



AGENDA
CHARTER TOWNSHIP OF MERIDIAN
ZONING BOARD OF APPEALS MEETING
August 26, 2020 6:30 pm

Zoom meeting ID: 867 6651 8469
Zoom password: 5151

1. CALL MEETING TO ORDER
2. APPROVAL OF THE AGENDA
3. CORRECTIONS, APPROVAL AND RATIFICATION OF MINUTES
 - A. January 8, 2020 Meeting Minutes
 - B. June 10, 2020 Meeting Minutes
4. COMMUNICATIONS
 - A. Mike & Jackie Christie RE: ZBA #20-08-26-1
5. UNFINISHED BUSINESS
6. NEW BUSINESS

A. ZBA CASE NO. 20-08-26-1 (Jerry Fedewa Homes), 5570 Okemos Road, East Lansing, MI, 48834

LOCATION: East Lake Drive (Vacant Parcel)
PARCEL ID: 02-101-004
ZONING DISTRICT: RA (Single Family, Medium Density)

The applicant is requesting variances from the following sections of the Code of Ordinances:

- Section 86-471(b)(1), all structures and grading activities shall be setback from the edge of a water feature as follows: Wetlands regulated by the Township, the state, or by federal law equal to or greater than two acres in area; 40 feet.
- Section 86-471(c)(1), to minimize erosion, stabilize streambanks and wetland edges, protect water quality, and preserve fish and wildlife habitat, a natural vegetation strip shall be maintained from the edge of a water feature as follows: Wetlands regulated by the Township, the state, or by federal law; 20 feet.

The applicant is requesting an 18' variance to construct the single family house within the 20 foot natural vegetation strip and a 38' variance to construct the single family house within the 40 foot wetland setback.

7. OTHER BUSINESS
8. PUBLIC REMARKS
9. BOARD MEMBER COMMENTS
10. ADJOURNMENT

Variance requests may be subject to change or alteration upon review of request during preparation of the staff memorandum. Therefore, Sections of the Code of Ordinances are subject to change. Changes will be noted during public hearing meeting.

Individuals with disabilities requiring auxiliary aids or services should contact the Meridian Township Board by contacting: Assistant Planner Justin Quagliata, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4580 - Ten Day Notice is Required.
Meeting Location: 5151 Marsh Road, Okemos, MI 48864 Township Hall

**CHARTER TOWNSHIP OF MERIDIAN
ZONING BOARD OF APPEALS REGULAR MEETING MINUTES *DRAFT*
5151 MARSH ROAD, OKEMOS, MI 48864-1198
(517) 853-4000
WEDNESDAY, JANUARY 8 2020 6:30 PM
TOWN HALL ROOM**

PRESENT: Chair Beauchine, Members Field-Foster, Mansour, Wisinski
ABSENT: Member Lane
STAFF: Director of Community Planning and Development Mark Kieselbach, Assistant
Planner Justin Quagliata

1. CALL MEETING TO ORDER

Chair Beauchine called the meeting to order at 6:30 p.m.

2. A. APPROVAL OF AGENDA

Assistant Planner Justin Quagliata reported

- The applicant requested the case be postponed for ZBA CASE NO. 19-11-13-1 (East Lansing Lodge, Inc.) – Item #6. B. was postponed.
- The Election of Officers is required at the ZBA's (Zoning Board of Appeals) first meeting of the year

MEMBER MANSOUR MOVED TO AMEND THE AGENDA TO INCLUDE THE ELECTION OF OFFICERS AS ITEM #2. B.

SECONDED BY MEMBER WISINSKI.

VOICE VOTE: Motion carried unanimously.

B. ELECTION OF OFFICERS

Member Mansour volunteered to be Chair of the Zoning Board of Appeals. Member Field-Foster volunteered to be Vice Chair.

CHAIR BEAUCHINE MOVED TO ACCEPT MEMBER MANSOUR AS CHAIR AND MEMBER FIELD-FOSTER AS VICE CHAIR.

SECONDED BY MEMBER WISINSKI.

VOICE VOTE: Motion carried unanimously.

3. CORRECTIONS, APPROVAL & RATIFICATION OF MINUTES

Wednesday, December 11, 2019

MEMBER FIELD-FOSTER MOVED TO APPROVE THE MINUTES FROM WEDNESDAY, NOVEMBER 13, 2019.

SECONDED BY MEMBER WISINSKI.

VOICE VOTE: Motion carried unanimously.

4. COMMUNICATIONS**A. Corridor Improvement Authority RE: ZBA #19-11-13-1****5. UNFINISHED BUSINESS**

None

6. NEW BUSINESS**A. ZBA CASE NO. 20-01-08-01 (Bayle), 5965 Greenman Street, Haslett, MI, 48840**

LOCATION: 5965 Greenman Street

PARCEL ID: 10-201-018

ZONING DISTRICT: RB (Single Family-High Density)

The applicant is requesting variances from the following sections of the Code of Ordinances:

- Section 86-565(1), Accessory buildings. In a front yard. No accessory building shall project into any front yard.
- Section 86-374(d)(5)(a), Front yards. In accordance with the setback requirements of Section 86-367 for the type of street upon which the lot fronts, the required setback from the centerline of the Lake Lansing Road right-of-way is 100 feet.

The variance requests are to construct an accessory building that would project 34 feet into the front yard and encroach 16 feet into the setback from the centerline of Lake Lansing Road at 5965 Greenman Street.

Assistant Planner Quagliata outlined the case for discussion.

Chair Mansour asked the applicant or the applicant's representative if they would like to address the Zoning Board of Appeals (ZBA).

Harold Bayle, 5965 Green Road, Haslett MI, the applicant, stated he did not want to attach the garage to the house because it has a different foundation than the house. The detached garage would not encroach into the front yard on Lake Lansing Road as much as the other houses in the area.

Member Field-Foster asked if there was a garage on the site. Mr. Bayle replied no, just a shed. When asked if it would be a 2-car garage, Mr. Bayle replied yes. When asked about the garage aligning with the driveway, Mr. Bayle replied the driveway would be expanded and straighten during construction.

Chair Mansour opened the floor for public remarks.

None

Chair Mansour closed public remarks.

Member Beauchine read review criteria one from Section 86-221 of the Code of Ordinances which states unique circumstances exist that are peculiar to the land or structure that are not

applicable to other land or structures in the same zoning district. He stated if the garage was attached, it would have not met the 100 foot setback from Lake Lansing Road. The garage is 10 feet from house, and does not encroach into the setback for Greenman Street. The request meets the criteria.

Member Beauchine read review criteria two which states these special circumstances are not self-created. He stated the circumstance was not self-created.

Member Beauchine read review criteria three which states strict interpretation and enforcement of the literal terms and provisions of this chapter would result in practical difficulties. He stated because of the required setbacks, there would not be enough area for a house and garage which would result in a practical difficulty.

Member Beauchine read review criteria four which states that the alleged practical difficulties which will result from a failure to grant the variance would unreasonably prevent the owner from using the property for a permitted purpose. He stated although a garage is not required with Michigan weather, it would reduce any difficulties.

Member Beauchine reviewed criteria five which states granting the variance is the minimum action that will make possible the use of the land or structure in a manner which is not contrary to the public interest and which would carry out the spirit of this zoning ordinance, secure public safety, and provide substantial justice. He stated granting the variance for the front yard setback would be the minimum necessary for the use of the land. It is a corner lot, there is no other location for garage, and the garage is not too large

Member Beauchine read review criteria six which states granting the variance will not adversely affect adjacent land or the essential character in the vicinity of the property. He stated this criteria had been met, the garage will be fronting on Greeman Street and the other houses in the area are located closer to Lake Lansing Road.

Member Beauchine review criteria seven which states the conditions pertaining to the land or structure are not so general or recurrent in nature as to make the formulation of a general regulation for such conditions practicable. He stated the conditions pertaining to the property were unique so this criteria had been met.

Member Beauchine read review criteria eight which states granting the variance will be generally consistent with public interest and the purposes and intent of this Chapter. He stated this criteria had been met.

MEMBER BEAUCHINE MOVED TO APPROVE ZONING BOARD OF APPEALS CASE NO. 20-01-08-01.

SECONDED BY MEMBER WISINSKI.

Chair Mansour agrees with the variance request but was concerned with the statement that not having a garage created a practical difficulty. The lot does have two front yards and there is no other practical location for a garage.

Assistant Planner Quagliata asked the applicant to clarify the setback for the garage from the west property line. The application replied 5 feet.

Member Wisinski asked if the driveway is reconfigured, what would be allowed. Staff replied the driveway is allowed to cover 35 percent of the front yard.

Member Field-Foster asked if the shed would be removed. Staff replied yes.

ROLE CALL TO VOTE:

YES: Members Wisinski, Beauchine, Chair Mansour, Member Field-Foster

NO: None

Motion carried unanimously.

B. ZBA CASE NO. 19-11-13-1 (East Lansing Lodge, Inc.), 2736 Grand River Avenue, East Lansing, MI, 48823

DESCRIPTION: 2736 Grand River Avenue

TAX PARCEL: 17-460-017

ZONING DISTRICT: C-2 (Commercial)

The applicant is requesting the Zoning Board of Appeals (ZBA) to rehear previously denied variances in accordance with the following section of the Code of Ordinances:

- Section 86-225 – No application for a variance, which has been denied wholly or in part by the Zoning Board of Appeals, shall be resubmitted until the expiration of one year or more from the date of such denial, except on grounds of newly discovered evidence or proof of changed circumstances found by the Zoning Board of Appeals to be sufficient to justify consideration.

If the ZBA decides to rehear the case the request is for variances from the following sections of the Code of Ordinances:

- Section 86-618(2), Nonconforming structures, other than single-family structures, may be altered, expanded, or modernized without prior approval of the Zoning Board of Appeals; provided, that structural alterations or extensions shall not increase the area, height, bulk, use, or extent of the structure and shall satisfy all other applicable site development regulations.
- Section 86-755, Schedule of requirements for parking space. Parking space shall be provided in accordance with the design standards of this chapter and according to this schedule: for motels, hotels, or other commercial lodging establishments, one for each one unit plus extra spaces for dining rooms, ballrooms, or meeting rooms as required by this division.
- Section 86-756(2). Design and construction requirements. For the layout of off-street parking facilities the required maneuvering lane width for 10 foot by 18 foot parking spaces shall be 25 feet.

The variance requests are to expand a nonconforming nonresidential structure with a porte cochere addition, a variance for three parking spaces, and a variance from the required maneuvering lane width for the drive aisles throughout the parking lot at 2736 Grand River Avenue. This is a request to rehear previously denied variances.

This item was postponed.

7. OTHER BUSINESS

None

8. PUBLIC REMARKS

Chair Mansour opened the floor for public remarks and seeing none closed public remarks.

9. BOARD MEMBER COMMENTS

Assistant Planner Quagliata reminded the members of the joint meeting with Township Board and other Boards and Commissions on Tuesday, January 28 at 6 pm in Town Hall Room and the January 22nd meeting of the Zoning Board of Appeals was cancelled.

Member Beauchine asked viewers to consider serving on the ZBA.

10. ADJOURNMENT

Meeting adjourned at 6:49 p.m.

Respectfully Submitted.

Robin Faust, Administrative Assistant II

**CHARTER TOWNSHIP OF MERIDIAN
ZONING BOARD OF APPEALS VIRTUAL REGULAR MEETING MINUTES *DRAFT*
5151 MARSH ROAD, OKEMOS, MI 48864-1198
(517) 853-4000
WEDNESDAY, JUNE 10, 2020 6:30 PM
TOWN HALL ROOM**

PRESENT: Chair Mansour, Members Field-Foster, Hendrickson, Kulhanek
ABSENT: Members Wisinski
STAFF: Director of Community Planning and Development Mark Kieselbach, Principal Planner Peter Menser, Assistant Planner Keith Chapman

1. CALL MEETING TO ORDER

Chair Mansour called the meeting to order at 6:32 p.m.

2. APPROVAL OF AGENDA

MEMBER FIELD-FOSTER MOVED TO APPROVE THE AGENDA.

SECONDED BY MEMBER HENDRICKSON

VOICE VOTE: Motion carried unanimously.

3. CORRECTIONS, APPROVAL & RATIFICATION OF MINUTES

None

4. UNFINISHED BUSINESS

None

6 NEW BUSINESS

A. ZBA CASE NO. 20-06-10-1 (Metro Detroit Signs), 11444 Kaltz Avenue, Warren, MI, 48098

LOCATION: 2085 Grand River Avenue
PARCEL ID: 21-276-011
ZONING DISTRICT: C-2 (Commercial)

The applicant is requesting a variance from the following section of the Code of Ordinances:

- Section 86-687(3)(d), Wall signs. Where several tenants use a common entrance in a multitenant structure, wall signs shall be permitted for those tenants having an individual means of public access up to a size equivalent to one square foot for each one square foot of building frontage occupied.

The variance request is to install an additional wall sign on the west façade and a wall sign that exceeds the allowable square footage on the north facade at 2085 Grand River Avenue.

Principal Planner Menser outlined the case for discussion.

Chair Mansour asked the applicant or the applicant's representative if they would like to address the Zoning Board of Appeals (ZBA).

Paul Deters, Metro Detroit Signs, 11444 Kaltz Avenue, Warren, MI, representing the applicant Aspen Dental, stated Aspen Dental was trying to establish their brand in Michigan. They are trying to comply with local ordinances but would like the design of the sign to fit the architectural features of the building. Identical signs are proposed on the north and west elevations.

