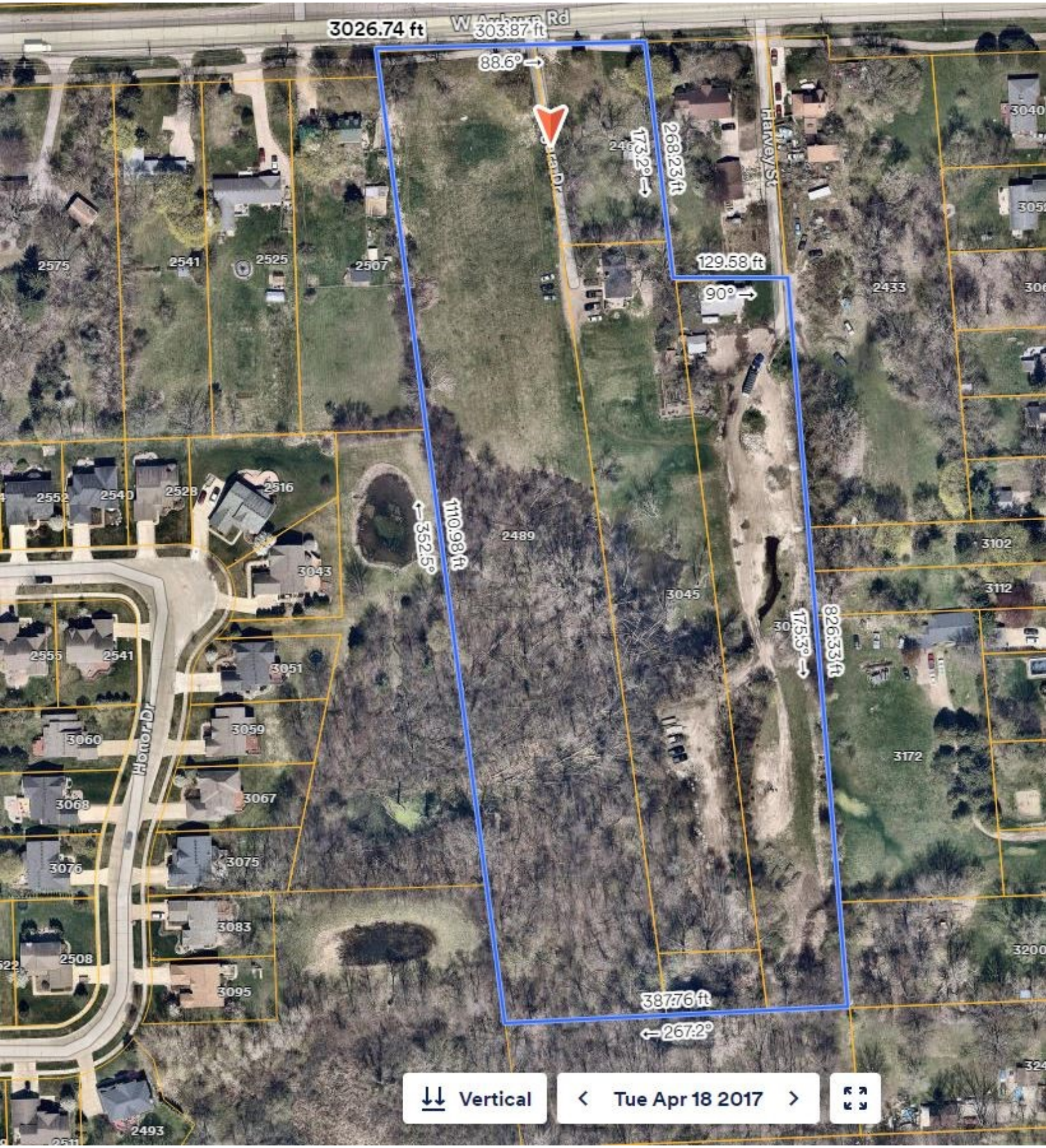
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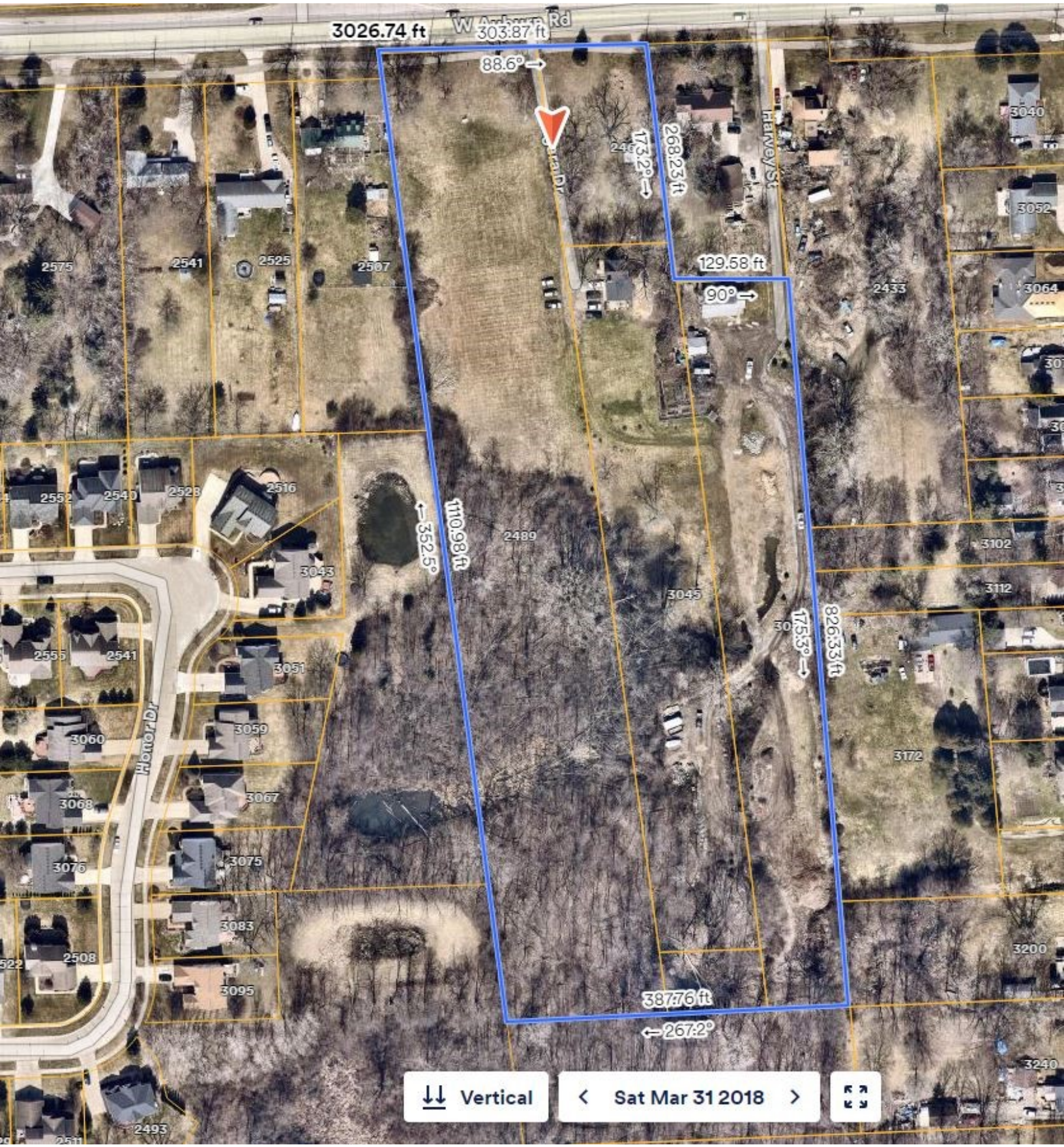
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