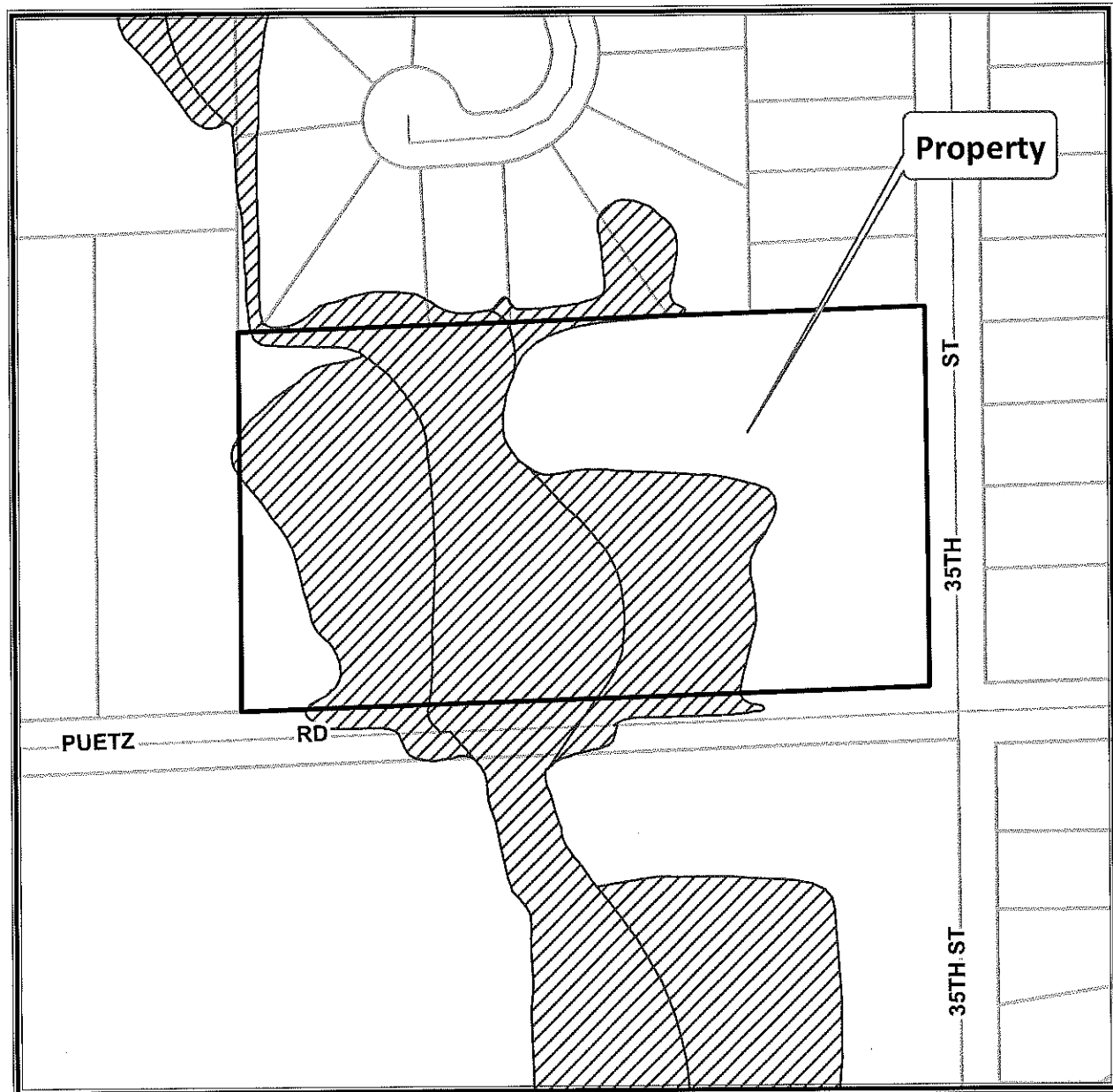


APPROVAL <i>Slw</i>	REQUEST FOR COUNCIL ACTION	MEETING DATE 01/03/17
REPORTS & RECOMMENDATIONS	RESOLUTION CONDITIONALLY APPROVING A 3 LOT CERTIFIED SURVEY MAP, BEING THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 13, TOWNSHIP 5 NORTH, RANGE 21 EAST, IN THE CITY OF FRANKLIN, MILWAUKEE COUNTY, WISCONSIN (RYAN S. KONICEK, OPERATOR OF BRIDGESTONE CAPITAL LLC, APPLICANT) (8647 SOUTH 35TH STREET)	ITEM NUMBER <i>G. 5.</i>
<p>At its December 22, 2016, meeting the Plan Commission recommended approval of a resolution conditionally approving a 3 lot certified survey map, being that part of the Southeast 1/4 of the Southwest 1/4 of Section 13, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, State of Wisconsin (Ryan Konicek, Operator of Bridgestone Capital LLC, Applicant) (8647 South 35th Street).</p> <p style="text-align: center;">COUNCIL ACTION REQUESTED</p> <p>A motion to adopt Resolution No. 2017-_____, a resolution conditionally approving a 3 lot certified survey map, being that part of the Southeast 1/4 of the Southwest 1/4 of Section 13, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, State of Wisconsin (Ryan Konicek, Operator of Bridgestone Capital LLC, Applicant) (8647 South 35th Street).</p>		



City of Franklin

8647 S. 35th Street
TKN: 833 9999 000



Planning Department
(414) 425-4024

0 115 230 460 Feet



2016 Aerial Photo

This map shows the approximate relative location of property boundaries but was not prepared by a professional land surveyor. This map is provided for informational purposes only and may not be sufficient or appropriate for legal, engineering, or surveying purposes.



City of Franklin

8647 S. 35th Street
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CITY OF FRANKLIN



REPORT TO THE PLAN COMMISSION

Meeting of December 8, 2016

Certified Survey Map

RECOMMENDATION: City Development Staff recommends approval of the proposed Certified Survey Map, subject to the conditions in the draft resolution.

Project Name:	Bridgestone Capital LLC Certified Survey Map (CSM)
Project Address:	8647 South 35 th Street
Applicant:	Ryan Konicek, Bridgestone Capital, LLC
Owners (property):	Bridgestone Capital, LLC
Current Zoning:	R-6 Suburban Single Family Residence District
2025 Future Land Use:	Residential
Use of Surrounding Properties:	Single-family residential to the north, east and west and Franklin Woods/Kayla's Playground to the south
Applicant Action Requested:	Recommendation of approval of the Certified Survey Map

Introduction:

Please note:

- Staff recommendations are underlined, in italics and are included in the draft resolution.
- Staff recommendations are underlined and are not included in the draft resolution.

On August 16, 2016, the applicant filed a Certified Survey Map (CSM) Application with the Department of City Development requesting approval to subdivide an approximately 8.987-acre property into three parcels.

According to Section 15-9.0309 of the Unified Development Ordinance (UDO), the Plan Commission shall within 60 days from the date of filing of the CSM recommend approval, conditional approval, or rejection of the map, and shall transmit the map along with its recommendations to the Common Council. The Common Council then shall approve, approve conditionally and thereby require resubmission of corrected Certified Survey Map, or reject such Certified Survey Map within ninety (90) days from the date of filing of the map unless time is extended by agreement with the Subdivider.

The applicant submitted the CSM on August 16, 2016; therefore, a decision by Plan Commission was required by October 15th and a final decision by the Common Council by November 14th. The applicant, in order to provide more time to obtain and review natural resource information, provided a 60-day extension for City review on October 20th. Therefore, the Plan Commission must forward a recommendation to the Common Council by December 14th and the Common Council must make a final decision by January 13, 2017.

Project Description and Analysis:

Certified Survey Map

The property consists of a single-family dwelling and several accessory structures. The remainder of the property is vacant land and protected natural resource features. As previously stated, the applicant is proposing to divide the property into three lots. Lot 1 has an area of approximately 2.859-acres and will be accessed from S. 35th Street. Lot 2 has an area of approximately 2.525-acres and is located at the northwest corner of S. 35th Street and W. Puetz Road. The existing home and accessory structures are located on Lot 2 with existing access from S. 35th Street. Lot 3 has an area of 2.97-acres with access to W. Puetz Road.

Public sewer is immediately adjacent to both W. Puetz Road and S. 35th Street. However, public water facilities are located only at the southeast corner of W. Puetz Road and S. 35th Street. Staff recommends that prior to recording the Certified Survey Map, the applicant shall request that the City extend public water facilities to serve the proposed lots. If rejected, the proposed lots may be developed with private well-water systems. A statement shall be added to Sheet 1 of the CSM to indicate whether the land is being served by public sewer and water or public sewer only. Staff would suggest that public water be provided to these subject lots.

The proposed lots meet the R-6 Suburban Single-Family Residence District minimum lot area of 13,000 square feet as well as the minimum lot width of 90 feet and 105 feet for corner lots. While the proposed lots significantly exceed the 13,000 square foot minimum size requirement, their size is reflective of the amount of protected natural resource features located on the property.

The property consists of R-6 Residence District zoning as well as C-1 Conservancy District zoning. As the C-1 Conservancy District is no longer utilized by the City (see Section 15-1.0111 below), staff recommends that the applicant shall apply for a Rezoning Application to remove the existing C-1 Conservancy District zoning, prior to recording the Certified Survey Map. If rezoned, the information on the CSM shall be revised accordingly.

SECTION 15-1.0111 REPEAL

A. Repeal of Zoning Ordinance. The City of Franklin Ordinance No. 221 adopted on February 6, 1968 and subsequent amendments thereto, relating to the zoning of land is hereby repealed and all other Ordinances or parts of Ordinances of the City of Franklin inconsistent or conflicting with this Ordinance, to the extent of the inconsistency or conflict only, are hereby repealed, excepting Section 8.5 of Ordinance No. 221 (B-4 Regional Shopping District) and Section 12.1 of Ordinance No. 221 (C-1 Conservancy District), which shall remain in effect until such time, after duly held public hearing, as the Common Council rezones the lands in a B-4 or C-1 zoning pursuant to Ordinance No. 221 to a zoning district provided for within this Ordinance. Immediately upon approval of said rezonings, the aforementioned Sections 8.5 and 12.1 shall be repealed without further public hearing.

Natural Resource Protection Plan

GRAEF prepared a Natural Resource Protection Plan, dated November 2016, received by the City on November 29, 2016. Overall, the property contains wetlands, young woodlands, a waterway and 100-year floodplain.

The location of Home #2 (upon Lot 3), which is illustrated on the NRPP map impacts approximately 0.042 acre (1,828.7 square feet) of young woodland. A total of 0.48 acres of young woodland around Home #2 is not being preserved within the Conservation Easement. There is also a 0.52 acre young woodland located on the east side of the parcel that is not included as part of the Conservation Easement. Therefore, a total of 1.00 acre of the 3.55 acres of young woodland onsite is not being protected per the applicant's NRPP.

Per Table 15-4.0100 of the UDO, a young woodland carries a 50% protection standard. The applicant has based the protection standard by including young woodlands that are already included and protected by more restrictive natural resource protection standards. For example, the 50% protection standard may not be based upon young woodlands located within a wetland, wetland buffer, shore buffer or 100-year floodplain as those areas carry a 100% protection standard. Therefore, staff recommends that the applicant demonstrate that a minimum of 50% of young woodland located outside of other more restrictive protected natural resource features are being protected and included within the Conservation Easement.

Staff notes that the applicant may choose to protect the 0.52-acre young woodland on the east side of the property, which would then allow the 0.48-acre impact to the young woodland surrounding Home #2 to resolve this matter. Staff would also note that the City's consultant commented that the dominant tree is green ash and the vast majority appear to be dead or dying. The applicant may have included these trees to determine young woodland boundaries; however, dead or dying trees do not have to be counted. Staff recommends that the 50% of young woodland to be preserved include the majority of the woodland on the east side of the property, in addition to any healthy trees that may exist on the western lot line of proposed Lot 3.

In summary, the site contains 3.55 acres of young woodland, 2.11 acres of shore buffer, 5.02 acres of floodplain and 1.51 acres of wetland buffer. The vast majority of protected resources, 5.02 acres, is 100-year floodplain. There is approximately 0.47 acres of shore buffer and wetland buffer that is located outside of the floodplain.

The applicant is proposing impacts to young woodlands; however, has double counted resources and therefore, must redo the Site Intensity and Capacity Calculations to only include young woodland areas that are outside of other protected resources and the NRPP map shall be revised to clearly illustrate the young woodland areas to be protected and those to be impacted.

The applicant has provided a letter from the Wisconsin Department of Natural Resources, dated November 23, 2016, that concurs with the wetland boundaries as delineated by GRAEF.

Below are additional recommended conditions of approval, which are mostly technical in nature:

- The "Building Setback" note at the bottom of Sheet 1 shall be revised to include the 19-foot Corner Side Yard Setback.
- The note on Sheet 1 indicating the zoning of the property shall be revised to state both R-6 Residence District and C-1 Conservancy District.
- The Conservation Easement shall be shown more clearly on both Sheet 1 and Sheet 2 of the Certified Survey Map.
- The note indicating that wetlands were delineated by GRAEF on October 20, 2014 shall be revised to also include the name of the individual that performed the delineation.

- The 12-foot wide roadway dedication adjacent to S. 35th Street shall be labeled similar to the labeling provided for the 27-foot dedication along W. Puetz Road.
- The note on Sheet 4 under Common Council approval shall be revised to add "dedication" between "and" and "approved."
- The applicant shall submit a written Conservation Easement document for Common Council review and approval and recording with the Milwaukee County Register of Deeds.

In addition to the above, staff also suggests that the applicant utilize signage or boulders to mark the location of the conservation easement boundary on the individual lots.

Staff Recommendation:

City Development Staff recommends approval of the proposed Certified Survey Map, subject to the conditions in the draft resolution.



CITY OF FRANKLIN



REPORT TO THE PLAN COMMISSION

Meeting of December 22, 2016

Certified Survey Map

RECOMMENDATION: City Development Staff recommends approval of the proposed Certified Survey Map, subject to the conditions in the draft resolution.

Project Name:	Bridgestone Capital LLC Certified Survey Map (CSM)
Project Address:	8647 South 35 th Street
Applicant:	Ryan Konicek, Bridgestone Capital, LLC
Owners (property):	Bridgestone Capital, LLC
Current Zoning:	R-6 Suburban Single Family Residence District
2025 Future Land Use:	Residential
Use of Surrounding Properties:	Single-family residential to the north, east and west and Franklin Woods/Kayla's Playground to the south
Applicant Action Requested:	Recommendation of approval of the Certified Survey Map

Introduction:

Please note:

- Staff recommendations are underlined, in italics and are included in the draft resolution.
- Staff suggestions are underlined and are not included in the draft resolution.

At the December 8, 2016 meeting, the Plan Commission approved a motion to table the subject matter to the December 22, 2016 Plan Commission meeting to allow the applicant to work with staff and provide additional information related to the soils, floodplain and potential development of the proposed lots.