Member Hendrickson stated the three items the ZBA would consider were 1) the size of the wall sign on the north elevation; 2) allowing a wall sign on the west elevation; and 3) the size of the wall sign on the west elevation. He asked staff if the ZBA could vote on each item separately.

Director Kieselbach replied yes.

Member Hendrickson asked staff what signage on the building would be allowed by right.

Director Kieselbach replied one wall sign up to 47 square feet in size on the north elevation along Grand River Avenue.

Member Hendrickson stated he would not be in favor of granting a variance for the size of the wall sign on the north elevation but would be in favor of granting a variance for a wall sign on the west elevation along Okemos Road.

Member Field-Foster stated she did not believe there was a practical difficulty preventing a sign of the appropriate size.

Mr. Deters replied due to the shape and scale of the building, they would like signage of the same size on both facades.

1. Size of wall sign on north elevation.

Chair Mansour read review criteria one from Section 86-221 of the Code of Ordinances which states unique circumstances exist that are peculiar to the land or structure that are not applicable to other land or structures in the same zoning district. She stated she could not determine there was a unique circumstance for the increase in the size of the sign.

MEMBER FIELD-FOSTER MOVED TO DENY THE VARIANCE FOR THE INCREASE IN SIZE OF THE WALL SIGN ON THE NORTH ELEVATION OF THE GRAND RIVER AVENUE PORTION OF THE BUILDING.

SECONDED BY MEMBER HENDRICKSON

ROLE CALL TO VOTE:

YES: Members Field-Foster, Hendrickson, Kulhanek, Chair Mansour

NO: None

Motion carried unanimously.

2. Wall sign on the west elevation

Chair Mansour read review criteria one from Section 86-221 of the Code of Ordinances which states unique circumstances exist that are peculiar to the land or structure that are not applicable to other land or structures in the same zoning district. She stated she could support the request because the building was on the corner of two streets.

Member Hendrickson stated the sign would provide better visibility for the tenant.

Chair Mansour read review criteria two which states these special circumstances are not self-created. She stated the circumstance was not self-created because of the location of the building on a corner lot.

Chair Mansour read review criteria three which states strict interpretation and enforcement of the literal terms and provisions of this chapter would result in practical difficulties. She stated she would support the request because the building was on a corner lot.

Chair Mansour asked if there will be other signage on the premises.

Principal Planner Menser replied the current free standing sign will become a multi-tenant free standing sign.

Member Field-Foster read review criteria four which states that the alleged practical difficulties which will result from a failure to grant the variance would unreasonably prevent the owner from using the property for a permitted purpose. She stated there was nothing to prevent the applicant from using the building. The applicant will also have signage on the free-standing sign.

Mr. Deter stated due to the speed limit on Grand River Avenue and Okemos Road, it makes finding the location difficult at times. He also stated the building's aesthetics will be improved with a sign on each elevation.

Member Hendrickson stated he supported the sign on the west elevation as it will assist traffic going north.

Member Hendrickson asked the applicant if the sign would be illuminated.

Mr. Deters replied yes.

Chair Mansour stated the applicant would not be prevented from using the property for its permitted use without a sign on the west elevation. There is no public entrance on the west side of the building.

Mr. Hendrickson stated a sign on the west elevation would help patients coming from the south.

Member Field-Foster stated she could support the variance as it would enable patients to find the location.

Chair Mansour read review criteria five which states granting the variance is the minimum action that will make possible the use of the land or structure in a manner which is not contrary to the public interest and which would carry out the spirit of this zoning ordinance, secure public safety, and provide substantial justice. She stated the sign was a public safety issue and the minimum action necessary.

Chair Mansour read review criteria six which states granting the variance will not adversely affect adjacent land or the essential character in the vicinity of the property. She stated the site will be aesthetically pleasing and it matches the character of buildings on the other corners in the area.

Chair Mansour read review criteria seven which states the conditions pertaining to the land or structure are not so general or recurrent in nature as to make the formulation of a general regulation for such conditions practicable. She stated this building is on a corner lot and the request for additional signage is in keeping with the businesses on the other three corner lots in this area.

Chair Mansour read review criteria eight which states granting the variance will be generally consistent with public interest and the purposes and intent of this Chapter. She stated this criteria had been met.

MEMBER HENDRICKSON MOVED TO APPROVE THE VARIANCE ALLOWING FOR A SIGN ON THE WEST ELEVATION OF THE BUILDING WITH THE CONDITION IT BE OF THE EQUIVALENT SIZE TO THE SIGN ON THE NORTH ELEVATION.

SECONDED BY MEMBER FIELD-FOSTER.

Member Field-Foster offered a friendly amendment: "THE SIGN ON THE WEST ELEVATION IS CONSISTENT WITH THE REQUIREMENT OF THE SIGN ON THE NORTH ELEVATION RATHER THAN STATING IT IS OF EQUAL SIZE."

Member Hendrickson accepted the friendly amendment.

Member Hendrickson asked if the Zoning Ordinance would allow a larger sign on the west elevation than on the north elevation.

Director Kieselbach replied a wall sign on the north elevation is allowed by right up to a maximum of 47 square feet. Based on the motion, the wall sign on the west elevation could be a maximum of 47 square feet.

ROLE CALL TO VOTE:

YES: Members Field-Foster, Hendrickson, Kulhanek, Chair Mansour

NO: None

Motion carried unanimously.

B. ZBA CASE NO. 20-06-10-2 (Buddy's Rendezvous-Pizzeria LLC), 31800 Northwestern Hwy. Ste. 206, Farmington Hills, MI, 48334

DESCRIPTION: 2010 Grand River Avenue

TAX PARCEL: 21-226-010

ZONING DISTRICT: C-2 (Commercial)

The applicant is requesting a variance from the following section of the Code of Ordinances:

- Section 86-687(3)(a), Wall signs. One wall sign shall be permitted and may be located flat against the building's front facade or parallel to the front facade on a canopy. For businesses with frontage on more than one public street, two signs may be permitted. In no case shall more than one wall sign be located on a facade and no wall sign shall be located on a rear facade.

The variance to install three wall signs not located on frontage to a public street is requested at 2010 Grand River Avenue.

Principal Planner Menser outlined the case for discussion.

Chair Mansour asked the applicant or the applicant's representative if they would like to address the Zoning Board of Appeals (ZBA).

Shawn Irish, Aria Group Architects, Inc., 830 North Boulevard, Oak Park, IL 60301, representing the applicant Buddy's Rendezvous-Pizzeria, asked to address other signage options, including the carryout and vintage projection signs that was not mentioned in the current request.

Chair Mansour asked if the ZBA would prefer a presentation on all of the signage proposed for the site.

Director Kieselbach stated if the applicant would like to be heard on all of the signage at one time, then the request should be tabled to a later meeting to allow for public notification. The ZBA could proceed to hear the request as listed for this meeting.

Mr. Irish stated he was willing to table the request in order for the ZBA to hear the entire sign package.

Director Kieselbach suggested the ZBA could open the hearing then adjourn it to a future meeting. If the request is tabled, it cannot be discussed.

Shawn Baxter, Buddy's Rendezvous-Pizzeria, 31800 Northwestern Highway, Ste 206, Farmington Hills, MI, stated he was not aware there were issues with the sign request. The signage is part of their brand.

Chair Mansour asked if he wanted to proceed with the request as presented by staff or table the request to a future meeting.

Mr. Baxter stated he would like to proceed with the request as submitted.

Member Field-Foster stated she would like to review all of the signage for the site at one time.

Chair Mansour agreed it would be better to review the signage as a whole since it is a new development.

Chair Mansour asked how many signs were in the initial request.

Principal Planner Menser replied the mural, the directional sign, the projection sign, the carryout sign and two wall signs for a total of five.

Mr. Baxter replied the mural did not need to wrap around the building and the neon carryout sign could be moved to inside the window.

Director Kieselbach stated without an amendment to the Sign Ordinance, the ZBA did not have the authority to grant a variance for a projection sign.

Chair Mansour stated the ZBA would consider four variances: 1) directional sign with a logo as a second freestanding sign; 2) the neon carry out sign on the north elevation; 3) the wall sign on the north elevation; and 4) a wall sign on the west elevation.

Mr. Baxter stated he would remove the request for the directional sign with a logo as a freestanding sign.

1: Wall sign west elevation:

Chair Mansour asked the applicant about the orientation of the building.

Mr. Irish replied the building orientation has an entrance on the west side of the building along the service drive.

Chair Mansour read review criteria one from Section 86-221 of the Code of Ordinances which states unique circumstances exist that are peculiar to the land or structure that are not applicable to other land or structures in the same zoning district. She stated the request met this criteria.

Chair Mansour read review criteria two which states these special circumstances are not self-created. She stated the orientation of the building on the site does create a special circumstance since the entrance does not face Grand River Avenue.

Chair Mansour read review criteria three which states strict interpretation and enforcement of the literal terms and provisions of this chapter would result in practical difficulties. She stated with the building's orientation, there would be a practical difficulty if there was no signage at the main entrance.

Chair Mansour read review criteria four which states that the alleged practical difficulties which will result from a failure to grant the variance would unreasonably prevent the owner from using the property for a permitted purpose. She stated there needs to be signage at the main entrance.

Chair Mansour read review criteria five which states granting the variance is the minimum action that will make possible the use of the land or structure in a manner which is not contrary to the public interest and which would carry out the spirit of this zoning ordinance, secure public safety, and provide substantial justice. She stated the request was the minimum action and provides substantial justice to the applicant.

Chair Mansour read review criteria six which states granting the variance will not adversely affect adjacent land or the essential character in the vicinity of the property. She stated the wall sign would not affect adjacent land.

Chair Mansour read review criteria seven which states the conditions pertaining to the land or structure are not so general or recurrent in nature as to make the formulation of a general regulation for such conditions practicable. She stated the orientation of the building was unique to the property.

Chair Mansour read review criteria eight which states granting the variance will be generally consistent with public interest and the purposes and intent of this Chapter. She stated the wall sign met this criteria.

MEMBER HENDRICKSON MOVED TO APPROVE THE VARIANCE FOR THE SIGN ON THE WEST ELEVATION OF THE BUILDING.

SECONDED BY MEMBER KULHANEK.

ROLE CALL TO VOTE:

YES: Members Hendrickson, Kulhanek, Field-Foster, Chair Mansour

NO: None

Motion carried unanimously.

2. Wall sign north elevation

Chair Mansour asked the applicant about using text for the wall sign on the north elevation.

Mr. Irish replied the sign brings back what is truly inherent about Buddy's such as the proposed text: "Buddy's Original Square Pizza Since 1946". Having the text on this façade would capture the visitors' attention from the mall.

Chair Mansour read review criteria one from Section 86-221 of the Code of Ordinances which states unique circumstances exist that are peculiar to the land or structure that are not applicable to other land or structures in the same zoning district. She stated the request met this criteria.

Chair Mansour read review criteria two which states these special circumstances are not self-created. She stated the special circumstances were not self-created.

Chair Mansour read review criteria three which states strict interpretation and enforcement of the literal terms and provisions of this chapter would result in practical difficulties. Chair Mansour stated she had an issue with using text for the sign versus a sign with a logo in this location as it pertains to visibility.

Commissioner Hendrickson stated the logo would be helpful to address visibility concerns.

Director Kieselbach reminded the ZBA they should be looking at the request as a "content neutral sign". Granting a variance is not based on the wording on the sign. The wording on the sign could change in the future.

Member Hendrickson stated he supported the additional sign on the north elevation to address traffic coming from the mall.

Chair Mansour read review criteria four which states that the alleged practical difficulties which will result from a failure to grant the variance would unreasonably prevent the owner from using the property for a permitted purpose. She stated the wall sign would address the traffic coming onto the site.

Chair Mansour read review criteria five which states granting the variance is the minimum action that will make possible the use of the land or structure in a manner which is not contrary to the public interest and which would carry out the spirit of this zoning ordinance, secure public safety, and provide substantial justice. She stated the size of sign as presented is within what the Zoning Ordinance would allow if the sign had faced the road and was the minimum action necessary.

Chair Mansour read review criteria six which states granting the variance will not adversely affect adjacent land or the essential character in the vicinity of the property. She stated it will not affect the adjacent land and could improve traffic flow.

Chair Mansour read review criteria seven which states the conditions pertaining to the land or structure are not so general or recurrent in nature as to make the formulation of a general regulation for such conditions practicable. She stated orientation of the building was a unique circumstance.

Chair Mansour read review criteria eight which states granting the variance will be generally consistent with public interest and the purposes and intent of this Chapter. She stated the sign met this criteria.

Member Hendrickson asked how the carryout sign differs from the variance for the wall sign.

Principal Planner Menser replied the ZBA would need to grant a variance to allow two wall signs on the north elevation.

MEMBER HENDRICKSON MOVED TO APPROVE THE SIGN ON THE NORTH ELEVATION OF THE BUILDING.

SECONDED BY MEMBER FIELD-FOSTER.

Director Kieselbach stated, to clarify the motion, the size of the wall sign of 40.33 square feet should be included.

Member Hendrickson agreed to incorporate the size of the sign into the motion.

Member Field-Foster accepted the amendment.

Chair Mansour re-stated the motion to read: "MOVE TO APPROVE THE VARIANCE FOR THE WALL SIGN ON THE NORTH ELEVATION AS DETAILED IN THE BOARD PACKET AT 40.33 SQUARE FEET IN SIZE.

