Mead & Hunt, Inc.
M & H Architecture, Inc.
1345B North Road
Green Bay, Wisconsin 54313
920-496-0500
meadhunt.com

September 20, 2013

Mr. James Doperalski, Jr.
DNR Northeast Regional HQ
2984 Shawano Avenue
Green Bay, WI 54313

Subject: **401 Water Quality Certification**

Project i.D. 4075-28-73	Project I.D. 4075-28-71	Project I.D. 4095-10-72
Village of Wrightstown	Village of Wrightstown	High Street, Village of Wrightstown
Fox River Bridge B-05-381	Fox River Bridge B-05-381	Fox River – Shanty Road
STH 96	STH 96	STH 96
Brown County	Brown County	Brown County
(Early Fill/Wick Drains)	(Bridge & Roundabouts)	(Washington and High Street)

Dear Mr. Doperalski Jr.:

Enclosed please find your copy of the 404 permit application sent to the Army Corps of Engineers for the subject projects. This copy is for your review and approval for 401 Water Quality Certification. Please do not forward this copy to the Corps of Engineers.

The following information is enclosed:

- 404 permit application
- Project plan sheets for 4075-28-73, 4075-28-71, 4095-10-72
- Project specifications for 4075-28-73, 4075-28-71, 4095-10-72

Schedule

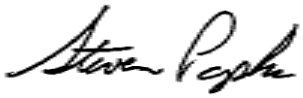
An early fill project (4075-28-73) is planned to take place prior to the bridge replacement project. The PS&E for the early fill project is November 1, 2013. Early fill construction is anticipated to occur May through July 2014.

The PS&E for projects 4075-28-71 and 4095-10-72 is February 1, 2014 with a LET date of July 8, 2014. Construction activities within the Fox River and adjacent wetlands is anticipated to begin early September 2014 and extend through June 2016.

Please review the enclosed information and respond to the address above regarding approval of the applicable permits. We are requesting that the permit is approved by November 1, 2013. If you have any questions or require additional information, please contact me at 920-496-0500 or by email at steven.popke@meadhunt.com.

Sincerely,

MEAD & HUNT, Inc.



Steven T. Popke, P.E.
Mead & Hunt Project Manager

Attachments

cc: Andrew Fulcer, P.E. – Wisconsin Department of Transportation NE Region

Mead & Hunt, Inc.
M & H Architecture, Inc.
1345B North Road
Green Bay, Wisconsin 54313
920-496-0500
meadhunt.com

September 17, 2013

Mr. Joey Shoemaker
United States Army Corps of Engineers
211 North Broadway, Suite 221
Green Bay, WI 54303

Subject: Section 10/404 Water Resources Application
Project I.D. 4075-28-71
Village of Wrightstown
Fox River Bridge B-05-381
STH 96
Brown County

Dear Mr. Shoemaker:

On behalf of the Wisconsin Department of Transportation, Mead & Hunt, Inc. is submitting this application for work to be performed along and within the Fox River in Wrightstown. The following information is enclosed:

- Form 3500-053
- Attachment A – Project Narrative & Purpose and Need
- Attachment B – Site Map & Project Plans
- Attachment C – Project Site Photo
- Attachment D – Wetland Delineation Report
- Attachment E – Practicable Alternative Analysis
- Attachment F – Wetland Restoration Plan
- Attachment G – Special Provisions
- Attachment H – Wetland Impact Tracking Form
- Attachment I – Bridge Asbestos Inspection Report

Schedule

An early fill project (4075-28-73) is planned to take place prior to this project. The PS&E for the early fill project is November 1, 2013. Early fill construction is anticipated to occur May through July 2014.

The PS&E for this project is February 1, 2014 with a LET date of July 8, 2014. Construction activities within the Fox River and adjacent wetlands is anticipated to begin early September 2014 and extend through June 2016.

Please review the enclosed information and respond to the address above regarding approval of the applicable USACE permits. We are requesting that the permit is approved by November 1, 2013. If you have any questions or require additional information, please contact me at 920-496-0500 or by email at steven.popke@meadhunt.com.

Sincerely,

MEAD & HUNT, Inc.

Steven T. Popke, P.E.
Mead & Hunt Project Manager

Attachments

cc: James Doperalski – Wisconsin Department of Natural Resources
Andrew Fulcer, P.E. – Wisconsin Department of Transportation NE Region

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Water Resources Application for Project Permits

Form 3500-053 (R 2/13)

Notice: Pursuant to chs. 30 and 31, Wis. Stats., ch. 281, Wis. Stats, and s. 283.33, Wis. Stats., this form is used to apply for coverage under the state construction site storm water runoff general permit, and to apply for a state or federal permit or certification for waterway and wetland projects or dam projects. This form and any required attachments constitute the permit application. Failure to complete and submit this application form may result in a fine and/or imprisonment or forfeiture under the provisions of applicable laws including s. 283.91, Wis. Stats. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records Laws (ss. 19.31-19.39, Wis. Stats.).

Use this form for (check all that apply):

- ☒ Work in public waters (DNR - ch. 30, Wis. Stats.)
- ☒ Work in waters of the U.S (Corps of Engineers)
- ☒ Permit for Wetland Fill (DNR or Corps of Engineers)
- ☐ Storm water NOI - New land disturbing construction activity
- ☐ Storm water NOI - Renewal FIN # _____
- ☐ Dam projects (DNR - ch. 31, Wis. Stats., or Corps of Engineers)

Read all instructions provided before completing. If additional space is needed, attach additional pages.

Section 1: Applicant/Permittee Information

Applicant Name (Ind., Org. or Entity)	Authorized Representative	Title
WI Dept. of Transportation	Andrew Fulcer, P.E.	Project Manager

Mailing Address	City	State	ZIP Code
944 Vanderperren Way	Green Bay	WI	54304-5344

Email Address	Phone Number (incl. area code)	FAX Number (incl. area code)
Andrew.Fulcer@dot.wi.gov	(920) 492-5664	(920) 492-5640

Section 2: Landowner Information (complete these fields when project site owner is different than applicant)

Name (Ind., Org. or Entity)	Contact Person	Title

Mailing Address	City	State	ZIP Code

Email Address	Phone Number (incl. area code)	FAX Number (incl. area code)

Section 3: Other Contact Information (check one)

☒ Consultant or Plan Preparer ☐ Contractor ☐ Agent ☐ Other — If Other, specify:

Name (Ind., Org. or Entity)	Contact Person	Title
Mead & Hunt, Inc.	Steven Popke, P.E.	Project Manager

Mailing Address	City	State	ZIP Code
1345B North Road	Green Bay	WI	54313

Email Address	Phone Number (incl.area code)	FAX Number (incl. area code)
steven.popke@meadhunt.com	(920) 496-0500	(920) 496-0576

Section 4: Project or Site Location

Project Name	County	☐ City ☐ Town ☒ Village
Fox River Bridge B-05-381, STH 96	Brown	of Wrightstown

Location Address/Description

Proposed bridge over Fox River 250-feet south of the existing bridge B-05-736

Section 5: Location Information

Create a map depicting the project location or the perimeter of the construction site (land disturbance) and relationship to nearby water resources using the Surface Water Data Viewer http://dnr.wi.gov/topic/surfacewater/swdv/ or a 7.5-minute series topographic map. You can print the map and then draw the location on the map.

Provide the section, range, township information and if available, the Latitude and Longitude information.

PLSS (Public Land Survey System) **Method**

Quarter-Quarter	Quarter	Section	Township	Range	If this site is not wholly contained on the quarter-quarter section, more description:
NE	NW	2	21 N	19 ☒E ☐W	Wetland impacts in NW-NE-2-21-19

Section 6: Waterways and Wetlands (see instructions about potential additional application requirements)

Name (description if unnamed) of closest waterbodies	Type	Special Status
Fox River	○ Lake ◉ Stream	○ ORW/ERW ◉ 303(d) listed

Yes No Wetlands:

☒ ☐ Wetlands will be filled, excavated, or disturbed during construction or as part of this project.

The presence of wetlands has been evaluated using: (check all that apply)

☒ Wisconsin Wetlands Inventory ☒ Wetland Delineation (attached report)

☒ Wetland Locator Tool http://dnr.wi.gov/topic/Wetlands/locating.html ☒ Soils (NRCS maps) ☐ Other:

Applicant/Project Name: WisDOT / Fox River Bridge B-05-381 County Brown

Latitude and Longitude Method (if available)

	Degrees	Minutes	Seconds	Method of Determining
Latitude	44	19	33.9590	☐ GPS ☐ DNR's Surface Water Data Viewer ☒ Other: CAD design file
Longitude	88	9	56.2282	

Section 7: Project Information (attach additional sheets as necessary)

Duration:	Anticipated Project Start Date (mm/dd/yyyy)	Anticipated Project End Date (mm/dd/yyyy
	09/01/2014	12/01/2016
Photos: Provide photographs of the "before" condition.		Date of Photographs (mm/dd/yyyy)

Narrative of the Project:

Provide a one to two paragraph description of the proposed project, including land and water alterations and intended use(s) of the project.

The project will consist of the realignment of approximately 2,550 feet of STH 96 to the south; construction of a new bridge (B-05-0381) crossing the Fox River approximately 250-feet upstream (south) of the existing bridge; removal of the existing bridge (B-05-0736); construction of a roundabout at the intersection of STH 96 and Broadway Street at the west end of the bridge; construction of a roundabout at the intersection of proposed STH 96 and Turner Street extended; reconstruction of the intersection of existing STH 96 with Turner and Fair Streets; and reconstruction of local roads adjacent to STH 96 within the project limits.

Section 8: Attachments and Permit Access (include required attachments for each proposed activity.)

The following attachments, such as the construction Erosion and Sediment Control (form 3500-052A) and the Post-Construction Storm Water Management (form 3500-052B) for a storm water construction permit application, constitute this permit application: (include all that apply)

Attachment name(s):

☐ I have obtained a copy of the construction site storm water runoff general permit from the department's internet site: http://dnr.wi.gov/topic/Stormwater/construction/forms.html

Section 9: Certification and Permission

Certification: I hereby certify that I am the owner or authorized representative of the owner of the property which is the subject of this Permit Application. I certify that the information contained in this form and attachments is true and accurate. I certify that the project will be in compliance with all permit conditions. I understand that failure to comply with any or all of the provisions of the permit may result in permit revocation and a fine and/or imprisonment or forfeiture under the provisions of applicable laws.

Permission: I hereby give the Department permission to enter and inspect the property at reasonable times, to evaluate this notice and application, and to determine compliance with any resulting permit coverage.

Name of Owner/Authorized Representative (please print)	Title	Phone Number
Andrew Fulcer, P.E.	Project Manager	(920) 492-5664

Signature of Applicant	Date Signed
Andrew D. Fulcer	

LEAVE BLANK - AGENCY USE ONLY				
Date Received	Fee Received $	Construction Site ID#	Docket #	Corps #
Initial screening: Completeness	☐ Historic checked	☐ Rare species (NHI) checked	☐ Wetlands checked	

Appendix A. Project Narrative & Purpose and Need

Project Narrative & Purpose and Need

Section 404/Section 10 Permit Application

Village of Wrightstown
Fox River Bridge B-05-381
STH 96
Brown County, Wisconsin

WisDOT Construction I.D. 4075-28-71

Project Description

The purpose of the project is to replace the functionally obsolete, non-redundant and fracture critical existing structure B-5-736 which conveys STH 96 traffic across the Fox River in the Village of Wrightstown. The existing bridge is vital to the mobility of the Village of Wrightstown residents and commuters in this region. Currently, the nearest north Fox River bridge crossing is about 10 miles north of Wrightstown in De Pere. The nearest south Fox River bridge crossing is about 7 miles south of Wrightstown in Kaukauna.

The proposed structure is located south of the existing structure to enable the existing structure to remain in service during construction of the new bridge and to reconfigure the roadway for improved traffic flow and safety. Roundabouts are included on both sides of the bridge to improve traffic circulation, intersection safety and to accommodate truck and agricultural vehicle traffic.

This segment of STH 96, located in the Village of Wrightstown in southwestern Brown County, is an urban minor arterial. STH 96 is not part of the National Highway System (NHS). It is designated as a Long-Truck Route (65' Restricted Truck Route – 48' trailer, no double bottoms). The project will consist of the realignment of approximately 2550 feet of STH 96 to the south; construction of a new bridge (B-05-0381) crossing the Fox River approximately 250-feet upstream of the existing bridge; removal of the existing bridge (B-05-0736); construction of roundabouts at each end of the bridge; and reconstruction of local roads adjacent to STH 96 within the project limits.

The project limits will begin just west of the railroad tracks along Broadway Street and extend to the intersection at Turner Street and existing WIS 96 (High Street).

Work under this project includes:

- Construction of the new Fox River bridge, pavement, curb and gutter, and sidewalk
- Construction of roundabouts at the intersection of WIS 96 (Main Street) and CTH DD (Broadway Street) and on a new alignment 100 feet south of the intersection of WIS 96 and Turner Street
- Reconstruction of the intersection at Turner Street and Fair Street
- Reconstruction of High Street from Mueller Street to Turner Street
- Reconstruction of High Street from west of the Fox River to Main Street
- Construction of the new alignment of Cedar Street, moving the connection from Broadway Street to Main Street.

Purpose and Need for the Project

The purpose of the proposed action is to construct a new Fox River bridge and approaches that will provide a safe and efficient crossing of the Fox River for future users while minimizing disturbance to the natural and built environment. The need for a new Fox River bridge and approaches is due to a

combination of factors including deficiencies with the existing bridge, safety, existing roadway conditions, and route importance.

Existing Bridge Deficiencies

The Fox River Bridge in Wrightstown carries WIS 96, High Street, over the Fox River. The bridge was constructed in 1934. Besides routine maintenance, the bridge has undergone significant rehabilitation work in 1977, 1985, 1986, 1999, and 2009. The bridge's former bascule (or movable) span is span 4. In 1999, opening and closing of the bascule span was deemed unnecessary. The bascule span was welded shut, the open steel grid deck in the bascule span was filled with lightweight concrete, and the operator's house was removed. The typical section of the bridge consists of a 24-foot clear roadway width with 6.25-foot sidewalks on either side. On February 24, 2009, a deck failure resulted in a 5- by 10-foot hole in the bridge's eastbound travel lane. The repair required the bridge to be closed for an evening.

Structural Issues

The existing bridge is a two-girder, non-redundant structure. This method of construction is now considered undesirable because failure by damage, overload, or fatigue to one of the girders will result in failure of the entire bridge span without warning. The bridge also contains fracture-critical steel bridge superstructures that are susceptible to failure because of fatigue, cracking, or other damage. Because the Fox River Bridge is fracture-critical, the Wisconsin Department of Transportation (WisDOT) inspects it annually. The most recent bridge inspection showed that although the Fox River Bridge is structurally sound, it is reaching the end of its assumed service life. Key structural deficiencies include:

- The concrete bridge piers exhibit concrete cracking, spalling, and scaling above and below the waterline. The rebar is exposed.
- The sidewalk is scaling and the grid is corroding through its length.
- The weld at the bascule span jaws has cracked.
- The deck in the bascule span (span 4) has a stay-in-place form that is causing rapid deterioration on the underside of the concrete where large areas of rebar are exposed.

Functional Issues

The bridge is functionally obsolete because of its inadequate 24-foot clear roadway width compared to current and accepted standards for the volume and type of traffic it carries. The Fox River Bridge serves automobiles, trucks, semi-trucks, tractors and other large farm machinery, snowmobiles, bicycles, and pedestrians.

Six farms in the area use the Fox River Bridge to move equipment with a transport width up to 16 feet from one farm to another. Farm equipment most often must cross the bridge in spring and fall. Large equipment crosses the bridge up to eight times a day at the height of the busy planting and harvesting seasons. The bridge's travel lane width is too narrow to accommodate large farm equipment and an oncoming vehicle. The operator of the farm equipment must wait until the bridge is clear in order to cross it. Once farm equipment is on the bridge, the bridge is too narrow for oncoming traffic to pass, temporarily prohibiting two-way traffic on the bridge and causing traffic to queue as it waits to cross. During busy periods, this can cause traffic operation issues at the WIS 96 intersections with Broadway, High, and Washington Streets. This restriction of two-way traffic and resulting traffic congestion can cause problems if emergency vehicles would have to cross the bridge at the same time as the farm machinery.

With a traffic volume of 10,400 average daily traffic (ADT) (construction year 2015 forecast) and projected 2035 ADT of 13,000, the clear roadway width should be 36 feet. The 24-foot clear roadway width on the bridge is substantially narrower than the 40-foot clear roadway on the approaches to the bridge. Under the existing configuration, the approaches taper as they reach the bridge and drivers must adjust from the wide roadway as they approach the bridge to the narrower roadway on the bridge. The taper also poses inconveniences to larger vehicles.

Safety and Existing Roadway Conditions

This segment of STH 96 has several operational and safety issues. Roadway safety is measured by the frequency and severity of crashes. An important objective of any transportation improvement is to minimize crash potential through roadway mainline and intersection design features and access management. Both the statewide average crash rate and statewide injury crash rate are exceeded for urban streets within this segment of STH 96. The 5-year average crash rate was 111 percent higher than the statewide average, whereas the injury crash rate was 65 percent higher than the statewide average. Crash occurrences within the project limits were predominately at intersections. The approaches to the bridge have several traffic operation problems:

- The current configuration of the STH 96/High Street, STH 96/Broadway Street and STH 96/Washington Street intersections force large vehicles to encroach on the opposing lane of traffic when making turns.
- Stopping patterns at the STH 96/High Street intersection are atypical for a T-intersection and create confusion for drivers.
- Grade changes at the Wisconsin Central Limited railroad crossing on Broadway Street limit sight distance and cause vehicles to "bottom out." In addition, there are horizontal curves on both the highway and railroad at this crossing that limit sight distance and present maintenance problems and poor ride quality for highway traffic because of conflicting super-elevations.

Proposed Activity

The proposed activity is located in the Village of Wrightstown, Brown County, Wisconsin (See Figure 1). The Wisconsin Department of Transportation (WisDOT) proposes to replace the existing 2-lane bridge with a wider 2-lane bridge over the Fox River. The STH 96 Bridge approaches will also be reconstructed. The proposed bridge will also pass over CTH ZZ (Washington Street) and the Plum Creek wetland.

The proposed activities are described as follows.

STH 96 Bridge Replacement

The existing structure (B-5-736) is a 10-span bridge with an overall length of 680 feet. The typical section of the bridge consists of a 24-foot traveled way with 6.25-foot sidewalks on either side. Under WisDOT's bridge inventory and inspection database, the structure has been separated into four segments depending on superstructure type. The four segments consist of a 232.8-foot, three-span steel plate girder bridge segment, a 94.5-foot double leaf bascule bridge segment, a 253.5-foot, three-span steel plate girder bridge segment, and a 103.5-foot, three-span reinforced concrete, haunched slab bridge segment. Segments 1, 2, and 3 are non-redundant, two-girder bridge systems, which require fracture critical bridge inspections. From segments 1 through 4, respectively, the existing bridge is supported by a full retaining concrete abutment, four solid shaft concrete piers, three open bent concrete piers, two round concrete column piers, and one concrete sill abutment. The piers and abutment under segment 1 are supported by spread footings, while the piers and abutment under segments 2 through 4 are supported by cast-in-place concrete or timber piles.

Additional data can be found in the following table:

Structure Data B-5-736

Segment	1	2	3	4
Structure No.	B-05-0736-0001	B-05-0736-0002	B-05-0736-0003	B-05-0736-0004
Year Built	1934	1934	1934	1934
Length	232.8	94.5	253.5	103.5
Clear Roadway Width	24	24	24	24

Since its original construction in 1934, the existing bridge has undergone rehabilitation work in 1977, 1985, 1986, and 1999. In 1977, the original timber and asphalt bascule bridge deck (segment 2) was replaced with a metal grid. The metal grid deck was filled with lightweight concrete in 1999. In 1999, the bascule bridge operator's house was removed. The original 5.5-inch reinforced concrete deck within segments 1 and 3 was replaced in 1985 with a 7-inch reinforced concrete deck. The original concrete deck girder superstructure within segment 4 was replaced in 1985 with a reinforced concrete haunched slab. The entire structure was repainted in 1986 and the railings were replaced in 1985.

It is proposed to replace the existing bridge with an approximate 1,816 foot long, 14 span prestressed concrete girder structure. The new bridge will have 13 single shaft piers supported on piling. See preliminary bridge plans (Figure 2, sheets 1-3).

The new bridge deck will be approximately 54.33 feet wide and will consist of the following:

- Two 12-foot driving lanes (2-lane undivided urban roadway)
- 8-foot shoulders to accommodate on-street bicycles
- 6-foot sidewalks on each side for pedestrians
- 1.17-foot parapets on each side

The new bridge alignment will be approximately 250 feet south of the existing bridge. The existing navigational clearance is approximately 11.2 feet. The new bridge will provide a minimum navigational clearance of approximately 37.4 feet.

Aesthetic treatments will include decorative concrete for the bridge parapets, decorative bridge piers, railings and lighting. Lookouts on the bridge are also proposed to provide an opportunity for pedestrians to view the Fox River. The decorative stone finish was selected by a local committee for community sensitive solutions.

STH 96 Bridge Approach Reconstruction

The west approach to the STH 96 Bridge begins approximately 275 feet south of the intersection of existing STH 96 (Main Street) with Broadway Street. Existing STH 96 consists of a two-lane, 44-foot wide urban roadway. The reconstructed west bridge approach will be a two-lane, variable width (41-feet to 47.7-feet) urban roadway with a single-lane roundabout at the intersection with Broadway Street.

The east approach to the STH 96 Bridge begins 400 feet east of the intersection with Turner Street and existing STH 96 (High Street). Existing STH 96 consists of a two-lane, 40-foot wide urban roadway. The reconstructed east bridge approach will include a single-lane roundabout at the intersection with Turner Street just east of the bridge, transitioning to a two-lane, variable width (49.6-feet to 56.8-feet) urban roadway.

Construction Schedule and Sequence

The anticipated summarized construction timeline for the STH 96 Bridge followed by a detailed list of construction stages is as follows:

- Construction start with early fill placement of East abutment embankment: May to August 2014
- Bridge construction start with clearing and grubbing: September 2014
- Construct causeways and temporary access roads for new bridge: September to October 2014
- Construct piers: October, 2014 to March, 2015
- Place girders and bridge deck: March to June 2015
- Remove causeway used for new bridge: July 2015
- Remove temporary access roads: October 2015
- Place erosion mat over impacted wetlands: October 2015

- Construct causeways for removal of existing bridge (only one causeway can be in place at a time): July, December 2015
- Remove existing bridge deck and girders: October 2015 to January 2016
- Remove causeways: November 2015, February 2015
- Place wetland plantings and seed Plum Creek wetlands: March through May 2016.
- Complete construction of bridge and approaches: August 2016

Traffic Control, Stages

The construction plans for the project will include WisDOT Standard Detail Drawings for advance signing and traffic control. Portable Changeable Message Signs will be placed on each end of the project **7 days** prior to beginning construction along STH 96.

Stages

Early Fill Stage – Anticipated Duration: 4 months – May 2014 to August 2014

- Place wick drains and early fill at east roundabout.

Stage 1 - Anticipated Duration: 11 months - September 2014 to July 2015

Stage 1a
- Close Hickory Street from Broadway Street to Bridge Street.
- Begin clearing and grubbing along proposed bridge alignment from Hickory Street to the west bank and from the east bank to High Street.
- Construct temporary construction access roads along bridge.
- Construct causeways for bridge construction.
- Begin construction of B-05-0381.
- Construct railroad crossing.
- Construct the west leg of the west roundabout.
- Construct temporary bypass in the northwest quadrant of the Broadway and Main Street intersection.
- Construct temporary access road between Cedar Street and temporary bypass.
- Obliterate Cedar Street from CTH DD to temporary access road for Cedar Street.

Stage 1b
- Divert STH 96 traffic to temporary bypass.
- Complete B-05-0381.
- Construct west roundabout.
- Construct east roundabout.
- Construct pedestrian access abutment (R-05-110).
- Construct pedestrian embankment connection to bridge.
- Remove temporary causeways.
- Remove temporary access roads except in Plum Creek wetlands.

Stage 2 - Anticipated Duration: 4 months - August 2015 to November 2015
- Remove temporary access road in wetland.
- Place erosion mat in impacted wetland area.
- Remove temporary bypass in the northwest quadrant of the Broadway and Main Street intersection.
- Construct sidewalk in north quadrant of west roundabout.
- Construct proposed Cedar Street.
- Obliterate existing High Street from Fair Street to proposed STH 96.

- Construct High Court cul de sac.
- Reconstruct High Street from Mueller Street to Turner Street, construct intersections of Mueller Street and High Street and Turner Street and Fair Street.
- Construct one temporary causeway along existing bridge.
- Remove portion of existing bridge.

Stage 3 - Anticipated Duration: 7 months - December 2015 to June 2016

Stage 3a
- Construct one temporary causeway along existing bridge.
- Complete removal of existing bridge.

Stage 3b
- Remove temporary causeway along removed bridge.
- Construct Cedar Street cul de sac to asphaltic binder coat surface.
- Construct Main Street temporary widening on northbound lane.
- Construct retaining walls along High Street (R-05-112, R-05-113).
- Construct High Street from Main Street to Hickory Street to asphaltic binder coat surface.
- Obliterate Hickory Street from proposed Bridge to High Street.
- Construct scenic overlook at east bank of Fox River.
- Reconstruct High Street from east bank of Fox River to CTH ZZ (Washington Street)

Stage 3c
- Construct southbound lanes of Main Street.
- Install 4.0 feet of temporary asphaltic surface on southbound lane of Main Street.

Stage 3d
- Construct northbound lanes of Main Street.

Stage 3e
- Construct from curb and gutter flange line to slope intercepts for southbound lanes for Main Street.
- Construct northeast splitter island of west roundabout.
- Place asphaltic surface layer for both Cedar and High Street.

All lane and roadway closures will require prior approval and monitoring by the WisDOT staff. Traffic control stage changes and short term closures on STH 96 or local roads will be previously approved and monitored by the WisDOT staff.

The special provision will also provide language for the contractor to follow the Village of Wrightstown noise ordinance. The majority of the construction activities will be completed from 7:00 AM to 9:00 PM on weekdays. However, per the Village ordinance, some night work may be permitted when public welfare and convenience renders it impossible to perform the work during the day. Such activities will need to be approved by the engineer in field.

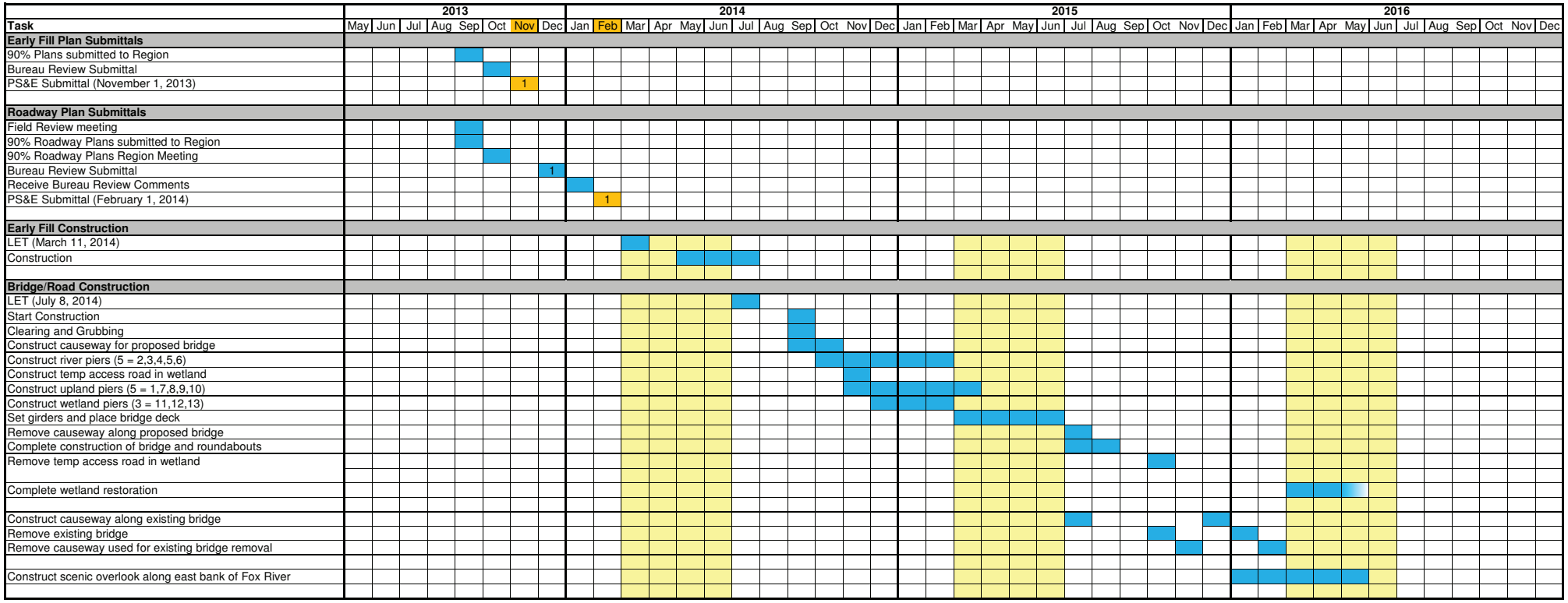
Traffic Diversion and Traffic Analysis

Based on the existing capacity and projected traffic along both STH 96 and the proposed detour route, no traffic diversion is expected, due to this project.

Both STH 96 and the detour route will operate under capacity. Speeds will not be reduced during construction. No traffic analysis was then, prepared. Delay was estimated simply by calculating the additional travel time incurred by the proposed detour.