The applicant has indicated that they are not yet prepared to move forward and are discussing the matter with a geotechnical firm. The applicant is requesting that the item again be tabled to a future meeting date. A review time extension has been provided.

Attached is a memorandum from the Engineering Department providing their review of the soils and proposed lots. Although additional research and data is still needed, staff finds that the lots are buildable, noting that atypical construction methods may be needed.

As such, staff continues to recommend approval of the proposed Certified Survey Map. Based upon the Plan Commission discussion at the December 8th meeting, staff recommends approval at this time with the added conditions below.

- Soil information, indicating type and labeling as hydric, shall be provided on the face of the Certified Survey Map.

- The applicant shall utilize signage and boulders to mark the location of the conservation easement boundary on the individual lots. (This was previously a suggestion.)

Staff suggests that the applicant place a note on the face of the Certified Survey Map indicating that hydric soils and a high groundwater table are present, and that special construction methods or designs may be appropriate, particularly if homes with a basement are desired.

Attached is the December 8th Plan Commission Staff Report for review and additional project information.

Staff Recommendation:

City Development Staff recommends approval of the proposed Certified Survey Map, subject to the conditions in the draft resolution.

STATE OF WISCONSIN

CITY OF FRANKLIN

MILWAUKEE COUNTY

RESOLUTION NO. 2017-_____

A RESOLUTION CONDITIONALLY APPROVING A 3 LOT CERTIFIED SURVEY MAP, BEING THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 13, TOWNSHIP 5 NORTH, RANGE 21 EAST, IN THE CITY OF FRANKLIN, MILWAUKEE COUNTY, WISCONSIN
(RYAN S. KONICEK, OPERATOR OF BRIDGESTONE CAPITAL LLC, APPLICANT)
(8647 SOUTH 35TH STREET)

WHEREAS, the City of Franklin, Wisconsin, having received an application for approval of a certified survey map, such map being that part of the Southeast 1/4 of the Southwest 1/4 of Section 13, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, Wisconsin, more specifically, of the property located at 8647 South 35th Street, bearing Tax Key No. 833-9999-000, Ryan S. Konicek, Operator of Bridgestone Capital LLC, applicant; said certified survey map having been reviewed by the City Plan Commission and the Plan Commission having recommended approval thereof pursuant to certain conditions; and

WHEREAS, the Common Council having reviewed such application and Plan Commission recommendation and the Common Council having determined that such proposed certified survey map is appropriate for approval pursuant to law upon certain conditions.

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and Common Council of the City of Franklin, Wisconsin, that the Certified Survey Map submitted by Ryan S. Konicek, Operator of Bridgestone Capital LLC, as described above, be and the same is hereby approved, subject to the following conditions:

1. That any and all objections made and corrections required by the City of Franklin, by Milwaukee County, and by any and all reviewing agencies, shall be satisfied and made by the applicant, prior to recording.
2. That all land development and building construction permitted or resulting under this Resolution shall be subject to impact fees imposed pursuant to §92-9. of the Municipal Code or development fees imposed pursuant to §15-5.0110 of the Unified Development Ordinance, both such provisions being applicable to the development and building permitted or resulting hereunder as it occurs from time to time, as such Code and Ordinance provisions may be amended from time to time.
3. Each and any easement shown on the Certified Survey Map shall be the subject of separate written grant of easement instrument, in such form as provided within the

RYAN S. KONICEK, OPERATOR OF BRIDGESTONE CAPITAL LLC – CERTIFIED
SURVEY MAP

RESOLUTION NO. 2017-_____

Page 2

City of Franklin Design Standards and Construction Specifications and such form and content as may otherwise be reasonably required by the City Engineer or designee to further and secure the purpose of the easement, and all being subject to the approval of the Common Council, prior to the recording of the Certified Survey Map.

4. Ryan S. Konicek, Operator of Bridgestone Capital LLC, successors and assigns, and any developer of the Bridgestone Capital LLC 3 lot certified survey map project, shall pay to the City of Franklin the amount of all development compliance, inspection and review fees incurred by the City of Franklin, including fees of consults to the City of Franklin, within 30 days of invoice for same. Any violation of this provision shall be a violation of the Unified Development Ordinance, and subject to §15-9.0502 thereof and §1-19. of the Municipal Code, the general penalties and remedies provisions, as amended from time to time.
5. The approval granted hereunder is conditional upon Ryan S. Konicek, Operator of Bridgestone Capital LLC and the 3 lot certified survey map project for the property located at 8647 South 35th Street: (i) being in compliance with all applicable governmental laws, statutes, rules, codes, orders and ordinances; and (ii) obtaining all other governmental approvals, permits, licenses and the like, required for and applicable to the project to be developed and as presented for this approval.
6. Prior to recording the Certified Survey Map, the applicant shall request that the City extend public water facilities to serve the proposed lots. If rejected, the proposed lots may be developed with private well-water systems. A statement shall be added to Sheet 1 of the Certified Survey Map to indicate whether the land is being served by public sewer and water or public sewer only.
7. The applicant shall apply for a Rezoning Application to remove the existing C-1 Conservancy District zoning, prior to recording the Certified Survey Map. If rezoned, the zoning information on the CSM shall be revised accordingly.
8. The applicant shall demonstrate that a minimum of 50% of young woodland located outside of other more restrictive protected natural resource features are being protected and included within the Conservation Easement.
9. The fifty percent of young woodland onsite to be preserved shall include the majority of the woodland on the east side of the property, in addition to any healthy trees that may exist on the western lot line of proposed Lot 3.
10. The applicant shall submit revised Site Intensity and Capacity Calculations, for

RYAN S. KONICEK, OPERATOR OF BRIDGESTONE CAPITAL LLC – CERTIFIED
SURVEY MAP

RESOLUTION NO. 2017-_____

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Department of City Development Review and approval, that only include young woodland areas that are outside of other protected natural resources. Furthermore, the Natural Resource Protection Plan map shall be revised to clearly illustrate the young woodland areas to be protected and those areas to be impacted.

11. The “Building Setback” note at the bottom of Sheet 1 shall be revised to include the 19-foot Corner Side Yard Setback.
12. The note on Sheet 1 indicating the zoning of the property shall be revised to state both R-6 Residence District and C-1 Conservancy District.
13. The Conservation Easement shall be shown more clearly on both Sheet 1 and Sheet 2 of the Certified Survey Map.
14. The note indicating that wetlands were delineated by GRAEF on October 20, 2014 shall be revised to also include the name of the individual that performed the delineation.
15. The 12-foot wide roadway dedication adjacent to S. 35th Street shall be labeled similar to the labeling provided for the 27-foot dedication along W. Puetz Road.
16. The note on Sheet 4 under Common Council approval shall be revised to add “dedication” between “and” and “approved.”
17. The applicant shall submit a written Conservation Easement document for Common Council review and approval and recording with the Milwaukee County Register of Deeds.
18. Soil information, indicating type and labeling as hydric, shall be provided on the face of the Certified Survey Map.
19. The applicant shall utilize signage and boulders to mark the location of the conservation easement boundary on the individual lots

BE IT FURTHER RESOLVED, that the Certified Survey Map, certified by owner, Bridgestone Capital LLC, be and the same is hereby rejected without final approval and without any further action of the Common Council, if any one, or more than one of the above conditions is or are not met and satisfied within 180 days from the date of adoption of this Resolution.

RYAN S. KONICEK, OPERATOR OF BRIDGESTONE CAPITAL LLC – CERTIFIED
SURVEY MAP

RESOLUTION NO. 2017-_____

Page 4

BE IT FINALLY RESOLVED, that upon the satisfaction of the above conditions within 180 days of the date of adoption of this Resolution, same constituting final approval, and pursuant to all applicable statutes and ordinances and lawful requirements and procedures for the recording of a certified survey map, the City Clerk is hereby directed to obtain the recording of the Certified Survey Map, certified by owner, Bridgestone Capital LLC, with the Office of the Register of Deeds for Milwaukee County.

Introduced at a regular meeting of the Common Council of the City of Franklin this _____ day of _____, 2017.

Passed and adopted at a regular meeting of the Common Council of the City of Franklin this _____ day of _____, 2017.

APPROVED:

Stephen R. Olson, Mayor

ATTEST:

Sandra L. Wesolowski, City Clerk

AYES _____ NOES _____ ABSENT _____



MEMORANDUM: FROM ENGINEERING

DATE: December 13, 2016

TO: Franklin Plan Commission

COPY: Joel Dietl, AICP, Planning Manager

FROM: Glen E. Morrow, PE- City Engineer

SUBJECT: 3-Lot CSM Bridgestone Capital LLC
NW corner of W. Puetz Road and S. 35th Street

The Engineering Staff was requested at the December 8, 2016, Plan Commission Meeting to prepare a report on the soils and suitability for development for the proposed 3-lot development located on the northwest corner of W. Puetz Road and S. 35th Street. It is not the practice nor appropriate for City staff to perform detailed engineering and design work for private developers. Please consider the following general observations and opinions within this memorandum as a preliminary analysis and review of the presented and available data for the Plan Commission's consideration.

Soil Types:

According to the United States Department of Agriculture Natural Resources Conservation Service (NRCS) current soils report for Milwaukee County (accessed through the NRCS website), there are only two types of soils series designated for this site. See GRAEF's Natural Resource Protection Plan dated November 2016 by Brain Schneider, PE, LEED AP (report) Figure #3.

- "AsA"- Ashkum silty clay loam, 0 to 2 percent slopes
- "MzdB"- Morley silt loam, or Ozaukee silt loam, 2 to 6 percent slopes. There appears to be a map error on the NRCS website- regardless, it appears that Morley and Ozaukee soils are closely related soil series.

Loam generally refers to a soil type with some portion of sand mixed in with the silts and clays. Although both silt and clay are fine grained soil (finer than sands), silts generally have larger particle size than clays and thus are less apt to be plastic/sticky-like than clays.

Based on the soil classifications, one would assume that the areas listed as Ashkum silty clay loam are less apt to drain well. Note that the description of the Ashkum silty clay loam series includes phrases such as "Poorly drained" drainage class and "About 0 to 12 inches" depth to water table. In contrast, the Ozaukee/Morley silt loam series descriptions contain "Moderately well drained" drainage class and "About 24 to 42 inches" depth to water table. Methods to address groundwater should be considered in all three soil types.

Sump Pumps:

Sump pumps are generally the most common way to effectively deal with ground water. However sump pumps in any of the given soil types would likely operate most of the time. Sump pumps could be avoided by the following two ways:

1. Elevate the finish floor elevation of the basement such that a basement foundation drain could daylight to a downhill location by gravity. This is commonly done in a "walk-out basement" scenario. The lowest elevation based on the Figure #4 of the GRAEF report is approximately 748 near the culvert crossing W. Puetz Road.

For reference, the three homes have been shown on a Draft Natural Resources Map. Assuming that a typical home would have a finish floor elevation (FFE) 9 feet above a basement floor, and another 2 feet above a footing drain, and the drain would fall 1/8-inch per foot (depending on detailed calculations) to the low spot, the minimum theoretical finish floor elevations above surrounding contours for the three homes can be assumed as follows:

- a. The proposed house on Lot 1- aka "Home 1" (located on the north end along S. 35th Street) appears to be located with the highest contour elevation is around 756. Needing an easement from Lot 2 to flow to the low spot along a direct route, the home site is 440 feet from the culvert crossing under W. Puetz Road (low spot). The minimum FFE would need to be 763.6, or 7.6 feet higher than the existing grade.
- b. The existing house on Lot 2 (located on the corner of S. 35th Street and W. Puetz Road) appears to be located on a spot with the highest contour elevation is 757. The home site is 410 feet from the low spot. The minimum FFE would need to be 763.3, or 6.3 feet higher than the existing grade.
- c. The proposed house on Lot 3- aka "Home 2" (located on the western third of the development and is accessed from W. Puetz Road) appears to be located with the highest contour elevation is around 754. The home site is 170 feet from the low spot. The minimum FFE would need to be 760.8, or 6.8 feet higher than the existing grade.

To summarize the gravity foundation drain discussion, the homes would need to be elevated 6.3 to 7.6 feet above the existing ground contours. Some of the difference could be made up by putting a garage 3-4 feet above existing grade splitting the elevations between the walkout basement and the FFE. The remainder of the distance between the garage floor elevation and the FFE could be made up by elevated exterior porches.

2. Construct a house with "slab-on-grade" or "crawlspace" scenarios. There are several homes in Franklin without basements- for example in the Hale Park area. However it is understood that virtually all Franklin single-family homes since the 1950's were constructed with basements. Note the exceptions of many condominiums and apartments where the first floor is on a slab. Per Franklin's UDO (see table 15-3.0207),

an R-6 Suburban Single-Family Residence District requires additional living area if the basement area is less than 600 square feet.

Although Franklin / Metro-Milwaukee homebuilder preferences indicate that virtually all single-family homes must include a basement, this is not so in most other areas of the country. Some areas, such as Florida have high groundwater tables and virtually no homes have basements. Most other areas have ability to construct basements but many homebuilders prefer not to for reasons that include:

- Elderly/other physical ailments where owner prefers a ranch style home all on one level with no climbing stairs.
- Basements have issues/concerns with radon gas exposure in living quarters.
- Basements have negative connotations with costly structure repairs from groundwater and soil pressures.
- Basements have negative connotations associated with dampness and mold conditions.
- Basements are an added expense to the cost of a home.
- Basements are more vulnerable to sewage backups
- Basements are more vulnerable to damage and loss of personal property during area flooding events.

In similar fashion to the basement scenario calculations, assuming that a typical home would have a finish floor elevation (FFE) 4 feet above a footing drain, and the drain would fall 1/8-inch per foot (depending on detailed calculations) to the low spot, the minimum theoretical finish floor elevations above surrounding contours for the three homes can be assumed as follows:

- a. The proposed house on Lot 1- aka "Home 1" with the highest contour elevation around 756. Needing an easement from Lot 2, the home site is 440 feet from the low spot. The minimum FFE would need to be 756.6, or 0.6 feet higher than the existing grade.
- b. The existing house on Lot 2 (located on the corner of S. 35th Street and W. Puetz Road) appears to be located on a spot with the highest contour elevation is 757. The home site is 410 feet from the low spot. The minimum FFE would need to be 756.3, or 0.7 feet below the existing grade.
- c. The proposed house on Lot 3- aka "Home 2" (located on the western third of the development and is accessed from W. Puetz Road) appears to be located with the highest contour elevation is around 754. The home site is 170 feet from the low spot. The minimum FFE would need to be 753.8, or 0.2 feet below the existing grade.

To summarize the slab floor/crawl space discussion, the minimum FFE for homes on a slab floor would be at roughly the same elevation as the existing ground contours. The

major obstacle would be the local preference for having a basement and thus the marketability of those homes without basements.