ROLE CALL TO VOTE:

YES: Members Hendrickson, Field-Foster, Kulhanek, Chair Mansour

NO: None

Motion carried unanimously.

3. Carryout sign

Chair Mansour asked the applicant if the carryout sign needed to be on the wall instead of in the window.

Mr. Baxter stated he would put the carryout sign in the window and withdraw the variance request.

7. OTHER BUSINESS

None

8. PUBLIC REMARKS

Chair Mansour opened the floor for public remarks and seeing none closed public remarks.

9. BOARD MEMBER COMMENTS

Member Hendrickson introduced himself as the Planning Commission representative and expressed appreciation for everyone's patience in this learning process.

Chair Mansour welcomed Members Hendrickson and Kulhanek and expressed appreciation to the staff for their hard work.

Member Field-Foster expressed appreciation to Mr. Baxter and Mr. Irish for being flexible on the variance requests for the Buddy's Rendezvous-Pizzeria.

Chair Mansour and IT Director Stephen Gebes thanked HOM-TV staff with televising the virtual meeting.

10. ADJOURNMENT

Meeting adjourned at 9:19 p.m.

Respectfully Submitted,
Robin Faust, Administrative Assistant II

Keith Chapman

From: Jackie Christie <jkchristie6399@yahoo.com>
Sent: Sunday, August 09, 2020 7:36 PM
To: Keith Chapman
Subject: ZBA #20-08-26-1 (Jerry Fedewa Homes)

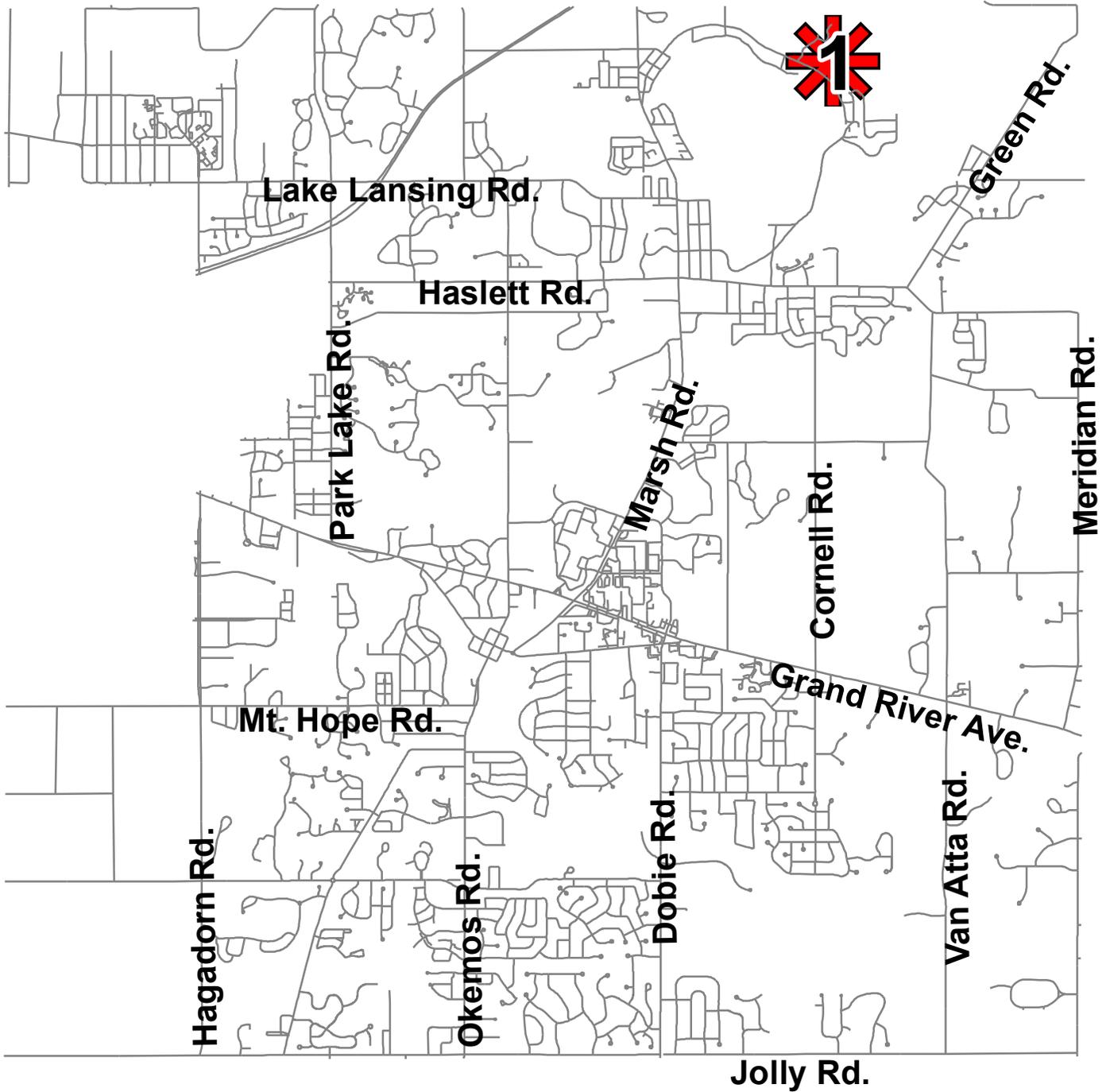
We are opposed to the variance request by Jerry Fedewa Homes for Parcel I.D. #02-101-004 for the following reasons:

1. The request does not meet all of your criteria to approve a variance.
2. If approved, it would set precedence for other applicants to request similar variances for the same reason.
3. It would increase water runoff due to an increase in impervious surface area leading to potential flooding in the surrounding area.

Mike and Jackie Christie
6399 E. Reynolds Rd.

Sent from my iPad

Meridian Township



Location Map

1. ZBA #20-08-26-1 (Jerry Fedewa Homes)



VARIANCE APPLICATION SUPPLEMENT

A variance will be granted, if the following Review Criteria are met:

1. Unique circumstances exist that are peculiar to the land or structure that are not applicable to other land or structures in the same zoning district.
2. These special circumstances are not self-created.
3. Strict interpretation and enforcement of the literal terms and provisions of this chapter would result in practical difficulties.
4. That the alleged practical difficulties which will result from a failure to grant the variance would unreasonably prevent the owner from using the property for a permitted purpose.
5. Granting the variance is the minimum action that will make possible the use of the land or structure in a manner which is not contrary to the public interest and which would carry out the spirit of this zoning ordinance, secure public safety, and provide substantial justice.
6. Granting the variance will not adversely affect adjacent land or the essential character in the vicinity of the property.
7. The conditions pertaining to the land or structure are not so general or recurrent in nature as to make the formulation of a general regulation for such conditions practicable.
8. Granting the variance will be generally consistent with public interest and the purposes and intent of this Chapter.



To: Zoning Board of Appeals
From: Keith Chapman, Assistant Planner
Date: August 21, 2020
Re: ZBA Case No. #20-06-26-1 (Jerry Fedewa Homes)

ZBA CASE NO.: 20-08-26-1 (Jerry Fedewa Homes), 5570 Okemos Road, East Lansing, MI 48834
LOCATION: East Lake Drive (Vacant Parcel)
PARCEL ID: 02-101-004
ZONING DISTRICT: RA (Single Family, Medium Density)

The applicant is requesting variances from the following sections of the Code of Ordinances:

- Section 86-471(b)(1), all structures and grading activities shall be setback from the edge of a water feature as follows: Wetlands regulated by the Township, the state, or by federal law equal to or greater than two acres in area; 40 feet.
- Section 86-471(c)(1), to minimize erosion, stabilize streambanks and wetland edges, protect water quality, and preserve fish and wildlife habitat, a natural vegetation strip shall be maintained from the edge of a water feature as follows: Wetlands regulated by the Township, the state, or by federal law; 20 feet.

Jerry Fedewa Homes, the applicant, has requested a variance to construct a proposed single family house located on East Lake Drive. The site is undeveloped. The approximate 13.02 acre site is zoned RA (Single Family, Medium Density).

The applicant intends to construct an approximately 2,143 square foot single family house near the northwest corner of the property. The house and proposed grading on site will be located within both the 40 foot wetland setback and the 20 foot natural vegetation strip. At the closest point the grading will be 2 feet from the wetland boundary.

There is one wetland located on the property. The applicant had a wetland delineation completed by Marx Wetlands, LLC on June 23 and 26, 2020. A wetland verification was conducted on July 30, 2020 by the Township's wetland consultant (WDV #20-03). The wetland covers 12.75 acres of the property, with the exception of the northwest corner where the house is proposed to be built. The wetland extends offsite to the north, south, and the west and is approximately 42.47 acres overall in size. Because the wetland is greater than five acres in size and within 500 feet of Lake Lansing it is regulated by both the State of Michigan and the Township.

The Zoning Ordinance specifies activities that are prohibited within the 20 foot and 40 foot wetland setbacks. The 40 foot wetland setback prohibits any structures or grading. Within the 20 foot wetland setback trees, shrubs, and ground cover may be selectively pruned or removed to

ZBA Case No. 20-08-26-1 (Jerry Fedewa Homes)
Zoning Board of Appeals (August 26, 2020)
Page 2

provide reasonable private access or views to water features, to remove potentially hazardous or nuisance exotic vegetation, and to improve or protect wildlife habitat. Such pruning and removal activities are subject to the following: 1. No more than 10% of the length of the strip shall be clear cut or mowed to the depth of the strip. 2. Pathways accessing water features shall not exceed 10 feet in width. 3. A live root system shall be maintained to provide for streambank stabilization and erosion control.

At the closest point the grading would be located 2' from the wetland boundary, encroaching 18' into the 20 foot natural vegetation strip and 38' into the 40 foot wetland setback. The applicant is requesting an 18' variance to construct the single family house within the 20 foot natural vegetation strip and a 38' variance to construct the single family house within the 40 foot wetland setback.

If the Zoning Board of Appeals decides to approve the request, staff recommends the following conditions:

- The applicant shall obtain a soil erosion and sedimentation control (SESC) permit from the Meridian Township Department of Public Works and Engineering, as applicable.
- The applicant shall stake the edge (limit) of grading on the parcel before any excavation or construction begins.
- The applicant shall install erosion control silt fencing along the boundary of the wetland before construction of the house and driveway to prevent erosion into the regulated wetland. The silt fencing shall remain for the duration of the house and driveway construction.

Attachments

1. Variance application dated July 22, 2020 and received by the Township on July 27, 2020.
2. Site Plan completed by Jerry Fedewa Homes dated August 4, 2020 and received by the Township on August 20, 2020.
3. Wetland Map completed by Marx Wetlands, LLC dated June 26, 2020 and received by the Township on July 27, 2020.
4. Site Survey completed by Kebs, Inc. dated July 22, 2020 and received by the Township on July 27, 2020.
5. Wetland Delineation completed by Marx Wetlands, LLC dated July 1, 2020 and received by the Township on July 27, 2020.
6. Wetland Verification completed by Fishbeck dated August 12, 2020 and received by the Township on August 12, 2020.
7. Site location map.

G:\COMMUN PLNG & DEV\PLNG\ZBA\2020 ZBA\ZBA 20-08-26\ZBA 20-08-26-1 (Jerry Fedewa Homes)\ZBA 20-08-26-1 staff report.zba1

CHARTER TOWNSHIP OF MERIDIAN
PLANNING DIVISION
5151 MARSH ROAD, OKEMOS, MI 48864
(517) 853-4560

VARIANCE APPLICATION

A. Applicant Jerry Fedewa Homes
Address of Applicant 5570 Okemos Rd. East Lansing, MI. 48834
Telephone (Work) (517) 339-0020 Telephone (Home) _____
Fax _____ Email address: fedewagr@gmail.com
Interest in property (circle one): Owner Tenant Option X Other

B. Site address/location E. Lake Drive. Haslett MI. 48840
Zoning district RA Parcel number 33-02-02-02-101-004

C. Nature of request (Please check all that apply):
 Request for variance(s)
 Request for interpretation of provision(s) of the "Zoning Ordinance" of the Code of Ordinances
 Review an order, requirements, decision, or a determination of a Township official charged with interpreting or enforcing the provisions of the "Zoning Ordinance" of the Code of Ordinances

Zoning Ordinance section(s) 86-471 Setbacks from water features and § 86-562 Side yard reductions.

D. Required Supporting Material Supporting Material if Applicable
-Property survey -Architectural sketches
-Legal description -Other
-Proof of property ownership or approval letter from owner
-Site plan to scale
-Written statement, which demonstrates how all the review criteria will be met (See next page)


Signature of Applicant

Jerry Fedewa
Print Name

8-4-2020
Date

Fee: \$1,100.00 Received by/Date: _____

I (we) hereby grant permission for members of the Charter Township of Meridian Zoning Board of Appeals, Township staff members and the Township's representatives or experts the right to enter onto the above described property (or as described in the attached information) in my (our) absence for the purposes of gathering information including but not limited to the taking and the use of photographs. (Note to Applicant(s): This is optional and will not affect any decision on your application.)