Project ID 4075-28-00/71
Village of Wrightstown
Fox River Bridge B-05-381
STH 96
Brown County

8/19/2013



March 1 - June 15, No river disturbance for fish spawning
May 1 - August 30, Do not disturb swallow nests

Temporary and Permanent Erosion Control Measures

Erosion control and storm water management will be done in accordance with WisDOT *Facilities Development Manual, Chapter 10, Erosion Control and Storm Water Quality*; Wisconsin Administrative Code Chapter TRANS 401, *Construction Site Erosion Control and Storm Water Management Procedures for Department Actions*; and the WisDOT/WisDNR Cooperative Agreement Amendment, *Memorandum of Understanding on Erosion Control and Storm Water Management*. Best management practices under these guidelines and regulations include the following:

- The size of exposed areas at any one time and the duration of exposure will be minimized.
- Disturbed areas will be protected from off-site runoff and sediment will be prevented from leaving the construction site.
- Disturbed areas will be stabilized as soon as practicable (temporary vegetation, mulch, stabilizing emulsions).
- Stabilized slopes, soil, and stream banks will be left undisturbed where possible.
- Trees and shrubs will be preserved, and over-clearing will be prevented or minimized.
- The soil surface will be protected by using permanent and temporary erosion control measures such as seeding and sodding, mulch, erosion mat, and riprap.
- Protect storm water inlets during construction.

The construction contractor is required to prepare an Erosion Control Implementation Plan that includes all erosion control commitments made in the project's engineering design phase. The construction plans and contract special provisions must include the specific erosion control measures agreed on by WisDOT in consultation with DNR who reviews the Erosion Control Implementation Plan.

The contractor will be required to not disturb nor store materials or topsoil within the wetlands except in areas designated to be filled or impacted as permitted in the project's U.S. Army Corps of Engineers Section 404 Permit. The wetlands are shown on the erosion control sheets to clearly identify the wetlands. The work area will be separated from the wetlands by silt fence, as shown on the plans, to avoid siltation and inadvertent fill into the wetland areas.

Construction operations will be performed in a timely and diligent manner, continuing all construction operations methodically from the initial topsoil stripping operation through the subsequent grading and finishing to minimize the period of exposure to erosion. The contractor will be required to immediately re-topsoil graded areas, as designated by the engineer, after grading is completed within those areas. Within five working days all topsoiled areas will be seeded, fertilized and mulched or covered with erosion mat.

At the end of each construction season disturbed areas will be restored with topsoil, seeding, fertilizer, and mulching or erosion mat to minimize erosion due to spring melt. Erosion mat will be placed in the impacted wetland in the fall and planted and seeded the following spring. This will be done to avoid having the seed washed away by flooding in the early spring.

Sealed cofferdams or similar containments will be used to minimize siltation during construction of the new pier footings and shafts.

Disposal of Excavated Materials

The construction contractor will be required to place material an adequate distance from and not within any waterway, wetland or floodway for all selected sites identified for disposal of excavated material. The construction contractor will also be required to place erosion control measures at all selected sites to protect the natural resources.

Fill Material and Proposed Construction Methods

STH 96 Bridge

The estimated Ordinary High Water (OHW) elevation for the Fox River channel at the STH 96 Bridge crossing is 597.808 NGVD. The elevation was determined by the Wisconsin Department of Natural Resources (WDNR) in consultation with WisDOT.

Construction of the pier footings and shafts for the STH 96 Bridge will require placing approximately 1,710 cubic yards of poured concrete below Ordinary High Water (OHW). The Fox River bottom generally consists of a 50-foot layer of clay over a 30-foot layer of silty clay over limestone bedrock at a depth of approximately 80-feet. The new bridge piers will be constructed on deep pile foundations with reinforced concrete pile caps and unreinforced concrete seals. The new pier pile caps and seals will be constructed within cofferdams. The abutments at each end of the new bridge are located above OHW.

Fill for the east abutment, consisting of granular material, will be placed into the Plum Creek Wetlands. This area is above the OHW elevation. The volume of fill material placed into the wetland is approximately 15,700 CY.

Temporary Construction Causeway

The Fox River is too shallow outside the river channel at the STH 96 crossing to float a barge for constructing the new bridge piers, therefore a temporary causeway will be required to provide construction access. In order to develop a reasonable scenario for constructing the temporary causeway, and to allow flexibility for construction contractors, WisDOT held two meetings with bridge contractors to obtain input on possible construction methods. Discussions included causeway width, length and depth of girders for the causeway spans, and methods of operation for cranes and other equipment.

WisDOT also conducted a hydraulic analysis to determine the effect of a temporary causeway on flood flows and backwater, and to provide guidance for construction contractors for the sequence of installing and removing the temporary causeways. Information on the hydraulic analysis is provided in the Appendix A.

Based on discussions with bridge contractors and the hydraulic analysis, the following temporary causeway scenario has been developed for purposes of this permit application.

- Access to a causeways will be from each bank from temporary access roads.

- The causeways for the new bridge construction will consist of varying sizes of clean rock placed in the Fox River at piers 2 through 6. It will be approximately 30 feet wide allowing one-way traffic for large equipment, and will have perpendicular “fingers” extending on each side of the causeway centerline. The causeway fingers will allow access to the bridge piers and provide room for crane maneuvers. The navigation channel will remain open throughout construction. Navigation lights will be placed on the causeway to alert river traffic to the presence of the causeway.

- The causeways for the removal of the existing bridge will also consist of varying sizes of clean rock placed in the Fox River at piers extending from each bank. It will be approximately 30 feet wide allowing one-way traffic for large equipment, and will have perpendicular “fingers” extending on each side of the causeway centerline. The causeway fingers will allow access to the bridge piers and provide room for crane maneuvers. Only one causeway will be allowed in the river for the removal of the existing bridge based on the hydraulic analysis. The navigation channel will remain open throughout construction. Navigation lights will be placed on the causeway to alert river traffic to the presence of the causeway.

- Openings will be placed between the causeway fingers to create spans that will accommodate river flow, avoid creating an increase in backwater elevation, and allow for fish passage. Openings will consist of culverts or steel beams with wood decking.

The amount of rock fill that will be placed below OHW for the temporary causeways will depend on contractor options for constructing the causeways. For purposes of this permit application, it is assumed that rock fill for the temporary causeways for the new bridge will not exceed a maximum of 16,000 cubic yards and temporary rock fill for the temporary causeways used to remove the existing bridge will not exceed a maximum of 11,200 cubic yards.

Summary

Total fill material placed below OHW for the proposed project is summarized in Table 1.

Table 1
Summary of Fill Material Placed

Project Activity	Fill Below OHW		Fill above OHW
	Poured Concrete (cubic yards)	Heavy Riprap/rock fill (cubic yards)	Clean Granular Fill (cubic yards)
STH 96 Bridge	1,710	0	15,700
High Street cul de sac	-	-	265
Washington Street (CTH ZZ)	-	-	600
Temporary Construction Causeway for new STH 96 Bridge	-	16,000 maximum	-
Temporary Construction Causeway for removal of existing bridge	-	11,200 maximum	-
Temporary Construction Access Road in wetland	-	1,100	13,000 maximum
Totals	1,710	28,300	-

Adjoining Riparian Owners

Neighboring waterfront property owners, those who own land under the STH 96 Bridge, and other interests having jurisdictional authority are listed below.

Wisconsin Department of Transportation 944 Vanderperren Way Green Bay, WI 54304-5344 Contact: Andrew Fulcer	U.S. Army Corps of Engineers Old Fort Square 211 N. Broadway, Suite 221 Green Bay, WI 54303 Contact: Mr. Joey Shoemaker
Village of Wrightstown Department of Public Works 101 Washington Street Wrightstown, WI 54180 Contact: Travis Coenen	Wisconsin Department of Natural Resources 2984 Shawano Avenue Green Bay, WI 54313-6727 Contact: James Doperalski
Fox River Navigational System Authority 1008 Augustine Street Kaukauna, WI 54130 Contact: Harlan Kiesow	Chief, Bridge Branch-Ninth Coast Guard District 1240 E Ninth Street Room 2047 Cleveland, OH 44199-2060 Contact: Scot M. Striffler
John J Verhasselt Revocable Trust 535 Hickory Street Wrightstown, WI 54180	John Verhasselt 531 Hickory Street Wrightstown, WI 54180

Hydraulic calculations indicate that the proposed bridge does not increase the 100-year flood elevation at the proposed crossing. The temporary causeway construction will be staged in order to not raise the backwater for the 100-year flood elevation more than 0.5 feet. Therefore the Wisconsin Department of Transportation will not be required to notify the adjacent landowners and the Brown County Floodplain Zoning Administrator of any backwater increases of the 100-year flood elevation in accordance with Wisconsin Administrative Code Chapter NR 116, *Wisconsin's Floodplain Management Program*, and procedures established under the WisDOT/WisDNR Cooperative Agreement.

Measures to Minimize Adverse Effects

The following measures to minimize adverse effects have been identified at this time. Others may be identified during the project's preconstruction conference in consultation with WisDNR, WisDOT, and the bridge contractor.

Sealed cofferdams or similar containments will be used to minimize siltation during construction of the new pier footings and shafts.

No in-stream work in the Fox River main channel will take place from March 1st to June 15th to avoid fish spawning activity. Work on the causeway is not expected to take place during this time period, however, if work on the causeway does occur, no materials will placed in the Fox River or removed from the Fox River.

Swallow nests are present in the existing STH 96 Bridge deck girders. Therefore, the contract special provisions will include the following language:

> The nesting season for swallows has been established as May 15 through August 15 (per DNR for this project). Work which may disturb or destroy occupied nests during the nesting period will require the contractor to apply for a depredation permit from the U.S. Fish and Wildlife Service. The need for a permit may be avoided by removing the existing bridge superstructure prior to nest occupation by swallows, and clearing the nests from and installing a suitable netting device on the remaining existing superstructure prior to nesting activity to prevent the swallows from nesting. The cost for preventing nesting shall be included in the cost of Removing Old Bridge.

Erosion control and storm water management will be done in accordance with WisDOT *Facilities Development Manual, Chapter 10, Erosion Control and Storm Water Quality*; Wisconsin Administrative Code Chapter TRANS 401, *Construction Site Erosion Control and Storm Water Management Procedures for Department Actions*; and the WisDOT/WisDNR Cooperative Agreement Amendment, *Memorandum of Understanding on Erosion Control and Storm Water Management*. Best management practices under these guidelines and regulations include the following:

- The size of exposed areas at any one time and the duration of exposure will be minimized.
- Disturbed areas will be protected from off-site runoff and sediment will be prevented from leaving the construction site.
- Disturbed areas will be stabilized as soon as practicable (temporary vegetation, mulch, stabilizing emulsions).
- Stabilized slopes, soil, and stream banks will be left undisturbed where possible.
- Trees and shrubs will be preserved, and over-clearing will be prevented or minimized.
- The soil surface will be protected by using permanent and temporary erosion control measures such as seeding and sodding, mulch, erosion mat, and riprap.
- Protect storm water inlets during construction.

The construction contractor is required to prepare an Erosion Control Implementation Plan that includes all erosion control commitments that are made. The plan is approved by WisDOT in consultation with WisDNR prior to the start of construction.

The contract special provision will require the construction contractor to clean the equipment before entering and leaving the construction area in the wetlands to prohibit the transfer of invasive species.

Filter fabric will be placed in the temporary access roads between the breaker run base and the driving surface. Drainage openings will be utilized to allow water to flow through the causeways and the temporary access road in the wetland area. The temporary loss of wetlands during construction will be mitigated through a wetland bank since the wetlands would not be restored during the same growing season. The mitigation ratio will be 0.5:1 for the temporary impacts.

A grading plan will be included in the construction documents to restore the impacted Plum Creek wetland. Only the area disturbed during construction will be restored. The location of the existing and proposed vernal pools will be reviewed by the DNR. The recommended locations of the restored vernal pools will be included in the grading plan. Grading tolerances will be included in the project specifications.

Planting and seeding quantities and specifications will be included in the construction documents. The location of wetland plantings and the arrangement of wildlife structures will be as directed by the field engineer.

STH 96 Bridge Temporary Construction Causeway Hydraulic Analysis

The Fox River is too shallow at the STH 96 crossing to float a barge for constructing the new bridge piers, therefore a temporary causeway will be required to provide construction access. In order to develop a reasonable scenario for constructing the temporary causeway, and to allow flexibility for construction contractors, WisDOT held two meetings with bridge contractors to obtain input on possible construction methods. Discussions included causeway width, length and depth of girders for the causeway spans, and methods of operation for cranes and other equipment.

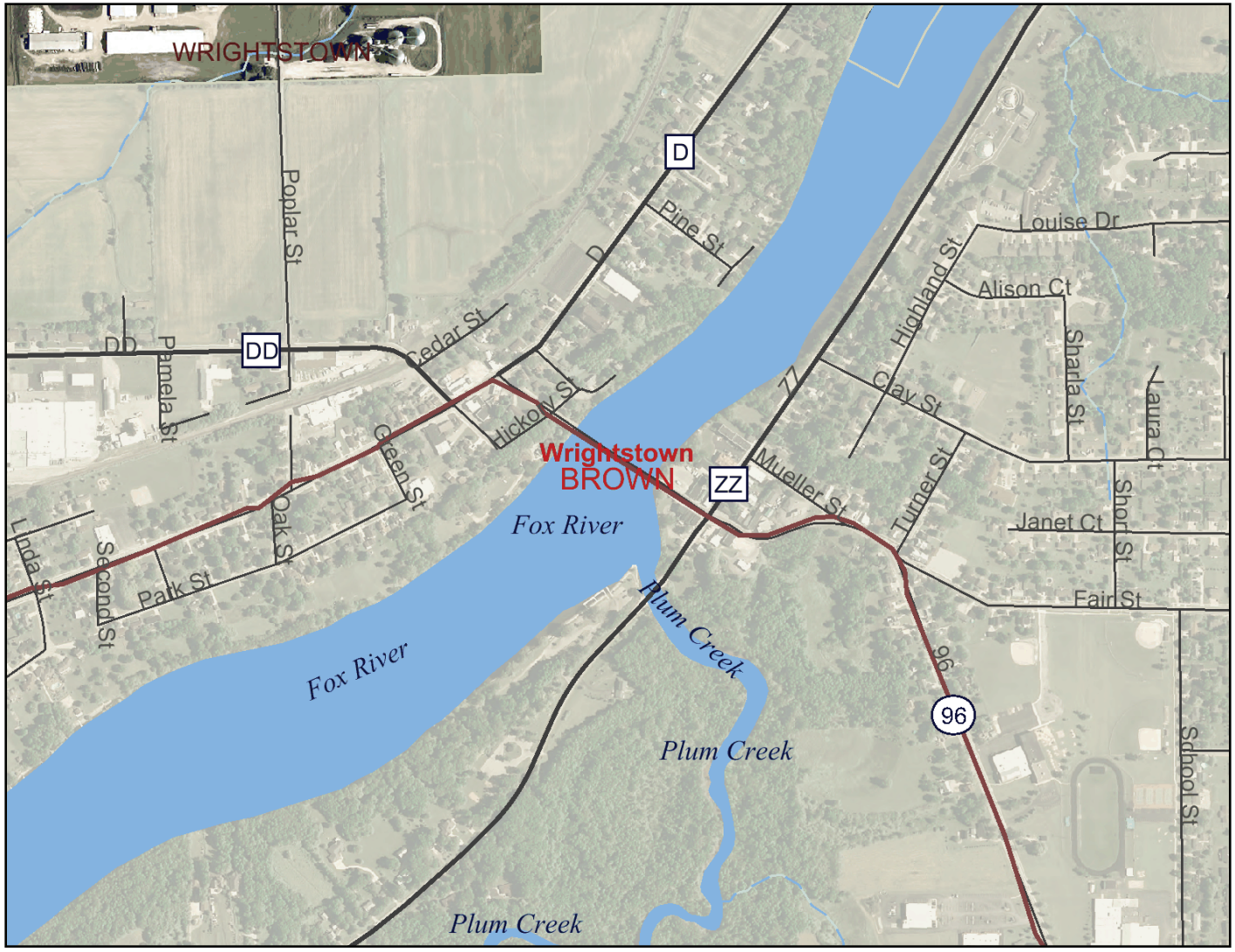
WisDOT also conducted a hydraulic analysis to determine the effect of a temporary causeway on flood flows and backwater, and to provide guidance for construction contractors on the sequence of placement and removal of the causeways. The following provides scenarios and associated backwater effects of the temporary construction causeways:

a. Stage 1 construction includes the existing bridge, the proposed bridge, and the causeway for the construction of the new bridge piers. The top of causeway elevation of 596.9 was assumed. Also both the east and west sections of the causeway were assumed to be in the waterway concurrently. This scenario would result in about 0.2’ of backwater relative to existing conditions during the 100-yr flood event.

b. Stage 2 construction includes the existing bridge, the proposed bridge, and the causeway for the removal of existing bridge piers. The top of causeway elevation of 596.9 was also assumed. In this case, the east and west sections of the causeway will be placed in the waterway consecutively and not concurrently. This scenario would result in approximately 0.3’ of backwater relative to existing conditions during the 100-yr flood event. If the west and east sections of this causeway are allowed to be placed in the waterway concurrently, then the resultant backwater increase during the 100-yr flood event will be in excess of 1 foot. Due to this, the contract special provisions will require the contractor to remove the existing bridge in stages and the sections of the causeway not be placed in the waterway concurrently.

Appendix B. Site Map & Project Plans

Map Created on Jul 17, 2013



Legend

Major Highways

- Interstate
- State Highway
- U.S. Highways

County Roads

Local Roads

24K County Boundaries

Civil Towns

- Civil Town

24K Open Water

24K Rivers and Shorelines

- Intermittent
- Fluctuating
- Perennial

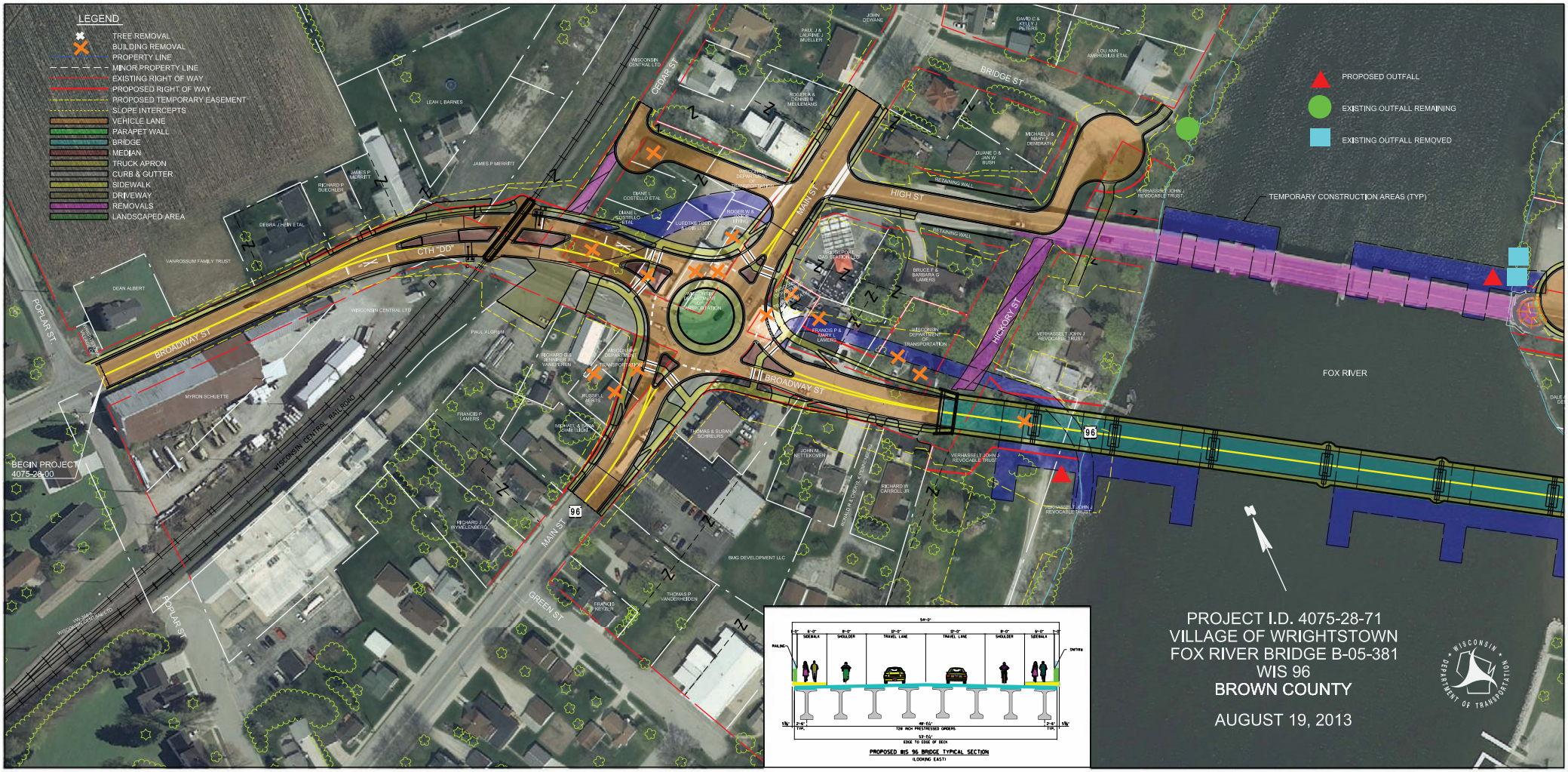
Cities and Villages

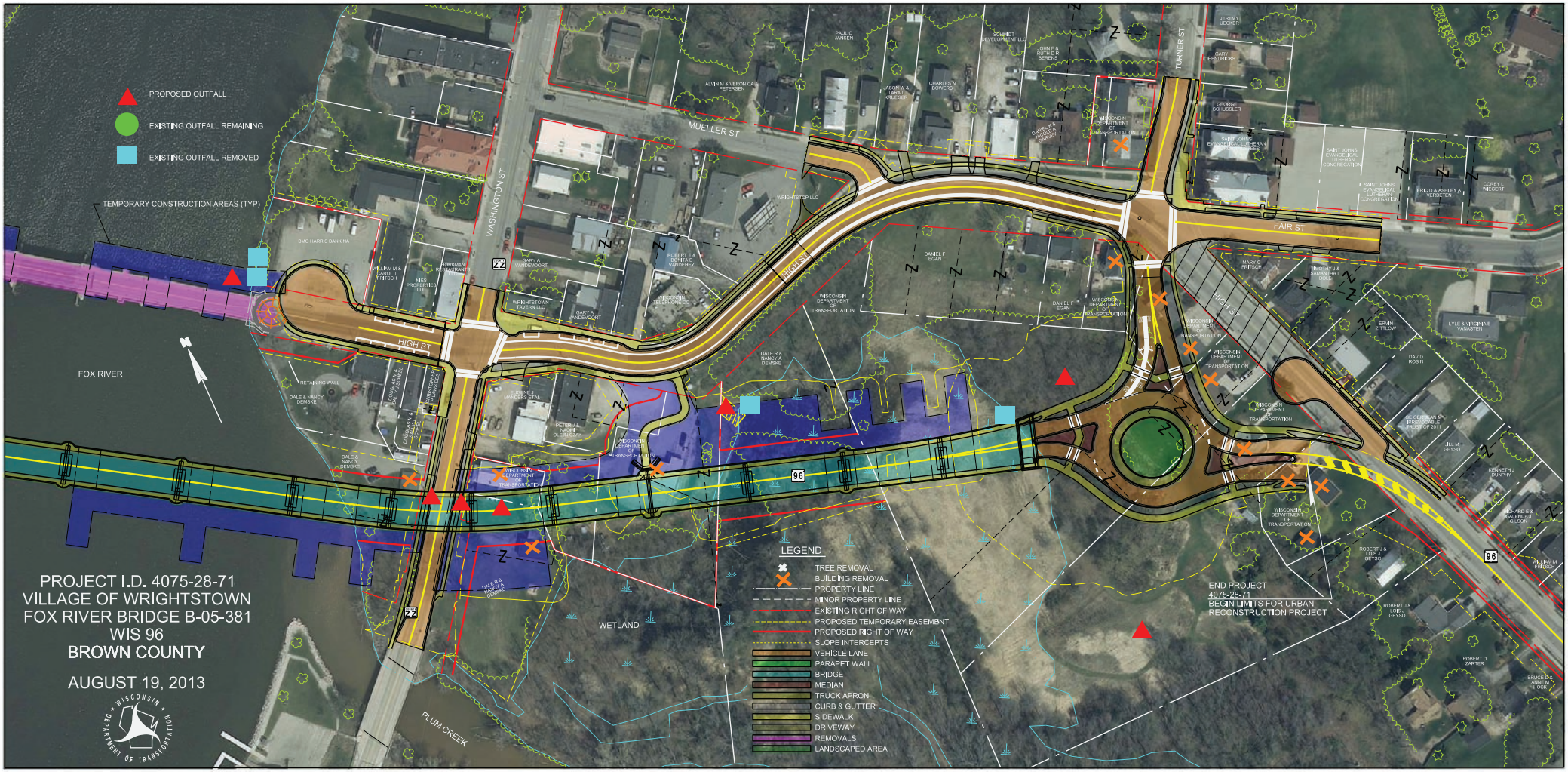
- Village
- City

Scale: 1:10,000

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: Vllage of Wrightstown
Fox River Bridge B-05-381
STH 96
Brown County


LEGEND
TREE REMOVAL
BUILDING REMOVAL
PROPERTY LINE
MINOR PROPERTY LINE
EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY
PROPOSED TEMPORARY EASEMENT
SLOPE INTERCEPTS
VEHICLE LANE
PARAPET WALL
BRIDGE
MEDIAN
TRUCK APRON
CURB & GUTTER
SIDEWALK
DRIVEWAY
REMOVALS
LANDSCAPED AREA
PROPOSED OUTFALL
EXISTING OUTFALL REMAINING
EXISTING OUTFALL REMOVED
TEMPORARY CONSTRUCTION AREAS (TYP)
BEGIN PROJECT
4075-28-00
BROADWAY ST
CTH "DD"
MAIN ST
HIGH ST
BRIDGE ST
CEDAR ST
HICKORY ST
POPLAR ST
GREEN ST
WISCONSIN CENTRAL RAILROAD
FOX RIVER
96
PROPOSED WIS 96 BRIDGE TYPICAL SECTION
(LOOKING EAST)
PROJECT I.D. 4075-28-71
VILLAGE OF WRIGHTSTOWN
FOX RIVER BRIDGE B-05-381
WIS 96
BROWN COUNTY
AUGUST 19, 2013
WISCONSIN DEPARTMENT OF TRANSPORTATION


PROPOSED OUTFALL
EXISTING OUTFALL REMAINING
EXISTING OUTFALL REMOVED
TEMPORARY CONSTRUCTION AREAS (TYP)
PROJECT I.D. 4075-28-71
VILLAGE OF WRIGHTSTOWN
FOX RIVER BRIDGE B-05-381
WIS 96
BROWN COUNTY
AUGUST 19, 2013
WISCONSIN DEPARTMENT OF TRANSPORTATION
FOX RIVER
WETLAND
PLUM CREEK
MUELLER ST
WASHINGTON ST
HIGH ST
FAIR ST
TURNER ST
LEGEND
TREE REMOVAL
BUILDING REMOVAL
PROPERTY LINE
MINOR PROPERTY LINE
EXISTING RIGHT OF WAY
PROPOSED TEMPORARY EASEMENT
PROPOSED RIGHT OF WAY
SLOPE INTERCEPTS
VEHICLE LANE
PARAPET WALL
BRIDGE
MEDIAN
TRUCK APRON
CURB & GUTTER
SIDEWALK
DRIVEWAY
REMOVALS
LANDSCAPED AREA
END PROJECT
4075-28-71
BEGIN LIMITS FOR URBAN
RECONSTRUCTION PROJECT

PROJECT ID: 4075-28-71
WITH: N/A

COUNTY: BROWN

ORDER OF SHEETS

TOTAL SHEETS =

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

VILLAGE OF WRIGHTSTOWN

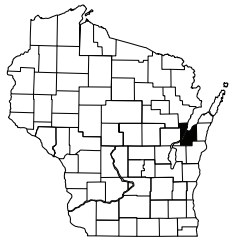
FOX RIVER BRIDGE B-05-381

STH 96

BROWN COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4075-28-71		

STATE PROJECT NUMBER
4075-28-71



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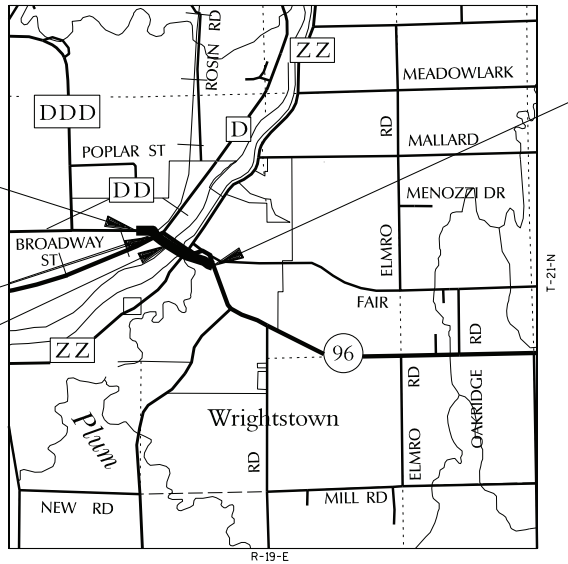


BEGIN PROJECT
STA 300'EB'+00.00
Y = 498,862.64
X = 59,460.07

END PROJECT
STA 134'EB'+80.90

EQUATION
STA 303'EB'+04.63 BK. =
STA 109'EB'+28.99 AH.