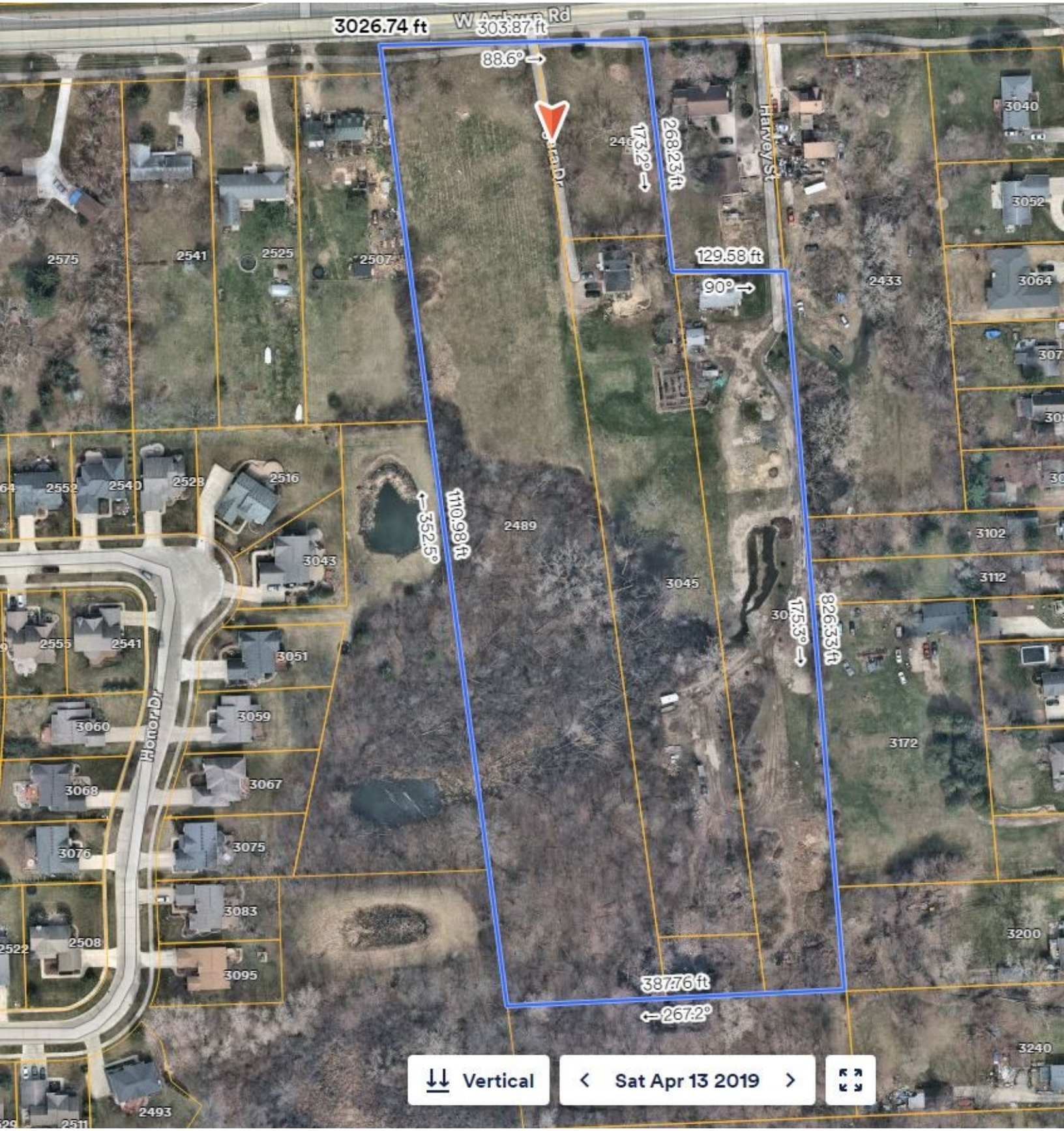
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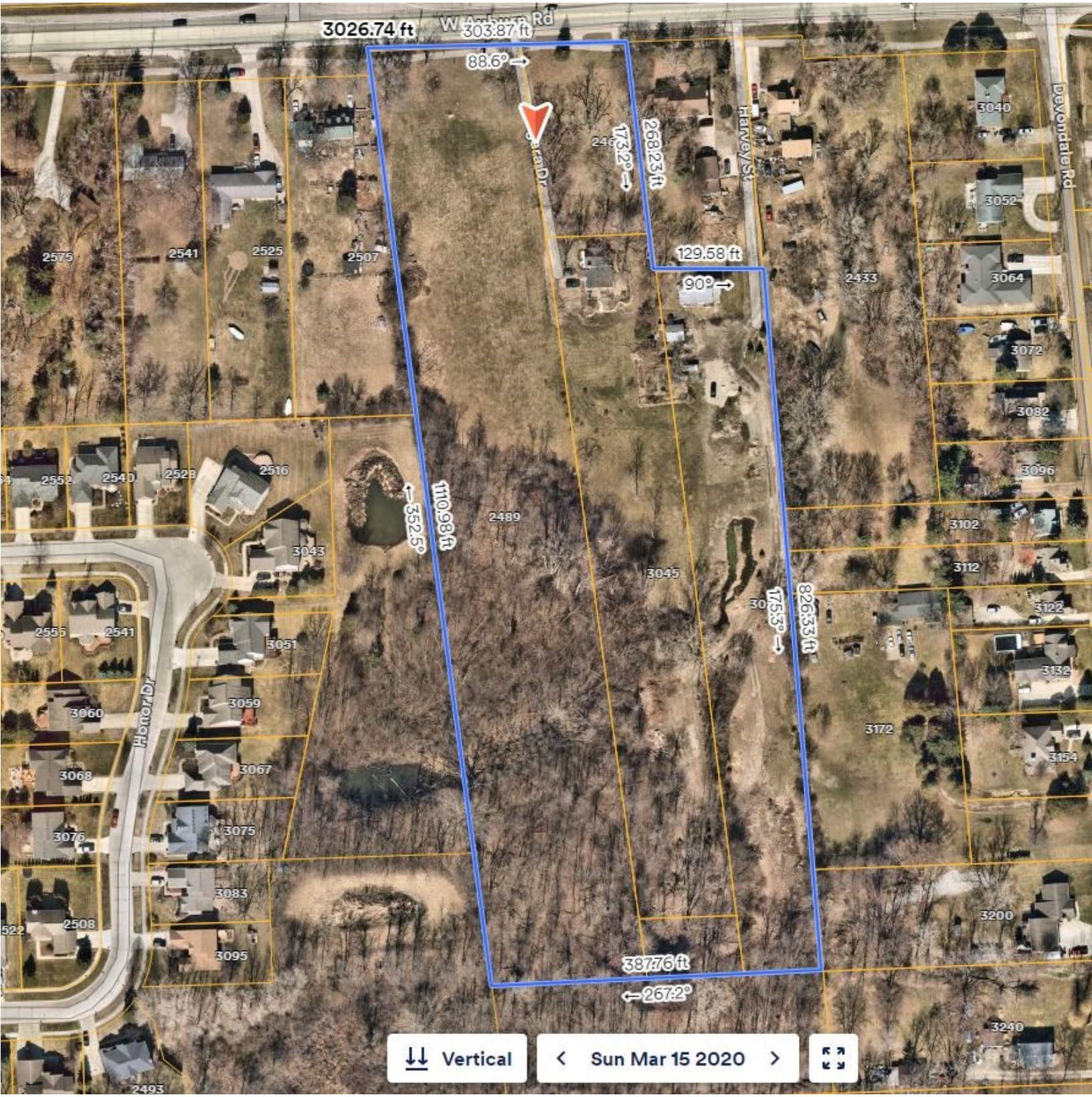
