

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

Planning Dept Email <planning@rochesterhills.org>
To: saralruss <saralruss@gmail.com>
Co: Chris McLeod <mcleodc@rochesterhills.org>

Wed, Oct 16, 2024 at 3:05 PM

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



Planning & Economic Development

248-656-4660 rochesterhills.org

[Quoted text hidden]

saralruss <saralruss@gmail.com>
To: Planning Dept Email <planning@rochesterhills.org>

Wed, Oct 16, 2024 at 3:46 PM

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]

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Mon, Oct 21, 2024 at 8:34 AM

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

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



Planning & Economic Development

248-656-4660 rochesterhills.org saralruss <saralruss@gmail.com>
Τα Planning Dept Email <planning@rochesterhills.org>

Mon, Oct 21, 2024 at 12:43 FM

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



--- 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.



Jason Boughton

Eng:maening UtilitJei Speclalist DC!parlment m Public Serne-os

248-841-2490 rochesterhil1s.org

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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

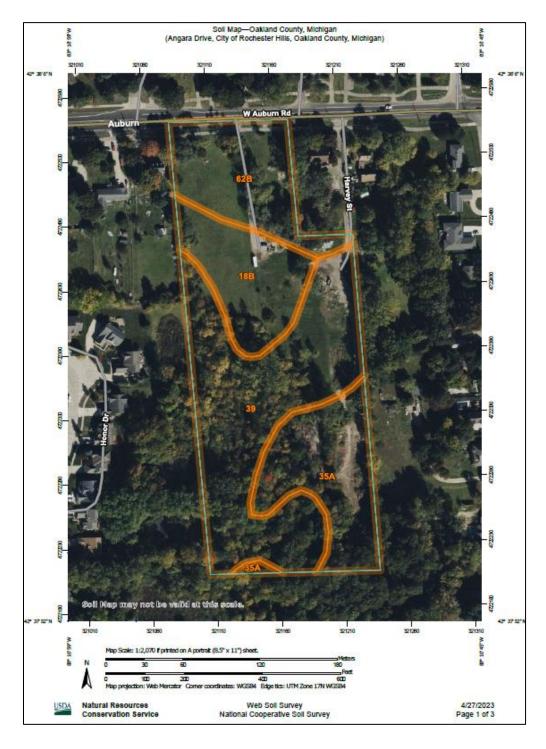
Barr conducted a desktop review to evaluate digital imagery for topography, soil types, and mapped wetlands within the AOI prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS; Figure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



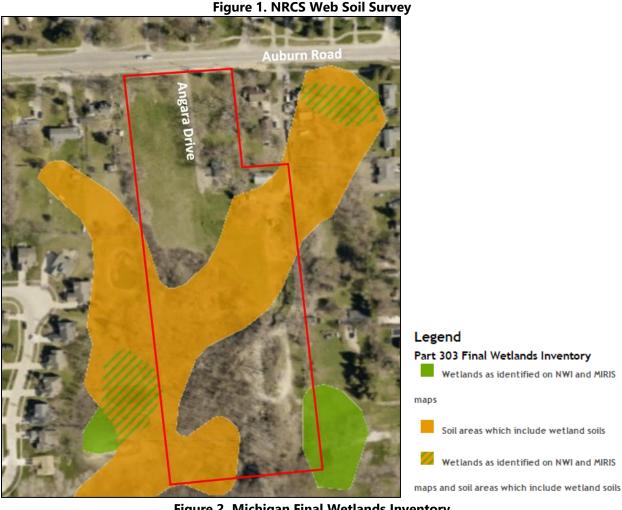


Figure 2. Michigan Final Wetlands Inventory

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 offsite 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.

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 R - DISTURBANCE 2	9 367 SF	69 SF	1 CY (CLIT)					

RIGHT OF WAY LINE LEGEND

WETLAND NOTES

ROCK FRAGMENTS

FOOTING fo = 3500 PSI

(28 DAYS)

(4' MIN.)

END VIEW

EX. RIGHT OF WAY LINE/EASEMENT

PR. RIGHT OF WAY LINE/EASEMENT

IMPACT LEGEND

WETLAND FILL NATURAL FEATURES 25' SETBACK IMPACT



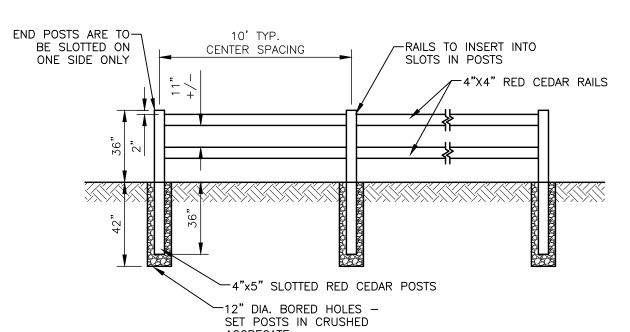
MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY PERMIT WILL BE REQUIRED FOR FILLING IN THE THE WETLAND AS SHOWN ON THIS PLAN. OAKLAND

- 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.

COUNTY WATER RESOURCE COMMISSIONER PERMIT WILL BE REQUIRED FOR DISCHARGING THE STORM WATER EFFLUENT INTO THE LEUDER'S DRAIN.

- 4. PRIOR TO ANY WORK BEING PERFORMED WITHIN THE WETLANDS OR NATURAL FEATURES SETBACKS ON THIS PROJECT:
- THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CITY ENGINEER. WORK SHALL NOT COMMENCE UNTIL CONSENT HAS BEEN OBTAINED FROM THE CITY MAYOR.
- 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



Call MISS DIG 3 full working days before you di One-Call 1-800-482-7171

Kevin C,

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CLIENT:

AUBURN ANGARA OAKS, LLC

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

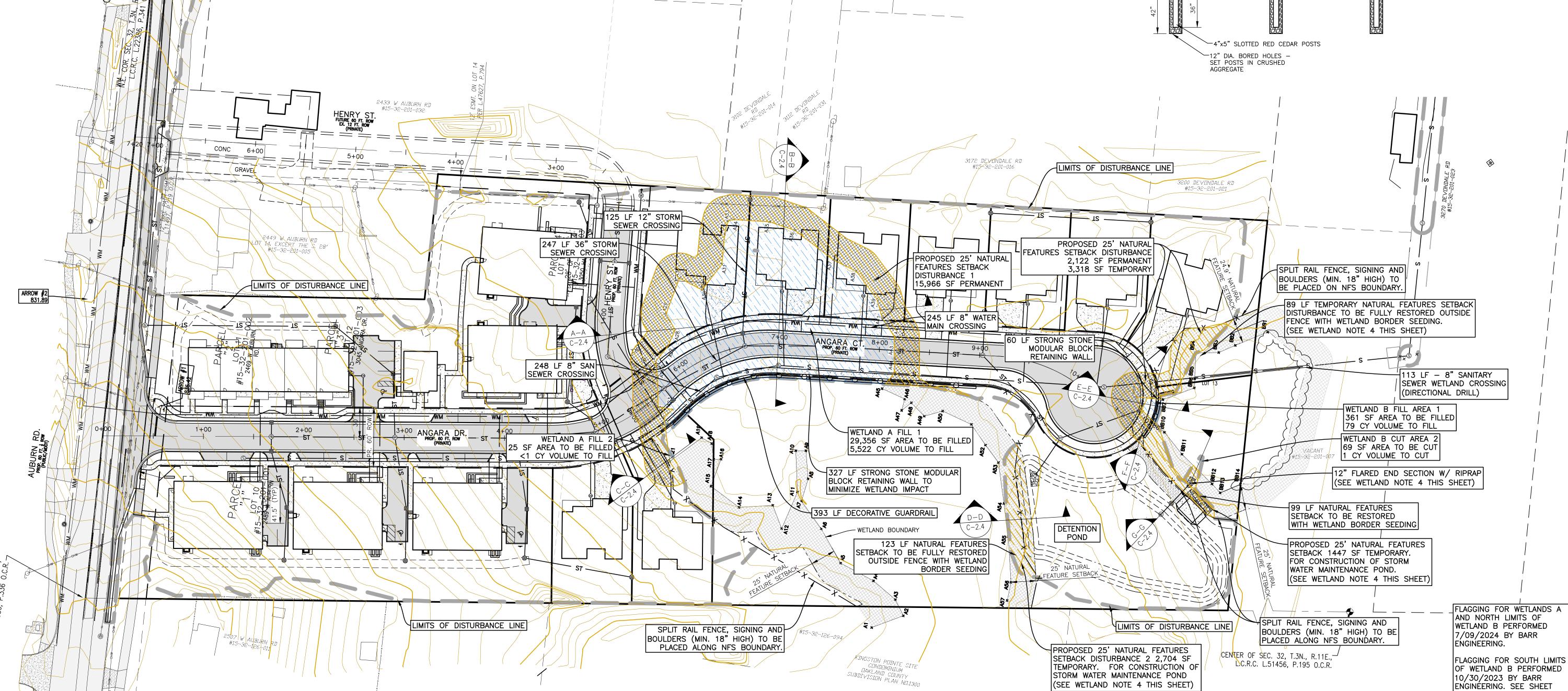
> OAKS AUBURN

ORIGINAL ISSUE DATE: 05/19/2022

PROJECT NO: 22-051 SCALE: 1" = 50'

1/2" FIELD: REICHERT DRAWN BY: MN DESIGN BY: KM

CHECK BY: AP



END SECTION DETAIL - WITH FOOTING

PIPE BEDDING

#4 REBARS ["] 10" O.C.

["]@ 10" O.C.

#4 REBAR "L"'S

PROFILE VIEW

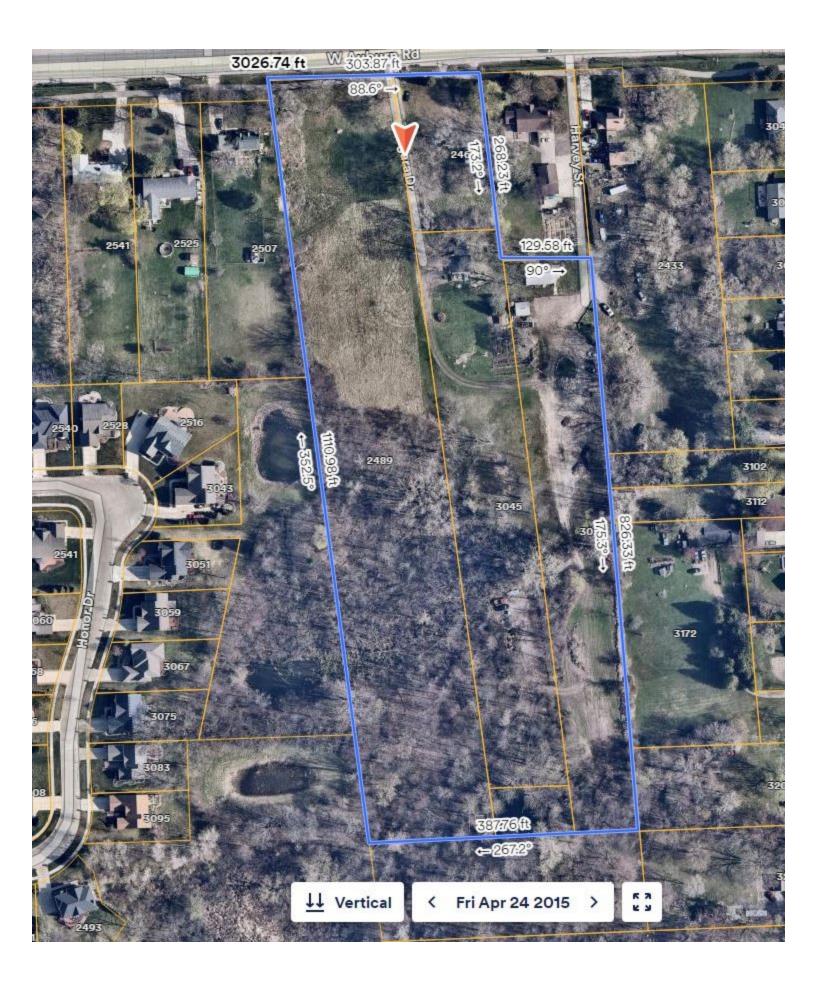
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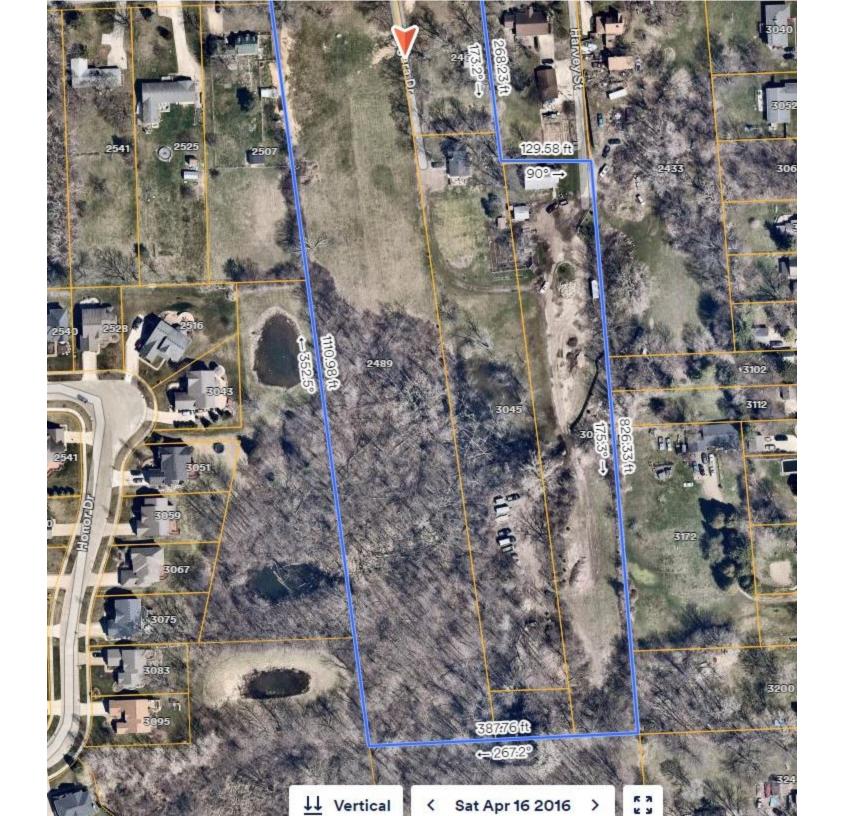
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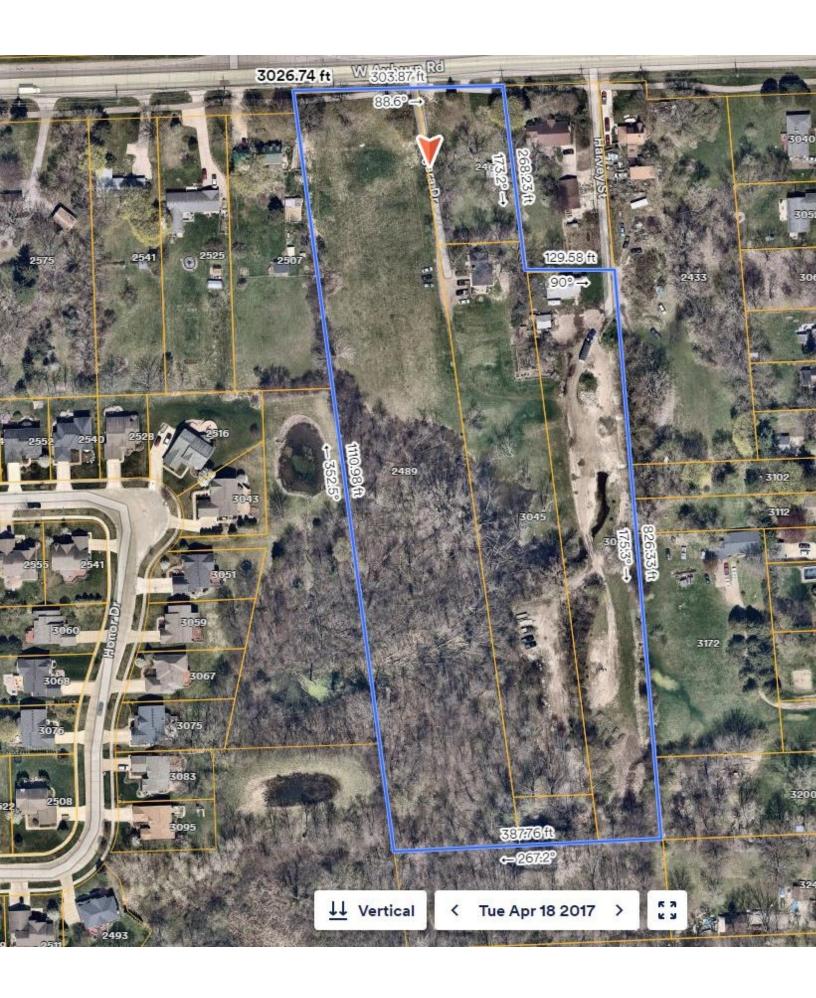
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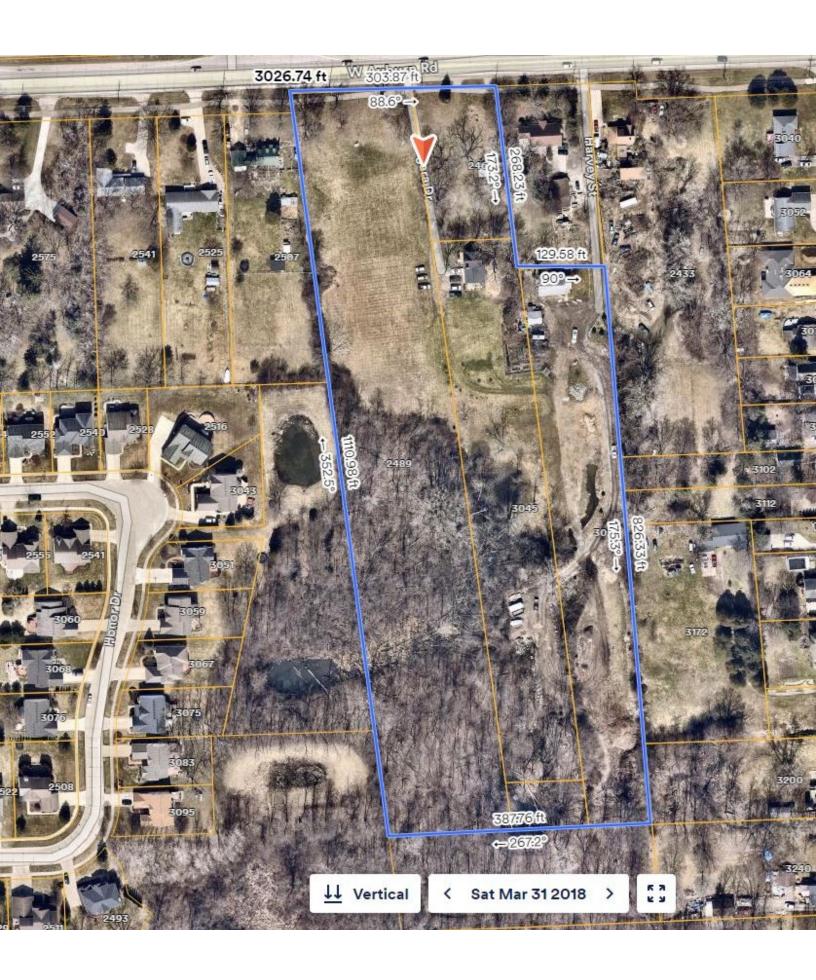
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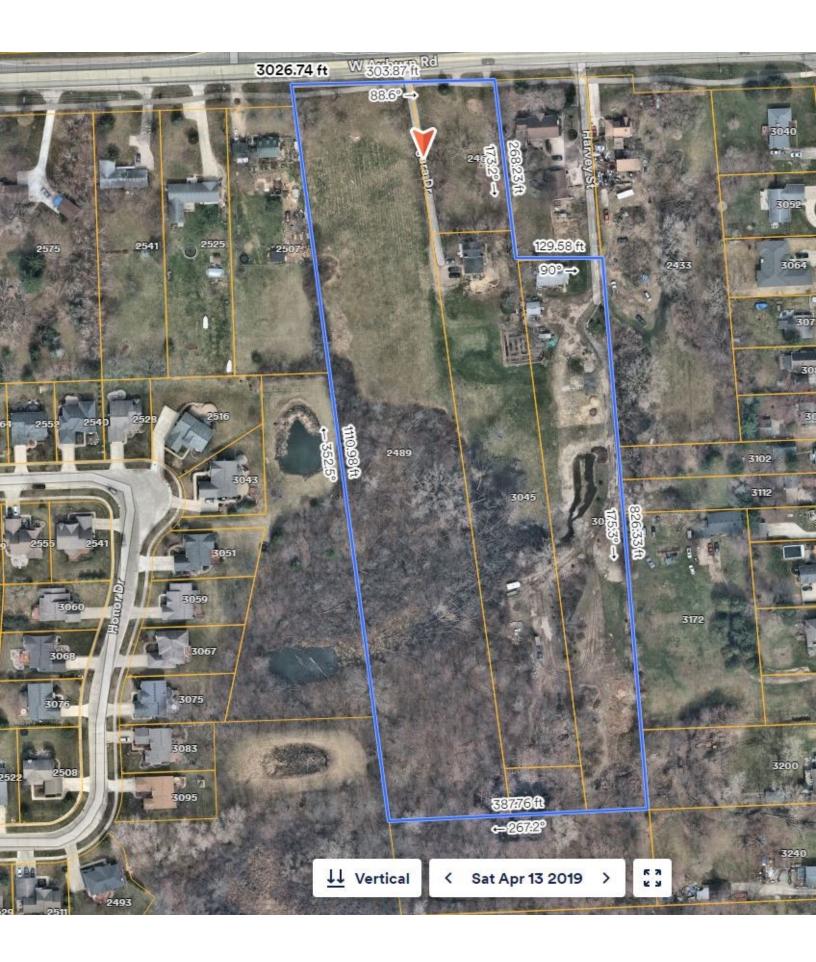
Attachments 1