STRUCTURE B-05-381
STA 112'EB'+35.00 - 130'EB'+50.00

STRUCTURE R-05-110
STA 125'EB'+42.00

STRUCTURE R-05-111
STA 209'H'+65.00

STRUCTURE R-05-112
STA 11'H'+80.00 - 13'H'+36.00

STRUCTURE R-05-113
STA 11'H'+80.00 - 13'H'+05.00

STRUCTURE S-05-142
STA 126'EB'+75.43

DESIGN DESIGNATION

A.A.D.T. 2015	=	10,400
A.A.D.T. 2035	=	13,000
D.H.V. 2035	=	1,274
D.D.	=	60/40
T.	=	11.6%
DESIGN SPEED	=	30 MPH
ESALS	=	4,905,600

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

LAYOUT
SCALE 0 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.541 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY, NAD 83 (1997)

ELEVATIONS ON THIS PLAN ARE REFERENCED TO NAVD 88

ORIGINAL PLANS PREPARED BY

Mead & Hunt
Mead & Hunt, Inc.
1345B North Road
Green Bay, WI 54313
920.496.0500
fax: 920.496.0576
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

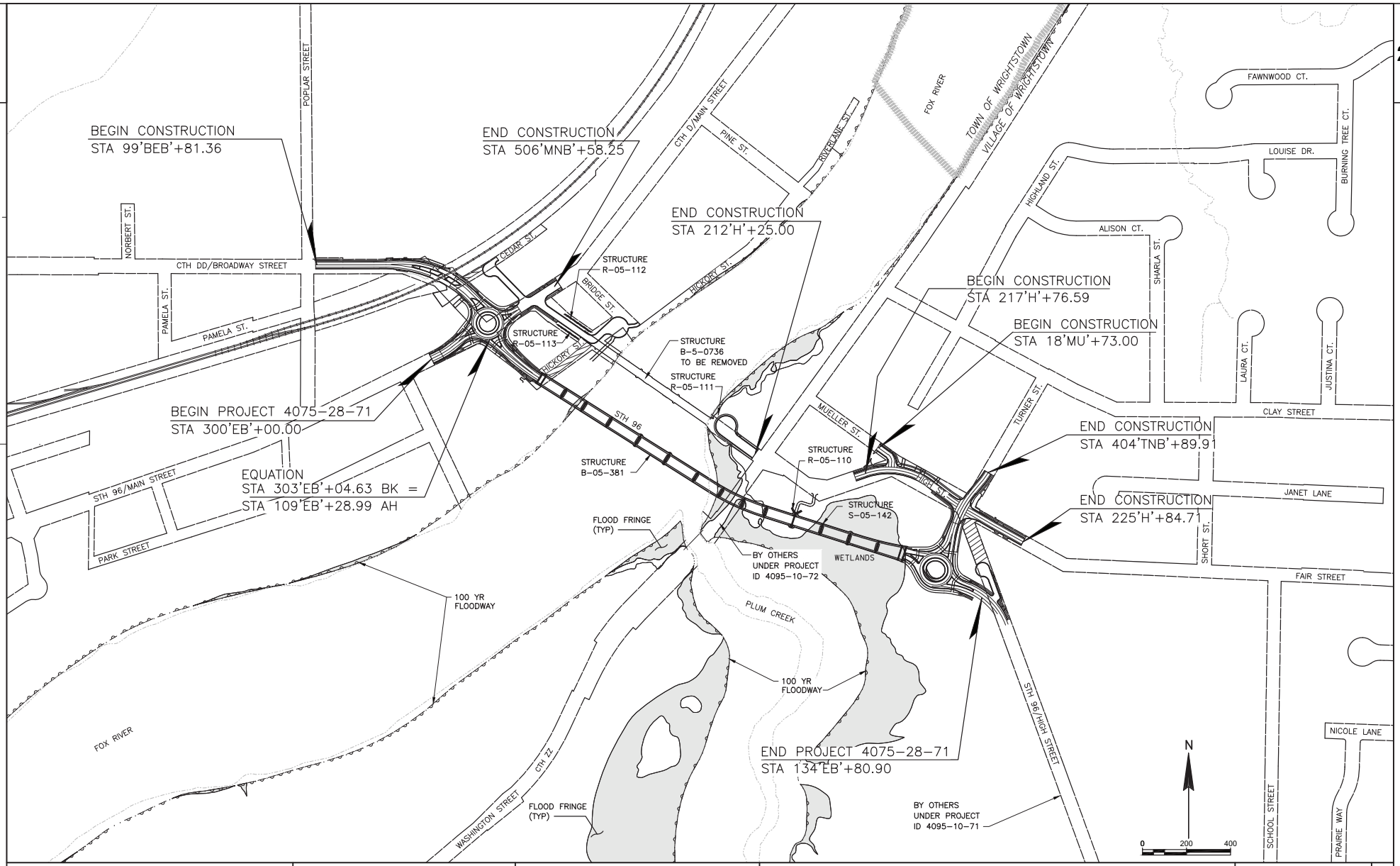
PREPARED BY

Surveyor	MEAD & HUNT
Designer	MEAD & HUNT
Project Manager	ANDREW FULCER
Regional Examiner	
Regional Supervisor	DANIEL SEGERSTROM
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: _____ _____ (Signature)

E



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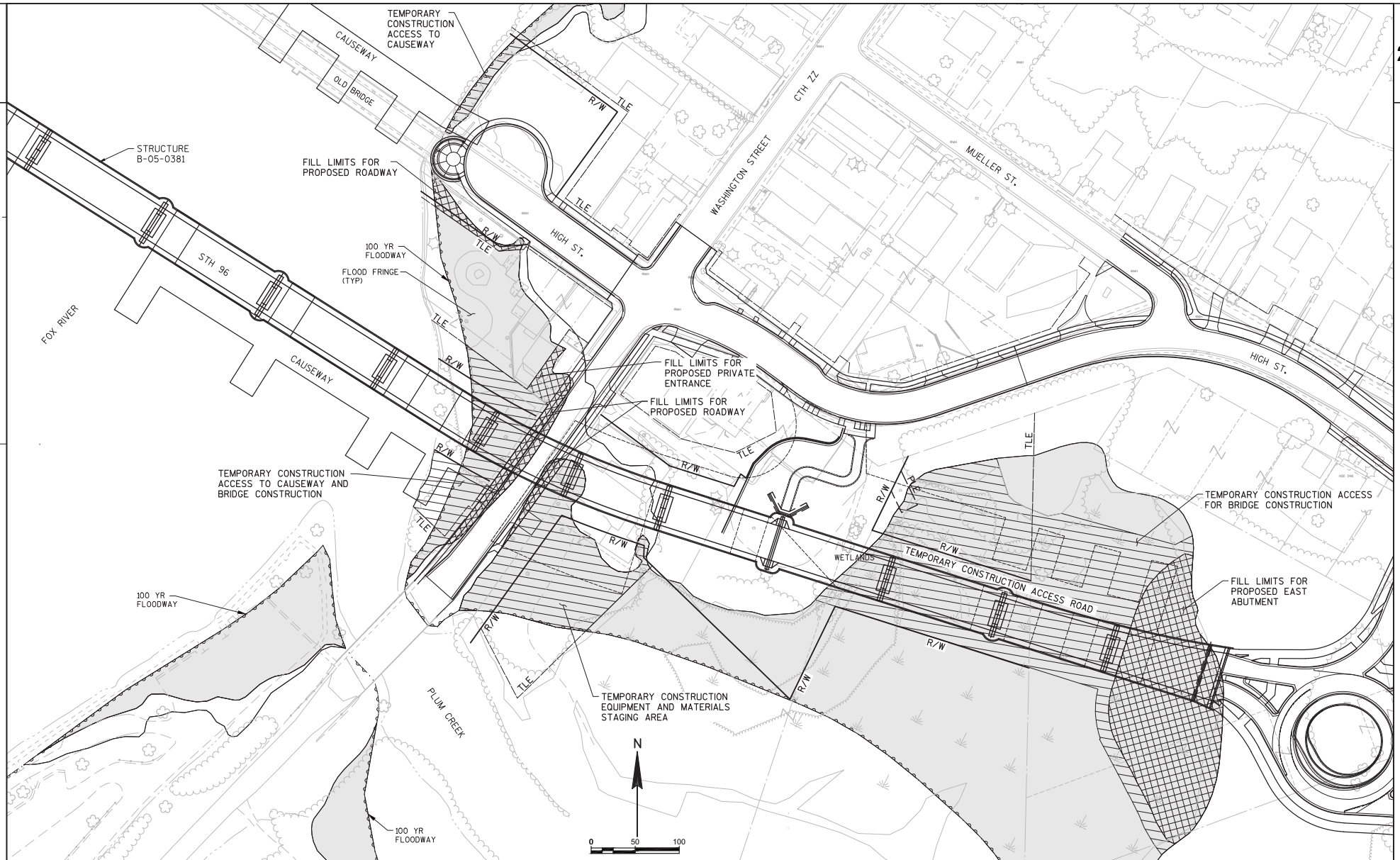

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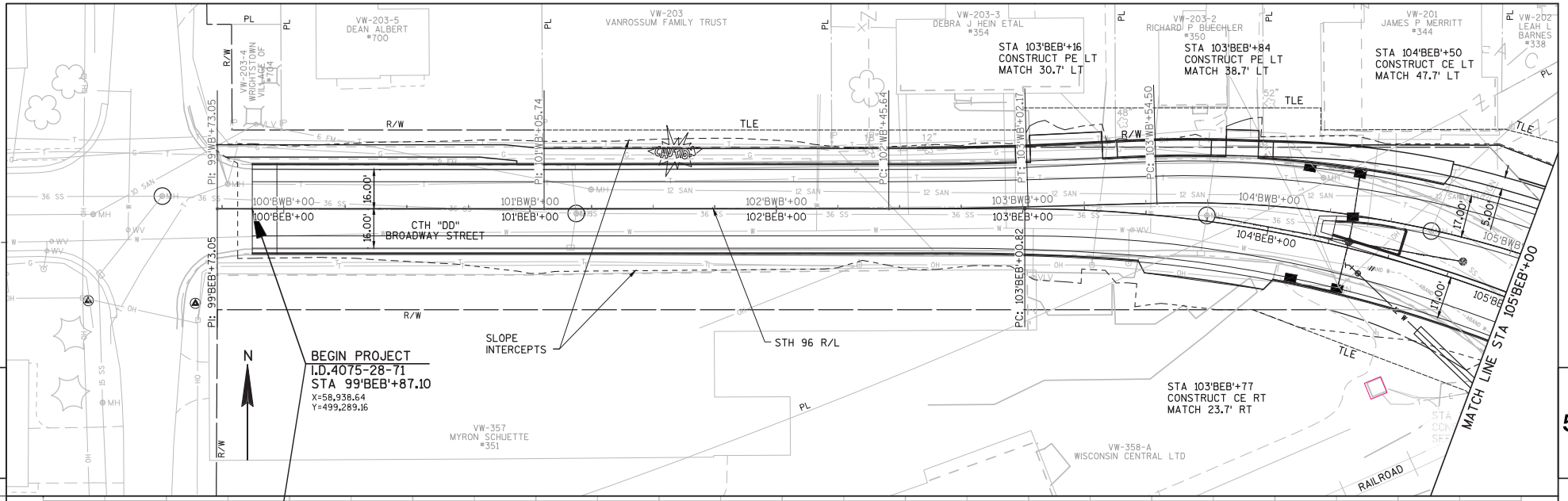

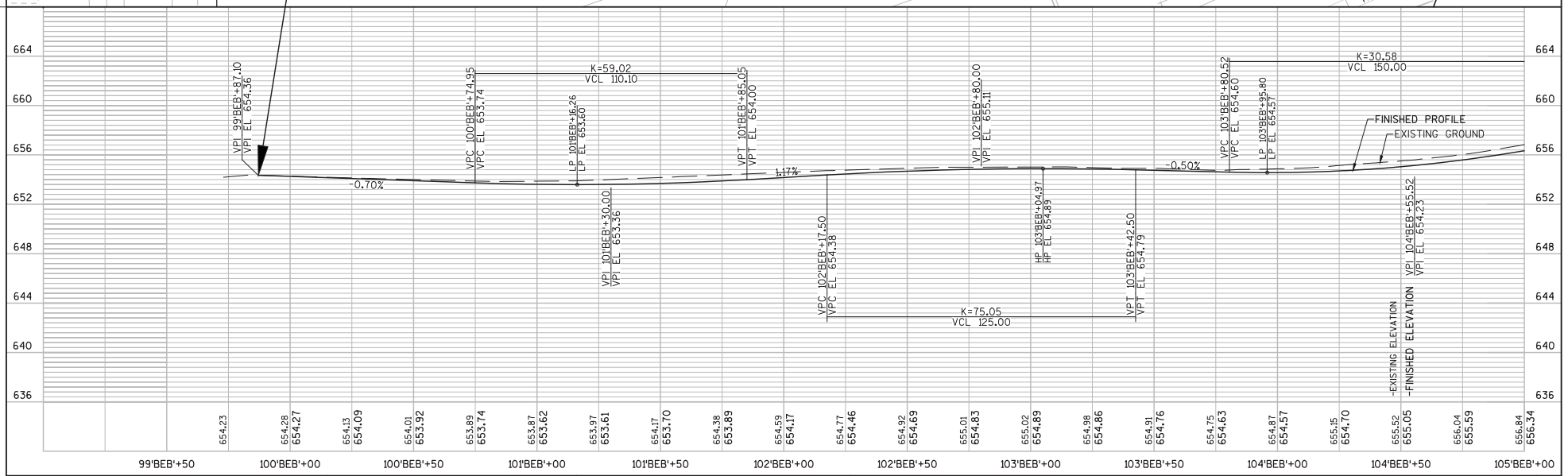

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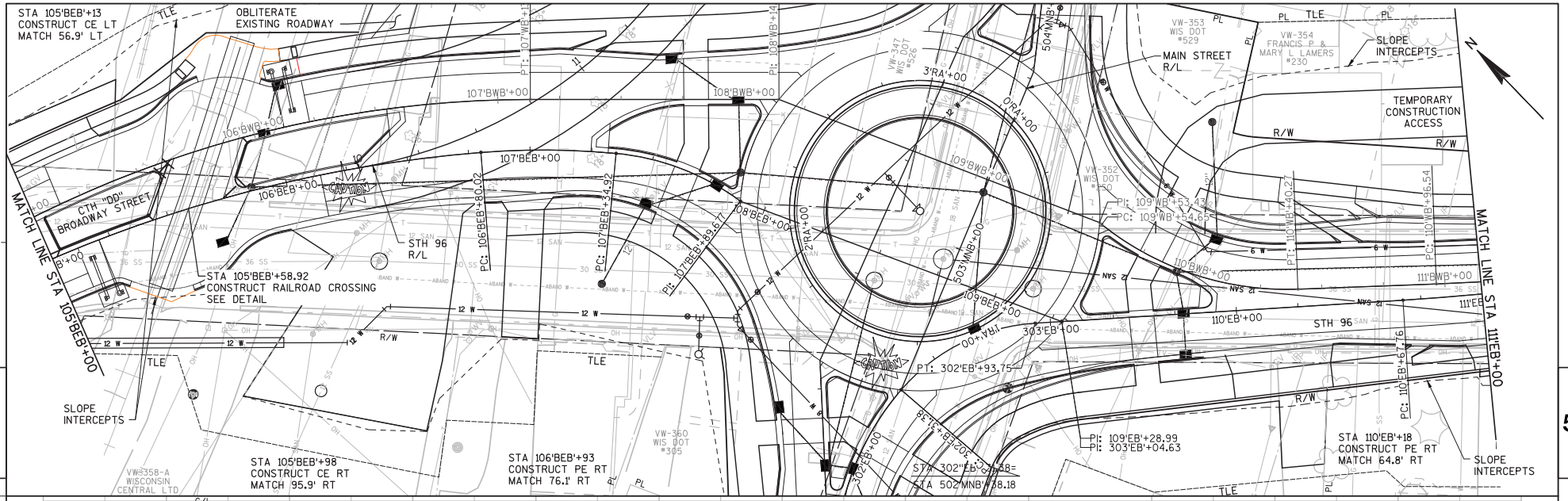

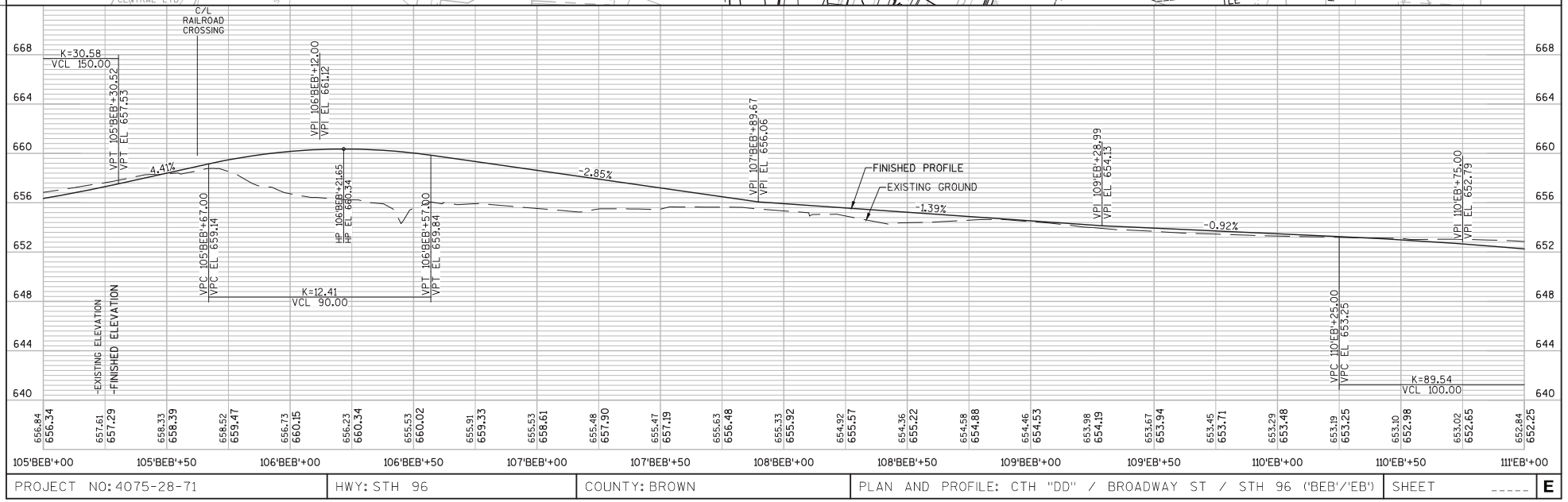

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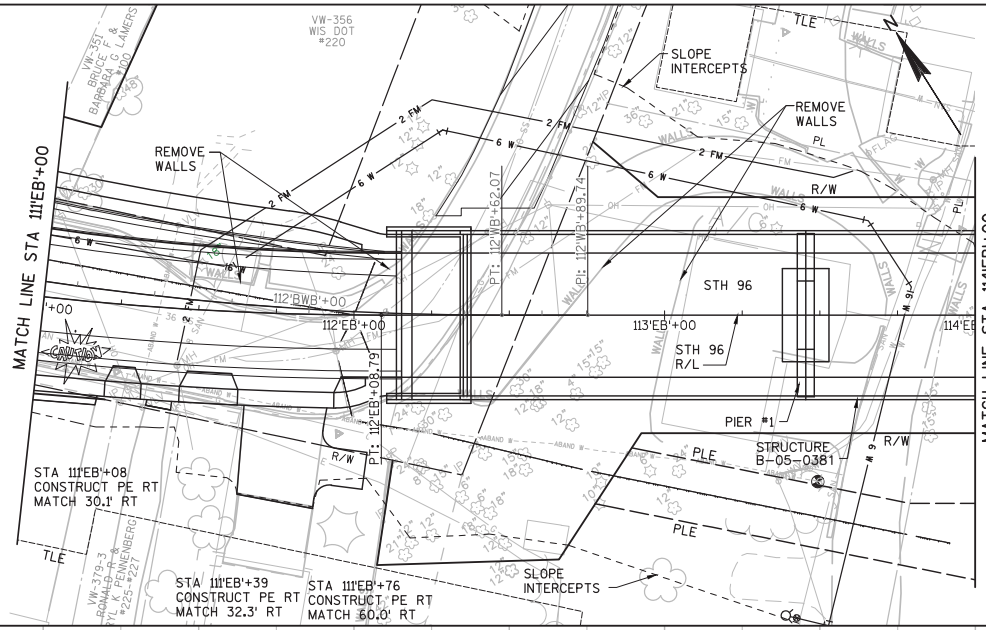

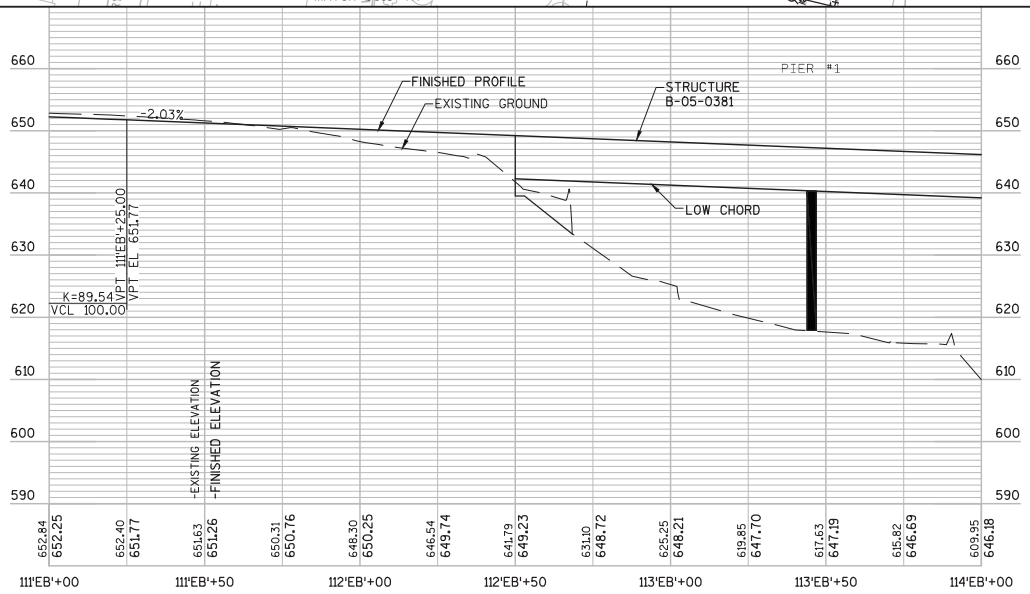

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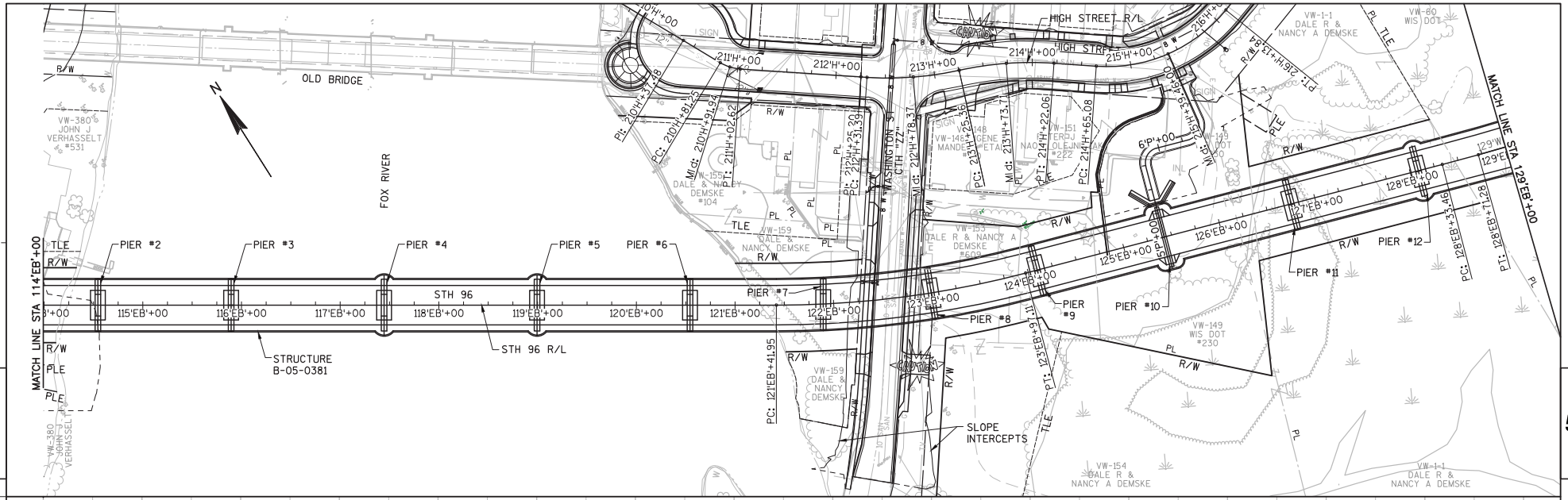

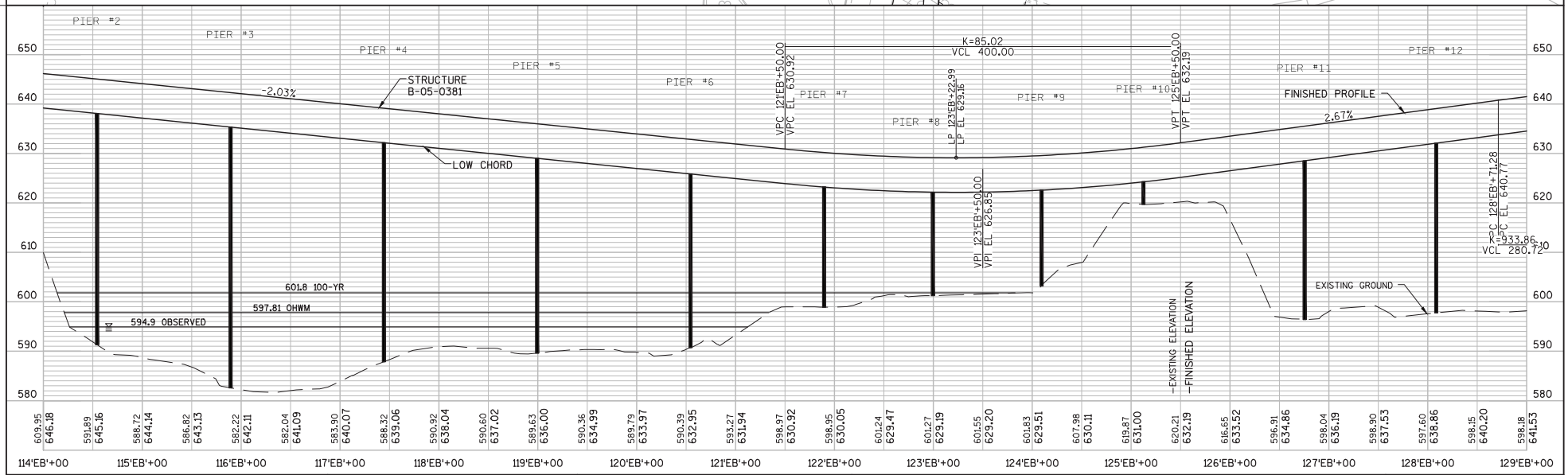

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PLOT BY : ANDREA BONELL
PLOT NAME : _____ PLOT SCALE : **********
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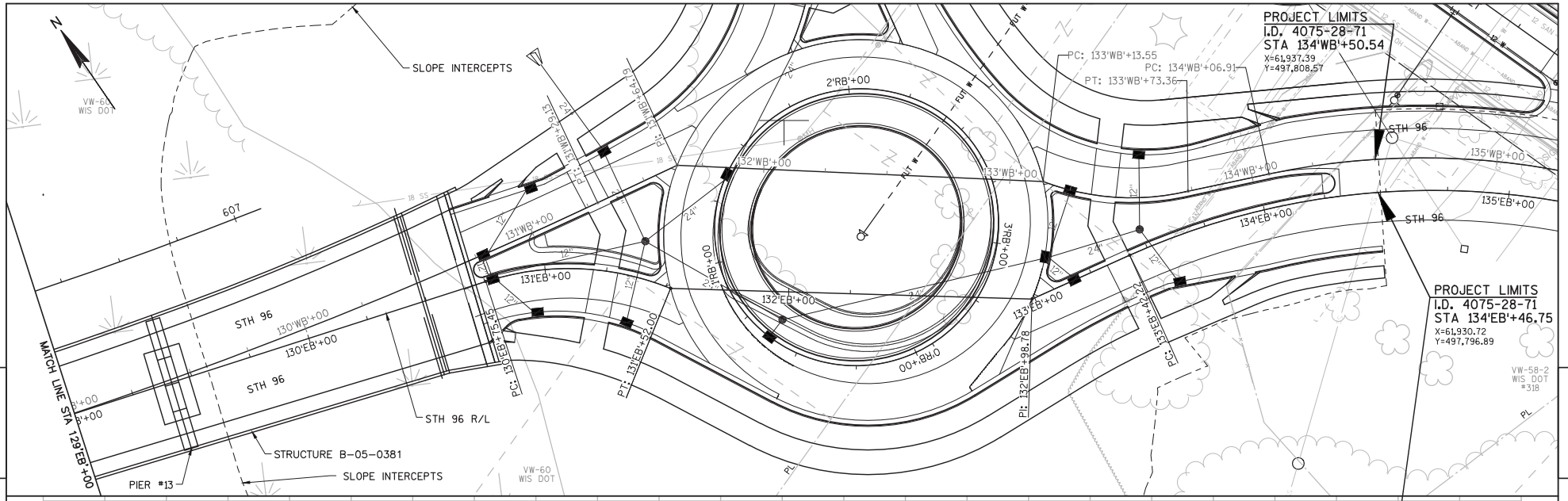
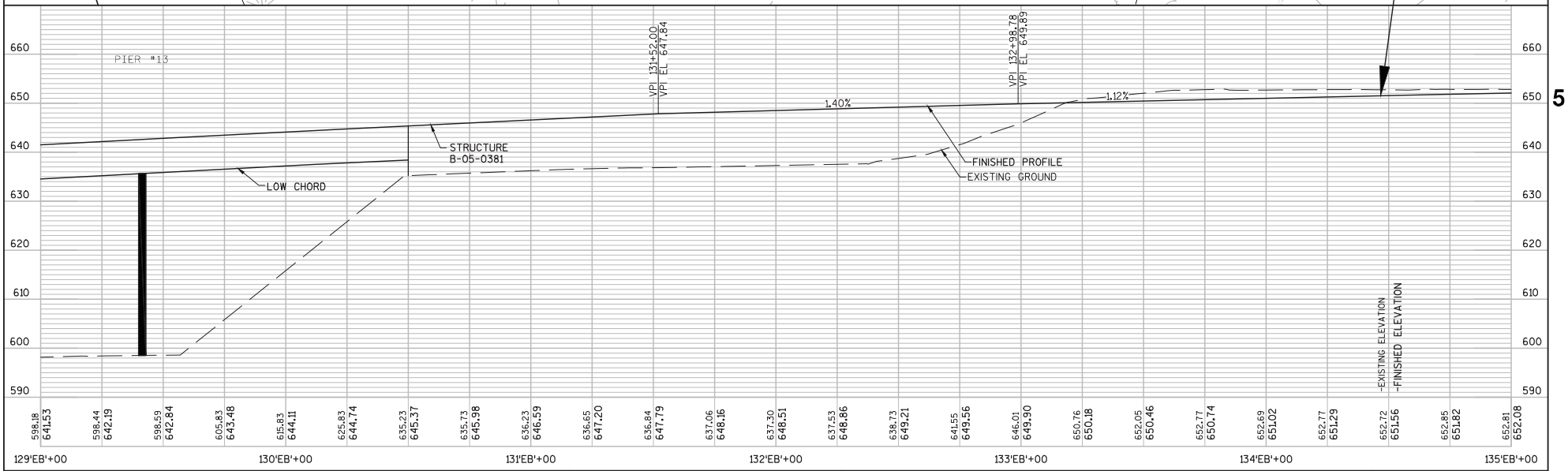