Structural Stability:

To consider the stability of soils, Table 8 in the 1971 version of the USDA Soil Conservation Survey gives various engineering properties of each soil series. Below is a table showing the comparisons of limitations for foundations for low buildings.

Soil Series	Ashkum	Morley	Ozaukee
Limitations	Severe	Severe	Severe
Shear strength	Fair	Fair	Fair
Compressibility	High	Moderate	Moderate
Shrink-swell Potential	High	-	Yes
Bearing Capacity	Low	Poor	Low
Water Table	High	-	-

A phone call to a local geotechnical engineer verified that building on the Ashkum soils would likely need removal and replacement with engineered soils. A budget of \$10,000 to \$20,000 is not an unreasonable budget to include for this activity. In addition, it is unknown if the larger footprint required for soil remediation would impact natural resources on the site. The developer and/or builder should consult a qualified and licensed geotechnical engineer to develop a detailed design.

Conclusion:

The developer is ultimately responsible for the constructability of the homes and will need to provide the appropriate data and calculations to the Inspection Department to obtain a building permit.

Based on the City Engineering Staff review of the available information, the homes may need atypical construction methods or designs from the average home in Franklin. However it appears that all three lots could have homes constructed.

Milwaukee and Waukesha Counties, Wisconsin

AsA—Ashkum silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ssrw
Elevation: 520 to 930 feet
Mean annual precipitation: 33 to 41 inches
Mean annual air temperature: 46 to 54 degrees F
Frost-free period: 160 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Ashkum, drained, and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ashkum, Drained

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Clayey colluvium over till

Typical profile

Ap - 0 to 12 inches: silty clay loam
Bg1 - 12 to 29 inches: silty clay
2Bg2 - 29 to 54 inches: silty clay loam
2Cg - 54 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 25 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Hydric soil rating: Yes

Minor Components

Peotone, drained

Percent of map unit: 5 percent

Landform: Depressions on ground moraines

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Orthents, clayey

Percent of map unit: 2 percent

Landform: Ground moraines, lake plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluv

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Urban land

Percent of map unit: 1 percent

Landform: Ground moraines

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluv

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Data Source Information

Soil Survey Area: Milwaukee and Waukesha Counties, Wisconsin

Survey Area Data: Version 12, Sep 28, 2016

Milwaukee and Waukesha Counties, Wisconsin

MzdB—Ozaukee silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2sn0b

Elevation: 640 to 890 feet

Mean annual precipitation: 31 to 40 inches

Mean annual air temperature: 46 to 51 degrees F

Frost-free period: 135 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Ozaukee and similar soils: 93 percent

Minor components: 7 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee

Setting

Landform: End moraines, ground moraines

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Interfluvium

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Loess over Wisconsinan age silty and clayey till

Typical profile

Ap - 0 to 6 inches: silt loam

E - 6 to 8 inches: silt loam

Bt1 - 8 to 12 inches: silty clay loam

2Bt2 - 12 to 36 inches: silty clay

2B Ct - 36 to 39 inches: silty clay loam

2Cd - 39 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: 24 to 45 inches to densic material

Natural drainage class: Moderately well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 24 to 42 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 35 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Minor Components

Ashkum, drained

Percent of map unit: 3 percent
Landform: End moraines, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)
Hydric soil rating: Yes

Pewamo, drained

Percent of map unit: 3 percent
Landform: Depressions on ground moraines, drainageways on ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: Yes

Urban land

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluvium
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: Milwaukee and Waukesha Counties, Wisconsin
Survey Area Data: Version 12, Sep 28, 2016

Milwaukee and Waukesha Counties, Wisconsin

2sn0b—Ozaukee silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2sn0b
Elevation: 640 to 890 feet
Mean annual precipitation: 31 to 40 inches
Mean annual air temperature: 46 to 51 degrees F
Frost-free period: 135 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ozaukee and similar soils: 93 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over Wisconsinan age silty and clayey till

Typical profile

Ap - 0 to 6 inches: silt loam
E - 6 to 8 inches: silt loam
Bt1 - 8 to 12 inches: silty clay loam
2Bt2 - 12 to 36 inches: silty clay
2BCt - 36 to 39 inches: silty clay loam
2Cd - 39 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 24 to 45 inches to densic material
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat):
Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 35 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Other vegetative classification: Trees/Timber (Woody Vegetation)

Hydric soil rating: No

Minor Components

Ashkum, drained

Percent of map unit: 3 percent

Landform: End moraines, ground moraines

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Concave

Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)

Hydric soil rating: Yes

Pewamo, drained

Percent of map unit: 3 percent

Landform: Depressions on ground moraines, drainageways on ground moraines

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave, linear

Across-slope shape: Concave

Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)

Hydric soil rating: Yes

Urban land

Percent of map unit: 1 percent

Landform: Ground moraines

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluvium

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Data Source Information

Soil Survey Area: Milwaukee and Waukesha Counties, Wisconsin

Survey Area Data: Version 12, Sep 28, 2016

TABLE 8.--ENGINEERING

[Clayey land (Cv), Loamy land (Lu), and Sandy and gravelly land (Sf) are omitted from this

Soil series and map symbols	Suitability as a source of--		Degree and kinds of limitations affecting--	
	Topsoil	Sand and gravel	Road subgrade	Foundations for low buildings
Adrian: Ac-----	Poor; soil is erodible and oxidizes rapidly.	Fair; underlying sand is variable; high water table hinders excavation.	Very severe; organic material is unsuitable for subgrade.	Very severe; organic material is unsuitable for foundations.
Alluvial land: Am-----	Fair; variable-----	Unsuitable; soil material is variable.	Severe; soil material is variable; stability and bearing capacity are variable; occasional flooding.	Moderate to severe; occasional flooding; soil material is variable and is unstable in places.
Ashkum: AsA-----	Surface layer good; subsoil poor, clayey; water table within 1 foot of surface most of the time.	Unsuitable-----	Very severe in subsoil; high shrink-swell potential; severe in substratum, low bearing capacity, elastic.	Severe; fair shear strength; high compressibility; high shrink-swell potential; low bearing capacity; high water table.
Aztalan: AzA, AzB-----	Surface layer good; subsoil poor, lower part is silty clay loam and is unstable in sloping areas.	Unsuitable-----	Moderate in subsoil, low bearing capacity when wet, low stability in lower part of subsoil; severe in substratum, unstable when wet.	Severe; moderate shrink-swell potential; high compressibility, poor shear strength; seepage, a high water table at times, or both.
Blount: BlA-----	Surface layer good, thin in some places; subsoil and substratum poor, clayey.	Unsuitable-----	Very severe in subsoil, high to moderate shrink-swell potential; severe in substratum, moderate shrink-swell potential; low bearing capacity; elastic.	Severe; fair shear strength; high compressibility; high to moderate shrink-swell potential; low bearing capacity; high water table, seepage, or both.

See footnote at end of table.

TABLE 8.--ENGINEERING INTERPRETATIONS

Soil series and map symbols	Suitability as a source of--		Degree and kinds of limitations affecting--	
	Topsoil	Sand and gravel	Road subgrade	Foundations for low buildings
Oshtemo: OmB-----	Surface layer unsuitable; subsoil unsuitable, erodible in sloping areas, thin over sand and gravel.	Fair to good; poorly graded sand and some pockets of gravel.	Slight in subsoil where properly compacted, low shrink-swell potential; slight in substratum, lacks stability under wheel load, low shrink-swell potential.	Slight; low compressibility and shrink-swell potential; good shear strength and bearing capacity.
OnB-----	Surface layer poor, droughty; subsoil unsuitable, erodible, thin over sand and gravel.	Fair to good; substratum is poorly graded sand; some gravel in places.	Slight in subsoil where properly compacted; slight in substratum, low stability under load, low shrink-swell potential.	Slight; low compressibility and shrink-swell potential; good shear strength and bearing capacity.
Ozaukee: OuB, OuB2, OuC2, OuD2.	Surface layer good; subsoil poor, clayey.	Unsuitable-----	Severe in subsoil, high shrink-swell potential; severe in substratum, moderate shrink-swell potential, low bearing capacity when wet.	Severe; fair shear strength; moderate compressibility and shrink-swell potential; low bearing capacity.
Palms: Pa-----	Poor; erodible; oxidizes rapidly.	Unsuitable-----	Very severe; organic soil material.	Very severe; organic soil material.
Pella: Ph-----	Good in surface layer, thick, dark; poor in subsoil, clayey; high water table.	Unsuitable-----	Very severe in subsoil and substratum; highly plastic; moderate shrink-swell potential.	Moderate to severe; fair shear strength; moderate compressibility; high water table; moderate shrink-swell potential.
Pella, moderately shallow variant: Pm.	Surface layer good, thick, dark; substratum poor, silty clay loam; high water table.	Unsuitable-----	Very severe in subsoil, highly plastic, moderate shrink-swell potential, elastic; very severe in substratum, dolomite bedrock at depth of 2 to 5 feet; high water table.	Moderate; dolomite bedrock; high water table.

See footnote at end of table.

TABLE 8.--ENGINEERING INTERPRETATIONS

Soil series and map symbols	Suitability as a source of--		Degree and kinds of limitations affecting--	
	Topsoil	Sand and gravel	Road subgrade	Foundations for low buildings
Montgomery: Mzb-----	Surface layer good, dark; subsoil poor, clayey; high water table.	Unsuitable-----	Very severe in subsoil, high shrink-swell potential, low bearing capacity, not suitable for flexible pavement; severe in substratum, low bearing capacity; moderate shrink-swell potential.	Severe; high shrink-swell potential; high to very high compressibility; high water table.
Morley: MzdB, MzdB2, MzdC2, MzdD2.	Surface layer good; subsoil poor, clayey.	Unsuitable-----	Very severe in subsoil, high shrink-swell potential; severe in substratum, moderate shrink-swell potential, low bearing capacity when wet.	Severe; fair shear strength; moderate compressibility; poor bearing capacity.
Mundelein: MzfA-----	Surface layer good; subsoil poor, unstable in sloping areas; seasonal high water table.	Poor; poorly graded; fine sand and silt in places; seasonal high water table.	Severe in subsoil, low bearing capacity; severe in substratum, relatively unstable.	Severe; fairly low compressibility; high susceptibility to frost heave; seasonal high water table, seepage, or both.
Muskego: Mzg-----	Poor; soil is erodible and oxidizes rapidly.	Unsuitable-----	Very severe; organic material; not suitable for subgrade.	Very severe; organic material; not suitable for foundations.
Mussey: Mzk-----	Surface layer good, dark; subsoil poor; high water table.	Good; substratum poorly graded sand and gravel; high water table.	Moderate in subsoil, low shrink-swell potential, low stability; very slight in substratum where properly drained, very stable.	Slight; very low compressibility; low shrink-swell potential; good shear strength; high water table.
Navan: Na-----	Surface layer good, thick, dark; subsoil poor, clayey in lower part; high water table.	Unsuitable-----	Moderate in subsoil, low stability and bearing capacity in lower part; severe in substratum, unstable.	Severe; moderate shrink-swell potential; high compressibility; poor shear strength; high water table.
Ogden: Oc-----	Poor; erodible; oxidizes rapidly.	Unsuitable-----	Very severe; organic material.	Very severe; organic material.

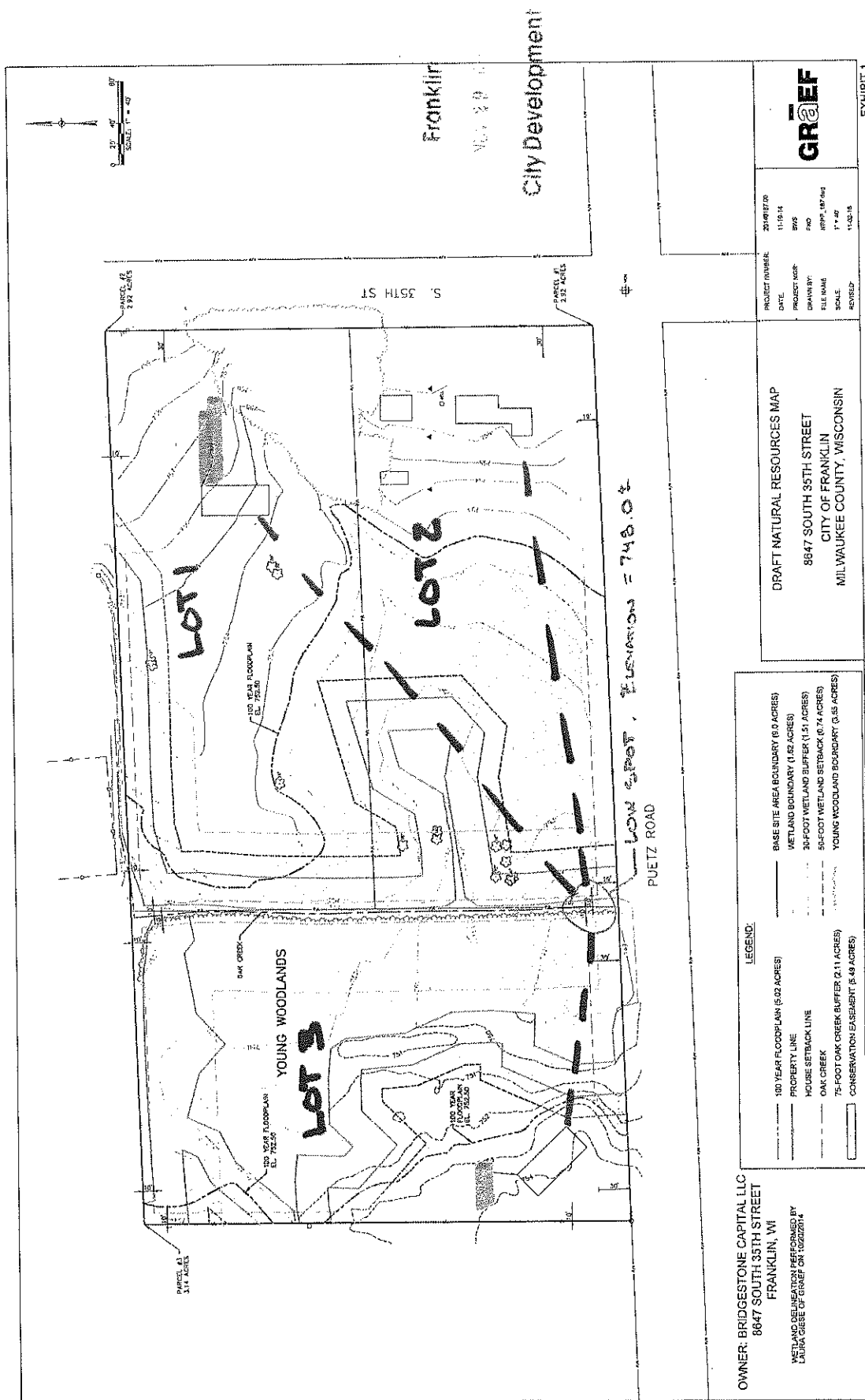
See footnote at end of table.