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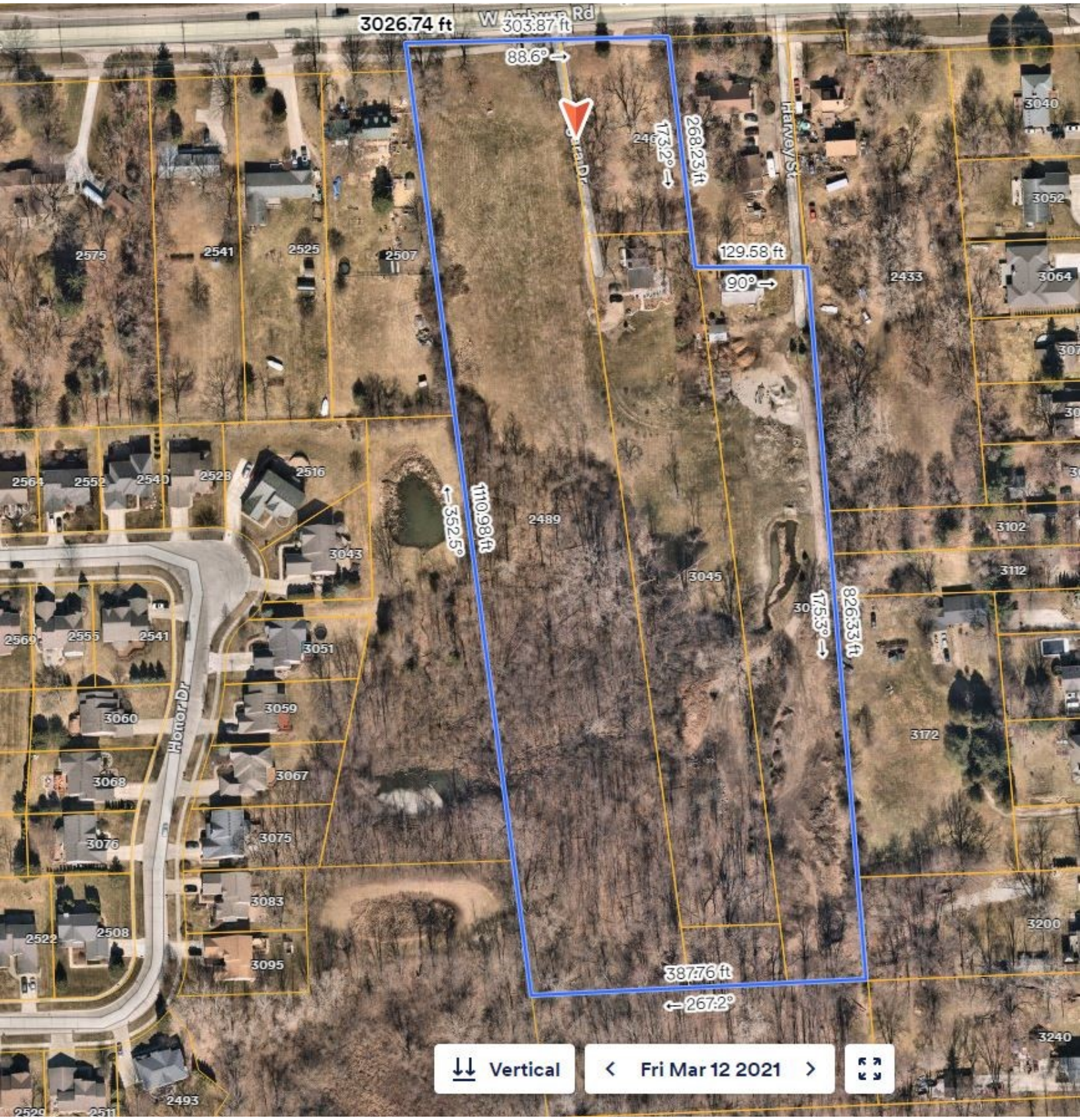
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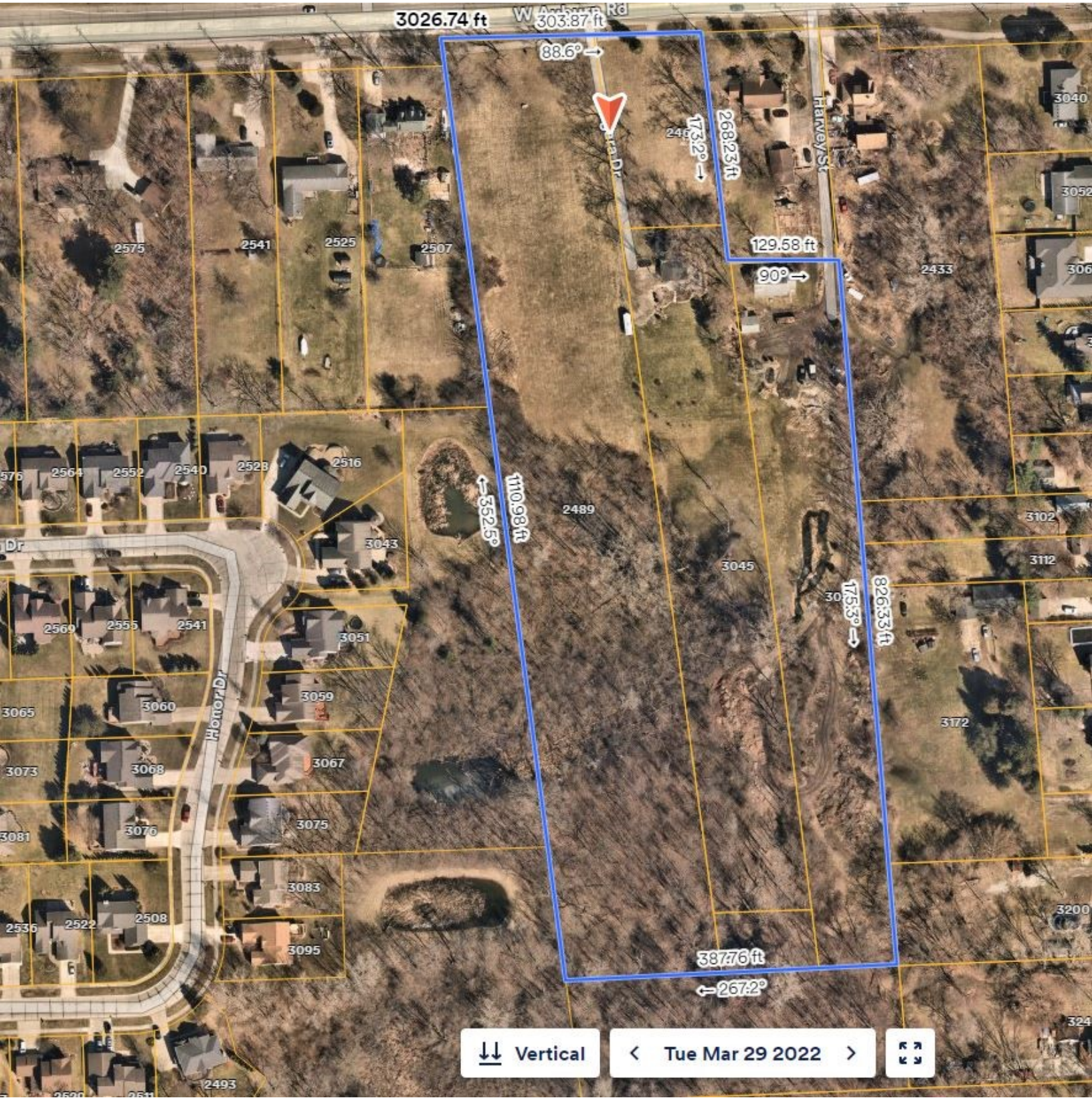