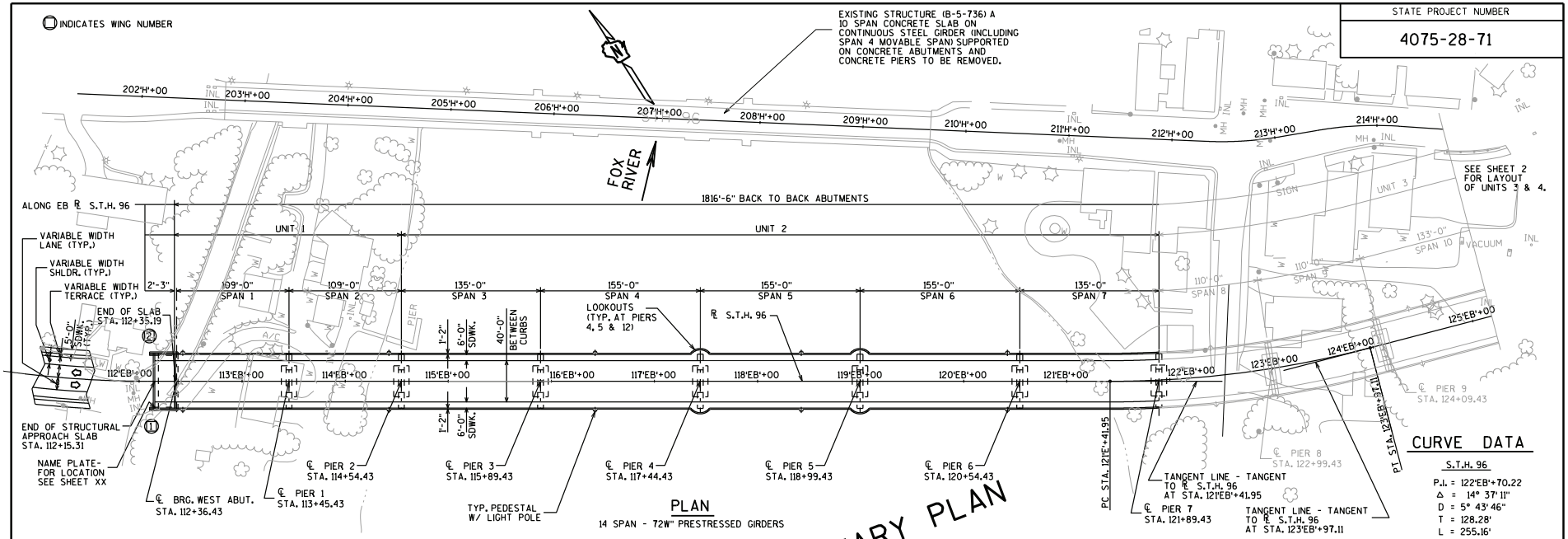
PROJECT NO: 4075-28-71	HWY: STH 96	COUNTY: BROWN	PLAN AND PROFILE: STH 96 ('EB')	SHEET _____	E

STATE PROJECT NUMBER

4075-28-71

INDICATES WING NUMBER

EXISTING STRUCTURE (B-5-736) A 10 SPAN CONCRETE SLAB ON CONTINUOUS STEEL GIRDER (INCLUDING SPAN 4 MOVABLE SPAN) SUPPORTED ON CONCRETE ABUTMENTS AND CONCRETE PIERS TO BE REMOVED.



PLAN

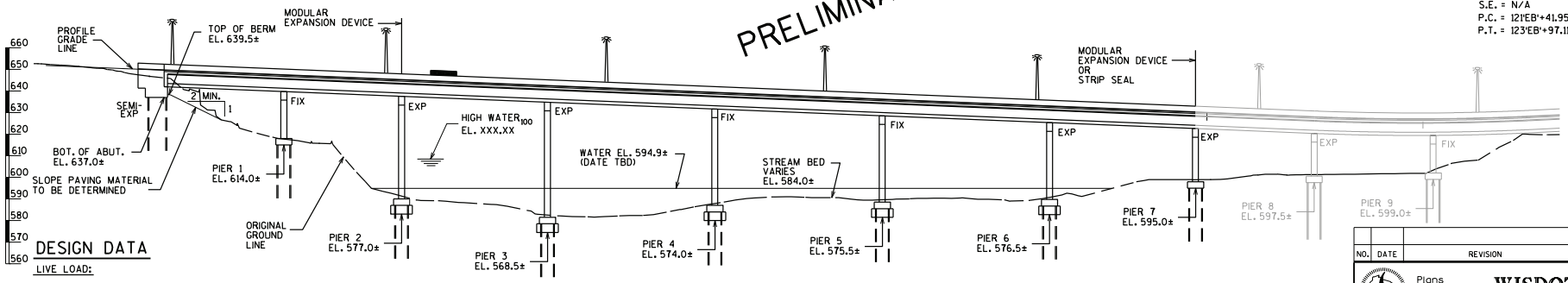
14 SPAN - 72W" PRESTRESSED GIRDERS

CURVE DATA

S.T.H. 96

P.I. = 122'EB'+70.22
Δ = 14° 37' 11"
D = 5° 43' 46"
T = 128.28'
L = 255.16'
R = 1000.00'
S.E. = N/A
P.C. = 121'EB'+41.95
P.T. = 123'EB'+97.11

PRELIMINARY PLAN



ELEVATION

NORMAL TO FOX RIVER

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=
OPERATING RATING FACTOR: RF=
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

STRUCTURE IS RATED FOR A POLYMER OVERLAY. LOADING IS ASSUMED TO BE 5 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

72W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = P.S.I.

STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED _____ LONG.

PIERS TO BE SUPPORTED ON PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED _____ LONG.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = C.F.S.
VEL. = F.P.S.
HW.= EL.
WATERWAY AREA= SQ. FT.
DRAINAGE AREA= SQ. MI.
ROAD OVERTOPPING = NA
SCOUR CRITICAL CODE =

2 YEAR FREQUENCY

Q_2 = C.F.S.
$HW._2$ = EL.

TRAFFIC VOLUME

S.T.H. 96
A.D.T.=13,000 (2035)
R.D.S.=30 M.P.H.

STRUCTURE DESIGN CONTACTS:

BRANDAN BURGER (608) 267-4019
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED _____ _____
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-5-381

S.T.H. 96 OVER FOX RIVER

COUNTY: BROWN — ~~TOWN/CITY/~~VILLAGE: WRIGHTSTOWN
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
DESIGNED BY: BLB — DESIGN CK'D. — DRAWN BY: BLB — PLANS CK'D.

GENERAL PLAN UNITS 1 & 2

SHEET 1 OF

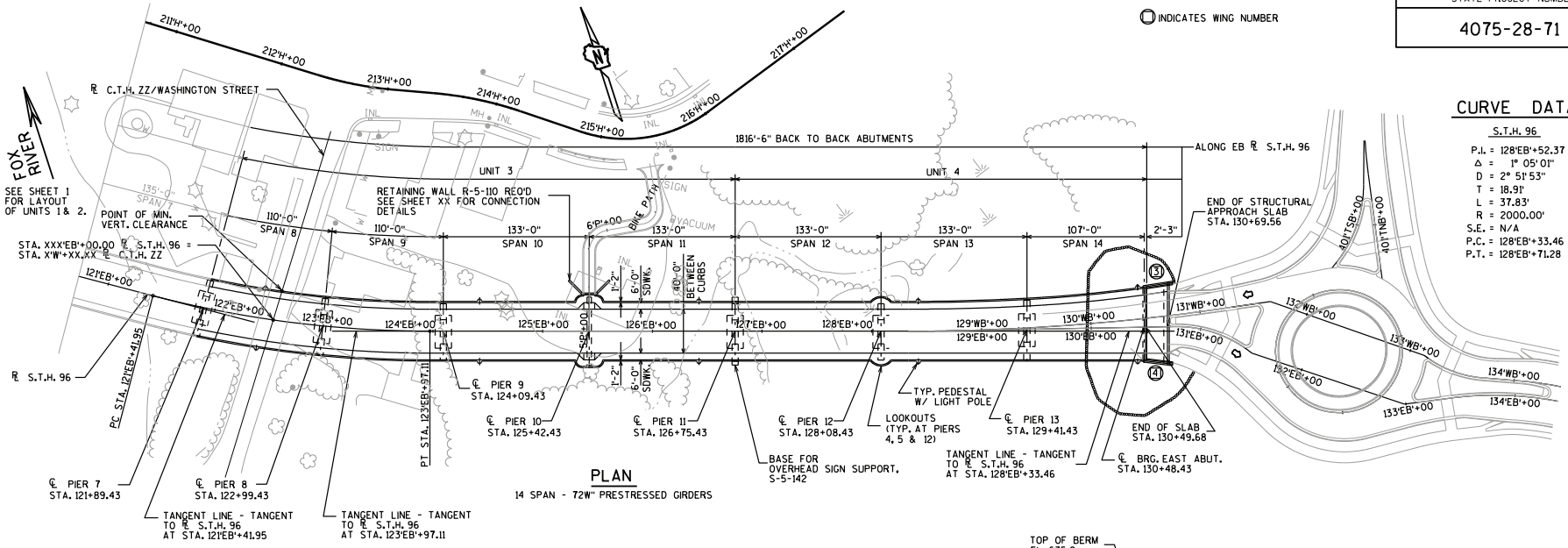
I.D. 4075-28-00

DATE: NOV. 2012

SCALE = 4

8

STATE PROJECT NUMBER
4075-28-71



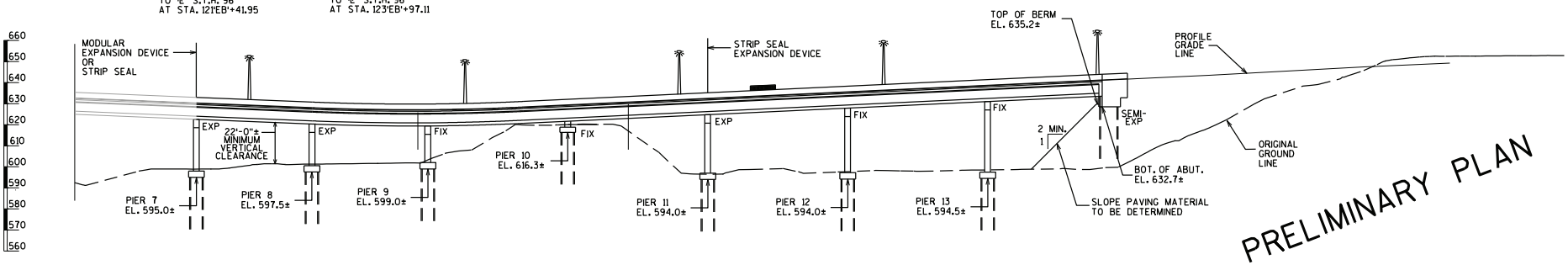
PLAN

14 SPAN - 72W" PRESTRESSED GIRDERS

CURVE DATA

S.T.H. 96

P.I. = 128'EB'+52.37
Δ = 1° 05' 01"
D = 2° 51' 53"
T = 18.91'
L = 37.83'
R = 2000.00'
S.E. = N/A
P.C. = 128'EB'+33.46
P.T. = 128'EB'+71.28



ELEVATION

NORMAL TO FOX RIVER

PRELIMINARY PLAN

LIST OF DRAWINGS

1. GENERAL PLAN UNITS 1& 2	16.	31.	46.	61.
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3. CROSS SECTIONS	18.	33.	48.	63.
4. QUANTITIES, NOTES & PROFILE	19.	34.	49.	64.
5. SUBSURFACE EXPLORATION	20.	35.	50.	65.
6.	21.	36.	51.	66.
7.	22.	37.	52.	67.
8.	23.	38.	53.	68.
9.	24.	39.	54.	69.
10.	25.	40.	55.	70.
11.	26.	41.	56.	71.
12.	27.	42.	57.	72.
13.	28.	43.	58.	73.
14.	29.	44.	59.	74.
15.	30.	45.	60.	75.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-381

DRAWN BY BLB | PLANS CK'D.

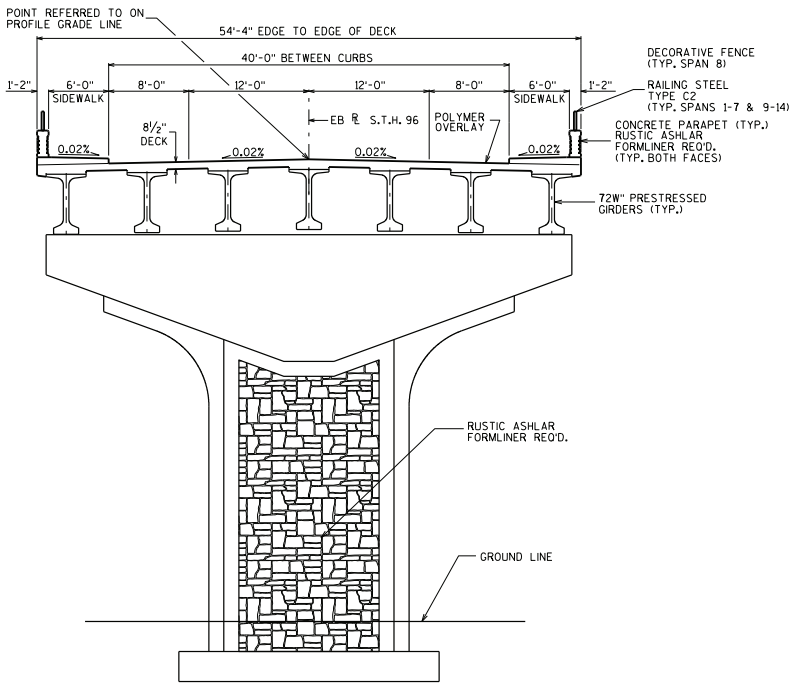
GENERAL PLAN UNITS 3 & 4

SHEET 2

8

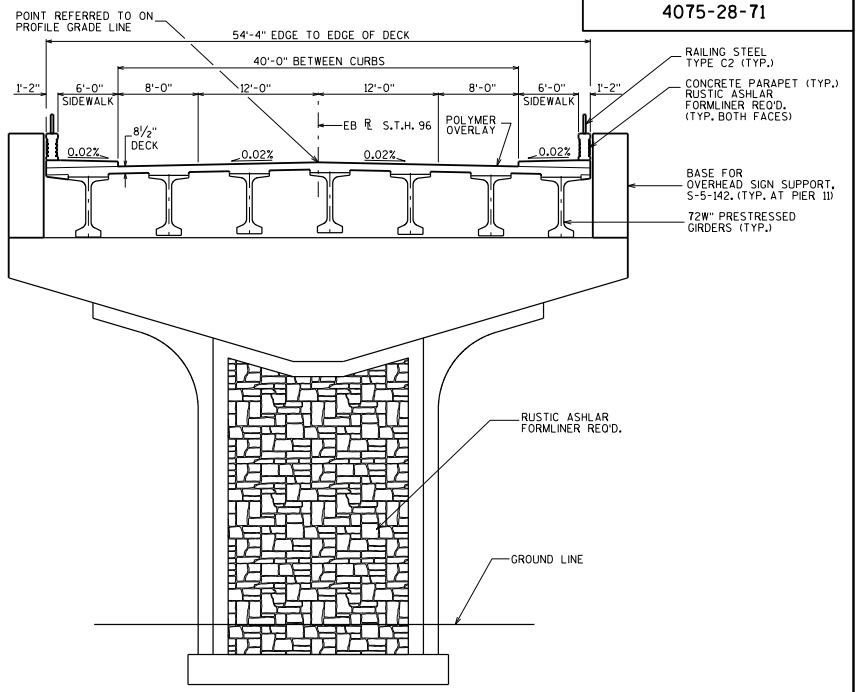
8

SCALE = 4



CROSS SECTION THRU ROADWAY LOOKING EAST

SHOWING PIERS 1 THRU 9, 12 AND 13



CROSS SECTION THRU ROADWAY LOOKING EAST

SHOWING PIER 11

STATE PROJECT NUMBER

4075-28-71

PRELIMINARY PLAN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE

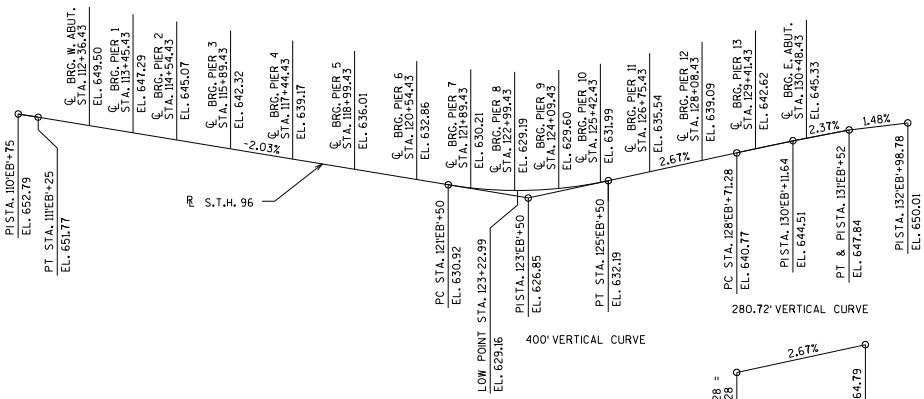
DRAWN BY	PLANS CK'D.

CROSS SECTIONS

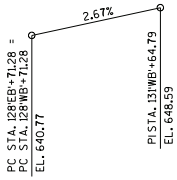
SHEET 3

SCALE =

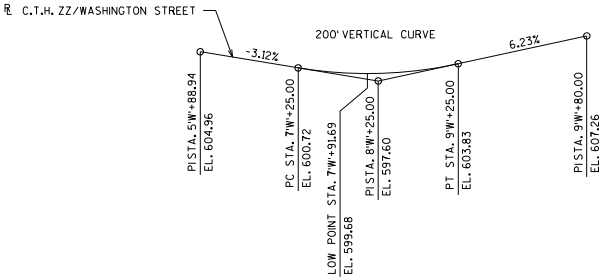
STATE PROJECT NUMBER
4075-28-71



PROFILE GRADE LINE S.T.H. 96 - EB



PROFILE GRADE LINE S.T.H. 96 - WB



PROFILE GRADE LINE C.T.H. ZZ/WASHINGTON STREET

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE AND THE FRONT FACE AND THE TOP OF THE PARAPET, INCLUDING PARAPETS ON ABUTMENT WINGS.

THE EXISTING GROUND LINE R THE EXISTING STREAMBED, WHICHEVER IS APPLICABLE, SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

AT ABUTMENTS AND PIER(S), CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TYPE 'HR' TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF ALL ABUTMENTS AND PIERS BELOW EXPANSION DEVICES.

8

8

PRELIMINARY PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-381

DRAWN BY	PLANS CK'D.
BLB	

NOTES & PROFILE

SHEET 4

SCALE =

STATE PROJECT NUMBER
4075-28-71

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	WEST APPR. SLAB	EAST APPR. SLAB	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	TOTALS
203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STA. 206'H'+00	LS																			1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-5-381	LS																			1
206.1050.S	UNDERWATER FOUNDATION INSPECTION	EACH							1	1	1	1	1								
206.5000	COFFERDAMS B-5-381	LS																			1
210.0100	BACKFILL STRUCTURE	CY																			
502.0100	CONCRETE MASONRY BRIDGES	CY																			
502.1100	CONCRETE MASONRY SEAL	CY																			
502.3100	EXPANSION DEVICE B-5-381	LS																			1
502.3110.S	EXPANSION DEVICE MODULAR B-5-381	LS																			1
502.3200	PROTECTIVE SURFACE TREATMENT	SY																			
503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF																			
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB																			
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB																			
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH																			
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH																			
506.4000	STEEL DIAPHRAGMS B-5-381	EACH																			
509.5100.S	POLYMER OVERLAY	SY																			1
513.7010	RAILING STEEL TYPE C2 B-5-381	LS																			1
514.2625	DOWNSPOUT 6-INCH	SY																			
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY																			
517.1010.S	CONCRETE STAINING B-5-381	SF																			
517.1015.S	CONCRETE STAINING MULTI-COLOR B-5-381	SF																			
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-5-381	SF																			
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF																			
604.0600	SLOPE PAVING SELECT CRUSHED MATERIAL	SY																			
606.0300	RIPRAP HEAVY	CY																			
645.0120	GEOTEXTILE FABRIC TYPE HR	SY																			
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF																			
SPV.0060	ANCHOR BOLT ASSEMBLY	EACH															2				2
SPV.0085	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB																			
	NON-BID ITEMS																				
	BRIDGE SEAT PROTECTION	L.S.																			1
	FILLER	SIZE																			1/2" & 3/4"

PRELIMINARY PLAN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

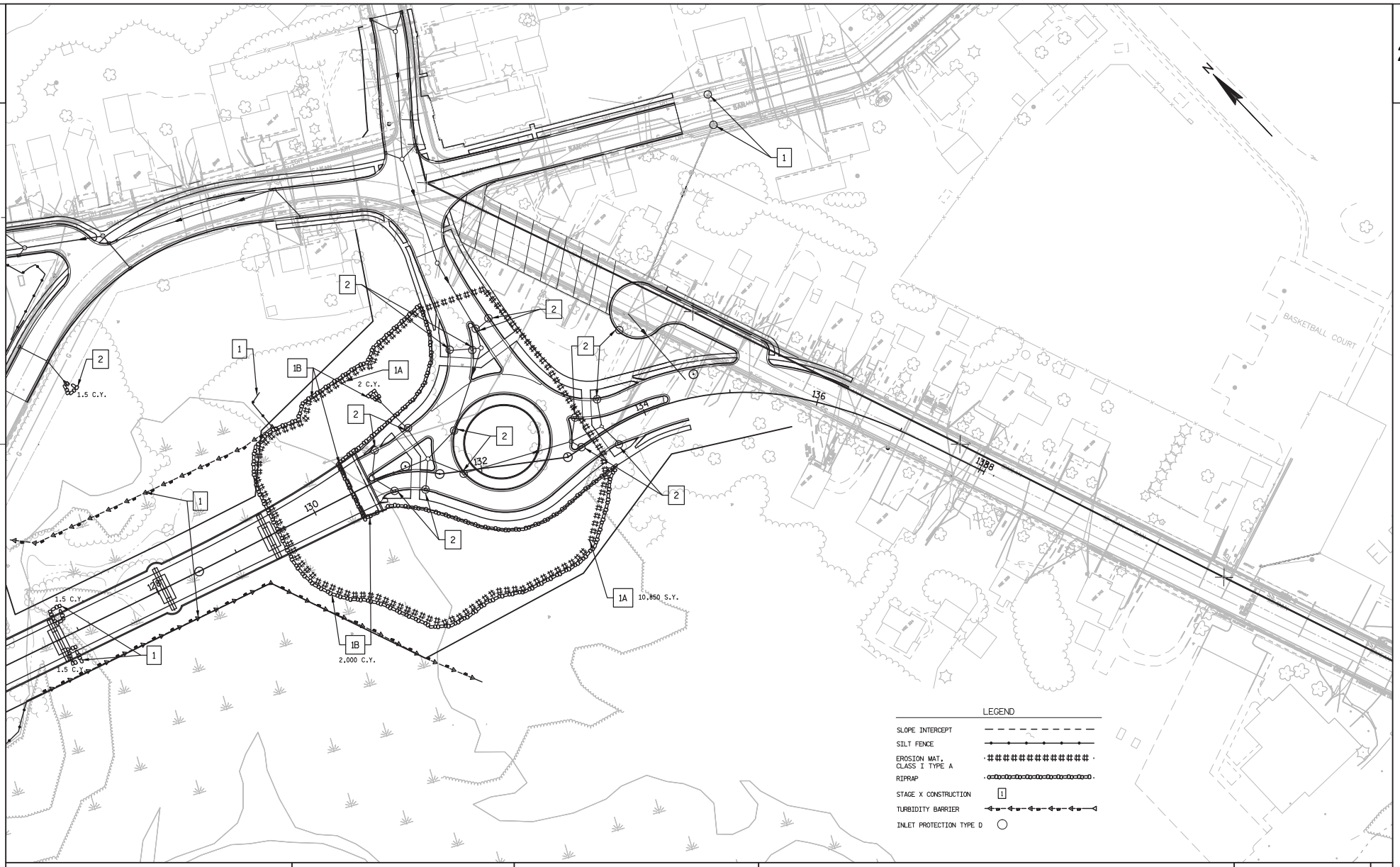
STRUCTURE B-5-381

DRAWN BY BLB | PLANS CK'D.

QUANTITIES

SHEET 5

SCALE =



PROJECT NO: 4075-28-71	HWY: STH 96	COUNTY: BROWN	EROSION CONTROL	SHEET _____ E

FILE NAME : F:\PROJECTS\11-43-024 STH 96 FOX RIVER BRIDGE APPROACHES SSD\CAD\4075-28-00\DESIGN\40752800\SHEETSPLAN\M2_4075-28-71_EC.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : SCHREINER, JON PLOT NAME : _____ PLOT SCALE : 1" = 100'_XREF

Appendix C. Project Site Photo

This photo shows the currently existing bridge. Left side of bridge is west and right side is east.

Appendix D. Wetland Delineation Report

Wetland Delineation Report

Project I.D. 4095-10-00
High Street, Village of Wrightstown
Fox River – Shanty Road
STH 96
Brown County

Project I.D. 4075-25-00
Wrightstown-Greenleaf
E CPL Wrightstown – Old 57 Road
STH 96
Brown County

Report prepared for

Wisconsin Department of Transportation

Northeast Region

Report prepared by

Mead & Hunt
www.meadhunt.com

August 2011

Table of Contents

Appendices

1. Introduction

The proposed projects are located along State Trunk Highway (STH) 96 in Brown County, Wisconsin, and total approximately 2.95miles in length.

A total of 0.767 miles of STH 96 (High Street) will be reconstructed from Turner Street to Shanty Road. STH 96 crosses over the Fox River within the village and connects the downtown to the Village of Wrightstown schools. STH 96 is an urban two-lane roadway with 10-foot parking lanes within the Village of Wrightstown. The existing urban facility consists of three inches of hot mix asphalt (HMA) over seven to eight inches of concrete and is highly distressed with a poor ride. The existing water main has also reached its service life and will be replaced. Plans for this project include expanding the existing two-lane urban section with bike and pedestrian accommodations. The design includes new pavement and sidewalks. The proposed roadway profile and alignment will be similar to the existing facility. The portion of the project between Turner Street and County Trunk Highway (CTH) D will be constructed in two stages.

The second area of proposed construction is 2.189 miles along STH 96 from the east limits of the Village of Wrightstown, Shanty Road, to 1,240 feet east of Old 57 Road. Work under this project includes milling and resurfacing the two-lane facility, widening the paved shoulders, replacing beamguard and end terminals, minor drainage ditching improvements, culvert replacement as needed, and repairing frost heave locations. No changes in profile, alignment, or overall roadway width are planned for this project. Bike accommodations will be provided by paving five feet of the shoulder along each side of STH 96.

Mead & Hunt, Inc. (Mead & Hunt) delineated wetlands within the area between CTH ZZ and STH 96, from the East bank of Plum Creek to STH 96, as well as within the right-of-way of approximately two miles of STH 96 between Shanty Road and Old 57 Road. A total of 26 separate wetlands were delineated, flagged, and documented within this identified project area from October 26-29, 2010.

In 2011 the proposed project alignment was modified, which required additional areas to be surveyed for wetlands. These areas included additional parcels west of 96 across the street from the high school, Fair Street to Shanty Road and from Old 57 Road east to Lagoon Road. A total of eight additional wetlands were delineated and flagged on August 10, 2011. The details of this delineation are described within the body of this report.

2. Methods

The field methods used conform to the *Routine Onsite Method* of the 1987 U.S. Army Corps of Engineers' (USACE) wetland delineation manual and the *Basic Guide to Wisconsin's Wetlands and Their Boundaries*, published by the Wisconsin Department of Administration, as modified by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (U.S. Army Corps of Engineers, 2008).

Soil characteristics were examined by digging pits with a 16-inch tile spade, and hydrologic indicators were visually assessed. A total of six data points, three in uplands and three in wetlands, were established to characterize the range of soil, vegetation, and hydrologic conditions.

The following data sources were examined prior to fieldwork:

- Soil survey of Brown County, U.S. Department of Agriculture (USDA), Web Soil Survey at http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

- Precipitation data for nearby Austin Straubel Airport, April 2010 through September 2010 and February 2011 through July 2011, National Weather Service at http://www.weather.gov/climate/xmacis.php?wfo=grb

- Wisconsin Wetlands and Wetland Indicators from the Wisconsin Department of Natural Resources (WDNR), http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer.wetlands

- Climatic norms for Wausau from the NRCS WETS tables at ftp://ftp.wcc.nrcs.usda.gov/support/climate/wetlands/wi/55009.txt

An Area of Interest map is presented as Appendix A of this report. Wetland boundary maps are presented as Appendix B in this report. A Wisconsin Wetland Inventory Map is provided in Appendix C. Project area soils maps from the USDA Web Soil Survey are presented in Appendix D. Field data sheets and photos are presented in Appendix E. Wetland locations with WisDOT and WDNR classifications are presented in Appendix F. A WisDOT Wetland Classification Map is presented in Appendix G.