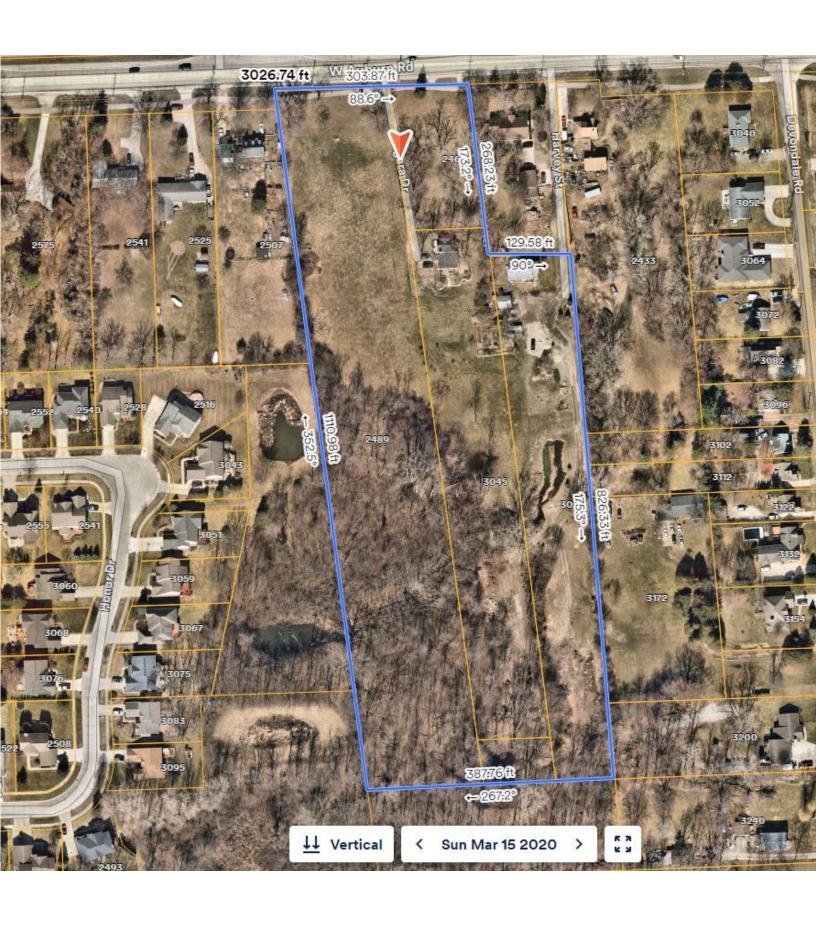


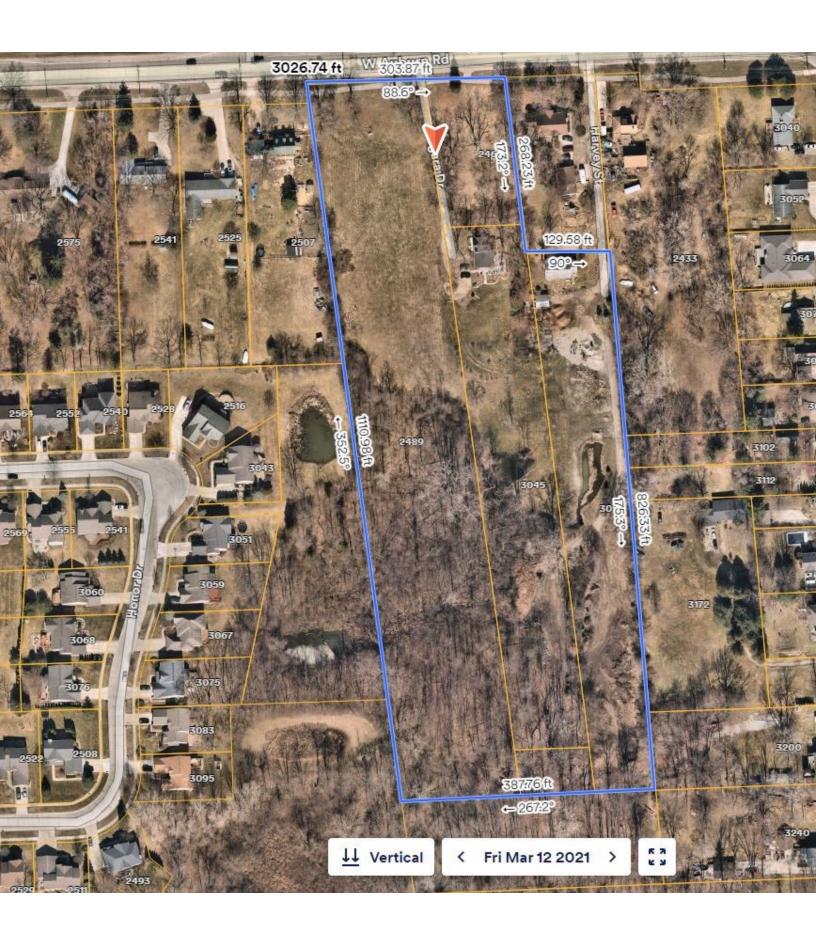


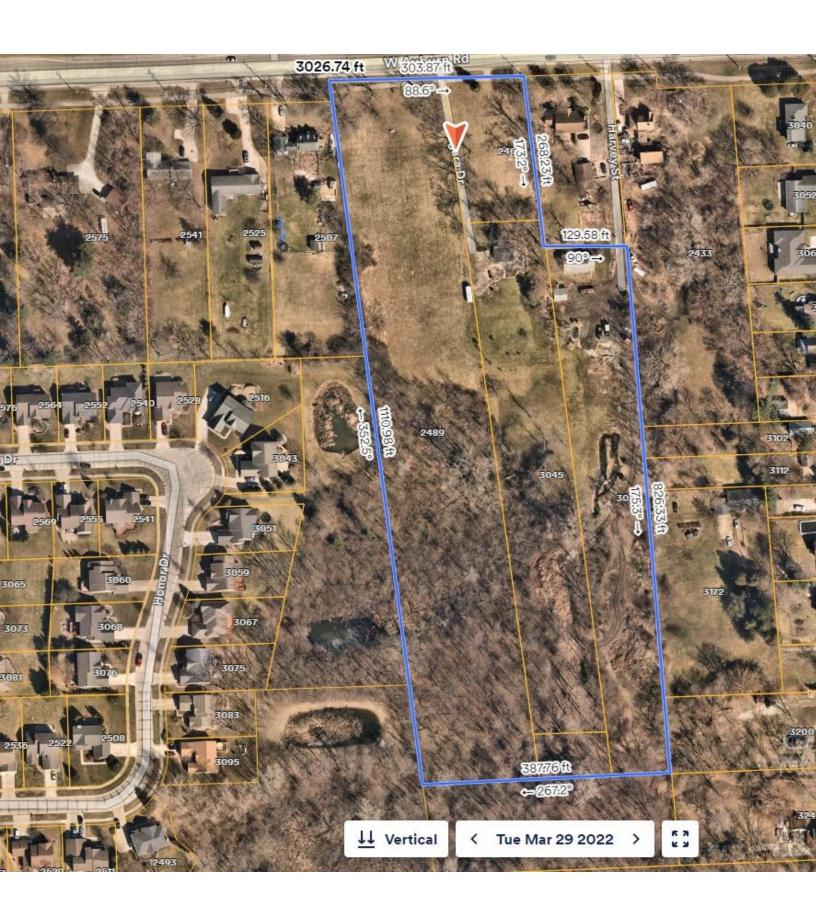


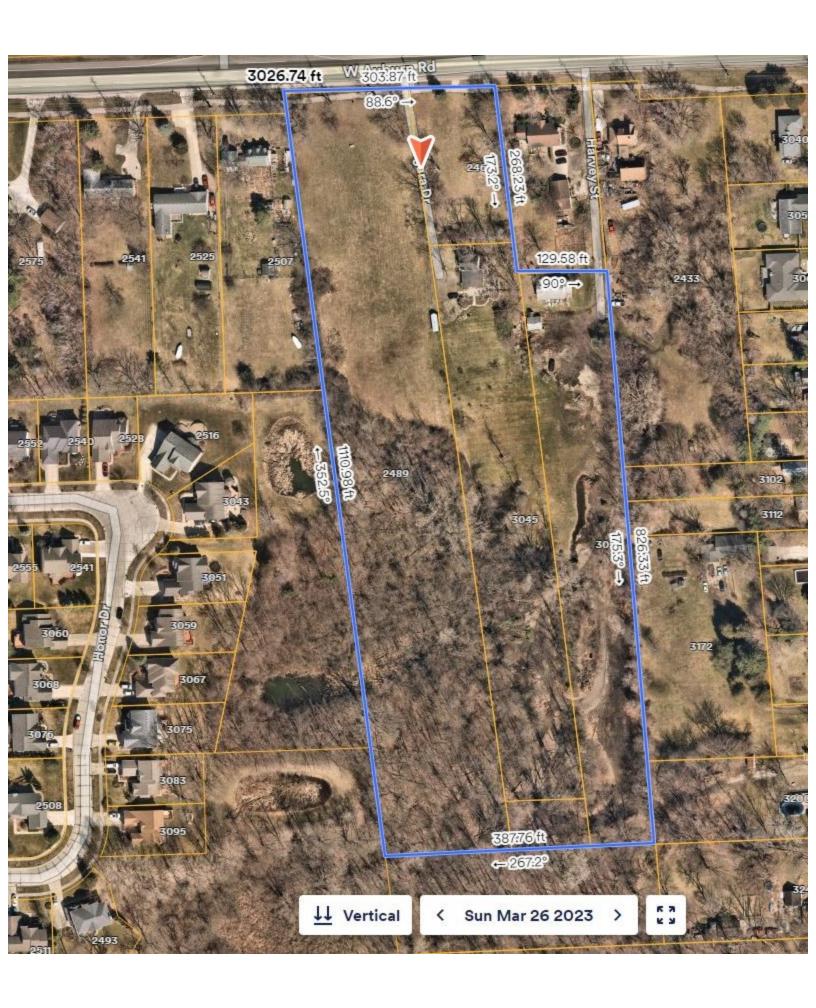


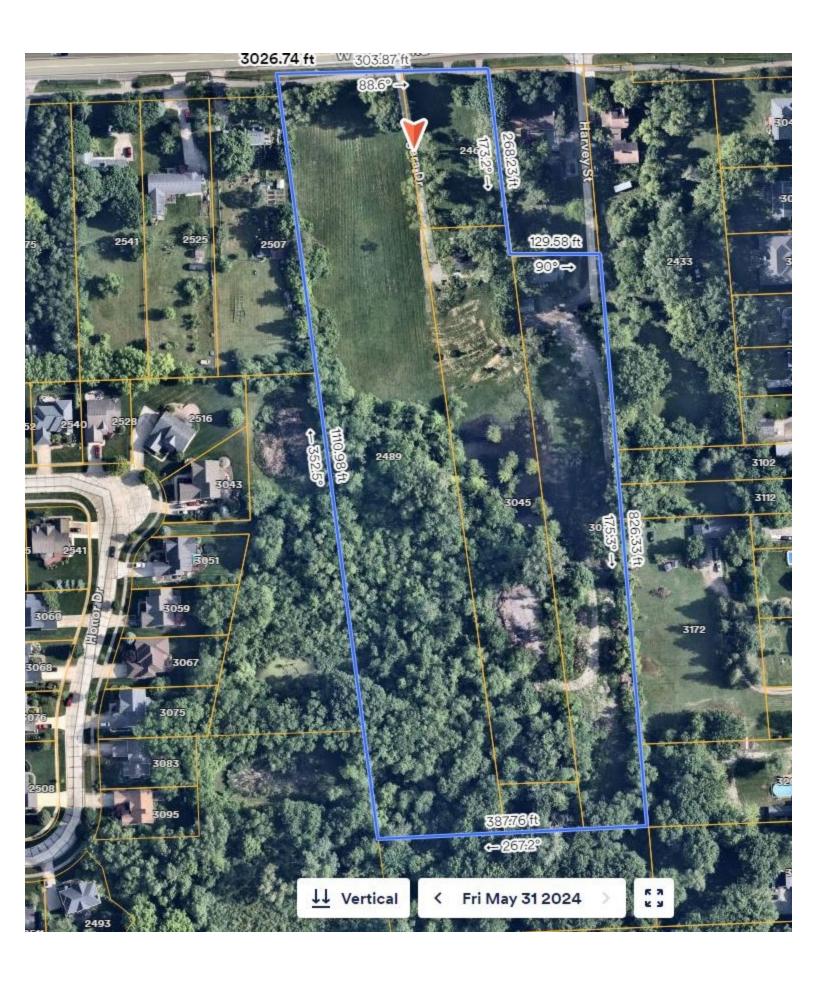












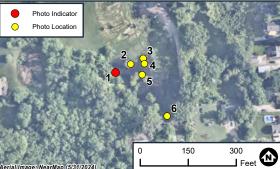
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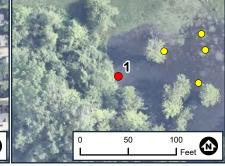












Sample Point ID:

SP1

Flag No: A20

Page 1 of 6
THREE OAKS **AUBURN ANGARA**

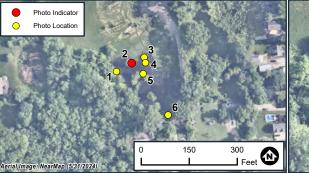


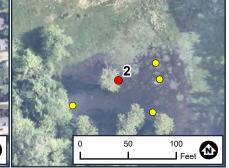












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Flag No: A27

Page 2 of 6 THREE OAKS **AUBURN ANGARA**

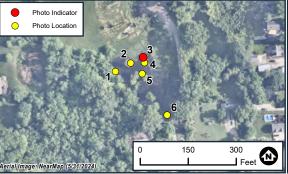


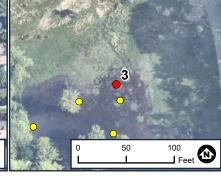












Sample Point ID: SP3

Flag No: A29

Page 3 of 6 THREE OAKS **AUBURN ANGARA**

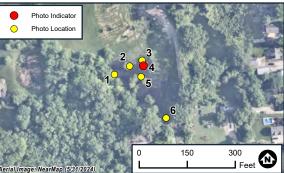


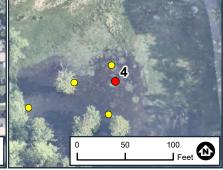










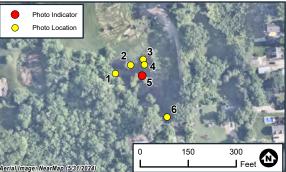


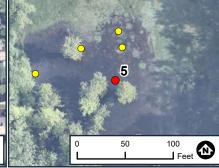
Sample Point ID: SP4

Flag No: A30

Page 4 of 6 THREE OAKS **AUBURN ANGARA**







Sample Point ID: SP5

Flag No: A30

Page 5 of 6
THREE OAKS **AUBURN ANGARA**

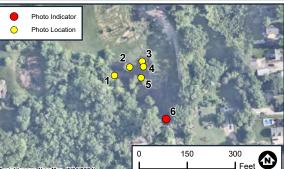












Sample Point ID:

Overview

Flag No:

Page 6 of 6 THREE OAKS **AUBURN ANGARA**



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/Cou	inty: Roches	ter Hills/Oakland	<u>Co.</u> Sar	npling D	ate: <u>5/30</u>	/2024
Applicant/Owner: Three Oaks Communities				State:	MI Sar	npling Po	oint: A5	6 UPL
Investigator(s): Fran Thompson, Barr Engineering Co.		Section, 7	Township, Ra	ange: S32, T3N,	R11E			
Landform (hillside, terrace, etc.): hillslope			Local relief (d	concave, convex,	none): conve	×		
Slope (%): 0-2 Lat: 42.63213		Long: -	83.18170		Datur	n: NAD 8	33	
Soil Map Unit Name: Granby loamy sand				NW	 I classificatio	n: Uplan	d	
Are climatic / hydrologic conditions on the site typical	for this time o	of year?	Yes X					
Are Vegetation No , Soil No , or Hydrology No		-		Circumstances" p				
				·			····	_
Are Vegetation No , Soil No , or Hydrology No SUMMARY OF FINDINGS – Attach site m			•	cplain any answer		-	: feature:	s, etc.
Hydrophytic Vegetation Present? Yes N	lo X	Is the	Sampled A	rea				
	lo X	withi	n a Wetland'	? Yes	N	o X		
Wetland Hydrology Present? Yes N	lo X							
Remarks:		·						
All three wetland criteria are not met. Sampling poin	t is upland. 1	his sampling	point represe	ents the upland ar	eas adjacent	to Wetla	ands A and	B.
VEGETATION – Use scientific names of pla	ants.							
Table Christians (District 20 ft	Absolute	Dominant	Indicator	Daminanaa T	4	-4.		
<u>Tree Stratum</u> (Plot size: <u>30 ft</u>) 1. <i>Prunus serotina</i>	% Cover 35	Species? Yes	Status FACU	Dominance To				
Robinia pseudoacacia	30	Yes	FACU	Number of Doi Are OBL, FAC	•	es I hat	2	(A)
3.			17.00	Total Number		Species		_('')
4.				Across All Stra		opecies	6	(B)
5.				Percent of Dor	minant Specie	es That		_` ′
	65	=Total Cover		Are OBL, FAC	•		33.3%	_(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft)							
1. Rhamnus cathartica	25	Yes	FAC	Prevalence In	dex worksh	eet:		
2. Lonicera morrowii	15	Yes	FACU	Total % C	Cover of:	Mu	ıltiply by:	_
3. Berberis thunbergii	5	No	FACU	OBL species	0	x 1 = .	0	_
4				FACW species		x 2 = .	0	_
5	45	Tatal Cause		FAC species	45	. x3=.	135	_
Horb Stratum (Plot size: 5 ft)	<u>45</u>	=Total Cover		FACU species UPL species	95	. x4=.	380	_
Herb Stratum (Plot size: 5 ft) 1. Rhamnus cathartica	20	Yes	FAC	Column Totals		x 5 = . (A)	515	(B)
2. Rosa multiflora	10	Yes	FACU		Index = B/A	· ` ′	3.68	– (D)
3				11070100	maox B//		0.00	_
4.				Hydrophytic \	/egetation In	dicators	s:	
5.					Test for Hydro			
6.				2 - Domina	ance Test is	>50%		
7.				3 - Prevale	ence Index is	≤3.0 ¹		
8.					ological Adap	,	`	
9					Remarks or c	•		,
10				Problemat	ic Hydrophyti	c Vegeta	ation ¹ (Expl	ain)
Woody Vine Stratum (Plot size:)	=Total Cover		¹ Indicators of h be present, un				must
1.	<u> </u>			Hydrophytic				
2.				Vegetation				
		=Total Cover		Present?	Yes	No	X	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			•				

SOIL Sampling Point: A56 UPL

Profile Des Depth	cription: (Describe to Matrix	to the dept		ument th ox Featur		ator or c	onfirm the absenc	ce of indicator	S.)	
(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			
12-10	10111 0/4	100					Loamy/Olaycy			
								_		
	·									
								_		
								_		
¹ Type: C=C	Concentration, D=Depl	etion, RM=I	Reduced Matrix,	MS=Masl	ked San	d Grains	. ² Locat	ion: PL=Pore L	ining, M=Matr	ix.
Hydric Soil	Indicators:						Indica	tors for Proble	ematic Hydric	Soils ³ :
Histosol	l (A1)		Sandy Gle	eyed Mat	rix (S4)		Co	oast Prairie Red	lox (A16)	
Histic E	pipedon (A2)		Sandy Re	dox (S5)			Iro	n-Manganese	Masses (F12)	
Black H	istic (A3)		Stripped N	Matrix (S6	6)		Re	ed Parent Mate	rial (F21)	
Hydroge	en Sulfide (A4)		Dark Surf	ace (S7)			Ve	ery Shallow Dar	k Surface (F2	2)
Stratifie	d Layers (A5)		Loamy Mi	ucky Mine	eral (F1)		Ot	her (Explain in	Remarks)	
2 cm Mi	uck (A10)		Loamy GI	eyed Mat	rix (F2)					
	d Below Dark Surface	(A11)	Depleted	Matrix (F	3)					
	ark Surface (A12)		Redox Da		` '			itors of hydroph		
	Mucky Mineral (S1)		Depleted)		etland hydrolog		
5 cm Mi	ucky Peat or Peat (S3)	Redox De	pression	s (F8)		un	less disturbed	or problematic	-
Restrictive	Layer (if observed):									
Type:			<u> </u>							
Depth (i	inches):						Hydric Soil Pres	ent?	Yes	. No <u>X</u>
HYDROLO	OGY									
-	drology Indicators:									
	icators (minimum of o	ne is require						dary Indicators	•	wo required
	Water (A1)		Water-Sta)		ırface Soil Crad	` ,	
	ater Table (A2)		Aquatic F					ainage Pattern	` '	
Saturati	` '		True Aqua		` ,	\		y-Season Wate	` ,	
	Marks (B1) nt Deposits (B2)		Hydrogen Oxidized I					ayfish Burrows aturation Visible		nery (C9)
	posits (B3)		Presence			-	· · · · —	unted or Stress		
	at or Crust (B4)		Recent Iro			` '		eomorphic Posi	•	,
	posits (B5)		Thin Mucl				` '	AC-Neutral Tes		
	ion Visible on Aerial Ir	magery (B7)							(- /	
Sparsel	y Vegetated Concave	Surface (B	8) Other (Ex	plain in R	emarks))				
Field Obse	rvations:		_ 							
Surface Wa	iter Present? Yes	S	No X	Depth (i	nches):					
Water Table	e Present? Yes	s	No X	Depth (ii						
Saturation F	Present? Yes	s	No X	Depth (i	nches):		Wetland Hydro	logy Present?	Yes	No_X
(includes ca	apillary fringe)									
Describe Re	ecorded Data (stream	gauge, mor	nitoring well, aeria	al photos	, previou	s inspec	tions), if available:			
_										
Remarks:										
Remarks:										

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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)

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: A56 W 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, e Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes	
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave NWI classification: PEM/PSS Are Climatic / hydrologic conditions on the site typical for this time of year? Yes _ X	tc.
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, e Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No No	etc.
Soil Map Unit Name: Granby loamy sand Are climatic / hydrologic conditions on the site typical for this time of year? 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, e Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Is the Sampled Area	etc.
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, e Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No No	etc.
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, e Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Yes X No	etc.
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No	etc.
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, e Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No Within a Wetland? Yes X No	etc.
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, e Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No Within a Wetland? Yes X No	etc.
Hydric Soil Present? Yes X No within a Wetland? Yes X No	
Welland Hydrology Fresent? Fes A No	
VEGETATION – Use scientific names of plants.	
Absolute Dominant Indicator	
Tree Stratum (Plot size: 30 ft) % Cover Species? Status Dominance Test worksheet:	
1. Ulmus americana 20 Yes FACW Number of Dominant Species That 2. Are OBL, FACW, or FAC: 5 (A	
3 Total Number of Dominant Species	•)
4. Across All Strata: 5 (B	3)
5. Percent of Dominant Species That	
20 =Total Cover Are OBL, FACW, or FAC: 100.0% (A	/B)
Sapling/Shrub Stratum (Plot size: 15)	
1. Rhamnus cathartica 25 Yes FAC Prevalence Index worksheet:	
2. Cornus amomum 10 Yes FACW Total % Cover of: Multiply by:	
3 OBL species 40 x1 = 40 4. FACW species 30 x 2 = 60	
5. FAC species 25 x 3 = 75	
35 =Total Cover FACU species 0 x 4 = 0	
Herb Stratum (Plot size: 5 ft) UPL species 0 x 5 = 0	
1. Carex lacustris 20 Yes OBL Column Totals: 95 (A) 175 (B	3)
2. Symplocarpus foetidus 15 Yes OBL Prevalence Index = B/A = 1.84	,
3. Glyceria striata 5 No OBL	
4. Hydrophytic Vegetation Indicators:	
5 1 - Rapid Test for Hydrophytic Vegetation	
6 X_2 - Dominance Test is >50%	
7 X_3 - Prevalence Index is ≤3.0 ¹	
8 4 - Morphological Adaptations ¹ (Provide support	rting
g. data in Remarks or on a separate sheet)	
10 Problematic Hydrophytic Vegetation¹ (Explain)	
Woody Vine Stratum (Plot size: NA) =Total Cover 1Indicators of hydric soil and wetland hydrology mu be present, unless disturbed or problematic.	st
1 Hydrophytic	
2	
Remarks: (Include photo numbers here or on a separate sheet.)	

