Item 6C.
BCWMC 11-15-17

Minnesota Wetland Conservation Act
Notice of Application

Local Government Unit (LGU)	Address
City of Plymouth	**3400 Plymouth Blvd.** **Plymouth, MN, 55447**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Banner Engineering Corp	**Banner Engineering Expansion**	**10/12/17**	**NA**

Type of Application (check all that apply):

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

Summary and description of proposed project (attach additional sheets as necessary):

The Banner Engineering Expansion site was reviewed for the presence and extent of wetland on September 20, 2017. One wetland was delineated on-site. Wetland 1 is a Type 3/5, PEM1Cx/PUBGx/PABFx, shallow marsh and open water wetland dominated by open water and cattail with patches of willow shrubs and red osier dogwood.

2. APPLICATION REVIEW AND DECISION

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 3 provides notice that an application was made to the LGU under the Wetland Conservation Act as specified above. A copy of the application is attached. Comments can be submitted to:

Name and Title of LGU Contact Person **Derek Asche** **Water Resources Manager**	Comments must be received by (minimum 15 business-day comment period): **November 10, 2017**
Address (if different than LGU) **Plymouth City Hall** **3400 Plymouth Blvd.** **Plymouth, MN, 55447**	Date, time, and location of decision: **November 13, 2017** **9am** **Plymouth City Hall**
Phone Number and E-mail Address **763-509-5526** **dasche@plymouthmn.gov**	Decision-maker for this application: ☒ Staff ☐ Governing Board or Council

Signature: Derek Asche **Date:** 10/18/17

3. LIST OF ADDRESSEES

- ☒ SWCD TEP member: **Ms. Stacey Lijewski, HCD, 701 Fourth Avenue South, Suite 700, Minneapolis, MN, 55415-1600** (sent electronically)
- ☒ BWSR TEP member: **Ben Carlson, BWSR, 520 Lafayette Road North, St. Paul, MN, 55401-1397** (sent electronically)
- ☐ LGU TEP member (if different than LGU Contact):
- ☒ DNR TEP member: **Becky Horton, MN DNR, 1200 Warner Road, St. Paul, MN, 55106** (sent electronically)
- ☒ DNR Regional Office (if different than DNR TEP member)
  Jason Spiegel, Area Hydrologist, MN DNR, 1200 Warner Road, St. Paul, MN, 55106 (sent electronically)
- ☒ WD or WMO (if applicable):
  BCWMC, c/o Laura Jester, Keystone Waters LLC, 16145 Hillcrest Lane, Eden Prairie, MN, 553467 (sent electronically)
- ☒ Applicant (notice only) and Landowner (if different):
  Mr. Kurtz, Banner Engineering, 9714 10th Ave. N., Plymouth, MN, 55441 (sent electronically)
- ☒ Members of the public who requested notice (notice only):
  Adam Cameron, KES (sent electronically)
- ☒ Corps of Engineers Project Manager (notice only): **Melissa Jenny, Army Corps of Engineers, 180 5th Street East, Suite 700, St. Paul, MN, 55101-1678** (sent electronically)
- ☐ BWSR Wetland Bank Coordinator (wetland bank plan applications only)

4. MAILING INFORMATION

- For a list of BWSR TEP representatives: www.bwsr.state.mn.us/contact/WCA_areas.pdf
- For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf
- Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

- For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687
  or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

- For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

5. ATTACHMENTS

In addition to the application, list any other attachments:

- ☒ **Wetland Delineation Report dated 10/3/17 for Banner Engineering by KES**
- ☐

Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resource aspects of proposed projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one project.

Required Information

Prior to submitting an application, applicants are **strongly encouraged** to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their projects with multiple agencies prior to submitting an application. Contact information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state's local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the Corps and the LGU.

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Submission Instructions

Send the completed joint application form and all required attachments to:

U.S Army Corps of Engineers. Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District's website at: http://www.mvp.usace.army.mil/Missions/Regulatory.aspx and select "Minnesota" from the contact Information box. Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

Section 401 Water Quality Certification: Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed project.

Wetland Conservation Act Local Government Unit: Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

DNR Public Waters Permitting: In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (https://webapps11.dnr.state.mn.us/mpars/public/authentication/login). Applicants for Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Banner Engineering Corp
Mailing Address: 9714 10th ave North, Plymouth, MN. 55441
Phone: 763-544-3164
E-mail Address: akurtz@bannerengineering.com

Authorized Contact (do not complete if same as above):
Mailing Address:
Phone:
E-mail Address:

Agent Name: Adam Cameron
Mailing Address: 2500 Shadywood Road Suite 130, Orono MN 55331
Phone: 715-307-1889
E-mail Address: Adam@kjolhaugenv.com

PART TWO: Site Location Information

County: **Hennepin** **City/Township:** **Plymouth**
Parcel ID and/or Address: **3611822110027, 3611822110030**
Legal Description (Section, Township, Range): **S36 T118N R22W**
Lat/Long (decimal degrees): **44.991574, -93.404936**
Attach a map showing the location of the site in relation to local streets, roads, highways.
Approximate size of site (acres) or if a linear project, length (feet): **0.65 acres**

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	**Aquatic Resource Type** (wetland, lake, tributary etc.)	**Type of Impact** (fill, excavate, drain, or remove vegetation)	**Duration of Impact** Permanent (P) or Temporary (T)[1]	**Size of Impact**[2]	**Overall Size of Aquatic Resource** [3]	**Existing Plant Community Type(s)** in Impact Area[4]	**County, Major Watershed #, and Bank Service Area #** of Impact Area[5]

[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: Carla _____ Date: Sept 26, 2017

I hereby authorize _____ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

[1] The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A
Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☒ **Wetland Type Confirmation**

☒ **Delineation Concurrence.** Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☒ **Preliminary Jurisdictional Determination.** A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination.** An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).
http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

Attachment B
Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part ***if*** you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR ***if*** you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

Attachment C
Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

Attachment D
Replacement/Compensatory Mitigation

Complete this part *if* your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Bank Service Area #	Credit Type (if applicable)	Number of Credits

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit[1]	Corps Mitigation Compensation Technique[2]	Acres	Credit % Requested	Credits Anticipated[3]	County	Major Watershed #	Bank Service Area #

[1]Refer to the name and subpart number in MN Rule 8420.0526.
[2]Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.
[3]If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile……) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
  - Previously restored or created under a prior approved replacement plan or permit
  - Drained or filled under an exemption during the previous 10 years
  - Restored with financial assistance from public conservation programs
  - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative: Title:

Signature: _____ Date:

Attachment E
Local Road Replacement Program Qualification

Complete this part ***if*** you are a local road authority (county highway department, city transportation department, etc.) seeking verification that your project (or a portion of your project) qualifies for the MN Local Government Road Wetland Replacement Program (LGRWRP). If portions of your project are not eligible for the LGRWRP, then Attachment D should be completed and attached to your application.

Discuss how your project is a repair, rehabilitation, reconstruction, or replacement of a currently serviceable road to meet state/federal design or safety standards/requirements. Applicants should identify the specific road deficiencies and how the project will rectify them. Attach supporting documents and information as applicable:

Provide a map, plan, and/or aerial photograph accurately depicting wetland boundaries within the project area. Attach associated delineation/determination report or otherwise explain the method(s) used to identify and delineate wetlands. Also attach and discuss any type of review or approval of wetland boundaries or other aspects of the project by a member or members of the local Technical Evaluation Panel (TEP) or Corps of Engineers:

In the table below, identify only the wetland impacts from Part 4 that the road authority has determined should qualify for the LGRWRP.