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173.2°
129.58 ft
90°
110.98 ft
352.5°
826.33 ft
175.3°
387.76 ft
267.2°
Honor Dr
2575
2541
2525
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3200
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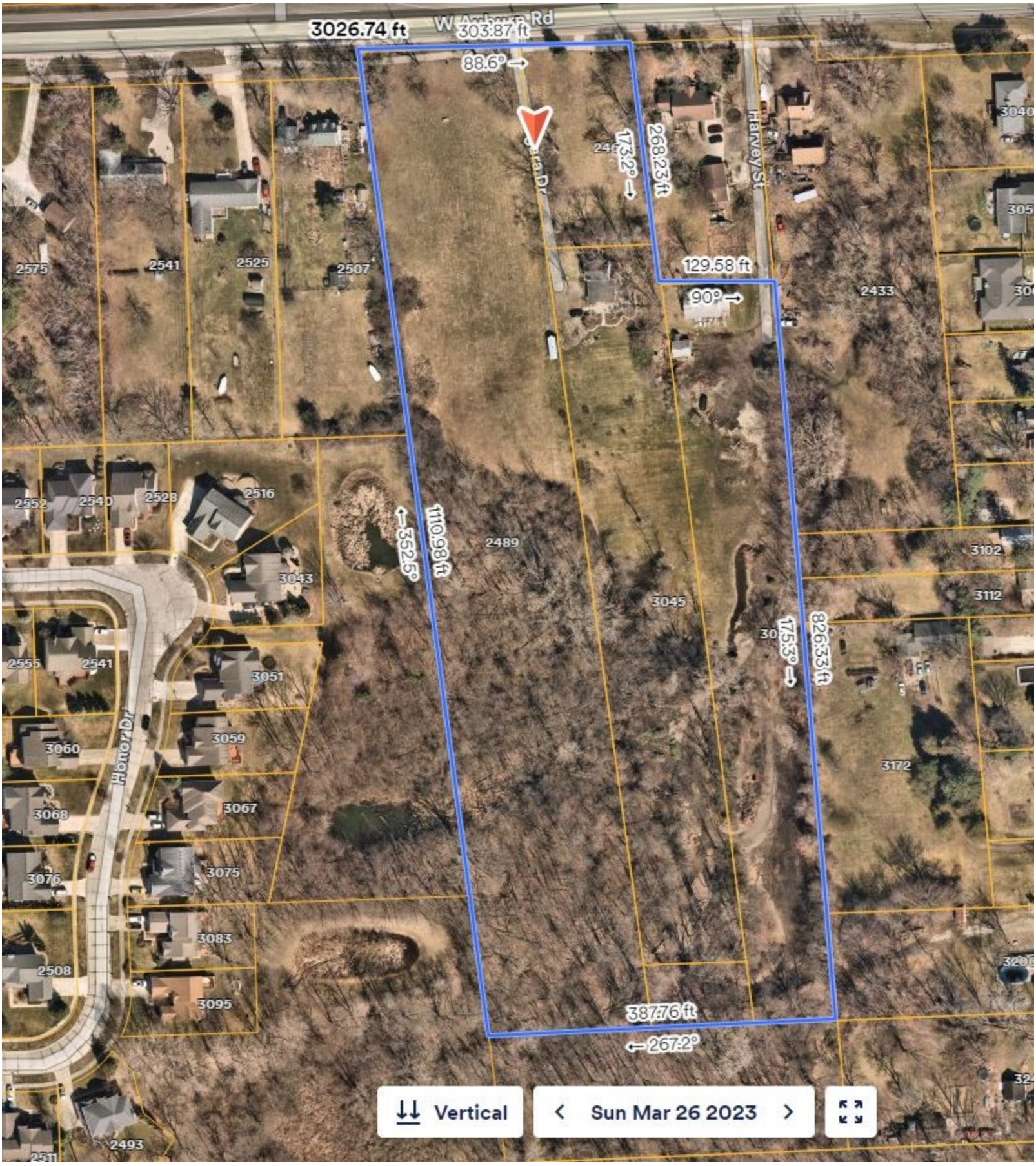
Vertical
Tue Mar 29 2022