SOIL Sampling Point: A56 WET

Profile Desc	cription: (Descr	ibe to the dept	h needed to doc	ument t	he indica	tor or o	confirm the absence	of indicators.)
Depth	Matr	ix	Redo	x Featur	es			
(inches)	Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 2/2	100					Loamy/Clayey	
10-16	10YR 4/1	<u> </u>	10YR 4/6	20	С		Loamy/Clayey	Prominent redox concentrations
	-							
	-							
¹ Type: C=Ce	oncentration, D=l	Depletion, RM=	Reduced Matrix, I	MS=Mas	ked Sand	Grains	. ² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:	-					Indicato	ers for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle	yed Mat	rix (S4)		Coa	st Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re	dox (S5)			Iron-	-Manganese Masses (F12)
Black His	stic (A3)		Stripped N	/latrix (Se	3)		Red	Parent Material (F21)
Hydroge	n Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)
Stratified	d Layers (A5)		Loamy Μι	icky Min	eral (F1)		Othe	er (Explain in Remarks)
2 cm Mu	ıck (A10)		Loamy Gl	eyed Ma	trix (F2)			
X Depleted	d Below Dark Sur	face (A11)	X Depleted I	Matrix (F	3)			
Thick Da	ark Surface (A12))	Redox Da	rk Surfac	ce (F6)		³ Indicato	ors of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)	Depleted I		, ,			and hydrology must be present,
5 cm Mu	icky Peat or Peat	(S3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.
Restrictive	Layer (if observe	ed):						
Type:								
Depth (ir	nches):						Hydric Soil Presen	t? Yes X No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicato	ors:						
Primary India	cators (minimum	of one is requir	ed; check all that	apply)			Seconda	ary Indicators (minimum of two required)
X Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)		Surf	ace Soil Cracks (B6)
High Wa	iter Table (A2)		Aquatic Fa	auna (B1	3)		Drai	nage Patterns (B10)
Saturation	on (A3)		True Aqua	itic Plant	s (B14)		Dry-	Season Water Table (C2)
Water M	larks (B1)		Hydrogen					fish Burrows (C8)
I —	nt Deposits (B2)		Oxidized F			•	· · · —	ration Visible on Aerial Imagery (C9)
1—	oosits (B3)		Presence			•		nted or Stressed Plants (D1)
I —	at or Crust (B4)		Recent Iro			lled Soil		morphic Position (D2)
	osits (B5)		Thin Muck		, ,		<u>X</u> FAC	-Neutral Test (D5)
l —	on Visible on Aer	0 , (~		, ,			
Sparsely	Vegetated Cond	ave Surface (B	8)Other (Exp	olain in F	Remarks)			
Field Obser								
Surface Wat		Yes X	No		nches): _			
Water Table		Yes	No		nches): _		l	
Saturation P		Yes	No	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes X No
(includes cap			nikawina walla na si				diana) if available.	
Describe Re	corded Data (Sire	eam gauge, mo	nitoring well, aeria	ii priotos	, previous	sinspec	ctions), if available:	
Remarks:								
i tomanto.								

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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: Rochest	ter Hills/Oakland Co.	Sampling Date	: 5/30/	2024
Applicant/Owner: Three Oaks Communities		State: MI	Sampling Point	:: <u>B4</u>	WET
Investigator(s): Fran Thompson, Barr Engineering Co.	Section, Township, Ra	nge: S32, T3N, R11E			
Landform (hillside, terrace, etc.): depression	Local relief (c	oncave, convex, none): c	onvcave		
Slope (%): 0-2 Lat: 42.63187	Long: -83.18106	С	Datum: NAD 83		
Soil Map Unit Name: Granby loamy sand		NWI classific	cation: PFO		
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes X	No (If no, expl	ain in Remarks.))	
Are Vegetation No , Soil No , or Hydrology No significantly	disturbed? Are "Normal C	Circumstances" present?	Yes X	No	
Are Vegetation No , Soil No , or Hydrology No naturally pro		plain any answers in Rem			-
SUMMARY OF FINDINGS – Attach site map show		cations, transects,	important fe	atures	, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Ar		No		
Wetland Hydrology Present? Yes X No					
Remarks: All three wetland criteria are met. Sampling point is wetland.					
VEGETATION – Use scientific names of plants.					
Absolute Tree Stratum (Plot size: 30 ft) % Cover	Dominant Indicator Species? Status	Dominance Test work	rahaati		
1. cer saccharinum 80	Species? Status Yes FACW	Number of Dominant S Are OBL, FACW, or FA	pecies That	1	(A)
3		Total Number of Domir Across All Strata:		1	(B)
5	=Total Cover	Percent of Dominant S Are OBL, FACW, or FA	•	100.0%	_ _(A/B)
Sapling/Shrub Stratum (Plot size: NA)					
1	·	Prevalence Index wor			
2. 3.	·	Total % Cover of: OBL species 0	Multip	лу by. 0	-
4	·	FACW species 80	x 2 =	160	-
4		FAC species 0	x3 =	0	-
	=Total Cover	FACU species 0	x 4 =	0	-
Herb Stratum (Plot size: NA)		UPL species 0	x 5 =	0	-
1		Column Totals: 80	(A)	160	- (B)
2.		Prevalence Index =	B/A = 2.0	00	- ` ′
3.					_
4.		Hydrophytic Vegetation	on Indicators:		
5		1 - Rapid Test for I	Hydrophytic Veg	etation	
6		X 2 - Dominance Tes	it is >50%		
7		X 3 - Prevalence Inde			
8		4 - Morphological A			
9		data in Remarks			
10		Problematic Hydro	. , .		,
Woody Vine Stratum (Plot size: NA)	=Total Cover	¹ Indicators of hydric so be present, unless dist			must
1		Hydrophytic			
2	=Total Cover	Vegetation Present? Yes	X No		
Remarks: (Include photo numbers here or on a separate sheet.)					
nomains. (molude prioto numbers here or on a separate sheet.)					

SOIL Sampling Point: B4 WET

Depth Matrix inches) Color (moist) %	Redox Features Color (moist) % Type ¹ Loc ²	Texture Remarks	
	- <u> </u>		
	RM=Reduced Matrix, MS=Masked Sand Grain		
lydric Soil Indicators:	Canada Clavad Matrix (C4)	Indicators for Problematic Hydric Soils	
Histosol (A1)	Sandy Redox (S5)	Coast Prairie Redox (A16)	
Histic Epipedon (A2)	Sandy Redox (S5)	Iron-Manganese Masses (F12) Red Parent Material (F21)	
Black Histic (A3) Hydrogen Sulfide (A4)	Stripped Matrix (S6) Dark Surface (S7)	Very Shallow Dark Surface (F22)	
Stratified Layers (A5)	Loamy Mucky Mineral (F1)	X Other (Explain in Remarks)	
2 cm Muck (A10)	Loamy Gleyed Matrix (F2)		
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,	
5 cm Mucky Peat or Peat (S3)	Redox Depressions (F8)	unless disturbed or problematic.	
 Restrictive Layer (if observed):			
- · · · · · · · · · · · · · · · · · · ·			
Type:			
Depth (inches): Remarks: Remarks: Remarks:		Hydric Soil Present? Yes X No al landscape position, predominance of silver maple tree	
Depth (inches): Remarks: Sampling point was inundated with 6 included included included in the sampling point with wat			
Depth (inches): Remarks: Sampling point was inundated with 6 included included included in the sampling point with wat the sampling point with the sampling point with wat the sampling point with the sampling point wit			
Depth (inches):	ter, the soil is assumed to be hydric.		
Depth (inches): Remarks: Sampling point was inundated with 6 included in the sampling point with wat in the sampling point with sampling point with sampling point with sampling point with sampling point was in the sampling point with sampling point was in the sampling point was included with 6 included point with water and sampling point water and sampling point with water and sampling point	ter, the soil is assumed to be hydric.	al landscape position, predominance of silver maple tree	
Depth (inches): Remarks: Sampling point was inundated with 6 included in the sampling point with wat in the sampling point with sampling point with sampling point with sampling point with sampling point was in the sampling point with sampling point was in the sampling point was included with 6 included point with water and sampling point water and sampling point with water and sampling point	ter, the soil is assumed to be hydric.	al landscape position, predominance of silver maple tree	
Depth (inches): Remarks: Sampling point was inundated with 6 included in the sampling point with wat in the sampling point with sampling point with sampling point with sampling point was in the sampling point with sampling point with sampling point was included with 6 included point with sampling point was inundated with 6 included point was inundated with 6 included point was inundated with 6 included point with wat in the sampling point with wat in the sampl	equired; check all that apply) Water-Stained Leaves (B9)	al landscape position, predominance of silver maple tree Secondary Indicators (minimum of two red Surface Soil Cracks (B6)	
Depth (inches): Remarks: Sampling point was inundated with 6 inclination of the sampling point with water YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is really a surface Water (A1) High Water Table (A2) Saturation (A3)	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13)	al landscape position, predominance of silver maple tree Secondary Indicators (minimum of two red Surface Soil Cracks (B6) Drainage Patterns (B10)	
Depth (inches): Remarks: Sampling point was inundated with 6 inclination of the sampling point with water YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is recovered by the control of the sampling point with water and the control of the sampling point with water your depth of the control of the sampling point with water and the control of the contr	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)	
Depth (inches): Remarks: Campling point was inundated with 6 includation of the sampling point with water and the sampling point and the sampling point with water and the sampling point was inundated with 6 included point with water and the sampling point with water and the sa	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Stunted or Stressed Plants (D1)	
Depth (inches): Remarks: Sampling point was inundated with 6 includation of the sampling point with water and the sampling point was inundated with 6 included point and the sampling point with water and the	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Canada Surface of Stunted or Stressed Plants (D1) Sils (C6) X Geomorphic Position (D2)	
Depth (inches): Remarks: Campling point was inundated with 6 inclination of the sampling point with water and the sampling point water and the sampling point with water and th	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Stunted or Stressed Plants (D1)	
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Canada Surface of Stunted or Stressed Plants (D1) Sils (C6) X Geomorphic Position (D2)	
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Canada Surface of Stunted or Stressed Plants (D1) Sils (C6) X Geomorphic Position (D2)	
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Canada Surface of Stunted or Stressed Plants (D1) Sils (C6) X Geomorphic Position (D2)	
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Canada Surface of Stunted or Stressed Plants (D1) Sils (C6) X Geomorphic Position (D2)	
Depth (inches): Remarks: Sampling point was inundated with 6 inclination of the sampling point with water and the sampling point water and the sampling point with water and th	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Scatter (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks) No Depth (inches): Bequired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Scatter (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Canonics) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) X FAC-Neutral Test (D5)	
Depth (inches): Remarks: Campling point was inundated with 6 inclination of the sampling point with water and the sampling point with water a	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Canada Surface of Stunted or Stressed Plants (D1) Sils (C6) X Geomorphic Position (D2)	
Depth (inches): Remarks: Campling point was inundated with 6 inclination of the sampling point with wat sundation sundations: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is read to sundation (A3) 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 Serial Observations: Surface Water Present? Yes X Vater Table Present? Yes Saturation Present? Yes includes capillary fringe)	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Scatter (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks) No Depth (inches): Bequired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Scatter (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) X FAC-Neutral Test (D5) Wetland Hydrology Present? Yes X No	
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary Indicators (minimum of two reconstructions) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) X FAC-Neutral Test (D5) Wetland Hydrology Present? Yes X No	

ENG FORM 6116-7, JUL 2018Midwest – Version 2.0

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/Cou	nty: Roches	ter Hills/Oakland Co.	Sampling Da	ate: <u>7/9/2024</u>	
Applicant/Owner: Three Oaks Communities				State: MI	Sampling Po	oint: SP1	
Investigator(s): Fran Thompson, Barr Engineering Co	D.	Section, 7	Township, Ra	ange: S32, T3N, R11	E		
Landform (hillside, terrace, etc.): terrace			Local relief (concave, convex, non-	e): 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 slope	s		NWI cla	ssification: NONE		
Are climatic / hydrologic conditions on the site typica	I for this time of	year?	Yes	No (If no,	explain in Remark	:s.)	
Are Vegetation No , Soil No , or Hydrology No	significantly d	isturbed? A	Are "Normal (Circumstances" prese	nt? Yes X	No	
Are Vegetation No , Soil No , or Hydrology No	naturally prob	lematic? (If needed, ex	plain any answers in	Remarks.)		
SUMMARY OF FINDINGS – Attach site			ng point lo	cations, transec	ts, important	features, et	c.
Hydric Soil Present? Yes	No No	1	Sampled A		NoX		
Remarks: Hydrology on site has been altered.							
VEGETATION – Use scientific names of p	lants.						
<u>Tree Stratum</u> (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test v	vorksheet:		
1. ces saccharinum	10	Yes	FACW	Number of Domina	nt Species That		
2				Are OBL, FACW, o	or FAC:	(A)	
3.				Total Number of D	ominant Species	. (5)	
4 5.				Across All Strata:	<u>-</u>	(B)	
	=	Total Cover		Percent of Domina Are OBL, FACW, o		100.0% (A/I	B)
Sapling/Shrub Stratum (Plot size: 15 ft 1.	_'			Prevalence Index	worksheet:		_
2.				Total % Cove		Itiply by:	
3.				OBL species	0 x 1 =	0	
4				FACW species	105 x 2 =	210	
5				FAC species	5 x 3 =	15	
<u>Herb Stratum</u> (Plot size: 5 ft)		Total Cover		FACU species	0 x 4 = _	0	
Herb Stratum (Plot size: 5 ft) 1. grostis stolonifera	95	Yes	FACW	UPL species Column Totals:	$\frac{0}{110}$ x 5 = _	0 225 (B)	
2. cer rubrum	5	No	FAC	Prevalence Inde	` ′ -	2.05	
3.					·		
4.				Hydrophytic Vege	tation Indicators	:	
5					for Hydrophytic V	egetation	
6				X 2 - Dominance			
7				3 - Prevalence		D	
8					cal Adaptations ¹ (arks or on a sepa		ing
9. 10.					/drophytic Vegeta	•	
10	100 =	Total Cover		l 		` ' '	
Woody Vine Stratum (Plot size:	_)	. 5.2.1 50401		¹ Indicators of hydri be present, unless			
1.				Hydrophytic			
2		Total Cover		Vegetation Present? Ye	es X No		
Pomarke: (Include phote numbers here or an a ser		. 5.6 00761		. 1000	<u> </u>		
Remarks: (Include photo numbers here or on a sep	Darate SHEEL)						

SOIL Sampling Point: SP1

Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 2/2	100					Sandy	unmasked sand grains/ Salt F	epper
	oncentration, D=Depl	etion, RM=	Reduced Matrix, N	/IS=Mas	ked Sand	d Grains.		PL=Pore Lining, M=Matrix.	2
Hydric Soil					. (0.1)			s for Problematic Hydric Soils	; ":
Histosol			Sandy Gle	-				t Prairie Redox (A16)	
	pipedon (A2)		Sandy Red					Manganese Masses (F12)	
Black Hi	` '		Stripped M		5)			Parent Material (F21)	
· ·	n Sulfide (A4)		Dark Surfa	` '				Shallow Dark Surface (F22)	
	Layers (A5)		Loamy Mu	-			— Other	(Explain in Remarks)	
	ick (A10) d Below Dark Surface	(Δ11)	Loamy Gle Depleted N	-					
	ark Surface (A12)	(A11)	Redox Dar				³ Indicator	s of hydrophytic vegetation and	
	lucky Mineral (S1)		Depleted D		` '	١		nd hydrology must be present,	
	icky Peat or Peat (S3)	Redox Dep		` '	,		s disturbed or problematic.	
	Layer (if observed):	,			- (. 0)	Т	unio c	o diotarboa or problematic.	
Type:	Layer (ii observeu).								
Depth (ir	nches).						Hydric Soil Present	? Yes N	o X
Remarks:							Tryuno Com r reseme		<u> </u>
HYDROLO	GY								
Wetland Hy	drology Indicators:								
_	cators (minimum of o	ne is requi	red; check all that a	apply)			Secondar	y Indicators (minimum of two re	quired
Surface	Water (A1)		Water-Stai	ned Lea	ves (B9)		Surfa	ce Soil Cracks (B6)	
X High Wa	iter Table (A2)		Aquatic Fa	una (B1	3)		Drain	age Patterns (B10)	
X Saturation	on (A3)		True Aqua	tic Plant	s (B14)		Dry-S	Season Water Table (C2)	
Water M	arks (B1)		Hydrogen	Sulfide (Odor (C1)	Crayf	ish Burrows (C8)	
	nt Deposits (B2)		Oxidized R			-	· · · · —	ation Visible on Aerial Imagery	(C9)
	posits (B3)		Presence of			. ,		ed or Stressed Plants (D1)	
	it or Crust (B4)		Recent Iro			lled Soils	` '	norphic Position (D2)	
	osits (B5)		Thin Muck				X FAC-	Neutral Test (D5)	
	on Visible on Aerial Ir Vegetated Concave	0 , (<i>′</i> —		` '				
		Ourrace (L	Other (Exp	nann nn n	(emarks)				
Field Obser Surface Wat		•	No. V	Donth (i	noboo):				
Water Table				Depth (i Depth (i	_	12			
Saturation P					nches):	10	Wetland Hydrolog	y Present? Yes X N	0
(includes cap		<u> </u>		Dopuii (i	_		Trottana nyarotog	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-
`	corded Data (stream	gauge, mo	nitoring well, aeria	l photos	, previou	s inspec	tions), 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	Ci	ty/County:	Rochester Hil	lls/Oakland C	o. Sampling D	ate: <u>7/9/2</u>	2024
Applicant/Owner: Three Oaks Communities				State: M	II Sampling P	oint:	SP2
Investigator(s): Fran Thompson, Barr Engineering Co.	Sec	ction, Towns	ship, Range:	S32, T3N, F	R11E		
Landform (hillside, terrace, etc.): toe slope		Local	relief (concav	ve, convex, n	one): concave		
Slope (%): 0-2 Lat: 42.63213	L	ong: -83.18	3170		Datum: WGS		
Soil Map Unit Name: Fox sandy loam, till plain, 2 to 6 perce	ent slopes			NWI	classification: Uplar	ıd	
Are climatic / hydrologic conditions on the site typical for thi	s time of year?	Yes	X No	(If n	o, explain in Remar	ks.)	
Are Vegetation, Soil, or Hydrologysignif	ficantly disturbe	- ed? Are "N	 Normal Circum	nstances" pre	sent? Yes X	No	
Are Vegetation , Soil , or Hydrology natur			eded, explain a				
SUMMARY OF FINDINGS – Attach site map s	howing sa	mpling p	oint location	ons, trans	ects, importan	t features	s, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	_	Is the Sam within a W	-	Yes_	X No		
Remarks: Sample Point taken at flag A27. Hydrology has been altere	ed on site						
VEGETATION – Use scientific names of plants.							
	solute Domi Cover Spec		cator atus Do i	minance Tes	st worksheet:		
1. cer saccharinum	15 Ye		014/		inant Species That		
2.				OBL, FACW	•	3	(A)
3					Dominant Species		
4				oss All Strata		3	_ ^(B)
o	15 =Total	Cover		rcent of Domi OBL, FACW	inant Species That I or FAC:	100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft)	10.01	00101	/ "	, 002, 17,011	,, 0, 1, 10.	100.070	_(',',')
Rhamnus cathartica	5 Ye	es F.	AC Pre	evalence Ind	ex worksheet:		
2				Total % Co	ver of: M	ultiply by:	_
3				L species _	5 x 1 =		_
4				CW species_	95 x 2 =	190	_
5				C species _	5 x 3 =	15	_
Herb Stratum (Plot size: 5 ft)	5 =Total	Cover		CU species _ L species	0 x 4 = 0 x 5 =	0	_
1. grostis stolonifera	80 Ye	-s FΔ		L species _ lumn Totals:	105 (A)	210	(B)
2. uncus articulatus	5 N			_	ndex = B/A =	2.00	_(_)
3.							_
4.			Hyd	drophytic Ve	getation Indicator	s:	
5.				1 - Rapid Te	est for Hydrophytic \	√egetation	
6				_	nce Test is >50%		
7			<u></u> X	_	ice Index is ≤3.0 ¹		
8			_		ogical Adaptations ¹ emarks or on a sep		
9							
10	85 =Total	Cover	— _	-	Hydrophytic Veget		,
Woody Vine Stratum (Plot size:)		Covei			dric soil and wetlan ss disturbed or prol		must
1			1 -	drophytic			
	=Total	Cover		getation esent?	Yes X No		
Pemerke: /Include photo numbers here or on a				- *-			
Remarks: (Include photo numbers here or on a separate s	SHEEL.)						

