WATER QUALITY TRADING PLAN

May 15, 2026



City of Prairie du Chien
Wastewater Treatment Facility

WPDES Permit No. WI-0020257-09-0
400 West Lockwood St.
Prairie du Chien, Wisconsin 53821

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Project Number: D22-056

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I. Executive Summary -

This Water Quality Trading Plan summarizes the City of Prairie Du Chien's (City) plan to utilize Water Quality Trading (WQT) for compliance with the final total phosphorus limit as provided in the Wisconsin Pollutant Discharge Elimination System (WPDES) Permit #WI 0020257. The WQT Credit generation will include nonpoint source reduction of Total Phosphorus (TP) as modeled by the NRCS Streambank Erosion Estimator. Credits are then applied to the daily monitoring reports to demonstrate compliance. The Wastewater Treatment Facility (WWTF) currently treats approximately 0.791 MGD and will discharge effluent with an average Total Phosphorus (TP) concentration of approximately 0.55 mg/L. The WWTF plans to continue with chemical Phosphorus treatment and offset the remaining **361 lbs**. of TP with WQT Credits. The City intends to satisfy the 0.1 mg/L 6-month average and 0.3 mg/L monthly average TP limits with a Phase 2 WQT Project.

NRCS Streambank Erosion modeling methods were used to calculate the total phosphorus credits that would be generated based on the installation of best management practices (BMPs). These credits will be used to demonstrate compliance with the final total phosphorus limit as proposed in the WPDES Permit.

As demonstrated in modeling results from Table 1.1, the WWTF has the ability to offset approximately **428 lbs** of TP towards final TP compliance. The implementation of this WQT Plan will result in compliance with TP limits. The WWTF intends to monitor TP credit usage and intends to perform construction of additional BMPs in order to comply with final TP limits. A revised Water Quality Trading Plan will be submitted at that time for new BMP practices and credit production.

Table 1.1 – Modeling Results

ID	Lateral Recession Rate (ft/yr.)	Current Phosphorus Loading (lbs./yr.)	Proposed Phosphorus Loading (lbs./yr.)	Proposed Phosphorus Reductions (lbs./yr.)	Trade Ratio	Phosphorus Credits
A.1R	0.50	145	0	145	3.06:1	47
A.2R	0.50	156	0	156	3.06:1	51
A.3R	0.50	53	0	53	3.06:1	17
A.1L	0.25	80	0	80	3.06:1	26
A.2L	0.10	78	0	78	3.06:1	26
A.3L	0.50	43	0	43	3.06:1	14
1R	0.50	27	0	27	3.16:1	9
2R	0.50	5	0	5	3.16:1	2
3R	0.50	45	0	45	3.16:1	14
4R	0.50	60	0	60	3.16:1	19
10R	0.50	25	0	25	3.16:1	8
12R	0.50	31	0	31	3.16:1	10
13R	0.50	18	0	18	3.16:1	6
14R	0.50	53	0	53	3.16:1	17
15R	0.50	44	0	44	3.16:1	14
16R	0.50	82	0	82	3.16:1	26
1L	0.50	21	0	21	3.16:1	7
2L	0.50	14	0	14	3.16:1	4
3L	0.50	62	0	62	3.16:1	19
4L	0.50	14	0	14	3.16:1	5
5L	0.50	23	0	23	3.16:1	7
7L	0.50	7	0	7	3.16:1	2
8L	0.50	18	0	18	3.16:1	6
9L	0.50	18	0	18	3.16:1	6
10L	0.50	13	0	13	3.16:1	4
12L	0.50	168	0	168	3.16:1	53
13L	0.50	14	0	14	3.16:1	4
14L	0.50	17	0	17	3.16:1	5
					Total	**428**

NOTE:

Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty: Habitat Adjustment):1

Delivery = 0.06/0.16 (Credit generation and use are within same SPARROW catchment)

Delivery Factor (Campbell Coulee) = (1 / Delivery Fraction) – 1 = 0.06

Delivery Factor (Mill Coulee) = (1 / Delivery Fraction) – 1 = 0.16

Delivery Fraction = 1 – ((user del_frac – generator del_frac) / user del_frac)

User del_frac = 0.96

Campbell Coulee generator del_frac = 0.91

Mill Coulee generator del_frac = 0.83

Downstream = 0 (For trades upstream of Outfall 001)

Equivalency = 0 (Not necessary of Total Phosphorus)

Uncertainty: *Streambank Stabilization without Habitat Restoration* = 3

II. Background

The purpose of this Water Quality Trading Plan (Plan) is to describe the City's use of Water Quality Trading to comply with the total phosphorus limits as provided in the City's WPDES Permit #WI-0020257. The Plan was developed following the Notice of Intent to Conduct Water Quality Trading, provided in Attachment #1, dated June 8, 2021. The Water Quality Trading Checklist Form 3400-208 is provided in Attachment #2.

The City of Prairie Du Chien (City) is located in Crawford County at the intersection of Wisconsin State Trunk Highway '35' and S.T.H. '27'. The City is geographically located at the confluence of the Wisconsin River with the Mississippi River in southwest Wisconsin. Prairie Du Chien operates and maintains public wastewater and water for the City of Prairie Du Chien and Bridgeport Sanitary District.

The sanitary users are comprised of a mix of residential, commercial, and industrial development. The Wastewater Treatment Facility (WWTF) is located at 400 West Lockwood Street (Section 1, Town 6 North, Range 7 West of the Fourth Principal Meridian). The City is comprised primarily of residential development with no major industries. The Village is situated along the Mississippi River with the mostly flat grade sloping throughout the area at normally 0% to 0.7%. Elevations in the area range from approximately 615'± at the Wastewater Treatment Facility (WWTF) to 650'± at the east side of the City by the bluffs. The location of the WWTF and topography of the area is provided in Attachment #3 – Topography Map. The City of Prairie Du Chien has a population of 5,509 residents.

The existing sanitary sewer collection consists of approximately 30 miles of sanitary sewer and seven (7) lift stations. The gravity sanitary sewer main varies in composition between concrete, clay, and PVC. The manholes vary in composition between brick, block, and precast structures. Please refer to Attachment #4 – Sanitary Sewer Map for location of sanitary sewer collection system components

The City of Prairie Du Chien owns and operates a WWTF that utilizes a contact stabilization, activated sludge process. Wastewater enters the WWTF by first passing through one of two (2) mechanical screens and grit removal system. Wastewater then proceeds to the aeration tank where raw wastewater mixes with return activated sludge. Following the aeration tank, solids are removed from the process through settling in the final clarifiers. Effluent is disinfected seasonally via UV disinfection prior to discharge to the East Channel of the Mississippi River. Activated sludge settled in the final clarifiers is either returned to the reaeration tanks of the process for further treatment or wasted to the gravity belt thickener prior to the aerobic sludge storage tanks, where it is digested and stored prior to land application on DNR-approved sites. Currently, Alum is added to assist in the removal of Phosphorus. The City completed jar testing of chemical precipitates for phospohorus treatment. Results of the jar test indicated that Polyaluminum Chloride (PAC) could reduce effluent TP concentrations to below 0.1 mg/L. In Spring 2026, the City will complete pilot testing of PAC as a polishing chemical. The WWTF has an average daily design flow of 2.0 MGD. Please see Attachment #5– WWTF Layout for a plan view of the City of Prairie Du Chien's Wastewater Treatment Facility.

The monthly average influent and effluent flows and loadings at the WWTF for 2021 through 2025 are provided in Table 2.1, Table 2.2, Table 2.3, Table 2.4, and Table 2.5 respectively. An annual average summary table is provided in Table 2.6.