3. Results and Discussion

A. Site description

The projects are located adjacent to the Fox River and Plum Creek. The Fox River is a perennial water body listed on the WDNR website as an Area of Special Natural Resource Interest (ASNRI). Plum Creek is a tributary to the Fox River and is associated with several intermittent tributaries.

The undulating topography over the project areas is generally marked by partially hydric (Bellevue silt loam) soils in the drainage ways with more well-drained soils on slopes and hilltops (generally Oshkosh silt loams). Glacial features control the topography in the central region of Brown County; in particular this is a mixed area of kettles, deeply cut rivers such as the Fox, and uplands.

National Weather Service records show that precipitation in the six months prior to the 2010 fieldwork was significantly higher than the range of normal, as defined by the NRCS WETS tables. Precipitation was excessively higher than normal throughout the summer. The actual recorded rainfall recorded for the six months prior to field work was approximately 12 inches above normal. This additional rainfall appeared to make the existing wetlands wetter, with many of them having standing water. The uplands, however, remained dry as the water ran off either into the Fox River or into lower wetland kettle areas.

Table 1. Austin Straubel Airport Precipitation, 2010

Month	Actual	Average	30% chance will have…	
			less than	more than
April 2010	3.63	2.56	1.96	3.14
May 2010	1.99	2.75	1.98	3.77
June 2010	6.73	3.43	2.07	4.31
July 2010	9.51	3.44	2.34	4.07
August 2010	4.42	3.77	2.40	4.41
September 2010	4.48	3.11	1.96	4.04
Totals	**30.76**	**19.06**	**12.71**	**23.74**

National Weather Service records show that precipitation in the six months prior to the 2011 fieldwork (shown in Table 2 below) was slightly higher than normal range as defined by the NRCS WETS tables. Precipitation was significantly higher than normal throughout spring and summer. The actual recorded rainfall recorded for the six months prior to field work was approximately nine inches above normal. This additional rainfall appeared to make the existing wetlands somewhat wetter, with many of them having standing water. The uplands, however, remained dry as the water ran off either into the Fox River or into lower wetland kettle areas.

Table 2. Austin Straubel Airport Precipitation, 2011

Month	Actual	Average	30% chance will have…	
			less than	more than
February 2011	1.34	1.01	0.59	1.21
March 2011	3.08	2.06	1.27	2.71
April 2011	6.24	2.56	1.96	3.14
May 2011	2.81	2.75	1.98	3.77
June 2011	5.12	3.43	2.07	4.31
July 2011	5.30	3.44	2.34	4.07
Totals	**23.89**	**15.25**	**10.21**	**19.21**

B. Findings

(1) Wetlands

A total of 34 wetlands were delineated within the proposed project area: 26 in the 2010 delineation and an additional eight in the 2011 delineation. From west to east, these areas are:

- A very large wetland complex located south of STH 96 within the floodplain area of Plum Creek (Wetland 1, data points 1-6). The complex consists of a floodplain forest (WisDOT type RPF(N), M(D), and SS; WDNR types T3K/E1Hw/S1H). This wetland is associated with Plum Creek.

- A wetland complex located south of STH 96 adjacent to a stream was delineated in 2011 (Wetland 2, data points 7 & 8). Within the study area this complex consists of a sedge meadow and wet meadow (WisDOT type M; WDNR type E2K). This wetland continues both to the northwest and southeast out of the study area.

- The rest of the wetlands delineated within the project area were primarily roadside ditches dominated by cattails located along STH 96 (Wetlands 3 through 34, no data points). The majority of these wetlands were identified as shallow marsh's (WisDOT type SM; WDNR type E2H). A few of these wetlands were associated with tributaries, in which case they were not only shallow marshes but also aquatic beds (WisDOT type AB; WDNR type A1H), and in some cases riparian wooded wetlands (WisDOT type RPF; WDNR type T1Kw).

Wetland hydrology was observed in all of these wetlands.

Wetland 1 correlates with a mapped WDNR wetland of types T3/E1Hw/T3Kw (see Appendix G). None of the other delineated wetlands were mapped WDNR wetlands, probably due to their small extent.

The boundary for Wetland 1 was established primarily by vegetative and hydrologic indicators. Wetland vegetation was dominated by green ash (*Fraxinus pennsylvanica*), Acer saccharinum (*silver maple*), disk water-hyssop (*Bacopa rotundifolia*), yellow avens (*Geum aleppicum*), wild

black current (*Ribes americanum*), button bush (*Cephalanthus occidentalis),* and reed canary grass (*Phalaris arundinacea*). The general topography of this wetland was flat with slightly lower basin areas. Hydric soil indicator A11: Depleted Below Dark Surface was shown by black (10YR 3/2) silt loam over very dark grayish brown (7.5YR 4/2) silty clay loam with yellowish brown (10YR 5/6) mottles. Wetland hydrology indicators included surface water, water-stained leaves, geomorphic position, and FAC-Neutral test. This wetland complex resides within the floodplain of Plum Creek.

The total area of Wetland 1 within the Area of Interest (AOI) is 7.13 acres and includes a total of three different WisDOT wetland classifications. These classifications have been delineated on an aerial photograph and are presented in Appendix G. The three wetland types include 4.35 acres of wooded riparian wetland RPF(N), one acre of Scrub Shrub SS, and 1.78 acres of degraded meadow M(D), along with 0.34 acres of Upland.

Area of Wetland 1 dominated by button bush, with standing water.

Upland snow mobile trail with Wetland 1 on both sides.

The boundary for Wetland 2 was delineated in 2011 and established primarily by vegetation and topography. Wetland vegetation was dominated by green bulrush (*Scirpus atrovirens)* and fox sedge (*Carex vulpinoidea)*. The general topography of this wetland was flat and the base of a hillslope. Hydric soil indicator TF2: Red Parent Material was shown by reddish brown (5YR 4/4) with yellowish red (5YR 4/6) mottles over reddish brown (5YR 5/4) with dark red (2.5YR 3/6) mottles. Wetland hydrology indicators included saturation, drainage patterns, geomorphic position, and FAC-Neutral test.

Wetland 2 dominated by green bulrush and fox sedge.

Wetlands 3, 4, 5, 31, 32, 33, and 34 were all delineated in 2011, while Wetlands 6 through 30 were delineated in 2010. All of these wetlands are located within the right-of-way of an approximate 2.7-mile stretch of STH 96 between Plum Road (CR-D) and Lagoon Road.

Wetlands 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 17, 21, 23, 24, 27, 28 and 32 are dominated by cattails and had standing water at the time of the site visit. Wetlands 8, 9, 16, 18, 19, 22, and 31 were dominated by reed canary grass. Wetlands 10 and 17 were dominated by giant reed grass (*Phragmites australis*), and Wetlands 20, 25, 26, 29, 30, 33, and 34 were wetlands associated with tributaries that cross under STH 96. Topography and vegetation were the primary factors considered in determining these wetlands. All of the wetlands began at the base of the road slopes and were dominated by vegetation with either a FACW or OBL hydrologic indicator.

A table presenting the location and WisDOT and WDNR classifications for each of the 34 wetlands is presented in Appendix F.

(2) Other waters

The segment of STH 96 is within close proximity to the Fox River and directly associated with Plum Creek. Multiple drainage ways located adjacent to STH 96 between Shanty Road and Lagoon Road may also be considered navigable waters. No other water bodies were identified during the delineation.

4. Conclusions

Thirty-four separate wetland boundaries were delineated within the proposed project area. These wetlands may be impacted by various project alternatives.

A jurisdictional determination for these wetlands will be needed from the USACE as they may be considered isolated water bodies. A Section 404 wetland fill permit from the USACE will be needed for any construction activity within the jurisdictional wetland boundaries. A Section 401 water quality certification of the 404 permit will also be required from the WDNR. The WDNR may also assert separate jurisdiction over any wetlands not considered jurisdictional by the USACE and may impose additional wetland permitting requirements under NR 103. Independent review by local land use authorities and adoption of the wetland boundaries under shoreland/wetland zoning ordinances may also be required.

Final authority over the project rests with the above federal, state, and local agencies.

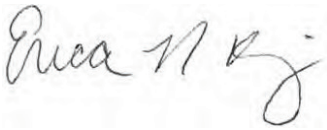
5. Certification and Limitations

The undersigned does hereby certify and state that she is an employee of Mead & Hunt, Inc., that she has been designated as being in responsible charge of the delineation of wetlands described herein; and that this delineation was performed in accordance with the USACE 1987 *Wetland Delineation Manual* and the state of Wisconsin standards under NR 103.08, as amended on June 1, 1998.

This wetland delineation report documents vegetation, soils, and hydrology conditions on the above-referenced parcel according to these standard accepted practices, and the wetland boundary so established is valid only for the designated area. No uses or interpretations of wetland conditions or boundaries outside of the work area are supported by this work.

The mapped wetland boundary is valid under the environmental conditions existing at the time of delineation. The user of this information is hereby notified that changing environmental conditions may affect the future validity of the wetland boundary.

MEAD & HUNT, Inc.



Erica N King

Date: August 2011

Appendix A. Area of Interest Maps

Project Location Map

Urban Area

Project No. 4095-10-00
Wrightstown, WI

Legend

Project Area of Interest

Brown County 2-ft Contours

Intermediate

Index

0 100 200 400 600 800 Feet

N

Map Note:
Image source: Brown County, Wisconsin
Map Server, April 2010

Mead & Hunt

Project Location Map

Rural Area

Project No. 4075-25-00
Wrightstown, WI

Legend

Project Area of Interest

0 200 400 800 1,200 1,600 Feet

N

Map Note:
Image source: Brown County, Wisconsin
Map Server, April 2010

Mead & Hunt

Appendix B. Wetland Boundary Maps

Hwy 96 Wetland Delineation

Wrightstown, WI

Legend

Data Point

Wetland Boundary

0 100 200 400 600 800 Feet

N

Map Note:
Image source: Brown County, Wisconsin
Map Server, April 2010

SHEET 1 OF 6

Hwy 96 Wetland Delineation

Wrightstown, WI

Legend

Data Point

Wetland Boundary

0 100 200 400 600 800 Feet

N

Map Note:
Image source: Brown County, Wisconsin
Map Server, April 2010

SHEET 2 OF 6

Hwy 96 Wetland Delineation

Wrightstown, WI

Legend

Data Point

Wetland Boundary

0 100 200 400 600 800 Feet

N

Map Note:
Image source: Brown County, Wisconsin
Map Server, April 2010

SHEET 3 OF 6

Hwy 96 Wetland Delineation

Wrightstown, WI

Legend

Data Point

Wetland Boundary

0 100 200 400 600 800 Feet

N

Map Note:
Image source: Brown County, Wisconsin Map Server, April 2010

SHEET 4 OF 6

Hwy 96 Wetland Delineation

Wrightstown, WI

Legend

Data Point

Wetland Boundary

0 100 200 400 600 800 Feet

N

Map Note:
Image source: Brown County, Wisconsin Map Server, April 2010

Hwy 96 Wetland Delineation

Wrightstown, WI

Legend

Data Point

Wetland Boundary

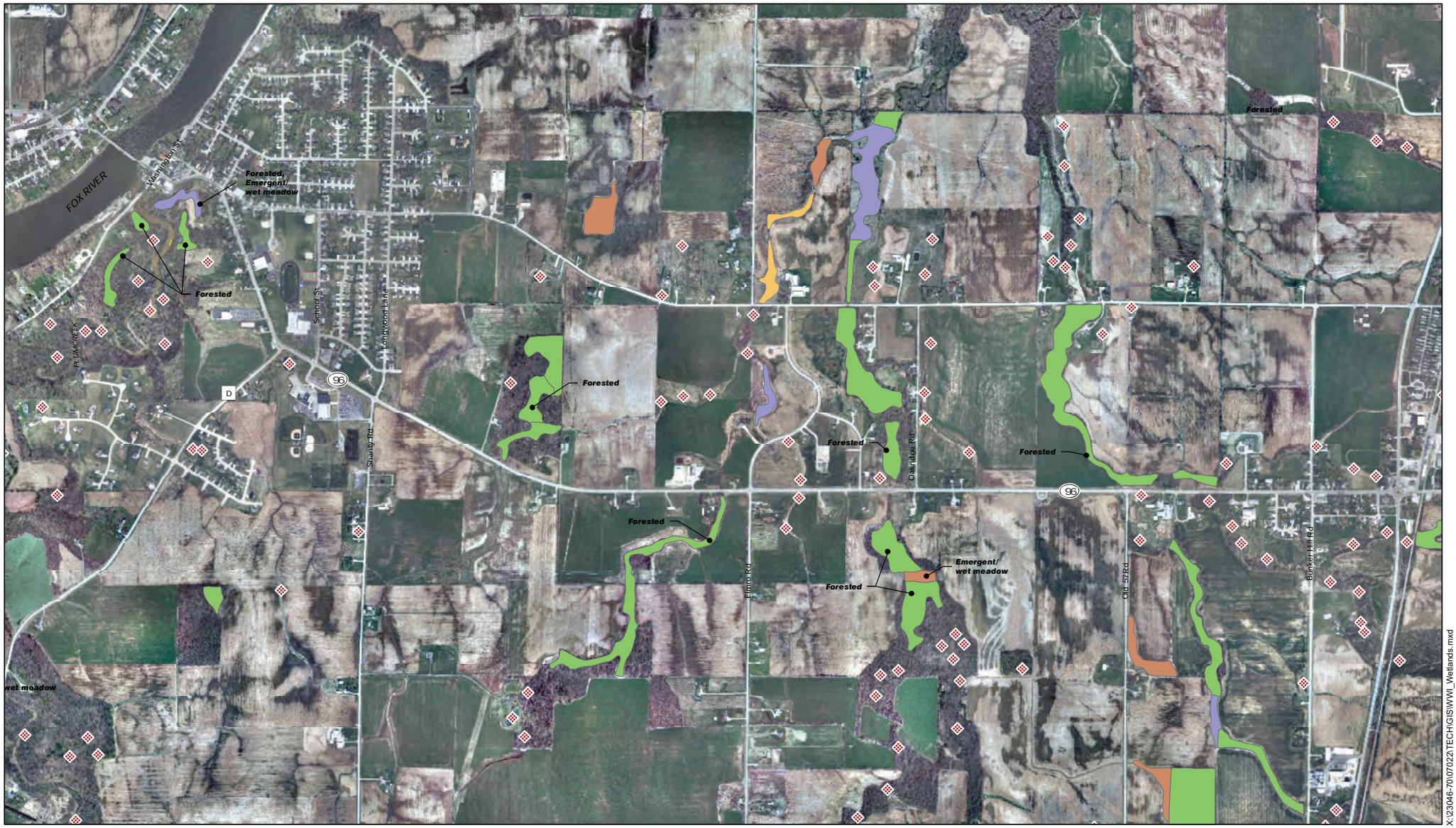
0 100 200 400 600 800 Feet

N

Map Note:
Image source: Brown County, Wisconsin Map Server, April 2010

SHEET 6 OF 6

Appendix C. Wisconsin Wetland Inventory Map



Hwy 96 Wetland Delineation

Wisconsin Wetland Inventory

Project Nos. 4075-25-00 & 4095-10-00

Wrightstown, WI

Legend

Wisconsin Wetlands Inventory

General Wetland Class

- Emergent/wet meadow
- Emergent/wet meadow, Open Water
- Forested
- Forested, Emergent/wet meadow
- Open Water
- Scrub/shrub, Emergent/wet meadow
- Wetlands too small to delineate

0 500 1,000 2,000 Feet

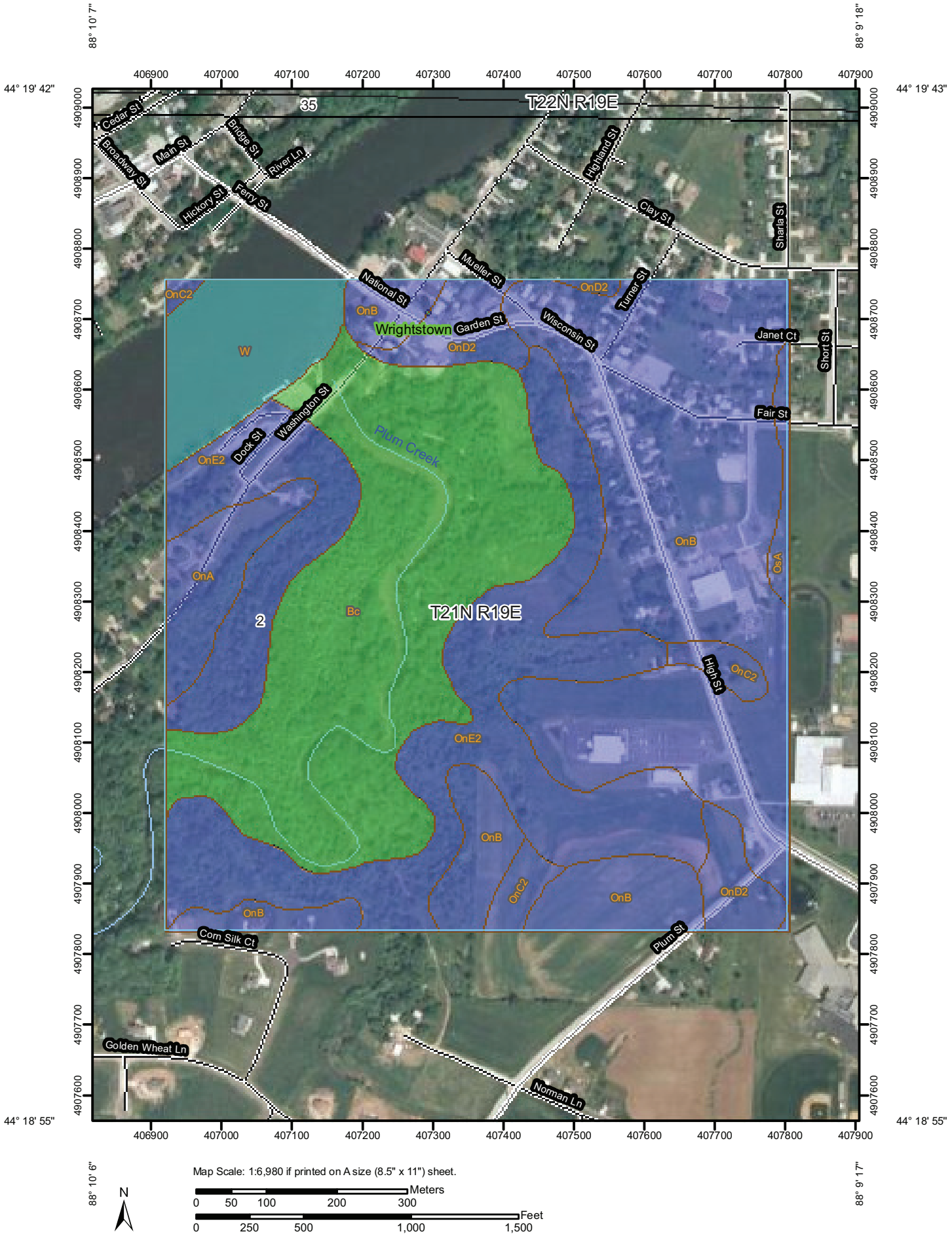
N

Map Note:
Image source: Brown County, Wisconsin Map Server, April 2010

Mead & Hunt

X:\23046-70\07022\TECH\GIS\WWI_Wetlands.mxd

Appendix D. Soils Maps and Descriptions


88° 10' 7"
88° 9' 18"
44° 19' 42"
44° 19' 43"
406900
407000
407100
407200
407300
407400
407500
407600
407700
407800
407900
4909000
4908900
4908800
4908700
4908600
4908500
4908400
4908300
4908200
4908100
4908000
4907900
4907800
4907700
4907600
T22N R19E
35
T21N R19E
2
Cedar St
Broadway St
Main St
Bridge St
River Ln
Hickory St
Ferry St
Highland St
Clay St
Sharla St
Mueller St
National St
Turner St
Wisconsin St
Garden St
Wrightstown
Janet Ct
Short St
Fair St
Washington St
Dock St
Plum Creek
High St
Corn Silk Ct
Plum St
Golden Wheat Ln
Norman Ln
OnC2
OnB
OnD2
W
OnE2
OnA
Bc
OsA
44° 18' 55"
88° 10' 6"
88° 9' 17"
Map Scale: 1:6,980 if printed on A size (8.5" x 11") sheet.
N
Meters
0 50 100 200 300
Feet
0 250 500 1,000 1,500

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- All Hydric
- Partially Hydric
- Not Hydric
- Unknown Hydric
- Not rated or not available

Political Features

- Cities
- PLSS Township and Range
- PLSS Section

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:6,980 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N NAD83

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

Soil Survey Area: Brown County, Wisconsin
Survey Area Data: Version 6, Mar 10, 2011

Date(s) aerial images were photographed: 6/1/2005

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

Hydric Rating by Map Unit

Hydric Rating by Map Unit— Summary by Map Unit — Brown County, Wisconsin (WI009)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Bc	Bellevue silt loam	Partially Hydric	52.1	25.9%
OnA	Oshkosh silt loam, 0 to 2 percent slopes	Not Hydric	6.8	3.4%
OnB	Oshkosh silt loam, 2 to 6 percent slopes	Not Hydric	69.4	34.5%
OnC2	Oshkosh silt loam, 6 to 12 percent slopes, eroded	Not Hydric	3.9	1.9%
OnD2	Oshkosh silt loam, 12 to 20 percent slopes, eroded	Not Hydric	8.0	4.0%
OnE2	Oshkosh silt loam, 20 to 30 percent slopes, eroded	Not Hydric	48.4	24.1%
OsA	Oshkosh silty clay loam, 0 to 2 percent slopes	Not Hydric	1.6	0.8%
W	Water	Unknown Hydric	11.0	5.5%
Totals for Area of Interest			**201.3**	**100.0%**

Description

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

"All hydric" means that all components listed for a given map unit are rated as being hydric, while "not hydric" means that all components are rated as not hydric. "Partially hydric" means that at least one component of the map unit is rated as hydric, and at least one component is rated as not hydric. "Unknown hydric" indicates that at least one component is not rated so a definitive rating for the map unit cannot be made.

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

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

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

References:

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

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

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

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

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

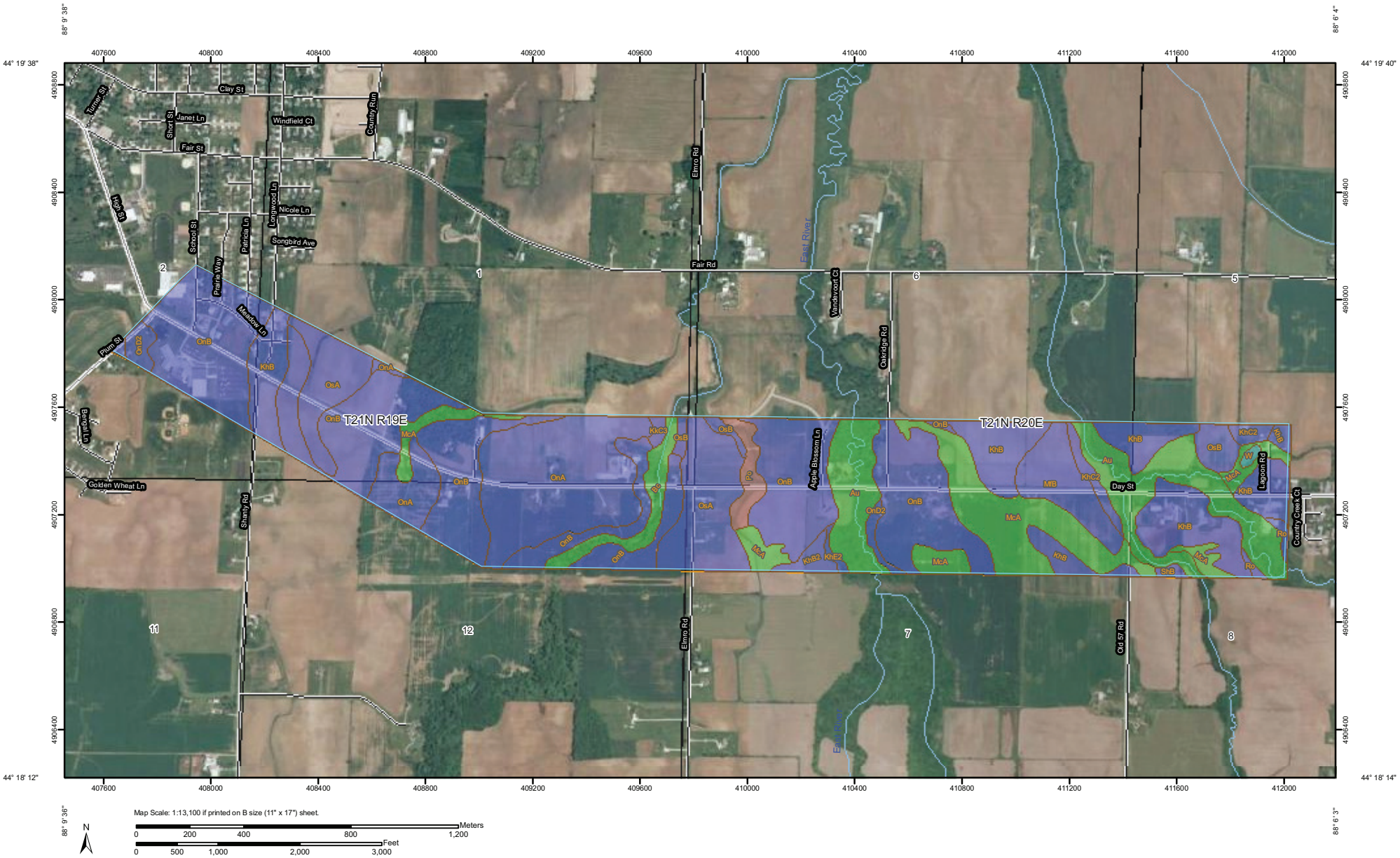
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Absence/Presence

Tie-break Rule: Lower

Hydric Rating by Map Unit—Brown County, Wisconsin



Map Scale: 1:13,100 if printed on B size (11" x 17") sheet.

N

Meters: 0 200 400 800 1,200

Feet: 0 500 1,000 2,000 3,000

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- All Hydric
- Partially Hydric
- Not Hydric
- Unknown Hydric
- Not rated or not available

Political Features

- Cities
- PLSS Township and Range
- PLSS Section

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:13,100 if printed on B size (11" × 17") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Brown County, Wisconsin
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Date(s) aerial images were photographed: 6/1/2005

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

Hydric Rating by Map Unit

Hydric Rating by Map Unit— Summary by Map Unit — Brown County, Wisconsin (WI009)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Au	Alluvial land	Partially Hydric	56.8	9.7%
Bc	Bellevue silt loam	Partially Hydric	11.1	1.9%
KhB	Kewaunee silt loam, 2 to 6 percent slopes	Not Hydric	73.8	12.6%
KhB2	Kewaunee silt loam, 2 to 6 percent slopes, eroded	Not Hydric	4.1	0.7%
KhC2	Kewaunee silt loam, 6 to 12 percent slopes, eroded	Not Hydric	6.3	1.1%
KhE2	Kewaunee silt loam, 20 to 30 percent slopes, eroded	Not Hydric	1.1	0.2%
KkC3	Kewaunee soils, 6 to 12 percent slopes, severely eroded	Not Hydric	1.3	0.2%
McA	Manawa silty clay loam, 1 to 3 percent slopes	Partially Hydric	58.8	10.1%
MfB	Manistee fine sandy loam, 2 to 6 percent slopes	Not Hydric	18.9	3.2%
OnA	Oshkosh silt loam, 0 to 2 percent slopes	Not Hydric	76.1	13.0%
OnB	Oshkosh silt loam, 2 to 6 percent slopes	Not Hydric	199.6	34.2%
OnD2	Oshkosh silt loam, 12 to 20 percent slopes, eroded	Not Hydric	5.9	1.0%
OsA	Oshkosh silty clay loam, 0 to 2 percent slopes	Not Hydric	50.2	8.6%
OsB	Oshkosh silty clay loam, 2 to 6 percent slopes	Not Hydric	9.0	1.5%
Po	Poygan silty clay loam	All Hydric	6.8	1.2%
Ro	Rough broken land	Not Hydric	2.1	0.4%
ShB	Sisson fine sandy loam, 2 to 6 percent slopes	Not Hydric	1.1	0.2%
W	Water	Unknown Hydric	0.9	0.1%
Totals for Area of Interest			**584.1**	**100.0%**

Description

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

"All hydric" means that all components listed for a given map unit are rated as being hydric, while "not hydric" means that all components are rated as not hydric. "Partially hydric" means that at least one component of the map unit is rated as hydric, and at least one component is rated as not hydric. "Unknown hydric" indicates that at least one component is not rated so a definitive rating for the map unit cannot be made.

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

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

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Absence/Presence

Tie-break Rule: Lower

Appendix E. Field Data Sheets and Site Photographs

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hwy 96 City/County: Brown Sampling Date: 10/29/2010
Applicant/Owner: WisDOT State: WI Sample Point: 1 wet
Investigator(s): Erica King, Mead & Hunt Section, Township, Range: Sec 2, T21N, R19E
Landform (hillslope, terrace, etc.): Base of hillslope Local relief (concave, convex, none): Concave
Slope (%): 5% Lat: 44.19'25.8"N Long: 88.9'48.6"W Datum:
Soil Map Unit Name: Bc-Bellevue Silt Loam NWI classification: PEM
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 ☒	No ☐
Hydric Soil Present?	Yes ☒	No ☐
Wetland Hydrology Present?	Yes ☒	No ☐

Is the Sampled Area within a Wetland? **Yes** ☒ **No** ☐
If yes, optional Wetland Side ID:

Remarks: All wetland criteria are satisfied. Reed canary grass is dominant and precipitation is about 12" over normal.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1. Crataegus crus-galli	5	X	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundincea	60	X	FACW
2. Ribes americanum	10		FACW
3. Solidago canadensis	10		FACU
4. Thalictrum dasycarpum	5		FACW
5. Cirsium muticum	5		FACW
6. Bacopa rotundifolia	2		OBL
7. Geum aleppicum	2		FAC
8.			
9.			
10.			
11.			
12. 50/20=47/18.8			
	94 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBI, FACW, or FAC: 100 (A/B)

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

Hydrophytic Vegetation Indicators:
☐ Rapid Test for Hydrophytic Vegetation
☒ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations' (Provide supporting
☐ Problematic Hydrophytic Vegetation' (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?
Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Wetland vegetation is present.