SOIL Sampling Point: SP2

Profile Desc	ription: (Describe	to the dep	th needed to doc	ument t	he indica	tor or	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(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	С		Loamy/Clayey	Prominent redox concentrations
6-15	10YR 2/2	100					Loamy/Clayey	
								-
¹ Type: C=Co	oncentration, D=De	pletion, RM	Reduced Matrix, N	√S=Mas	ked Sand	d Grains	s. ² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicator	rs for Problematic Hydric Soils ³ :
Histosol	` '		Sandy Gle					st Prairie Redox (A16)
I —	pipedon (A2)		Sandy Re	, ,				Manganese Masses (F12)
Black His	` '		Stripped M	`	3)			Parent Material (F21)
I — · ·	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
l ——	I Layers (A5)		Loamy Mu	-			Othe	r (Explain in Remarks)
2 cm Mu			Loamy Gle	-				
1—	l Below Dark Surfac	e (A11)	X Depleted I	•	•		2	
I —	rk Surface (A12)		Redox Da		, ,			rs of hydrophytic vegetation and
I — '	lucky Mineral (S1)		Depleted [, ,			and hydrology must be present,
5 cm Mu	cky Peat or Peat (S	3)	X Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive I	Layer (if observed)	:						
Type:								
Depth (ir	nches):						Hydric Soil Present	t? Yes <u>X</u> No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators							
Primary Indic	cators (minimum of	one is requi	red; check all that	apply)			<u>Seconda</u>	ry Indicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ined Lea	ives (B9)		Surfa	ace Soil Cracks (B6)
X High Wa	ter Table (A2)		Aquatic Fa	auna (B1	3)		Drair	nage Patterns (B10)
X Saturation	on (A3)		True Aqua					Season Water Table (C2)
Water M	arks (B1)		Hydrogen					fish Burrows (C8)
Sedimen	t Deposits (B2)		Oxidized F			-	` ' 	ration Visible on Aerial Imagery (C9)
	oosits (B3)		Presence			•		ted or Stressed Plants (D1)
I —	t or Crust (B4)		Recent Iro			lled Soi		morphic Position (D2)
I —	osits (B5)		Thin Muck		` '		X FAC	-Neutral Test (D5)
	on Visible on Aerial	0 , (<i>'</i> —					
Sparsely	Vegetated Concav	e Surface (E	38) Other (Exp	olain in F	Remarks)			
Field Obser								
Surface Wat		es	No <u>X</u>	Depth (i	_			
Water Table		es X	No	Depth (i		9		
Saturation P		es X	No	Depth (i	nches): _	5	Wetland Hydrolog	gy Present? Yes <u>X</u> No
(includes cap								
Describe Re	corded Data (strear	n gauge, mo	onitoring well, aeria	ıı photos	, previous	s insped	ctions), if available:	
Domarka								
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/Cou	inty: Roches	ster Hills/Oakland Co.	Sampling Da	ate: <u>7/9/2024</u>
Applicant/Owner: Three Oaks Communities				State: MI	Sampling Po	oint: SP 3
Investigator(s): Fran Thompson, Barr Engineering Co.		Section, -	Township, Ra	ange: S32, T3N, R11	 E	
Landform (hillside, terrace, etc.): shoulder			Local relief (concave, convex, none	e): convex	
Slope (%): 1-2 Lat: 42.63325278		Long: -	83.18079722	2	Datum: WGS	
Soil Map Unit Name: Granby loamy sand				NWI clas	sification: NONE	
Are climatic / hydrologic conditions on the site typical f	or this time of	f year?	Yes X	No (If no, e	xplain in Remark	(s.)
Are Vegetation , Soil , or Hydrology	significantly d					
Are Vegetation , Soil , or Hydrology				· κplain any answers in F		
SUMMARY OF FINDINGS – Attach site m			•		•	features, etc.
Hydrophytic Vegetation Present? Yes X N	o	Is the	Sampled A	rea		
	o_X_	withi	n a Wetland	? Yes	NoX	
Wetland Hydrology Present? Yes X N	° <u> </u>					
Remarks: Sample Point taken north of Flag 30.						
VEGETATION – Use scientific names of pla						
Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w	orksheet:	
1. 2.				Number of Dominar Are OBL, FACW, or	•	(A)
3. 4.				Total Number of Do Across All Strata:	minant Species	2 (B)
5.		Total Cover		Percent of Dominar Are OBL, FACW, o	•	100.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft)			, ,	_	` ′
1				Prevalence Index	worksheet:	
2.				Total % Cover		Itiply by:
3				OBL species	25 x 1 = _	25
4				FACW species	$\frac{40}{0}$ $x = 2$	80
5		Total Cover		FAC species FACU species	0	0
Herb Stratum (Plot size: 5 ft)		- Total Cover		UPL species	0	0
1. leocharis oli acea	25	Yes	OBL	Column Totals:	65 (A)	105 (B)
2. C perus esculentus	20	Yes	FACW	Prevalence Index		1.62
3. grostis stolonifera	10	No	FACW			
4. S mph otrichum lateriflorum	5	No	FACW	Hydrophytic Veget	ation Indicators) <u>:</u>
5. Phalaris arundinacea	5	No	FACW	1 - Rapid Test t	or Hydrophytic V	egetation
6.				X 2 - Dominance	Test is >50%	
7.				3 - Prevalence	Index is ≤3.0 ¹	
8.						Provide supporting
9				data in Rema	arks or on a sepa	rate sheet)
10				Problematic Hy	drophytic Vegeta	tion ¹ (Explain)
Woody Vine Stratum (Plot size:) 65 =	Total Cover		¹ Indicators of hydric be present, unless of		
1.				Hydrophytic		
2				Vegetation		
	=	Total Cover		Present? Ye	s_X No_	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)					

SOIL Sampling Point: SP 3

(inches)	Matrix		Redo	x Feature	es			
	Color (moist)	<u>%</u>	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- 0.0							2, ,,	
	ncentration, D=Dep	letion, RM	=Reduced Matrix, I	MS=Masi	ked Sand	d Grains		: PL=Pore Lining, M=Matrix.
Hydric Soil I			Sandy Cla	wad Mate	iv (C4)			rs for Problematic Hydric Soils ³ :
Histosol (ipedon (A2)		Sandy Gle Sandy Re	-	IX (54)			t Prairie Redox (A16) Manganese Masses (F12)
Black His			Stripped N		:)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa	,	')			Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	` ,	ral (F1)			r (Explain in Remarks)
2 cm Muc			Loamy Gle	-				(Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted I	-				
	rk Surface (A12)	, (, , , ,	Redox Da	-			³ Indicator	s of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted I		` ')		nd hydrology must be present,
	cky Peat or Peat (S3	3)	Redox De		` '	,		s disturbed or problematic.
 Restrictive L	.ayer (if observed):		<u> </u>					
Type:	,							
Depth (in	ches):						Hydric Soil Present	? Yes No
Remarks:								
HYDROLO	GY							
	GY Irology Indicators:							
Wetland Hyd Primary Indic	Irology Indicators: ators (minimum of o	one is requ						
Wetland Hyd Primary Indic Surface V	Irology Indicators: ators (minimum of o Water (A1)	one is requ	Water-Sta	ined Lea	` '		Surfa	ce Soil Cracks (B6)
Wetland Hyd Primary Indic Surface V High Wat	Irology Indicators: ators (minimum of o Water (A1) ter Table (A2)	one is requ	Water-Sta Aquatic Fa	ined Lea auna (B1	3) ` ´		Surfa Drain	ace Soil Cracks (B6) age Patterns (B10)
Wetland Hyd Primary Indic Surface V High Wat Saturation	Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3)	one is requ	Water-Sta Aquatic Fa True Aqua	ined Lea auna (B1 atic Plant	3) s (B14)		Surfa Drain Dry-S	age Patterns (B10) Season Water Table (C2)
Primary Indic Surface V High Wat Saturation Water Ma	Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plant Sulfide (3) s (B14) Odor (C1)	Surfa Drain Dry-S Crayf	ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma	Arology Indicators: Lators (minimum of or Nater (A1) Ler Table (A2) In (A3) Larks (B1) Larks (B2)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph	3) s (B14) Odor (C1 eres on l) Living R	Surfa Drain Dry-S Crayf oots (C3) Satur	ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo	Arology Indicators: Lators (minimum of or	one is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on led) Living R (C4)	Surfa	ace Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo	Arology Indicators: Arotors (minimum of or	one is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Lea auna (B1 atic Plants Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on led Iron (tion in Ti) Living R (C4)	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo	Arology Indicators: Arotos (minimum of or		Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plants Sulfide (Rhizosph of Reduc on Reduc Surface	3) s (B14) Odor (C1 eres on led Iron (C1) tion in Ti) Living R (C4)	Surfa	ace Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) in Visible on Aerial In	magery (B	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (B1 sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on led Iron (tion in Ti (C7) a (D9)) Living R (C4) illed Soil	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely	Arology Indicators: ators (minimum of or	magery (B	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (B1 sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on led Iron (tion in Ti (C7) a (D9)) Living R (C4) illed Soil	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ	Arology Indicators: Lators (minimum of or Nater (A1) Let Table (A2) In (A3) Lators (B1) It Deposits (B2) Losits (B3) Losits (B4) Losits (B5) Losits (B	magery (B Surface (Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide C Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on led Iron (tion in Ti (C7) a (D9) emarks)) Living R (C4) illed Soil	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate	Arology Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) is or Crust (B4) is or Crust (B4) is or Krust (B5) in Visible on Aerial In Vegetated Concave vations: ar Present? Ye	magery (B Surface (Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Odor (C1 eres on led Iron (C7) a (D9) emarks)) Living R (C4) illed Soil	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Water Table	Arology Indicators: Arotos (minimum of or Nater (A1) Aret (A2) Arks (B1) Arks (B1) Arks (B3) Arct or Crust (B4) Arit (B5) Arct of Crust (B4) Arct (B5)	magery (B Surface (s s	Water-Sta	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc a Surface Well Dat Depth (ii Depth (ii	3) s (B14) Odor (C1 eres on led Iron et (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf oots (C3) Satur Stunt Is (C6) Geon X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It Deposits (B3) It or Crust (B4) It or Crust (B4) It or Wisible on Aerial In Vegetated Concave Vations: It or Present? Yee Present? Yee Yeesent? Yee	magery (B Surface (s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Odor (C1 eres on led Iron et (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pri	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It Deposits (B3) It or Crust (B4) It or Crust (B4) It or Wisible on Aerial In Vegetated Concave Vations: It or Present? Yee Present? Yee Yeesent? Yee	magery (B Surface (s s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (iii	3) s (B14) Ddor (C1 eres on led Iron etion in Ti (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf Satur Stunt Stunt S (C6) X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pri	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It or Crust (B4) It or Crust (B4) It or Crust (B5) In Visible on Aerial In Vegetated Concave Vations: It or Present? Ye Present? Ye Sesent? Ye Sesent? Ye Sesent? Ye	magery (B Surface (s s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (iii	3) s (B14) Ddor (C1 eres on led Iron etion in Ti (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf Satur Stunt Stunt S (C6) X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pri	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It or Crust (B4) It or Crust (B4) It or Crust (B5) In Visible on Aerial In Vegetated Concave Vations: It or Present? Ye Present? Ye Sesent? Ye Sesent? Ye Sesent? Ye	magery (B Surface (s s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (iii	3) s (B14) Ddor (C1 eres on led Iron etion in Ti (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf Satur Stunt Stunt S (C6) X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pro (includes cap) Describe Reco	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It or Crust (B4) It or Crust (B4) It or Crust (B5) In Visible on Aerial In Vegetated Concave Vations: It or Present? Ye Present? Ye Sesent? Ye Sesent? Ye Sesent? Ye	magery (B Surface (s s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (iii	3) s (B14) Ddor (C1 eres on led Iron etion in Ti (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf Satur Stunt Stunt S (C6) X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)

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/Cou	nty: Roches	ter 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, T	ownship, Ra	nge: S32, T3N, R11E		
Landform (hillside, terrace, etc.): back slope		!	Local relief (c	concave, convex, none)	concave	
Slope (%): 01 Lat: 42.6332222		Long: -	83.1807778		Datum: WGS	
Soil Map Unit Name: Granby loamy sand				NWI class	ification: NONE	
Are climatic / hydrologic conditions on the site typical f	or this time of	year?	Yes X	No (If no, ex	plain in Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly d	isturbed? A	re "Normal C	 Circumstances" present	? Yes N	No
Are Vegetation , Soil , or Hydrology				plain any answers in Re		
SUMMARY OF FINDINGS – Attach site ma	ap showin	g samplin	g point lo	cations, transects	s, important fe	atures, etc.
Wetland Hydrology Present? Yes X No	<u>X</u>	1	Sampled Ain a Wetland?		NoX	
Remarks:						
VEGETATION – Use scientific names of pla	nts.					
Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	orksheet:	
1				Number of Dominant Are OBL, FACW, or	•	1 (A)
3. 4.				Total Number of Don Across All Strata:	ninant Species	1 (B)
5. Sapling/Shrub Stratum (Plot size: 15 ft		Total Cover		Percent of Dominant Are OBL, FACW, or	•	00.0% (A/B)
1.	,			Prevalence Index w	orksheet:	
2.				Total % Cover of	of: Multip	ly by:
3				OBL species	0 x 1 =	0
4				· -	71 x 2 =	142
5					1 x 3 =	3
(5)	=	Total Cover			0 x 4 =	0
Herb Stratum (Plot size: 5 ft)	60	Voo	FACW		$\frac{0}{72}$ $\times 5 =$	0 145 (B)
grostis stolonifera C perus esculentus	<u>60</u> 5	Yes No	FACW	Prevalence Index	`	``
3. cer rubrum	1	No	FAC	Trevalence index	- B/A - 2.0	
4. Bidens frondosa	1	No	FACW	Hydrophytic Vegeta	tion Indicators:	
5. grostis gigantea	5	No	FACW		r Hydrophytic Vege	etation
6.				X 2 - Dominance T		
7.				3 - Prevalence Ir	ndex is ≤3.0 ¹	
8.					l Adaptations ¹ (Pro	
9				data in Remar	ks or on a separate	e sheet)
10				Problematic Hyd	rophytic Vegetation	า ¹ (Explain)
Woody Vine Stratum (Plot size:	=	Total Cover		¹ Indicators of hydric s be present, unless di		
1. 2.				Hydrophytic Vegetation		
	=	Total Cover		-	X No	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)					

SOIL Sampling Point: SP4

Depth (inches)	Color (moist)	%	Color (moist)	x Featur %	Type ¹	Loc ²	Texture	Remarks	
0-3	10YR 2/1	10	- ()				Loamy/Clayey		
3-11	10YR 4/3	90	10YR 5/6	10			Loamy/Clayey	Distinct redox conce	ntrations
11-15	7.5YR 5/2	70	7.5YR 5/6	30	<u>c</u>	M	<u> Louiny/Olayoy</u>	Prominent redox conc	
11-15	7.51K 5/2	70	7.518 5/6			IVI		Prominent redox conc	entrations
1- 0.0							2, ,,		
Hydric Soil	oncentration, D=Dep	letion, RM	=Reduced Matrix, I	/IS=Mas	ked Sand	Grains		 PL=Pore Lining, M=Matr rs for Problematic Hydric 	
Histosol			Sandy Gle	ved Mat	riy (S4)			st Prairie Redox (A16)	Suis .
	pipedon (A2)		Sandy Re					Manganese Masses (F12)	
Black Hi			Stripped M					Parent Material (F21)	
	n Sulfide (A4)		Dark Surfa	•	-,			Shallow Dark Surface (F2	2)
	d Layers (A5)		Loamy Mu	` '	eral (F1)			r (Explain in Remarks)	-/
	ick (A10)		Loamy Gle	-				,	
	d Below Dark Surfac	e (A11)	Depleted I						
	ark Surface (A12)	,	Redox Da		-		³ Indicator	s of hydrophytic vegetation	n and
Sandy M	lucky Mineral (S1)		Depleted [Dark Sur	face (F7))	wetla	and hydrology must be pres	sent,
5 cm Mu	icky Peat or Peat (S	3)	Redox De	oression	s (F8)		unles	ss disturbed or problematic	
Restrictive	Layer (if observed):								
Type:									
Depth (ir	nches):						Hydric Soil Present	t? Yes	No X
Remarks:									
HYDROLO	OGY								
Wetland Hy	drology Indicators:								
Primary India	cators (minimum of o	ne is requ	ired; check all that	apply)			Seconda	ry Indicators (minimum of t	wo required
Surface	Water (A1)		Water-Sta	ined Lea	ives (B9))	Surfa	ace Soil Cracks (B6)	
High Wa	iter Table (A2)		Aquatic Fa	auna (B1	3)		Drain	nage Patterns (B10)	
Saturation	` '		True Aqua					Season Water Table (C2)	
	larks (B1)		Hydrogen					fish Burrows (C8)	
	nt Deposits (B2)		Oxidized F			-	· · · · —	ration Visible on Aerial Ima	
	posits (B3)		Presence			` '		ted or Stressed Plants (D1))
	at or Crust (B4)		Recent Iro			illed Soil	· ' —	morphic Position (D2)	
	osits (B5)	maganı (D	Thin Muck		` '		<u>X</u> FAC-	Neutral Test (D5)	
	on Visible on Aerial I		<i>'</i> —						
<u> </u>		Surface (Other (Ex	naiii iii i	(Ciliaiks)		T		
Field Obser Surface Wat		· C	No. Y	Donth (i	nches):				
Water Table		es			nches): _				
Saturation P		.s			nches): _		Wetland Hydrolog	gy Present? Yes X	No
	pillary fringe)		<u> </u>	Doptii (i	_		Wettand Hydrolog	gy 11030111. 103 <u>X</u>	
	corded Data (stream	gauge, m	onitoring well, aeria	l photos	, previou	s inspec	tions), 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/Cou	inty: Roches	ster Hills/Oakland Co.	Sampling Da	te: <u>7/9/2024</u>
Applicant/Owner: Three Oaks Communities				State: MI	_ Sampling Poi	int: SP5
Investigator(s): Fran Thompson, Barr Engineering Co		Section, 7	Township, Ra	ange: S32, T3N, R11E		
Landform (hillside, terrace, etc.): toe slope			Local relief (concave, convex, none)	: concave	
Slope (%): <u>0-1</u> Lat: <u>42.6331833</u>		Long:	83.1808972		Datum: WGS	
Soil Map Unit Name: Granby loamy sand				NWI class	sification: PSS	
Are climatic / hydrologic conditions on the site typical	for this time of	year?	Yes X	No (If no, ex	xplain in Remarks	s.)
Are Vegetation, Soil, or Hydrology	significantly di	sturbed? A	Are "Normal (Circumstances" present	t? Yes	No
Are Vegetation, Soil, or Hydrology				φlain any answers in R		
SUMMARY OF FINDINGS – Attach site n					·	features, etc.
Hydric Soil Present? Yes X	No No No	1	e Sampled A n a Wetland		No	
Remarks:	<u> </u>					
VEGETATION – Use scientific names of p	lants.					
Tree Stratum (Plot size: 30 ft)	Absolute	Dominant	Indicator	Dominance Test we	orkoboot:	
Tree Stratum (Plot size: 30 ft) 1. cer saccharinum	<u>% Cover</u> 30	Species? Yes	Status FACW	Number of Dominan		
2.				Are OBL, FACW, or	•	4 (A)
3.				Total Number of Dor	— minant Species	
4				Across All Strata:	·	4 (B)
5				Percent of Dominant	•	
Caralina / Charala Charata and / Diataina 45 ft	30 =	Total Cover		Are OBL, FACW, or	FAC:	100.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft 1.	-)			Prevalence Index w	vorkshoot:	
1. 2.				Total % Cover		tiply by:
3.				-	20 x 1 =	20
4.				· · · · · · · · · · · · · · · · · · ·	35 x 2 =	70
5.				FAC species	0 x 3 =	0
	=	Total Cover		FACU species	0 x 4 =	0
Herb Stratum (Plot size: 5 ft)				UPL species	0 x 5 =	0
1. Lud i ia palustris	15	Yes	OBL	Column Totals:	55 (A) _	90 (B)
2. rostis stolonifera	5	Yes	FACW	Prevalence Index	= B/A =	1.64
3. <u>Lemna minor</u>	5	Yes	OBL			
4				Hydrophytic Vegeta		
5					or Hydrophytic Ve	getation
6				X 2 - Dominance		
7.				X 3 - Prevalence I		S
8					al Adaptations* (F rks or on a separ	Provide supporting
9.						
10	25 =	 Total Cover		l —	drophytic Vegetat	,
Woody Vine Stratum (Plot size:		Total Cover		¹ Indicators of hydric be present, unless d		
1.				Hydrophytic		
2		Total Caver		Vegetation	No.	
		Total Cover		Present? Yes	<u> </u>	<u> </u>
Remarks: (Include photo numbers here or on a sep	arate sheet.)					

SOIL Sampling Point: SP5

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-3	10YR 2/1	100	, ,				Mucky Loam/Clay		
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	pedon (A2)		Sandy Red					Manganese Masses (F12)	
Black Hist	` '		Stripped M	•	5)			Parent Material (F21)	
	Sulfide (A4)		Dark Surfa	` '	1.(54)			Shallow Dark Surface (F22)	
	Layers (A5)		Loamy Mu	•	٠,		Other	(Explain in Remarks)	
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ENG FORM 6116-7, JUL 2018Midwest – Version 2.0



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



T: 248.482.2600 | F: 248.482.2601

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

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







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Request for Condominium Construction.pdf 398K



Upcoming Planning Commission meeting dated October 15, 2024

 Thu, Oct 10, 2024 at 11:57 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,

Hana Lewis



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.

Sent from Yahoo Mail for iPhone



Auburn Oaks Development

Larry Collette <lcollette@specialdreamsfarm.org>
To: "planning@rochesterhills.org" <planning@rochesterhills.org>
Cc: Larry Collette <lcollette@specialdreamsfarm.org>

Mon, Oct 14, 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.