Table 2.1 – 2021 Monthly Phosphorus Averages

Month	Outfall	Effluent Avg. Flow (MGD)	Effluent Avg. TP Concentration (mg/L)	Effluent Avg. TP Mass (lbs/day)
Jan. ('21)	001	0.992	0.89	7.39
Feb. ('21)	001	1.043	0.54	4.66
Mar. ('21)	001	0.994	0.67	5.51
Apr. ('21)	001	0.999	0.75	6.21
May ('21)	001	0.956	0.98	7.81
Jun. ('21)	001	0.941	0.80	6.31
Jul. ('21)	001	0.937	0.83	6.46
Aug. ('21)	001	0.960	0.43	3.43
Sept. ('21)	001	0.942	0.86	6.77
Oct. ('21)	001	0.910	0.38	2.87
Nov. ('21)	001	0.932	0.20	1.57
Dec. ('21)	001	0.907	0.52	3.96
	Average:	**0.959**	**0.65**	**5.25**

Table 2.2 – 2022 Monthly Phosphorus Averages

Month	Outfall	Effluent Avg. Flow (MGD)	Effluent Avg. TP Concentration (mg/L)	Effluent Avg. TP Mass (lbs/day)
Jan. ('22)	001	0.946	0.85	6.70
Feb. ('22)	001	0.966	0.78	6.29
Mar. ('22)	001	0.767	0.58	3.70
Apr. ('22)	001	0.718	0.55	3.31
May ('22)	001	0.763	0.41	2.63
Jun. ('22)	001	0.697	0.92	5.35
Jul. ('22)	001	0.797	0.60	4.01
Aug. ('22)	001	0.733	0.24	1.48
Sept. ('22)	001	0.685	0.39	2.22
Oct. ('22)	001	0.648	0.89	4.84
Nov. ('22)	001	0.641	0.62	3.32
Dec. ('22)	001	0.603	0.65	3.27
	Average:	**0.747**	**0.62**	**3.93**

Table 2.3 – 2023 Monthly Phosphorus Averages

Month	Outfall	Effluent Avg. Flow (MGD)	Effluent Avg. TP Concentration (mg/L)	Effluent Avg. TP Mass (lbs/day)
Jan. ('23)	001	0.671	0.40	2.24
Feb. ('23)	001	0.658	0.39	2.14
Mar. ('23)	001	0.682	0.29	1.64
Apr. ('23)	001	1.592	0.42	5.55
May ('23)	001	1.395	1.14	13.22
Jun. ('23)	001	0.789	0.72	4.74
Jul. ('23)	001	0.669	0.36	2.04
Aug. ('23)	001	0.654	0.50	2.73
Sept. ('23)	001	0.623	0.63	3.29
Oct. ('23)	001	0.594	0.17	0.86
Nov. ('23)	001	0.594	0.65	3.20
Dec. ('23)	001	0.535	1.91	8.52
	Average:	**0.788**	**0.63**	**4.18**

Table 2.4 – 2024 Monthly Phosphorus Averages

Month	Outfall	Effluent Avg. Flow (MGD)	Effluent Avg. TP Concentration (mg/L)	Effluent Avg. TP Mass (lbs/day)
Jan. ('24)	001	0.574	0.35	1.67
Feb. ('24)	001	0.602	0.37	1.86
Mar. ('24)	001	0.610	0.37	1.89
Apr. ('24)	001	0.655	0.93	5.07
May ('24)	001	0.765	0.28	1.82
Jun. ('24)	001	1.015	0.38	3.23
Jul. ('24)	001	1.750	0.47	6.83
Aug. ('24)	001	0.847	0.46	3.25
Sept. ('24)	001	0.714	0.41	2.42
Oct. ('24)	001	0.649	0.43	2.35
Nov. ('24)	001	0.645	0.47	2.54
Dec. ('24)	001	0.653	0.57	3.09
	Average:	**0.790**	**0.46**	**3.00**

Table 2.5 – 2025 Monthly Phosphorus Averages

Month	Outfall	Effluent Avg. Flow (MGD)	Effluent Avg. TP Concentration (mg/L)	Effluent Avg. TP Mass (lbs/day)
Jan. ('25)	001	0.643	0.81	4.34
Feb. ('25)	001	0.631	0.43	2.28
Mar. ('25)	001	0.665	0.54	3.00
Apr. ('25)	001	0.689	0.36	2.07
May ('25)	001	0.710	0.25	1.50
Jun. ('25)	001	0.672	0.59	3.31
Jul. ('25)	001	0.750	0.42	2.66
Aug. ('25)	001	0.739	0.18	1.10
Sept. ('25)	001	0.684	0.16	0.92
Oct. ('25)	001	0.633	0.15	0.80
Nov. ('25)	001	0.618	0.50	2.59
Dec. ('25)	001	0.644	0.32	1.73
	Average:	**0.673**	**0.39**	**2.19**

Table 2.6 – Annual Phosphorus Averages

Year	Outfall	Effluent Avg. Flow (MGD)	Effluent Avg. TP Concentration (mg/L)	Effluent TP Mass (lbs./Day)
2021	001	0.959	0.65	5.25
2022	001	0.747	0.62	3.93
2023	001	0.788	0.63	4.18
2024	001	0.790	0.46	3.00
2025	001	0.673	0.39	2.19
Annual Average =		**0.791**	**0.55**	**3.71**

Currently, the City has been able to maintain an average Total Phosphorus effluent of 0.55 mg/L which is well within the current WPDES interim limit of 1.0 mg/L. The City has also implemented source reduction measures such as investigating potential TP contributors, has checked with the following businesses for Phosphorus contribution, and will continue its investigation of Phosphorus contributors:

1. PdC Auto Wash
2. Casey's – Auto Wash
3. Krachey's BP – Auto Wash
4. Country Inn & Suites
5. Microtel Inn & Suites
6. River District Hotel
7. BA Kennedy School
8. PdC High School
9. Bluff View School
10. Crossing Rivers Hospital
11. Prairie Industries
12. AMPI – Associated Milk Producers, Inc.
13. 3M

During the initial evaluation of sanitary dischargers, it was determined that AMPI was a major contributor of Phosphorus. The City intends to continue educating sewer users in 2023. Educational materials provided to sewer users are provided at the City Website: http://www.cityofpdc.com/departments/wastewater-department/

The City has investigated watershed compliance alternatives such as Water Quality Trading (WQT) and Adaptive Management (AM). Stream monitoring from 2005 to 2010 confirmed that the Mississippi River was an impaired water due to TP. As calculated in the Water Quality Based Effluent Limit (WQBEL) on February 20, 2015, all rolling median TP concentrations exceeded the water quality criterion of 0.100 mg/L. Following initial investigation, the City elected to move forward with WQT. The City intends to perform WQT projects upstream of the outfall but within the City's Hydrological Unit Code – 12 (HUC-12) watershed #070600011003 as provided in Attachment #6.

As represented in Table 2.6, recent phosphorus treatment optimization changes made at the WWTF to have significantly reduced effluent phosphorus concentrations. It is believed the WWTF will be able to maintain effluent concentrations below 0.50 mg/L. Flow and loading data from 2021 through 2025 was utilized to determine credits needed. Annual effluent TP was estimated at 1331 lbs. The final limit would allow annual discharge of 241 lbs. The City would be required to offset at least 1090 lbs. of effluent TP. Calculations for required WQT reductions are provided below.