Signature of Applicant(s) _____
Date

Signature of Applicant(s) _____
Date

VARIANCE APPLICATION SUPPLEMENT

A variance will be granted, if the following Review Criteria are met:

1. Unique circumstances exist that are peculiar to the land or structure that are not applicable to other land or structures in the same zoning district. The attached parcel of land is almost entirely a wetland area.
2. These special circumstances are not self-created. The building envelope is created by the wetland.
3. Strict interpretation and enforcement of the literal terms and provisions of this chapter would result in practical difficulties. By using the Township required 40 feet of setback buffer as opposed to the DEQ requirement of 20 foot setback, the building envelope is restricted to a very small area. Because of the configuration of the lot we need to encroach on the side yard setback on the north side of the property.
4. That the alleged practical difficulties which will result from a failure to grant the variance would unreasonably prevent the owner from using the property for a permitted purpose. By not granting the variance the 12 acre parcel will be almost unbuildable.
5. Granting the variance is the minimum action that will make possible the use of the land or structure in a manner which is not contrary to the public interest and which would carry out the spirit of this zoning ordinance, secure public safety, and provide substantial justice. Granting the variance is the minimum action to make this parcel a buildable lot.
6. Granting the variance will not adversely affect adjacent land or the essential character in the vicinity of the property. The surrounding properties will not be impacted by this decision as there are no adjacent residential property owners.
7. The conditions pertaining to the land or structure are not so general or recurrent in nature as to make the formulation of a general regulation for such conditions practicable. This wetland area is so large with such a small building area this general condition is not very recurrent.
8. Granting the variance will be generally consistent with public interest and the purposes and intent of this Chapter. Granting this variance will not be detrimental to the wetland area as a whole and is consistent with the intent of the Chapter.

Effect of Variance Approval:

1. Granting a variance shall authorize only the purpose for which it was granted.
2. The effective date of a variance shall be the date of the Zoning Board of Appeals approves such variance.
3. A building permit must be applied for within 24 months of the date of the approval of the variance, and a Certificate of occupancy must be issued within 18 months of the date the building permit was issued, otherwise the variance shall be null and void.

Reapplication:

1. No application for a variance, which has been denied wholly or in part by the Zoning Board of Appeals, shall be resubmitted until the expiration of one (1) year or more from the date of such denial, except on grounds of newly discovered evidence or proof of changed conditions found by the Zoning Board of Appeals to be sufficient to justify consideration.



Fedewa Residence
 Lake Dr. Haslett, MI
 ZBA Application

DATE
8-4-20

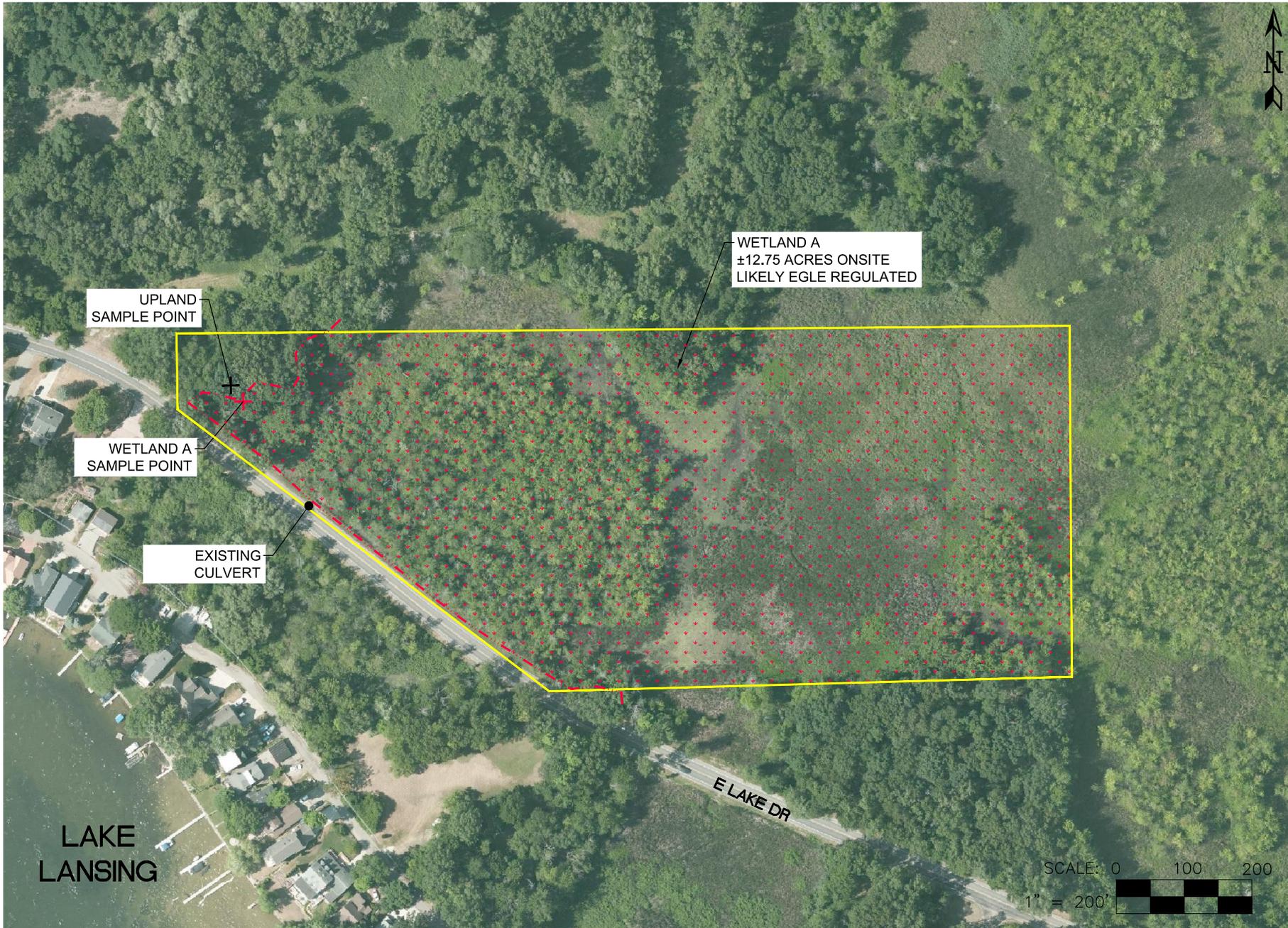
SHEET NO.
C2



**NORTHWEST CORNER
 OF 12 ACRE SITE**

1"=50'-0"

Parcel #:
33-02-02-02-101-004



LEGEND

- APPROX. ASSESSMENT AREA
- EXISTING WETLAND
- UPLAND SAMPLE POINT
- WETLAND SAMPLE POINT

NOTE: THIS MAP ILLUSTRATES AN APPROXIMATE DEPICTION OF THE WETLANDS LOCATED ON THE SUBJECT PROPERTY AS DELINEATED BY MARX WETLANDS, LLC. ON JUNE 23, 2020. PLEASE NOTE THAT THE EGLE HAS THE FINAL AUTHORITY ON THE EXTENT OF REGULATED WETLANDS, LAKES, AND STREAMS IN THE STATE OF MICHIGAN.

MARX WETLANDS, LLC.
3309 PLATT ROAD
ANN ARBOR, MICHIGAN 48108
(734) 478-8277



SECTION: 02	TOWN 04 NORTH, RANGE 01 WEST
MERIDIAN TOWNSHIP	
INGHAM COUNTY, MICHIGAN	

CLIENT: JERRY FEDEWA HOMES
PERRY ROAD & E LAKE DRIVE
PARCEL: 33-02-02-02-101-004

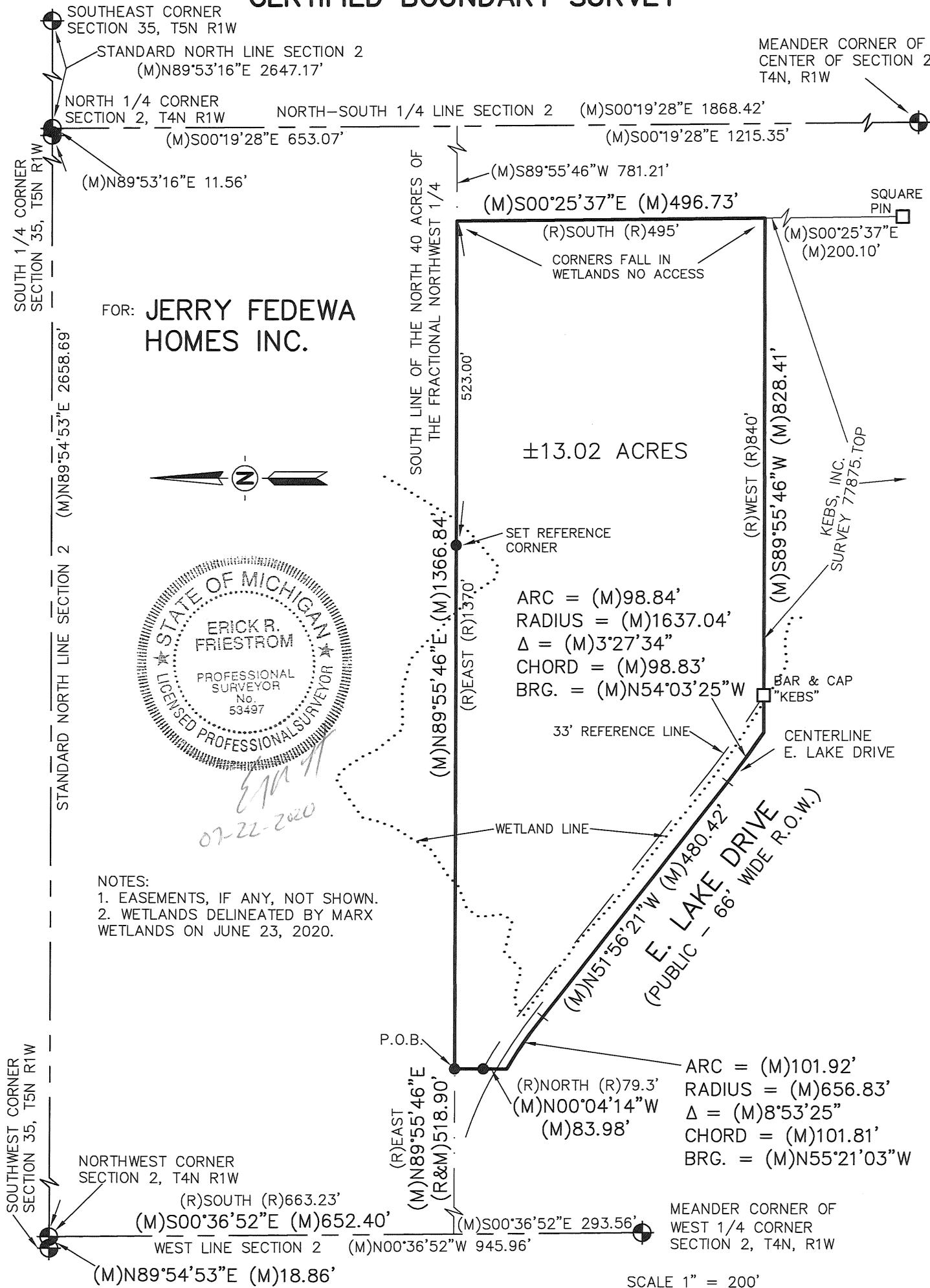
WETLAND LOCATION MAP

REVISIONS:

DATE: JUNE 26, 2020

SHEET NO.
01

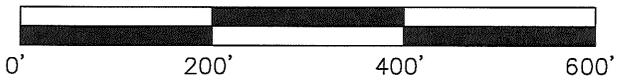
CERTIFIED BOUNDARY SURVEY



LEGEND

- (M) = Measured Distance
- (R) = Record Distance
- = Set 1/2" Bar with Cap
- = Found Iron as Noted
- = Survey Boundary Line
- = Distance Not to Scale
- x — = Fence
- ← 0.0'± = Denotes Distance to the Survey Line

All Dimensions are in Feet and Decimals Thereof.