SOIL

Sampling Point: 1 wet

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2						Silt Loam	
8-18	7.5 YR 4/2		7.5YR 5/6				Silty Clay Loam	

[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:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☒ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149 B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric

- ☐ 2 cm Muck - (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Peat or Mucky Peat (S3) **(LRR K,**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K,**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L,**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: Meets Criteria A11. Hydric soil is present.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present?
Yes ☒ **No** ☐

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

Remarks: Wetland hydrology is indicated. The geomorphic position is an annual floodplain

Photo: See Data Point 2.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hwy 96 City/County: Brown Sampling Date: 10/29/2010
Applicant/Owner: WisDOT State: WI Sample Point: 2 upl
Investigator(s): Erica King, Mead & Hunt Section, Township, Range: Sec 2, T21N, R19E
Landform (hillslope, terrace, etc.): Plane Local relief (concave, convex, none): None
Slope (%): 0% Lat: 44.19'25.8"N Long: 88.9'48.6"W Datum:
Soil Map Unit Name: Bc-Bellevue Silt Loam NWI classification: N/A
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 ☐	No ☒
Hydric Soil Present?	Yes ☐	No ☒
Wetland Hydrology Present?	Yes ☐	No ☒

Is the Sampled Area within a Wetland? **Yes** ☐ **No** ☒
If yes, optional Wetland Side ID:

Remarks: Sample point is located on snow mobile trail. Vegetation has been mowed. Precipitation is about 12" over normal. No wetland criteria are satisfied.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Poa pratensis	90	X	FAC
2. Taraxacum officinale	10		FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12. 50/20=50/20			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBI, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of.	Multiply by:	
OBL species		x 1 =
FACW species		x 2 =
FAC species	90	x 3 = 270
FACU species	10	x 4 = 40
UPL species		x 5 =
Column Totals:	100 (A)	310 (B)

Prevalence Index = B/A = 3.1

Hydrophytic Vegetation Indicators:
☐ Rapid Test for Hydrophytic Vegetation
☒ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations' (Provide supporting
☐ Problematic Hydrophytic Vegetation' (Explain)

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

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?
Yes ☐ No ☒

Remarks: (Include photo numbers here or on a separate sheet.) Passes dominance test but fails P.I. at 3.1. Upland vegetation is present.

SOIL

Sampling Point: 2 upl

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 3/3						Silt loam	

[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:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149 B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric

- ☐ 2 cm Muck - (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Peat or Mucky Peat (S3) **(LRR K,**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K,**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L,**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: rock and gravel fill

Depth (inches): 1

Hydric Soil Present? **Yes** ☐ **No** ☒

Remarks: very shallow topsoil over gravel fill material above the floodplain. Does not meet hydric soil criteria.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present?
Yes ☐ **No** ☒

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

Remarks: No wetland hydrology was present or indicated. Data point is located in an upland.

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hwy 96 City/County: Brown Sampling Date: 10/29/2010
Applicant/Owner: WisDOT State: WI Sample Point: 3 wet
Investigator(s): Erica King, Mead & Hunt Section, Township, Range: Sec 2, T21N, R19E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
Slope (%): 20% Lat: 44.19'25.8"N Long: 88.9'48.6"W Datum:
Soil Map Unit Name: Bc-Bellevue Silt Loam NWI classification: PEM
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 ☒	No ☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Hydric Soil Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	If yes, optional Wetland Side ID:

Remarks: All wetland criteria are satisfied. Reed canary grass is dominant. Precipitation is about 12" over normal.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundiancea	100	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12. 50/20=50/20			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBI, FACW, or FAC: 100 (A/B)

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

Hydrophytic Vegetation Indicators:
☒ Rapid Test for Hydrophytic Vegetation
☒ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations' (Provide supporting
☐ Problematic Hydrophytic Vegetation' (Explain)

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

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?
Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Wetland vegetation is present.

SOIL

Sampling Point: 3 wet

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 3/2						Silt Loam	
3-18	7.5YR 3/2	95	5YR 4/6	5			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:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☒ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149 B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric

- ☐ 2 cm Muck - (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Peat or Mucky Peat (S3) **(LRR K,**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K,**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L,**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: Meets Criteria A11 and F6. Hydric soil is present.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present?
Yes ☒ **No** ☐

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

Remarks: Wetland hydrology is indicated. Geomorphic position is an annual floodplain.

Photo: See Data Point 4.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hwy 96 City/County: Brown Sampling Date: 10/29/2010
Applicant/Owner: WisDOT State: WI Sample Point: 4 upl
Investigator(s): Erica King, Mead & Hunt Section, Township, Range: Sec 2, T21N, R19E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
Slope (%): 10% Lat: 44.19'25.8"N Long: 88.9'48.6"W Datum:
Soil Map Unit Name: OnE2-Oshkosh Silt Loam NWI classification: N/A
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 ☒	No ☐	**Is the Sampled Area within a Wetland?** **Yes** ☐ **No** ☒
Hydric Soil Present?	Yes ☐	No ☒	If yes, optional Wetland Side ID:
Wetland Hydrology Present?	Yes ☐	No ☒	

Remarks: Wetland vegetation is present, but no other criteria are satisfied. Vegetation has been mowed. Precipitation is about 12" over normal.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Poa pratensis	99	X	FAC
2. Daucus carota	1		NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12. 50/20=50/20			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBI, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of.	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 99	x 3 = 297	
FACU species	x 4 =	
UPL species 1	x 5 =	
Column Totals: 100 (A)		297 (B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:
☐ Rapid Test for Hydrophytic Vegetation
☒ Dominance Test is >50%
☒ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations' (Provide supporting
☐ Problematic Hydrophytic Vegetation' (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?
Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Wetland vegetation is present.

SOIL

Sampling Point: 4 upl

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2						Silt Loam	
6-18	10YR 3/3	50	10YR 4/4	50			Silt Loam	

[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:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149 B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric

- ☐ 2 cm Muck - (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Peat or Mucky Peat (S3) **(LRR K,**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K,**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L,**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☒

Remarks: Does not meet hydric soil criteria.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present?

Yes ☐ **No** ☒

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

Remarks: No wetland hydrology is indicated.

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hwy 96 City/County: Brown Sampling Date: 10/29/2010
Applicant/Owner: WisDOT State: WI Sample Point: 5 wet
Investigator(s): Erica King, Mead & Hunt Section, Township, Range: Sec 2, T21N, R19E
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none):
Slope (%): Lat: 44.19'25.8"N Long: 88.9'48.6"W Datum:
Soil Map Unit Name: Bc-Bellevue Silt Loam NWI classification: PFO
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 ☒	No ☐
Hydric Soil Present?	Yes ☒	No ☐
Wetland Hydrology Present?	Yes ☒	No ☐

Is the Sampled Area within a Wetland? **Yes** ☒ **No** ☐
If yes, optional Wetland Side ID:

Remarks: All wetland criteria are satisfied. Precipitation is about 12" above average for this time of the year.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharinum	30	X	FACW
2. Fraxinus pennsylvanica	10	X	FACW
3.			
4.			
5. 50/20=20/8			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	5	X	FACW
2. Bacopia rotundifolia	2	X	OBL
3. Geum aleppicum	2	X	FAC
4. Ribes americanum	2	X	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12. 50/20=5.5/2.2			
	11	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

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 OBI, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
☐ Rapid Test for Hydrophytic Vegetation
☒ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations' (Provide supporting
☐ Problematic Hydrophytic Vegetation' (Explain)

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

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?
Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Wetland vegetation is present.

SOIL

Sampling Point: 5 wet

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 3/2						Silt Loam	
3-18	7.5YR 3/2	95	5YR 4/6	5			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:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☒ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149 B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric

- ☐ 2 cm Muck - (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Peat or Mucky Peat (S3) **(LRR K,**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K,**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L,**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: Meets Criteria A11 and F6. Hydric soil is present.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒	No ☐	Depth (inches): 3
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present?

Yes ☒ **No** ☐

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

Remarks: Wetland hydrology is present and indicated. Geomorphic position is an annual floodplain.

Photo: See Data Point 6.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hwy 96 City/County: Brown Sampling Date: 10/29/2010
Applicant/Owner: WisDOT State: WI Sample Point: 6 upl
Investigator(s): Erica King, Mead & Hunt Section, Township, Range: Sec 2, T21N, R19E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none):
Slope (%): Lat: 44.19'25.8"N Long: 88.9'48.6"W Datum:
Soil Map Unit Name: Bc-Bellevue Silt Loam NWI classification: N/A
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 ☐	No ☒	**Is the Sampled Area within a Wetland?** **Yes** ☐ **No** ☒
Hydric Soil Present?	Yes ☐	No ☒	If yes, optional Wetland Side ID:
Wetland Hydrology Present?	Yes ☐	No ☒	

Remarks: No wetland criteria are satisfied. Precipitation is about 12" higher than average for this time of the year.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Poa pratensis	60	X	FAC
2. Glechoma hederacea	30	X	FACU
3. Taraxacum officinale	10		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12. 50/20=50/20			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBI, FACW, or FAC: 50 (A/B)

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

Hydrophytic Vegetation Indicators:
☐ Rapid Test for Hydrophytic Vegetation
☐ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations' (Provide supporting
☐ Problematic Hydrophytic Vegetation' (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?
Yes ☐ No ☒

Remarks: (Include photo numbers here or on a separate sheet.) Upland vegetation is present.

SOIL

Sampling Point: 6 upl

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/3						Silt Loam	with gravel and rocks
3-6	7.5 YR 4/6	60	10YR 3/3	30			Silty Clay Loam	with gravel and rocks

[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:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149 B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric

- ☐ 2 cm Muck - (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Peat or Mucky Peat (S3) **(LRR K,**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K,**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L,**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rocks

Depth (inches): 6 inches

Hydric Soil Present? **Yes** ☐ **No** ☒

Remarks: Does not meet hydric soil criteria

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present?

Yes ☐ **No** ☒

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

Remarks: No wetland hydrology is indicated.

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hwy 96 City/County: Brown Sampling Date: 8/10/2011
Applicant/Owner: WISDOT State: WI Sample Point: 7 wet
Investigator(s): Erica King, Mead and Hunt, Inc. Section, Township, Range: Sec 2, T21N, R19E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
Slope (%): 30% Lat: 44.19'25.8"N Long: 88.9'48.6"W Datum:
Soil Map Unit Name: Bc-Bellevue Silt Loam NWI classification: None
Are climatic hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ **No** ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area**
Hydric Soil Present?	Yes ☒	No ☐	**within a Wetland?** **Yes** ☒ **No** ☒
Wetland Hydrology Present?	Yes ☒	No ☐	If yes, optional Wetland Side ID:

Remarks: Sample point is located at the base of a steep hill adjacent to a stream.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Carex vulipinoidea	25	X	OBL
2. Scirpus atrovirens	25	X	OBL
3. Polygonum amphibium	15		OBL
4. Solidago gigantea	15		FACW
5. Bromus inermis	5		NA
6. Aster puniceus	5		OBL
7. Elytrigia repens	5		NA
8. Phalaris arundinacea	5		FACW
9.			
10.			
11.			
12. 50/20=50/20			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBI, FACW, or FAC: 100 (A/B)

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

Hydrophytic Vegetation Indicators:
☒ Rapid Test for Hydrophytic Vegetation
☒ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations' (Provide supporting
☐ Problematic Hydrophytic Vegetation' (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?
Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Wetland vegetation is present.

SOIL

Sampling Point: 7 wet

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	5YR 4/4	97	5YR 4/6	3			Clay	
3-18	5YR 5/4	95	2.5YR 3/6	5			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:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149 B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric

- ☐ 2 cm Muck - (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Peat or Mucky Peat (S3) **(LRR K,**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K,**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L,**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☒ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: Soils meet hydric criteria TF2 Red Parent Material from glacial sediments derived from weathered bedrock. Although TF2 is supposed to be entirely within the top 12 inches, this appears to be variance because it is a test criteria.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (inches): 15 in

Wetland Hydrology Present? **Yes** ☒ **No** ☐

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

Remarks: All three wetland criteria have been met. This sample point is located in a wetland.

Photo: See Data Point 8.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hwy 96 City/County: Brown Sampling Date: 8/10/2011
Applicant/Owner: WISDOT State: WI Sample Point: 8 upl
Investigator(s): Erica King, Mead and Hunt Inc. Section, Township, Range: Sec 2, T21N, R19E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
Slope (%): 30% Lat: 44.19'25.8"N Long: 88.9'48.6"W Datum:
Soil Map Unit Name: OnE2-Oshkosh Silt Loam NWI classification: None
Are climatic hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ **No** ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area**
Hydric Soil Present?	Yes ☐	No ☒	**within a Wetland?** **Yes** ☐ **No** ☒
Wetland Hydrology Present?	Yes ☐	No ☒	If yes, optional Wetland Side ID:

Remarks: Sample point is located on a hillslope.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Bromis inermis	65	X	NA
2. Elytrigia repens	25	X	NA
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12. 50/20=32.5/4			
	90 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= 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 OBI, FACW, or FAC: 0 (A/B)

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

Hydrophytic Vegetation Indicators:
☐ Rapid Test for Hydrophytic Vegetation
☐ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations' (Provide supporting
☐ Problematic Hydrophytic Vegetation' (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?
Yes ☐ No ☒

Remarks: (Include photo numbers here or on a separate sheet.) Upland vegetation is present.

SOIL

Sampling Point: 8 upl

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	7.5 YR 4/4	100					Clay	
15-18	7.5 YR 4/3	100					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:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149 B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric

- ☐ 2 cm Muck - (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Peat or Mucky Peat (S3) **(LRR K,**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K,**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L,**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☒

Remarks: Upland soils are present.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

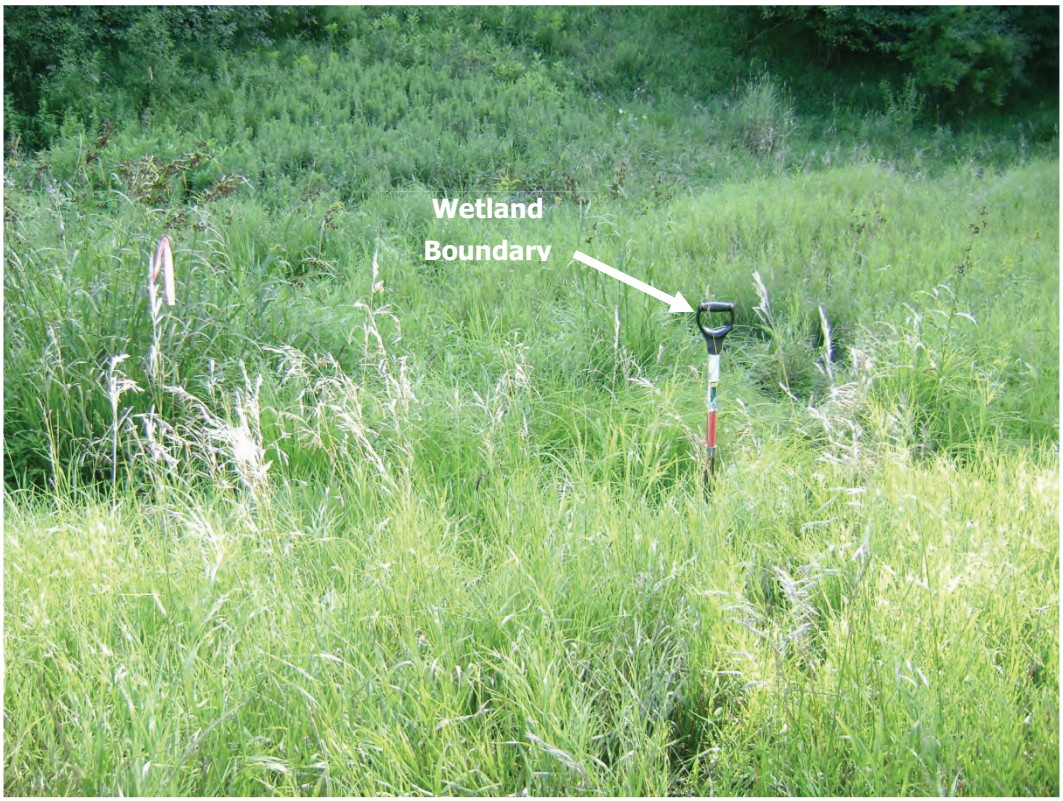
Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks: Wetland criteria could not be met. Sample point is located in an upland.

Photo:



Appendix F. Wetland Locations with WisDOT and WDNR Classifications

Wetland Numbers with WisDOT and WDNR Classifications

Wetland No.	WisDOT	WDNR
1	RPF(N)/M(D)/SS	T3K/E1Hw/S1H
2	M	E2K
3	SM	E2K
4	SM/DM	E2H
5	SM	E2K
6	SM	E3K
7	SM	E3K
8	M	E2K
9	M	E2K
10	SM	E3K
11	SM/M(D)	E3K/E2K
12	SM/M(D)	E3K/E2K
13	SM	E3K
14	SM	E3K
15	SM	E3K
16	M(D)	E2K
17	SM	E3K
18	M(D)	E2K
19	M(D)	E2K
20	RPF	T3R
21	SM	E3K
22	M(D)	E2K
23	SM	E3K
24	SM	E3K
25	RPF	T3R
26	RPF	T3R
27	SM	E3K
28	SM	E3K
29	AB/SM	A1R/E3K
30	AB/SM	A1R/E3K
31	M(D)	E2K
32	SM	E2K
33	SM	E2K
34	M(D)	E2K

Appendix G. WisDOT Wetland Classification Map

Hwy 96 Wetland Delineation

Wrightstown, WI

Legend

ProjectAOI wetland_type

- M(D)
- RPF(N)
- SS
- UPLAND

0 100 200 400 Feet

N

WisDOT WETLAND TYPES

Wetland 1

Map Note:
Image source: Brown County Ortho, 2005
Wrightstown, WI

Appendix E. Practicable Alternatives Analysis

State of Wisconsin **APPLICATION FOR WETLAND WATER QUALITY CERTIFICATION**
Department of Natural Resources Form 3500-53N (R 1/2002)
PRACTICABLE ALTERNATIVES ANALYSIS

Section 1- Project Background

1. Describe the purpose and need for the project.

Purpose of the Proposed Action
The purpose of the proposed action is to construct a new Fox River bridge and approaches that will provide a safe and efficient crossing of the Fox River for future users while minimizing disturbance to the natural and built environment. The project study limits are the County U/County DD intersection on the west and the WIS 96/County D intersection on the east.

Need for the Proposed Action
The need for a new Fox River bridge and approaches is due to a combination of factors including deficiencies with the existing bridge, safety, existing roadway conditions, and route importance.

2. Is your project an expansion of existing work or is it new construction? Explain.

The proposed project consists of urban road reconstruction and replacing the bridge over the Fox River. The project will consist of the realignment of approximately 2,550 feet of STH 96 to the south; construction of a new bridge (B-05-0381) crossing the Fox River approximately 250-feet upstream (south) of the existing bridge; removal of the existing bridge (B-05-0736); construction of a roundabout at the intersection of STH 96 and Broadway Street at the west end of the bridge; construction of a roundabout at the intersection of proposed STH 96 and Turner Street extended; reconstruction of the intersection of existing STH 96 with Turner and Fair Streets; and reconstruction of local roads adjacent to STH 96 within the project limits.

3. When did you start to develop a plan for your project?

A Bridge Location Environmental Scan was prepared on October 24, 2006. The bridge replacement alternatives study began in 2007.

4. Are you the current owner or easement holder of the property? If so, how long have you owned the property? If you are not the property owner, please provide the current owners name and contact information.

Project is located within existing and acquired roadway right-of-way.

5. Explain what the consequences are of not building the project. Include social and economic consequences, as well as other pertinent information.

Although the proposed action would not change the economic characteristics of the WIS 96 corridor or the surrounding area, its advantages outweigh its disadvantages because an efficient and reliable crossing of the Fox River is essential to connecting the Village on both sides of the

river. With the No-Build Alternative, the reliability of the bridge becomes questionable as time passes. The deck failure in February 2009, which closed the bridge during the repair, is an example of the problems with an aging bridge that could create economic disadvantages in Wrightstown.

6. Explain why the project must be located in or adjacent to wetlands.

The east roundabout location allows the Turner/Fair Street intersection to function similar to how it exists today, yet be connected to the roundabout. Moving the roundabout to the south increases the impact to the wooded area west of WIS 96, the Plum Creek wetlands, and adjacent property owners. Moving the roundabout to the north would impact St. John's Lutheran Church's operation of funeral processions and reduce parking.

Section 2 - Developing Project Alternatives

1. How could you redesign or reduce your project to avoid the wetland, and still meet your basic project purpose?

Avoiding the wetlands would require the proposed bridge to be placed in a different location.

2. How could you redesign or reduce your project to minimize wetland impacts and still meet your basic project purpose?

These alternatives were evaluated and discussed between WisDOT and WIDNR. The impacts to the wetlands may be reduced by providing a longer bridge structure. Moving the abutment further east to reduce wetland impacts would require a flared steel bridge span that would support the flared entry of the roundabout. The other alternative discussed was to provide a retaining wall at the east bridge abutment. Based on previous soil borings and the existing topography, the Mechanically Stabilized Earth (MSE) retaining wall would be at the maximum height that could be constructed. Access to maintain the MSE retaining wall would be difficult. Both alternatives were not preferred due to initial construction costs and future maintenance costs.

3. What other sites were considered for this project? (Please include properties you currently own, have recently owned, adjacent parcels and properties available for sale in the area. Provide the geographic area(s) you searched for an alternative site and the specific location of other properties considered. For each of these properties considered, indicated why they were not selected whether or not they meet the basic purpose and need identified in Section 1. Available properties that meet the purpose and need should be considered further, particularly if they result in lower wetland impact compared to the selected alternative.)* If no other sites were considered, please explain why.

Throughout the NEPA process, the build alternatives' development/screening phase was an iterative process that began by developing 31 preliminary alternatives located north and south of Wrightstown, as well as adjacent to the WIS 96 Bridge. The starting point for developing preliminary build alternatives was the alternatives developed during WisDOT's 2006 feasibility study. The 31 alternatives were grouped into 5 geographical "families" for comparison purposes. In the first screening step, the 31 alternatives were screened down to six: three north and three south of the existing WIS 96 Bridge. The final two screening steps involved screening the six alternatives to two—one north and one south of the bridge—before selecting a preferred alternative.

Section 3 – Evaluating Project Alternatives

1. Will the alternative affect the wetlands? If so please provide the acreage and type of wetland impacted.

The preferred alternative would temporarily and permanently affect 1.913 acres of Wetland 1 in the project. The wetland area converted to fee right of way is 1.3 acres.

There are 1.008 acres of permanent impacts within the right of way:

- 0.550 acres of fill for the east bridge abutment embankment
- 0.458 acres for the pier footings and permanent shading by the bridge

There are 0.905 acres of temporary impacts as a result of the construction access road and work pads in Wetland 1.

See the Wetland Impact Tracking Form for the impacts to each wetland type.

2. Provide resizing or reconfiguration options for each alternative to reduce or eliminate wetland impacts.

See Section 2.2

3. What are the primary costs for developing the alternative?

Additional costs would include the design, construction, and maintenance of a flared steel bridge span or high retaining wall.

4. What are the logistical reasons that make an alternative not practicable?
   Logistical constraints include but are not limited to:
   - Inability to meet other regulatory standards
   - Construction limitations
   - Access or transportation concerns
   - Site availability
   - Existing infrastructure

The alternatives are not practicable due to the lack of future access through the wetland or down the steep embankment slope to perform routine inspections and maintenance.

5. What are the technical constraints to an alternative?
   - Technical constraints include in adequate depth to bedrock, inappropriate site geology, proximity to groundwater, proximity to a contaminated area, unfavorable soils, or engineering concerns.

The retaining wall needed would be near the maximum height recommended for MSE retaining walls.

6. Are there impacts to other important natural resources?
    - Archeological or historic sites
    - Habitat for threatened or endangered species
    - Environmental Corridors or Natural Areas
    - Waterways

No other impacts are anticipated.

7. Are there other factors you would like us to consider during our alternatives analysis evaluation?

None

Section 4 – Preferred Project Alternative

1. Indicate how your preferred project alternative meets your project purpose and how it avoids and/or minimizes wetland impacts to the maximum extent practicable

The proposed bridge will allow large farm machinery to cross the bridge without impeding on-coming traffic and provide efficient traffic operations. The proposed alignment will also improve the grade and geometry along STH 96 therefore providing increased safety. St John's Lutheran Church will be able to continue functioning as it currently does. Wetland impacts were minimized by lowering the bridge profile at the east abutment to the elevation that would still accommodate the required design criteria.

2. Indicate how you plan to minimize harm to the impacted wetlands and adjacent wetlands that will not be directly impacted by the project. Examples may include but are not limited to erosion control, proper marking of the limits of proposed wetland impact, visible flagging for protection of wetlands that will not be impacted by project, adequate stormwater management, best management practices, etc.

A Wetland Restoration Plan has been prepared to restore the temporary wetland impacts to preconstruction conditions. The wetland Restoration Plan is described below.

Restoration Objectives

The wet meadows have a vernal hydrology that is independent from annual flooding by Plum Creek, and are most important for amphibian breeding and vernal pool fauna. Restoration of the wet meadows' topography, including depressions and old channel scars, is the chief objective, with special measures to address possible compaction of wetland soils due to the weight of the temporary fill and associated construction equipment. Once topography and soil conditions are restored the site is expected to have a hydrology closely resembling preconstruction conditions.

Salvage and restoration of coarse woody debris as basking structure and substrate is also needed. This will be accomplished using tree trunks and large branches from the project impact area and installing them on the restored wetland grade. Vegetation objectives include re-establishment of swamp forest tree and shrub cover, with an understory floodplain and riparian-emergent grasses, sedges and wildflowers.

Methods

Pre-construction contours and soil conditions will be restored by fill removal using a variety of measures to control and alleviate any compaction and restore soil health. The boundary between fill material and native soils will be protected by geotextile fabric, to avoid intermixing under load. The estimated ground pressure of the temporary fill is 4 psi. This fill will be removed by low ground pressure equipment with straight-edged buckets or blades. Progress will be monitored by survey, with discing and application of a composted organic topsoil amendment as needed to aerate the soil and attain final grade. Finally, soil health and growing potential will be ensured by application of a mycorrhizal inoculant during planting and seeding operations.

Planting Plan

The long-term objectives of the planting plan are re-establishment of a floodplain swamp forest hardwood tree canopy, with an understory of swamp forest shrubs and native floodplain grasses, sedges and wildflowers. The planting plan is partially constrained by the degree of permanent or partial shade provided by the bridge through the growing season. Therefore, trees and shrubs are limited to areas receiving full or partial sun, while shaded areas will only be seeded with shade-adapted herbs. The planting plan includes both container stock for herbs, shrubs and trees as well as wetland seeding for sunlit and shaded areas.

Appendix F. Wetland Restoration Plan

Wetland Restoration Plan

Project I.D.	4075-28-00/71
Title	Village of Wrightstown
	Fox River Bridge B-05-381
Highway	STH 96
County	Brown

Background

The proposed alignment for the new STH 96 bridge across the Fox River in Wrightstown was determined in coordination with the Department of Natural Resources (DNR) and took into account storm water drainage, wetland avoidance, roadway and roundabout functionality and comments from local government officials. The new bridge will have a structural width of 54 feet and a minimum clearance of about 30 feet over the Plum Creek floodplain wetlands. Temporary fill used for the access roads needed to construct the bridge will cover approximately 1.3 acres of the wetland. Approximately 0.9 acres of the temporary fill area will be sunlit to some degree after bridge construction. Removal of the temporary fill and restoration of the floodplain wetlands will be required.

The Plum Creek floodplain wetlands consist of riparian forest (RPF) dominated by silver maple and green ash, scrub shrub (SS) dominated by buttonbush and degraded wet meadow dominated by reed canary grass (M(D). The floodplain wetland complex covers about 25 acres in the project vicinity and has exceptional functional performance for flood and storm water attenuation and high functional significance for floral diversity, fishery habitat and aesthetics/recreation/education. Prior correspondence from DNR had also noted high fishery and wildlife functions, including potential habitat for the State Threatened Blanding's Turtle.

The DNR noted high wildlife functions were partly due to regional scarcity of this habitat complex in association with the Fox River corridor. Some vernal pool (seasonally-flooded) habitat is present. These pools are largely dominated by reed canary grass, and based on a field review by DNR wildlife staff, restoration of these vernal depressions was determined to be the major objective of the on-site restoration plan.

Wetland impacts from the project will be formally compensated for by withdrawal of mitigation credits from an applicable DOT Statewide Mitigation Bank.

The remainder of this Mitigation Plan addresses the need for site restoration via removal of the temporary wetland fills required for bridge construction. The average depth of this fill will be about 4 feet, yielding a ground pressure of about 4 pounds per square inch.

Restoration Objectives

The wet meadows have a vernal hydrology that is independent from annual flooding by Plum Creek, and are most important for amphibian breeding and vernal pool fauna. Enhancement of any hydrologic connection with Plum Creek is not preferred by DNR because of a desire to protect the observed vernal pool characteristics from fish predation of breeding amphibians. Restoration of the wet meadows' topography, including depressions and old channel scars, is the chief objective, with special measures to address possible compaction of wetland soils due to the weight of the temporary fill and associated

construction equipment. Once topography and soil conditions are restored the site is expected to have a hydrology closely resembling preconstruction conditions.