1) The current annual Phosphorus loading discharged at the WWTF is calculated as follows:

   Seasonal Average Daily Flow (Q) = 0.791 MGD
   Average Phosphorus concentration = 0.55 mg/L

   0.791 MGD x 0.55 mg/L x 8.34 x 365 days/yr. = **1331 lbs./yr**.

2) The proposed allowable annual Phosphorus mass limit at the WWTF is calculated as follows:

   Seasonal Average Daily Flow (Q) = 0.791 MGD
   Proposed Seasonal Phosphorus Concentration Limit = 0.10 mg/L

   0.791 MGD x 0.10 mg/L x 8.34 x 365 days/yr. = **241 lbs./yr**.

3) Reduction of Total Phosphorus required at WWTF:

   1331 lbs./yr. – 241 lbs./yr. = **1090 lbs./yr.**

However, the City is currently testing PAC and is anticipated to reduce TP concentrations to a typical level of below 0.27 mg/L when utilized with chemical Alum. The addition of chemical Alum and PAC is expected to set the required offset to a level as displayed below:

(0.25 - 0.1) mg/L x 0.791 MGD x 8.34 x 365 days/yr = **361 lbs/yr**

To generate the required **361 TP Credits**, the City intends to perform streambank stabilization. The City intends to generate additional credits as a factor of safety and for future growth.

III. Location and Description of Credit Generation Sites –

The City discharges to the East Channel of the Mississippi River in the Rush Creek Watershed of the Bad Axe – La Crosse River Basin in Crawford County at Outfall 001. As mentioned previously, the City intends to perform WQT projects within the City's HUC-12 #070600011003. The City plans to perform streambank stabilization which will utilize grading and/or riprap to prevent the erosion of sediment from the streambanks. Projects will occur on private property. Streambank stabilization will not only prevent sediment from entering the stream, but will also prevent phosphorus, nitrogen, and other pollutants from discharging to the Mississippi River. See Figure 3.1 for additional project location information.

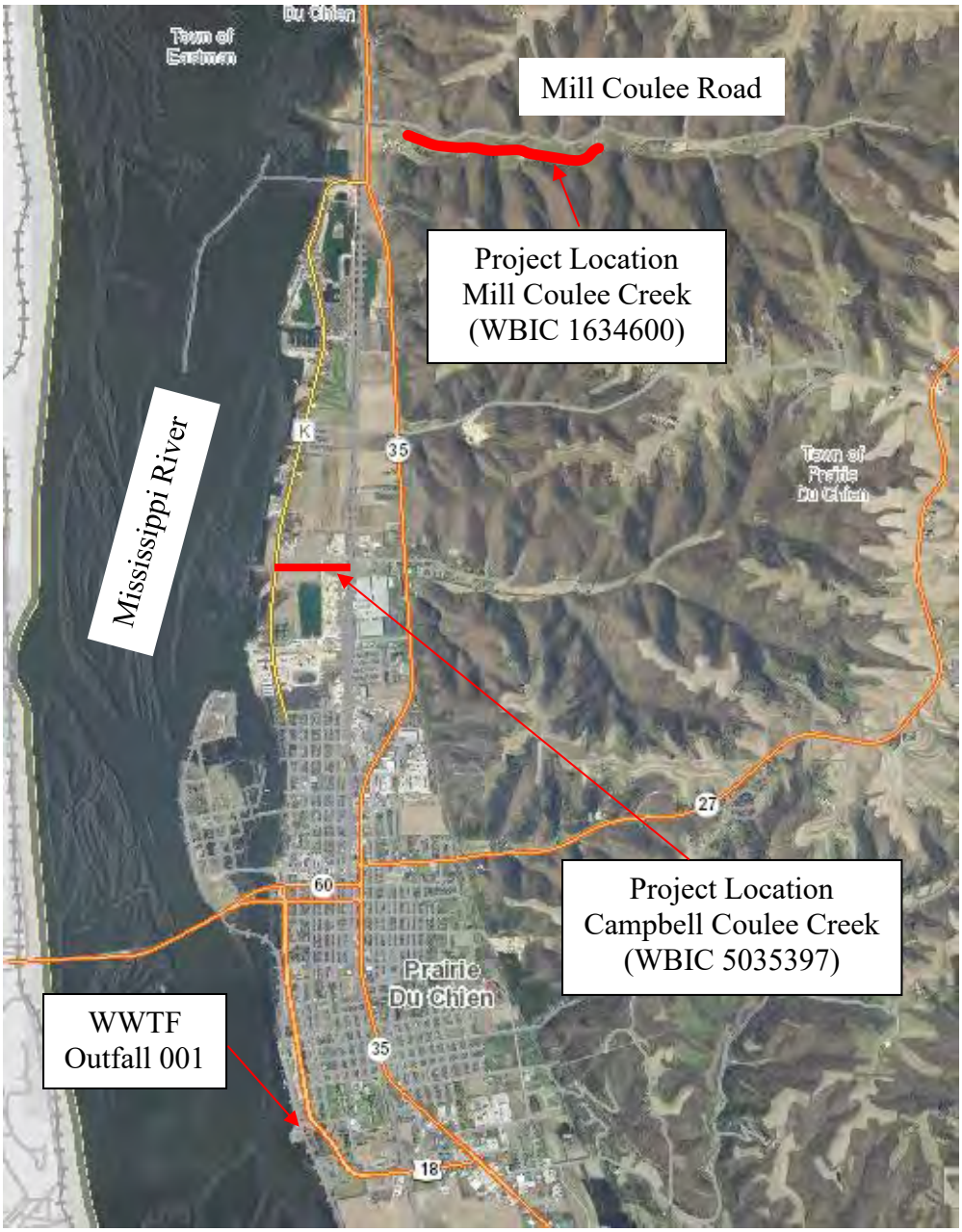


Figure 3.1 – Project locations in relation to Outfall 001

IV. Methods for Nonpoint Source Load Reduction –

A. Methods Used to Generate Load Reductions

The project location described above was inspected by a Professional Engineer in order to identify locations of severe erosion along the Mill Coulee Creek and Campbell Coulee Creek. Signs to identify severe erosion include but are not limited to: streambanks missing vegetation, presence of slumps and rills, tree roots extruding from the streambank, fallen trees as a result of soil being eroded from underneath the trunk. The primary method to remediate the erosion sites is to re-grade the existing streambanks for the length of the active erosion to a more stable slope of 6:1. At a 6:1 slope, streambanks with vegetation alone are generally able to inhibit erosion from flowing rivers and streams under ordinary circumstances. The use of riprap as a method to remediate the actively eroding streambanks allows us to protect the streambanks from erosion and retain a steeper slope of 2:1 because the riprap is able to absorb and deflect the energy of the flowing water. The advantage of re-grading the streambank at a steeper slope is that less material will have to be excavated and removed from the site for construction. Additionally, the use of riprap allows us keep from infringing on property lines, roadways, and agriculture fields.

The Water Quality Trading Plan identifies streambank stabilization practices that will reduce TP runoff from nonpoint sources. The City has the ability to generate TP load reductions through streambank grading and/or rip-rap of approximately 10,620 lineal feet of streambank.

Streambank Stabilization will be performed as per NR 328 *Shore Erosion Control Structures in Navigable Waterways and* NRCS 580 *Streambank and Shoreline Protection*. Streambank shaping and riprapping will eliminate the discharge of sediment to the stream. The streambank stabilization project will occur within HUC-12 #070600011003 in order to generate TP credits. Standard Plans and Specifications for the Project Site will be provided by a Professional Engineer. The City will also acquire all required permits and authorizations for the Projects.