Wetland Impact ID (as noted on overhead view)	**Type of Impact** (fill, excavate, drain)	**Size of Impact** (square feet or acres to 0.01)	**Existing Plant Community Type(s)** in Impact Area[1]	**County, Major Watershed #, and Bank Service Area #** of Impact[2]

[1]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

[2]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

Discuss the feasibility of providing onsite compensatory mitigation/replacement for important site-specific wetland functions:

Please note that under the MN Wetland Conservation Act, projects with less than 10,000 square feet of wetland impact are allowed to commence prior to submission of this notification so long as the notification is submitted within 30 days of the impact. The Clean Water Act has no such provision and requires that permits be obtained prior to any regulated discharges into water of the United States. To avoid potential unauthorized activities, road authorities must, at a minimum, provide a complete application to the Corps and receive a permit prior to commencing work.

By signature below, the road authority attests that they have followed the process in MN Rules 8420.0544 and have determined that the wetland impacts identified in Part 4 are eligible for the MN Local Government Road Wetland Replacement Program.

Road Authority Representative: Title:

Signature: _____ Date:

Technical Evaluation Panel Concurrence: Project Name and/or Number: Banner Engineering

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

Upon approval and signature by the TEP, application must be sent to: **Wetland Bank Administration**
Minnesota Board of Water & Soil Resources
520 Lafayette Road North
Saint Paul, MN 55155

Banner Engineering

Plymouth, Minnesota

Wetland Delineation Report

Prepared for
Banner Engineering Corp.

by
Kjolhaug Environmental Services Company, Inc.
(KES Project No. 2015-126)

October 3, 2017

WETLAND DELINEATION SUMMARY

- The Banner Engineering parcel was inspected on September 20, 2017 for the presence and extent of wetland.
- The NWI-map showed one (PABGx/PEM1C) wetland, and one (PABG/PFO1A) wetland within the site boundary.
- The soil survey showed no hydric soil present within the site boundary.
- The DNR Public Waters map showed no DNR Public Waters within 1000' of the site boundary.
- One Type 3/5 (PEM1Cx/PUBGx/PABFx) wetland was identified and delineated within the site boundaries.

Banner Engineering

Plymouth, Minnesota

Wetland Delineation Report

I. INTRODUCTION

The 6.53-acre Banner Engineering parcel was inspected on September 20, 2017 for the presence and extent of wetland. The property was located in Section 36, Township 118N, Range 22W, Plymouth, Hennepin County, Minnesota. The site was located immediately east of Nathan Lane N, and north of 10th Avenue N (**Figure 1**). The site limits corresponded to Hennepin County PID's 3611822110030 and 3611822110027.

The northwestern portion of the site consisted of an excavated ditch, which followed the eastern edge of the adjacent parking lot. The site was bordered to the north by railroad tracks. The land use surrounding the site was mainly commercial and industrial. Single-family homes were located northeast of the site boundaries. Public storage was located immediately southeast of the site boundaries. Medicine Lake was also located northwest of the site boundaries.

One (1) wetland was identified and delineated within the site boundary (**Figure 2**).

II. METHODS

Wetlands were identified using the Routine Determination method described in the Corps of Engineers Wetlands Delineation Manual (Waterways Experiment Station, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) as required under Section 404 of the Clean Water Act and the Minnesota Wetland Conservation Act.

Wetland boundaries were identified as the upper-most extent of wetland that met criteria for hydric soils, hydrophytic vegetation, and wetland hydrology. Wetland-upland boundaries were marked with pin flags that were located by land surveyors from Loucks, Inc.

Soils, vegetation, and hydrology were documented at a representative location along the wetland-upland boundary. Plant species dominance was estimated based on the percent aerial or basal coverage visually estimated within a 30-foot radius for trees and vines, a 15-foot radius for the shrub layer, and a 5-foot radius for the herbaceous layer within the community type sampled.

Soils were characterized to a minimum depth of 24 inches (unless otherwise noted) using a Munsell Soil Color Book and standard soil texturing methodology. Hydric soil indicators used are from Field Indicators of Hydric Soils in the United States (USDA Natural Resources Conservation Service (NRCS) in cooperation with the National Technical Committee for Hydric Soils, Version 7, 2010).

Mapped soils are separated into five classes based on the composition of hydric components and the Hydric Rating by Map Unit color classes utilized on Web Soil Survey. The five classes include Hydric (100 percent hydric components), Predominantly Hydric (66 to 99 percent hydric components), Partially Hydric (33 to 65 percent hydric components), Predominantly Non-Hydric (1 to 32 percent hydric components), and Non-Hydric (less than one percent hydric components).

Plants were identified using standard regional plant keys. Taxonomy and indicator status of plant species was taken from the 2017 National Wetland Plant List (U.S. Army Corps of Engineers 2017. National Wetland Plant List, version 3.3, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH).

III. RESULTS

Review of NWI, Soils, and DNR Information

The ***National Wetlands Inventory (NWI)*** (Minnesota Geospatial Commons 2009-2014, https://gisdata.mn.gov/dataset/water-nat-wetlands-inv-2009-2014) The NWI-map showed one (PABGx/PEM1C) wetland and one (PABG/PFO1A) wetland within the site boundaries (**Figure 3**).

The ***Soil Survey of Hennepin County, Minnesota*** (http://soils.usda.gov/survey/geography/ssurgo/) showed no hydric soils mapped within the review area. A soils map indicating the soil types present within the parcel, along with a table of soil series data and hydric ratings is included in **Figure 4.**

The Minnesota ***DNR Public Waters Map, Hennepin County*** (https://gisdata.mn.gov/dataset/water-mn-public-waters) showed no DNR Public Waters within 1000' of the site boundaries (**Figure 5**).

The **National Hydrography Dataset** (U.S. Geological Survey, http://nhd.usgs.gov/) showed one Lake Pond present within the site boundaries (**Figure 6**).

Wetland Determinations and Delineations

Potential wetlands were evaluated in greater detail during field observations on September 20, 2017. One wetland was identified and delineated on the property (**Figure 2**). Corresponding data forms are included in **Appendix A**. The following description of the wetland and the adjacent upland reflects conditions observed at the time of the field visit. At that time precipitation conditions were drier than normal based on available 30-day rolling precipitation data and wetter than normal based on the three-month antecedent conditions (**Appendix B**). A survey of the wetland boundary by Loucks, Inc. is included in **Appendix C**.

Wetland 1 was a Type 3/5 (PEM1Cx/PUBGx/PABx) shallow marsh and open water wetland dominated by cattail, with patches of willow shrubs and red osier dogwood present along the steeply sloped edges. The majority of Wetland 1 was inundated with approximately 6 inches of

water in the center and saturated at the surface along the wetland fringe. The Type 5 portion of Wetland 1 was inundated with approximately 3-5 feet of water.

Adjacent upland was dominated by a canopy of red cedar, with an understory of buckthorn, red osier dogwood, Canada thistle, and Virginia creeper. No indicators of wetland hydrology were observed on the upland.

The delineated boundary followed a change in vegetation from wetland to upland plant communities that accompanied a steep change in topography. With the exception of the eastern boundary of Wetland 1, all of the side slopes were excavated. Wetland 1 was mapped as PABGx/PEM1C/PABG/PFO1A wetland on the NWI map, and was located in an area mapped as Urban Land – Udorthents (Non-Hydric) on the soil survey. Culverts were present at the northwestern and southern edges of Wetland 1. Inlets draining westward into Wetland 1 were present along the eastern edge of the adjacent parking lot. Wetland 1 also connected to a ditch extending offsite to the east.

Other Areas

The eastern portion of the site was mapped as a PFO1A wetland on the NWI map. This area was topographically elevated, and consisted of woodland dominated by a canopy of cottonwood trees, with an understory of buckthorn shrubs and Virginia creeper. This area did not meet any indicators of wetland hydrology, and was therefore determined to be upland.