KEBS, INC. KYES ENGINEERING
BRYAN LAND SURVEYS

2116 HASLETT ROAD, HASLETT, MI 48840
PH. 517-339-1014 FAX. 517-339-8047

13432 PRESTON DRIVE, MARSHALL, MI 49068
PH. 269-781-9800 FAX. 269-781-9805

DRAWN BY	SSF	SECTION	2, T4N, R1W
FIELD WORK BY	SW	JOB NUMBER:	96779.BND
SHEET	1 OF 3		

CERTIFIED BOUNDARY SURVEY

CERTIFICATE OF SURVEY:

I hereby certify only to the parties named hereon that we have surveyed at the direction of said parties, a parcel of land previously described as:

(As provided by Westcor Land Title Insurance Company, Commitment No. LIB135056, dated June 30, 2020)

Beginning at a point 663.23 feet South and 518.90 feet East of the Northwest corner of Section 2, Town 4 North, Range 1 West, thence East 1370 feet, thence South 495 feet, thence West 840 feet to centerline of Lake Lansing Drive, thence along said centerline to a point 79.3 feet South of Beginning, thence North to the Point of Beginning.

and that we have found or set, as noted hereon, permanent markers to all corners and angle points of the boundary of said parcel and that the more particular legal description of said parcel is as follows:

A parcel of land in the Northwest fractional 1/4 of Section 2, T4N, R1W, Meridian Township, Ingham County, Michigan, the surveyed boundary of said parcel described as: Commencing at the Southwest corner of Section 35, T5N, R1W, Bath Township, Clinton County, Michigan; thence N89°54'53"E along the standard North line of said Section 2 a distance of 18.86 feet to the Northwest corner of said Section 2; thence S00°36'52"E along the West line of said Section 2 a distance of 652.40 feet to the South line of the North 40 acres of the Fractional Northwest 1/4 of section 2; thence along said South line N89°55'46"E 518.90 feet to the point of beginning of this description; thence N89°55'46"E 1366.84 feet; thence S00°25'37"E 496.73 feet; thence S89°55'46"W parallel with said South line 828.41 feet to the centerline of E. Lake Drive; thence along said centerline the following three courses: Northwesterly 98.84 feet along a curve to the right, said curve having a radius of 1637.04 feet, a delta angle of 3°27'34", and a chord of 98.83 feet bearing N54°03'25"W; N51°56'21"W 480.42 feet; and Northwesterly 101.92 feet along a curve to the left, said curve having a radius of 656.83 feet, a delta angle of 8°53'25", and a chord of 101.81 feet bearing N55°21'03"W; thence N00°04'14"W 83.98 feet to the point of beginning; said parcel containing 13.02 acres more or less; said parcel subject to right-of-way for road purposes along E. Lake Drive; said parcel subject to all easements and restrictions if any.



griestrom
07-22-2020

	KEBS, INC.	KYES ENGINEERING BRYAN LAND SURVEYS
	2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 13432 PRESTON DRIVE, MARSHALL, MI 49068 PH. 269-781-9800 FAX. 269-781-9805	
DRAWN BY	SSF	SECTION 2, T4N, R1W
FIELD WORK BY	SW	JOB NUMBER:
SHEET	2 OF 3	96779.BND

CERTIFIED BOUNDARY SURVEY

WITNESSES TO SECTION CORNERS:

Northwest corner Section 2, T4N, R1W, Book 13, Page 196
 Found 2-1/2" pipe & cap #13039 in centerline of Perry Road
 Found nail & tag #25832 in South side of Power pole, S77°E, 33.66'
 2" steel fence anchor post, S85°E, 36.72'
 Found 1/2 bar, (I13, T5N, R1W), West 18.86'
 Set Pk nail in North side power pole, S80°W, 45.54'

North 1/4 corner of Section 2, T4N, R1W, Book 13, Page 199
 Found remon. bar & cap #47942
 Found remon. nail & tag Southeast side of 24" shagbark hickory, N60°E, 31.37'
 Found remon. nail & tag South side of 14" oak, S54°E, 19.70'
 Found Amended corner, 3/4" pipe North, 0.17'
 Found Remon. bar & cap, (J13, T5N, R1W), West, 11.56'

Meander corner for the West 1/4 corner Section 2, T4N, R1W, Book 13, Page 206
 Found remon. bar & cap #47942 along the extension of Perry Road
 Found remon. nail & tag in South side of 14" Maple, S85°E, 35.76'
 Found remon. nail & tag in Northeast side of twin 10" elm, N38°W, 27.32'
 Found remon. nail & tag in South side of Multi 8" elm, S67°W, 25.12'
 Top center of concrete culvert, S80°E, 7.0'

Meander corner for the Center of Section 2, T4N, R1W, Book 13, Page 202
 Found remon. bar & cap #47942 ±7' north of the north edge of pavement of Lake Drive
 Found remon. nail & tag in North side of 14" elm, N37°W, 21.34'
 Found remon. nail & tag in South side of 8" white ash, N74°E, 5.39'
 Found remon. nail & tag in North side of 14" hickory, S73°E, 42.50'
 Top center bolt of hydrant, N50°W, 36.47'

Southwest corner Section 35, T5N, R1W, Liber 4, Page 333
 Found 1/2 bar, ±3' west of west edge of asphalt of Perry Road
 2" steel fence anchor post, S85°E, 55.73'
 Found nail & tag #25832 in South side of utility pole, S77°E, 51.91'
 Found 2-1/2" pipe & cap #13039, (I-01, T4N, R1W), East, 18.86'
 Set PK nail in North side power pole, S70°W, 27.28'

South 1/4 corner of Section 35, T5N, R1W, Liber 4, Page 335
 Found remon. bar & cap #13039
 Found nail & tag Southeast side of 13" cherry, S55°W, 20.86'
 Found nail & tag North side of 10" wood fence post, N88°W, 18.32'
 Found nail & tag North side of 10" wood fence post, S85°E, 11.68'
 Found Remon. bar & cap, (J01, T4N, R1W), East, 11.56'

Southeast corner Section 35, T5N, R1W, Liber 4, Page 337
 Found 1-1/2" pipe in marsh on West side of North-South drain
 Found nail & tag #13039 in West side of 33" Oak, S02°E, 163.31'
 Found nail & tag #13039 in East side of 24" Maple, S12°W, 158.08'
 Found nail & tag #13039 in East side of 9" Maple, S10°W, 112.27'
 Found nail & tag #13039 in East side of 6" Maple, S04°W, 108.54'

I certify that the requirements for 1970 PA 132, MCL 54.213 have been met. The relative positional precision of the corners identified for this survey and shown on the map are within the limits accepted by the professional practice of surveying.

All bearings are Michigan State Plane South Zone grid bearings obtained from GPS observations using corrections obtained from the Lansing C.O.R.S.



E.R.F.
 Erick R. Friestrom
 Professional Surveyor No. 53497
 Date: 07-22-2020

	KEBS, INC.	KYES ENGINEERING BRYAN LAND SURVEYS
	2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047	
	13432 PRESTON DRIVE, MARSHALL, MI 49068 PH. 269-781-9800 FAX. 269-781-9805	
DRAWN BY SSF	SECTION 2, T4N, R1W	
FIELD WORK BY SW	JOB NUMBER:	
SHEET 3 OF 3	96779.BND	



MARX
WETLANDS
LLC

July 1, 2020

Mr. Jerry Fedewa
Jerry Fedewa Homes
5570 Okemos Rd.
East Lansing, Michigan 48823
Office (517) 339-0020
Cell (517) 719-6300
www.jerryfedewahomes.com

**Re: Wetland Determination and Delineation- E. Perry Road and E. Lake Drive
Parcel #33-02-02-02-101-004
Section 2, Meridian Township, Ingham County, Michigan**

Dear Mr. Fedewa:

Pursuant to your request, Marx Wetlands LLC conducted a wetland delineation for an approximately 12-acre parcel (#parcel 33-02-02-02-101-004) ("Site"), located directly north of East Lake Drive and approximately 0.10 miles south of E. Perry Road within the northeast quadrant of section 2 of Meridian Township (T4N, R1W), Ingham County, Michigan.

The intent of this determination is to provide a report of the character of any wetland areas within the subject parcel and an opinion as to the possible jurisdiction of the Michigan Department of Environment, Great Lakes, and Energy (EGLE), and/or local governances over wetland areas identified on-site. The wetland determination and delineation was performed in accordance with the Michigan Department of Environmental Quality Wetland Identification Manual (2001), the Northcentral-Northeast and Midwest Interim Regional Supplements to the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual. The delineation of any wetland depends on three basic parameters. These parameters are: 1) the presence of hydrophytic vegetation (plants adapted to living in saturated soils), 2) hydric soils (distinctive soil types that develop under saturated conditions), and 3) wetland hydrology (the presence of water at or near the surface for a specific period of time). The above parameters are virtually always inter-related and present in wetland systems.

The wetland delineation consisted of desktop review of available background documentation and mapping followed by two (2) on-site visits conducted by MW on June 23 and 26, 2020. A review of the findings is provided below.

Site Characteristics

Based on review of aerial photographs, available on-line resources, and an on-site visit, the Site contains undeveloped land, consisting of upland forest and wetland.

The upland forest was identified in the western end of the Site. This area generally contains oaks (*Quercus alba*, *Q. rubra*, and *Q. velutina*), black walnut (*Juglans nigra*), black cherry (*Prunus serotina*), box-elder (*Acer negundo*), scattered with cottonwood (*Populus deltoides*), sassafras (*Sassafras albidum*), basswood (*Tilia*

3309 Platt Road
Ann Arbor, Michigan
Mobile: 734-478-8277
e-mail

bg.marxwetlands@gmail.com

E. Perry Road and E. Lake Drive
 Meridian Township, Ingham County, MI
 Page 2 of 6

americanum), American elm (*Ulmus americana*), and white ash (*Fraxinus americana*.) trees. Upland herbaceous understory species include strawberry (*Fragaria virginiana*), may-apple (*Podophyllum peltatum*), helleborine (*Epipactis helleborine*), Pennsylvania sedge (*Carex pennsylvanica*), and white avens (*Geum canadense*). Upland shrub and vine species include Eurasian honeysuckles (*Lonicera tatarica* and *L. macckii*), prickly gooseberry (*Ribes cynasbati*), Japanese barberry (*Berberis thunbergii*), multi-flora rose (*Rosa multiflora*), common buckthorn (*Rhamnus cathartica*), autumn-olive (*Elaeagnus umbellata*), riverbank grape (*Vitis riparia*), and thicket creeper (*Parthenocissus inserta*). Refer to the *Site Photographs Log (Enclosure 1)*.

Wetland Determination & Delineation

One large wetland system (Wetland A) was identified within or along the Site. Refer to the enclosed *Wetland Location Map*. Refer to **Table 1**, below.

Table 1. Natural Features Table

Feature Name	Type*	Regulated by the State of Michigan?	Meridian Township Regulated?
Wetland A	PFO/PEM/PSS	Likely; > 5 acres in size and within 500 feet of Lake Lansing	Likely; >1/4 acre and within 500 feet of Lake Lansing

Vegetation

Common herbaceous vegetation observed within Wetland A includes fowl manna grass (*Glyceria striata*), sensitive fern (*Onoclea sensibilis*), reed canary grass (*Phalaris arundinacea*), false nettle (*Boehmeria cylindrica*), late goldenrod (*Solidago gigantea*), and sedges (*Carex intumescens*, *C. lacustris*, and *vulpinoidea*). Woody vines observed include poison-ivy (*Toxicodendron radicans*) and river-bank grape. Common shrubs observed include glossy buckthorn (*Frangula alnus*), common buckthorn, and black ash saplings (*Fraxinus nigra*). Dominant tree species include American elm, box-elder, and silver maple (*Acer saccharinum*).

Although upland-ranked honeysuckles were flagged within the limits of Wetland A, it appeared as if these species were functioning as hydrophytes as stipulated in the Chapter 5, *Difficult Wetland Situations in the Northcentral and Northeast Region (NCNE)* under subsection *Problematic Hydrophytic Vegetation* of the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: NCNE Region (version V.2.0; USACE 2012). According to this Chapter 5, both honeysuckles (Facultative Upland) and buckthorn (Non-native) can occur in and dominate many wetlands in the NCNE Region and may cause a wetland plant community to fail to meet any of the hydrophytic vegetation indicators. Marx Wetlands LLC included some of these areas as wetland, but only areas that contained both hydric soils and wetland hydrology and the upland-ranked problematic vegetation.

E. Perry Road and E. Lake Drive
Meridian Township, Ingham County, MI
Page 3 of 6

The species within these wetlands range in wetland indicator status from obligate (OBL) to facultative (FAC), indicating species that typically occur in wetlands.

Hydrology

Typical hydrology indicators observed include standing water, saturation, hummocks, water-stained leaves, water marks, saturation visible on aerial imagery, geomorphic position, and FAC Neutral Test. This wetland appears to receive hydrology from precipitation, runoff from adjacent developed areas, and roadways, and overflow adjacent wetlands, resulting in seasonally saturated to seasonally inundated water regimes.

Soils

Hydric soil indicators were observed in soil sample pits within the on-site wetland. An adjacent upland sample plot was collected as well. Please refer to enclosed *USACE Wetland Determination Data Forms*.

100-Year Floodplain

No watercourses or drains were identified during the site visit. Refer to *Meridian County (NE) Drain Map (Enclosure 3)*.

Review of the Federal Emergency Management Agency (FEMA) FIRM Panel No. 26065C0044D, (eff. 8/16/2011) revealed that the Site lies within an area mapped as Zone X: an area that is determined to be outside the 100-year floodplain. Lake Lansing appears to have a 100-year floodplain mapped as Zone AE (with available Base Flood Elevation- BFE at approximately 853 feet above sea level); however, is situated approximately 450 south of the Site (**Enclosure 4**).

Regulations & Recommendations

Watercourse, Drain, and Floodplain Regulations

Part 301, Inland Lakes and Streams, states that a feature is considered a regulated watercourse by the EGLE if it possesses a defined bed, bank, and evidence of continued flow or a continued occurrence of water. **No watercourses were identified within the Site.**

In addition, no county drains appear to be located within the Site. County drains typically have an easement for construction and maintenance purposes and where development or structures are prohibited. **Although no watercourses or drains appear to be within the Site, be sure to contact the Ingham County Drain Commissioners office to see if the proposed site development requires any approvals or other permits through Ingham County.** Refer to **Enclosure 3- Ingham County – Meridian Township (NE) Drain Map**.

E. Perry Road and E. Lake Drive
Meridian Township, Ingham County, MI
Page 4 of 6

Part 31, Water Resources Protection, of the NREPA regulates activities within the 100-year floodplain and floodway of a river, stream, or drain, and within the floodplain of any watercourse with an upstream drainage area of two square miles or larger. A Part 31 permit is required for construction within a regulated floodplain or floodway. MW's preliminary review of FEMA FIRM Panel No. 26065C0044D, (eff. 8/16/2011) revealed that the Site appears to be mapped as Zone X: an area that is determined to be outside the 100-year floodplain. **A floodplain elevation request or pre-application meeting through the EGLE can assist with the project development process and/or floodplain permitting, if applicable. Refer to the Firm Map (Enclosure 4).**

State and Local Wetland Regulations

Part 303, Wetlands Protection, of the NREPA states that if a wetland is five acres in size or larger and/or connected to or located within 500 feet of a river, stream, lake, or pond, it is considered regulated by the EGLE.