To register credits, the City has entered into trade agreements with Property Owners pursuant to *s. 283.84(1)(b), Wis. Stats*.

B. History of Project Site

The Project is planned within the Rush Creek Watershed. The project location is on private properties along Campbell Coulee Creek (WBIC 5035397) and Mill Coulee Creek (WBIC 1634600). Land use consists of crop land and cattle pasture. Vegetative cover is primarily crops and grass with scattered trees. No mapped wetlands will be impacted by the WQT Project as indicated in Attachment #7 – Wetland Maps.

The streambanks have experienced significant erosion as the watershed has been cleared for residential and agricultural use. Residential development and agricultural

practices caused long term deposition of silt within the floodplain followed by decades of stream morphology eroding a new channel through the deposition. The banks within the project location are generally outside bends of the stream which receive higher stream velocity and thus have a higher erosion potential.

The banks are bare with slumps, rills and severe vegetative overhang throughout. Severe erosion indicators such as undercuts, slumps, tree roots, and fallen trees are readily visible throughout the site. The erosion indicators demonstrate the lateral recession rate based on the NRCS Recession Rate Table.

Reach 1 is located within an active pastured land use area. Livestock with access to this site shall be restricted to the practices identified in the Grazing Plan, provided in Attachment #8, in order to protect the riparian. The Grazing Plan was written in accordance to NRCS 110 *Conservation Planning Activity,* NRCS 528 *Prescribed Grazing,* and the Crawford County Conservation Department. Per the Crawford County Conservation Department, a maximum of one (1) Animal Unit (AU) per Acre should be followed to conserve forage and prevent erosion.

C. Trade Ratio

The Plan identifies trading practices that will reduce TP runoff. However, the DNR requires a trade ratio to provide a safety factor for meeting water quality standards. Trade ratios consider pollutant reductions of varying certainty, location, and type. A trade ratio of 3.16:1 was derived in accordance with Section 3.4 of the Wisconsin Department of Natural Resources' *Guidance for Implementing Water Quality Trading in WPDES Permits (Edition 2)* as follows:

Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty: Habitat Adjustment):1

Delivery = 0.06/0.16 (Credit generation and use are within same SPARROW catchment)

Delivery Factor (Campbell Coulee) = (1 / Delivery Fraction) – 1 = 0.06

Delivery Factor (Mill Coulee) = (1 / Delivery Fraction) – 1 = 0.16

Delivery Fraction = 1 – ((user del_frac – generator del_frac) / user del_frac)

user del_frac = 0.96

Campbell Coulee generator del_frac = 0.91

Mill Coulee generator del_frac = 0.83

Downstream = 0 (For trades upstream of Outfall 001)

Equivalency = 0 (Not necessary of Total Phosphorus)

Uncertainty: *Streambank Stabilization without Habitat Restoration* = 3

A Delivery Factor is included in the trade ratio to account for phosphorus removed by natural attenuation processes and ensure trades offset a sufficient amount of phosphorus prior to the WWTF outfall. The Delivery Factor was calculated in accordance to Appendix G - Management Practices and Associated Information of the Wisconsin Department of Natural Resources *Guidance for implementing Water Quality Trading in WPDES Permits (Edition 2)* and the DNR's SPARROW Model. See Attachment #9 – SPARROW Model Map.

The uncertainty factor was determined from Appendix H – Management Practices and Associated Information of the Wisconsin Department of Natural Resources *Guidance for implementing Water Quality Trading in WPDES Permits (Edition 2)*.

D. Model Used to Derive Load Reductions

NRCS Streambank Erosion modeling methods were used to calculate the total phosphorus credits that would be generated based on the installation of BMPs. These credits will be used to demonstrate compliance with the final total phosphorus limit as proposed in the WPDES Permit. Modeling results are provided in Table 4.1. If the Plan or model inputs change during construction, the City will submit to the DNR the revised models and calculations to more accurately reflect the number of credits generated.

Table 4.2 – Modeling Results

ID	Lateral Recession Rate (ft/yr.)	Current Phosphorus Loading (lbs./yr.)	Proposed Phosphorus Loading (lbs./yr.)	Proposed Phosphorus Reductions (lbs./yr.)	Trade Ratio	Phosphorus Credits
A.1R	0.50	145	0	145	3.06:1	47
A.2R	0.50	156	0	156	3.06:1	51
A.3R	0.50	53	0	53	3.06:1	17
A.1L	0.25	80	0	80	3.06:1	26
A.2L	0.10	78	0	78	3.06:1	26
A.3L	0.50	43	0	43	3.06:1	14
1R	0.50	27	0	27	3.16:1	9
2R	0.50	5	0	5	3.16:1	2
3R	0.50	45	0	45	3.16:1	14
4R	0.50	60	0	60	3.16:1	19
10R	0.50	25	0	25	3.16:1	8
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2L	0.50	14	0	14	3.16:1	4
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5L	0.50	23	0	23	3.16:1	7
7L	0.50	7	0	7	3.16:1	2
8L	0.50	18	0	18	3.16:1	6
9L	0.50	18	0	18	3.16:1	6
10L	0.50	13	0	13	3.16:1	4
12L	0.50	168	0	168	3.16:1	53
13L	0.50	14	0	14	3.16:1	4
14L	0.50	17	0	17	3.16:1	5
					Total	**428**

NOTE:

Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty: Habitat Adjustment):1

Delivery = 0.06/0.16 (Credit generation and use are within same SPARROW catchment)

Delivery Factor (Campbell Coulee) = (1 / Delivery Fraction) – 1 = 0.06

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User del_frac = 0.96

Campbell Coulee generator del_frac = 0.91

Mill Coulee generator del_frac = 0.83

Downstream = 0 (For trades upstream of Outfall 001)

Equivalency = 0 (Not necessary of Total Phosphorus)

Uncertainty: *Streambank Stabilization without Habitat Restoration* = 3

Soil testing has been completed to determine TP concentrations within the soil. Soil sampling was performed approximately every 200 feet and included the use of a soil sampler which pulled ¾" cores at 8" depth. Approximately six (6) cores were taken at each sampling location to provide a representative sample. Soils maps and soil testing data is provided in Attachment #10.

Streambank cross sections were surveyed every 200 feet with global position system (GPS) equipment. The site was also surveyed with an aerial drone. The bank height was calculated by using the horizontal distance and vertical difference of GPS survey points located at the water line and the top of eroded area. Bank heights were calculated using the Pythagorean Theorem:

$c = \sqrt{a^2 + b^2}$)
c = bank height (hypotenuse) (feet)
a = vertical bank (feet)
b = horizontal bank (feet)

Streambank heights were then calculated as per guidance for the NRCS Streambank Erosion Estimator. An average height was determined for each reach for input to the NRCS Streambank Erosion Estimator. An onsite evaluation has been conducted to estimate stream bank recession rate. The data, narrative, and photos documenting the current state of eroding stream banks are provided in Attachment #11.

With the collected data, the NRCS Streambank Erosion Estimator was used to calculate TP loss from each reach of the eroding streambank. The modeling data for the NRCS Streambank Erosion Estimator is available in Attachment #12. The streambank grading and riprap design will eliminate streambank recession thus eliminating TP inputs within the Project areas. A data summary for each reach is provided in Table 4.3 below. Bank height calculations are provided below. Figure 4.1 demonstrates how bank height is calculated in the field.