Salvage and restoration of coarse woody debris as basking structure and substrate is also needed. This will be accomplished using tree trunks with root wads from the project impact area and installing them on the restored wetland grade. Vegetation objectives include re-establishment of swamp forest tree and shrub cover, with an understory floodplain and riparian-emergent grasses, sedges and wildflowers. The flood duration of restored vernal pools should be from 40 to 70 consecutive days to accommodate amphibian breeding.

Methods

Pre-construction contours and soil conditions will be restored by fill removal using a variety of measures to control and alleviate any compaction and restore soil health. The boundary between fill material and native soils will be protected by geotextile fabric, to avoid intermixing under load. The estimated ground pressure of the temporary fill is 4 psi. This fill will be removed by low ground pressure equipment with straight-edged buckets or blades. Progress will be monitored by survey, with topsoil replacement and a sub-soil aeration special provision as needed to attain final grade. Finally, soil health and growing potential will be ensured by application of a mycorrhizal inoculant during planting and seeding operations.

Planting Plan

The long-term objectives of the planting plan are re-establishment of a floodplain swamp forest hardwood tree canopy, with an understory of swamp forest shrubs and native floodplain grasses, sedges and wildflowers. The planting plan is partially constrained by the degree of permanent or partial shade provided by the bridge through the growing season. Therefore, trees and shrubs are limited to areas receiving full or partial sun, while shaded areas will only be seeded with shade-adapted herbs. The planting plan includes both container stock for herbs, shrubs and trees as well as wetland seeding for sunlit and shaded areas.

a. Plantings

All plantings will be completed in the spring growing season, prior to June 15.

- Sun Wetland Planting – See Special Provisions
- Wetland Tree Planting – See Special Provisions
- Wetland shrub planting – See Special Provisions

b. Seeding

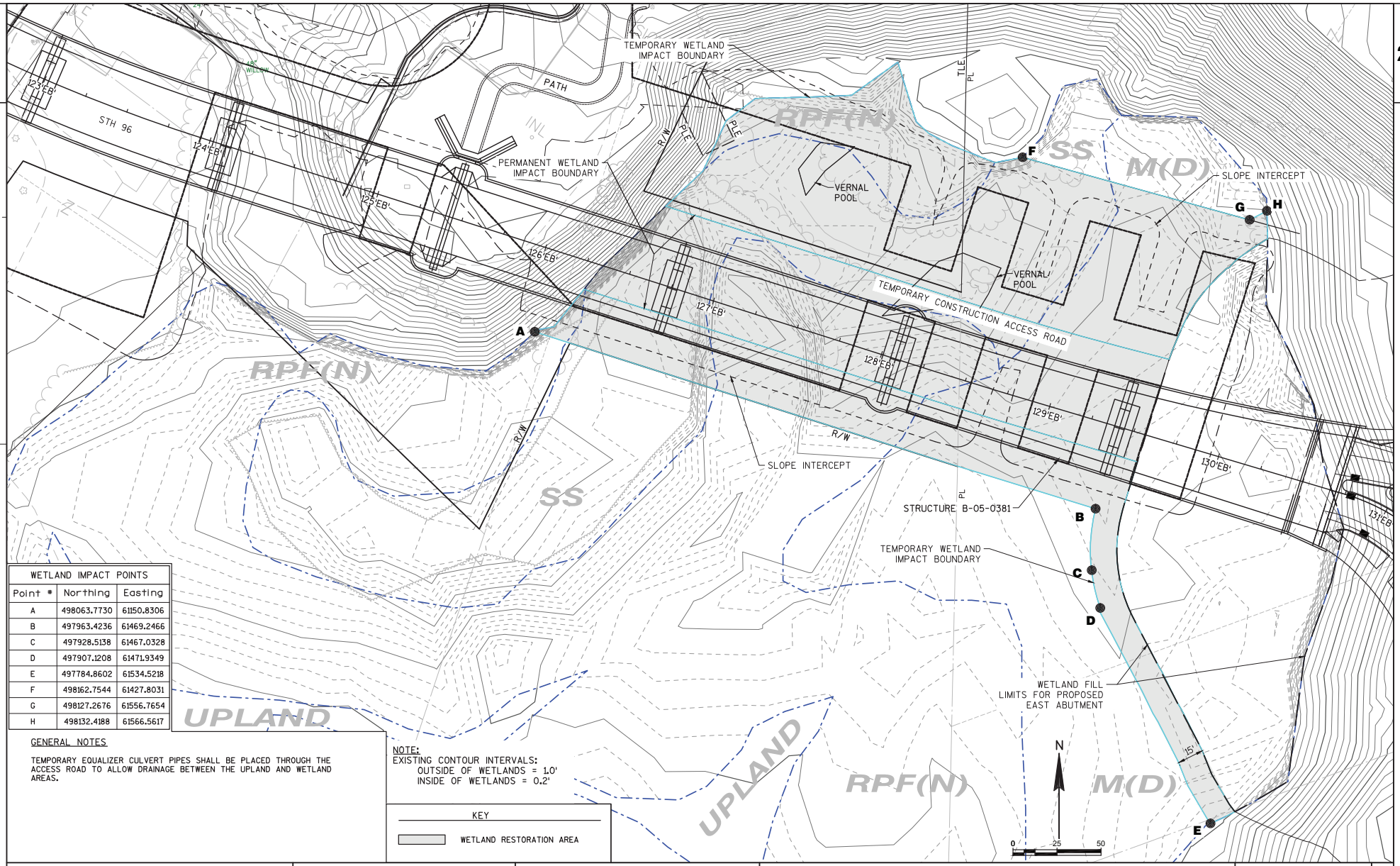
All seeding will be done either prior to May 15 or after November 1, using materials of 90% pure live seed and of current-year crop. The following seed mixtures will be used in sunlit areas and those shaded by the bridge, with some overlap in the narrow zone where shading is seasonal.

- Sun Wetland Seeding – See Special Provisions
- Shade Wetland Seeding – See Special Provisions

Wildlife Structures - See Special Provisions

Construction activities will have to remove live as well as dead and downed trees from within the work area of the bridge. As woody debris performs important ecosystem functions for these wetlands, this material will be restored on the recovered wetland grade by salvaged tree trunks with their root wads and re-installing them on the finished wetland grade. Materials for wildlife structures will be selected in coordination with the contractor prior to any clearing or grubbing operations and set aside.

Each wildlife structure will consist of a tree trunk and its root wad and have a minimum total length of 15 feet with a minimum trunk diameter of 12 inches, measured at five feet from the base of the trunk. They will be installed within sunlit areas of the restoration area by partial burial of the root wad so that the bottom side of the tree trunk is less than six inches from the surface of the restored wetland grade, so that seasonal flooding inundates at least a portion of the structure.



WETLAND IMPACT POINTS		
Point #	Northing	Easting
A	498063.7730	61150.8306
B	497963.4236	61469.2466
C	497928.5138	61467.0328
D	497907.1208	61471.9349
E	497784.8602	61534.5218
F	498162.7544	61427.8031
G	498127.2676	61556.7654
H	498132.4188	61566.5617

GENERAL NOTES

TEMPORARY EQUALIZER CULVERT PIPES SHALL BE PLACED THROUGH THE ACCESS ROAD TO ALLOW DRAINAGE BETWEEN THE UPLAND AND WETLAND AREAS.

NOTE:
EXISTING CONTOUR INTERVALS:
OUTSIDE OF WETLANDS = 1.0'
INSIDE OF WETLANDS = 0.2'

KEY

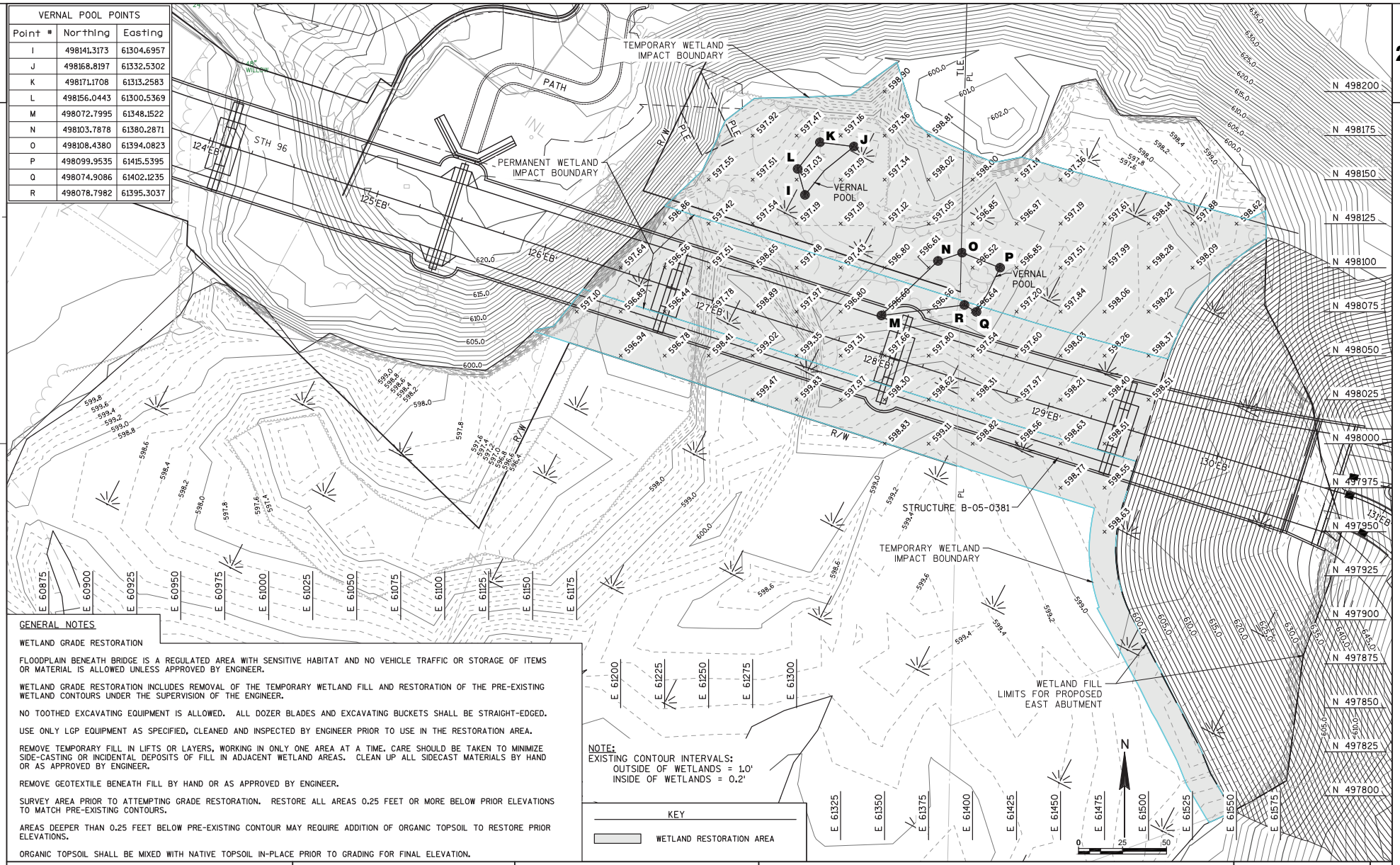
WETLAND RESTORATION AREA

PROJECT NO: 4075-28-71	HWY: STH 96	COUNTY: BROWN	WETLAND: CONSTRUCTION IMPACTS	SHEET ____	E

FILE NAME : X:\3230500\113689.01\TECH\DSGN\CIVIL\CIVIL3D\40752800\SHEETSPLAN\40752871_0210XX_CD_WETLAND.DWG PLOT DATE : 9/16/2013 8:03 AM PLOT BY : RUTH STEENO PLOT NAME : _____ PLOT SCALE : ********

WISDOT/CADDS SHEET 42

VERNAL POOL POINTS		
Point #	Northing	Easting
I	498141.3173	61304.6957
J	498168.8197	61332.5302
K	498171.1708	61313.2583
L	498156.0443	61300.5369
M	498072.7995	61348.1522
N	498103.7878	61380.2871
O	498108.4380	61394.0823
P	498099.9535	61415.5395
Q	498074.9086	61402.1235
R	498078.7982	61395.3037



GENERAL NOTES

WETLAND GRADE RESTORATION

FLOODPLAIN BENEATH BRIDGE IS A REGULATED AREA WITH SENSITIVE HABITAT AND NO VEHICLE TRAFFIC OR STORAGE OF ITEMS OR MATERIAL IS ALLOWED UNLESS APPROVED BY ENGINEER.

WETLAND GRADE RESTORATION INCLUDES REMOVAL OF THE TEMPORARY WETLAND FILL AND RESTORATION OF THE PRE-EXISTING WETLAND CONTOURS UNDER THE SUPERVISION OF THE ENGINEER.

NO TOOTHED EXCAVATING EQUIPMENT IS ALLOWED. ALL DOZER BLADES AND EXCAVATING BUCKETS SHALL BE STRAIGHT-EDGED.

USE ONLY LGP EQUIPMENT AS SPECIFIED, CLEANED AND INSPECTED BY ENGINEER PRIOR TO USE IN THE RESTORATION AREA.

REMOVE TEMPORARY FILL IN LIFTS OR LAYERS, WORKING IN ONLY ONE AREA AT A TIME. CARE SHOULD BE TAKEN TO MINIMIZE SIDE-CASTING OR INCIDENTAL DEPOSITS OF FILL IN ADJACENT WETLAND AREAS. CLEAN UP ALL SIDECAST MATERIALS BY HAND OR AS APPROVED BY ENGINEER.

REMOVE GEOTEXTILE BENEATH FILL BY HAND OR AS APPROVED BY ENGINEER.

SURVEY AREA PRIOR TO ATTEMPTING GRADE RESTORATION. RESTORE ALL AREAS 0.25 FEET OR MORE BELOW PRIOR ELEVATIONS TO MATCH PRE-EXISTING CONTOURS.

AREAS DEEPER THAN 0.25 FEET BELOW PRE-EXISTING CONTOUR MAY REQUIRE ADDITION OF ORGANIC TOPSOIL TO RESTORE PRIOR ELEVATIONS.

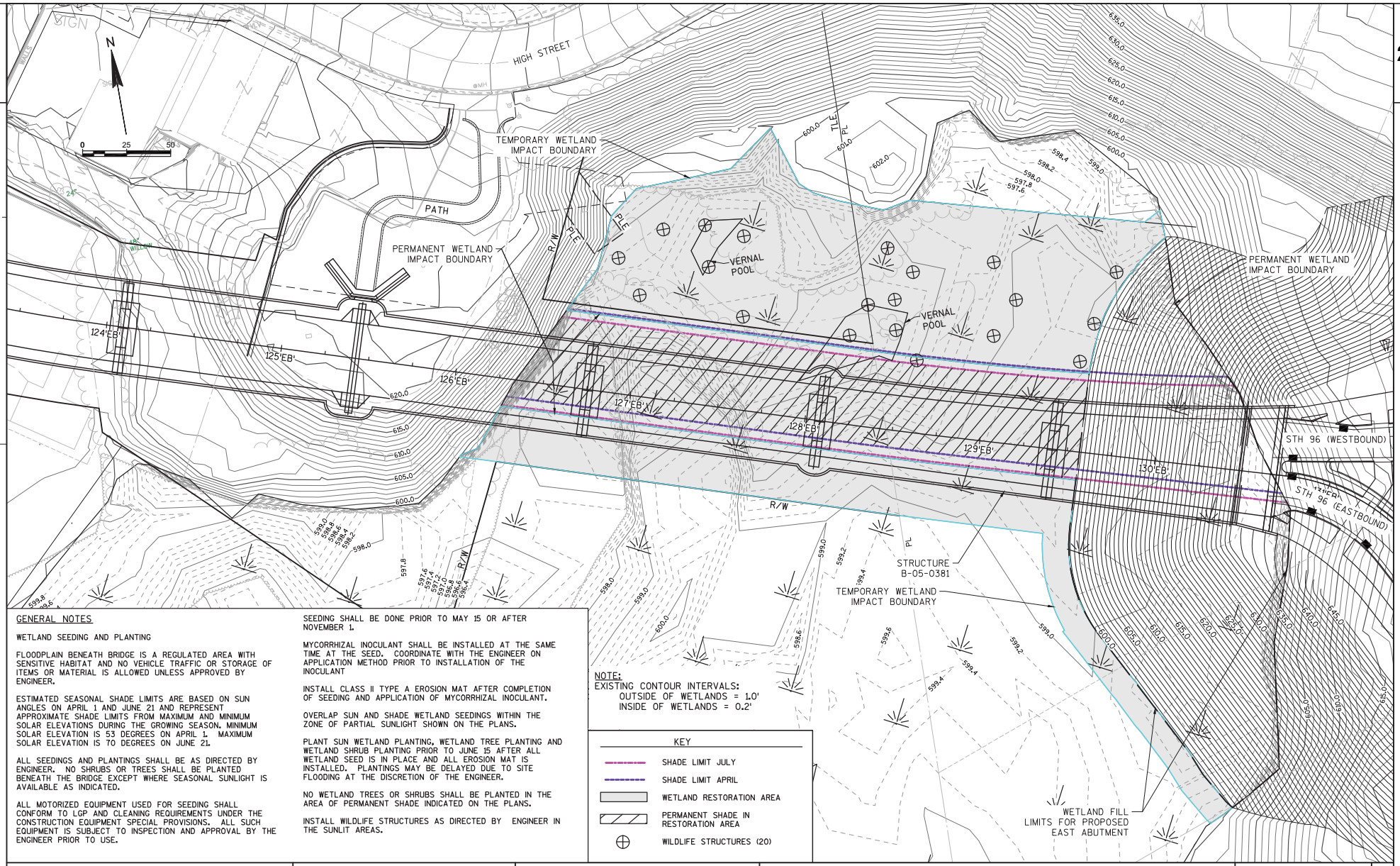
ORGANIC TOPSOIL SHALL BE MIXED WITH NATIVE TOPSOIL IN-PLACE PRIOR TO GRADING FOR FINAL ELEVATION.

NOTE:
EXISTING CONTOUR INTERVALS:
OUTSIDE OF WETLANDS = 1.0'
INSIDE OF WETLANDS = 0.2'

KEY
WETLAND RESTORATION AREA

PROJECT NO: 4075-28-71	HWY: STH 96	COUNTY: BROWN	WETLAND: GRADE RESTORATION PLAN	SHEET ____ E

FILE NAME : X:\3230500\113689.01\TECH\DSGN\CIVIL\CIVIL3D\40752800\SHEETSPLAN\40752871_0210XX_CD_WETLAND.DWG PLOT DATE : 9/16/2013 8:07 AM PLOT BY : RUTH STEENO PLOT NAME : _____ PLOT SCALE : ********* WISDOT/CADDS SHEET 42



2

2

GENERAL NOTES

WETLAND SEEDING AND PLANTING

FLOODPLAIN BENEATH BRIDGE IS A REGULATED AREA WITH SENSITIVE HABITAT AND NO VEHICLE TRAFFIC OR STORAGE OF ITEMS OR MATERIAL IS ALLOWED UNLESS APPROVED BY ENGINEER.

ESTIMATED SEASONAL SHADE LIMITS ARE BASED ON SUN ANGLES ON APRIL 1 AND JUNE 21 AND REPRESENT APPROXIMATE SHADE LIMITS FROM MAXIMUM AND MINIMUM SOLAR ELEVATIONS DURING THE GROWING SEASON. MINIMUM SOLAR ELEVATION IS 53 DEGREES ON APRIL 1. MAXIMUM SOLAR ELEVATION IS 70 DEGREES ON JUNE 21.

ALL SEEDINGS AND PLANTINGS SHALL BE AS DIRECTED BY ENGINEER. NO SHRUBS OR TREES SHALL BE PLANTED BENEATH THE BRIDGE EXCEPT WHERE SEASONAL SUNLIGHT IS AVAILABLE AS INDICATED.

ALL MOTORIZED EQUIPMENT USED FOR SEEDING SHALL CONFORM TO LGP AND CLEANING REQUIREMENTS UNDER THE CONSTRUCTION EQUIPMENT SPECIAL PROVISIONS. ALL SUCH EQUIPMENT IS SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER PRIOR TO USE.

SEEDING SHALL BE DONE PRIOR TO MAY 15 OR AFTER NOVEMBER 1.

MYCORRHIZAL INOCULANT SHALL BE INSTALLED AT THE SAME TIME AT THE SEED. COORDINATE WITH THE ENGINEER ON APPLICATION METHOD PRIOR TO INSTALLATION OF THE INOCULANT

INSTALL CLASS II TYPE A EROSION MAT AFTER COMPLETION OF SEEDING AND APPLICATION OF MYCORRHIZAL INOCULANT.

OVERLAP SUN AND SHADE WETLAND SEEDINGS WITHIN THE ZONE OF PARTIAL SUNLIGHT SHOWN ON THE PLANS.

PLANT SUN WETLAND PLANTING, WETLAND TREE PLANTING AND WETLAND SHRUB PLANTING PRIOR TO JUNE 15 AFTER ALL WETLAND SEED IS IN PLACE AND ALL EROSION MAT IS INSTALLED. PLANTINGS MAY BE DELAYED DUE TO SITE FLOODING AT THE DISCRETION OF THE ENGINEER.

NO WETLAND TREES OR SHRUBS SHALL BE PLANTED IN THE AREA OF PERMANENT SHADE INDICATED ON THE PLANS.

INSTALL WILDLIFE STRUCTURES AS DIRECTED BY ENGINEER IN THE SUNLIT AREAS.

NOTE:
EXISTING CONTOUR INTERVALS:
OUTSIDE OF WETLANDS = 1.0'
INSIDE OF WETLANDS = 0.2'

KEY

- SHADE LIMIT JULY
- SHADE LIMIT APRIL
- WETLAND RESTORATION AREA
- PERMANENT SHADE IN RESTORATION AREA
- WILDLIFE STRUCTURES (20)

PROJECT NO: 4075-28-71	HWY: STH 96	COUNTY: BROWN	WETLAND: SEEDING AND PLANTING PLAN	SHEET _____ E

FILE NAME : X:\3230500\113689.01\TECH\DSGN\CIVIL\CIVIL3D\40752800\SHEETSPLAN\40752871_0210XX_CD_WETLAND.DWG PLOT DATE : 9/16/2013 8:10 AM PLOT BY : RUTH STEENO PLOT NAME : _____ PLOT SCALE : ********* WISDOT/CADDS SHEET 42

Appendix G. Special Provisions

Special Provisions

Table of Contents

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 4075-28-71, STH 96 Fox River Bridge B-05-381 and Project 4095-10-72, High Street, Fox River – Shanty Road; both projects are located in the Village of Wrightstown, Brown County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2014 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.
100-005 (20130615)

2. Scope of Work.

The work under this contract shall consist of excavation common, storm sewer, breaker run, base aggregate, Structures B-05-381, R-05-110, R-05-111, R-05-112, R-05-113, S-05-142, concrete curb and gutter, concrete sidewalk, concrete pavement, asphaltic paving, permanent signing, pavement marking, erosion control, traffic control, lighting items, landscaping and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Andrew Fulcer at (920) 492-5664.

Construction of the temporary causeways within the banks of the Fox River shall comply with the causeway concept included in the U.S. Army Corps of Engineers Section 404. If a method of construction is chosen that is not covered in the department's 404 Permit, submit hydraulic calculations for the restricted waterway confirming that the causeway will have no adverse effect on the river flows. Provide hydraulic computations and scouring determinations as necessary. The engineer will complete the review of the hydraulic data within 10 days of submittal.

If a method of construction is chosen that is not covered by the department's 404 Permit, obtain the proper additional approvals required from the U.S. Army Corps of Engineers. No time extensions as discussed in standard spec 108.10 will be granted for the time required to apply for and obtain the additional approvals. Be aware that the U.S. Army Corps of Engineers may not grant the approval requested.

No change in payment will be granted if a method of construction is chosen that does not comply with the 404 Permit.

4. Wetland Restoration.

A Description

The Department will provide oversight for the construction and monitoring of the wetland restoration construction. The Department's Environmental Coordinator shall be contacted to coordinate restoration work 10 business days prior to any seeding or the placement of any plantings or wildlife structures. The Department contact is Michael Helmrick (phone number: 920-492-7738).

There is a threshold for the amount of invasive species allowed in the wetland during the 2 year proving period. The thresholds were based on the quality of the existing wetlands. The impacted wetland area would be divided west and east of STA 128'EB'+75. No invasive species should be in the vernal pools. The threshold parameters on the west side would be a minimum of 85% native coverage and up to 15% invasive coverage with no reed canary grass. The east side thresholds would be a minimum of 85% native coverage and up to 15% invasive coverage not including reed canary grass in the amount of invasive coverage. Invasive species such as phragmities will not be allowed in the establishment area.

This item establishes the ground pressure specifications and cleaning requirements of motorized vehicles used on the Wetland Restoration portion of the project. This work includes all wetland planting and seeding, placement of Wildlife Structures and Wetland Grade Restoration.

B Materials

To avoid rutting of the site and achieve accurate grading, wheeled or tracked equipment used for excavation or final grading within the restoration area shall have a maximum operating ground pressure of no more than 5.00 psi. A Caterpillar D5N LGP with a 30-inch track or a Caterpillar D6N LGP with a 34-inch track are examples of equipment that meet these specifications.

Any agricultural tractor or equipment used for Wetland Seeding shall have a maximum ground pressure of no more than 8.0 psi in operating condition. Soil conditions may dictate the use of other equipment with a lower ground pressure.

The engineer reserves the right to have any equipment that is rutting the site removed from the project.

C Construction
Construction work within the wetland restoration area is scheduled from the late summer through the early fall seasons to provide the best soil drainage condition.

Prior to final grading, topsoil placement and seeding in the Wetland Restoration area, all equipment designated for use shall be cleaned offsite by high-pressure spray or steam equipment and shall be inspected and approved by the Engineer prior to any movement into the Wetland Restoration area. Once cleaned and approved, such equipment shall be dedicated to completion of seeding, grading, discing, topsoil placement or other relevant tasks until use for other project purposes.

D Measurement
Vacant

E Payment
No additional payment will be made for these restrictions regarding Construction Equipment. All costs to the Contractor for providing, operating, and cleaning low ground pressure equipment as required by this specification shall be considered incidental to the Work.

5. Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels prior to being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf for disinfection:

1. Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots),

and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or invested waters; and

4. Disinfect your boat, equipment and gear by either:
    a. Washing with ~212º F water (steam clean), or
    b. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
    c. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104º F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.
107-055 (20130615)

6. Environmental Protection, Decontamination of Construction Equipment.

Exotic invasive organisms such as zebra mussels, purple loosestrife and Eurasian water milfoil, are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.715, "Placement of Boats, Trailers, and Equipment in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters. The cleaning procedures outlined below must be followed for equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

All equipment that has come into contact with potentially infested material must be thoroughly disinfected before use in this project. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources) for disinfection:

- Wash machinery so that it is free of soils, etc. that could possibly contain exotic invasive species prior to leaving the contaminated site;
- Drain all water from boats, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds or roots), and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or infested waters; and

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.
(NER11-0608)

7. Environmental Protection, Dewatering.

Supplement subsection 107.18 of the standard specifications as follows:
If dewatering is required, treat the water to remove suspended sediments by filtration, settlement or other appropriate best management practice prior to discharge. The means and

methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for dewatering at each location it is required. The submittal shall also include the details of how the intake will be managed to not cause an increase in the background level turbidity prior to treatment and any additional erosion controls necessary to prevent sediments from reaching the project limits or wetlands and waterways. Guidance on dewatering can be found on the Wisconsin Department of Natural Resources website located in the Storm Water Management Technical Standards, Dewatering Code #1061 and Sedimentation Basins #1064. The cost of all work and materials associated with water treatment and/or dewatering is incidental to the bid items the work is associated.

8. Construction Over or Adjacent to Navigable Waters.

Supplement standard spec 107.19 with the following:

The Fox River is classified as a navigable waterway.
107-060 (20040415)

9. Erosion Control Structures.

Within seven calendar days after the commencement of work on the bridge superstructure, place all permanent erosion control devices, including riprap, erosion mat, ditch checks, seed, fertilizer, mulch, soil stabilizer, or any other item required by the contract or deemed necessary by the engineer. These devices shall be in place in the area under the bridge and on both sides of the roadway, from the waterway to a point 100-feet behind the backwall of the abutment. Within said limits, place these devices to a height equivalent to the calculated water elevation resulting from a storm that occurs on the average of once every two years (Q2) as shown on the plan, or as directed by the engineer. Prior to initial construction operations, place turbidity barriers, silt screens, and other temporary erosion control measures as shown on the plans, and remove them after the permanent erosion control devices are in place unless directed otherwise by the engineer.

In the event that construction activity does not disturb the existing ground below the Q2 elevation, the above timing requirements for permanent erosion control shall be waived.
107-070 (20030820)

10. Notice to Contractor – Layout Information for Permitted Impact to Wetlands.

Upon award of the contract, the department can supply information for laying out boundaries of permanent and temporary impact to wetlands as defined under the Section 404 permit. Contact Andrew Fulcer, phone (920) 492-5664.

11. Removing Old Structure Over Waterway Station 206'H'+00, Item 203.0500.S.

Conform to standard spec 203 as modified in this special provision.

Add the following to standard spec 203:

203.3.6 Removals Over Waterways and Wetlands

203.3.6.1 Removing Old Structure Over Waterway

(1) Remove the existing structure Enter Structure #over the Fox River conforming to the contractor's approved structure removal and clean-up plan. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. Remove large pieces of the structure within 36 hours. The contractor may leave limited amounts of small concrete pieces scattered over the waterway floor or wetland only if the engineer allows.

(2) Submit a structure removal and clean-up plan as part of the erosion control implementation plan required under standard spec 107.20. Do not start work under the structure removal and clean-up plan without the department's written approval of the plan. Include the following information in the structure removal and clean-up plan:

1. Methods and schedule to remove the structure.
2. Methods to control potentially harmful environmental impacts.
3. Methods for removing piers and abutments. If blasting in water, include restrictions that regulatory agencies and the contract require.
4. Methods for cleaning the waterway or wetlands.