Marx Wetlands, LLC has the professional opinion that the on-site wetland is likely regulated by the EGLE. Wetland A is larger than 5 acres in size and within 500 feet of Lake Lansing. **Therefore, Wetland A appears to meet the requirements of Part 303, Wetlands Protection, of the NREPA, and therefore likely falls under the jurisdiction of the EGLE.**

Local Regulations

In addition, Meridian Township (Township) has its own wetland protection ordinance. The township's Wetland Protection ordinance (Chapter 22, Article IV) states that wetlands are protected if they are:

- contiguous to any inland lake stream, river, or pond.
- Partially or entirely within 500 feet of the ordinary high-water mark of any inland lake, stream, river or pond.
- Two or more areas of wetland separated only by barriers, such as dikes, roads, berms or other similar features, if any of those wetlands are contiguous to an inland lake, stream, river or pond.
- larger than two acres, even if not contiguous to an inland lake, stream, river or pond.
- not contiguous to any inland lake, stream, river or pond, if the state department of environmental quality determines the protection of the wetland is essential to the preservation of the natural resources of the state from pollution, impairment or destruction.

- wetlands, equal to or greater than one-quarter acre and equal to or less than two acres in size, which are not contiguous to any inland lake, stream, river or pond and are determined to be essential to the preservation of the natural resources of the Township as provided in township code § 22-156. Code § 22-156 provides that a wetland is essential to the preservation of the township's natural resources if it fulfills any of ten criteria.

It is the professional opinion of Marx Wetlands LLC that Wetland A is also likely regulated by Meridian Township's Code § 22-156. Meridian Township's wetland consultant will make the final decision regarding the regulatory statuses, shape, and extent of the on-site wetlands during a wetland verification visit.

It is important to note that a wetland verification application is required following a wetland delineation conducted within Meridian Township, Ingham County, Michigan. The Meridian Township's wetland consultant will make the final decisions during an on-site wetland verification visit. Applications should include the following information:

- A completed application form.
- The required administrative fee and escrow amount addressed to Meridian Charter Township.
- Written permission from the property owner if the property owner is not the applicant.
- For verifications only: written confirmation that the wetland flags are located on the site and remain observable.
- For verifications only: three (3) copies of an existing wetland delineation report and accompanying maps and materials prepared by a wetland or environmental consultant.
- Copies of any correspondence received from the Michigan Department of Environment, Great Lakes, and Energy (EGLE).
- Copies of any permits issued by the Ingham County Drain Commissioner's office for the subject site.

The Meridian Township Wetland Verification & Escrow form can be found here: <http://www.meridian.mi.us/Home/ShowDocument?id=12235>.

Please note that the Meridian Township Board has a policy of no net loss of wetlands and impacts to wetlands may require wetland mitigation. A mitigation plan, if required, shall be approved as part of the wetland use permit decision.

A permit or approval is likely required by the Meridian Township for any proposed work (e.g., filling, dredging, construction, and draining and/or other development) that takes place within the boundaries of a regulated wetland.

July 1, 2020

E. Perry Road and E. Lake Drive
Meridian Township, Ingham County, MI
Page 6 of 6

Most construction activities that take place outside of these boundaries do not require a wetland permit from the EGLE or Meridian Township. **Please note that the EGLE and Township have the final authority on the extent of regulated wetlands, lakes, floodplains, and streams in the State of Michigan and Meridian Township, respectively.**

Please be advised that the information provided in this report is a professional opinion. The ultimate decision on wetland boundary locations and jurisdiction thereof rests with the EGLE and/or local government, and, in some cases, the federal government. Therefore, there may be adjustments to boundaries based upon review by a regulatory agency. An agency determination can vary depending on various factors including, but not limited to, experience of the agency representative making the determination and the season of the year. In addition, the physical characteristics of the site can change over time, depending on the weather, vegetation patterns, drainage, activities on adjacent parcels, or other events. Any of these factors can change the nature and/or extent of wetlands on the site.

Thank you for the opportunity to provide this wetland determination and TES habitat review. If you have any questions, please contact me at your convenience.

Sincerely,



Bryana Guevara, PWS
ISA Certified Arborist #MI-4042A
Marx Wetlands, LLC

Enclosures:

- 1) Site Photographs Log**
- 2) Wetland Location Map & Wetland Determination Data Forms**
- 3) Meridian Township Northeast Drain Map**
- 4) FIRM Map and other publicly available background information**

Site Photographs



1) View of typical upland forest identified throughout the northwest corner of the Site.



2) Another upland forest area identified along the north-central portion of the Site.



3) A southeast-facing view of the southern boundary along E. Lake Drive. *Wetland A along the north side of E. Lake Drive.*



4) Existing culvert at E. Lake Drive, which appears to drain south off-site to Lake Lansing.

Site Photographs



5) A northeast-facing view of Wetland A.



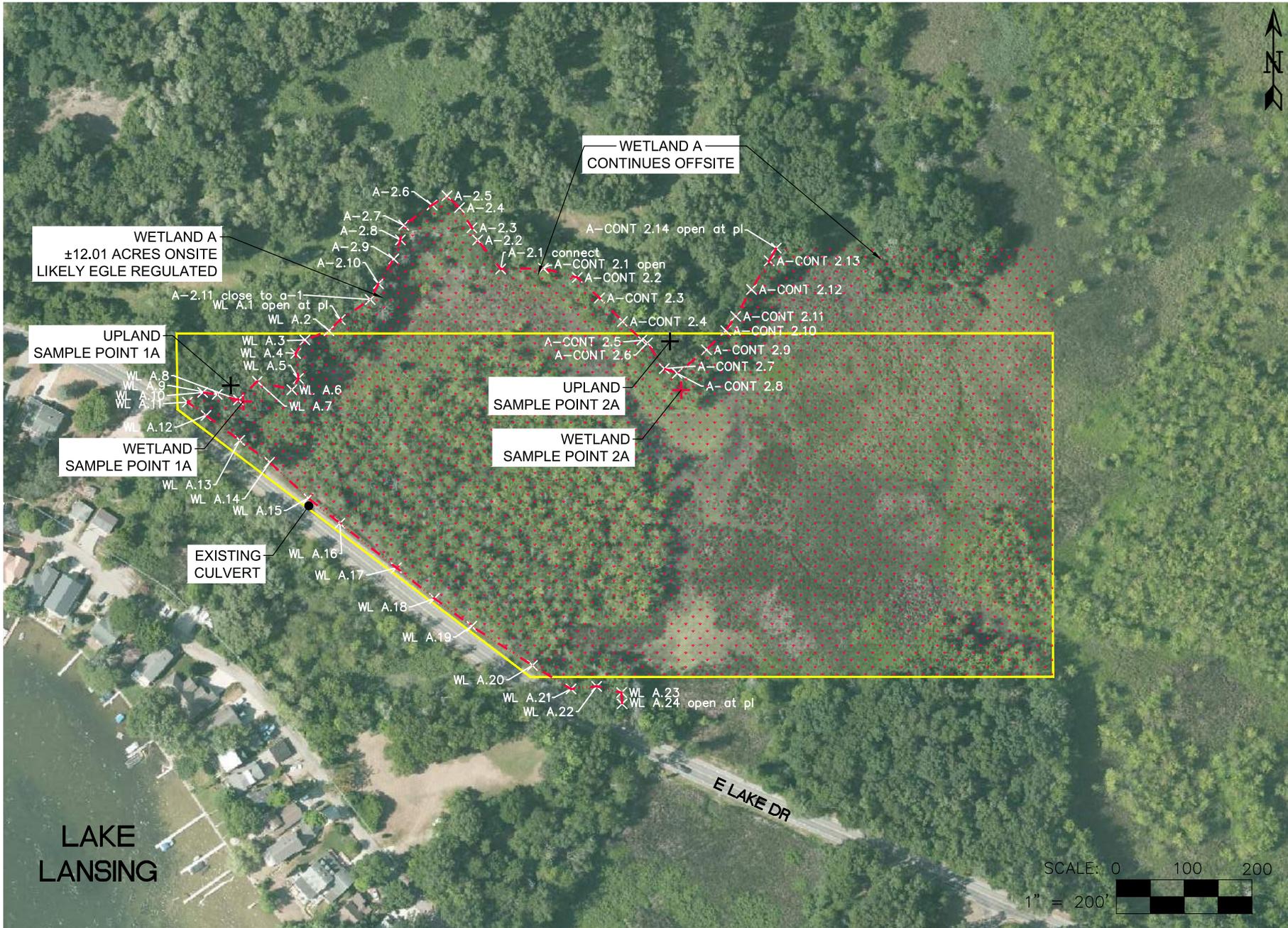
6) Another view of the forested portion of Wetland A.



7) View of Wetland A from upland ridge (north end of the property).



8) Open water component of Wetland A, extending off-site.



LEGEND

- APPROX. ASSESSMENT AREA
- EXISTING WETLAND
- + UPLAND SAMPLE POINT
- + WETLAND SAMPLE POINT

NOTE: THIS MAP ILLUSTRATES AN APPROXIMATE DEPICTION OF THE WETLANDS LOCATED ON THE SUBJECT PROPERTY AS DELINEATED BY MARX WETLANDS, LLC. ON JUNE 23, 2020. PLEASE NOTE THAT THE EGLE HAS THE FINAL AUTHORITY ON THE EXTENT OF REGULATED WETLANDS, LAKES, AND STREAMS IN THE STATE OF MICHIGAN.

MARX WETLANDS, LLC.
 3309 PLATT ROAD
 ANN ARBOR, MICHIGAN 48108
 (734) 478-8277



SECTION: 02	TOWN 04 NORTH, RANGE 01 WEST
MERIDIAN TOWNSHIP	
INGHAM COUNTY, MICHIGAN	

CLIENT: JERRY FEDEWA HOMES	WETLAND LOCATION MAP
PERRY ROAD & E LAKE DRIVE	
PARCEL: 33-02-02-02-101-004	

REVISIONS:	

DATE: JULY 2, 2020

SHEET NO.
01

Image/Sketch for Parcel: 33-02-02-02-101-004



****Disclaimer:** BS&A Software provides BS&A Online as a way for municipalities to display information online and is not responsible for the content or accuracy of the data herein. This data is provided for reference only and WITHOUT WARRANTY of any kind, expressed or inferred. Please contact your local municipality if you believe there are errors in the data.

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National Flood Hazard Layer FIRMette



84°24'26"W 42°46'17"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes, Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

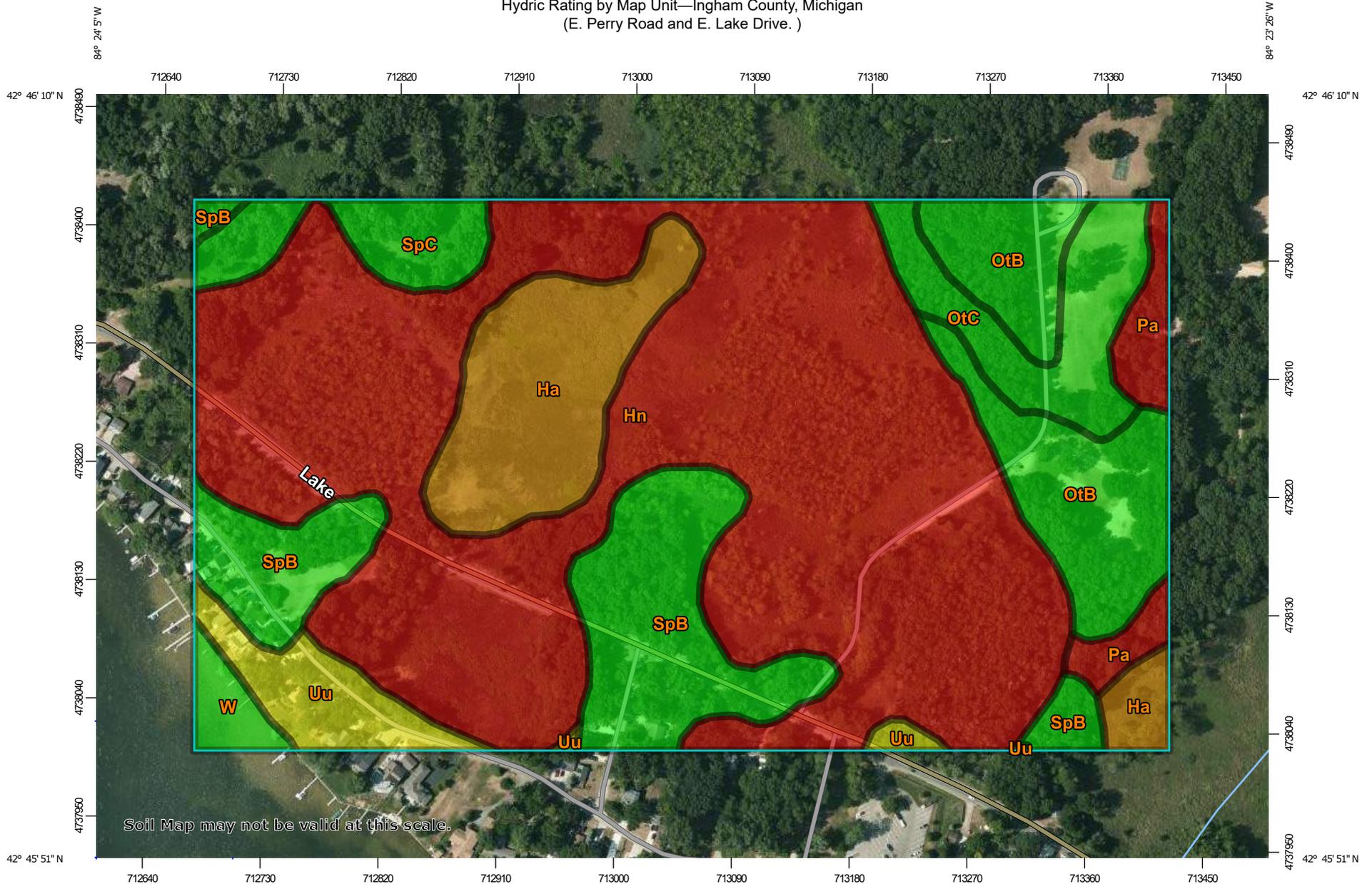


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

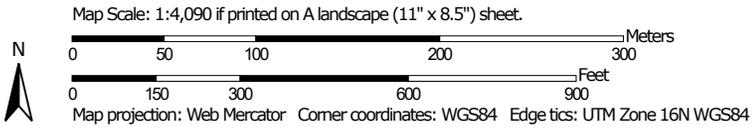
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/29/2020 at 11:21 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Hydric Rating by Map Unit—Ingham County, Michigan
(E. Perry Road and E. Lake Drive.)