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

Respectfully

Larry, Mary, and Gregory Collette



Wetlands

1 message

Marge Huggard <mahuggard1021@gmail.com> To: planning@rochesterhills.org

Tue, Oct 15, 2024 at 6:30 AM

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>
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Fri, Oct 11, 2024 at 4:17 PM

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>
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Tue, Oct 15, 2024 at 11:34 AM

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



rochesterhousingsolutionsmi.org



Oct. 15 Planning Commission meeting

Sophia Lada <sophialada28@gmail.com>
To: "planning@rochesterhills.org" <planning@rochesterhills.org>

Tue, Oct 15, 2024 at 3:07 PM

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

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

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

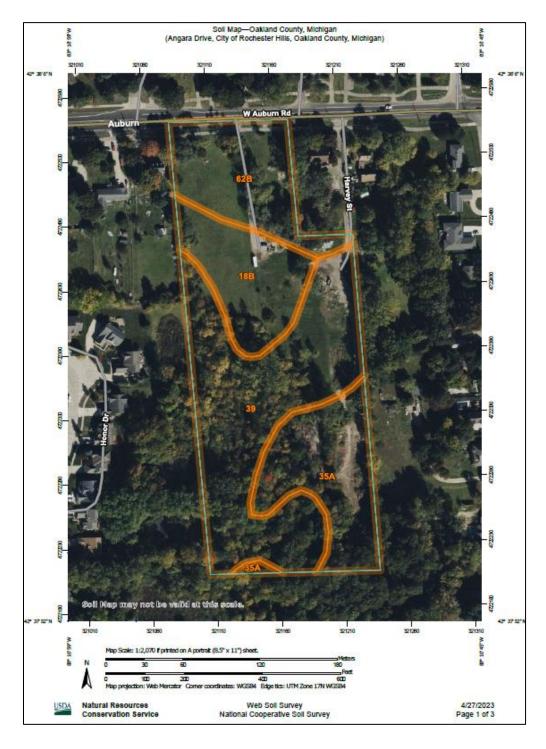
Barr conducted a desktop review to evaluate digital imagery for topography, soil types, and mapped wetlands within the AOI prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS; Figure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



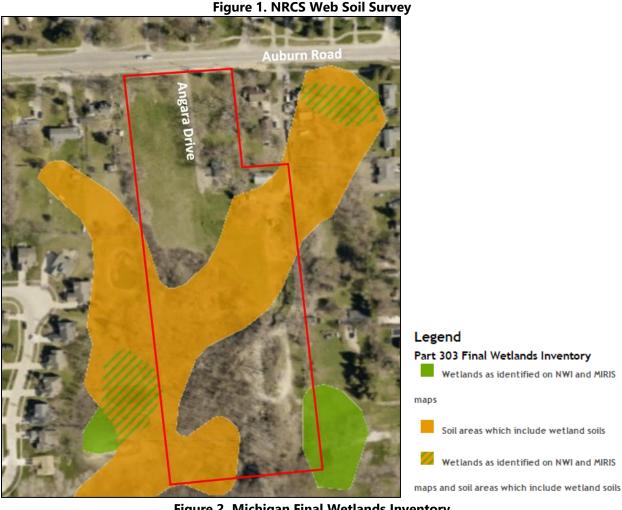


Figure 2. Michigan Final Wetlands Inventory

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 offsite 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 FNGINFFRING 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)						

RIGHT OF WAY LINE LEGEND

WETLAND NOTES

ROCK FRAGMENTS

FOOTING fo = 3500 PSI

(28 DAYS)

(4' MIN.)

END VIEW

EX. RIGHT OF WAY LINE/EASEMENT

PR. RIGHT OF WAY LINE/EASEMENT

IMPACT LEGEND

WETLAND FILL

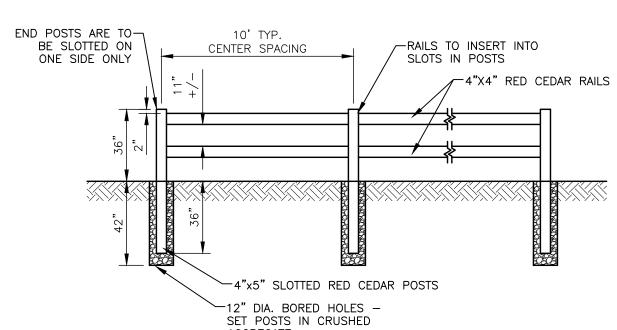


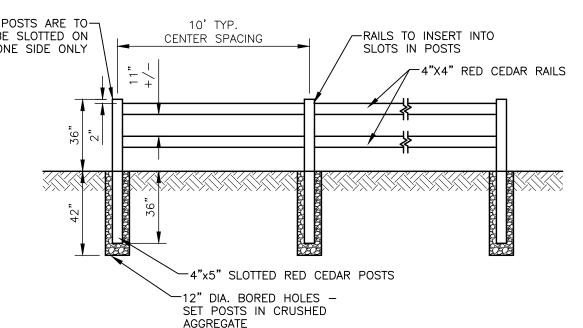
MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY PERMIT WILL BE REQUIRED FOR FILLING IN THE THE WETLAND AS SHOWN ON THIS PLAN. OAKLAND COUNTY WATER RESOURCE COMMISSIONER PERMIT WILL BE REQUIRED FOR DISCHARGING THE STORM WATER EFFLUENT INTO THE LEUDER'S DRAIN.

- 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:
- THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CITY ENGINEER. WORK SHALL NOT COMMENCE UNTIL CONSENT HAS BEEN OBTAINED FROM THE CITY MAYOR. 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

(SEE WETLAND NOTE 4 THIS SHEET)





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AUBURN ANGARA OAKS, LLC

14496 N SHELDON RE SUITE 230

PLYMOUTH, MI 48170

BRUCE MICHAEL

(248) 703-4653

OAKS

AUBURN

Kevin C,

One-Call

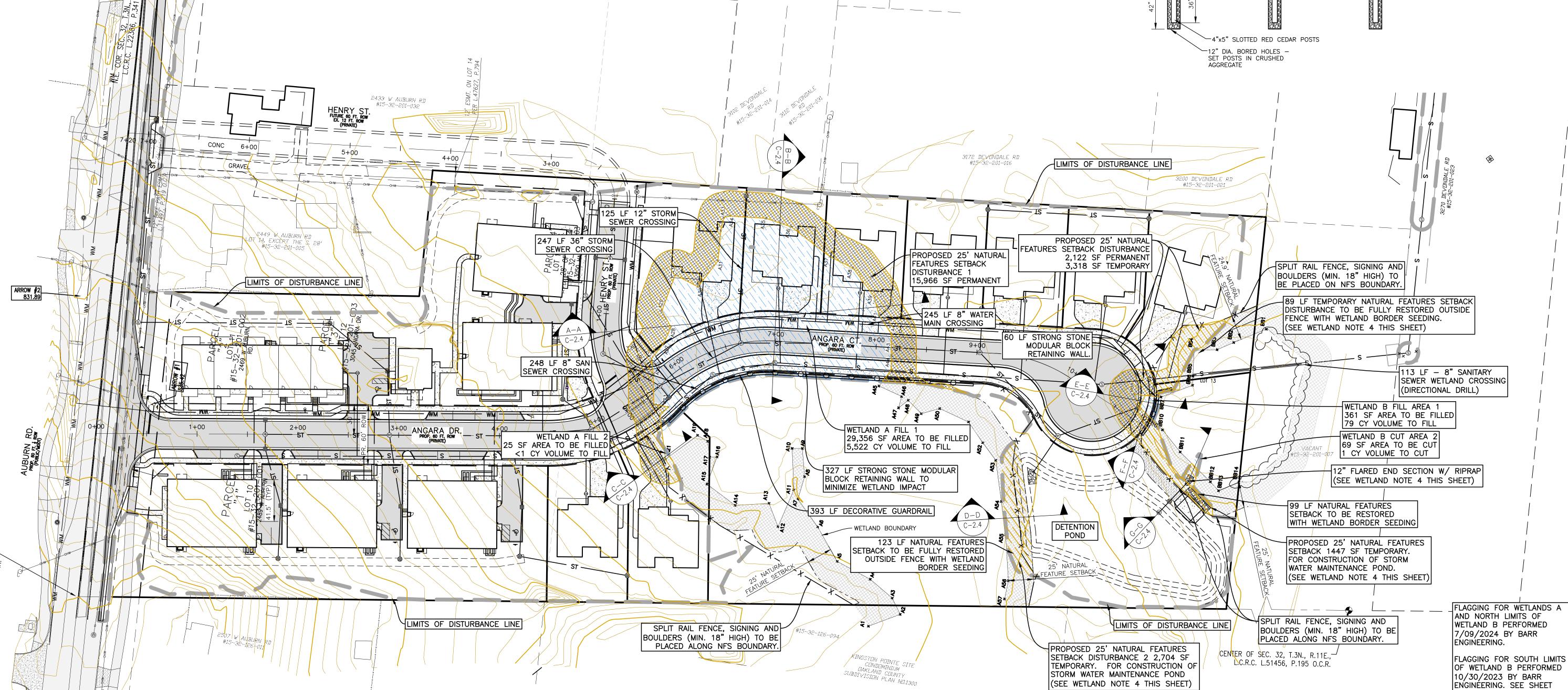
CLIENT:

ORIGINAL ISSUE DATE: 05/19/2022

PROJECT NO: 22-051 SCALE: 1" = 50'

1/2" FIELD: REICHERT DRAWN BY: MN DESIGN BY: KM

CHECK BY: AP



END SECTION DETAIL - WITH FOOTING

PIPE BEDDING

#4 REBARS ["] 10" O.C.

["]@ 10" O.C.

#4 REBAR "L"'S

PROFILE VIEW

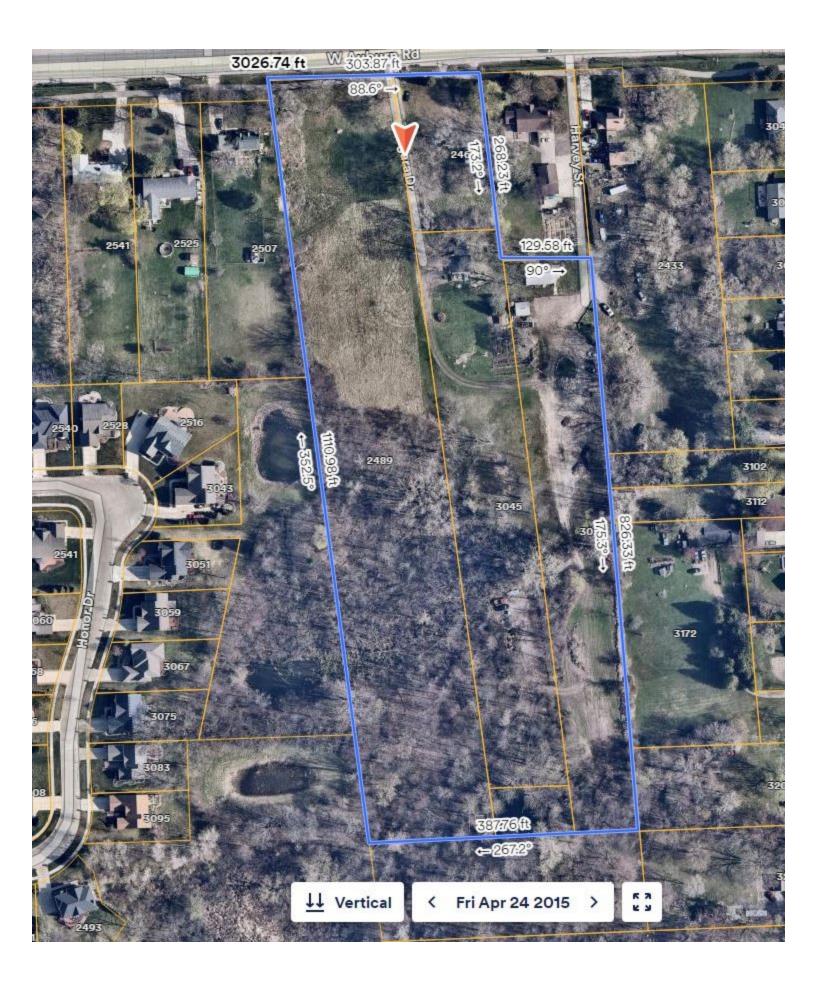
SECTION B-B

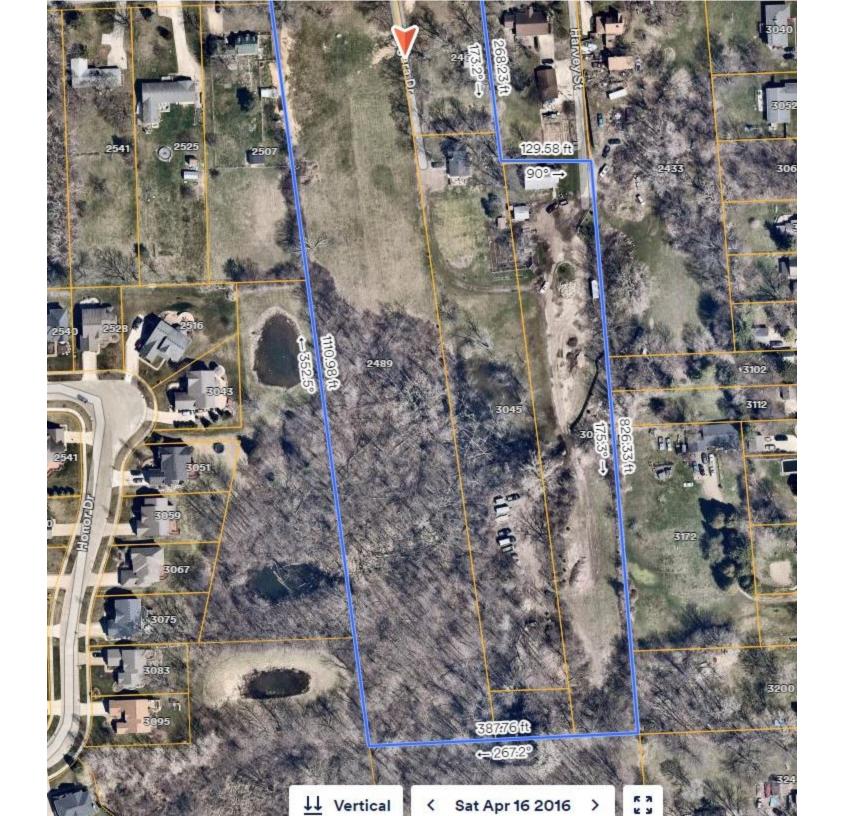
GEOTEXTILE

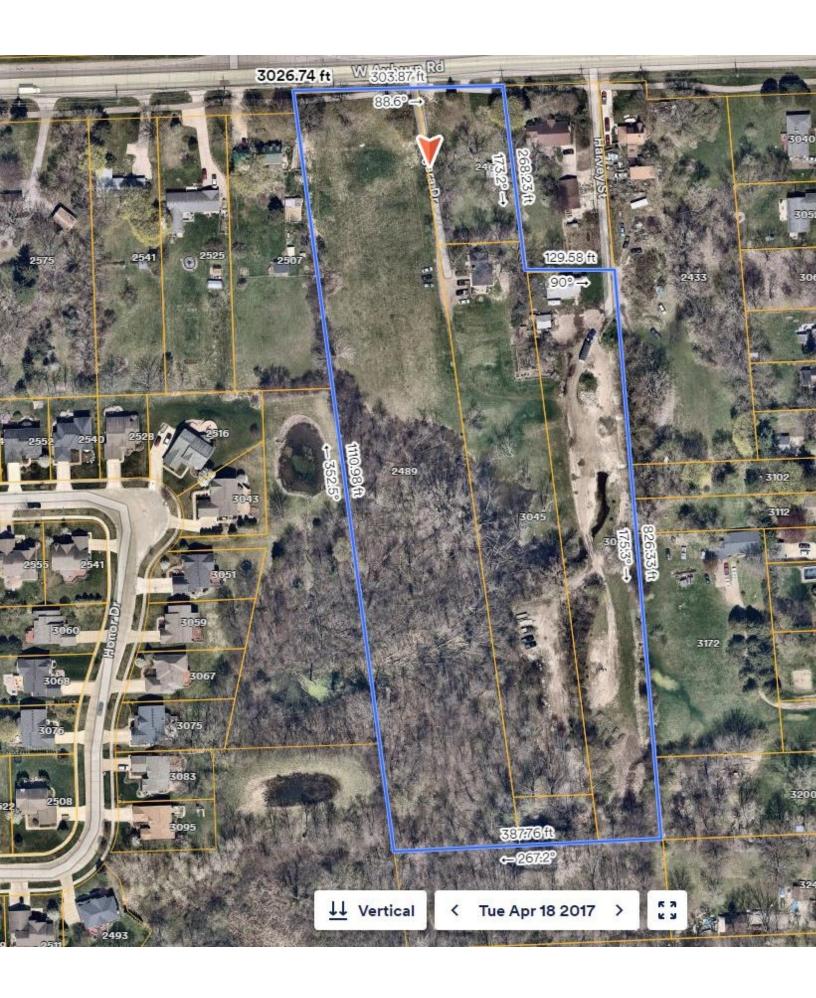
FABRIC (WOVEN) —

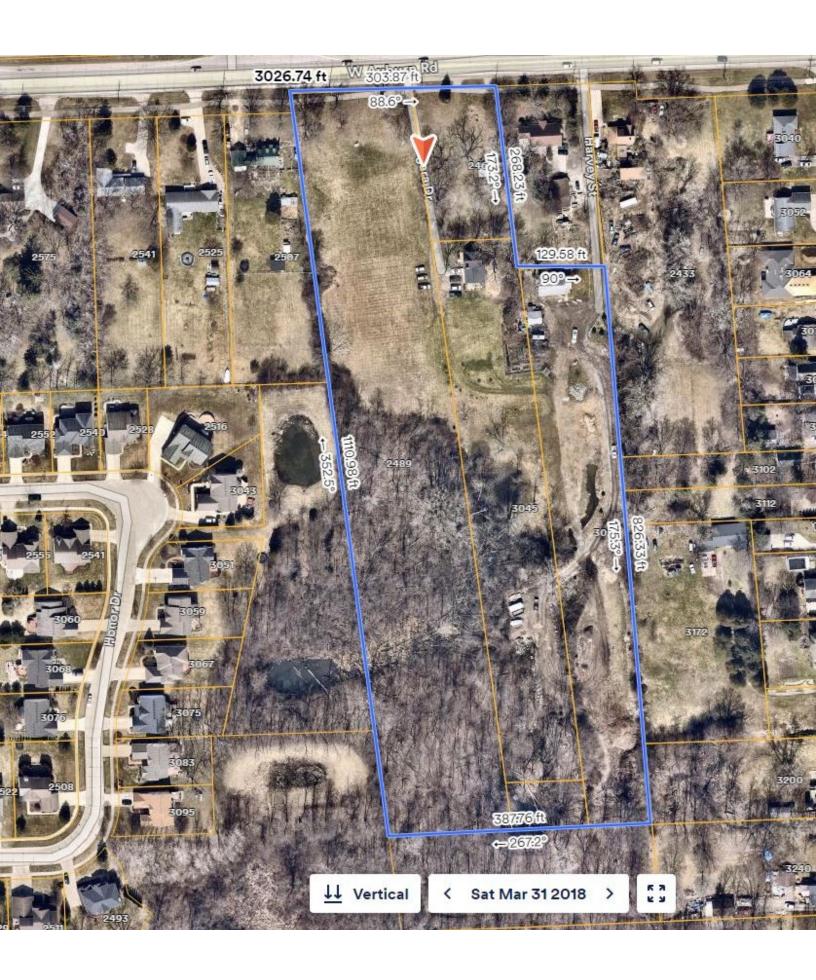
V-1.1 FOR LOCATIONS.