Table 4.3 - Reach Summary

ID	Length (feet)	Number of Cross Sections	Average Vertical Bank (feet)	Average Horizontal Bank (feet)	Average Bank Height (feet)
A.1R	925	5	5.4	4.6	7.12
A.2R	1,200	6	4.33	4.67	6.44
A.3R	150	1	7.00	13.00	14.76
A.1L	925	5	4.40	5.40	6.99
A.2L	1,200	6	8.00	9.17	12.28
A.3L	150	1	8.00	7.00	10.63
1R	159	1	4.05	10.50	11.25
2R	39	1	6.31	5.80	8.57
3R	426	3	4.53	5.23	6.94
4R	991	6	2.63	4.00	4.92
10R	258	2	2.94	5.10	6.13
12R	165	1	8.12	8.90	12.05
13R	257	2	3.56	5.55	6.61
14R	177	1	3.66	15.30	15.73
15R	291	1	4.84	6.30	7.94
16R	368	2	5.60	11.20	12.78
1L	172	2	4.66	7.00	8.54
2L	135	1	5.00	5.20	7.21
3L	610	3	3.36	6.23	7.11
4L	149	2	3.70	5.80	6.90
5L	326	1	3.84	5.50	6.71
7L	213	1	0.86	1.10	1.40
8L	154	2	3.13	3.70	4.85
9L	254	1	2.30	2.50	3.40
10L	173	1	3.76	5.10	6.34
12L	595	3	6.79	12.70	14.43
13L	97	1	5.15	3.50	6.23
14L	64	1	9.23	6.60	11.35

An example of the bank height calculation is provided below:

$c = \sqrt{a^2 + b^2}$)

c = bank height (hypotenuse) (feet)

a = vertical bank (feet)

b = horizontal bank (feet)

a = 105.00' – 100.00' = 5.00'

b = 2.50' (horizontal measurement from AutoCAD Civil3D)

$c = \sqrt{5.00^2 + 2.50^2}$) = 5.59'

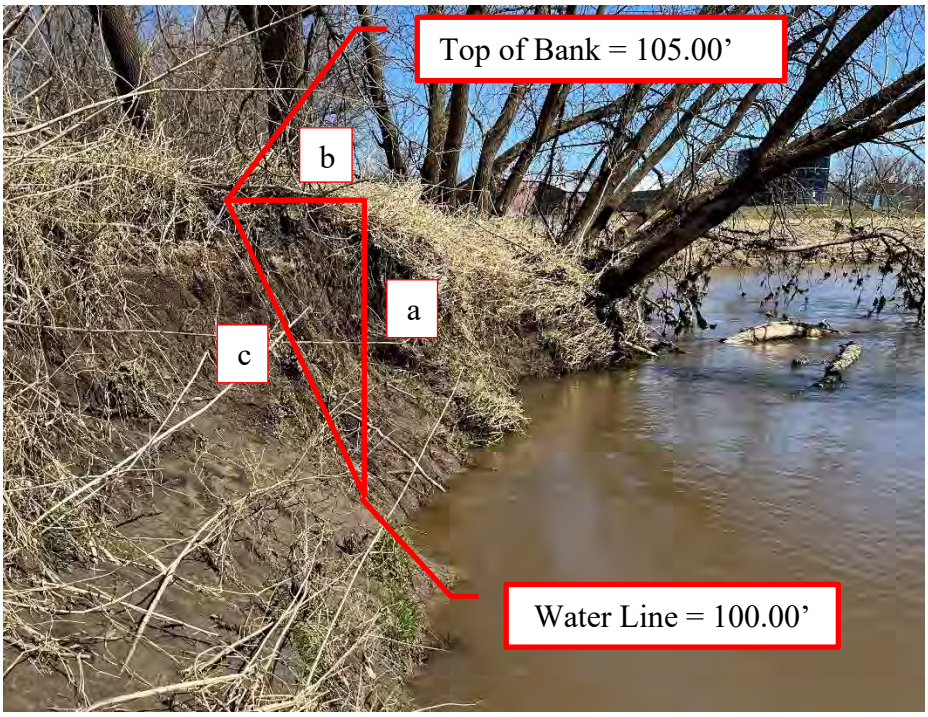


Figure 4.1 – Bank Hight Calculation Example

E. Operation and Maintenance

An Operation and Maintenance (O&M) Plan is provided in Attachment #13. The O&M plan describes how the Stream Stabilization Practices will be operated and maintained. The O&M Plan also addresses response procedures for Practice Registration, Noncompliance Notification, and Notification of Trade Agreement Termination.

As previously mentioned, the City is planning to perform streambank stabilization by implementing BMPs for streambank stabilization. The stabilization practices will be installed and maintained per the Plans and Specifications as provided in Attachment #14. BMPs are to follow NR 328 *Shore Erosion Control Structures in Navigable Waterways* and NRCS 580 *Streambank and Shoreline Protection*.

Restoration landscaping and seeding will be installed following construction and will be closely monitored for a minimum of two (2) growing seasons to ensure the new seeding grows and erosion is not prevalent. Weeds and invasive vegetation growth will be addressed if present. The BMP will be inspected following heavy rain events at a minimum. Inspection will be used to determine appropriate actions in order to maintain the BMP for continuous and ongoing streambank stabilization and TP credit generation.

The BMPs will be inspected annually by a licensed Professional Engineer to ensure that the BMPs are functioning as intended in order to meet the requirements of this WQT Plan.

V. Trade Timeline –

Schedule for Installation of the above mentioned trading practices for Total Phosphorus Credit Generation for TP compliance is provided in Table 5.1 below.

Table 5.1 – Trade Timeline

Item	Completion Timeline
Submit Revised WQT Plan	April 30, 2026
DNR Approval of WQT Plan	May 31, 2026
DNR Construction Permit Approvals	June 30, 2026
Begin Construction of WQT Practices	July 31, 2026
Phosphorus Credit Registration	December 31, 2026
Use of Phosphorus Credits (Ongoing for Permit Compliance)	January 1, 2027
Submit Revised WQT Plan	April 30, 2026
DNR Approval of WQT Plan	May 31, 2026

Credits will be used by the WWTF following a request to modify the City's WPDES Permit once construction of the BMPs is complete. Credits will continue as long as the trading practices are maintained as outlined in this WQT Plan.

VI. Inspection Reporting –

A. Tracking Procedures

The City will track credits used monthly. The City will report credit usage to the DNR on a monthly basis in the Discharge Monitoring Reports (DMRs). The annual report will summarize the 12 months of credit usage and credit generation. The City will report to DNR any concern that they have that may result in a need to modify the trade agreement and/or this trade plan. For example, a need to generate additional credits based on discharge.

B. Inspection

Inspection of the BMPs shall occur during construction phase to ensure they are installed per the design and meet all applicable codes and permits. Once completed, inspections of the established BMPs shall occur each month at a minimum or following heavy rain events. A licensed professional engineer will perform an annual certification to ensure the practice is performing as designed and the City remains in compliance.

The inspection reports will include:

i. Name and contact information of the inspector
ii. Inspection Date
iii. Relevant standards set forth in the Design Plan or Operation and Maintenance Plan
iv. Vegetative and Structural Conditions of the streambanks
v. Issues identified
vi. When and how any issues identified were addressed
vii. When and how any issues identified will be addressed in the future
viii. Photos of each BMP

Inspection reports generated during each routine or after rain event inspection will be included with the Annual Water Quality Trading Report submitted by the City to DNR. Annual inspections by a professional engineer will typically occur in April or May. This time of year is ideal for evaluating the condition of BMPs as it follows the freeze/thaw which poses the greatest potential for changes to the BMPs. Minimal vegetation cover will allow for adequate visual inspection.