No other areas with hydrophytic vegetation or wetland hydrology were observed on the site. No other areas were mapped with hydric soil on the soil survey map, or as wetland on the NWI map.

IV. CERTIFICATION OF DELINEATION

The procedures utilized in the described delineation are based on the COE 1987 Wetland Delineation Manual as required by Section 404 of the Clean Water Act and the Minnesota Wetland Conservation Act. Both the delineation and report were conducted in compliance with regulatory standards in place at the time the work was completed.

All site boundaries indicated on figures within this report are approximate and do not constitute an official survey product.

Delineation completed by: Adam Cameron, Wetland Ecologist/GIS Specialist
MN Certified Wetland Delineator In-Training No. 5221

Report prepared by: Adam Cameron, Wetland Ecologist/GIS Specialist
MN Certified Wetland Delineator In-Training No. 5221

Report reviewed by: _____ Date: October 3, 2017

Mark Kjolhaug, Professional Wetland Scientist No. 000845

Banner Engineering

Wetland Delineation Report

Figures:

- Figure 1 – Site Location Map
- Figure 2 – Existing Conditions Map
- Figure 3 – NWI Map
- Figure 4 – Soil Survey Map
- Figure 5 – DNR Protected Waters Map
- Figure 6 – National Hydrography Dataset Map

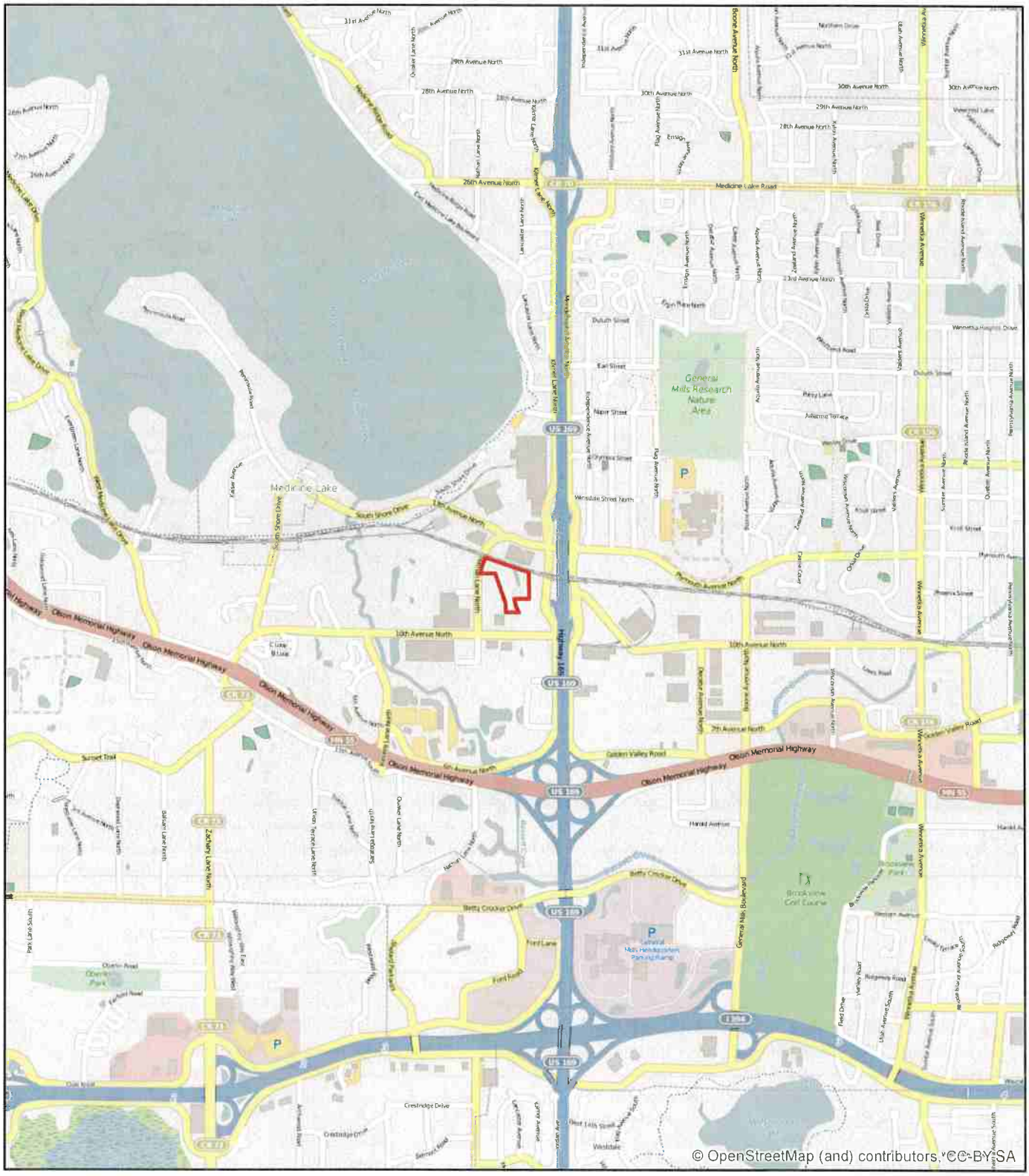


Figure 1 - Site Location

N

0 2,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Banner Engineering (KES 2015-126)
Plymouth, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