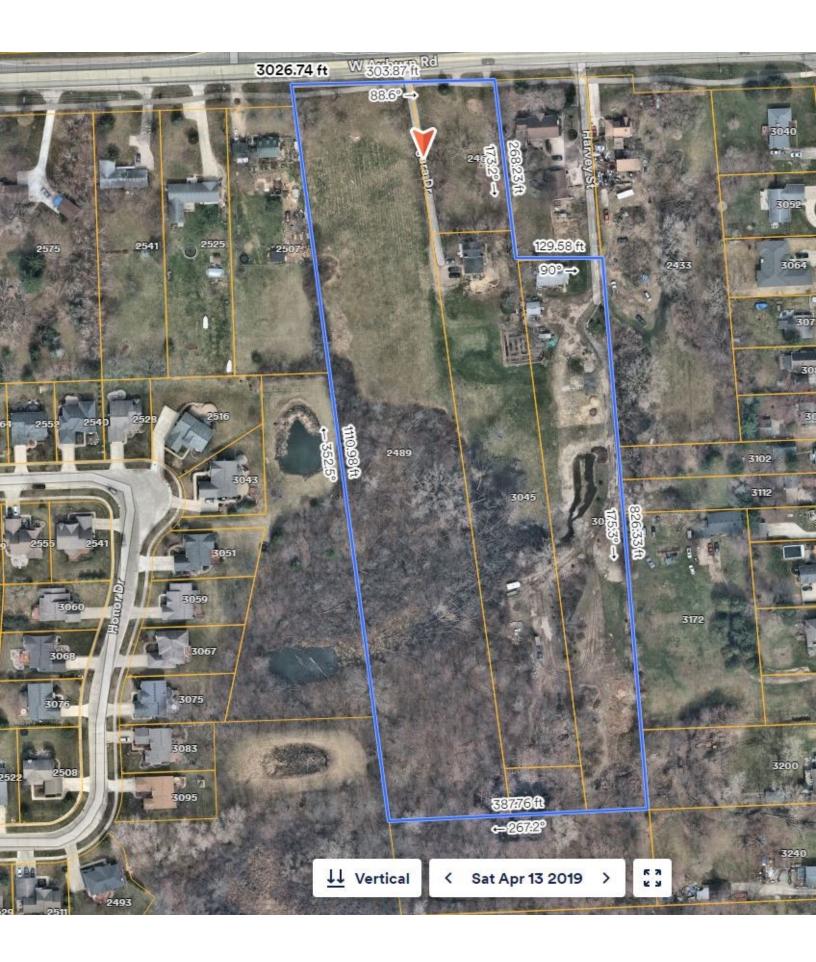
Attachments 1

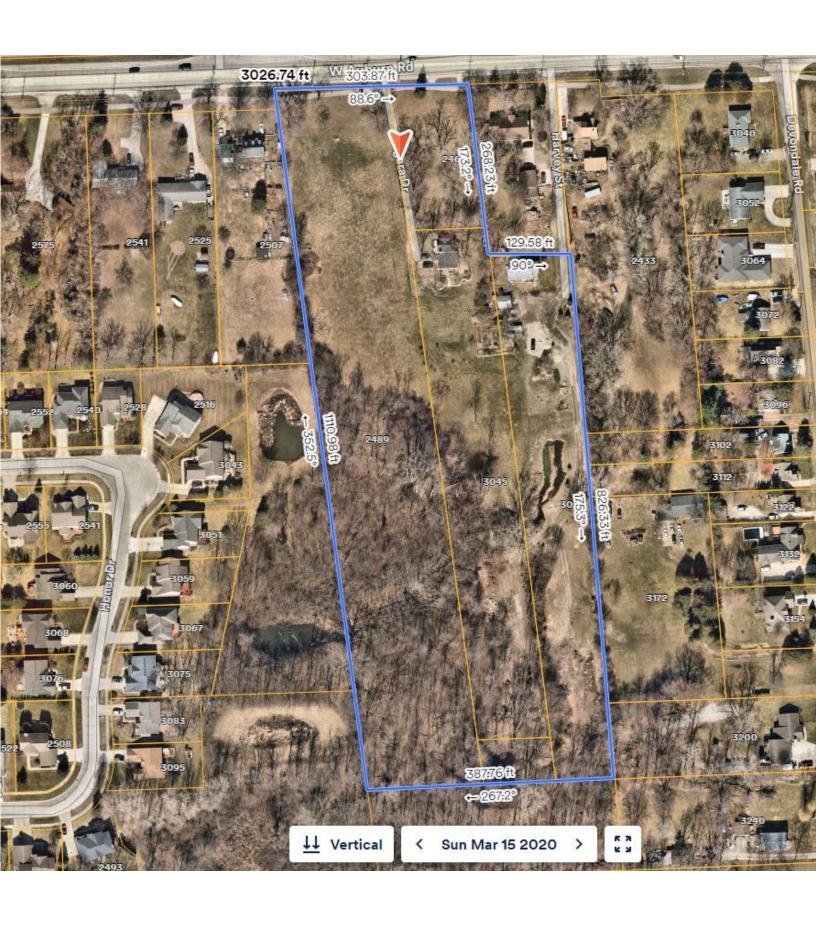


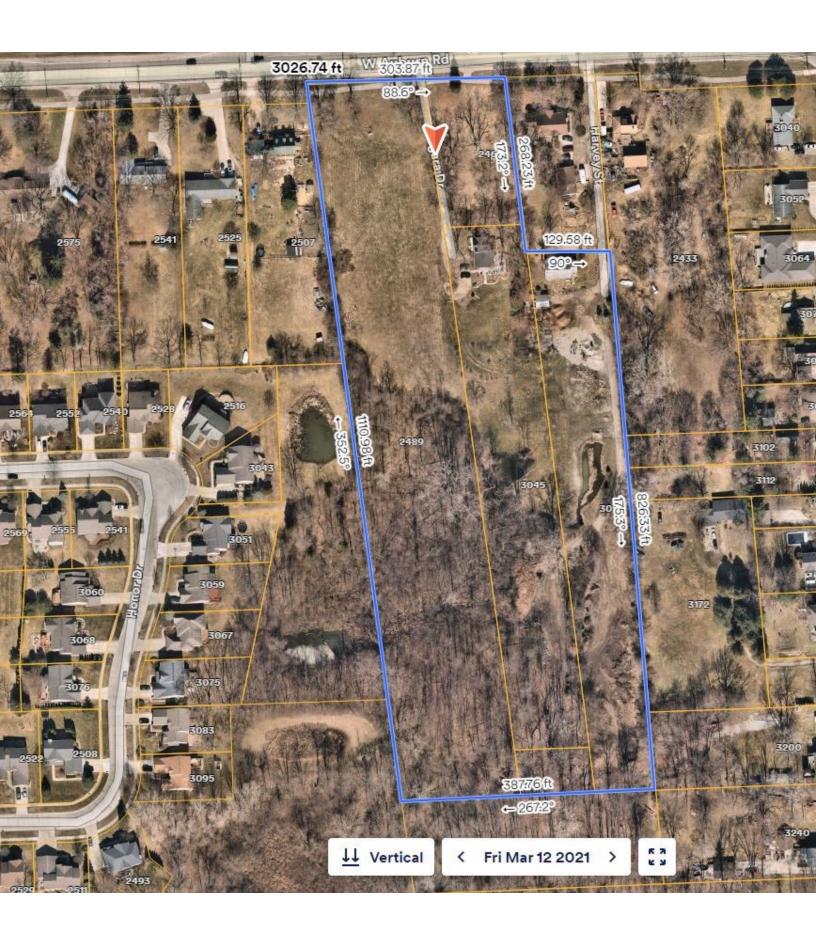


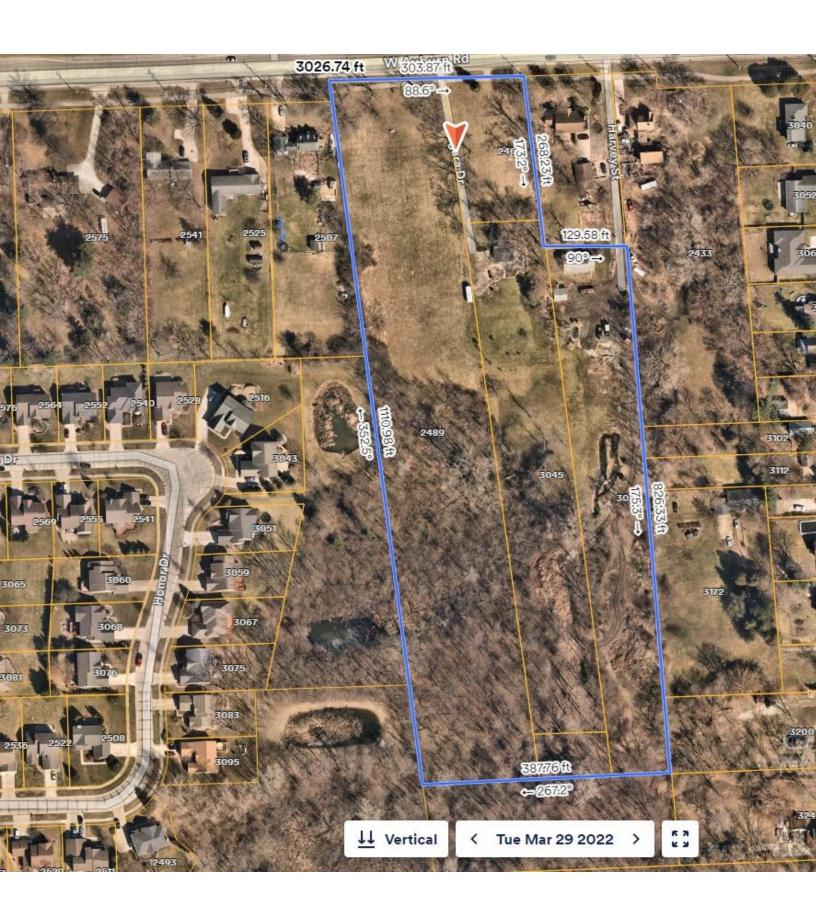


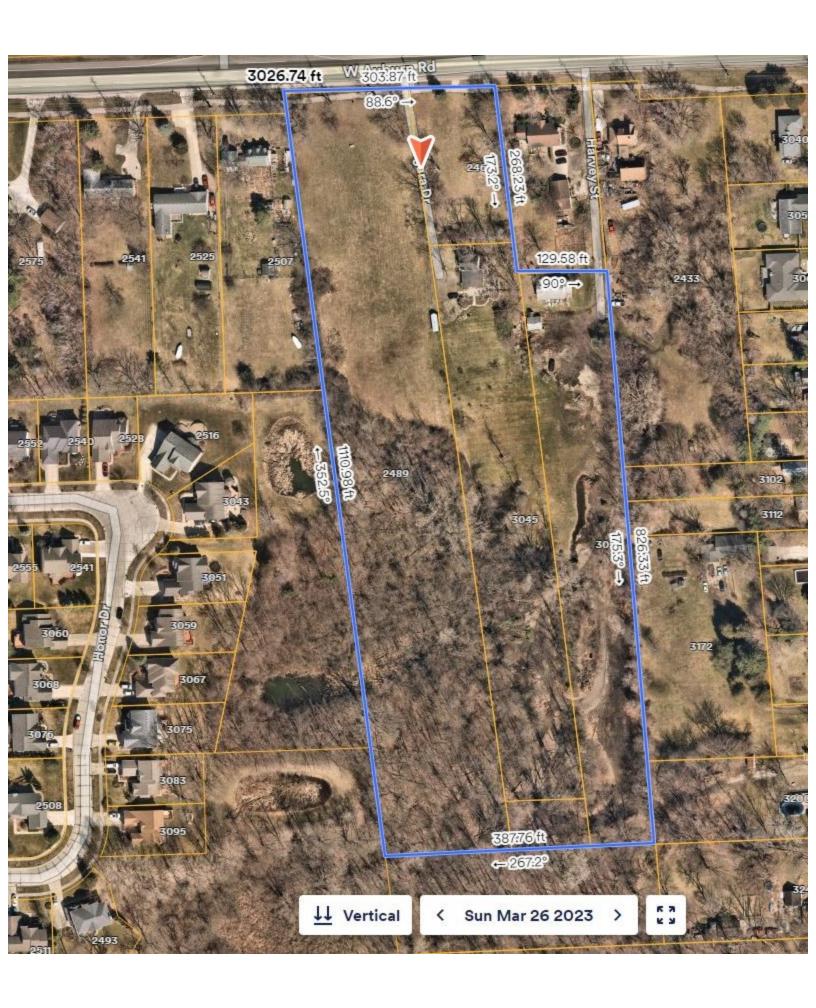


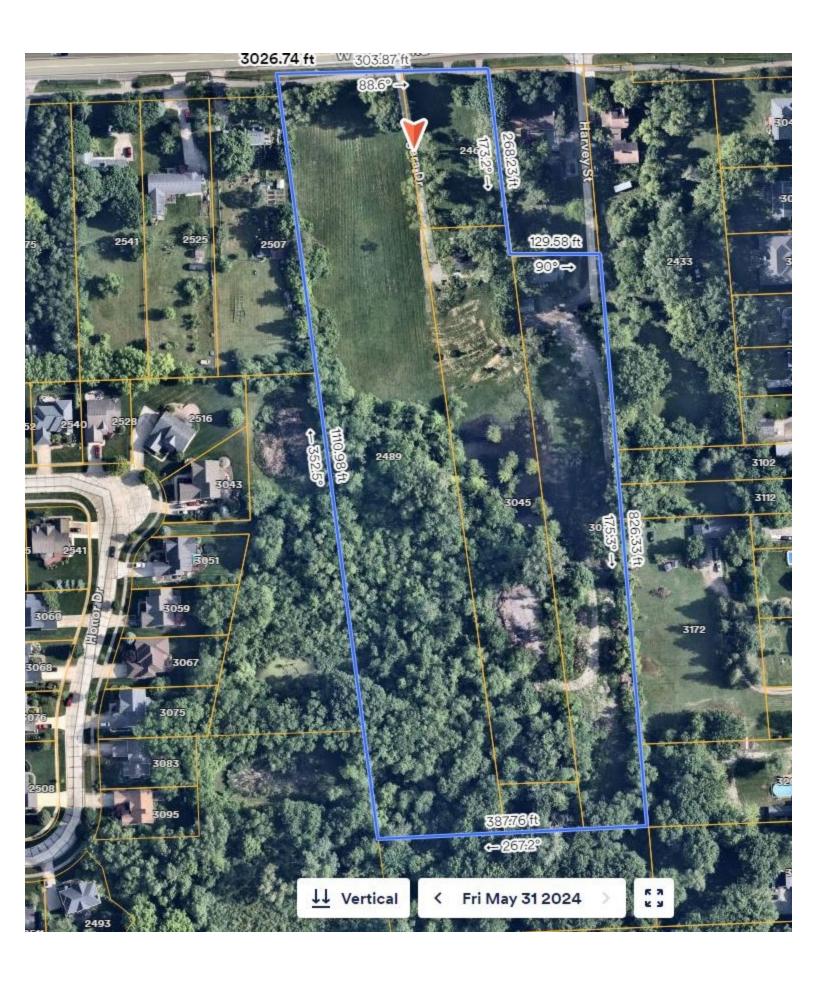












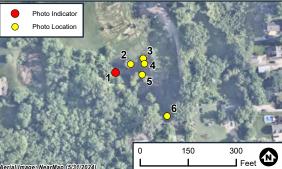
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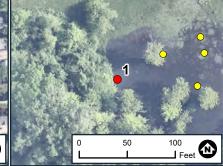












Sample Point ID:

SP1

Flag No: A20

Page 1 of 6
THREE OAKS **AUBURN ANGARA**

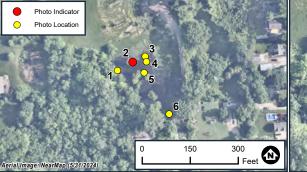


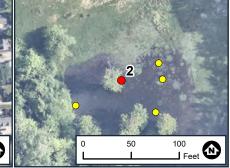












Sample Point ID: SP2

Flag No: A27

Page 2 of 6 THREE OAKS **AUBURN ANGARA**

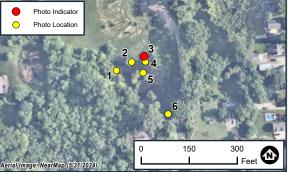


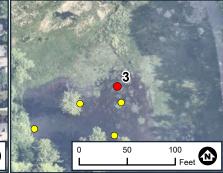












Sample Point ID: SP3

Flag No: A29

Page 3 of 6 THREE OAKS **AUBURN ANGARA**

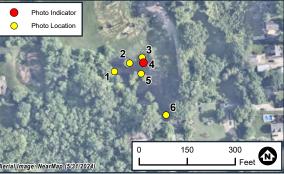


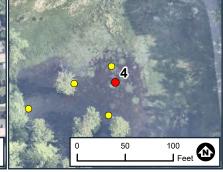










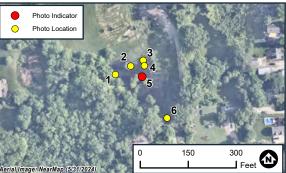


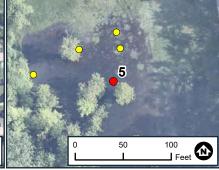
Sample Point ID: SP4

Flag No: A30

Page 4 of 6 THREE OAKS **AUBURN ANGARA**







Sample Point ID: SP5

Flag No: A30

Page 5 of 6
THREE OAKS **AUBURN ANGARA**

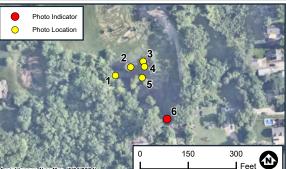


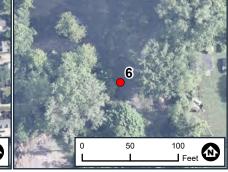












Sample Point ID:

Overview

Flag No:

Photo Locations Three Oaks Communities, LLC Rochester Hills, Michigan

Page 6 of 6 THREE OAKS

AUBURN ANGARA



See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

Project/Site: Auburn Angara Oaks		City/Cou	nty: Roches	ter Hills/Oakland Co	Sampling	Date: <u>5/3</u>	0/2024
Applicant/Owner: Three Oaks Communities				State: MI	Sampling	Point: A	56 UPL
Investigator(s): Fran Thompson, Barr Engineering Co		Section,	Гownship, Ra	ange: S32, T3N, R1	11E		
Landform (hillside, terrace, etc.): hillslope		<u> </u>	Local relief (d	concave, convex, no	ne): convex		
Slope (%): 0-2 Lat: 42.63213		Long: -	83.18170		Datum: NA	D 83	
Soil Map Unit Name: Granby loamy sand				NWI cl	assification: Up	land	
Are climatic / hydrologic conditions on the site typical	for this time o	of year?	Yes X	No (If no			
Are Vegetation No , Soil No , or Hydrology No		-		Circumstances" pres		•	
	_						_
Are Vegetation No , Soil No , or Hydrology No	_			xplain any answers ir	•		
SUMMARY OF FINDINGS – Attach site n	nap showir	ng samplir	ng point lo	cations, transe	cts, importa	int feature	es, etc.
Hydrophytic Vegetation Present? Yes !	No X	le the	Sampled A	roa			
	No X		n a Wetland		No _>	(
	No X			_			
Remarks:							
All three wetland criteria are not met. Sampling poir	nt is upland. T	his sampling	point represe	ents the upland area	s adjacent to W	etlands A and	d B.
VEGETATION – Use scientific names of p	lants.						
·	Absolute	Dominant	Indicator				
<u>Tree Stratum</u> (Plot size: <u>30 ft</u>)	% Cover	Species?	Status	Dominance Test	worksheet:		
Prunus serotina	35	Yes	FACU	Number of Domir	•		
2. Robinia pseudoacacia	30	Yes	FACU	Are OBL, FACW,	or FAC:	2	(A)
3.				Total Number of I	•		(D)
4 5.				Across All Strata:		6	(B)
J	65	Total Cover		Percent of Domin Are OBL, FACW,	•	at 33.3%	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft)	- Total Cover		Ale OBE, I ACW,	or rac.	33.370	— ^(A/D)
1. Rhamnus cathartica	- ⁷ 25	Yes	FAC	Prevalence Inde	x worksheet:		
2. Lonicera morrowii	15	Yes	FACU	Total % Cov	er of:	Multiply by:	
3. Berberis thunbergii	5	No	FACU	OBL species	0 x 1		
4.				FACW species	0 x 2	= 0	_
5				FAC species	45 x 3	= 135	
	45	=Total Cover		FACU species	95 x 4		
Herb Stratum (Plot size: 5 ft)		.,		UPL species	0 x 5		— <u>(5)</u>
1. Rhamnus cathartica		Yes	FAC	Column Totals:	140 (A)	515	(B)
2. Rosa multiflora 3.	10	Yes	FACU	Prevalence Inc	iex = B/A =	3.68	
1				Hydrophytic Veg	etation Indicat	ors:	
5.					st for Hydrophyti		
6.					e Test is >50%	-	
7.				3 - Prevalenc	e Index is ≤3.0 ¹		
8.				ı —	gical Adaptation	`	
9				data in Rei	marks or on a s	eparate shee	et)
10				Problematic I	Hydrophytic Veg	getation ¹ (Exp	olain)
	30	=Total Cover		¹ Indicators of hyd			y must
Woody Vine Stratum (Plot size:	_)			be present, unles	s disturbed or p	roblematic.	
				1			
1.				Hydrophytic			
		=Total Cover		Vegetation	Yes N	No _ X_	

SOIL Sampling Point: A56 UPL

Profile Des	cription: (Describe t Matrix	o tne dept		ument th ox Featur		ator or c	ontirm the abse	ence of indicator	·s.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-12	10YR 3/2	100	(/				Loamy/Claye			
12-18	10YR 5/4	100					Loamy/Claye			
12-10	10111 3/4	100					Loamy/olaye	<u> </u>		
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix,	MS=Masl	ked San	d Grains	. ² Loc	ation: PL=Pore	Lining, M=Matr	ix.
Hydric Soil	Indicators:						Indi	cators for Probl	ematic Hydric	Soils ³ :
Histosol	(A1)		Sandy Gl	eyed Mat	rix (S4)			Coast Prairie Re	dox (A16)	
Histic E	pipedon (A2)		Sandy Re	dox (S5)				Iron-Manganese	Masses (F12)	
Black H	istic (A3)		Stripped I	Matrix (S6	6)			Red Parent Mate	erial (F21)	
Hydroge	en Sulfide (A4)		Dark Surf	ace (S7)				Very Shallow Da	rk Surface (F2	2)
Stratified	d Layers (A5)		Loamy M	ucky Mine	eral (F1)			Other (Explain in	Remarks)	
2 cm Mu	uck (A10)		Loamy GI	eyed Mat	rix (F2)					
	d Below Dark Surface	(A11)	Depleted	Matrix (F	3)		•			
	ark Surface (A12)		Redox Da		` '			cators of hydropl		
	Mucky Mineral (S1)		Depleted)		wetland hydrolog	-	
5 cm Mu	ucky Peat or Peat (S3)	Redox De	pression	s (F8)			unless disturbed	or problemation	-
Restrictive	Layer (if observed):									
Type:			<u> </u>							
Depth (i	nches):		<u> </u>				Hydric Soil Pre	esent?	Yes	. No <u>X</u>
HYDROLO	OGY									
-	drology Indicators:									
	cators (minimum of o	ne is requir						ondary Indicators	•	wo required
	Water (A1)		Water-Sta)		Surface Soil Cra	` ,	
	ater Table (A2)		Aquatic F					Drainage Pattern	` '	
Saturation	` '		True Aqua		` ,	`		Dry-Season Wat	` ,	
	farks (B1) nt Deposits (B2)		Hydrogen Oxidized					Crayfish Burrows Saturation Visible		nery (C9)
	posits (B3)		Presence			-		Stunted or Stress		
	at or Crust (B4)		Recent Ire			` '		Geomorphic Pos	•	,
	posits (B5)		Thin Mucl				` '	FAC-Neutral Tes		
	on Visible on Aerial Ir	nagery (B7)							(- /	
	y Vegetated Concave	0, 1			` ')				
Field Obser	rvations:		<u> </u>	-						
	ter Present? Yes	S	No X	Depth (i	nches):					
Water Table			No X	Depth (ii						
Saturation F	Present? Yes	<u> </u>	No X	Depth (i			Wetland Hyd	rology Present?	? Yes	No X
(includes ca	pillary fringe)				_					
Describe Re	corded Data (stream	gauge, moi	nitoring well, aeri	al photos	, previou	s inspec	tions), if available	e:		
Remarks:										

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See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

Project/Site: Auburn Angara Oaks		City/County: R	ochester Hills/Oakland	Co. Sampling Da	ate: <u>5/30/2024</u>
Applicant/Owner: Three Oaks Communities			State:	MI Sampling Po	oint: A56 WET
Investigator(s): Fran Thompson, Barr Engineering	Co.	Section, Townsh	ip, Range: S32, T3N,	R11E	
Landform (hillside, terrace, etc.): depression		Local re	elief (concave, convex,	none): concave	
Slope (%): 0-2 Lat: 42.63231		Long: -83.181	80	Datum: NAD 8	33
Soil Map Unit Name: Granby loamy sand			NWI	l classification: PEM/F	PSS
Are climatic / hydrologic conditions on the site typi	cal for this time of ye	ear? Yes	X No (If	no, explain in Remark	 ks.)
Are Vegetation No , Soil No , or Hydrology 1	No significantly dist		rmal Circumstances" pr	resent? Yes X	No
Are Vegetation No , Soil No , or Hydrology N			ed, explain any answers		
SUMMARY OF FINDINGS – Attach site			-		: features, etc.
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wottend Hydrology Present?	No	Is the Samp		XNo	
Wetland Hydrology Present? Yes X	No				
Remarks: VEGETATION – Use scientific names of	f plants.				
	Absolute D	ominant Indica			
Tree Stratum (Plot size: 30 ft)		Species? State		est worksheet:	
Ulmus americana 2.		Yes FAC	Number of Dor Are OBL, FAC	minant Species That	5 (A)
3.				of Dominant Species	(^)
4.			Across All Stra	•	5 (B)
5.				ninant Species That	100.00((A/D)
Sapling/Shrub Stratum (Plot size: 15	20=To	otal Cover	Are OBL, FAC	W, or FAC:	100.0% (A/B)
1. Rhamnus cathartica	/ 	Yes FA	C Prevalence In	dex worksheet:	
Cornus amomum	10	Yes FAC			ultiply by:
3.			OBL species	40 x 1 =	40
4.			FACW species	30 x 2 =	60
5			FAC species	25 x 3 =	75
	35=To	otal Cover	FACU species	0 x 4 =	0
Herb Stratum (Plot size: 5 ft)			UPL species	0 x 5 =	0
1. Carex lacustris		Yes OB			175 (B)
2. Symplocarpus foetidus	15	Yes OB		Index = B/A =	1.84
3. Glyceria striata		No OB		/agatatian Indicator	
4 5.				/egetation Indicators Fest for Hydrophytic V	
6			`	ance Test is >50%	egetation
7				ence Index is ≤3.0 ¹	
8.				ological Adaptations ¹ (Provide supporting
9.				Remarks or on a sepa	
10.			Problemat	ic Hydrophytic Vegeta	ation ¹ (Explain)
Woody Vine Stratum (Plot size: NA	40 =Tc	otal Cover		ydric soil and wetland less disturbed or prob	
1.					
2.			— Hydrophytic Vegetation		
	=To	otal Cover	Present?	Yes X No	
Remarks: (Include photo numbers here or on a s	separate sheet.)		L		