C. Management Practice Registration Form

The City will file a completed registration form 3400-207 for Water Quality Trading Management Practice Registration separately from this Plan.

D. Annual Water Quality Trading Report Submittal

The following shall be submitted to the DNR by January 31 of each year:

i. The number of pollutant reduction credits (lbs./month) used each month of the previous year to demonstrate compliance;
ii. A summary of the annual inspection of the practice that generated any of the pollutant reduction credits used during the previous year, this inspection shall be completed by a licensed Professional Engineer;
iii. All monthly inspection reports;
iv. Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports;
v. A list of all noncompliance and the correction measures and timing to address the issues throughout the year; and
vi. An updated WQT plan if management practices have or will change.

E. Monthly Certification of Management Practices

Each month, the City will certify that the BMPs are maintained and operating in a manner consistent with this Water Quality Trading Plan or provide a statement noting noncompliance with this Plan. The monthly Discharge Monitoring Report (DMR) will include the following statement as a certification of compliance when the Credit Generating Practice is operating in a manner consistent with the Plan:

> "I certify that to the best of my knowledge that the management practices identified in the approved water quality trading plan as the source of phosphorus credits is installed, established and properly maintained."

F. Notification of Failure to Generate Credits

The City will notify DNR by telephone call to DNR's regional wastewater compliance engineer within 24 hours or next business day of becoming aware that phosphorus credits used or intended for use by City are not being generated as outlined in this Water Quality Trading Plan.

The City will submit a written notification within five days after the City recognizes that the phosphorus credits are not being generated as outlined in the Trading Plan. DNR may waive the requirement for submittal for a written notice within five days and instruct the City to submit the written notice with the next regularly scheduled monitoring report required by City's WPDES Permit.

The written notice will contain a description of how and why the TP credits are not being generated as outlined in the Water Quality Trading Plan, the steps taken or planned to prevent reoccurrence of the identified problems and the length of time anticipated it will take to address the issue.

The City will work to rectify the problem as laid out in the Operation and Maintenance Plans.

G. Conditions under which Management Practices May Be Inspected

Any DNR authorized officer, employee, or representative has the right to access and inspect the credit generating practice so long as the City's trade agreement with the property owner(s) and this Water Quality Trading Plan remain in effect. Notification to the property owner prior to access is required.

VII. Certification –

The undersigned hereby certifies that this Water Quality Trading Plan is accurate and correct to the best of his knowledge.

City of Prairie Du Chien Wastewater Treatment Facility

By: Larry Gates

Larry Gates
Utility Director
City of Prairie Du Chien
214 East Blackhawk Avenue
P.O. Box 324
Prairie du Chien, WI 53821
Telephone: (608) 326-6406
Email: lgates@prairieduchien-wi.gov

Attachement #1

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., and ch. NR 217 Wis. Adm. Code, this form must be completed by any WPDES permittee that is using water quality trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number	Facility Site Number
City of Prairie du Chien	WI- 0020257	

Facility Address	City	State	ZIP Code
400 West Lockwood Street	Prairie du Chien	WI	53821

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Jordan Fure (Delta 3 Eng.)	875 Sout Chestnut Street	Platteville	WI	53808

Project Name
Prairie du Chien WQT Project

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Mississippi River	Phosphorus	070600011003

Is the permittee in a point or nonpoint source dominated watershed? (See PRESTO results - http://dnr.wi.gov/topic/surfacewater/presto.html)
- ○ Point source dominated
- ○ Nonpoint source dominated

Credit Generator Information

Credit generator type (select all that apply):
- ☐ Permitted Discharge (non-MS4/CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☒ Urban nonpoint source discharge
- ☒ Agricultural nonpoint source discharge
- ☐ Other - Specify: _____

Are any of the credit generators in a different HUC 12 than the applicant?
- ○ Yes; HUC 12: _____
- ◉ No
- ○ Unsure

Are any of the credit generators downstream of the applicant?
- ○ Yes
- ◉ No
- ○ Unsure

Will a broker/exchange be used to facilitate trade?
- ○ Yes; Name: _____
- ◉ No
- ○ Unsure

Point to Point Trades (Traditional Municipal / Industrial Discharge, MS4, CAFO)

Discharge Type	Permit Number	Name	Contact Address	Is the point source credit generator currently in compliance with their permit requirements?
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure

Point to Nonpoint Trades (Non-permitted Agricultural, Non-Permitted Urban, etc.)

List the practices that will be used to generate credits:

Streambank stabilization

Method for quantifying credits generated:

- ☐ Monitoring
- ☒ Modeling, Names: NRCS Streambank Erosion Estimator
- ☐ Other: _____

Projected date credits will be available: 07/01/2023

The preparer certifies all of the following:

- I am familiar with the specifications submitted for this application, and I believe all applicable items in this checklist have been addressed.
- I have completed this document to the best of my knowledge and have not excluded pertinent information.

Signature of Preparer	Date Signed
Jordan Turner	6/7/2021

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed
Barry Gates	6/8/21

Attachment #2

State of WisconsinDepartment of
Natural Resources101 South Webster
Street
Madison WI 53707-7921dnr.wi.gov

Water Quality Trading Checklist

Form 3400-208 (1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., this form must be completed by any WPDES permittee that intends to pursue pollutant trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number	Facility Site Number
City of Prairie du Chien	WI- 0020257	

Facility Address	City	State	ZIP Code
400 West Lockwood Street	Prairie du Chien	WI	53821

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Jordan Fure (Delta 3 Eng.)	875 South Chestnut Street	Platteville	WI	53818

Project Name
Proposed 2023 Stream Improvements

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Mississippi River	Total Phosphorus	070600011003

Credit Generator Information

Credit generator type (select all that apply):

- ☐ Permitted Discharge (non-MS4CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☑ Urban nonpoint source discharge
- ☑ Agricultural nonpoint source discharge
- ☐ Other - Specify:

Are any of the credit generators in a different HUC 12 than the applicant? ○ Yes; HUC 12: ○ No (●)

Are any of the credit generators downstream of the applicant? ○ Yes ○ No (●)

Will a broker/exchange be used to facilitate trade? ○ Yes *(include description and contact information in WQT plan)* ○ No (●)

Point to Point Trades (Traditional Municipal / Industrial, MS4, CAFO)

Are each of the point source credit generators identified in this section in compliance with their WDPES permit requirements? ○ Yes ○ No

Discharge Type	Permit Number	Name	Contact Information	Trade Agreement Number
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				

Point to Point Trades (Traditional Municipal / Industrial, MS4, CAFO) *cont.*

Does plan have a narrative that describes:			Plan Section
a. Summary of discharge and existing treatment including optimization	○ Yes	○ No	
b. Amount of credit being generated	○ Yes	○ No	
c. Timeline for credits and agreements	○ Yes	○ No	
d. Method for quantifying credits	○ Yes	○ No	
e. Tracking and verification procedures	○ Yes	○ No	
f. Location of credit generator in proximity to receiving water and credit user	○ Yes	○ No	
g. Other: _____	○ Yes	○ No	

Point to Nonpoint Trades (Non-Permitted Urban, Agricultural, Other)

Discharge Type	Practices Used to Generate Credits	Method of Quantification	Trade Agreement Number	Have the practice(s) been formally registered?
○ Urban NPS ◉ Agricultural NPS ○ Other	Streambank Stabilization	NRCS Streambank Erosion Estimator		○ Yes ◉ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part