3026.74 ft
W Auburn Rd
303.87 ft
88.6°
268.23 ft
17.2°
129.58 ft
90°
110.98 ft
352.5°
826.33 ft
17.5°
387.76 ft
267.2°
Honor Dr
Harvey St
2575
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2525
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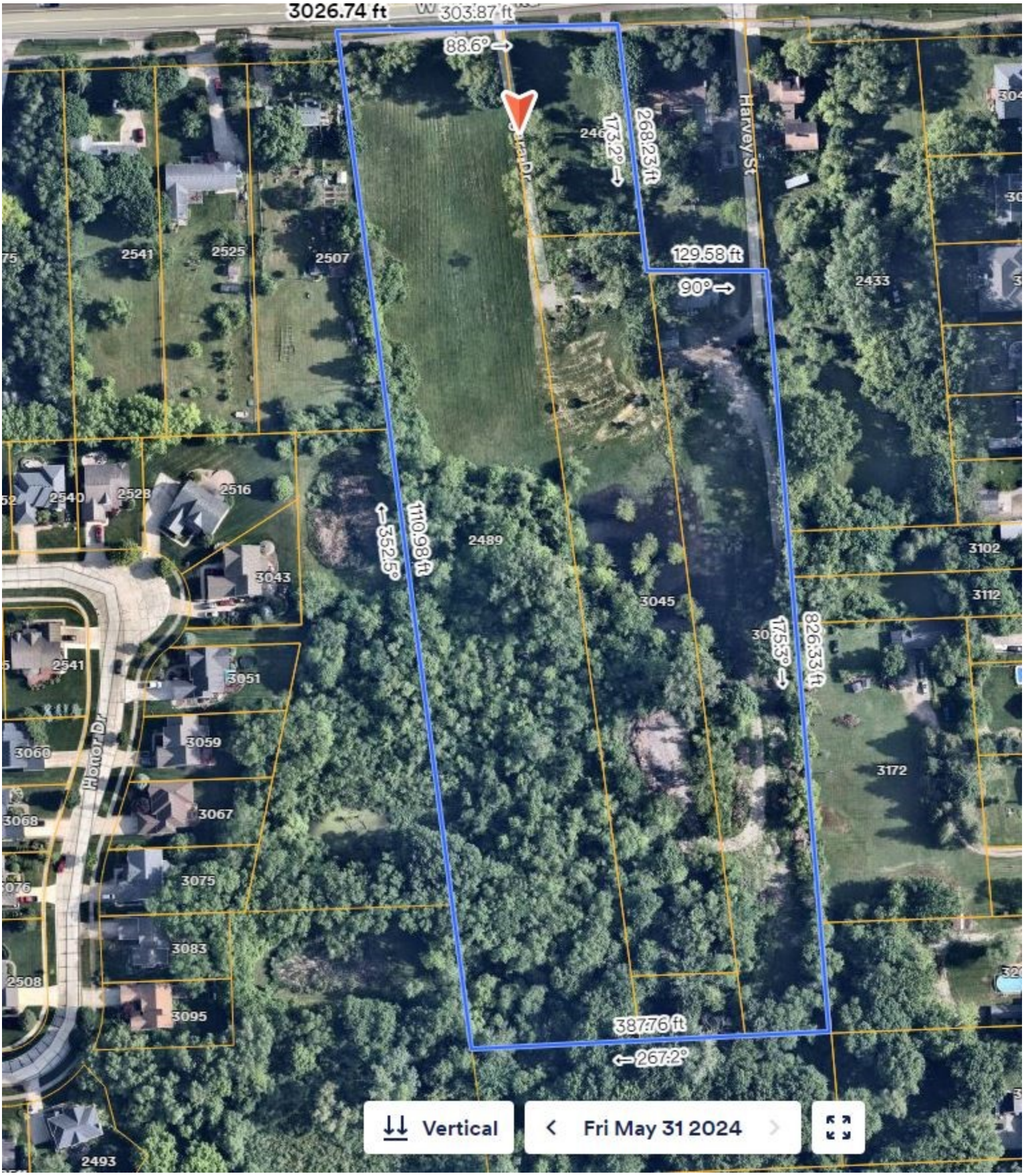
Vertical
Sun Mar 26 2023