SOIL Sampling Point: A56 WET

Profile Desc	cription: (Descr	ibe to the dept	h needed to doc	ument t	he indica	tor or o	confirm the absence	of indicators.)
Depth	Matr	ix	Redo	x Featur	es			
(inches)	Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 2/2	100					Loamy/Clayey	
10-16	10YR 4/1	<u> </u>	10YR 4/6	20	С		Loamy/Clayey	Prominent redox concentrations
	-							
	-							
¹ Type: C=Ce	oncentration, D=l	Depletion, RM=	Reduced Matrix, I	MS=Mas	ked Sand	Grains	. ² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:	-					Indicato	ers for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle	yed Mat	rix (S4)		Coa	st Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re	dox (S5)			Iron-	-Manganese Masses (F12)
Black His	stic (A3)		Stripped N	/latrix (Se	3)		Red	Parent Material (F21)
Hydroge	n Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)
Stratified	d Layers (A5)		Loamy Μι	icky Min	eral (F1)		Othe	er (Explain in Remarks)
2 cm Mu	ıck (A10)		Loamy Gl	eyed Ma	trix (F2)			
X Depleted	d Below Dark Sur	face (A11)	X Depleted I	Matrix (F	3)			
Thick Da	ark Surface (A12))	Redox Da	rk Surfac	ce (F6)		³ Indicato	ors of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)	Depleted I		, ,			and hydrology must be present,
5 cm Mu	icky Peat or Peat	(S3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.
Restrictive	Layer (if observe	ed):						
Type:								
Depth (ir	nches):						Hydric Soil Presen	t? Yes X No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicato	ors:						
Primary India	cators (minimum	of one is requir	ed; check all that	apply)			Seconda	ary Indicators (minimum of two required)
X Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)		Surf	ace Soil Cracks (B6)
High Wa	iter Table (A2)		Aquatic Fa	auna (B1	3)		Drai	nage Patterns (B10)
Saturation	on (A3)		True Aqua	itic Plant	s (B14)		Dry-	Season Water Table (C2)
Water M	larks (B1)		Hydrogen					fish Burrows (C8)
I —	nt Deposits (B2)		Oxidized F			•	· · · —	ration Visible on Aerial Imagery (C9)
1—	oosits (B3)		Presence			•		nted or Stressed Plants (D1)
I —	at or Crust (B4)		Recent Iro			lled Soil		morphic Position (D2)
	osits (B5)		Thin Muck		, ,		<u>X</u> FAC	-Neutral Test (D5)
l —	on Visible on Aer	0 , (~		, ,			
Sparsely	Vegetated Cond	ave Surface (B	8)Other (Exp	olain in F	Remarks)			
Field Obser								
Surface Wat		Yes X	No		nches): _			
Water Table		Yes	No		nches): _		l	
Saturation P		Yes	No	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes X No
(includes cap			nikawina walla na wia				diana) if available.	
Describe Re	corded Data (Sire	eam gauge, mo	nitoring well, aeria	ii priotos	, previous	sinspec	ctions), if available:	
Remarks:								
i tomanto.								

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See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

Project/Site: Auburn Angara Oaks	City/County: Roch	nester Hills/Oakland Co.	Sampling Date: <u>5/30/2024</u>
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 relie	f (concave, convex, none):	convcave
Slope (%): 0-2 Lat: 42.63187	Long: -83.18106	•	Datum: NAD 83
Soil Map Unit Name: Granby loamy sand	_	NWI classif	ication: PFO
Are climatic / hydrologic conditions on the site typical for this time of you	ear? Yes X	No (If no, exp	lain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly dist		al Circumstances" present?	·
Are Vegetation No , Soil No , or Hydrology No naturally probler		explain any answers in Rei	
SUMMARY OF FINDINGS – Attach site map showing		•	•
Liberton India Venetation December Veneta	In the Committee	1 A	
Hydrophytic Vegetation Present? Yes X No No No	Is the Sampled within a Wetlan		No
Wetland Hydrology Present? Yes X No	Within a Wellan	163 <u>X</u>	
Remarks:			
All three wetland criteria are met. Sampling point is wetland.			
VEGETATION – Use scientific names of plants.			
	Oominant Indicator		
,,,	Species? Status	 Dominance Test wor 	
1. <u>Acer saccharinum</u> 80 2.	Yes FACW	Number of Dominant	•
3.		Are OBL, FACW, or F	
4.		_ Total Number of Domi Across All Strata:	inant Species 1 (B)
5.		Percent of Dominant S	
	otal Cover	Are OBL, FACW, or F	•
Sapling/Shrub Stratum (Plot size: NA)			
1		Prevalence Index wo	rksheet:
2		Total % Cover of	: Multiply by:
3		OBL species 0	x 1 =0
4		FACW species 80	
5	etal Cauca	FACILITIES 0	
Herb Stratum (Plot size: NA)	otal Cover	FACU species 0	
1.		Column Totals: 80	
		Prevalence Index	
3.		-	
4.		Hydrophytic Vegetat	ion Indicators:
5.		1 - Rapid Test for	Hydrophytic Vegetation
6.		X 2 - Dominance Te	est is >50%
7		X 3 - Prevalence Inc	
8			Adaptations ¹ (Provide supporting
9		_	s or on a separate sheet)
10		- 	ophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: NA)	otal Cover	¹ Indicators of hydric so be present, unless dis	oil and wetland hydrology must turbed or problematic.
1		- Hydrophytic	
2		_ Vegetation	
=To	otal Cover	Present? Yes	No
Remarks: (Include photo numbers here or on a separate sheet.)			

SOIL Sampling Point: B4 WET

Depth Matrix inches) Color (moist) %	Redox Features Color (moist) % Type¹ Log	Texture	Remarks
	RM=Reduced Matrix, MS=Masked Sand Gra		PL=Pore Lining, M=Matrix.
lydric Soil Indicators: Histosol (A1)	Sandy Gleyed Matrix (S4)		for Problematic Hydric Soils ³ : Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)		anganese Masses (F12)
Black Histic (A3)	Stripped Matrix (S6)		arent Material (F21)
Hydrogen Sulfide (A4)	Dark Surface (S7)		shallow Dark Surface (F22)
Stratified Layers (A5)	Loamy Mucky Mineral (F1)		(Explain in Remarks)
2 cm Muck (A10)	Loamy Gleyed Matrix (F2)	<u></u>	(Zzpiam mir termame)
Depleted Below Dark Surface (A11)			
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		d hydrology must be present,
5 cm Mucky Peat or Peat (S3)	Redox Depressions (F8)	unless	disturbed or problematic.
Restrictive Layer (if observed):			
_			
Type:			
Depth (inches): Remarks: Sampling point was inundated with 6 inc	ches of standing water. Due to the depressicater, the soil is assumed to be hydric.	Hydric Soil Present?	
Depth (inches): Remarks: Sampling point was inundated with 6 incommondation of the sampling point with was			
Depth (inches): Remarks:			
Depth (inches): Remarks: Sampling point was inundated with 6 inconundation of the sampling point with was provided by the sampling point with the sampling point with the sampling point with was provided by the sampling point with the sampling po	ater, the soil is assumed to be hydric.	nal landscape position, pre	
Depth (inches): Remarks: Sampling point was inundated with 6 inconundation of the sampling point with was brundation of the sampling point with was brundation of the sampling point with the samplin	equired; check all that apply) Water-Stained Leaves (B9)	nal landscape position, pre	edominance of silver maple trees, a lead of the silver maple trees.
Depth (inches): Remarks: Sampling point was inundated with 6 incommon of the sampling point with was provided by the sampling point with was provided by the sampling point with the sampling	ater, the soil is assumed to be hydric.	nal landscape position, pre	edominance of silver maple trees, a
Depth (inches): Remarks: Sampling point was inundated with 6 inchundation of the sampling point with was been undation of the sampling point with was been undationed by the sampling point with 6 inches and the sampling point with 6 inches undationed by the sampling point with 6 inches undation of the sampling point with was been undation.	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	nal landscape position, pre Secondary Surface Draina Dry-Se	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2)
Depth (inches): Remarks: Sampling point was inundated with 6 incommon and the sampling point with was been undation of the sampling point with was been undationed by the sampling point with 6 incommon undation of the sampling point with 6 incommon undation of the sampling point with 6 incommon undation of the sampling point with was been undation of the sampling point with was been undation of the sampling point with 6 incommon undation of the sampling point with was been undation. Y Surface Water (A1) High Water Table (A2) Saturation (A3) X Water Marks (B1)	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Surface Draina Dry-Se Crayfis	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8)
Depth (inches): Remarks: Sampling point was inundated with 6 inchundation of the sampling point with was nundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with 6 inconundation of the sampling point with was nundated with a sampling point with was nundated with 6 inconundated with was nundated with 6 inconundated with was nundated with 6 inconundated with 6 incon	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
Depth (inches): Remarks: Campling point was inundated with 6 inconundation of the sampling point with was builded by the sampling point with a sampling point with was builded by the sampling by the	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4)	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura Stunte	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Depth (inches): Remarks: Sampling point was inundated with 6 inconundation of the sampling point with was brundation of the sampling point with was brundat	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura Stunte Soils (C6) X Geom	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (inches): Remarks: Sampling point was inundated with 6 inchundation of the sampling point with was nundation of the sampling point with was nundated with 6 inches nundation of the sampling point with was nundated with 6 inches nundation of the sampling point with was nundatio	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7)	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura Stunte Soils (C6) X Geom	Indicators (minimum of two require e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) y (B7) Gauge or Well Data (D9)	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura Stunte Soils (C6) X Geom	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) y (B7) Gauge or Well Data (D9)	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura Stunte Soils (C6) X Geom	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) y (B7) Gauge or Well Data (D9) ce (B8) Other (Explain in Remarks)	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura Stunte Soils (C6) X Geom	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (inches): Remarks: Sampling point was inundated with 6 incondition of the sampling point with was nundation (A) Wetland Hydrology Indicators: 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 X Sparsely Vegetated Concave Surface Water Present? Yes X	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) y (B7) Gauge or Well Data (D9) ce (B8) Other (Explain in Remarks)	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura Stunte Soils (C6) X Geom	Indicators (minimum of two requires e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (inches): Remarks: Sampling point was inundated with 6 inconundation of the sampling point with was nundation yellow point with was nundation (A) Wetland Hydrology Indicators: 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 X Sparsely Vegetated Concave Surface Water Present? Yes X	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) y (B7) Gauge or Well Data (D9) ce (B8) Other (Explain in Remarks)	Secondary Surface Draina Dry-Se Crayfis Roots (C3) Satura Stunte Soils (C6) X Geom	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
Depth (inches): Remarks: Sampling point was inundated with 6 incondition of the sampling point with was nundation (A3) 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 X Sparsely Vegetated Concave Surface Water Present? Field Observations: Surface Water Present? Ves Water Table Present?	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) y (B7) Gauge or Well Data (D9) ce (B8) Other (Explain in Remarks) No Depth (inches): 6 No Depth (inches):	Secondary Surfac Draina Dry-Se Crayfis Satura Stunte Soils (C6) X Geom X FAC-N	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
Depth (inches): Remarks: Campling point was inundated with 6 incondition of the sampling point with was boundation (A3) X Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery X Sparsely Vegetated Concave Surface Water Present? Yes X Vater Table Present? Yes Saturation Present? Yes includes capillary fringe)	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) y (B7) Gauge or Well Data (D9) ce (B8) Other (Explain in Remarks) No Depth (inches): 6 No Depth (inches):	Secondary Surface Draina Dry-Se Crayfis Satura Stunte Soils (C6) X Geom X FAC-N	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
Depth (inches): Remarks: Rema	equired; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled 3 Thin Muck Surface (C7) y (B7) Gauge or Well Data (D9) ce (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary Surface Draina Dry-Se Crayfis Satura Stunte Soils (C6) X Geom X FAC-N	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)

ENG FORM 6116-7, JUL 2018Midwest – Version 2.0

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

Project/Site: Auburn Angara Oaks		_ City/County:	Rochester Hi	lls/Oakland	Co. Sam	pling Date:	7/9/20)24
Applicant/Owner: Three Oaks Communities	i			_State:I	MI Sam	pling Point:	SF	P1
Investigator(s): Fran Thompson, Barr Engineeri	ng Co.	Section, Tow	nship, Range:	S32, T3N,	R11E			
Landform (hillside, terrace, etc.): terrace		Loca	al relief (conca	ve, convex,	none): conca	ve		
Slope (%):0-1 Lat: 42.6332694		Long:83.1	1809722		Datum	: WGS		
Soil Map Unit Name: Fox sandy loam, till plain,	2 to 6 percent slopes			NWI	l classification	: NONE		
Are climatic / hydrologic conditions on the site t	ypical for this time of y	ear? Yes	s No	(If	no, explain in	Remarks.)		
Are Vegetation No , Soil No , or Hydrology	No significantly dist	turbed? Are '	'Normal Circur	nstances" pr	resent? Yes	s X N	lo	
Are Vegetation No , Soil No , or Hydrology			eded, explain					
SUMMARY OF FINDINGS – Attach s				-		•	atures,	etc.
Hydrophytic Vegetation Present? Yes X	No X		mpled Area	Vaa	Ni.	- V		
Hydric Soil Present? Yes Wetland Hydrology Present? Yes X	No X	within a	Wetland?	Yes		<u> </u>		
Remarks:								
Hydrology on site has been altered.								
VEGETATION – Use scientific names								
Tree Stratum (Plot size: 30 ft			dicator status Do	minance Te	est workshee	et:		
1. Aces saccharinum	10		-A-C)A/		ninant Specie			
2.				OBL, FAC	•		2	(A)
3.			To	tal Number o	of Dominant S	Species		
4			Ac	ross All Stra	ta:		2	(B)
5					ninant Specie		00.00/	(4./5)
Sapling/Shrub Stratum (Plot size: 15	<u>10</u> =To 5 ft)	otal Cover	Are	e OBL, FAC	W, or FAC:		00.0%	(A/B)
	 -		Pro	evalence Inc	dex workshe	et:		
1. 2.			'''	Total % C		Multipl	y by:	
3.			OE	BL species	0	x 1 =	0	
4.				CW species	105	x 2 =	210	
5.			FA	.C species	5	x 3 =	15	
	=To	otal Cover	FA	CU species	0	x 4 =	0	
Herb Stratum (Plot size: 5 ft	_)		UF	L species	0	x 5 =	0	
Agrostis stolonifera	95	Yes F	ACW Co	lumn Totals	:110	(A)	225	(B)
2. Acer rubrum		No	FAC	Prevalence	Index = B/A =	= 2.0	5	
3.								
4			Ну		egetation Inc			
5.			— _	-	Test for Hydro		tation	
6.			<u>_</u>	_	ance Test is >			
7.				_	ence Index is sological Adapta		vido oupi	nortino
8.				_	Remarks or or	•		porting
9. 10.					ic Hydrophytic			in)
10		otal Cover		_		-		•
Woody Vine Stratum (Plot size:)	otal Gover			ydric soil and less disturbed			nust
1 2.				drophytic				
<u> </u>		otal Cover		getation esent?	Yes X	No		
Remarks: (Include photo numbers here or on	a separate sheet.)							

Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 2/2	100					Sandy	unmasked sand grains/ Salt F	epper
	oncentration, D=Depl	etion, RM=	Reduced Matrix, N	/IS=Mas	ked Sand	d Grains.		PL=Pore Lining, M=Matrix.	2
Hydric Soil					. (0.1)			s for Problematic Hydric Soils	; ":
Histosol			Sandy Gle	-				t Prairie Redox (A16)	
	pipedon (A2)		Sandy Red					Manganese Masses (F12)	
Black Hi	` '		Stripped M		5)			Parent Material (F21)	
· ·	n Sulfide (A4)		Dark Surfa	` '				Shallow Dark Surface (F22)	
	Layers (A5)		Loamy Mu	-			— Other	(Explain in Remarks)	
	ick (A10) d Below Dark Surface	(Δ11)	Loamy Gle Depleted N	-					
	ark Surface (A12)	(A11)	Redox Dar				³ Indicator	s of hydrophytic vegetation and	
	lucky Mineral (S1)		Depleted D		` '	١		nd hydrology must be present,	
	icky Peat or Peat (S3)	Redox Dep		` '	'		s disturbed or problematic.	
	Layer (if observed):	,			- (. 0)	Т	unio c	o diotarboa or problematic.	
Type:	Layer (ii observeu).								
Depth (ir	nches).						Hydric Soil Present	? Yes N	o X
Remarks:							Tryuno Com r reseme		<u> </u>
HYDROLO	GY								
Wetland Hy	drology Indicators:								
_	cators (minimum of o	ne is requi	red; check all that a	apply)			Secondar	y Indicators (minimum of two re	quired
Surface	Water (A1)		Water-Stai	ned Lea	ves (B9)		Surfa	ce Soil Cracks (B6)	
X High Wa	iter Table (A2)		Aquatic Fa	una (B1	3)		Drain	age Patterns (B10)	
X Saturation	on (A3)		True Aqua	tic Plant	s (B14)		Dry-S	Season Water Table (C2)	
Water M	arks (B1)		Hydrogen	Sulfide (Odor (C1)	Crayf	ish Burrows (C8)	
	nt Deposits (B2)		Oxidized R			-	· · · · —	ation Visible on Aerial Imagery	(C9)
	posits (B3)		Presence of			. ,		ed or Stressed Plants (D1)	
	it or Crust (B4)		Recent Iro			lled Soils	` '	norphic Position (D2)	
	osits (B5)		Thin Muck				X FAC-	Neutral Test (D5)	
	on Visible on Aerial Ir Vegetated Concave	0 , (<i>′</i> —		` '				
		Ourrace (L	Other (Exp	nann nn n	(emarks)				
Field Obser Surface Wat		•	No. V	Donth (i	noboo):				
Water Table				Depth (i Depth (i	_	12			
Saturation P					nches):	10	Wetland Hydrolog	y Present? Yes X N	0
(includes cap		<u> </u>		Bopui (i	_		Trottana nyarotog	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-
`	corded Data (stream	gauge, mo	nitoring well, aeria	l photos	, previou	s inspec	tions), if available:		
	·			·	·		·		
Remarks:									

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

Applicant/Owner: Three Oaks Communities State: MI Sampling Point: Investigator(s): Fran Thompson, Barr Engineering Co. Landform (hillside, terrace, etc.): toe slope Local relief (concave, convex, none): concave	SP2
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 featur	es, etc.
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? 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.	
Absolute Dominant Indicator Tree Stratum (Plot size: 30 ft) % Cover Species? Status Dominance Test worksheet:	
1. Acer saccharinum 15 Yes FACW Number of Dominant Species That	
2 Are OBL, FACW, or FAC: 3	(A)
3 Total Number of Dominant Species	
4 Across All Strata: 3	(B)
5 Percent of Dominant Species That	(A/D)
Sapling/Shrub Stratum (Plot size: 15 ft)	(A/B)
1. Rhamnus cathartica 5 Yes FAC Prevalence Index worksheet:	
2. Total % Cover of: Multiply by:	
3. OBL species 5 x 1 = 5	
4. FACW species 95 x 2 = 190	
5. FAC species 5 x 3 = 15	
5	
<u>Herb Stratum</u> (Plot size: <u>5 ft</u>) UPL species <u>0</u> x 5 = <u>0</u>	
1. Agrostis stolonifera 80 Yes FACW Column Totals: 105 (A) 210	(B)
2. Juncus articulatus 5 No OBL Prevalence Index = B/A = 2.00	
3	
4. Hydrophytic Vegetation Indicators:	
51 - Rapid Test for Hydrophytic Vegetation	
6 X_ 2 - Dominance Test is >50% 7 X_ 3 - Prevalence Index is ≤3.0¹	
4 - Morphological Adaptations 1 (Provide	unnortino
data in Remarks or on a separate she	
10. Problematic Hydrophytic Vegetation ¹ (Ex	•
Woody Vine Stratum (Plot size:) 85 =Total Cover Indicators of hydric soil and wetland hydrologic be present, unless disturbed or problematic.	•
2 Hydrophytic Vegetation	
=Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.)	