Table 15-3.0207

R-6 SUBURBAN SINGLE-FAMILY RESIDENCE DISTRICT DEVELOPMENT STANDARDS

Type of Standard	Permitted Use "Conventional Subdivision"	Special Use "Open Space Subdivision"
		Option 1
Minimum Open Space Ratio and Maximum Density		
Open Space Ratio (OSR)	0.00	0.10
Gross Density (GD)	2.972	2.919
Net Density (ND)	2.972	3.243
Lot Dimensional Requirements		
Minimum Lot Area (s.f.)	11,000	10,000
Minimum Lot Width at Setback Line (feet)	90 100 – corner	85 100 – corner
Minimum Front Yard (feet)	30 (c)	30 (c)
Minimum Side Yard (feet)	10 (c)	10 (c)
Minimum Side Yard on Corner Lot (feet)	19 (c)	19 (c)
Minimum Rear Yard (feet)	30 (c)	30 (c)
Minimum Shore Buffer (feet)	75	75
Minimum Wetland Buffer (feet)	30	30
Minimum Wetland Setback (feet)	50	50
Maximum Lot Coverage (maximum percent of lot area)	0.25	0.25
Minimum Total Living Area per Dwelling Unit (D.U.)		
1-Story D.U. 3 Bedrooms	1,250 s.f.	1,250 s.f.
1-Story D.U. >3 Bedrooms	150 s.f. (a)	150 s.f. (a)
1-Story D.U. if Basement is < 600 Square Feet	250 s.f. (b)	250 s.f. (b)
Multi-Story D.U. 3 Bedrooms	1,550 s.f. – total 950 s.f. – 1 st floor	1,550 s.f. – total 950 s.f. – 1 st floor
Multi-Story D.U. >3 Bedrooms	100 s.f. (a)	100 s.f. (a)
Multi-Story D.U. if Basement is < 600 Square Feet	250 s.f. (b)	250 s.f. (b)
Maximum Building Height		
Principal Structure (stories/ft.)	2.5/30	2.5/30
Accessory Structure (stories/ft.)	1.0/15	1.0/15

- (a) Add to minimum required building floor area for each bedroom in excess of three (3).
 (b) Add to minimum required first floor area for each dwelling unit which has a basement less than 600 s.f.
 (c) See Section 15-5.0108 for increased setback requirements along arterial streets and highways.

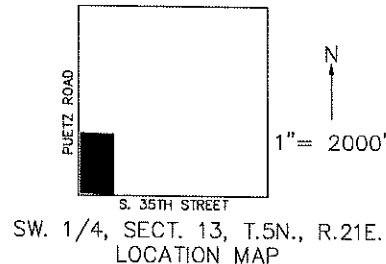
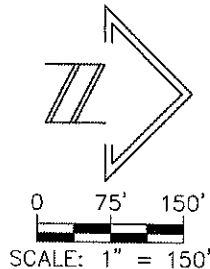


CERTIFIED SURVEY MAP NO. _____

That part of the Southeast 1/4 of the Southwest 1/4 Section 13, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, Wisconsin.

GRAEF

One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1469
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com



SW. COR. OF THE
SW. 1/4, SECT 13,
T.5N., R.21E.
N - 329942.39
E - 2543840.18

DEDICATED FOR
ROADWAY PURPOSES
28,101 SQ. FT.
(0.646 AC.)

S. LINE OF THE
SW. 1/4, SECT 13,
T.5N., R.21E.

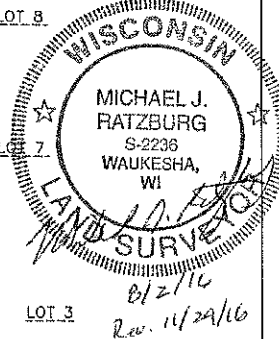
SE. COR. OF THE
SW. 1/4, SECT 13,
T.5N., R.21E.
N - 330029.17
E - 2546500.44

UNPLATTED
LANDS

NOTE
Property is
Zoned R-6,

CONSERVATION
EASEMENT

FRANKLIN
PLACE
SUBDIVISION

**REFERENCE BEARING**

All bearings are referenced to the south line of the SW. 1/4 of Sect. 13, T.5N., R.21E. which bears S.88°07'54"W. and is referenced to Grid North of the Wisconsin State Plane Coordinate System, South Zone.

OWNER

Bridgestone Capital, LLC.
8647 South 35th Street
Franklin, Wisconsin

BUILDING SETBACKS

FRONT - 30'
SIDE - 10'
REAR - 30'

LEGEND

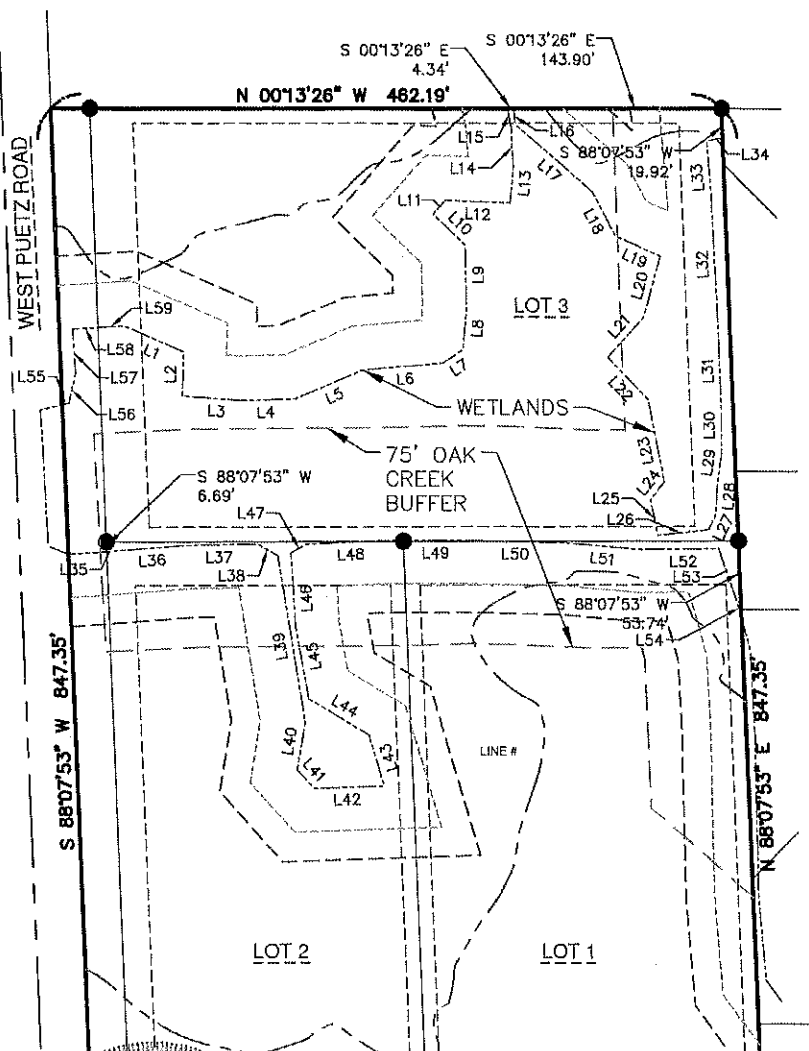
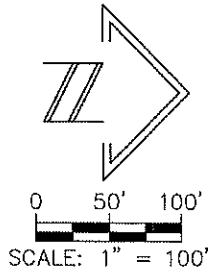
- FOUND 1" IRON PIPE
- 3/4" REBAR SET, MINIMUM WEIGHT 1.13 LBS/FT.
- FOUND CONC. MONUMENT W/BRASS CAP

CERTIFIED SURVEY MAP NO. _____

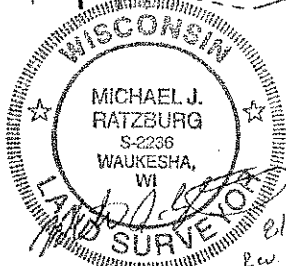
That part of the Southeast 1/4 of the Southwest 1/4 Section 13, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, Wisconsin.

GRAEF

One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1489
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com



LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	43.79'	S23°29'24"W
L2	30.06'	N87°49'30"W
L3	39.89'	S04°28'29"W
L4	38.30'	S01°55'43"E
L5	50.16'	S23°10'30"E
L6	55.89'	S05°07'26"E
L7	16.80'	S33°28'45"E
L8	28.28'	S84°54'15"E
L9	43.25'	N89°03'53"E
L10	30.13'	N44°03'27"E
L11	12.62'	S48°25'54"E
L12	44.08'	S02°00'13"W
L13	24.82'	S84°38'13"E
L14	27.74'	N86°41'01"E
L15	12.28'	S79°24'33"W
L16	11.13'	S84°29'55"W
L17	70.90'	S40°38'13"W
L18	33.27'	S62°44'58"W
L19	33.92'	S23°31'51"W
L20	43.59'	N74°10'16"W
L21	37.02'	N47°29'42"W
L22	39.88'	S45°59'52"W
L23	57.79'	S79°19'56"W
L24	15.53'	N52°24'09"W
L25	24.85'	S78°41'54"W
L26	34.88'	S06°36'57"E
L27	11.08'	S63°31'39"E
L28	21.52'	S85°51'04"E
L29	22.22'	S81°53'19"E
L30	30.51'	N89°50'39"E
L31	49.82'	N88°12'11"E
L32	97.13'	N87°15'13"E
L33	35.57'	N85°19'17"E
L34	11.59'	N11°59'49"W
L35	3.31'	N04°37'35"W
L36	54.41'	N04°37'35"W
L37	47.25'	N00°41'37"W
L38	15.21'	N31°27'06"E
L39	115.18'	N81°12'44"E
L40	32.92'	S80°00'23"E
L41	17.09'	N48°08'40"E
L42	48.23'	N01°55'47"W
L43	38.27'	S73°42'18"W
L44	48.15'	S31°00'02"W
L45	49.35'	S80°15'04"W
L46	51.26'	S86°52'37"W
L47	11.99'	N30°46'34"W
L48	52.22'	N02°45'30"W
L49	57.27'	N00°17'21"W
L50	67.51'	N01°12'37"E
L51	54.04'	N04°48'07"E
L52	53.59'	N00°43'49"W
L53	38.77'	N71°21'47"E
L54	14.02'	N74°54'12"E



NOTE

Wetlands were located by GRAEF on 10/20/14.

LINE TABLE		
	LENGTH	DIRECTION
L55	4.62'	N13°05'04"W
L56	21.22'	N76°47'58"W
L57	29.97'	S86°10'20"W
L58	18.27'	N03°55'44"W
L59	18.27'	N03°35'44"W

CERTIFIED SURVEY MAP NO. _____

That part of the Southeast 1/4 of the Southwest 1/4 of Section 13, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, Wisconsin.

SURVEYOR'S CERTIFICATE

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

I, Michael J. Ratzburg, a professional land surveyor, do hereby certify:


That I have surveyed, divided and mapped the Southeast 1/4 of the Southwest 1/4 of Section 13, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, Wisconsin, bounded and described as follows:

Commencing at the Southeast corner of said Southwest 1/4; thence South 88°07'53" West, on and along the south line of said Southwest 1/4, 33.01 feet; thence North 00°13'26" West and parallel to the east line of said Southwest 1/4, 33.01 feet to the north right of way line of West Puetz Road and the point of beginning; thence South 88°07'54" West, on and along said north right of way line, 847.35 feet; thence North 00°13'26" West, 462.19 feet; thence North 88°07'54" East, 847.35 feet to the west right of way line of South 35th Street; thence South 00°13'26" East, on and along said west right of way line, 462.19 feet to the point of beginning.

Containing 391,475 square feet (8.987 acres), more or less.

That I have made such survey, land division, and map by the direction of the owners of said land. That such map is a correct representation of all the exterior boundaries of the land surveyed and the land division thereof made.

That I have fully complied with the provisions of Chapter 236.34 of the Wisconsin Statutes and the Unified Development Ordinance – Division 15 of the City of Franklin, in surveying, dividing and mapping the same.



Michael J. Ratzburg, S-2236
Professional Wisconsin Land Surveyor

Date: 8/2/16
Rev. 11/29/16



CERTIFIED SURVEY MAP NO. _____

That part of the Southeast 1/4 of the Southwest 1/4 of Section 13, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, Wisconsin.

CORPORATE OWNER'S CERTIFICATE

Bridgestone Capital LLC, a corporation duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, does hereby certify that said corporation caused the land described on this plat to be surveyed, divided, mapped and dedicated as represented on this plat.

Bridgestone Capital LLC, does further certify that this plat is required by s.236.10 or s.236.12 to be submitted to the following for approval or objection: City of Franklin.

IN WITNESS WHEREOF, Bridgestone Capital LLC has caused these present to be signed by Ryan Konicek, representative of said corporation on this _____ day of _____, 2016.

Ryan Konicek, Representative

STATE OF WISCONSIN)
) SS
MILWAUKEE COUNTY)

Personally came before me this _____ day of _____, 2016, Ryan Konicek of the above named corporation, to me know to be the person who executed the foregoing instrument, and to me known to be the representative of said corporation, and acknowledged that he executed the foregoing instrument as such officer as the deed of said corporation, by its authority.