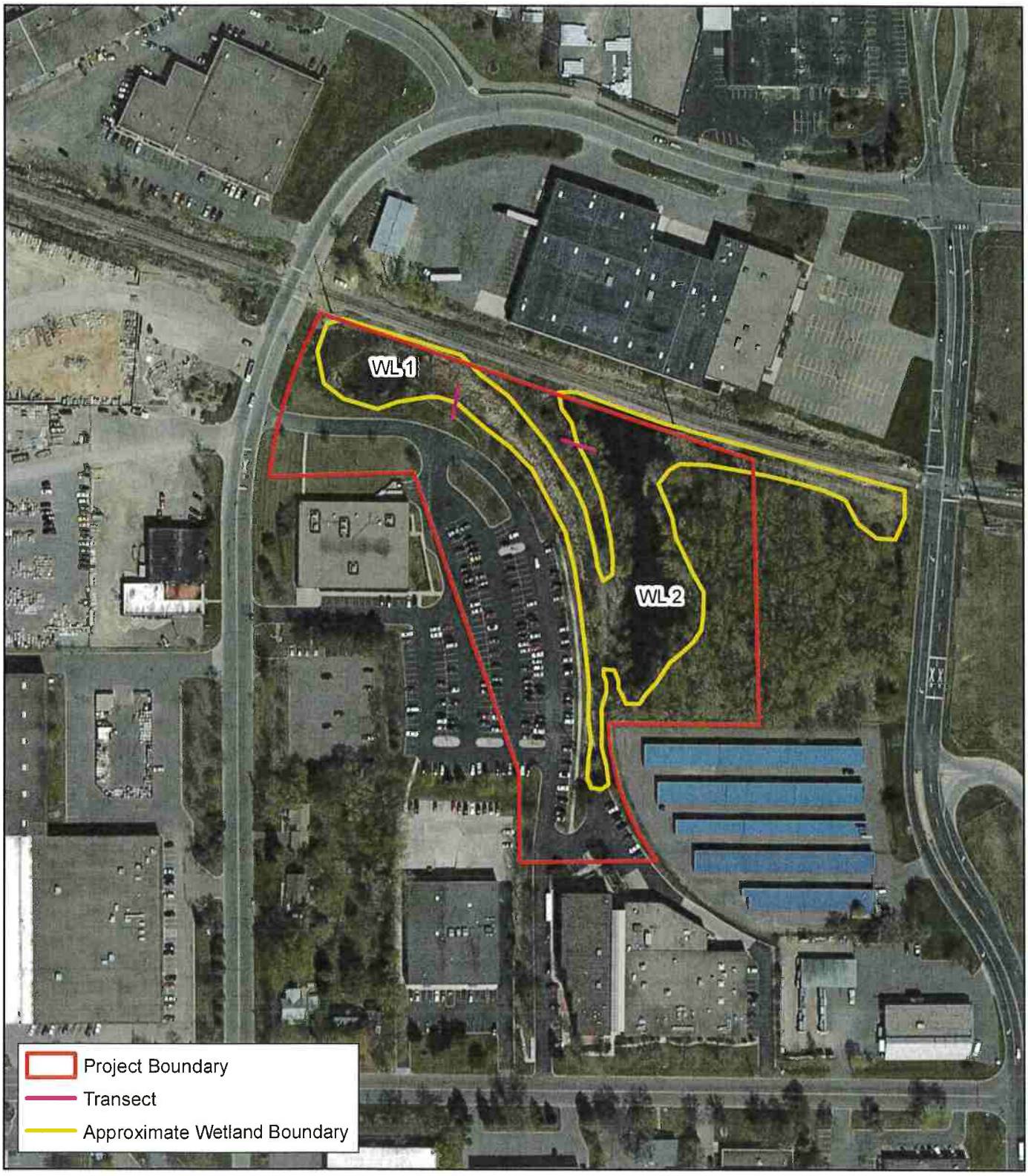


Figure 2 - Existing Conditions

N

0 200 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Banner Engineering (KES 2015-126)
Plymouth, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

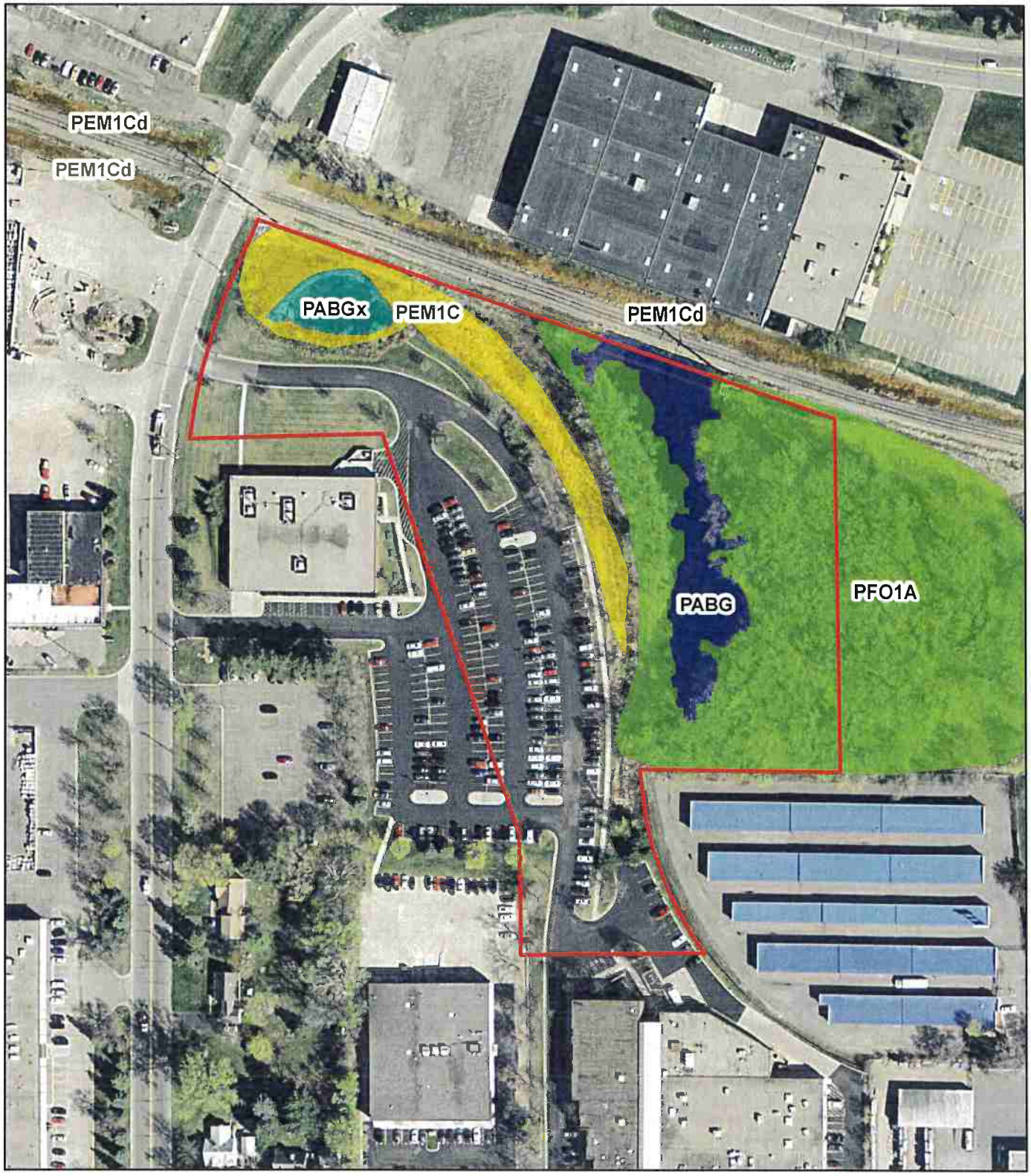


Figure 3 - National Wetlands Inventory (2013 MN DNR)

N

0 150 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Banner Engineering (KES 2015-126)
Plymouth, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
U1A	Urban land-Udorthents, wet	Non-Hydric	6.53	100.00%

Figure 4 - Soil Survey

N

0 150 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Banner Engineering (KES 2015-126)
Plymouth, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