(3) If stockpiling spoil material, place it on an upland site an adequate distance from the waterway, wetland, or any open water created by excavation. Install silt fence between the spoil pile and the waterway, wetland, or excavation site.

Add the following Removing Old Structure bid item to standard spec 203.5.1:

ITEM NUMBER	DESCRIPTION	UNIT
203.0500.S	Removing Old Structure Over Waterway Station 206'H'+00	LS

203-015 (20090105)

12. Subsoiling, Item SPV.0005.01

A Description

Furnish equipment and perform subsoiling within the wetland restoration area as directed by the engineer.

B Equipment

Furnish commercially available, multi-shanked, parallelogram implement attached to track-type equipment to create channels to a minimum depth of 16 inches. The equipment shall be capable of exerting a penetration force necessary for the site. No disc cultivators chisel plows, or spring-loaded equipment will be allowed.

C Construction

Subsoiling shall form a two-directional 90-degree grid. The channels shall be spaced a minimum of 24-inches to a maximum of 36-inches apart, depending on equipment and site conditions. The channel depth shall be to a depth of between 16-20 inches. Work shall be performed on slopes 1 vertical to 3 horizontal or flatter. Work shall be at right angles to the direction of surface drainage, whenever practical. Exceptions to subsoiling include over utility lines within 30-inches of the surface, where trenching or drainage lines are installed, where compaction is by design (abutments, footings, or inslopes) and inaccessible slopes, as approved by the engineer. In cases where exceptions occur, observe a minimum setback, as directed by the engineer.

D Measurement
The department will measure Subsoiling by the acre in accordance to subsection 109.1.1.2 of the standard specifications.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0005.01	Subsoiling	Acre

Payment is full compensation for furnishing all specified equipment and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.
(NER11-0128)

13. Wetland Grade Restoration, Item SPV.0005.02.

A Description
This item is a procedural specification for the restoration of the pre-construction soils and elevations within the temporary wetland fill supporting the bridge construction access roads. The approximate area of the temporary wetland fill is 1.4 acres.

B Materials
Only cleaned and approved low ground pressure equipment as described in the special provision for Construction Equipment shall be used.

The engineer reserves the right to have any unclean equipment or equipment that is rutting the site removed from the project.

C Construction
The following procedure shall be used for Wetland Grade Restoration:

Remove temporary wetland fill. The fill material shall be removed using Low Ground Pressure (LGP) equipment having straight-edged blades or buckets. No toothed excavating buckets will be allowed in order to minimize disturbance of the native wetland soils.

The fill shall be removed in an orderly manner, working in only one location at a time while erosion control measures remain in place at other locations. Fill shall be removed carefully in two or more lifts or layers, taking care not to gouge or dig into the native soil substrate beneath the geotextile that forms the separation boundary between the temporary fill and the native wetland topsoil. Any temporary fill materials that are sidecast or incidentally fall onto adjacent areas of the wetland shall be removed using hand tools or other means approved by the Engineer.

The final lift of fill removed shall be of a thickness that facilitates complete recovery and removal of the geotextile fabric without excess spillage of fill material. .Removal of the geotextile fabric shall be accomplished by hand or by a mechanical method approved by the Engineer.

Restore wetland grade. After all temporary wetland fill and geotextile has been removed, the wetland grade shall be restored to the pre-existing contours shown on the plans using approved and cleaned Low Ground Pressure equipment as described in Special Provision Wetland Restoration.

Prior to using any mechanized equipment, the elevations of the wetland grade shall be checked by survey cross sections to determine the locations and extent of any settlement or displacement that has occurred during bridge construction.

All areas which are found by survey to have experienced settlement or displacement equal or greater than 0.25 feet shall be restored their prior elevation using the procedures under Subsoiling. An electronic digital terrain model of the wetland is available upon request.

D Measurement
The department will measure Wetland Grade Restoration by the amount of the area acceptably completed as determined by the project engineer.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0005.02	Wetland Grade Restoration	ACRE

Payment is full compensation for

14. Sun Wetland Planting, Item SPV.0060.06.

A Description
This item consists of providing and planting native herbaceous wetland plants within sunlit areas as directed by the Engineer following installation of the Class II Type B erosion control mat.

B Materials

Plants shall be potted or plug stock with a minimum live shoot length of 12 inches. The minimum acceptable pot or plug size is 11 to 12 cubic inches, corresponding to a 32-cell to 38-cell planting flat.

Provide the following 2 species of grasses and sedges in the quantities listed:

GRASSES AND SEDGES

Name		Plants/1,000 sq.ft.
Spartina pectinata	Cordgrass	4
Carex grayi	Gray's sedge	4

In addition provide 2 of the following 5 species of grasses and sedges in the quantities listed:

GRASSES AND SEDGES

Name		Plants/1,000 sq.ft.
Carex lacustris	Lake sedge	4
Carex crinita	Fringed sedge	4
Carex lupulina	Hop sedge	4
Carex crus-corvi	Crowfoot sedge	4
Carex stipata	Awl-fruited sedge	4

Provide the following 4 species of wildlflowers in the quantities listed:

WILDFLOWERS

Acorus calamus	Sweet flag	4
Eutrochium purpureum	Joe-pye weed	4
Iris virginica	Southern blue flag	4
Vernonia fasciculata	Ironweed	4

In addition provide 2 of the following 7 species of wildlflowers in the quantities listed:

WILDFLOWERS

Symphyotrichum novae-angliae	New England aster	4
Helianthus grosseserratus	Sawtooth sunflower	4
Helenium autumnale	Sneezeweed	4
Silphium perfoliatum	Cup plant	4
Hypericum majus	Greater St.John's wort	4
Rudbeckia laciniata	Cut-leaf coneflower	4
Eupatorium perfoliatum	Boneset	4
	TOTAL PLANTS per 1,000 sq.ft.	40

C Construction

All planting shall be completed in the spring planting season before June 15.

Sun Wetland Planting shall be planted in the areas indicated by the Engineer. A total plant quantity of up to 1200 plants is anticipated by the department.

Plants shall be planted by cutting a slit no longer than six inches within the installed erosion mat and then digging a small hole of appropriate dimension to accommodate the entire root structure of the plant. After placing the plant in the hole, the hole shall be backfilled with the excavated native soil and firmly heel-tamped.

D Measurement
The department will measure Sun Wetland Planting by the number of live plants acceptably installed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.06	Sun Wetland Planting	EACH

Sun Wetland Planting, measured as provided above, will be paid for at the contract unit price per plant, which price shall be full compensation for furnishing, handling and storing and planting all plants and for all labor, transportation, tools, equipment, supplies and incidentals necessary to complete the work.

15. Wetland Tree Planting, Item SPV.0060.07.

A Description
This item consists of providing and planting balled-and-burlapped Swamp White Oak trees within sunlit areas as directed by the Engineer following installation of the Class II Type B erosion control mat.

B Materials
Trees shall be balled-and-burlapped Swamp White Oak (Quercus bicolor) with a minimum caliper dimension of two inches.

C Construction
Swamp white oak trees shall be planted at a rate of 12 trees per 1,000 square feet within sunlit wetland areas as indicated by the Engineer, in accordance with WisDOT Standard Specifications for planting such stock. A total quantity of up to 360 trees is anticipated.

D Measurement
The department will measure Wetland Tree Planting by the number of trees acceptably installed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.07	Wetland Tree Planting	EACH

Payment is full compensation for furnishing, handling and storing and planting all trees and for all labor, transportation, tools, equipment, supplies and incidentals necessary to complete the work.

16. Wetland Shrub Planting, Item SPV.0060.08.

A Description
This item consists of providing and planting containerized native wetland shrubs within the wetland restoration area as directed by the Engineer following installation of the Class II Type B erosion control mat.

B Materials
Wetland shrubs shall be containerized stock in 3-gallon containers (ANLA no. 3 container) with a minimum age of two years. The following species are required:

Provide the following 2 species of shrubs in the quantities indicated.

Name		Number/1,000 sq.ft.
Cephalanthus occidentalis	Buttonbush	5
Ilex verticillata	Winterberry	5

In addition provide 1 of the following 2 species of shrubs in the quantities indicated.

Name		Number/1,000 sq.ft.
Sambucus canadensis	Elderberry	5
Ribes americanum	Black currant	5

C Construction
Wetland shrubs shall be planted at a total rate of 15 shrubs per 1,000 square feet within sunlit wetland areas as indicated by the Engineer, in accordance with WisDOT Standard Specifications for planting such stock. A total quantity of up to 450 shrubs is anticipated.

D Measurement
The department will measure Wetland Tree Planting by the number of trees acceptably installed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.08	Wetland Shrub Planting	EACH

Payment is full compensation for furnishing, handling and storing and planting all shrubs and for all labor, transportation, tools, equipment, supplies and incidentals necessary to complete the work.

17. Wildlife Structures, Item SPV.0060.09.

A Description

Wildlife structures are assemblages or individual items of large woody debris consisting of stumps and root wads, tree trunks and portions of the tree trunks with branches that will be installed within the finish-graded wetlands as wildlife habitat enhancements. Twenty wildlife structures shall be installed within project site. The structures shall be installed in the summer just prior to installation of interim erosion control measures that will stabilize the site between the end of the fall construction period and the execution of native seeding, planting and final site stabilization in the following spring.

B Materials

Wildlife structures shall consist of woody debris, stumps, and logs salvaged from the cleared and grubbed temporary wetland fill area as described herein.

Materials for the wildlife structures will be selected in coordination with the Engineer prior to any clearing or grubbing operations. These materials shall be salvaged, collected and stockpiled by the contractor in an area approved by the Engineer for installation on the restored wetland grade after removal of the temporary wetland fill. The contractor shall exercise suitable care in salvage so as not to damage or compromise the character or dimensions of the material below what is required in this specification.

Each wildlife structures shall consist of a tree trunk and its root wad and have a minimum total length of 15 feet with a minimum trunk diameter of 12 inches, measured at five feet from the base of the trunk.

C Construction

Wildlife Structures shall be installed within sunlit areas of the restoration area as shown in the mitigation plans. Exact locations will be determined by the Engineer. Installation shall consist of partial burial of the root wad so that the bottom side of the tree trunk is less than six inches from the surface of the restored wetland grade

D Measurement

The item wildlife structures will be measured by the number of wildlife structures installed in acceptable locations and inspected and approved by the Engineer.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Wildlife Structures	EACH

The item wildlife structures will be paid for by each structure acceptably completed.

18. Mycorrhizal Inoculant, Item SPV.0085.02.

A Description

This item consists of supplying and applying to the seed bed during seeding operations a dry, granular form of fungal inoculant to promote growth and establishment of the germinating seed.

B Materials

The mycorrhizal inoculant shall be a domestically-produced dry granular substance containing endomycorrhizal fungi (*Glomus intraradices* or similar species) at the rate of 60,000 propagules per pound.

The material provided shall be suitable for application to a prepared seed bed using standard seeding equipment. The source and exact composition of the mycorrhizal inoculant shall be provided to the engineer for review and approval prior to any seeding operations.

C Construction

The inoculant shall be applied at a rate of 60 lbs per acre to all wetland/floodplain seeding zones to be seeded with Sun or Shade Wetland Seeding during the seeding operations.

The inoculant may be used as a bulking agent for the native seed mixture, or may be applied separately prior to seeding operations. The application method shall be coordinated and approved by the engineer.

D Measurement

The department will measure Mycorrhizal Inoculant by the pound of inoculant acceptably applied.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.02	Mycorrhizal Inoculant	LB

Payment is the full compensation for supplying the inoculant and applying it to the seed bed and for all labor, transportation, tools, equipment and incidentals necessary to complete the work.

19. Sun Wetland Seeding, Item SPV.0085.03.

A Description

This item consists of providing a native wetland seed mixture for sunlit portions of the restoration area, preparing the seed bed and applying the seed mixture to the seed bed in the areas indicated by the Engineer.

B Materials

The following types and amounts of seed shall be supplied in separate, labeled bags for inspection and approval by the Engineer prior to mixing and seeding.

No chemical fertilizer shall be used.

All seed supplied by the contractor shall be at least 90% pure live seed, based on germination tests, and shall be current year crop.

Provide the following 3 species of grasses and sedges in the amounts listed for the respective species:

GRASSES AND SEDGES

Species		Amount, oz.
Carex lacustris	Lake sedge	12.0
Scirpus atrovirens	Dark green bulrush	2.0
Scirpus validus	Softstem bulrush	2.0

In addition provide 3 of the following 7 species of grasses and sedges in the amounts listed for the respective species:

GRASSES AND SEDGES

Species		Amount, oz.
Spartina pectinata	Cordgrass	24.0
Carex crinita	Fringed sedge	6.0
Carex lupulina	Hop sedge	12.0
Carex grayi	Gray's sedge	12.0
Carex crus-corvi	Crowfoot sedge	6.0
Carex hystericina	Porcupine sedge	6.0
Carex stipata	Awl-fruited sedge	8.0
	TOTAL MINIMUM OZ	50.0

Provide the following 4 species of wildflowers in the amounts listed for the respective species:

WILDFLOWERS

Cicuta maculata	Water hemlock	2.0
Helianthus grosseserratus	Sawtooth sunflower	4.0
Helenium autumnale	Sneezeweed	2.0
Rudbeckia laciniata	Cut-leaf coneflower	4.0

Provide 2 of the following 8 species of wildflowers in the amounts listed for the respective species:

WILDFLOWERS

Acorus calamus	Sweet flag	6.0

Symphyotrichum novae-angliae	New England aster	2.0
Eutrochium purpureum	Joe-pye weed	2.0
Eupatorium perfoliatum	Boneset	2.0
Iris virginica	Southern blue flag	8.0
Silphium perfoliatum	Cup plant	4.0
Vernonia fasciculata	Ironweed	2.0
Hypericum majus	Greater St.John's wort	2.0
	TOTAL MINIMUM OZ	18.0
	TOTAL MINIMUM AGGREGATE WEIGHT, OZ	68.0

C Construction

Seeding shall occur before May 15 or after November 1.

No seeding equipment shall be allowed on the seed bed unless cleaned by high-pressure spray equipment within the staging area and inspected and approved by the Engineer.

The seed bed shall be prepared by light harrowing using a cleaned and approved LGP agricultural tractor and a cleaned harrow until a fine, even seed bed is established.

After the seed bed is approved by the Engineer, the wetland seed shall be evenly applied over the entire area indicated as suited for this seed mixture by the Engineer at the rate of 10.0 lb (160.0 oz) per acre. Any seeding equipment used shall be adapted for use with fine-seeded native wetland seed and shall be approved by the Engineer. No more than 30,000 square feet of wetland (approximately 0.7 acres) will be seeded by Sun Wetland Seeding.

D Measurement

The department will measure Sun Wetland Seeding by the pound of pure live seed acceptably installed in the area indicated by the Engineer.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.003	Sun Wetland Seeding	LB

Payment is full compensation for furnishing, handling and storing all seed; for mixing the seed, for preparing the seed bed, sowing, covering and firming the seed; and for all labor, transportation, tools, equipment and incidentals necessary to complete the work.

20. Shade Wetland Seeding, Item SPV.0085.04.

A Description

This item consists of providing a native wetland seed mixture for shaded portions of the restoration area, preparing the seed bed and applying the seed mixture to the seed bed in the areas indicated by the Engineer.

B Materials

The following types and amounts of seed shall be supplied in separate, labeled bags for inspection and approval by the Engineer prior to mixing and seeding.

No chemical fertilizer shall be used.

All seed supplied by the contractor shall be at least 90% pure live seed, based on germination tests, and shall be current year crop.

Provide the following 2 species in the amounts listed for the respective species:

GRASSES AND SEDGES

Species		Amount, oz.
Carex grayi	Gray's sedge	8.0
Carex crinita	Fringed sedge	4.0

In addition provide 1 of the following 3 species in the amounts listed for the respective species:

GRASSES AND SEDGES

Species		Amount, oz.
Elymus riparius	Riverbank wild rye	16.0
Elymus virginicus	Virginia wild rye	16.0
Carex lupulina	Common hop sedge	12.0
	TOTAL MINIMUM OZ	32.0

Provide the following 2 species in the amounts listed for the respective species:

WILDFLOWERS

Species		Amount, oz.
Impatiens capensis	Jewelweed	8.0
Lycopus americanus	Water horehound	4.0

Provide 1 of the following 3 species in the amounts listed for the respective species:

WILDFLOWERS

Species		Amount, oz.
Aster lateriflorus	Calico aster	4.0
Boehmeria cylindrica	False nettle	4.0
Ranunculus scleratus	Annual buttercup	8.0

TOTAL MINIMUM OZ	20.0

TOTAL MINIMUM AGGREGATE WEIGHT, OZ 52.0

C Construction
Seeding shall occur before May 15 or after November 1.

No seeding equipment shall be allowed on the seed bed unless cleaned by high-pressure spray equipment within the staging area and inspected and approved by the Engineer.

The seed bed shall be prepared by light harrowing using a cleaned and approved LGP agricultural tractor and a cleaned harrow until a fine, even seed bed is established.

After the seed bed is approved by the Engineer, the wetland seed shall be evenly applied over the entire area indicated as suited for this seed mixture by the Engineer at the rate of 10.0 lb (160.0 oz) per acre. Any seeding equipment used shall be adapted for use with fine-seeded native wetland seed and shall be approved by the Engineer. No more than 30,000 square feet (approximately 0.70 acres) will be seeded by Shade Wetland Seeding.

D Measurement
The department will measure Shade Wetland Seeding by the pound of pure live seed acceptably installed in the area indicated by the Engineer.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.04	Shade Wetland Seeding	LB

Payment is full compensation for furnishing, handling and storing all seed; for mixing the seed, for preparing the seed bed, sowing, covering and firming the seed; and for all labor, transportation, tools, equipment and incidentals necessary to complete the work.

21. Temporary Haul Road Access for Structure Construction, Item SPV.0150.04.

A Description
Construct a temporary haul road from the Fox River and to the east through the Plum Creek wetland to facilitate construction of the bridge structure, as needed to transport equipment and materials, in accordance to the stipulations of the Section 404 permit. This item provides for construction, and maintenance of the temporary haul road throughout construction and for removing the temporary haul road after construction.

B Materials

Obtain approval of the engineer for all materials and conform to the pertinent requirements of the standard specifications. Provide clean virgin materials if stone is used; salvaged or recycled materials are not allowed.

C Construction

Wetlands are present throughout a significant portion of the area within the limits of this project and are identified in the plans. Operations, including constructed features, storage of equipment and materials, and stockpile of excavation from pier footings, shall occur only in permitted areas covered by the Section 404 permit, as shown in the plan. If the contractor determines additional areas for stockpiling or storage is required, the materials and/or equipment shall be hauled to another location outside the wetland areas. Address temporary erosion control in the erosion control implementation plan.

At least 14 days prior to the pre-construction meeting, submit a plan to the DNR for approval showing proposed dimensions within the permitted wetland boundaries, materials, method and timetable for construction of the temporary haul roads, and their removal.

Construct the temporary haul roads to obtain a usable travel way for delivery of equipment and materials.

Provide necessary temporary erosion control and culverts along the temporary haul road. Thoroughly remove all temporary haul road materials. If necessary, excavate materials below existing ground as necessary to backfill with materials contiguous to the area. Match existing depth of all organic material.

D Measurement

The department will measure Temporary Haul Road Access for Structure Construction as a single complete lump sum unit of work, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.04	Temporary Haul Road Access for Structure Construction	LS

Payment is full compensation for any additional agency coordination and/or permitting; for furnishing all materials; for constructing and maintaining the temporary haul road; for removing temporary haul road; for providing, installation and removal of temporary erosion control and culverts.

22. Temporary River Access for Structure B-05-381, Item SPV.0105.05; Temporary River Access for Structure B-05-736, Item SPV.0105.06.

A Description

Construct temporary accesses within the Fox River to construct piers 2-6 for Structure B-05-381 and to remove Structure B-05-736, as needed to transport equipment and materials, in accordance to the stipulations of the Section 404 permit. Said access consists of causeways within the limits of the Fox River and connected to the east and west banks of the Fox River. This item provides for the construction and maintenance of the shoreline access and causeways, removal of the causeway, and the restoration of the site.

B Materials

Obtain approval of the engineer for all materials and conform to the pertinent requirements of the standard specifications.

Provide clean virgin materials for the stone; salvaged or recycled materials are not allowed.

C Construction

Do not place materials within the limits of the Fox River between March 1 and June 15.

Operations, including constructed features, and storage of equipment and materials shall occur only in permitted areas covered by the Section 404 permit, as shown in the plan.

Address temporary erosion control, and erosion control to remain after construction, in the erosion control implementation plan.

At least 14 days prior to the pre-construction meeting, submit a plan to the DNR for approval showing proposed dimensions, materials, method and timetable for construction of the shoreline access road and causeway, and removal of the causeway.

The length of time the causeway is in place shall be limited as described under “Prosecution and Progress”.

To limit siltation in the Fox River, use clean stone predominately 6-inches or greater in at least one dimension with the fill placed over geotextile fabric and/or geogrid. Any stone to be used should be as free of fines as possible. Place geotextile fabric between the clean stone fill and the top driving surface of the causeway. Construct the shoreline access and causeway to accommodate the delivery of equipment and materials. Do not grub trees that must be removed in order to construct the causeway.

Use intermittent openings in the causeway to allow for continued river flow without causing excessive downstream scouring. Provide a minimum of one 18-inch diameter equalization pipe perpendicular to the causeway at maximum spacing of 50 feet.

The contractor is responsible for the design and stability of causeway.

Remove the causeway in such a manner that provides the least disturbance to the riverbed. Remove the top driving surface first and then the remainder of the causeway material. Place erosion mat over disturbed overbank areas. Include in the ECIP installation and removal procedures including restoration plan for the temporary causeway area. Construction of a

causeway and any associated materials for the causeway construction is incidental to structure bid items.

If a barge is used, place Warning Lights Type A every 25 feet around the perimeter of the barge.

Water level is subject to change. Make a determination of water levels that will exist during construction.

Provide seeding, topsoil, and erosion control for the shoreline access.

Though not expected to be necessary, if dredging is desired to facilitate means and methods of construction, obtain all necessary regulatory agency approvals.

Construction activities shall allow sufficient clearances for the navigation of boat and snowmobile traffic along the Fox River. As provided under the item "Traffic Control for the Fox River Recreational Vehicles", install devices for maintaining boat and snowmobile traffic during and after construction as shown in the plans, including buoys and signing, prior to the start of any work in the river.

When removing the causeway, restore the Fox River as closely as possible to its natural state. Thoroughly remove all causeway materials from the Fox River.

D Measurement

The department will measure Temporary Creek Access for Structure B-05-381 and Temporary Creek Access for Structure B-05-786 as a single complete lump sum unit of work, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Temporary River Access for Structure B-05-381	LS
SPV.0105.06	Temporary River Access for Structure B-05-786	LS

Payment is full compensation for any additional agency coordination and/or permitting; for furnishing all materials; for constructing and maintaining the shoreline access and causeways; for the removal of all causeway materials from the Fox River; for installation and removal of temporary erosion control along the shoreline access; for installation of erosion control to remain after construction along the shoreline access; for shaping the shoreline access to the original slope, and for seeding and topsoiling.

Appendix H. Wetland Impact Tracking Form

Wisconsin Department of Transportation

Division of Transportation System Development
Northeast Region

WETLAND IMPACT TRACKING FORM

This form must be filled out for all projects.

Return This Completed Form to:

Kathie VanPrice
Environmental Coordinator
WisDOT - Northeast Region
944 Vanderperren Way
Green Bay, WI 54304
Phone : (920) 492-7175
FAX: (920) 492-0144
kathie.vanprice@dot.wi.gov

Please Complete All Information Highlighted In Yellow

The Environmental Coordinator (EC) Will Supply Information Highlighted In Green

Project Design I.D. #:	4075-28-00
Project Construction I.D. #:	4075-28-71
Project Title :	Village of Wrightstown
	Fox River Bridge B-05-381
County :	Brown
Construction Year :	2014
Date this form is completed:	September 14, 2013

This Form Prepared by:	Steven Popke	920-496-0500	steven.popke@meadhunt.com
	NAME	PHONE	EMAIL

Is a discharge of dredged or fill material into wetlands anticipated?

NO [ ] **Form complete; no further information is required (RETURN FORM).**

YES [X] **Complete remainder of form and:**

1. Include this sheet with your DNR 401 and COE 404 permit applications.
2. When you receive DNR 401 final concurrence and COE 404 permit, return this form with:
   - **a.** D size copy of plan sheet showing impact areas.
   - **b.** A copy of the DNR 401 Water Quality Certification Letter.
   - **c.** A copy of the U.S. COE 404 permit (Cover letter only).

Wetland Delineation/ Determination completed by:	Erica King	262-790-0232	Erica.King@meadhunt.com
	NAME	PHONE	EMAIL
	Ecologist		
	QUALIFICATIONS		

Directions:

1. One location may be made up of several different wetland types. List each type of wetland impacted from each location on the project corridor separately in the table below.
2. Contact the Environmental Coordinator for appropriate ratio and bank information.
3. Use Department of Transportation Wetland Classification System.
4. Areas should be reported to the nearest 0.001-acre if possible.

Describe methods used to avoid and minimize impacts to wetlands:

Permanent Fill: The proposed roadway profiles were designed to minimized the extent of the east abutment embankment slope. Temporary Fill: The proposed temporary access road to construct the bridge was designed to minimize the extent of construction equipment impacts.

Point #	Wetland ID	Impact Location (project station)	Lat/Long	Type Impacted	Area Impacted	The Environmental Coordinator (EC) will provide this: Debit Ratio	Type Mitigated	Area Mitigated
	Permanent Impact							
	1	STA 127'EB'+75	Lon: -88.16182151074143° Lat: 44.32479984491825°	RPF(N)	0.170			
	1	STA 130'EB'+00	Lon: -88.16100908914548° Lat: 44.32463073788057°	M(D)	0.709			
	1	STA 126'EB'+75	Lon: -88.16219609408634° Lat: 44.32495478579064°	SS	0.129			
	Temporary Impact							
	1	STA 127'EB'+50	Lon: -88.16191711518209° Lat: 44.32482374779982°	RPF(N)	0.217			
	1	STA 129'EB'+25, 41' LT	Lon: -88.16123243573819° Lat: 44.32479614370446°	M(D)	0.313			
	1	STA 128'EB'+00, 45' LT	Lon: -88.16167852055779° Lat: 44.32490408892248°	SS	0.375			
			Lat: Long:					
			TOTAL		**1.913**			**0.000**

Is there potential for onsite mitigation? If unknown, check with the EC.

YES [ ] Where is it located? (T/R, station, map)

NO [X] List bank site to be used. **(Determined by EC)**

Please attach another sheet if the space provided is not adequate for all impacts or to add any additional comments.

Appendix I. Bridge Asbestos Inspection Report

Bridge Asbestos Inspection Report

WisDOT Project ID: 4095-12-00
Structure Number: B-05-0736
Structure Name: STH 96 over Fox River
City/County: Brown County
RMT Project Number: 06175.82.001
Date Inspected: March 14, 2011
Inspected By/License Number: John Roelke, AII-119523

Findings:

The inspection to identify and collect samples of potential asbestos-containing material (ACM) was completed following WisDOT standard sampling procedure for bridge inspections found in FDM 21-35-40.

None of the materials that were identified as potentially asbestos-containing material (ACM) and sampled tested positive for asbestos. The reconstruction can proceed as planned. Standard Special Provision (STSP) 107-125 should be included in the specifications.

Sample Number	Sample Description	Sample Location	Analytical Results and Method	Friable/ Non-friable or No ACM	Quantity of ACM Material
1	Caulk	Abutment wall expansion joint	PLM, non-detect	No ACM	0
2	Caulk	Abutment wall expansion joint	PLM, non-detect	No ACM	
3	Caulk	Abutment wall expansion joint	PLM, non-detect	No ACM	

744 Heartland Trail (53717-1982) • PO Box 8923 (53708-8923) • Madison, WI • (608) 831-4444 • (608) 831-3334 FAX • www.rmtinc.com

If you have any questions, please contact me, at (608) 662-5248.

RMT, Inc.

Richard P. Fish
Vice President

John Roelke
Asbestos Inspector

Attachments: Location Map, Photos, and Laboratory Reports

Report Distribution:

Recipient	Electronic (PDF) Copy	Paper Copy
BEES sharlene.tebeest@dot.wi.gov	X (via email)	X
REC Mike.Helmrick@dot.wi.gov	X (via email)	
Project Manager Bryan.Lipke@dot.wi.gov	X (via email)	
Other		

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WIS 96 & Fox River Bridge Approaches Corridor Study

Brown County

TB082008001MKE 1.1_Project_Location_Map_1 8.01.08 cae

EXHIBIT 1-1
Project Location Map

B-05-0736

Caulk in abutment expansion joint

Black rubber mat under guardrail attachment is not assumed to be asbestos-containing therefore no samples were collected.

EMSL Analytical, Inc.
14375 23rd Avenue North, Minneapolis, Mn 55447
Phone: (763) 449-4922 Fax: (763) 449-4924 Email: minneapolislab@emsl.com

Attn: **Angie Voit**
RMT, Inc.
744 Heartland Trail
P.O.Box 8923
Madison, WI 53708

Fax: (608) 831-3334 Phone: (608) 831-4444
Project: **06175.82.001**

Customer ID: RMT50
Customer PO:
Received: 03/15/11 10:00 AM
EMSL Order: 351101290

EMSL Proj: Wisconsin DOT Bridge
Analysis Date: 3/21/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
1 *351101290-0001*	B-5-736	Gray Fibrous Homogeneous	<1%	Glass	100% Non-fibrous (other)	**None Detected**
2 *351101290-0002*	B-5-736	Gray Fibrous Heterogeneous	<1%	Glass	100% Non-fibrous (other)	**None Detected**
3 *351101290-0003*	B-5-736	Gray Fibrous Homogeneous	<1%	Glass	100% Non-fibrous (other)	**None Detected**

Initial report from 03/21/2011 15:10:52

Analyst(s)

Kaitlyn Kubokawa (3)

Rachel Travis, Laboratory Manager
or other approved signatory

THIS IS THE LAST PAGE OF THE REPORT.