NOTARY PUBLIC, STATE OF WISCONSIN

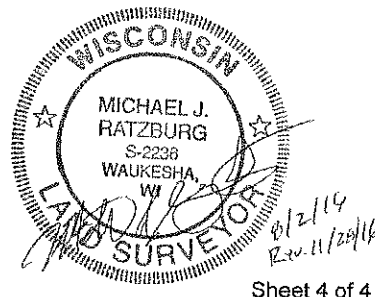
My Commission Expires _____

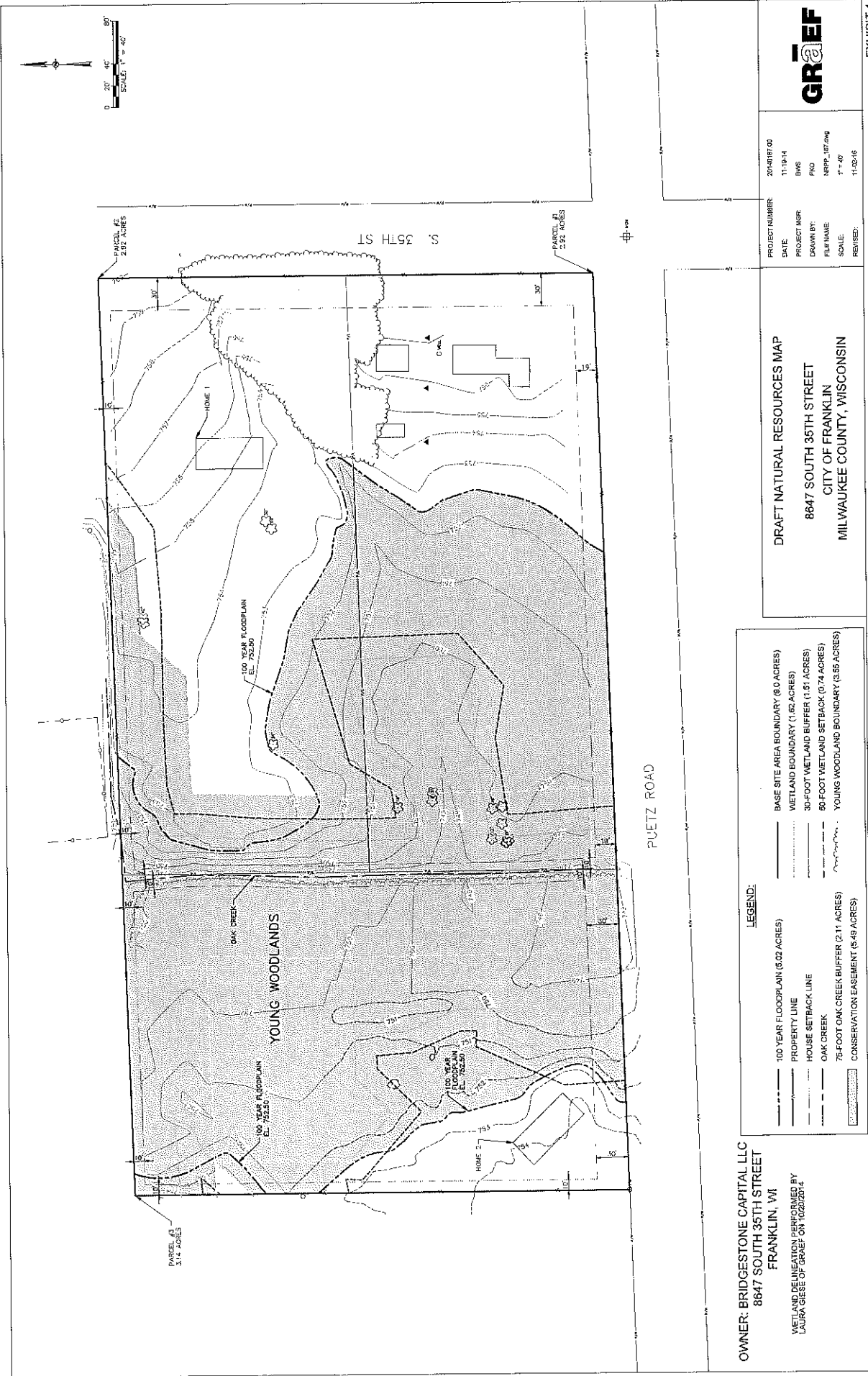
COMMON COUNCIL APPROVAL

Approved and accepted by the Common council of the City of Franklin, Resolution No. _____ of this _____ day of _____, 2016.

Steven Olsen, Mayor

Sandra L. Wesolowski, City Clerk





OWNER: BRIDGESTONE CAPITAL LLC
 8647 SOUTH 35TH STREET
 FRANKLIN, WI

WETLAND DELINEATION PERFORMED BY
 LAURA SIEBE OF GRAEF ON 10/20/2014

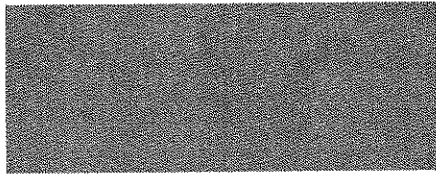
LEGEND:

- 100 YEAR FLOODPLAIN (6.0 ACRES)
- WETLAND BOUNDARY (1.62 ACRES)
- 30-FOOT WETLAND BUFFER (1.51 ACRES)
- 50-FOOT WETLAND SETBACK (0.74 ACRES)
- YOUNG WOODLAND BOUNDARY (3.55 ACRES)
- 100 YEAR FLOODPLAIN (5.02 ACRES)
- PROPERTY LINE
- HOUSE SETBACK LINE
- OAK CREEK
- 75-FOOT OAK CREEK BUFFER (2.11 ACRES)
- CONSERVATION EASEMENT (5.49 ACRES)

DRAFT NATURAL RESOURCES MAP
 8647 SOUTH 35TH STREET
 CITY OF FRANKLIN
 MILWAUKEE COUNTY, WISCONSIN

PROJECT NUMBER: 201401RF 00
 DATE: 11-19-14
 PROJECT MGR: BWS
 DRAWN BY: PND
 FILE NAME: NRPP_167.dwg
 SCALE: 1" = 40'
 REVISED: 11-02-15





Natural Resource Protection Plan Milwaukee County

8647 South 35th Street
Franklin, WI 53132

November 2016

Prepared for

Ryan Konicek

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Prepared by



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I. INTRODUCTION

A Setting and Client Information

Site Location:

Southeast ¼ of Section 13, Township 5 North, Range 21 East in Franklin, Milwaukee County, Wisconsin with the address of 8647 South 35th Street. The location of the subject property is shown in Figure 1.

Client Information:

Ryan Konicek
10125 South 52nd Street
Franklin, WI 53132

B Scope of Services

This Natural Resource Protection Plan (NRPP) has been prepared by GRAEF for Ryan Konicek (client/user). The scope includes conducting site reconnaissance, review of available records and a written report to determine natural resource features on the subject property. Field work and site reconnaissance has been completed by Laura A. B. Giese, Ph.D., PWS, CF, CSE and Geoffrey Parish, PG, PH of GRAEF. The report has been authored by Mike Al-wathiqui of GRAEF.

C Purpose

The purpose of this report is to document natural resource protection areas as they relate to the proposed re-division and development of the subject property in accordance with the City of Franklin Unified Development Division 15-4.0100. The subject property consists of 9 acres to be divided into three roughly equal parcels (Parcel #1 - #3) of approximately 3 acres each. The owner is seeking to build two houses on the property, one on proposed Parcel #2 and one on proposed Parcel #3 (See NRPP). The subject property was found to contain wetlands, young woodlands, a waterway and its associated 100 year floodplain. The proposed location of Home #2 impacts 0.042-acres (1,828.7 ft²) of the young woodland that is located outside of the conservation easement. There are no impacts associated with the construction of Home #1 or subdivision of the lot. The subject property can be seen on the Site Location Map (Figure 1).

II. EXISTING NATURAL RESOURCES

A. STEEP SLOPES

There are no steep slopes, as defined by the UDO within the subject property.

B. WOODLANDS – MATURE AND YOUNG

The western portion of the property is occupied by 3.03 acres of young woodland. This area was determined to be young woodland as it meets the UDO definition of a young woodland having canopy cover of a half-acre or more with 50 percent of the trees having a DBH of three inches or greater. The young woodland is dominated by Green Ash (*Fraxinus pennsylvanica*). Other trees present in the young woodland include American Elm (*Ulmus Americana*), American Basswood (*Tilia Americana*), White Ash (*Faxinus americana*), Shagbark Hickory (*Caria ovata*), Tatarian Honeysuckle (*Lonicera tatarica*), Common Buckthorn (*Rhamnus cathartica*), Norway Maple (*Acer plantoides*) and Cockspur Hawthorn (*Crataegus crus-galli*). There is a 0.52 acre stand of young woods on the east end of the property as well along 35th street primarily occupied by Scotts Pine (*Pinus sylvestris*). The combined young woodland acreage on site is 3.55 acres.

Seventy two percent of young woodland is located within other natural resource features which have 100 percent protection standards, therefore seventy two percent or 2.55 acres will be placed in a conservation easement to be protected. The 0.52 acre young woodland located on the east end of the site along 35th street and 0.48 acres near the proposed location of Home #2 have been left out of the conservation easement. No trees of 8 inch DBH or greater were observed within 25 feet of the proposed location of home #2. Home #2 will impact 0.042 acres of young woodland. The area of young woods to be impacted by Home #2 is dominated by dense Common Buckthorn (*Rhamnus cathartica*), Bell's Honeysuckle (*Loncera x bella*) and young Green Ash (*Fraxinus pennsylvanica*) less than 8 inches DBH.

C. LAKES AND PONDS

There are no lakes or ponds, as defined by the UDO within the subject property.

D. STREAMS

A straightened and intermittent, ditched section of Oak Creek transects the site from north to south along the east edge of the young woodland. North of the parcel boundary Oak Creek splits into two branches. One branch travels to the east to a storm water pond and the other branch continues west. This section of Oak Creek is a vegetated swale like feature absent of standing water, therefore an ordinary high water mark was not mapped as none exists.

E. SHORE BUFFERS

A 75 foot shore buffer has been placed on either side of the straightened and ditched portion of Oak Creek which transects the property. This portion of the stream is a vegetated swale absent of an ordinary high water mark. The 75 foot buffer has been measured out from the centerline of the feature. The buffer occupies 2.11 acres.

F. FLOODPLAINS, FLOODWAYS, AND FLOOD LANDS

Per the FEMA FIRM map review the 100 year floodplain of Oak Creek occupies much of western and central portions of the site. The floodplain will be placed in a conservation easement to be protected.

G. WETLANDS, SHORE LAND WETLANDS, WETLAND BUFFERS, WETLAND SETBACKS.

There is one large wetland on the site with an associated wetland buffer and setback. It is a hardwood swamp occupying the majority of the young woodlands. There is a small finger of wet meadow wetland that extends from the young woodland, east into the managed turf lawn. The wetland boundary was concurred with by the WDNR during a site visit. The wetland and wetland buffer will be placed in a conservation easement to be protected. The wetland setback will not be disturbed as part of the development.

III. SUMMARY

The eastern portion of the subject property is primarily occupied by a large managed turf lawn with an existing house. The western portion of the property is dominated by young woodland and hardwood swamp. High elevations occur in the eastern portion of the site and appear to be associated with grading for the house and 35th street. The rest of the site is fairly flat with the lowest elevations occurring at the intermittent portion of Oak Creek which transects the site north to south along the eastern boundary of the young woodland. This intermittent portion of Oak Creek transecting the site is a vegetated swale absent of standing water and an ordinary high water mark. A buffer of 75 feet was placed on either side of the center line of the swale. The 100 year floodplain of Oak Creek occupies much of western and central portions of the site. There are no steep slopes present on the site.

All natural resource features with a 100 percent protection standard have been placed in a conservation easement to be protected which includes all of the 100 year floodplain, the wetland and wetland buffer and the 75 foot stream buffer. Seventy two percent of young woodland is located within other natural resource features which have a 100 percent protection standard, therefore seventy two percent (2.55 acres) will be placed in a conservation easement to be protected. The 0.52 acre young woodland located on the east end of the site along 35th street and 0.48 acres near the proposed location of Home #2 has been left out of the conservation easement. The end result is a 5.49 acres of natural resource land to be placed in a conservation easement and protected. No trees of 8 inch DBH or greater were observed within 25 feet of the proposed location of home #2. A driveway location has not yet been identified, but a future driveway location is not to impact the conservation easement or any protected resources. There are no impacts associated with the construction of Home #1 or subdivision of the lot.

Figure 1
Site Location Map

APPENDIX A

Site Intensity Calculations

DIVISION 15-3.0500

SITE INTENSITY AND CAPACITY CALCULATIONS

SECTION 15-3.0501

NATURAL RESOURCE PROTECTION AND SITE INTENSITY AND
CAPACITY CALCULATIONS FOR RESIDENTIAL AND
NONRESIDENTIAL USES REQUIRED

- A. **Recognition of Natural Resource Features.** This Ordinance recognizes that landforms, parcel size and shape, and natural resource features vary from site to site and that development regulations must take into account these variations. The maximum density or intensity of use allowed in any zoning district is controlled by the various district standards set forth for each of the various zoning districts of this Ordinance.
- B. **When Natural Resource Protection and Site Intensity and Capacity Calculations Are Required.** Natural resource protection is required for all development and the site intensity and capacity calculations set forth in this Division shall be made for each parcel of land to be used or built upon in the City of Franklin including all new Certified Survey Maps, Preliminary Plats, condominiums, multiple-family residential developments, all nonresidential development, and as may be required elsewhere in this Ordinance except as excluded under the provisions of Section 15-3.0501C. of the Unified Development Ordinance.
- C. **Exclusions (When Natural Resource Protection and Site Intensity and Capacity Calculations Are Not Required).** Natural resource protection shall not be required and the site intensity and capacity calculations set forth in this Division shall not be required for the construction of single-family and two-family residential development located on non-divisible existing lots of record within existing platted Subdivisions (with an approved Final Plat), Certified Survey Maps, and Condominiums existing on August 1, 1998, the effective date of this Ordinance or for which a natural resource protection plan and site intensity capacity calculations were filed at the time of division after August 1, 1998.

SECTION 15-3.0502

CALCULATION OF BASE SITE AREA

The **base site area** shall be calculated as indicated in Table 15-3.0502 for each parcel of land to be used or built upon in the City of Franklin as referenced in Section 15-3.0501 of this Ordinance.

Table 15-3.0502

**WORKSHEET FOR THE CALCULATION OF BASE SITE AREA
FOR BOTH RESIDENTIAL AND NONRESIDENTIAL DEVELOPMENT**

STEP 1:	Indicate the total gross site area (in acres) as determined by an actual on-site boundary survey of the property.	9 acres
STEP 2:	Subtract (-) land which constitutes any existing dedicated public street rights-of-way, land located within the ultimate road rights-of-way of existing roads, the rights-of-way of major utilities, and any dedicated public park and/or school site area.	- 0 acres
STEP 3:	Subtract (-) land which, as a part of a previously approved development or land division, was reserved for open space.	- 0 acres
STEP 4:	In the case of " <i>Site Intensity and Capacity Calculations</i> " for a proposed residential use, subtract (-) the land proposed for nonresidential uses; or In the case of " <i>Site Intensity and Capacity Calculations</i> " for a proposed nonresidential use, subtract (-) the land proposed for residential uses.	- 0 acres
STEP 5:	Equals "Base Site Area"	= 9 acres

SECTION 15-3.0503CALCULATION OF THE AREA OF NATURAL RESOURCES
TO BE PROTECTED

All land area with those natural resource features as described in Division 15-4.0100 of this Ordinance and as listed in Table 15-3.0503 and lying within the **base site area** (as defined in Section 15-3.0502), shall be measured relative to each natural resource feature present. The actual land area encompassed by each type of resource is then entered into the column of Table 15-3.0503 titled "Acres of Land in Resource Feature." The acreage of each natural resource feature shall be multiplied by its respective **natural resource protection standard** (to be selected from Table 15-4.0100 of this Ordinance for applicable agricultural, residential, or nonresidential zoning district) to determine the amount of resource protection land or area required to be kept in open space in order to protect the resource or feature. The sum total of all resource protection land on the site equals the **total resource protection land**. The **total resource protection land** shall be calculated as indicated in Table 15-3.0503.