Soil Map may not be valid at this scale.



Hydric Rating by Map Unit—Ingham County, Michigan
(E. Perry Road and E. Lake Drive.)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ingham County, Michigan
Survey Area Data: Version 17, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 4, 2018—Jul 18, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ha	Histosols and Aquents, ponded	92	7.1	9.1%
Hn	Houghton muck, 0 to 1 percent slopes	100	41.8	53.9%
OtB	Oshtemo-Spinks loamy sands, 0 to 6 percent slopes	0	7.0	9.0%
OtC	Oshtemo-Spinks loamy sands, 6 to 12 percent slopes	0	4.0	5.1%
Pa	Palms muck, 0 to 1 percent slopes	100	1.8	2.4%
SpB	Spinks loamy sand, 0 to 6 percent slopes	0	9.5	12.2%
SpC	Spinks loamy sand, 6 to 12 percent slopes	0	2.6	3.4%
Uu	Urban land-Fluvaquents complex	45	2.8	3.7%
W	Water	0	1.0	1.2%
Totals for Area of Interest			77.5	100.0%

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

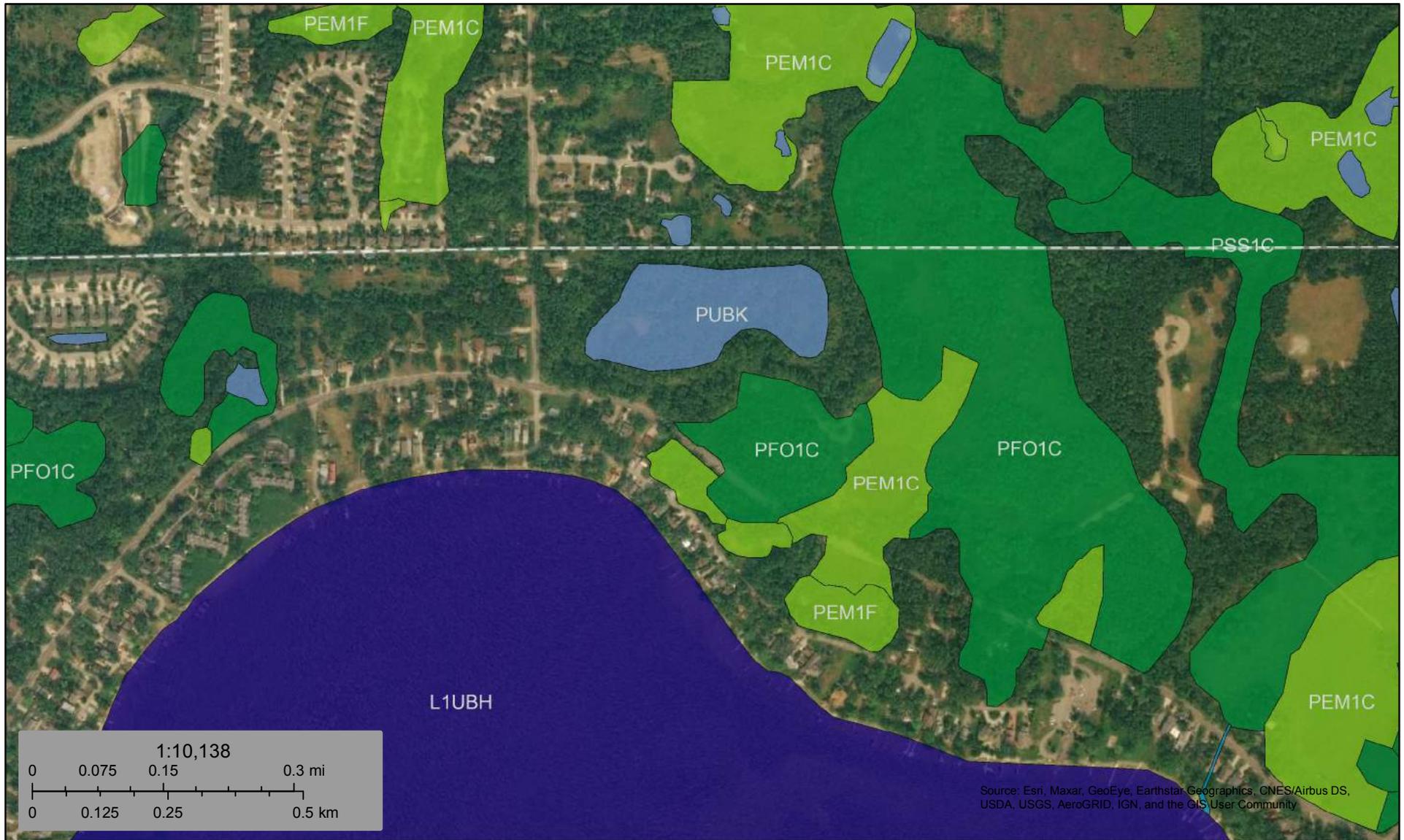
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower



June 22, 2020

Wetlands

- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Estuarine and Marine Wetland
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: E. Perry Road and E. Lake Drive City/County: Meridian Township/Ingham Co Sampling Date: 6/23/2020
 Applicant/Owner: Fedewa Homes; Jerry Fedewa State: MI Sampling Point: A-1
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S2, T4N, R1W
 Landform (hillside, terrace, etc.): lowland/depression Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR L Lat: 42.76777595 Long: -84.40062973 Datum: WSG84
 Soil Map Unit Name: Houghton muck, 0 to 1 percent slopes NWI classification: PFO/PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u> Hydric Soil Present? Yes <u>x</u> No <u> </u> Wetland Hydrology Present? Yes <u>x</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland A occupies the majority of the property, extending east and north off-site.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u>X</u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u>X</u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u>X</u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u>X</u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u>X</u> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u>X</u> Crayfish Burrows (C8) <u>X</u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u>X</u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>XX</u> No <u> </u> Depth (inches): <u>10+</u> Water Table Present? Yes <u>XX</u> No <u> </u> Depth (inches): <u> </u> Saturation Present? Yes <u>XX</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: This wetland appears to receive hydrology from precipitation, groundwater, runoff from adjacent developed areas, and roadways, overflow from adjacent wetlands, resulting in seasonally to semi-permanently inundated water regime.	

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: E. Perry Road and E. Lake Drive City/County: Meridian Township/Ingham Co Sampling Date: 6/23/2020
 Applicant/Owner: Fedewa Homes; Jerry Fedewa State: MI Sampling Point: UPL A-1
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S2, T4N, R1W
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR L Lat: 42.7678405389, Long: -84.40069875 Datum: WSG84
 Soil Map Unit Name: Houghton muck, 0 to 1 percent slopes/Spinks loamy sand, 6 to 12 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Upland to Wetland A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sampling plot taken adjacent to Wetland SP-A1 location.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland Hydrology was not identified at this sampling plot.	

VEGETATION – Use scientific names of plants.

Sampling Point: UPL A-1

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30-ft radius</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>12</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>55</u></td> <td>x 3 = <u>165</u></td> </tr> <tr> <td>FACU species <u>190</u></td> <td>x 4 = <u>760</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>260</u> (A)</td> <td><u>1000</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.85</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>55</u>	x 3 = <u>165</u>	FACU species <u>190</u>	x 4 = <u>760</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>260</u> (A)	<u>1000</u> (B)	Prevalence Index = B/A = <u>3.85</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>55</u>	x 3 = <u>165</u>																			
FACU species <u>190</u>	x 4 = <u>760</u>																			
UPL species <u>15</u>	x 5 = <u>75</u>																			
Column Totals: <u>260</u> (A)	<u>1000</u> (B)																			
Prevalence Index = B/A = <u>3.85</u>																				
1. <u>Prunus serotina</u>	15	Yes	FACU																	
2. <u>Quercus alba</u>	10	Yes	FACU																	
3. <u>Quercus rubra</u>	10	Yes	FACU																	
4. <u>Quercus velutina</u>	10	Yes	FACU																	
5. <u>Fraxinus americana</u>	15	Yes	FACU																	
6. _____																				
7. _____																				
	60	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15-ft radius</u>)																				
1. <u>Elaeagnus umbellata</u>	30	Yes	FACU																	
2. <u>Rhamnus cathartica</u>	15	Yes	FAC																	
3. <u>Lonicera tatarica</u>	15	Yes	FACU																	
4. <u>Lonicera maackii</u>	10	No	UPL																	
5. <u>Rosa multiflora</u>	5	No	FACU																	
6. _____																				
7. _____																				
	75	=Total Cover																		
Herb Stratum (Plot size: <u>5-ft radius</u>)																				
1. <u>Carex gracillima</u>	10	No	FACU																	
2. <u>Carex pennsylvanica</u>	30	Yes	FACU																	
3. <u>Epipactis helleborine</u>	5	No	UPL																	
4. <u>Podophyllum peltatum</u>	15	Yes	FACU																	
5. <u>Geum canadense</u>	10	No	FAC																	
6. <u>Fragaria virginiana</u>	15	Yes	FACU																	
7. <u>Carex rosea</u>	10	No	FACU																	
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	95	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30-ft radius</u>)																				
1. <u>Parthenocissus inserta</u>	30	Yes	FAC																	
2. _____																				
3. _____																				
4. _____																				
	30	=Total Cover																		
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																				
Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: E. Perry Road and E. Lake Drive City/County: Meridian Township/Ingham Co Sampling Date: 6/26/2020
 Applicant/Owner: Fedewa Homes; Jerry Fedewa State: MI Sampling Point: A-2
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S2, T4N, R1W
 Landform (hillside, terrace, etc.): lowland/depression Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR L Lat: 42.767947 Long: -84.398227 Datum: WSG84
 Soil Map Unit Name: Houghton muck, 0 to 1 percent slopes NWI classification: PFO/PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u> Hydric Soil Present? Yes <u>x</u> No <u> </u> Wetland Hydrology Present? Yes <u>x</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>x</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland A occupies the majority of the property, extending east and north off-site.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
---	--

Field Observations: Surface Water Present? Yes <u>XX</u> No <u> </u> Depth (inches): <u>2+</u> Water Table Present? Yes <u>XX</u> No <u> </u> Depth (inches): <u> </u> Saturation Present? Yes <u>XX</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
--	---

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

Remarks:
 This wetland appears to receive hydrology from precipitation, groundwater, runoff from adjacent developed areas, and roadways, overflow from adjacent wetlands, resulting in seasonally to semi-permanently inundated water regime.

VEGETATION – Use scientific names of plants.