Profile Desc	ription: (Describe	to the dep	th needed to doc	ument t	he indica	tor or	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(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	С		Loamy/Clayey	Prominent redox concentrations
6-15	10YR 2/2	100					Loamy/Clayey	
								-
¹ Type: C=Co	oncentration, D=De	pletion, RM	Reduced Matrix, N	√S=Mas	ked Sand	d Grains	s. ² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicator	rs for Problematic Hydric Soils ³ :
Histosol	` '		Sandy Gle					st Prairie Redox (A16)
I —	pipedon (A2)		Sandy Re	, ,				Manganese Masses (F12)
Black His	` '		Stripped M	`	3)			Parent Material (F21)
I — · ·	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
l ——	I Layers (A5)		Loamy Mu	-			Othe	r (Explain in Remarks)
2 cm Mu			Loamy Gle	-				
1—	l Below Dark Surfac	e (A11)	X Depleted I	•	•		2	
I —	rk Surface (A12)		Redox Da		, ,			rs of hydrophytic vegetation and
I — '	lucky Mineral (S1)		Depleted [, ,			and hydrology must be present,
5 cm Mu	cky Peat or Peat (S	3)	X Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive I	Layer (if observed)	:						
Type:								
Depth (ir	nches):						Hydric Soil Present	t? Yes <u>X</u> No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators							
Primary Indic	cators (minimum of	one is requi	red; check all that	apply)			<u>Seconda</u>	ry Indicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ined Lea	ives (B9)		Surfa	ace Soil Cracks (B6)
X High Wa	ter Table (A2)		Aquatic Fa	auna (B1	3)		Drair	nage Patterns (B10)
X Saturation	on (A3)		True Aqua					Season Water Table (C2)
Water M	arks (B1)		Hydrogen					fish Burrows (C8)
Sedimen	t Deposits (B2)		Oxidized F			-	` ' 	ration Visible on Aerial Imagery (C9)
I — ·	oosits (B3)		Presence			•		ted or Stressed Plants (D1)
I —	t or Crust (B4)		Recent Iro			lled Soi		morphic Position (D2)
I —	osits (B5)		Thin Muck		` '		X FAC	-Neutral Test (D5)
	on Visible on Aerial	0 , (<i>'</i> —					
Sparsely	Vegetated Concav	e Surface (E	38) Other (Exp	olain in F	Remarks)			
Field Obser								
Surface Wat		es	No <u>X</u>	Depth (i	_			
Water Table		es X	No	Depth (i		9		
Saturation P		es X	No	Depth (i	nches): _	5	Wetland Hydrolog	gy Present? Yes <u>X</u> No
(includes cap								
Describe Re	corded Data (strear	n gauge, mo	onitoring well, aeria	ıı photos	, previous	s insped	ctions), if available:	
Domarka								
Remarks:								

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

Project/Site: Auburn Angara Oaks		City/Cou	inty: Roches	ter Hills/Oakland Co.	Sampling D	ate: <u>7/9/</u> 2	2024
Applicant/Owner: Three Oaks Communities				State: MI	Sampling Po	oint:	SP 3
Investigator(s): Fran Thompson, Barr Engineering Co.		Section,	Township, Ra	inge: S32, T3N, R1	1E		
Landform (hillside, terrace, etc.): shoulder			Local relief (d	concave, convex, nor	ne): convex		
Slope (%): 1-2 Lat: 42.63325278			83.18079722		Datum: WGS		
Soil Map Unit Name: Granby loamy sand			0000.0.22		assification: NONE		
Are climatic / hydrologic conditions on the site typical for	r this time o	fvoor	Voc. V		-		
, ,		•	Yes X				
Are Vegetation, Soil, or Hydrologys						No	_
Are Vegetation, Soil, or Hydrologyn	aturally prob	olematic? ((If needed, ex	plain any answers in	Remarks.)		
SUMMARY OF FINDINGS – Attach site ma	ıp showir	ng samplir	ng point lo	cations, transe	cts, important	: feature:	s, etc.
Hydrophytic Vegetation Present? Yes X No	ı	Is the	Sampled A	rea			
	X	I	n a Wetland		No X		
Wetland Hydrology Present? Yes X No				_	<u> </u>		
Remarks:							
Sample Point taken north of Flag 30.							
VEGETATION – Use scientific names of plan	nts.						
Trace Charles (Districts 20 ft)	Absolute	Dominant	Indicator	Daminanaa Taat			
<u>Tree Stratum</u> (Plot size: <u>30 ft</u>) 1.	% Cover	Species?	Status	Dominance Test			
2.				Number of Domina Are OBL, FACW,	•	2	(A)
3.				Total Number of D	•		_('')
4.				Across All Strata:	Johnnant Species	2	(B)
5.				Percent of Domina	ant Species That		_ ` ′
		Total Cover		Are OBL, FACW,		100.0%	_(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft)							
1				Prevalence Index	worksheet:		
2				Total % Cove		ultiply by:	_
3				OBL species	25 x 1 =	25	_
4				FACW species	40 x 2 =	80	_
5		Total Cover		FAC species FACU species	0 x 3 = 0 x 4 =	0	_
<u>Herb Stratum</u> (Plot size: 5 ft)		- Total Cover		UPL species	$\frac{0}{0}$ $x = 0$	0	_
1. Eleocharis olivacea	25	Yes	OBL	Column Totals:	65 (A)	105	— (B)
Cyperus esculentus	20	Yes	FACW	Prevalence Ind		1.62	_(-/
3. Agrostis stolonifera	10	No	FACW				_
4. Symphyotrichum lateriflorum	5	No	FACW	Hydrophytic Veg	etation Indicators	S:	
5. Phalaris arundinacea	5	No	FACW	1 - Rapid Tes	t for Hydrophytic \	/egetation	
6				X 2 - Dominanc			
7				l 	e Index is ≤3.0 ¹		
8					ical Adaptations ¹ (
9					narks or on a sepa		
10		T-1-1-0		l 	Hydrophytic Vegeta		
Woody Vino Stratum / Dlat size:	65	=Total Cover		¹ Indicators of hydr			/ must
Woody Vine Stratum (Plot size:)				be present, unless	s disturbed of prob	iemauc.	
1				Hydrophytic			
-		Total Cover		Vegetation Present? Y	'es X No		
Pomarke: (Include abote numbers here as an a							
Remarks: (Include photo numbers here or on a separa	ate SHEEL.)						

(inches)	Matrix		Redo	x Feature	es			
	Color (moist)	<u></u> %	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- 0.0							2, ,,	
	ncentration, D=Dep	letion, RM	=Reduced Matrix, I	MS=Masi	ked Sand	d Grains		: PL=Pore Lining, M=Matrix.
Hydric Soil I			Sandy Cla	wad Mate	iv (C1)			rs for Problematic Hydric Soils ³ :
Histosol (ipedon (A2)		Sandy Gle Sandy Re	-	IX (54)			t Prairie Redox (A16) Manganese Masses (F12)
Black His			Stripped N		:)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa	,	')			Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	` ,	ral (F1)			r (Explain in Remarks)
2 cm Muc			Loamy Gle	-				(Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted I	-				
	rk Surface (A12)	, (, , , ,	Redox Da	-			³ Indicator	s of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted I		` ')		nd hydrology must be present,
	cky Peat or Peat (S3	3)	Redox De		` '	,		s disturbed or problematic.
 Restrictive L	.ayer (if observed):		<u> </u>					
Type:	,							
Depth (in	ches):						Hydric Soil Present	? Yes No
Remarks:								
HYDROLO	GY							
	GY Irology Indicators:							
Wetland Hyd Primary Indic	Irology Indicators: ators (minimum of o	one is requ						
Wetland Hyd Primary Indic Surface V	Irology Indicators: ators (minimum of o Water (A1)	one is requ	Water-Sta	ined Lea	` '		Surfa	ce Soil Cracks (B6)
Wetland Hyd Primary Indic Surface V High Wat	Irology Indicators: ators (minimum of o Water (A1) ter Table (A2)	one is requ	Water-Sta Aquatic Fa	ined Lea auna (B1	3) ` ´		Surfa Drain	ace Soil Cracks (B6) age Patterns (B10)
Wetland Hyd Primary Indic Surface V High Wat Saturation	Irology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3)	one is requ	Water-Sta Aquatic Fa True Aqua	ined Lea auna (B1 atic Plant	3) s (B14)		Surfa Drain Dry-S	age Patterns (B10) Season Water Table (C2)
Primary Indic Surface V High Wat Saturation Water Ma	Irology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plant Sulfide (3) s (B14) Odor (C1)	Surfa Drain Dry-S Crayf	ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma	Arology Indicators: Lators (minimum of or Nater (A1) Ler Table (A2) In (A3) Larks (B1) It Deposits (B2)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph	3) s (B14) Odor (C1 eres on l) Living R	Surfa	ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo	Arology Indicators: Lators (minimum of or	one is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on led) Living R (C4)	Surfa	ace Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo	Arology Indicators: Arotors (minimum of or	one is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Lea auna (B1 atic Plants Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on led Iron (tion in Ti) Living R (C4)	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo	Arology Indicators: Arotos (minimum of or		Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plants Sulfide (Rhizosph of Reduc on Reduc Surface	3) s (B14) Odor (C1 eres on led Iron (C1) tion in Ti) Living R (C4)	Surfa	ace Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) in Visible on Aerial In	magery (B	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (B1 sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on led Iron (tion in Ti (C7) a (D9)) Living R (C4) illed Soil	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely	Arology Indicators: ators (minimum of or	magery (B	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (B1 sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on led Iron (tion in Ti (C7) a (D9)) Living R (C4) illed Soil	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ	Arology Indicators: Lators (minimum of or Nater (A1) Let Table (A2) In (A3) Lators (B1) It Deposits (B2) Losits (B3) Losits (B4) Losits (B5) Losits (B	magery (B Surface (Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide C Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on led Iron (tion in Ti (C7) a (D9) emarks)) Living R (C4) illed Soil	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) in (A3) arks (B1) it Deposits (B2) it or Crust (B4) it or Crust (B4) it or Crust (B5) in Visible on Aerial In Vegetated Concave vations: ar Present? Ye	magery (B Surface (Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Odor (C1 eres on led Iron (C7) a (D9) emarks)) Living R (C4) illed Soil	Surfa	ace Soil Cracks (B6) Lage Patterns (B10) Deason Water Table (C2) Tish Burrows (C8) Lation Visible on Aerial Imagery (C9) Led or Stressed Plants (D1) Lation Position (D2)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Water Table	Arology Indicators: Arotos (minimum of or Nater (A1) Aret (A2) Arks (B1) Arks (B1) Arks (B3) Arct or Crust (B4) Arit (B5) Arct of Crust (B4) Arct (B5)	magery (B Surface (s s	Water-Sta	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc a Surface Well Dat Depth (ii Depth (ii	3) s (B14) Odor (C1 eres on led Iron et (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf oots (C3) Satur Stunt Is (C6) Geon X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ	Arclogy Indicators: Actors (minimum of or Nater (A1) Actor (A2) Actor (A2) Actor (A2) Actor (A3) Actor (B4) Actor (B4) Actor (B4) Actor (B4) Actor (B4) Actor (B5) Actor (B4) Actor (B5) Actor (B4) Ac	magery (B Surface (s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Odor (C1 eres on led Iron et (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pri	Arclogy Indicators: Actors (minimum of or Nater (A1) Actor (A2) Actor (A2) Actor (A2) Actor (A3) Actor (B4) Actor (B4) Actor (B4) Actor (B4) Actor (B4) Actor (B5) Actor (B4) Actor (B5) Actor (B4) Ac	magery (B Surface (s s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (iii	3) s (B14) Ddor (C1 eres on led Iron etion in Ti (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf Satur Stunt Stunt S (C6) X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pri	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It or Crust (B4) It or Crust (B4) It or Crust (B5) In Visible on Aerial In Vegetated Concave Vations: It or Present? Ye Present? Ye Present? Ye Sesent? Ye Sesent? Ye	magery (B Surface (s s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (iii	3) s (B14) Ddor (C1 eres on led Iron etion in Ti (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf Satur Stunt Stunt S (C6) X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pri	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It or Crust (B4) It or Crust (B4) It or Crust (B5) In Visible on Aerial In Vegetated Concave Vations: It or Present? Ye Present? Ye Present? Ye Sesent? Ye Sesent? Ye	magery (B Surface (s s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (iii	3) s (B14) Ddor (C1 eres on led Iron etion in Ti (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf Satur Stunt Stunt S (C6) X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Water Table I Saturation Pro (includes cap) Describe Reco	Arclogy Indicators: ators (minimum of or Nater (A1) ter Table (A2) In (A3) arks (B1) It Deposits (B2) It or Crust (B4) It or Crust (B4) It or Crust (B5) In Visible on Aerial In Vegetated Concave Vations: It or Present? Ye Present? Ye Present? Ye Sesent? Ye Sesent? Ye	magery (B Surface (s s s	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (iii	3) s (B14) Ddor (C1 eres on led Iron etion in Ti (C7) a (D9) emarks) nches): _ nches): _) Living R (C4) illed Soil	Surfa Drain Dry-S Crayf Satur Stunt Stunt S (C6) X FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) Fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

Project/Site: Auburn Angara Oaks		City/Cour	nty: Rocheste	er 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, T	ownship, Ran	ge: S32, T3N, R11E		
Landform (hillside, terrace, etc.): back slope			Local relief (co	oncave, convex, none):	concave	
Slope (%): 01 Lat: 42.6332222		Long: -	83.1807778		Datum: WGS	
Soil Map Unit Name: Granby loamy sand				NWI classi	fication: NONE	
Are climatic / hydrologic conditions on the site typical for	this time of	f year?	Yes X	No (If no, ex	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologysi		-		rcumstances" present?	Yes N	lo
Are Vegetation , Soil , or Hydrology na				lain any answers in Re	·	
SUMMARY OF FINDINGS – Attach site ma					·	atures, etc.
Wetland Hydrology Present? Yes X No	X		Sampled Are	ea Yes	No X	
Remarks:						
VEGETATION – Use scientific names of plan						
Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:	
1				Number of Dominant Are OBL, FACW, or I	•	1 (A)
3. 4.				Total Number of Dom Across All Strata:	inant Species	1 (B)
5.		Total Cover		Percent of Dominant Are OBL, FACW, or I	•	00.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft) 1.			-	Prevalence Index we	orksheet:	
2.				Total % Cover o		y by:
3.				OBL species	x 1 =	0
4.				FACW species 7	1 x 2 =	142
5.				FAC species	1 x 3 =	3
	=	Total Cover			x 4 =	0
Herb Stratum (Plot size: 5 ft)				· · —) x 5 =	0
1. Agrostis stolonifera	60	Yes	FACW		2 (A)	145 (B)
2. Cyperus esculentus	5	No No	FACW	Prevalence Index	= B/A =2.0	<u> 11 </u>
Acer rubrum Bidens frondosa	1	No No	FACW FACW	Hydrophytic Vegete	tion Indicators	
5. Agrostis gigantea	5	No No	FACW	Hydrophytic Vegeta	· Hydrophytic Vege	atation
^			<u> </u>	X 2 - Dominance To		iation
7				3 - Prevalence In		
8.					Adaptations ¹ (Pro	vide supporting
9.					ks or on a separate	
10.				Problematic Hydi	ophytic Vegetation	n ¹ (Explain)
Woody Vine Stratum (Plot size:)	72 =	Total Cover		¹ Indicators of hydric s be present, unless dis		
1				Hydrophytic	•	
		Total Cover		Vegetation Present? Yes	X No	
	-				A 110	

Depth (inches)	Color (moist)	 -	Color (moist)	x Featur %	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 2/1	10	- ()				Loamy/Clayey	
3-11	10YR 4/3	90	10YR 5/6	10			Loamy/Clayey	Distinct redox concentrations
11-15	7.5YR 5/2	- 	7.5YR 5/6	30	<u>c</u>	M	Loamyrolayoy	Prominent redox concentration
11-15	7.51K 5/2		7.51K 5/6			IVI		Prominent redox concentration
1- 0.0							2, ,,	
Hydric Soil	oncentration, D=De	pletion, RM	Reduced Matrix, I	viS=Mas	ked Sand	d Grains		: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
Histosol			Sandy Gle	ved Mat	riy (S4)			t Prairie Redox (A16)
	pipedon (A2)		Sandy Re					Manganese Masses (F12)
Black Hi			Stripped N					Parent Material (F21)
	n Sulfide (A4)		Dark Surfa	,	-,			Shallow Dark Surface (F22)
	l Layers (A5)		Loamy Mu	` '	eral (F1)			r (Explain in Remarks)
2 cm Mu			Loamy Gle	-			_	,
	d Below Dark Surfac	ce (A11)	Depleted I	-				
	ark Surface (A12)	, ,	Redox Da		-		³ Indicator	rs of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted I	Dark Sur	face (F7))	wetla	and hydrology must be present,
5 cm Mu	icky Peat or Peat (S	3)	Redox De	pression	s (F8)		unles	s disturbed or problematic.
Restrictive	Layer (if observed):						
Type:								
Depth (ir	nches):						Hydric Soil Present	? Yes No _
Remarks:								
HYDROLO)GY							
Wetland Hy	drology Indicators	:						
Primary Indi	cators (minimum of	one is requi	red; check all that	apply)			Seconda	ry Indicators (minimum of two requi
Surface	Water (A1)		Water-Sta	ined Lea	ives (B9))	Surfa	ace Soil Cracks (B6)
High Wa	iter Table (A2)		Aquatic Fa	auna (B1	3)		Drain	nage Patterns (B10)
Saturation	` '		True Aqua					Season Water Table (C2)
	arks (B1)		Hydrogen					fish Burrows (C8)
	nt Deposits (B2)		Oxidized F			-	· · · —	ration Visible on Aerial Imagery (C9
	posits (B3)		Presence			, ,		ted or Stressed Plants (D1)
	t or Crust (B4)		Recent Iro			illed Soil	` ' —	norphic Position (D2)
	osits (B5)	Imagan, (D	Thin Muck		` '		<u>X</u> FAC-	Neutral Test (D5)
	on Visible on Aerial Vegetated Concav	0 , (<i>_</i>					
<u> </u>		e ourrace (L	Other (EX	Jiaiii iii i	(Ciliaiks)		T	
Field Obser Surface Wat		'oc	No. Y	Donth (i	nches):			
Water Table		es	No X No X		nches): _			
Saturation P		es			nches): _		Wetland Hydrolog	gy Present? Yes X No
(includes cap			<u> </u>	Dopui (i	_		Tronana riyaroroş	<u></u>
	corded Data (strear	n gauge, mo	onitoring well, aeria	l photos	, previou	s inspec	tions), if available:	
Remarks:								

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

Project/Site: Auburn Angara Oaks		City/County	: Rochester Hil	ls/Oakland (Co. Sampli	ng Date:	7/9/2024
Applicant/Owner: Three Oaks Communities						ng Point:	SP5
Investigator(s): Fran Thompson, Barr Engineering Co.	5	Section, Tow	nship, Range:	S32, T3N, I	R11E		
Landform (hillside, terrace, etc.): toe slope		Loc	cal relief (concav	ve, convex, r	none): concave		
Slope (%): 0-1 Lat: 42.6331833		Long: -83.	·		Datum: V	VGS	
Soil Map Unit Name: Granby loamy sand				NWI	classification: F	PSS	
Are climatic / hydrologic conditions on the site typical for t	his time of vea	ar? Ye	s X No		ــ no, explain in Re		
Are Vegetation, Soil, or Hydrologysign	-			<u> </u>	·	•	
Are Vegetation , Soil , or Hydrology nat			eeded, explain		_		
SUMMARY OF FINDINGS – Attach site map				-	•	tant feat	tures, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No Remarks:		1	ampled Area Wetland?	Yes	X No_		
VEGETATION – Use scientific names of plant							
		minant In	ndicator				
Tree Stratum (Plot size: 30 ft)				minance Te	st worksheet:		
1. Acer saccharinum	30	Yes I			ninant Species 1	Γhat	
2			Are	OBL, FACV	V, or FAC:		4(A)
3				al Number o	of Dominant Spe		4 (B)
4							<u>4</u> (B)
J	30 =Tota	al Cover		Cent of Dome OBL, FACV	ninant Species T V, or FAC:		0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft)							``
1			Pre	evalence Inc	dex worksheet:		
2				Total % Co	over of:	Multiply	by:
3				L species .			20
4				CW species			70
5				C species			0
	=Tota	al Cover		CU species .			0
Herb Stratum (Plot size: 5 ft)	45	V		L species umn Totals:			0 (D)
Ludwigia palustris Agrostis stolonifera		Yes F			$\frac{55}{\text{ndex} = B/A} = $	1.64	90 (B)
3. Lemna minor		Yes	OBL	TOVAICTIOCT		1.04	
4.				drophytic V	egetation Indic	ators:	
5.			´		est for Hydroph		ation
6.				-	nce Test is >50	_	
7.			X	3 - Prevale	nce Index is ≤3.	0 ¹	
8.					logical Adaptatio	•	
9				data in R	Remarks or on a	separate	sheet)
10				Problemation	c Hydrophytic V	egetation ¹	(Explain)
Woody Vine Stratum (Plot size:)	=Tota	al Cover			ydric soil and we ess disturbed or		
1			Hyd	drophytic			
2			Ve	getation			
<u> </u>	=Tota	al Cover	Pre	esent?	Yes X	No	-
Remarks: (Include photo numbers here or on a separate	e sheet.)						

Depth (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		Loamy/Clayey	Prominent redox concentr	ations
0-10	10111 3/2		7.511(5/6				Loamy/Olaycy	T TOTHINGTIC TODOX CONCENT	ations
		- — .							
		:							
 									
		oletion, RM	=Reduced Matrix, N	/IS=Mas	ked Sand	d Grains.		PL=Pore Lining, M=Matrix.	
Hydric Soil In			0 1 01		. (0.1)			s for Problematic Hydric Soi	ils³:
— Histosol (A	•		Sandy Gle					Prairie Redox (A16)	
	pedon (A2)		Sandy Red					Manganese Masses (F12)	
Black Hist	, ,		Stripped M	,	5)			Parent Material (F21)	
	Sulfide (A4)		Dark Surfa	` '	1 (54)			Shallow Dark Surface (F22)	
	Layers (A5)		Loamy Mu	•	٠,		Other	(Explain in Remarks)	
2 cm Muc	, ,	(4.4.4)	Loamy Gle	-					
·	Below Dark Surfac	e (A11)	X Depleted N				31	f boods on book on one f - f book on one	
	k Surface (A12)		Redox Da		, ,			s of hydrophytic vegetation an	
	ıcky Mineral (S1) ky Peat or Peat (S	3)	Depleted [Redox Depleted I		, ,	1		nd hydrology must be present, s disturbed or problematic.	,
_	· .				5 (1-0)		uilles	s disturbed of problematic.	
Type:	ayer (if observed)	i							
- · · -	shee).						Hydric Soil Present	Yes Y	No
Depth (inc	ches):		_ 				Hydric Soil Present	? Yes X I	No
Depth (inc	ches):		<u></u>				Hydric Soil Present	? Yes <u>X</u> I	No
Depth (inc							Hydric Soil Present	? Yes <u>X</u> I	No
Depth (inc Remarks:							Hydric Soil Present	? Yes <u>X</u>	No
Depth (incomplete incomplete inco	GY rology Indicators		uired; check all that	apply)			,	Yes X I	
Depth (incomplete incomplete inco	GY rology Indicators ators (minimum of		nired; check all thatWater-Sta		ives (B9)		<u>Secondar</u>		
Depth (inc Remarks: HYDROLOG Wetland Hydr Primary Indica	GY rology Indicators ators (minimum of			ined Lea	, ,		Secondar	y Indicators (minimum of two	
Depth (inc Remarks: HYDROLOG Wetland Hydr Primary Indica Surface W	GY rology Indicators ators (minimum of Vater (A1) er Table (A2)		Water-Sta	ined Lea auna (B1	3)		Secondar Surfa Drain	y Indicators (minimum of two r	
Depth (incomplete in the complete in the compl	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1)		Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plant Sulfide (3) s (B14) Odor (C1))	Secondar Surfa Drain Dry-S Crayf	y Indicators (minimum of two loce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8)	required
Depth (incomplete in the complete in the compl	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph	3) s (B14) Odor (C1) eres on l) _iving Ro	Secondar Surfa Drain Dry-S Crayf pots (C3)Satur	y Indicators (minimum of two doce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery	required
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