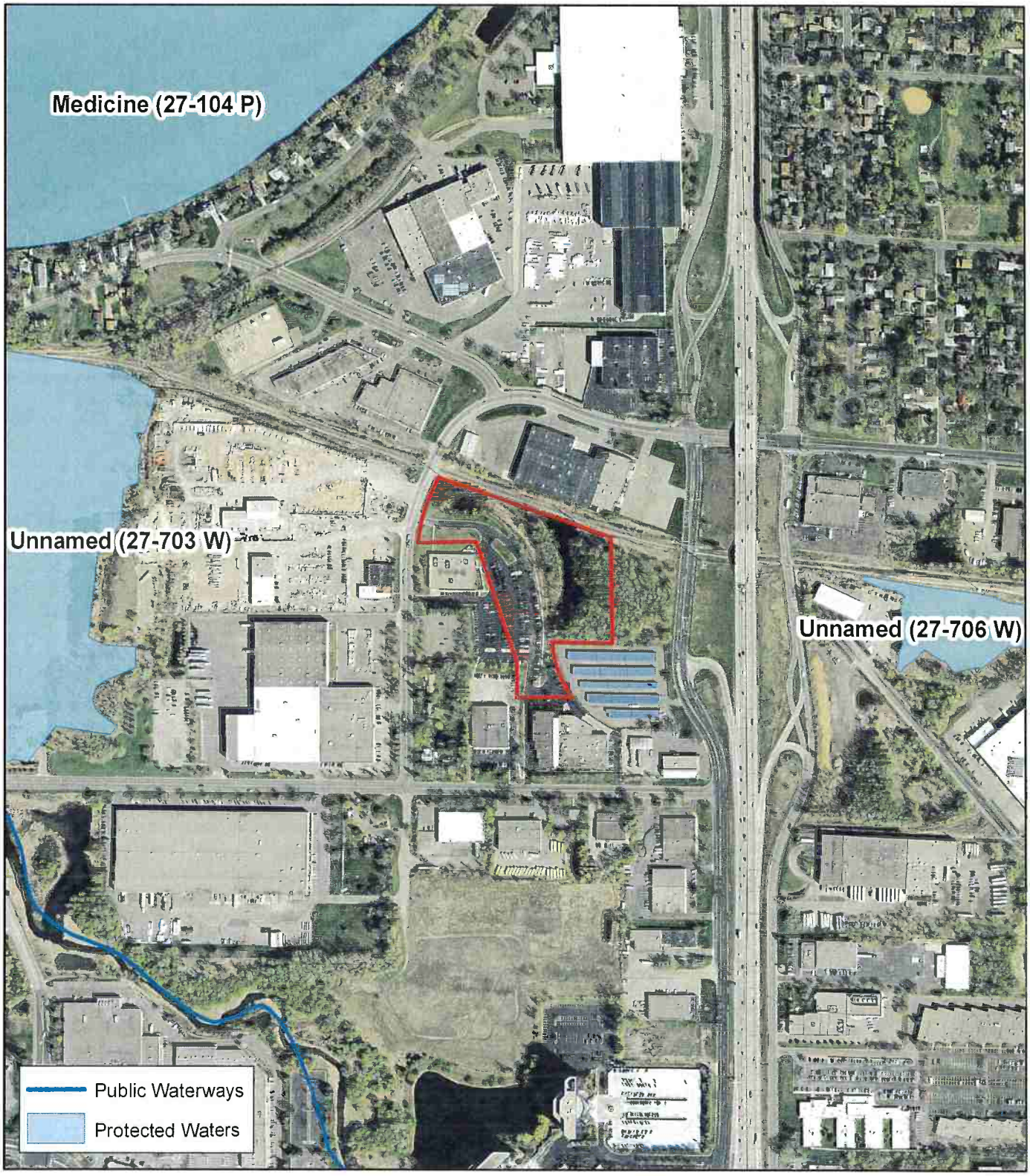


Figure 5 - DNR Public Waters Inventory

N

0 500 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Banner Engineering (KES 2015-126)
Plymouth, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

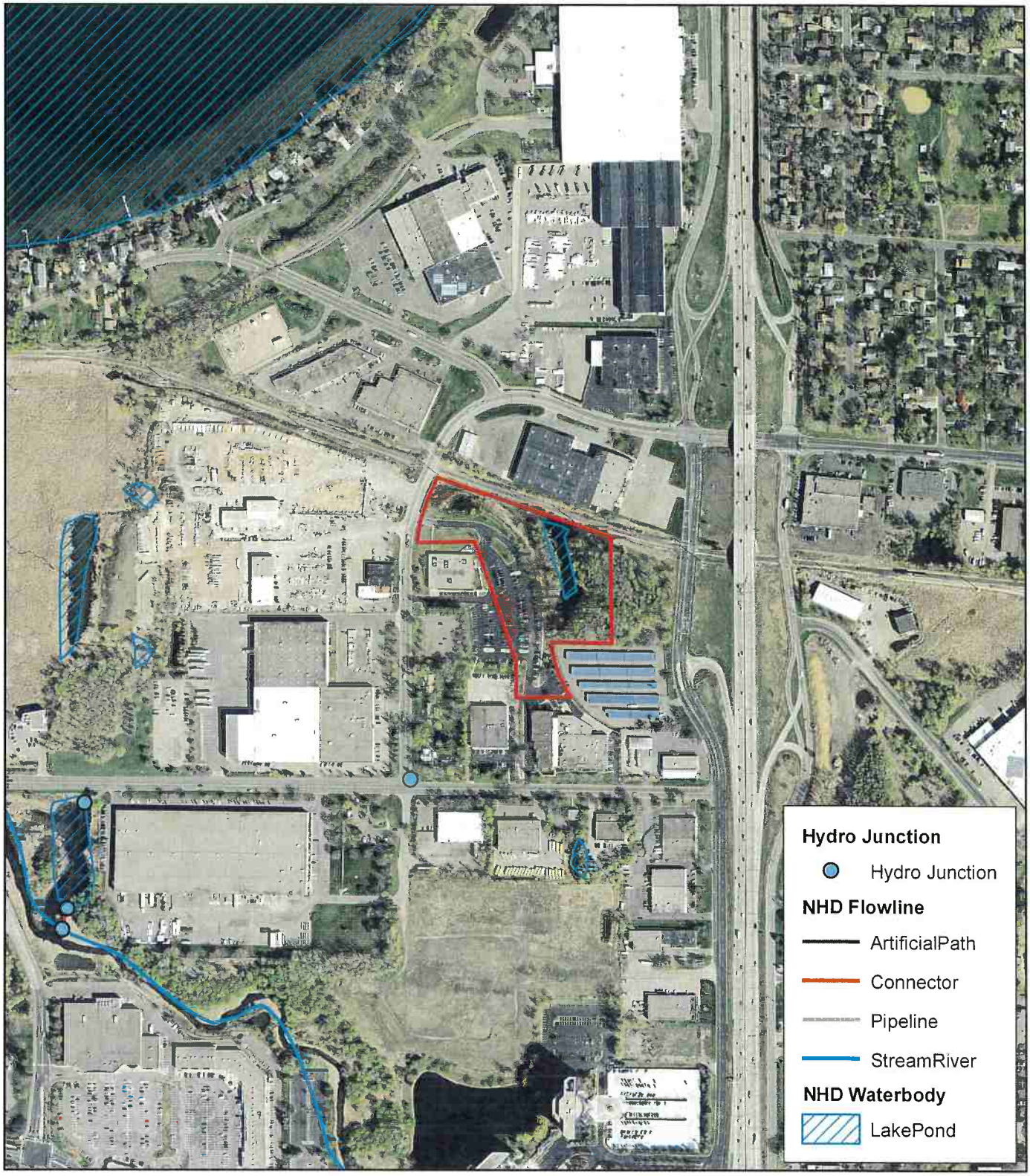


Figure 6 - National Hydrography Dataset (USGS)

N

0 500 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Banner Engineering (KES 2015-126)
Plymouth, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Banner Engineering

Wetland Delineation Report

Appendix A: Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Banner Engineering | City/County: Plymouth/Hennepin | Sampling Date: 8/11/2015
Applicant/Owner: Banner Engineering Corp. | State: MN | Sampling Point: SP1-1U
Investigator(s): R.Bouta,A.Cameron, Kjolhaug Environmental Service | Section, Township, Range: S36 T118N R22W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Linear
Slope (%): 6 - 8 | Lat: | Long: | Datum:
Soil Map Unit Name: Urban land - Udorthents (Non-Hydric) | NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	N	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	N		

Remarks: (Explain alternative procedures here or in a separate report.)
Precipitation documentation worksheet from gridded database wetter than normal. 30-day precipitation rolling average wetter than typical.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Staus
Tree Stratum (Plot size: 30)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratum (Plot size: 15)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 5)			
1 *Solidago canadensis*	40	Y	FACU
2 *Poa pratensis*	40	Y	FAC
3 *Sonchus oleraceus*	20	N	FACU
4 *Cirsium arvense*	5	N	FACU
5 *Arctium minus*	2	N	FACU
6 *Taraxacum officinale*	2	N	FACU
7			
8			
9			
10			
	109 = Total Cover		
Woody vine stratum (Plot size: 30)			
1			
2			
	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: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	69	x 4 =	276
UPL species	0	x 5 =	0
Column totals	109 (A)		396 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:
___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