Sampling Point: A-2

	Absolute % Cover	Dominant Species?	Indicator Status																													
Tree Stratum (Plot size: <u>30-ft radius</u>)																																
1. <u><i>Acer saccharinum</i></u>	30	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 9 </u> (A) Total Number of Dominant Species Across All Strata: <u> 9 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 100.0% </u> (A/B)																												
2. <u><i>Acer rubrum</i></u>	30	Yes	FAC																													
3. <u><i>Populus deltoides</i></u>	10	No	FAC																													
4. _____																																
5. _____																																
6. _____																																
7. _____																																
	<u>70</u>	=Total Cover																														
Sapling/Shrub Stratum (Plot size: <u>15-ft radius</u>)																																
1. <u><i>Frangula alnus</i></u>	10	Yes	FAC	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;"><u> 10 </u></td> <td style="text-align:center;">x 1 =</td> <td style="text-align:center;"><u> 10 </u></td> </tr> <tr> <td style="text-align:right;">OBL species</td> <td style="text-align:center;"><u> 140 </u></td> <td style="text-align:center;">x 2 =</td> <td style="text-align:center;"><u> 280 </u></td> </tr> <tr> <td style="text-align:right;">FACW species</td> <td style="text-align:center;"><u> 105 </u></td> <td style="text-align:center;">x 3 =</td> <td style="text-align:center;"><u> 315 </u></td> </tr> <tr> <td style="text-align:right;">FAC species</td> <td style="text-align:center;"><u> 0 </u></td> <td style="text-align:center;">x 4 =</td> <td style="text-align:center;"><u> 0 </u></td> </tr> <tr> <td style="text-align:right;">FACU species</td> <td style="text-align:center;"><u> 0 </u></td> <td style="text-align:center;">x 5 =</td> <td style="text-align:center;"><u> 0 </u></td> </tr> <tr> <td style="text-align:right;">UPL species</td> <td style="text-align:center;"><u> 255 </u></td> <td style="text-align:center;">(A)</td> <td style="text-align:center;"><u> 605 </u> (B)</td> </tr> <tr> <td style="text-align:right;">Column Totals:</td> <td colspan="3" style="text-align:center;">Prevalence Index = B/A = <u> 2.37 </u></td> </tr> </table>	Total % Cover of:	<u> 10 </u>	x 1 =	<u> 10 </u>	OBL species	<u> 140 </u>	x 2 =	<u> 280 </u>	FACW species	<u> 105 </u>	x 3 =	<u> 315 </u>	FAC species	<u> 0 </u>	x 4 =	<u> 0 </u>	FACU species	<u> 0 </u>	x 5 =	<u> 0 </u>	UPL species	<u> 255 </u>	(A)	<u> 605 </u> (B)	Column Totals:	Prevalence Index = B/A = <u> 2.37 </u>		
Total % Cover of:	<u> 10 </u>	x 1 =	<u> 10 </u>																													
OBL species	<u> 140 </u>	x 2 =	<u> 280 </u>																													
FACW species	<u> 105 </u>	x 3 =	<u> 315 </u>																													
FAC species	<u> 0 </u>	x 4 =	<u> 0 </u>																													
FACU species	<u> 0 </u>	x 5 =	<u> 0 </u>																													
UPL species	<u> 255 </u>	(A)	<u> 605 </u> (B)																													
Column Totals:	Prevalence Index = B/A = <u> 2.37 </u>																															
2. <u><i>Fraxinus nigra</i></u>	15	Yes	FACW																													
3. <u><i>Cornus amomum</i></u>	10	Yes	FACW																													
4. <u><i>Rhamnus cathartica</i></u>	10	Yes	FACW																													
5. _____																																
6. _____																																
7. _____																																
	<u>45</u>	=Total Cover																														
Herb Stratum (Plot size: <u>5-ft radius</u>)																																
1. <u><i>Phalaris arundinacea</i></u>	30	Yes	FACW	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																												
2. <u><i>Leersia oryzoides</i></u>	25	Yes	FACW																													
3. <u><i>Onoclea sensibilis</i></u>	10	No	FACW																													
4. <u><i>Glyceria striata</i></u>	10	No	OBL																													
5. <u><i>Urtica dioica</i></u>	10	No	FAC																													
6. _____																																
7. _____																																
8. _____																																
9. _____																																
10. _____																																
11. _____																																
12. _____																																
	<u>85</u>	=Total Cover																														
Woody Vine Stratum (Plot size: <u>30-ft radius</u>)																																
1. <u><i>Toxicodendron radicans</i></u>	45	Yes	FAC	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																												
2. <u><i>Vitis riparia</i></u>	10	No	FACW																													
3. _____																																
4. _____																																
	<u>55</u>	=Total Cover																														
Hydrophytic Vegetation Present?				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																												

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: E. Perry Road and E. Lake Drive City/County: Meridian Township/Ingham Co Sampling Date: 6/26/2020
 Applicant/Owner: Fedewa Homes; Jerry Fedewa State: MI Sampling Point: UPL A2
 Investigator(s): B.Guevara; Marx Wetlands LLC Section, Township, Range: S2, T4N, R1W
 Landform (hillside, terrace, etc.): ridge/hillside Local relief (concave, convex, none): concave Slope (%): 8%
 Subregion (LRR or MLRA): LRR L Lat: 42.7678405389, Long: -84.40069875 Datum: WSG84
 Soil Map Unit Name: Spinks loamy sand, 6 to 12 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u>Upland to Wetland A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sampling plot taken in adjacent upland north of the Wetland SP-A2 location.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland Hydrology was not identified at this sampling plot.	

VEGETATION – Use scientific names of plants.

Sampling Point: UPL A2

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30-ft radius</u>)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>11</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>18.2%</u> (A/B)</p> <p>Prevalence Index worksheet:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>215</u></td> <td>x 4 = <u>860</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>265</u> (A)</td> <td><u>1040</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.92</u></td> </tr> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p><small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small></p> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <p>Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>215</u>	x 4 = <u>860</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>265</u> (A)	<u>1040</u> (B)	Prevalence Index = B/A = <u>3.92</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>35</u>	x 3 = <u>105</u>																			
FACU species <u>215</u>	x 4 = <u>860</u>																			
UPL species <u>15</u>	x 5 = <u>75</u>																			
Column Totals: <u>265</u> (A)	<u>1040</u> (B)																			
Prevalence Index = B/A = <u>3.92</u>																				
1. <u>Prunus serotina</u>	20	Yes	FACU																	
2. <u>Tilia americana</u>	25	Yes	FACU																	
3. <u>Quercus rubra</u>	15	Yes	FACU																	
4. <u>Acer saccharum</u>	10	No	FACU																	
5. <u>Sassafras albidum</u>	10	No	FACU																	
6. <u>Quercus velutina</u>	15	Yes	UPL																	
7. _____																				
	95	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15-ft radius</u>)																				
1. <u>Elaeagnus umbellata</u>	25	Yes	FACU																	
2. <u>Rhamnus cathartica</u>	10	Yes	FAC																	
3. <u>Ribes cynosbati</u>	10	Yes	FACU																	
4. <u>Ligustrum vulgare</u>	10	Yes	FACU																	
5. _____																				
6. _____																				
7. _____																				
	55	=Total Cover																		
Herb Stratum (Plot size: <u>5-ft radius</u>)																				
1. <u>Carex gracillima</u>	5	No	FACU																	
2. <u>Carex pennsylvanica</u>	30	Yes	FACU																	
3. <u>Asplenium platyneuron</u>	5	No	FACU																	
4. <u>Podophyllum peltatum</u>	25	Yes	FACU																	
5. <u>Geum canadense</u>	10	No	FAC																	
6. <u>Fragaria virginiana</u>	10	No	FACU																	
7. <u>Pteridium aquilinum</u>	15	No	FACU																	
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	100	=Total Cover																		
Woody Vine Stratum (Plot size: <u>30-ft radius</u>)																				
1. <u>Parthenocissus inserta</u>	15	Yes	FAC																	
2. _____																				
3. _____																				
4. _____																				
	15	=Total Cover																		

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

August 12, 2020
Project No. 201010

Peter Menser
Charter Township of Meridian
5151 Marsh Road
Okemos, MI 48864 1198

Wetland Boundary Verification – WDV 20-03
West End of Parcel No. 33-02-02-02-101-004
Meridian Township, Ingham County, Michigan

Dear Peter:

On July 30, 2020, Fishbeck staff conducted a field investigation and verified wetland boundaries at the west end of an approximately 12-acre parcel located north of East Lake Drive, approximately 0.1 mile east of the East Perry Road/East Lake Drive intersection (the Site). The Site encompasses parcel number 33-02-02-02-101-004 in Section 2 of Meridian Township (Town 4 North, Range 1 West). The Township wetland map identifies Wetland 2-4A as occupying all but the northwestern tip of the Site. This wetland consists of an approximately 42.47-acre emergent wetland.

Site wetlands were recently delineated by Marx Wetlands (Marx), as described in its July 1, 2020, report entitled *Wetland Determination and Delineation – East Perry Road and East Lake Drive, Parcel #33-02-02-02-101-004, Section 2, Meridian Township, Ingham County, Michigan* (Report).

Site Investigation

Fishbeck staff met Bryana Guevara of Marx at the Site on July 30, 2020 to inspect the flagged wetland boundary at the west end of the site, specifically wetland boundary flags WL A-2 through WL A-12. Site conditions were consistent as described in the Report and the 11 wetland boundary flags within the review area were properly placed at the wetland boundary. Fishbeck did not request any adjustment to the flagged wetland boundary.

Regulatory Review

According to Michigan's Natural Resources and Environmental Protection Act (NREPA), Act 451, Section 30301(d), wetlands "contiguous to the Great Lakes or Lake St. Clair, an inland lake or pond, or a river or stream" or "more than 5 acres in size" are regulated by the State of Michigan. In addition, the Township regulates wetlands greater than two acres in size which are not contiguous to a water body and wetlands between 0.25 acre and two acres in size that are determined to be essential to the preservation of the natural resources of the Township.

The flagged wetland is part of Township Wetland 2-4A, which is greater than five acres in size and is within 500 feet of Lake Lansing. This wetland is regulated by both the State of Michigan and the Township.

A Wetland Use Permit (WUP) is required from the Township for any of the following activities within wetlands regulated by the Township:

- Placing fill or permitting the placement of fill in regulated wetland.
- Dredging, removing, or permitting the removal of soil or minerals from regulated wetland.

- Constructing, operating, or maintaining any use or development in regulated wetland.
- Draining surface water from regulated wetland.

In addition, the Township requires that all structures and grading activities during site development shall be set back 40 feet from the delineated wetland boundary and a natural vegetation strip shall be maintained within 20 feet of the wetland boundary.

If you have any questions regarding this letter or any other wetland-related issues, please contact me at 616.464.3738 or ehtripp@fishbeck.com.

Sincerely,



Elise Hansen Tripp, PWS

Senior Wetland Scientist

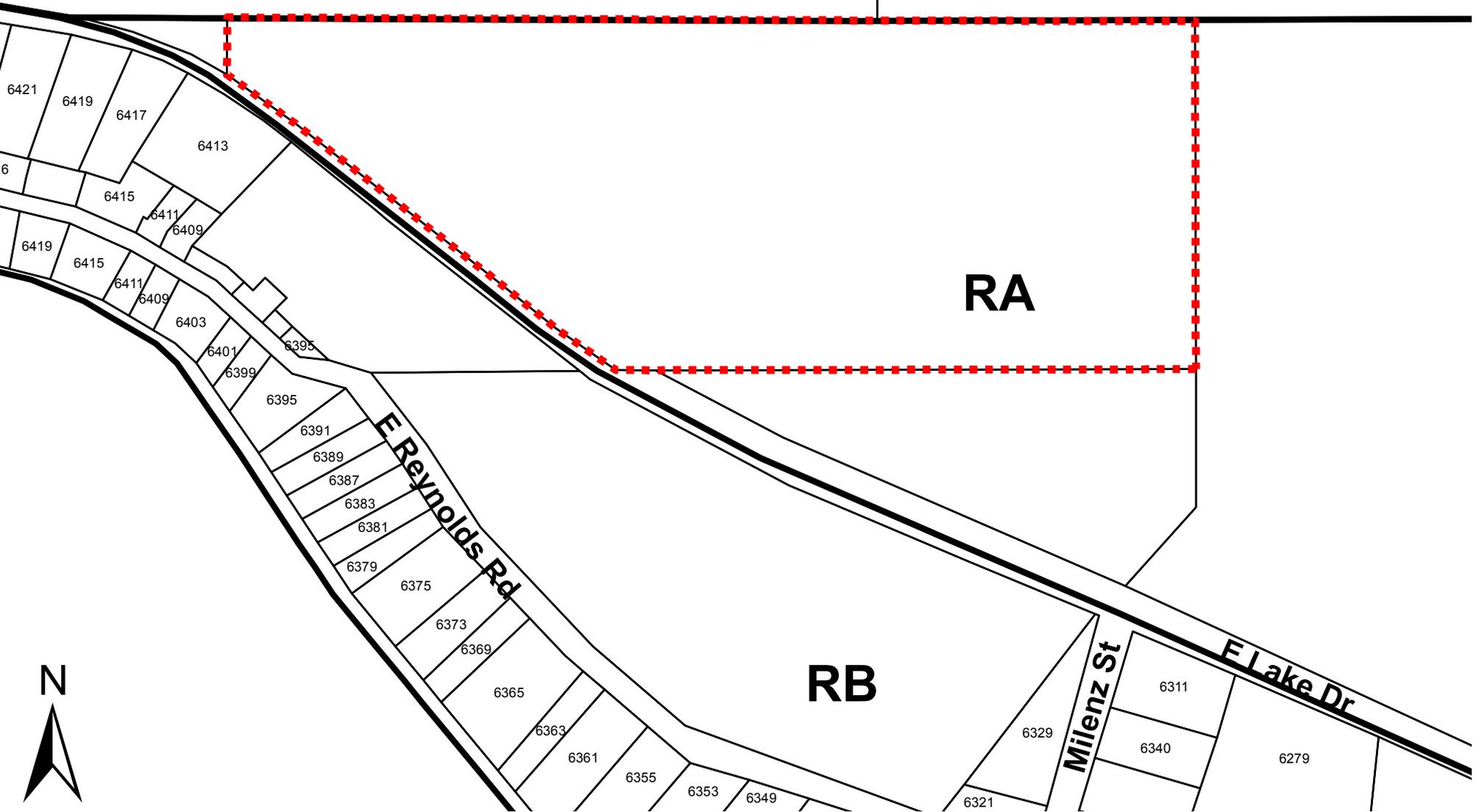
By email

copy: Mark Kieselbach – Charter Township of Meridian

RR

RA

RB



N