3026.74 ft
303.87 ft
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Honor Dr
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2493
2433
3102
3112
3172
Vertical
Fri May 31 2024

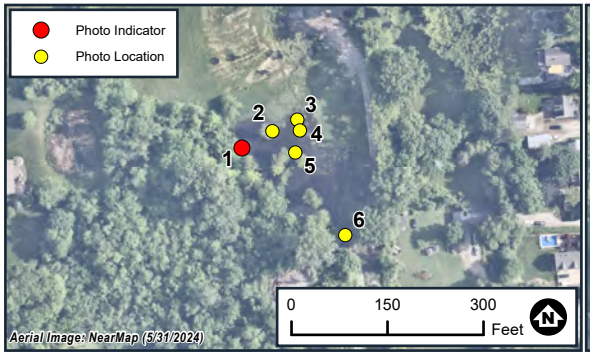
Attachment 2

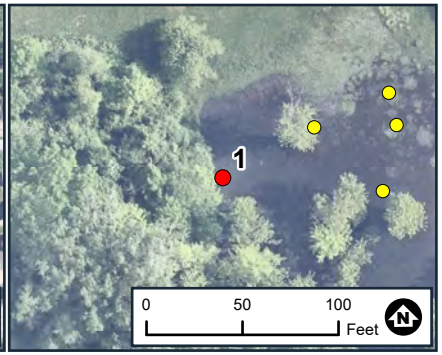
SP1 facing west

SP1 facing south

SP1 facing east

SP1 facing north





Date: 7/9/2024

Sample Point ID:
SP1

Flag No:
A20

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

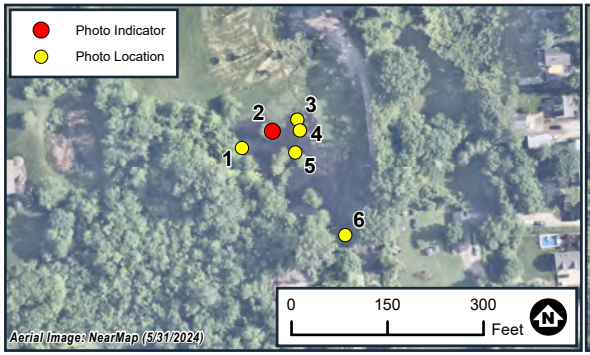
BARR

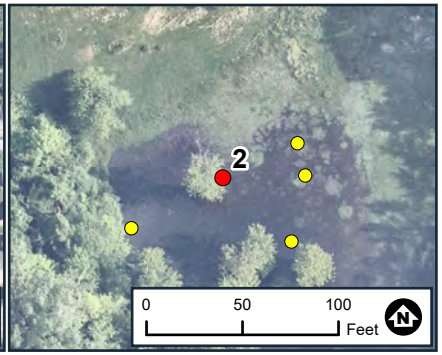
SP2 facing west

SP2 facing south

SP2facing east

SP2 facing north





Date: 7/9/2024

Sample Point ID:
SP2

Flag No:
A27

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

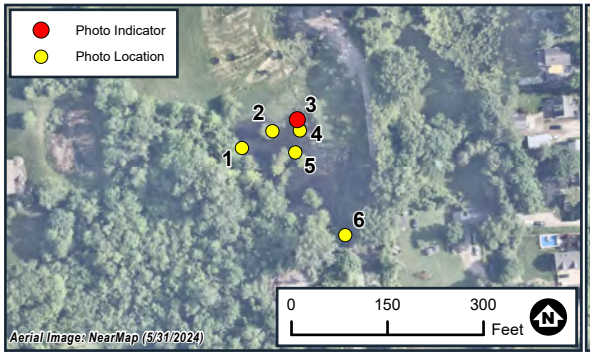
BARR

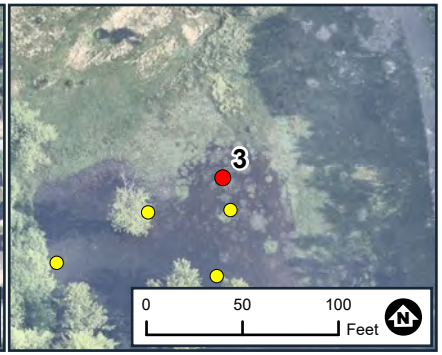
SP3 facing east

SP3 facing south

SP3 facing west

SP3 facing north





Date: 7/9/2024

Sample Point ID:
SP3

Flag No:
A29

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

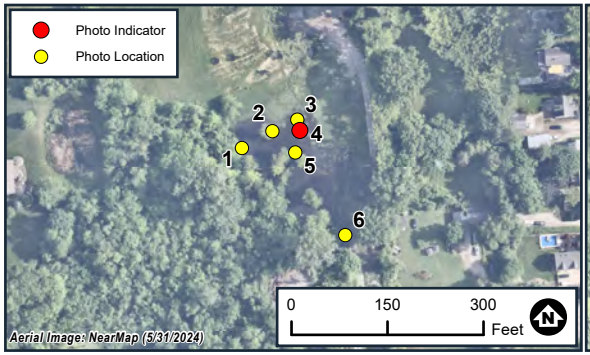
BARR

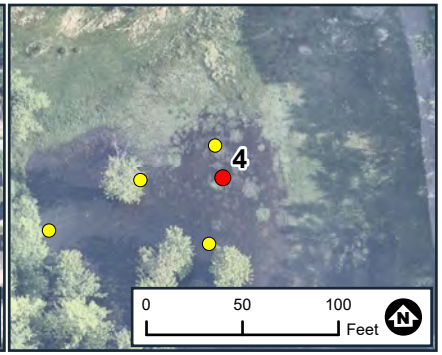
SP4 facing west

SP4 facing north

SP4 facing east

SP4 facing south





Date: 7/9/2024

Sample Point ID:
SP4

Flag No:
A30

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

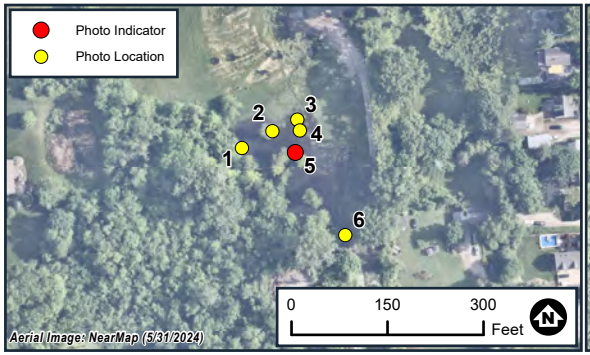
BARR

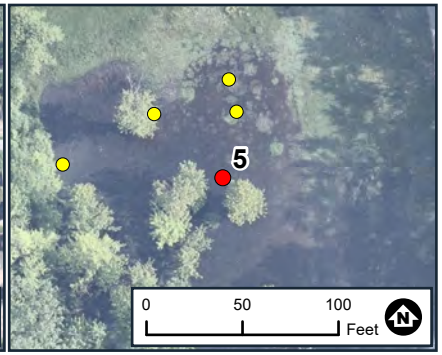
SP5 facing west

SP5 facing north

SP5 facing east

SP5 facing south





Date: 7/9/2024

Sample Point ID:
SP5

Flag No:
A30

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

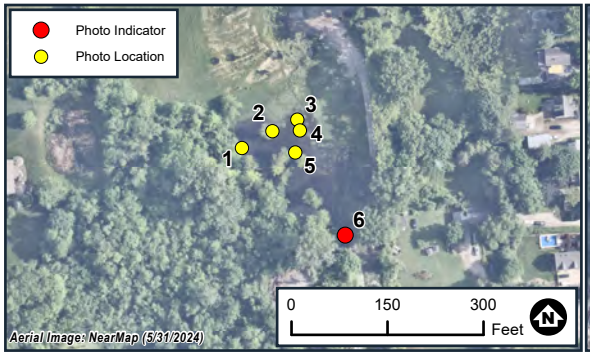
BARR

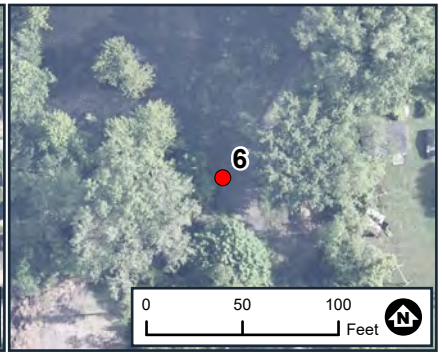
WETLAND A east side of swale

WETLAND A facing west

WETLAND A facing east

WETLAND A facing north





Date: 7/9/2024

Sample Point ID:
Overview

Flag No:
A

Note: Photo locations are approximate

THREE OAKS
AUBURN ANGARA
Photo Locations
Three Oaks Communities, LLC
Rochester Hills, Michigan

BARR

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 5/30/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: A56 UPL