PROTECTION LAND

Natural Resource Feature	Protection Standard Based Upon Zoning District Type (circle applicable standard from Table 15-4.0100 for the type of zoning district in which the parcel is located)			Acres of Land in Resource Feature	
	Agricultural District	Residential District	Non-Residential District		
Steep Slopes:					
10-19%	0.00	0.60	0.40	X _____ =	_____
20-30%	0.65	0.75	0.70	X _____ =	_____
+ 30%	0.90	0.85	0.80	X _____ =	_____
Woodlands & Forests:					
Mature	0.70	0.70	0.70	X _____ =	_____
Young	0.50	0.50	0.50	X <u>3.55</u> =	<u>1.775</u>
Lakes & Ponds	1	1	1	X _____ =	_____
Streams	1	1	1	X _____ =	_____
Shore Buffer	1	1	1	X <u>2.11</u> =	<u>2.11</u>
Floodplains/Floodlands	1	1	1	X <u>5.02</u> =	<u>5.02</u>
Wetland Buffers	1	1	1	X <u>1.51</u> =	<u>1.51</u>
Wetlands & Shoreland Wetlands	1	1	1	X _____ =	_____
TOTAL RESOURCE PROTECTION LAND (Total of Acres of Land in Resource Feature to be Protected)					<u>5.49</u>

Note: In conducting the calculations in Table 15-3.0503, if two or more natural resource features are present on the same area of land, only the most restrictive resource protection standard shall be used. For example, if floodplain and young woodlands occupy the same space on a parcel of land, the resource protection standard would be 1.0 which represents the higher of the two standards.

The Majority of natural resources present occupy space within the 5.02 acre 100-year floodplain except for 0.47 acres of shore and wetland buffer which extends beyond the 100-year floodplain. The result is 5.49 acres of land in resource features to be protected.

SECTION 15-3.0504

**CALCULATION OF SITE INTENSITY AND CAPACITY FOR
RESIDENTIAL USES**

In order to determine the maximum number of dwelling units which may be permitted on a parcel of land zoned in a residential zoning district, the site intensity and capacity calculations set forth in Table 15-3.0504 shall be performed.

Table 15-3.0504

**WORKSHEET FOR THE CALCULATION OF SITE INTENSITY AND
CAPACITY FOR RESIDENTIAL DEVELOPMENT**

STEP 1:	CALCULATE MINIMAL REQUIRED ON-SITE OPEN SPACE Take <i>Base Site Area</i> (from Step 5 in Table 15-3.0502): <u>9</u> Multiple by Minimum <i>Open Space Ratio (OSR)</i> (see specific residential zoning district OSR standard): X <u>0</u> Equals MINIMUM REQUIRED ON-SITE OPEN SPACE =	0 acres
STEP 2:	CALCULATE NET BUILDABLE SITE AREA: Take <i>Base Site Area</i> (from Step 5 in Table 15-3.0502): <u>9</u> Subtract <i>Total Resource Protection Land</i> from Table 15-3.0503) or <i>Minimum Required On-Site Open Space</i> (from Step 1 above), whichever is greater: <u>- 5.49</u> Equals NET BUILDABLE SITE AREA =	3.51 acres
STEP 3:	CALCULATE MAXIMUM NET DENSITY YIELD OF SITE: Take <i>Net Buildable Site Area</i> (from Step 2 above): <u>3.51</u> Multiply by Maximum <i>Net Density (ND)</i> (see specific residential zoning district ND standard): X <u>2.972</u> Equals MAXIMUM NET DENSITY YIELD OF SITE =	10.43 D.U.s
STEP 4:	CALCULATE MAXIMUM GROSS DENSITY YIELD OF SITE: Take <i>Base Site Area</i> (from Step 5 of Table 15-3.0502): <u>9</u> Multiple by Maximum <i>Gross Density (GD)</i> (see specific residential zoning district GD standard): X <u>2.972</u> Equals MAXIMUM GROSS DENSITY YIELD OF SITE =	26.748 D.U.s
STEP 5:	DETERMINE MAXIMUM PERMITTED D.U.s OF SITE: Take the <i>lowest</i> of Maximum Net Density Yield of Site (from Step 3 above) or Maximum Gross Density Yield of Site (from Step 4 above):	10.43 D.U.s

APPENDIX B

Site Photographs

SITE PHOTOGRAPHS

Natural Resource Protection Plan
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 10-21-14

GRAEF



Photo #: 1

Direction of View:

Northwest

Comment:

View of the managed lawn taken from the southeast corner of the Study Area.

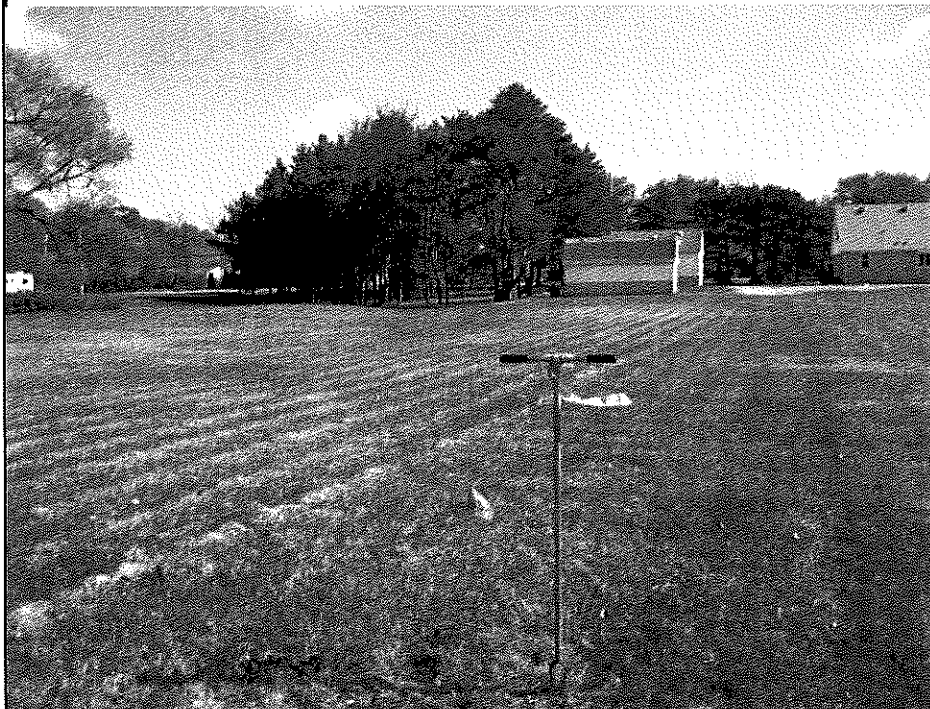


Photo #: 2

Direction of View:

Northeast

Comment:

View of managed lawn, looking towards 35th Street.

SITE PHOTOGRAPHS

Natural Resource Protection Plan
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 10-21-14

GRAEF



Photo #: 3

Direction of View:

-

Comment:

Overview of young woodlands within
the 100-year floodplain.



Photo #: 4

Direction of View:

-

Comment:

View of young woodlands and
hardwood swamp.

SITE PHOTOGRAPHS

Natural Resource Protection Plan
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 10-21-14

GRAEF



Photo #: 5

Direction of View:

East

Comment:

Overview of 0.52 acres of young woodland on east edge of site.



Photo #: 6

Direction of View:

South

Comment:

View of south end of straightened and ditched section of Oak Creek which transects the site along the young woodland. This portion of Oak Creek is a vegetated swale with intermittent flow.

APPENDIX C

Wetland Delineation Report and WDNR Concurrence Letter

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
P.O. Box 7921
Madison, WI 53707-7921

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



November 23, 2016

WIC-SE-2016-41-03657

Bridgestone Capital LLC
Ryan Konicek
10125 S 52nd Street
Franklin, WI 53132

RE: Wetland Delineation Report for an approximately 9 acre project area located in the SE1/4 of the SW1/4 of Section 13, Township 5 North, Range 21 East (Northwest of the Intersection of 35th Street and Puetz Road), City of Franklin, Milwaukee County

Dear Mr. Konicek:

We have received and reviewed the wetland delineation report prepared for the above mentioned site by GRAEF. This letter will serve as confirmation that the wetland boundaries as shown on the attached wetland delineation map are acceptable. This finding is based upon an October 28, 2016 field visit. Any filling or grading within these areas will require DNR approvals. Our wetland confirmation is valid for five years unless altered site conditions warrant a new wetland delineation be conducted. Be sure to send a copy of the report, as well as any approved revisions, to the U.S. Army Corps of Engineers.

In order to comply with Chapter 23.321, State Statutes, please supply the department with a polygon shapefile of the wetland boundaries delineated within the project area. Please do not include data such as parcel boundaries, project limits, wetland graphic representation symbols, etc. If internal upland polygons are found within a wetland polygon, then please label as UPLAND. The shapefile should utilize a State Plane Projection, and be overlain onto recent aerial photography. If a different projection system is used, please indicate what system the data are projected to. In the correspondence sent with the shapefile, please supply a brief description of each wetland's plant community (eg: wet meadow, floodplain forest, etc.). Please send these data to Calvin Lawrence (608-266-0756, or calvin.lawrence@wisconsin.gov).

There is a waterway identified on the property that may be considered to be navigable by the DNR. DNR Chapter 30 permits may be needed if earthwork (filling, dredging, etc.) or structures (culverts, bridges, erosion control, etc.) are proposed in or adjacent to navigable waterways. The Wetland ID Program recommends that a navigability determination be conducted on the waterway within the project area, if the waterway has not been evaluated previously.

If you are planning development on the property, you are required to avoid take of endangered and threatened species, or obtain an incidental take authorization, to comply with the state's Endangered Species Law. To insure compliance with the law, you should submit an endangered resources review form (Form 1700-047), available at <http://dnr.wi.gov/topic/ERReview/Review.html>. The Endangered Resources Program will provide

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

a review response letter identifying any endangered and threatened species and any conditions that must be followed to address potential incidental take.

In addition to contacting WDNR, be sure to contact your local zoning office and U.S. Army Corps of Engineers to determine if any local or federal permits may be required for your project.

If you have any questions, please contact me at (608) 261-6430 or email Neil.Molstad@wisconsin.gov.

Sincerely,



Neil Molstad
Wetland Identification Specialist

cc: April Marcangeli, Project Manager, U.S. Army Corps of Engineers
Joel Dietl, Planning Manager, City of Franklin
Mike Al-wathiqui, GRAEF
Joshua Wied, DNR Water Management Specialist
Intake, DNR Stormwater SE Region
Chris Jors, SEWRPC

Attachments:

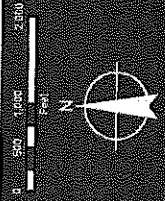
General Site Location Mapping for the Project Area
Wetland Delineation Mapping for the Project Area



SITE LOCATION

FIGURE #1
CR&EF

35TH & PUETZ
FRANKLIN
MILWAUKEE CO., WISCONSIN



1 in = 2,000 ft

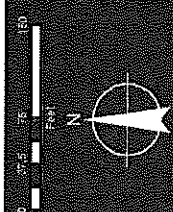


WETLAND DELINEATION

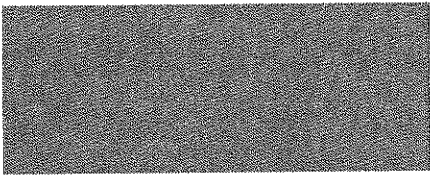
35TH & PUETZ
FRANKLIN
MILWAUKEE CO., WISCONSIN

EXHIBIT #1

GR
EF



1 in = 150 ft



**8647 South 35th Street
Wetland Delineation
Milwaukee County**

July 2016

Prepared for

Ryan Konicek

10125 South 52nd Street
Franklin, WI 53132

Prepared by

GRAEF

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Project No.: 2014-0187.00

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Appendix B: WETS Analysis

Appendix C: Wetland Delineation Map

Appendix D: Site Photographs

Appendix E: Wetland Determination Data Forms

Appendix F: Statement of Qualifications

1.0 INTRODUCTION

Per the request of Mr. Ryan Konicek, GRAEF conducted a wetlands delineation within a designated Study Area at 8647 South 35th Street (Figure 1, Appendix A). The site is located in Section 13, Township 5 North, Range 21 East in the City of Franklin, Milwaukee County, Wisconsin. The Study Area is primarily occupied by a large managed turf lawn with a house on the east edge of the property. The western portion of the property is dominated by young woodland.

The purpose of this wetland delineation was to determine the location and extent of wetlands located within designated Study Areas. Our study is presented here in terms of methodology, results, and conclusions.

The wetlands delineation field investigation was conducted by GRAEF scientists Geoffrey B. Parish and Laura A. B. Giese on October 20th and October 21st, 2014. A Statement of Qualifications on the field investigators is provided in Appendix G.

2.0 METHODS

This delineation was conducted in accordance with the guidelines of the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, 2010), the Corps of Engineers and the Wisconsin Department of Natural Resources guidance on delineation reports (2015) and the Wisconsin Department of Natural Resources guidelines (WI Department of Administration, WI Coastal Management Program, 1995). National Wetland Indicator status and taxonomic nomenclature is referenced from The National Wetland Plant List (Lichvar et al., 2016). National Wetland Indicator status is based on the Midwest Region.

Prior to conducting fieldwork, GRAEF scientists reviewed several maps including the United States Geological Survey (USGS) 7.5' Quadrangle maps, Wisconsin Wetland Inventory Map, Natural Resource Conservation Service (NRCS) Soil Survey Map, and aerial photographs. *Note: NRCS no longer releases their NRCS Wetland Inventory Maps to other than the landowner or operator without documented permission from the landowner or operator; therefore they were not reviewed nor are they included with this report.*

Precipitation data from approximately 90 days prior to the field investigation was obtained from a weather station near the Study Area and compared with 30-year average precipitation data obtained from an NRCS WETS Table for the County where the Study Area was located to determine if antecedent hydrologic conditions at the time of the site visit were normal for the time of the year.

Sampling points were located in areas exhibiting wetland and upland characteristics to document the presence and/or absence of wetlands and to provide support for the delineated wetland boundaries. At each sampling point, data were collected to document the vegetation, soils, and indicators of wetland

hydrology. The wetland boundaries were staked using wire pin flags and when needed flagging tape. Wetland boundaries were generally determined by distinct to subtle differences in the abundance of hydrophytic vegetation and upland vegetation, apparent topographic breaks, and regular probing of soils.

3.0 RESULTS AND DISCUSSION

3.1 BACKGROUND REVIEW

3.1.1 Topography

The topographic map (Figure 4, Appendix A) showed elevations ranging from 749 to 760 above sea level. High elevations occur in the eastern portion of the site and appear to be associated with grading for the house and 35th street. The site slopes from both the east and west sides toward Oak Creek, which appears to have been realigned and straightened.

3.1.2 Wisconsin Wetland Inventory

The Wisconsin Wetland Inventory (WWI) map (Figure 2, Appendix A) depicted one T3K, forested, broad-leaved deciduous, wet soil wetland within the Study Area.