Does plan have a narrative that describes:			Plan Section
a. Description of existing land uses	◉ Yes	○ No	*Section IV*
b. Management practices used to generate credits	◉ Yes	○ No	*Section IV*
c. Amount of credit being generated	◉ Yes	○ No	*Section IV*
d. Description of applicable trade ratio per agreement/management practice	◉ Yes	○ No	*Section IV*
e. Location where credits will be generated	◉ Yes	○ No	*Section III*
f. Timeline for credits and agreements	◉ Yes	○ No	*Section V*
g. Method for quantifying credits	◉ Yes	○ No	*Section IV*

Does plan have a narrative that describes:			Plan Section
h. Tracking procedures	◉ Yes	○ No	Section IV
i. Conditions under which the management practices may be inspected	◉ Yes	○ No	Section VI
j. Reporting requirements should the management practice fail	◉ Yes	○ No	Section VI
k. Operation and maintenance plan for each management practice	◉ Yes	○ No	Section IV
l. Location of credit generator in proximity to receiving water and credit user	◉ Yes	○ No	Section III
m. Practice registration documents, if available	○ Yes	◉ No	
n. History of project site(s)	◉ Yes	○ No	Section IV
o. Other: _____	○ Yes	○ No	

The preparer certifies all of the following:

- I am familiar with the specifications submitted for this application, and I believe all applicable items in this checklist have been addressed.
- I have completed this document to the best of my knowledge and have not excluded pertinent information.
- I certify that the information in this document is true to the best of my knowledge.

Signature of Preparer	Date Signed
John Finn	4-17-2023

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed
Larry Gates	4/17/23

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Attachment #3

Topographical Map - Prairie du Chien



Legend: (some map layers may not be displayed)

- Rivers and Streams
- Intermittent Streams
- Open Water
- Rivers and Streams
- Intermittent Streams
- Open Water
- 24K Intermittent Streams
- 24K Lakes and Open Water

100K USGS DRGs

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 8
- 9
- 10

Notes:

Service Layer Credits:
DNR Basic Feature VTL (WTM): Wisconsin Department of Natural Resources, GIS Section, Surface Water: WiDNR, USGS, and other data, Topographic Maps:

Map projection: NAD 1983 HARN Wisconsin TM

N

Map: 0 3,000 6,000 Feet
0 890 1,780 Meters



This map is a product generated by a DNR web mapping application.

This map is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. The user is solely responsible for verifying the accuracy of information before using for any purpose. By using this product for any purpose user agrees to be bound by all disclaimers found here: https://dnr.wisconsin.gov/legal.

Date Printed: 4/24/2026 1:07 PM

Attachment #4

CITY OF PRAIRIE DU CHIEN
SANITARY SEWER SYSTEM MAP

LEGEND

- CITY LIMITS
- 6" SANITARY
- 8" SANITARY
- 10" SANITARY
- 12" SANITARY
- 15" SANITARY
- 18" SANITARY
- 21" SANITARY
- FORCE MAIN

< DIRECTION OF FLOW

MANHOLE

■ [X] LIFT STATION & NO.

- [1] CABELA'S LIFT STATION
- [2] N. MAIN STREET
- [3] WASHINGTON STREET
- [4] IOWA STREET
- [5] BRUNSON COURT
- [6] WACOUTA AVE.
- [7] CROSSING RIVER HOSPITAL
- [8] MEADOW LANE

(1) LIFT STATION SERVICE AREA

LIFT STATION(S) SERVING AREA

N

W E

S

GRAPHIC SCALE FEET
0 125 250 500

DECEMBER 29, 2014

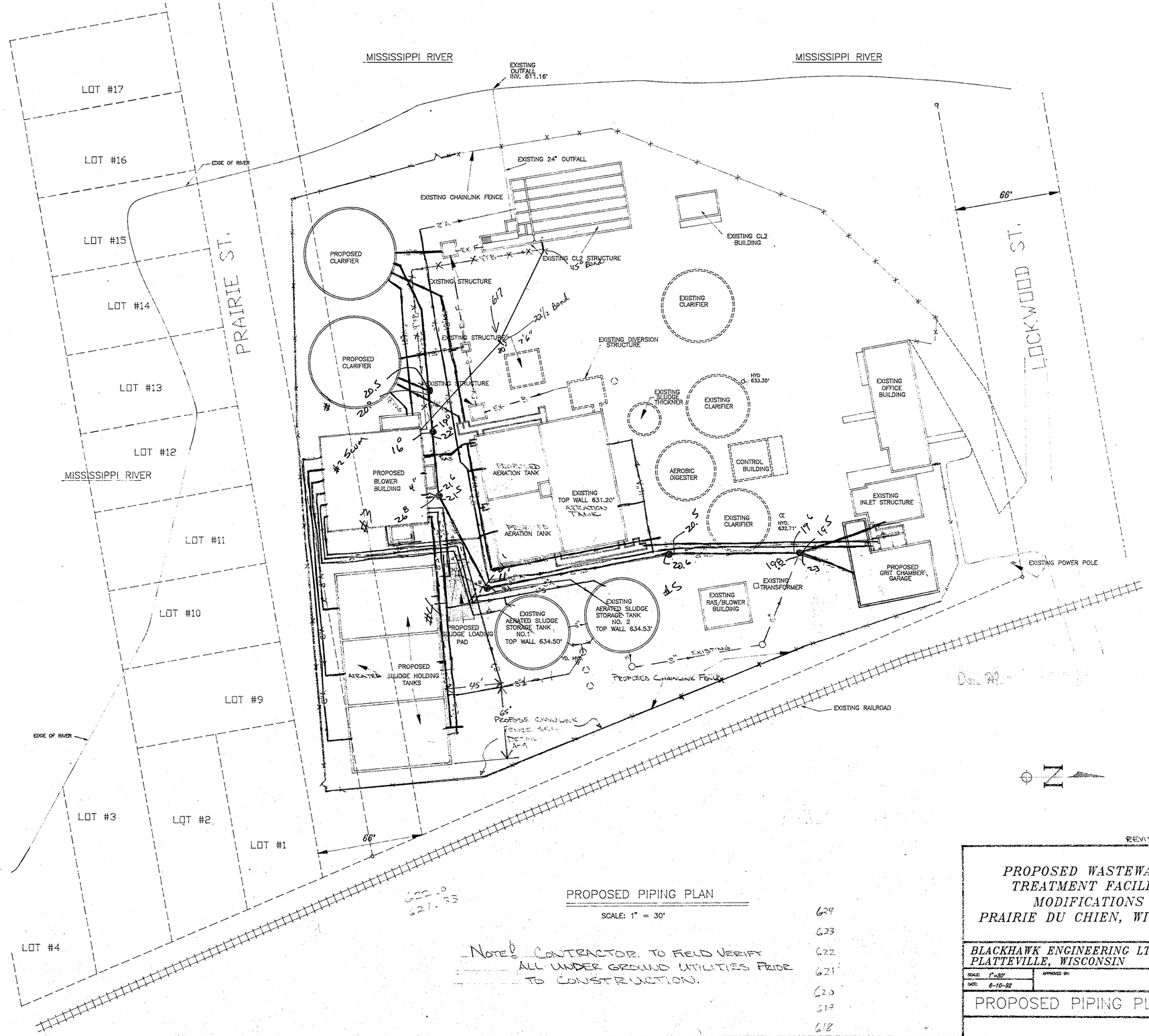
vierbicher
planners engineers advisors
REEDSBURG - MADISON - PRAIRIE DU CHIEN
126 West Blackhawk Avenue Prairie du Chien, Wisconsin 53821
Phone: (608) 326-1051 Fax: (608) 326-1052