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex

Slope (%): 0-2 Lat: 42.63213 Long: -83.18170 Datum: NAD 83

Soil Map Unit Name: Granby loamy sand NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
All three wetland criteria are not met. Sampling point is upland. This sampling point represents the upland areas adjacent to Wetlands A and B.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	35	Yes	FACU
2. *Robinia pseudoacacia*	30	Yes	FACU
3.			
4.			
5.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rhamnus cathartica*	25	Yes	FAC
2. *Lonicera morrowii*	15	Yes	FACU
3. *Berberis thunbergii*	5	No	FACU
4.			
5.			
	45	=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Rhamnus cathartica*	20	Yes	FAC
2. *Rosa multiflora*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	45	x 3 =	135
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	140 (A)		515 (B)
Prevalence Index = B/A =			3.68

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A56 UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					Loamy/Clayey	
12-18	10YR 5/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 5/30/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: A56 WET

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 0-2 Lat: 42.63231 Long: -83.18180 Datum: NAD 83

Soil Map Unit Name: Granby loamy sand NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	20	Yes	FACW
2.			
3.			
4.			
5.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica*	25	Yes	FAC
2. *Cornus amomum*	10	Yes	FACW
3.			
4.			
5.			
	35	=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex lacustris*	20	Yes	OBL
2. *Symplocarpus foetidus*	15	Yes	OBL
3. *Glyceria striata*	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	40	=Total Cover	
Woody Vine Stratum (Plot size: NA)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	30	x 2 =	60
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		175 (B)

Prevalence Index = B/A = 1.84

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A56 WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/2	100					Loamy/Clayey	
10-16	10YR 4/1	80	10YR 4/6	20	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 1
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 5/30/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: B4 WET

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): convcave

Slope (%): 0-2 Lat: 42.63187 Long: -83.18106 Datum: NAD 83

Soil Map Unit Name: Granby loamy sand NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
All three wetland criteria are met. Sampling point is wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2.			
3.			
4.			
5.			
	80 =Total Cover		
Sapling/Shrub Stratum (Plot size: NA)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: NA)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	=Total Cover		
Woody Vine Stratum (Plot size: NA)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	80 (A)		160 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: B4 WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Sampling point was inundated with 6 inches of standing water. Due to the depressional landscape position, predominance of silver maple trees, and inundation of the sampling point with water, the soil is assumed to be hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 6
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP1

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave

Slope (%): 0-1 Lat: 42.6332694 Long: -83.1809722 Datum: WGS

Soil Map Unit Name: Fox sandy loam, till plain, 2 to 6 percent slopes NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Hydrology on site has been altered.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Aces saccharinum*	10	Yes	FACW
2.			
3.			
4.			
5.			
	10 =Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Agrostis stolonifera*	95	Yes	FACW
2. *Acer rubrum*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	105	x 2 =	210
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		225 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/2	100					Sandy	unmasked sand grains/ Salt Pepper

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP2

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): toe slope Local relief (concave, convex, none): concave

Slope (%): 0-2 Lat: 42.63213 Long: -83.18170 Datum: WGS

Soil Map Unit Name: Fox sandy loam, till plain, 2 to 6 percent slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
Sample Point taken at flag A27. Hydrology has been altered on site

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rhamnus cathartica*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Agrostis stolonifera*	80	Yes	FACW
2. *Juncus articulatus*	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	85	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	95	x 2 =	190
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	105 (A)		210 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Mucky Loam/Clay	
2-6	10YR 5/2	80	10YR 6/8	20	C	M	Loamy/Clayey	Prominent redox concentrations
6-15	10YR 2/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 9
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 5

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP 3

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): convex

Slope (%): 1-2 Lat: 42.63325278 Long: -83.18079722 Datum: WGS

Soil Map Unit Name: Granby loamy sand NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Sample Point taken north of Flag 30.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Eleocharis olivacea*	25	Yes	OBL
2. *Cyperus esculentus*	20	Yes	FACW
3. *Agrostis stolonifera*	10	No	FACW
4. *Symphyotrichum lateriflorum*	5	No	FACW
5. *Phalaris arundinacea*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	65 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	40	x 2 =	80
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	65 (A)		105 (B)

Prevalence Index = B/A = 1.62

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Loamy/Clayey	
2-13	7.5YR 4/1	50	10YR 3/2	40			Loamy/Clayey	
			10YR 5/6	10	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Large gravel angular rock at 13 inches below the surface

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP4

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): back slope Local relief (concave, convex, none): concave

Slope (%): 01 Lat: 42.6332222 Long: -83.1807778 Datum: WGS

Soil Map Unit Name: Granby loamy sand NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Agrostis stolonifera*	60	Yes	FACW
2. *Cyperus esculentus*	5	No	FACW
3. *Acer rubrum*	1	No	FAC
4. *Bidens frondosa*	1	No	FACW
5. *Agrostis gigantea*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	72 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	71	x 2 =	142
FAC species	1	x 3 =	3
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	72 (A)		145 (B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	10					Loamy/Clayey	
3-11	10YR 4/3	90	10YR 5/6	10	C	M	Loamy/Clayey	Distinct redox concentrations
11-15	7.5YR 5/2	70	7.5YR 5/6	30	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Auburn Angara Oaks City/County: Rochester Hills/Oakland Co. Sampling Date: 7/9/2024

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: SP5

Investigator(s): Fran Thompson, Barr Engineering Co. Section, Township, Range: S32, T3N, R11E

Landform (hillside, terrace, etc.): toe slope Local relief (concave, convex, none): concave

Slope (%): 0-1 Lat: 42.6331833 Long: -83.1808972 Datum: WGS

Soil Map Unit Name: Granby loamy sand NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	30	Yes	FACW
2.			
3.			
4.			
5.			
	30 =Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. *Ludwigia palustris*	15	Yes	OBL
2. *Agrostis stolonifera*	5	Yes	FACW
3. *Lemna minor*	5	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	35	x 2 =	70
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	55 (A)		90 (B)

Prevalence Index = B/A = 1.64

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100					Mucky Loam/Clay	
3-15	10YR 5/2	80	7.5YR 5/8	20	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 9
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 6

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample Point taken south at flag A31. Hydrology has been altered on site