3.1.3 Soils

According to the NRCS Soil Survey map (Figure 3, Appendix A) two mapped soil units are located within the Study Area. Mapped soils include Ashkum silty clay loam, 0 to 2 percent slopes (AsA) which is classified as a hydric soil and Morley silt loam, 2 to 6 percent slopes (MzdB) which is classified as a non-hydric soil.

3.1.4 Precipitation Data.

The WETS analysis worksheet is provided in Appendix B. According to the USDA eFOTG Database, the total precipitation from a nearby weather station (Milwaukee MT MARY CLG, WI5474) for the 14 days prior to the October 20th site visit was 1.62 inches. The most recent rainfall event prior to the October 20th site visit was 0.08 inches on October 19th. It also rained 0.02 inches on the day of the October 21st site visit. The total precipitation for the 90 days prior to the month of October was approximately 8.88 inches, which was 1.94 inches below a 30-year average. The precipitation data for the 90 day period preceding the month of October were entered into a WETS analysis worksheet to determine antecedent hydrologic conditions at the time of the site visit for field investigation purposes. Based on this analysis, the precipitation total for the 90 days prior to the site visits was considered below average. However, despite the dryer than normal conditions for the previous three months, the relatively significant rain events immediately before the October 20th site visit and during the day of the October 21st site visit may have contributed to wetter than normal site conditions during the time of field work.

3.2 FIELD STUDY

3.2.1 Site Description

The Study Area is primarily occupied by a large managed turf lawn with a house on the east edge of the property. The western third of the property is dominated by young woodland. High elevations occur in the eastern portion of the site and appear to be associated with grading for the house and 35th street. The rest of the site slopes from both east and west sides toward Oak Creek, which appears to have been realigned and straightened. Oak Creek is located at the eastern boundary of the woodlands.

3.2.2 Wetlands

One wetland (W-1) was delineated. The delineated wetland boundaries and data points are shown on a map (Exhibit 1) in Appendix C. Data was collected and recorded on Wetland Determination Data Forms at four data points to document wetland and upland locations (Appendix E). Photographs were taken at each data point and other notable locations (Appendix D).

Wetland W-1 was 1.65 acres and extended outside of the Study Area. The wetland was mostly comprised of a hardwood swamp with a finger of wet meadow extending east into the managed field. The wet meadow portion of wetland W-1 was dominated by Creeping Bentgrass (*Agrostis stolonifera*) with vegetation in the hardwood swamp portion dominated by Common Buckthorn (*Rhamnus cathartica*), American Elm (*Ulmus americana*), Green Ash (*Fraxinus pennsylvanica*) and Blisterwort (*Ranunculus recurvatus*). Soils in the wetland were depleted below a dark surface with a presence of redoximorphic features meeting the criteria for hydric soil indicators A11 (Depleted Below Dark Surface) and F3 (Depleted Matrix). Indicators of hydrology included standing water in the wet meadow as well as D2 (Geomorphic Position) and D5 (FAC-neutral Test). Indicators of hydrology in the hardwood swamp portion of wetland W-1 included D2 (Geomorphic Position) and D5 (FAC-neutral Test).

The upland adjacent to the wet meadow portion of wetland W-1 was dominated by Canada Bluegrass (*Poa compressa*) and Dandelion (*Taraxacum officinale*). Vegetation in the upland adjacent to the hardwood swamp portion of wetland W-1 was dominated by Green Ash (*Fraxinus pennsylvanica*), Tartarian Honeysuckle (*Lonicera tatarica*), Gray Dogwood (*Cornus racemosa*), Cockspur Hawthorn (*Crataegus crus-galli*) and Common Buckthorn (*Rhamnus cathartica*). Soils in the upland immediately adjacent to the wet meadow portion of W-1 were dark with a presence of redoximorphic features near the surface meeting the hydric indicator criteria for F6 (Redox Dark Surface). This may be an artifact of the sample point's proximity to the wetland boundary. There was also a water table at 8" with saturation at 2" at the upland sample point adjacent the wet meadow portion of W-1. However it had rained a total 0.14 inches three days prior to the site visit including the day of the site visit. Topography and vegetation were also used to delineate the wetland boundary in this area. The soils in the upland adjacent to the hardwood swamp portion of wetland W-1 were fairly high in chroma and light in value and did not meet any of the criteria for hydric soil indicators. There were no indicators of hydrology in the upland adjacent to the hardwood swamp portion of wetland W-1.

A channelized section of Oak Creek was identified within the Study Area entering into the site on the north side of the Study Area on the edge of the woods. The waterway runs along the edge of the wooded area and exits the site through a culvert under Puetz Road at the south end of the Study Area.

4.0 CONCLUSION

Based on the wetlands delineation completed by GRAEF one wetland (W-1) was delineated with a total of 1.65 acres. One waterway was also identified.

Activity in delineated wetlands or waterways may require permits from the U.S. Army Corps of Engineers, Wisconsin Department of Natural Resources, and local governments prior to beginning any work.

5.0 LIMITATIONS

The results of this field study are based on site conditions at the time of the field study, which was conducted in accordance with current regulatory policy and methods. Unknown and future conditions that affect observations of field indicators, and change in interpretation of regulatory policy, may modify future findings.

Statements within this report about the connectivity of the delineated wetlands to surface waters are the professional opinions of GRAEF's scientists and are not significant nexus determinations or jurisdictional determinations. Opinions on connectivity are based on general field observations and a cursory review available map resources. The ultimate authority to determine jurisdiction resides with the U.S. Army Corps of Engineers and the Wisconsin Department of Natural Resources.

The U.S. Army Corps of Engineers and the Wisconsin Department of Natural Resources have the ultimate authority to determine wetland boundaries, and adjustments to wetland boundaries may occur based on decisions made by these regulatory agencies.

6.0 REFERENCES

- Bernthal, Tom. 2003. Development of a Floristic Quality Assessment for Wisconsin. Wisconsin Department of Natural Resources, Bureau of Fisheries Management and Habitat Protection, 22 pp.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Eggers, Steve D. and Donald M. Reed. 1997. Wetland Plants and Plant Communities of Minnesota and Wisconsin. 2nd Ed. U.S. Army Corps of Engineers, St. Paul District.
- Lichvar, R.W. 2013. *The National Wetland Plant List: 2013 wetland ratings*. Phytoneuron 3013-29: 1-241.
- Midwestern Regional Climate Center cli-MATE Database <http://mrcc.isws.illinois.edu/CLIMATE/>
- Southeastern Wisconsin Regional Planning Commission (SEWRPC) Southeastern Wisconsin Regional Land Information: Regional Map Server
<http://maps.sewrpc.org/regionallandinfo/regionalmapping/RegionalMaps/viewer.htm>
- Swink, Floyd, and Gerould Wilhelm. "Plants of the Chicago region." Indianapolis: Indiana Academy of Science, 1994.
- U.S. Army Corps of Engineers and Wisconsin Department of Natural Resources. 2015. *Guidance for submittal of Delineation Reports to the St. Paul District Army Corps of Engineers and the Wisconsin Department of Natural Resources*.
- U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2011. *Regional Supplement to the Corps of Engineers Wetland Delineation Training Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J.S. Wakeley, R. W. Lichvar, C.V. Noble, and J.F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- USDA Natural Resources Conservation Service Web Soil Survey
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>
- USDA NRCS Climate Analysis by County Web Site (WETS). (Web Address:
<http://www.wcc.nrcs.usda.gov/climate/wetlands.html>)

Woodward , Donald E., ed. 1997. Hydrology Tools for Wetland Determination, Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

WI Department of Administration, WI Coastal Management Program. 1995. Basic Guide to Wisconsin's Wetlands and their Boundaries. WI Coastal Management Program, Madison, WI

Wisconsin Department of Natural Resources Surface Water Data Viewer Web Mapping Application
<http://dnrmaps.wi.gov/imf/imf.jsp?site=SurfaceWaterViewer>

Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guideline. 1993, revised March 2002. Wisconsin Department of Natural Resources, United States Army Corps of Engineers, United States Environmental Protection Agency, United States Fish and Wildlife Service, and the Federal Highway Administration.

APPENDICES

- Appendix A Figures**
- Appendix B WETS Analysis**
- Appendix C Wetland Delineation
Map**
- Appendix D Site Photographs**
- Appendix E Wetland Determination
Data Forms**
- Appendix F Statement of
Qualifications**

APPENDIX A

Figures





SOIL MAP

35TH & PUETZ
 FRANKLIN
 MILWAUKEE CO., WISCONSIN

FIGURE #3

GRÄEF



Legend
— Contour Line
— Site Boundary

CONTOUR MAP

FIGURE #4

GRÄEF

35TH & PUETZ
FRANKLIN
MILWAUKEE CO., WISCONSIN

1 in = 150 ft



Legend
Site Boundary

2000 AERIAL

35TH & PUETZ
FRANKLIN
MILWAUKEE CO., WISCONSIN

FIGURE #5

GRÄEF

0 50 100 200
Feet



1 in = 200 ft

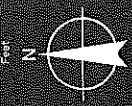


2005 AERIAL

35TH & PUETZ
FRANKLIN
MILWAUKEE CO., WISCONSIN

FIGURE #6

GRÄEF



1 in = 200 ft



2010 AERIAL

35TH & PUETZ
FRANKLIN
MILWAUKEE CO., WISCONSIN

1 in = 200 ft

FIGURE #7

CR&EF

Legend
Site Boundary



0 50 100 200
Feet



1 in = 200 ft

2015 AERIAL

35TH & PUETZ

FRANKLIN

MILWAUKEE CO., WISCONSIN

FIGURE #8

CRÄEF

Legend
Site Boundary

APPENDIX B

WETS Analysis

WETS Analysis

Project Site: 8647 South 35th Street
 Project Number: 2014-0187.00
 Period of interest: July-September, 2014
 County: Milwaukee

Long-term rainfall records (from WETS table)

	Month	3 years in 10	
		less than	greater than
1st month prior:	September	1.57	4.13
2nd month prior:	August	2.81	4.72
3rd month prior:	July	2.4	4.11
		Sum = 10.82	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
1.39	Dry	1	3	3
4.45	Normal	2	2	4
3.04	Normal	2	1	2
8.88	Sum*** =			9

Sum =

*Normal precipitation with 30% to 70% probability of occurrence

**Condition value:

***If sum is:

Dry = 1
 Normal = 2
 Wet = 3

6 to 9 then period has been drier than normal
 10 to 14 then period has been normal
 15 to 18 then period has been wetter than normal

Determination:

Wet

☐ Dry
☒ Normal

Precipitation data source: USDA eFOTG

WETS Station: MILWAUKEE MT MARY CLG, WI5474

Reference:

Donald E. Woodward, ed. 1997. *Hydrology Tools for Wetland Determination*, Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.



collaborāte / formulāte / innovāte

APPENDIX C

Wetland Delineation Map



Legend

- Sample Point
- Wetland Delineation
- Site Boundary
- Parcel Line

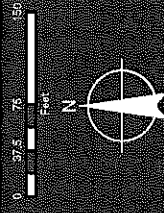
WETLAND DELINEATION

EXHIBIT #1

GRÄEF

35TH & PUETZ
FRANKLIN
MILWAUKEE CO., WISCONSIN

1 in = 150 ft



APPENDIX D

Site Photographs

SITE PHOTOGRAPHS

8647 South 35th Street
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 10/20/2014

GRAEF



Photo #: 1

Direction of View:

West

Comment:

Wetland sample point SP-1 in wetland W-1.



Photo #: 2

Direction of View:

East

Comment:

Upland sample point SP-2.

SITE PHOTOGRAPHS

8647 South 35th Street
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 10/20/2014

GRAEF



Photo #: 3

Direction of View:

-

Comment:

Wetland sample point SP-3 in wetland W-1.



Photo #: 4

Direction of View:

-

Comment:

Upland sample point SP-4.

APPENDIX E

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 8647 South 35th Street City/County: Franklin/Milwaukee Sampling Date: 20-Oct-14
 Applicant/Owner: Ryan Konicek State: WI Sampling Point: SP-1 wtd
 Investigator(s): Laura Giese, Geof Parish Section, Township, Range: S 13 T 5 N R 21 E
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave
 Slope: 1.0% / 0.6° Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Ashkum silty clay loam, 0 to 2 percent slopes (AsA), Hydric WWI 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 checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Remarks: This is on the toeslope of a microtopographic depression in a mown field. All three of the criteria are met indicating that this area is wetland. Wetland ID: W-1. It has rained 0.14 inches over the past three days, including today, making hydrological conditions naturally problematic.	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' R)	Absolute % Cover	Dominant Species? Rel. Strat. Cover	Indicator Status
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
0 = Total Cover			
Sapling/Shrub Stratum (Plot size: 15' R)	Absolute % Cover	Dominant Species? Rel. Strat. Cover	Indicator Status
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
0 = Total Cover			
Herb Stratum (Plot size: 5' R)	Absolute % Cover	Dominant Species? Rel. Strat. Cover	Indicator Status
1. <i>Agrostis stolonifera</i>	75	<input checked="" type="checkbox"/> 71.4%	FACW
2. <i>Poa compressa</i>	20	<input type="checkbox"/> 19.0%	FACU
3. <i>Taraxacum officinale</i>	10	<input type="checkbox"/> 9.5%	FACU
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
8. _____	0	<input type="checkbox"/> 0.0%	
9. _____	0	<input type="checkbox"/> 0.0%	
10. _____	0	<input type="checkbox"/> 0.0%	
105 = Total Cover			
Woody Vine Stratum (Plot size: 30' R)	Absolute % Cover	Dominant Species? Rel. Strat. Cover	Indicator Status
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
0 = Total Cover			

Dominance Test worksheet:
 Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>75</u>	x 2 = <u>150</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u>	(A) <u>270</u> (B)

 Prevalence Index = B/A = 2.571

Hydrophytic Vegetation Indicators:
☒ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is > 50%
☒ 3 - Prevalence Index is ≤ 3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)
 This is an area of a mown field, dominated by Creeping Bentgrass. The hydrophytic vegetation criterion is met.

¹Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-1 wtd**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-3	10YR	3/2	95	7.5YR	5/8	5	C	M	Silty Clay Loam
3-4	10YR	5/1	90	7.5YR	5/8	10	C	M	Silty Clay
4-16	10YR	4/2	50	7.5YR	5/8	15	C	M	Silty Clay
	N	2/1	30	10YR	5/6	5	C	M	

¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron Manganese Masses (F12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)		
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="radio"/> No <input type="radio"/>
Depth (inches): _____	

Remarks:
The hydric soil criterion is met by indicators A11 (Depleted Below Dark Surface) and F3 (depleted Matrix).