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

SOIL

Sampling Point: SP1-1U

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-8	10YR 3/2	100					Loam	
8-20	10YR 5/4	100					Loam	
20-24	10YR 5/4	40					Sandy Loam	Fill soil
	10YR 3/2	40					Sandy Loam	Fill soil
	10YR 4/1	20					Sandy Loam	Fill soil

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Banner Engineering | City/County: Plymouth/Hennepin | Sampling Date: 8/11/2015

Applicant/Owner: Banner Engineering Corp. | State: MN | Sampling Point: SP1-1W

Investigator(s): R.Bouta,A.Cameron, Kjolhaug Environmental Service | Section, Township, Range: S36 T118N R22W

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave

Slope (%): 0 - 1 | Lat: | Long: | Datum:

Soil Map Unit Name: Urban Land - Udorthents (Non-Hydric) | NWI Classification: PABGx/PEM1C

Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	Wetland 1

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation documentation worksheet from gridded database wetter than normal. 30-day precipitation rolling average wetter than typical.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 15)			
1 *Cornus sericea*	40	Y	FACW
2			
3			
4			
5			
	40	= Total Cover	
Herb stratum (Plot size: 5)			
1 *Typha angustifolia*	60	Y	OBL
2 *Solidago canadensis*	20	Y	FACW
3 *Rumex crispus*	2	N	FAC
4 *Cirsium arvense*	2	N	FACU
5			
6			
7			
8			
9			
10			
	84	= Total Cover	
Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	60	x 1 =	60
FACW species	60	x 2 =	120
FAC species	2	x 3 =	6
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column totals	124 (A)		194 (B)

Prevalence Index = B/A = 1.56

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

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

SOIL

Sampling Point: SP1-1W

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-3	10YR 3/1	100					Clay Loam	
3-16	10YR 3/2	50					Clay Loam	
	10YR 5/3	30					Clay Loam	
	10YR 4/1	20					Clay Loam	
16-24	10YR 3/2	20	6/5 GY	60	D	M	Clay Loam	Gley 1
	10YR 5/3	10					Clay Loam	
	10YR 4/1	10					Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	X	No	___	Depth (inches): 9
Saturation present? (includes capillary fringe)	Yes	X	No	___	Depth (inches): 5

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Banner Engineering | City/County: Plymouth/Hennepin | Sampling Date: 8/11/2015
Applicant/Owner: Banner Engineering Corp. | State: MN | Sampling Point: SP2-1U
Investigator(s): R.Bouta,A.Cameron, Kjolhaug Environmental Service | Section, Township, Range: S36 T118N R22W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Linear
Slope (%): 3 - 4 | Lat: | Long: | Datum:
Soil Map Unit Name: Urban Land - Udorthents (Non-Hydric) | NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances"
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N		
Hydric soil present?	N	**Is the sampled area within a wetland?**	N
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Precipitation documentation worksheet from gridded database wetter than normal. 30-day precipitation rolling average wetter than typical.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Juniperus virginiana*	5	Y	FACU
2			
3			
4			
5			
	5 = Total Cover		
Sapling/Shrub stratum (Plot size: 15)			
1 *Cornus sericea*	30	Y	FACW
2 *Rhamnus cathartica*	20	Y	FAC
3			
4			
5			
	50 = Total Cover		
Herb stratum (Plot size: 5)			
1 *Solidago canadensis*	30	Y	FACU
2 *Parthenocissus quinquefolia*	10	Y	FACU
3			
4			
5			
6			
7			
8			
9			
10			
	40 = Total Cover		
Woody vine stratum (Plot size: 30)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 5 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 40.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	20	x 3 =	60
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column totals	95 (A)		300 (B)

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

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

SOIL

Sampling Point: SP2-1U

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	10YR 4/2	100					Loam	
6-16	10YR 5/3	80	10YR 4/6	10	C	M	Loam	
			10YR 6/1	10	D	M	Loam	
16-20	10YR 5/3	60	10YR 4/6	30	C	M	Loam	
			10YR 6/1	10	D	M	Loam	
20-24	10YR 5/3	60	10YR 4/6	30	C	M	Clay Loam	
			10YR 6/1	10	D	M	Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Banner Engineering | City/County: Plymouth/Hennepin | Sampling Date: 8/11/2015
Applicant/Owner: Banner Engineering Corp. | State: MN | Sampling Point: SP2-1W
Investigator(s): R.Bouta,A.Cameron, Kjolhaug Environmental Service | Section, Township, Range: S36 T118N R22W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0 - 1 | Lat: | Long: | Datum:
Soil Map Unit Name: Urban Land - Udorthents (Non-Hydric) | NWI Classification: PABG/PFO1A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances"
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	Y
Indicators of wetland hydrology present?	Y	f yes, optional wetland site ID:	Wetland 2

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation documentation worksheet from gridded database wetter than normal. 30-day precipitation rolling average wetter than typical.

VEGETATION -- Use scientific names of plants.

	Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus
1	*Populus deltoides*	40	Y	FAC
2	*Salix nigra*	20	Y	OBL
3	*Rhamnus cathartica*	10	N	FAC
4	*Fraxinus pennsylvanica*	10	N	FACW
5				
		80	= Total Cover	
	Sapling/Shrub stratum (Plot size: 15)			
1	*Rhamnus cathartica*	20	Y	FAC
2	*Cornus sericea*	15	Y	FACW
3				
4				
5				
		35	= Total Cover	
	Herb stratum (Plot size: 5)			
1	*Phalaris arundinacea*	20	Y	FACW
2	*Parthenocissus quinquefolia*	10	Y	FACU
3	*Solidago canadensis*	5	N	FACU
4				
5				
6				
7				
8				
9				
10				
		35	= Total Cover	
	Woody vine stratum (Plot size: 30)			
1				
2				
		0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across all Strata: 6 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 83.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	20	x 1 =	20
FACW species	45	x 2 =	90
FAC species	70	x 3 =	210
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column totals	150 (A)		380 (B)

Prevalence Index = B/A = 2.53

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

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

SOIL

Sampling Point: SP2-1W

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	10YR 2/1	100					Mucky Loam	
5-9	10YR 4/1	100					Mucky Loam	
9-12	Gley 5/10Y	100					Gley 1	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):
Water table present?	Yes	X	No		Depth (inches): 12
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches): 6