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>		
Saturation Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>		
(includes capillary fringe)			

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

Remarks:
The water table is present at the surface. Multiple secondary hydrology indicators are present as well. The criterion is met. It has rained 0.14 inches over the past three days, including today, making hydrological conditions naturally problematic.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 8647 South 35th Street City/County: Franklin/Milwaukee Sampling Date: 20-Oct-14

Applicant/Owner: Ryan Konicek State: WI Sampling Point: SP-2 upl

Investigator(s): Laura Giese, Geof Parish Section, Township, Range: S 13 T 5 N R 21 E

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

Slope: 2.0% / 1.1° Lat.: Long.: Datum:

Soil Map Unit Name: Ashkum silty clay loam, 0 to 2 percent slopes (AsA), Hydric WWI 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="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Remarks: This is on the shoulder slope of a depression in an area of microtopographic relief. Hydric soils are present, but are likely an artifact of the proximity of the sample point to the wetland boundary. Recent rainfall has made hydrological conditions naturally problematic as well.	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' R)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	0	<input type="checkbox"/> 0.0%	
2.	0	<input type="checkbox"/> 0.0%	
3.	0	<input type="checkbox"/> 0.0%	
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' R)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	0	<input type="checkbox"/> 0.0%	
2.	0	<input type="checkbox"/> 0.0%	
3.	0	<input type="checkbox"/> 0.0%	
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
	0	= Total Cover	

Herb Stratum (Plot size: 5' R)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. Poa compressa	75	<input checked="" type="checkbox"/> 60.0%	FACU
2. Taraxacum officinale	35	<input checked="" type="checkbox"/> 28.0%	FACU
3. Agrostis gigantea	15	<input type="checkbox"/> 12.0%	FACW
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
6.	0	<input type="checkbox"/> 0.0%	
7.	0	<input type="checkbox"/> 0.0%	
8.	0	<input type="checkbox"/> 0.0%	
9.	0	<input type="checkbox"/> 0.0%	
10.	0	<input type="checkbox"/> 0.0%	
	125	= Total Cover	

Woody Vine Stratum (Plot size: 30' R)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	0	<input type="checkbox"/> 0.0%	
2.	0	<input type="checkbox"/> 0.0%	
	0	= Total Cover	

Dominance Test worksheet:			
Number of Dominant Species That are OBL, FACW, or FAC:	0	(A)	
Total Number of Dominant Species Across All Strata:	2	(B)	
Percent of dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)	
Prevalence Index worksheet:			
Total % Cover of:	Multiply by:		
OBL species 0	x 1 =	0	
FACW species 15	x 2 =	30	
FAC species 0	x 3 =	0	
FACU species 110	x 4 =	440	
UPL species 0	x 5 =	0	
Column Totals: 125	(A)	470	(B)
Prevalence Index = B/A = 3.760			
Hydrophytic Vegetation Indicators:			
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation			
<input type="checkbox"/> 2 - Dominance Test is > 50%			
<input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 ¹			
<input type="checkbox"/> 4 - 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.			
Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			

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

This is part of a mown lawn dominated by Canada Blue Grass. The vegetation indicate that this area is upland. The hydrophytic vegetation criterion is not met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-2 upl**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix			Redox Features					Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type ¹	Loc ²			
0-2	10YR	3/2	100						Silty Clay Loam	
2-6	10YR	3/2	96	10YR	5/6	2	C	M	Silty Clay Loam	
				7.5YR	5/8	2	C	M		
6-16	10YR	3/1	90	10YR	5/6	5	C	M	Silty Clay Loam	
				7.5YR	5/8	5	C	M		
16-19	10YR	5/1	60	7.5YR	5/8	15	C	M	Silty Clay	
	10YR	5/2	25							

¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron Manganese Masses (F12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

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

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="radio"/> No <input type="radio"/>
Depth (inches): _____	

Remarks:
The hydric soil criterion is met by indicator F6 (Redox Dark Surface).

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>		
Saturation Present? (Includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>		
Depth (inches): _____	8		
Depth (inches): _____	2		

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

Remarks:
The water table is present at 8" with saturation at 2". The hydrology criterion is met, however it has rained 0.14 inches over the past three days, including today, making hydrological conditions naturally problematic.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 8647 South 35th Street City/County: Franklin/Milwaukee Sampling Date: 21-Oct-14

Applicant/Owner: Ryan Konicek State: WI Sampling Point: SP-3 wtd

Investigator(s): Laura Giese, Geof Parish Section, Township, Range: S 13 T 5 N R 21 E

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

Slope: 1.0% / 0.6° Lat.: Long.: Datum:

Soil Map Unit Name: Ashkum silty clay loam, 0 to 2 percent slopes (AsA), Hydric WWI 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 checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Wetland Hydrology Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Remarks: This is an depressional area in the woods. All three of the criteria are met indicating that this area is wetland. Wetland ID: W-1. It has rained 0.14 inches over the past three days making hydrological conditions naturally problematic.		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' R)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 6 (A) Total Number of Dominant Species Across All Strata: 6 (B) Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1. Ulmus americana	70	<input checked="" type="checkbox"/> 56.0%	FACW	
2. Fraxinus pennsylvanica	30	<input checked="" type="checkbox"/> 24.0%	FACW	
3. Rhamnus cathartica	25	<input checked="" type="checkbox"/> 20.0%	FAC	
4.	0	<input type="checkbox"/> 0.0%		
5.	0	<input type="checkbox"/> 0.0%		
	125	= Total Cover		
Prevalence Index worksheet:				
Total % Cover of: Multiply by:				
OBL species 0 x 1 = 0				
FACW species 135 x 2 = 270				
FAC species 95 x 3 = 285				
FACU species 0 x 4 = 0				
UPL species 0 x 5 = 0				
Column Totals: 230 (A) 555 (B)				
Prevalence Index = B/A = 2.413				
Hydrophytic Vegetation Indicators:				
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation				
<input checked="" type="checkbox"/> 2 - Dominance Test is > 50%				
<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 ¹				
<input type="checkbox"/> 4 - 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.				
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>				
Sapling/Shrub Stratum (Plot size: 15' R)				
1. Rhamnus cathartica	35	<input checked="" type="checkbox"/> 100.0%	FAC	
2.	0	<input type="checkbox"/> 0.0%		
3.	0	<input type="checkbox"/> 0.0%		
4.	0	<input type="checkbox"/> 0.0%		
5.	0	<input type="checkbox"/> 0.0%		
	35	= Total Cover		
Herb Stratum (Plot size: 5' R)				
1. Rhamnus cathartica	25	<input checked="" type="checkbox"/> 35.7%	FAC	
2. Ranunculus recurvatus	35	<input checked="" type="checkbox"/> 50.0%	FACW	
3. Hydrophyllum virginianum	10	<input type="checkbox"/> 14.3%	FAC	
4.	0	<input type="checkbox"/> 0.0%		
5.	0	<input type="checkbox"/> 0.0%		
6.	0	<input type="checkbox"/> 0.0%		
7.	0	<input type="checkbox"/> 0.0%		
8.	0	<input type="checkbox"/> 0.0%		
9.	0	<input type="checkbox"/> 0.0%		
10.	0	<input type="checkbox"/> 0.0%		
	70	= Total Cover		
Woody Vine Stratum (Plot size: 30' R)				
1.	0	<input type="checkbox"/> 0.0%		
2.	0	<input type="checkbox"/> 0.0%		
	0	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)
This is a hardwood swamp. The hydrophytic vegetation criterion is met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-3 wtd**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-10	10YR	2/1	100					Silty Clay Loam	
10-14	10YR	3/1	95	5YR	4/4	5	C	M	Silty Clay Loam
14-17	10YR	3/1	85	10YR	4/6	15	C	M	Silty Clay
17-20	10YR	4/2	80	10YR	4/6	20	C	M	Silty Clay

¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Muck Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

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

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="radio"/> No <input type="radio"/>
Depth (inches): _____	

Remarks:

It is in the best professional judgement of the delineator that organic material was masking the redox within the upper 10 inches of the soil profile and it is likely that indicator F6 (Dark Surface Redox) is met.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:		Wetland Hydrology Present?
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/>
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	

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

Remarks:

Multiple secondary hydrology indicators are present. The criterion is met. It has rained 0.14 inches over the past three days making hydrological conditions naturally problematic, but there is no standing water or water table present in this area.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 8647 South 35th Street City/County: Franklin/Milwaukee Sampling Date: 21-Oct-14
 Applicant/Owner: Ryan Konicek State: WI Sampling Point: SP-4 upl
 Investigator(s): Laura Giese, Geof Parish Section, Township, Range: S 13 T 5 N R 21 E
 Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, convex, none): convex
 Slope: 5.0% / 2.9 ° Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Ashkum silty clay loam, 0 to 2 percent slopes (AsA), Hydric WWI 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 checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Remarks: This is in the wooded area upslope of the hardwood swamp. The hydrophytic vegetation criterion is met, but the soils and a lack of hydrology indicate that this area is upland.	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' R)			
1. <i>Fraxinus pennsylvanica</i>	50	<input checked="" type="checkbox"/> 83.3%	FACW
2. <i>Ulmus americana</i>	10	<input type="checkbox"/> 16.7%	FACW
3.	0	<input type="checkbox"/> 0.0%	
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' R)			
1. <i>Lonicera tatarica</i>	30	<input checked="" type="checkbox"/> 37.5%	FACU
2. <i>Cornus racemosa</i>	30	<input checked="" type="checkbox"/> 37.5%	FAC
3. <i>Crataegus crus-galli</i>	20	<input checked="" type="checkbox"/> 25.0%	FAC
4.	0	<input type="checkbox"/> 0.0%	
5.	0	<input type="checkbox"/> 0.0%	
	80	= Total Cover	
Herb Stratum (Plot size: 5' R)			
1. <i>Rhamnus cathartica</i>	40	<input checked="" type="checkbox"/> 66.7%	FAC
2. <i>Lonicera tatarica</i>	10	<input type="checkbox"/> 16.7%	FACU
3. <i>Symphotrichum lateriflorum</i>	5	<input type="checkbox"/> 8.3%	FACW
4. <i>Frangula alnus</i>	5	<input type="checkbox"/> 8.3%	FACW
5.	0	<input type="checkbox"/> 0.0%	
6.	0	<input type="checkbox"/> 0.0%	
7.	0	<input type="checkbox"/> 0.0%	
8.	0	<input type="checkbox"/> 0.0%	
9.	0	<input type="checkbox"/> 0.0%	
10.	0	<input type="checkbox"/> 0.0%	
	60	= Total Cover	
Woody Vine Stratum (Plot size: 30' R)			
1.	0	<input type="checkbox"/> 0.0%	
2.	0	<input type="checkbox"/> 0.0%	
	0	= Total Cover	

Dominance Test worksheet:
 Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)
 Total Number of Dominant Species Across All Strata: 5 (B)
 Percent of dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>70</u>	x 2 = <u>140</u>
FAC species <u>90</u>	x 3 = <u>270</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>200</u>	(A) <u>570</u> (B)

 Prevalence Index = B/A = 2.850

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is > 50%
☒ 3 - Prevalence Index is ≤ 3.0 ¹
☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation ¹ (Explain)
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)
 The hydrophytic vegetation criterion is met, but the soils and a lack of hydrology indicate that this area is upland.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-4 upl**

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:										
<div style="display: flex; justify-content: space-between;"> <div> Primary Indicators (minimum of one is required; check all that apply) </div> <div> Secondary Indicators (minimum of two required) </div> </div>										
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <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"/> FAC-Neutral Test (D5)								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> Field Observations: <div style="display: flex; justify-content: space-between;"> <div> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> </div> <div> Depth (inches): _____ Depth (inches): _____ Depth (inches): _____ </div> </div> </td> <td style="width: 50%; padding: 5px; text-align: center;"> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: </td> <td></td> </tr> <tr> <td colspan="3" style="padding: 5px;"> Remarks: There are no indicators of hydrology here. This is upslope of the hardwood swamp. The criterion is not met. </td> </tr> </table>			Field Observations: <div style="display: flex; justify-content: space-between;"> <div> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> </div> <div> Depth (inches): _____ Depth (inches): _____ Depth (inches): _____ </div> </div>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			Remarks: There are no indicators of hydrology here. This is upslope of the hardwood swamp. The criterion is not met.		
Field Observations: <div style="display: flex; justify-content: space-between;"> <div> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> </div> <div> Depth (inches): _____ Depth (inches): _____ Depth (inches): _____ </div> </div>	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>									
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: There are no indicators of hydrology here. This is upslope of the hardwood swamp. The criterion is not met.										

APPENDIX F

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

FIELD INVESTIGATORS:

Laura A. B. Giese, Ph.D., PWS, CF, CSE

Dr. Giese has more than 20 years of experience working in natural resources: research, private consulting, teaching, and outreach. Dr. Giese's experience includes wetland delineation and functional analyses, stream assessment and restoration, mitigation monitoring, threatened and endangered species surveys, vegetation surveys, and forest management. Her ecology background (forestry and wetland) and diverse scientific interests complement the consulting profession. She has authored numerous wetland and forestry technical reports and analysis of impacts to natural resources. Dr. Giese also teaches two graduate level courses: Wetlands Ecology and Policy and Invasive Species Ecology and Policy, and serves on the Board of the Southeastern Wisconsin Invasive Species Consortium, Inc

Geoffrey B. Parish, P.G., P.H.

Mr. Parish is a hydrologist and geologist with M.S. and B.S. degrees in geosciences from the University of Wisconsin-Milwaukee. He has studied wetland hydrology and soils in Wisconsin, and Illinois for almost twenty years. His wetland work has included wetland delineations, wetland mitigation projects, including enhancements, restorations and creations in Wisconsin and Illinois. Geof has worked on over 300 delineations in Wisconsin in the past six years. He was on a team of scientists that provided expert witness services to the US Department of Justice regarding impacts to a state of Wisconsin owned wetland. In 2014 and 2015 Geof co-taught Wetland Hydrology for the UW-Milwaukee School of Continuing Education Water Technology Program. The class focused on hydrology basics, wetland hydrology indicators, determining sources of wetland hydrology, soil indicators of wetland hydrology, hydrology of plant community types, wetland water budgets and restoration of wetlands. The 2014 proposed revisions of the definition of "Waters of the U.S." were presented in 2014 and the finalized definition published in 2015 was presented in 2015 along with connectivity concepts. Geof has worked on habitat mapping, including numerous plant species such as Forked Aster, Prairie Milkweed Small White Lady Slipper Hairy Wild Petunia and Slender Bog Arrow-grass, inarticulate species Karner Blue Butterfly, Gorgone Checker Spot, Phlox Moth and the Persius Dusky Wing, and animals such as Northern Cricket Frog and Red-shouldered Hawk. Geof has worked on the assessment of wetland functions using the WDNR Wetland Rapid Assessment Method Version 2.0 for project corridors. Geof has worked on invasive species mapping projects, such as mapping *Phragmites australis* along IH 94 in Kenosha and Racine Counties, and mapped the location of invasive species along over thirty miles of the Fox River from the City of Waukesha to Waterford, Wisconsin.