Indicators of wetland hydrology present? Y

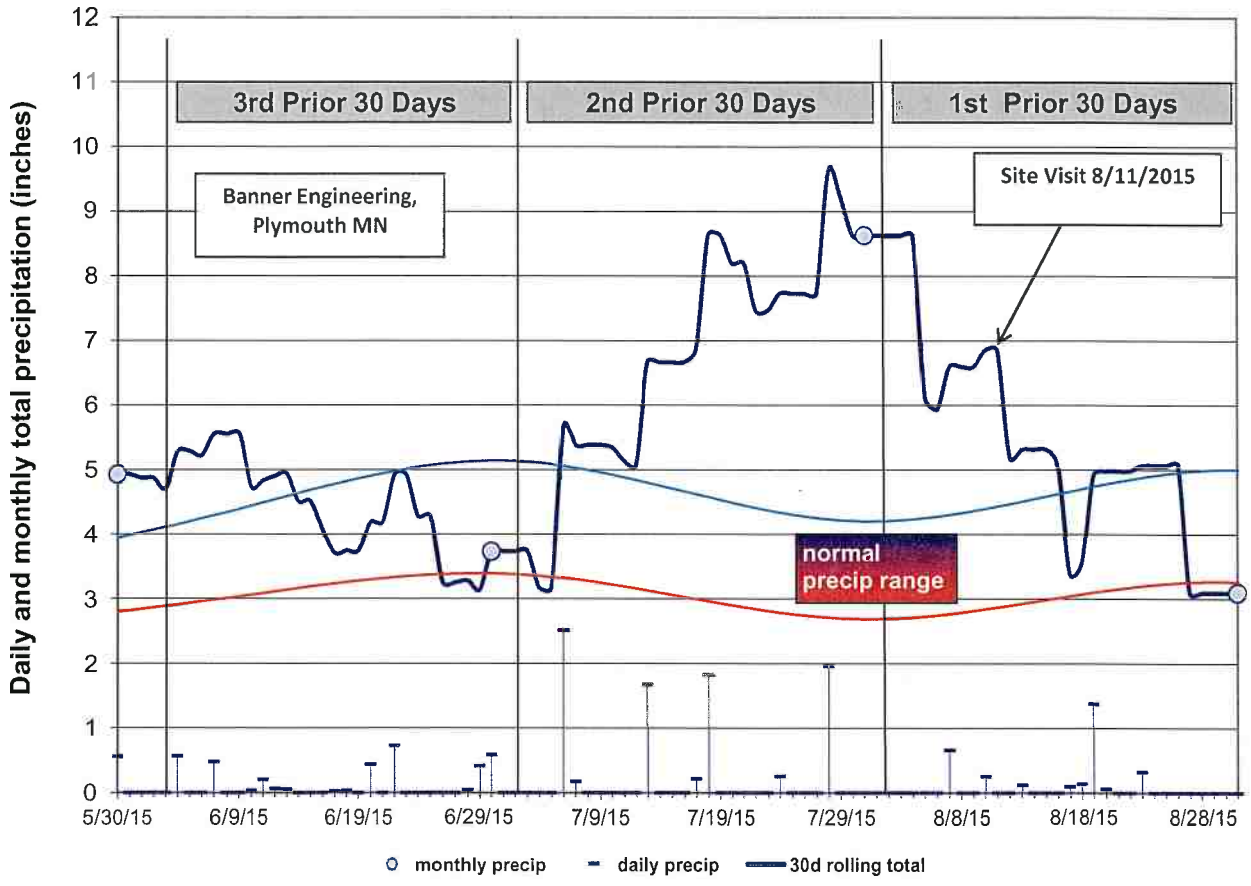
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Banner Engineering

Wetland Delineation Report

Appendix B: Precipitation Data


Daily and monthly total precipitation (inches)
12
11
10
9
8
7
6
5
4
3
2
1
0
3rd Prior 30 Days
2nd Prior 30 Days
1st Prior 30 Days
Banner Engineering, Plymouth MN
Site Visit 8/11/2015
normal precip range
5/30/15
6/9/15
6/19/15
6/29/15
7/9/15
7/19/15
7/29/15
8/8/15
8/18/15
8/28/15
monthly precip
daily precip
30d rolling total

Banner engineering, Plymouth MN:
Precipitation Summary
Source: Minnesota Climatology Working Group

Monthly Totals: 2015 (latitude: 44.98588 longitude: 93.41064)

Target: T118 R22 S36

mon	year	cc	tttN	rrW	ss	nnnn	oooooooo	pre (inches)
Jan	2015	27	118N	22W	25	BYRG		.52
Feb	2015	27	118N	22W	25	BYRG		.43
Mar	2015	27	118N	22W	25	BYRG		.73
Apr	2015	27	118N	22W	25	BYRG		1.63
May	2015	27	118N	22W	25	BYRG		4.92
Jun	2015	27	118N	22W	25	BYRG		3.73
Jul	2015	27	118N	22W	25	BYRG		8.62
Aug	2015	27	118N	22W	25	BYRG		3.09

May/June/July/August Daily Records

May 1, 2015	0	Jun 1, 2015	0	Jul 1, 2015	0	Aug 1, 2015	0
May 2, 2015	.06	Jun 2, 2015	0	Jul 2, 2015	0	Aug 2, 2015	0
May 3, 2015	0	Jun 3, 2015	0	Jul 3, 2015	0	Aug 3, 2015	0
May 4, 2015	.16	Jun 4, 2015	.57	Jul 4, 2015	0	Aug 4, 2015	0
May 5, 2015	0	Jun 5, 2015	0	Jul 5, 2015	0	Aug 5, 2015	0
May 6, 2015	0	Jun 6, 2015	0	Jul 6, 2015	2.51	Aug 6, 2015	0
May 7, 2015	.06	Jun 7, 2015	.48	Jul 7, 2015	.18	Aug 7, 2015	.66
May 8, 2015	.15	Jun 8, 2015	0	Jul 8, 2015	0	Aug 8, 2015	0
May 9, 2015	0	Jun 9, 2015	0	Jul 9, 2015	0	Aug 9, 2015	0
May 10, 2015	0	Jun 10, 2015	.04	Jul 10, 2015	0	Aug 10, 2015	.26
May 11, 2015	.86	Jun 11, 2015	.21	Jul 11, 2015	0	Aug 11, 2015	0
May 12, 2015	.11	Jun 12, 2015	.07	Jul 12, 2015	0	Aug 12, 2015	0
May 13, 2015	0	Jun 13, 2015	.06	Jul 13, 2015	1.67	Aug 13, 2015	.13
May 14, 2015	.02	Jun 14, 2015	0	Jul 14, 2015	0	Aug 14, 2015	0
May 15, 2015	.43	Jun 15, 2015	0	Jul 15, 2015	0	Aug 15, 2015	0
May 16, 2015	0	Jun 16, 2015	0	Jul 16, 2015	0	Aug 16, 2015	0
May 17, 2015	.44	Jun 17, 2015	.03	Jul 17, 2015	.22	Aug 17, 2015	.11
May 18, 2015	.39	Jun 18, 2015	.04	Jul 18, 2015	1.82	Aug 18, 2015	.15
May 19, 2015	0	Jun 19, 2015	0	Jul 19, 2015	0	Aug 19, 2015	1.38
May 20, 2015	0	Jun 20, 2015	.44	Jul 20, 2015	0	Aug 20, 2015	.07
May 21, 2015	0	Jun 21, 2015	0	Jul 21, 2015	0	Aug 21, 2015	0
May 22, 2015	0	Jun 22, 2015	.73	Jul 22, 2015	0	Aug 22, 2015	0
May 23, 2015	0	Jun 23, 2015	0	Jul 23, 2015	0	Aug 23, 2015	.33
May 24, 2015	0	Jun 24, 2015	0	Jul 24, 2015	.26	Aug 24, 2015	0
May 25, 2015	.64	Jun 25, 2015	0	Jul 25, 2015	0	Aug 25, 2015	0
May 26, 2015	0	Jun 26, 2015	0	Jul 26, 2015	0	Aug 26, 2015	0
May 27, 2015	1.02	Jun 27, 2015	0	Jul 27, 2015	0	Aug 27, 2015	0
May 28, 2015	0	Jun 28, 2015	.05	Jul 28, 2015	1.96	Aug 28, 2015	0
May 29, 2015	.02	Jun 29, 2015	.42	Jul 29, 2015	0	Aug 29, 2015	0
May 30, 2015	.56	Jun 30, 2015	.59	Jul 30, 2015	0	Aug 30, 2015	0
May 31, 2015	0			Jul 31, 2015	0	Aug 31, 2015	0

1981-2010 Summary Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
30%	0.51	0.39	1.33	2.20	2.82	3.39	2.69	3.26	2.19	1.22	1.11	0.76	18.19	29.68	27.72
70%	1.24	1.00	2.15	2.85	3.98	5.13	4.20	5.00	3.97	3.60	2.04	1.43	21.85	34.37	35.35
mean	0.88	0.82	1.94	2.71	3.59	4.51	4.25	4.14	3.40	2.51	1.83	1.24	19.90	31.83	31.64

Minnesota Climatology Working Group

State Climatology Office - DNR Division of Ecological and Water Resources University of Minnesota

Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

county: **Hennepin**
township name: **Plymouth**
nearest community: **Medicine Lake**
township number: **118N**
range number: **22W**
section number: **36**

Aerial photograph or site visit date:
Tuesday, August 11, 2015

Score using 1971-2000 normal period

(values are in inches)	first prior month: July 2015	second prior month: June 2015	third prior month: May 2015
estimated precipitation total for this location:	**missing**	**3.45**	**4.15**
there is a 30% chance this location will have less than: *	2.96	2.89	2.62
there is a 30% chance this location will have more than: *	5.30	5.32	4.04
type of month: dry normal wet	**missing**	**normal**	**wet**
monthly score	**missing**	**2 * 2 = 4**	**1 * 3 = 3**
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	**missing**		

Score using 1981-2010 normal period

(values are in inches)	first prior month: July 2015	second prior month: June 2015	third prior month: May 2015
estimated precipitation total for this location:	8.62	**3.45**	**4.15**
there is a 30% chance this location will have less than: *	2.79	2.96	2.55
there is a 30% chance this location will have more than: *	5.10	5.42	4.26
type of month: dry normal wet	wet	**normal**	**normal**
monthly score	3*3=9	**2 * 2 = 4**	**1 * 2 = 2**
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	9+4+2=15 wet		

view USDA-NRCS WETS data for Hennepin County

Other Resources:

- retrieve daily precipitation data
- view radar-based precipitation estimates
- view weekly precipitation maps
- *Hydrology Tools for Wetland Determination*, USDA-NRCS

* from USDA-NRCS two-parameter gamma distribution fit

Preliminary Plat: BANNER 3RD ADDITION

PRELIMINARY PLAT GENERAL NOTES

LEGAL DESCRIPTION:
Outlot A, BANNER 2ND ADDITION

Parcel 1:
N. 100 Ft of S. 435.50 Ft of W. 217.50 Ft. of NE 1/4, NE 1/4, Sec 35

Parcel 2:
N. 100 Ft of S. 335.50 Ft of W. 217.50 Ft. of NE 1/4, NE 1/4, Sec 35

Parcel 3:
W. 117.50 Ft of S. 235.50 Ft of NE 1/4, NE 1/4, Sec 35

Parcel 3:
W. 100 Ft of E. 1197.50 Ft of S. 235.50 Ft of NE 1/4, NE 1/4, Sec 35

DATE OF PREPARATION:
August 2015

BENCHMARKS:
Benchmark #1
Top nut of hydrant located approx. 560 feet north of 10th Ave N on Nathan Lane N
Elev. = 904.16 (City of Plymouth Datum)

Benchmark #2
Top nut of hydrant located approx. 300 feet west of Nathan Lane N on 10th Ave N
Elev. = 902.80 (City of Plymouth Datum)

ZONING:
Zone (I-2) General Industrial District

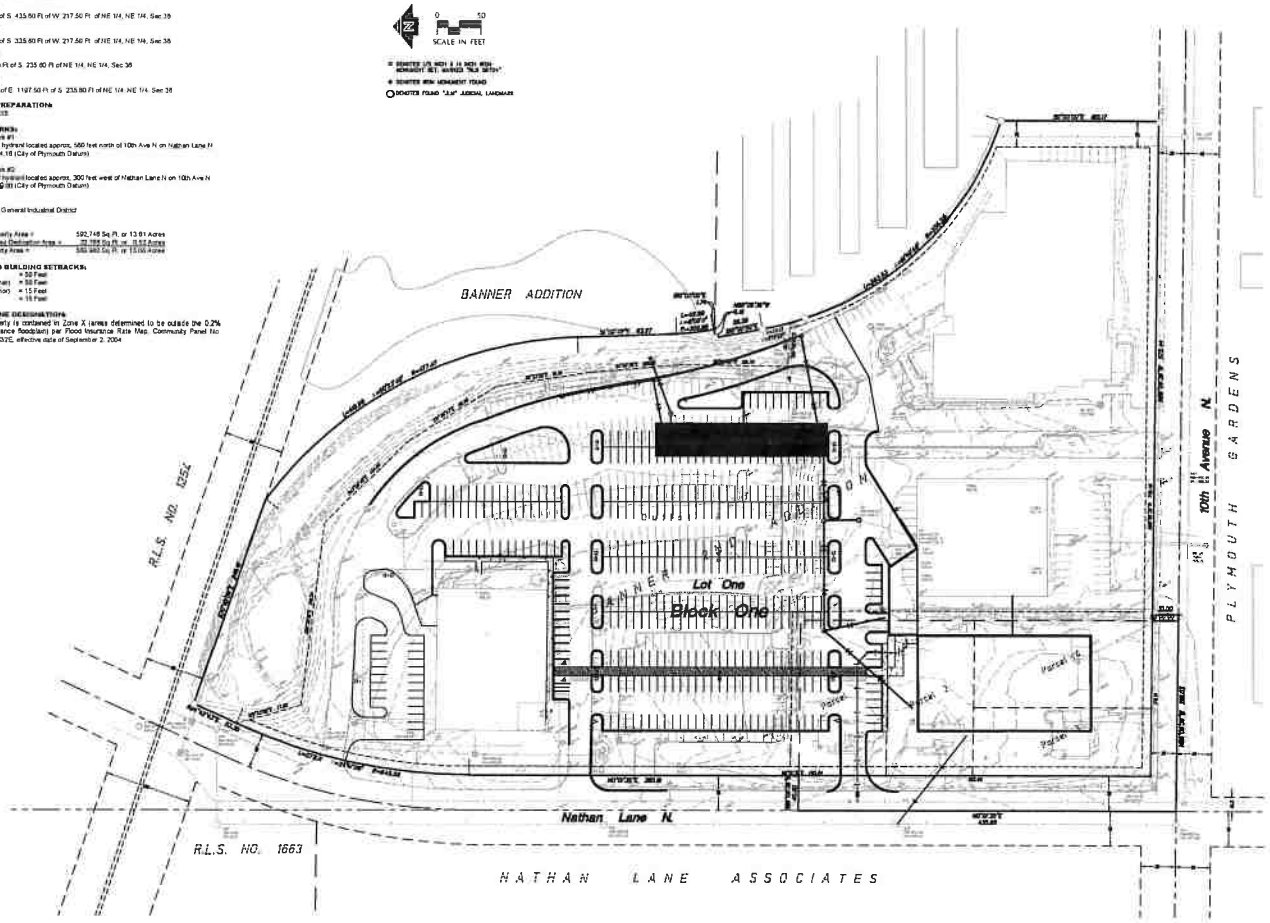
AREAS:

Total Property Area =	592,748 Sq.Ft. or 13.61 Acres
Right of way Dedication Area =	22,788 Sq.Ft. or 0.52 Acres
Net Property Area =	569,960 Sq.Ft. or 13.09 Acres

PROPOSED BUILDING SETBACKS:

Front	= 50 Feet
Side (Corner)	= 50 Feet
Side (Interior)	= 15 Feet
Rear	= 15 Feet

FLOOD ZONE DESIGNATION:
This property is contained in Zone X (areas determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map, Community Panel No. 27053C0033E, effective date of September 2, 2004



BANNER ENGINEERING

LOUCKS

PRELIMINARY PLAT
1 of 1