20 Jan 2015 - 12:52p R:\PDCH 140023 2014 General Services\201 4 Sanitary System Update\PDCH Sanitary System 2014.dwg by: mmvc

LEGEND

- A — PROPOSED AIR LINE
- R — PROPOSED RAW LINE
- PROPOSED CHAIN LINK FENCE
- AS — PROPOSED ACTIVATED SLUDGE
- EXISTING STRUCTURE TO BE REMOVED
- EX — EXISTING PIPING
- EXISTING EDGE OF BITUMINOUS PAVEMENT
- B — PROPOSED BY PASS LINE
- EXISTING CHAIN LINK FENCE
- SC — PROPOSED SCUM LINE
- EXISTING STRUCTURES TO REMAIN
- RAS — PROPOSED RETURN ACTIVATED SLUDGE
- EXISTING EDGE OF GRAVEL
- FB — PROPOSED FINAL BACKWASH LINE
- PROPOSED STRUCTURES
- SS — PROPOSED SANITARY SEWER
- S — PROPOSED SLUDGE LINE
- E — PROPOSED EFFLUENT LINE

Attachemtn #5



PROPOSED PIPING PLAN

SCALE: 1" = 30'

Note: Contractor to field verify all under ground utilities prior to construction.

REVISED 1/8/94

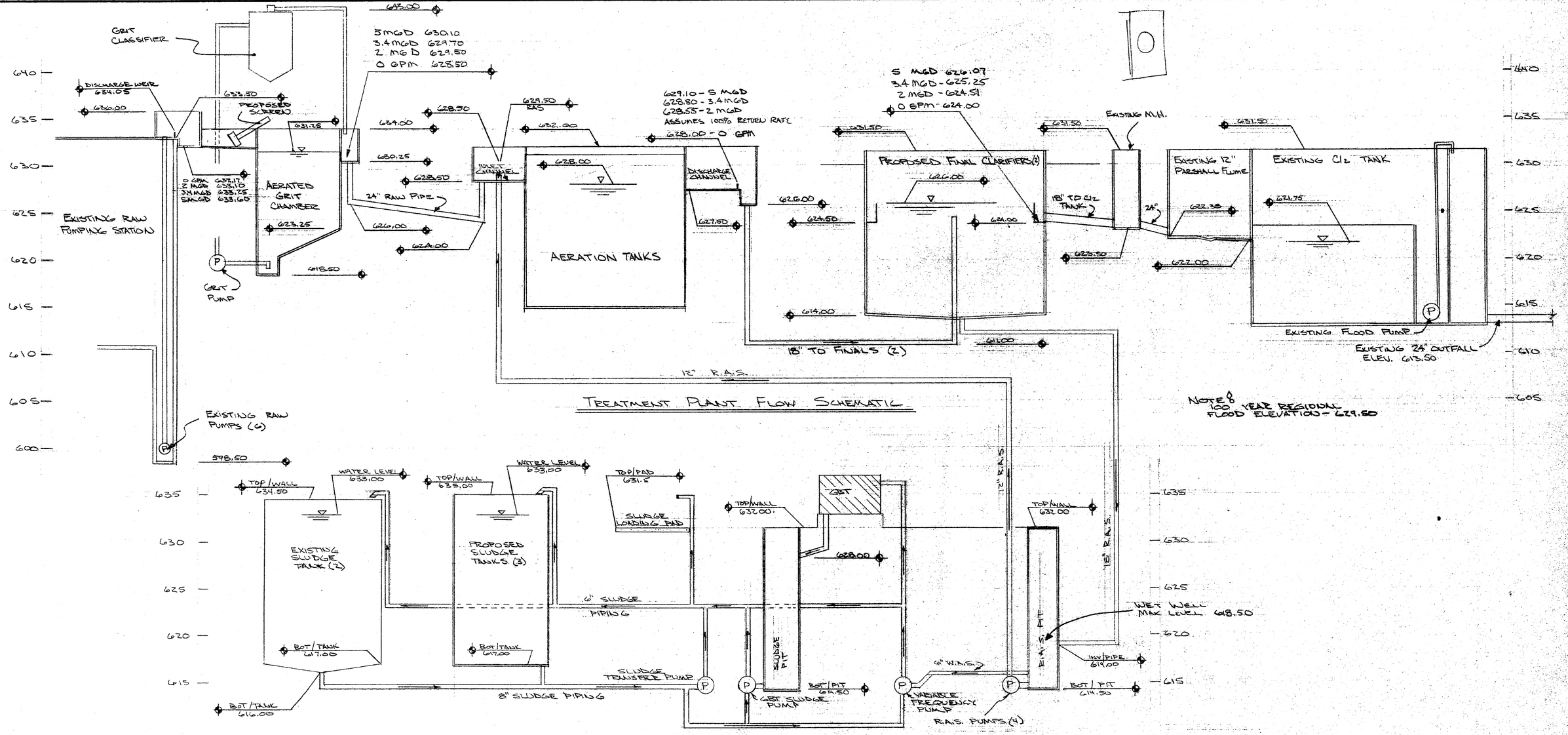
PROPOSED WASTEWATER TREATMENT FACILITY MODIFICATIONS PRAIRIE DU CHIEN, WISCONSIN

BLACKHAWK ENGINEERING LTD. PLATTEVILLE, WISCONSIN

SCALE: 1"=30'	APPROVED BY:	DRAWN BY: CRK
DATE: 6-10-92		REVISED: 6-20-93

PROPOSED PIPING PLAN

DRAWING NUMBER 90-156-04



PRAIRIE DU CHIEN WASTEWATER TREATMENT PLANT

DESIGN POPULATION

CITY	6564
TOWN OF BRIDGEPORT	100
TOWN OF PDC	870
TOTAL	7534

FLOW

AVE. DAILY	
30 DAY WET WEATHER	2.0 MGD
MAX. DAILY	3.4 MGD
PEAK	5.0 MGD

B.O.D.

AVE. DAILY	2690# BOD/DAY
MAX. DAILY 2X	5380# BOD/DAY

SUSPENDED SOLIDS

AVE. DAILY	2080# SS/DAY
MAX. DAILY	4160# SS/DAY

AERATED GRIT CHAMBER

VOLUME - 7660 GALLONS
DESIGN FLOW - 2.0 MGD
PEAK FLOW - 5.0 MGD
DETENTION @ 2.0 MGD - 5.5 MIN.
DETENTION @ 5.0 MGD - 2.2 MIN.

AERATION TANKS

VOLUME - 590,000 GALLONS
DESIGN FLOW - 2.0 MGD
DETENTION @ DESIGN - 7.1 HOURS
BOD LOADING - 34# /1000 CF

FINAL CLARIFIERS (2)

VOLUME - 442,000 GALLONS
DESIGN FLOW - 2.0 MGD
DETENTION @ DESIGN - 5.3 HOURS
DETENTION @ 3.4 MGD - 3.1 HOURS

SLUDGE STORAGE

EXISTING TANKS (2)
VOLUME - 392,500 GALLONS

PROPOSED TANK (3)
VOLUME - 861,690 GALLONS

TOTAL VOLUME 1,284,190 GALLONS

PROPOSED WASTEWATER TREATMENT FACILITY MODIFICATIONS
PRAIRIE DU CHIEN, WISCONSIN

BLACKHAWK ENGINEERING LTD.
PLATTEVILLE, WISCONSIN

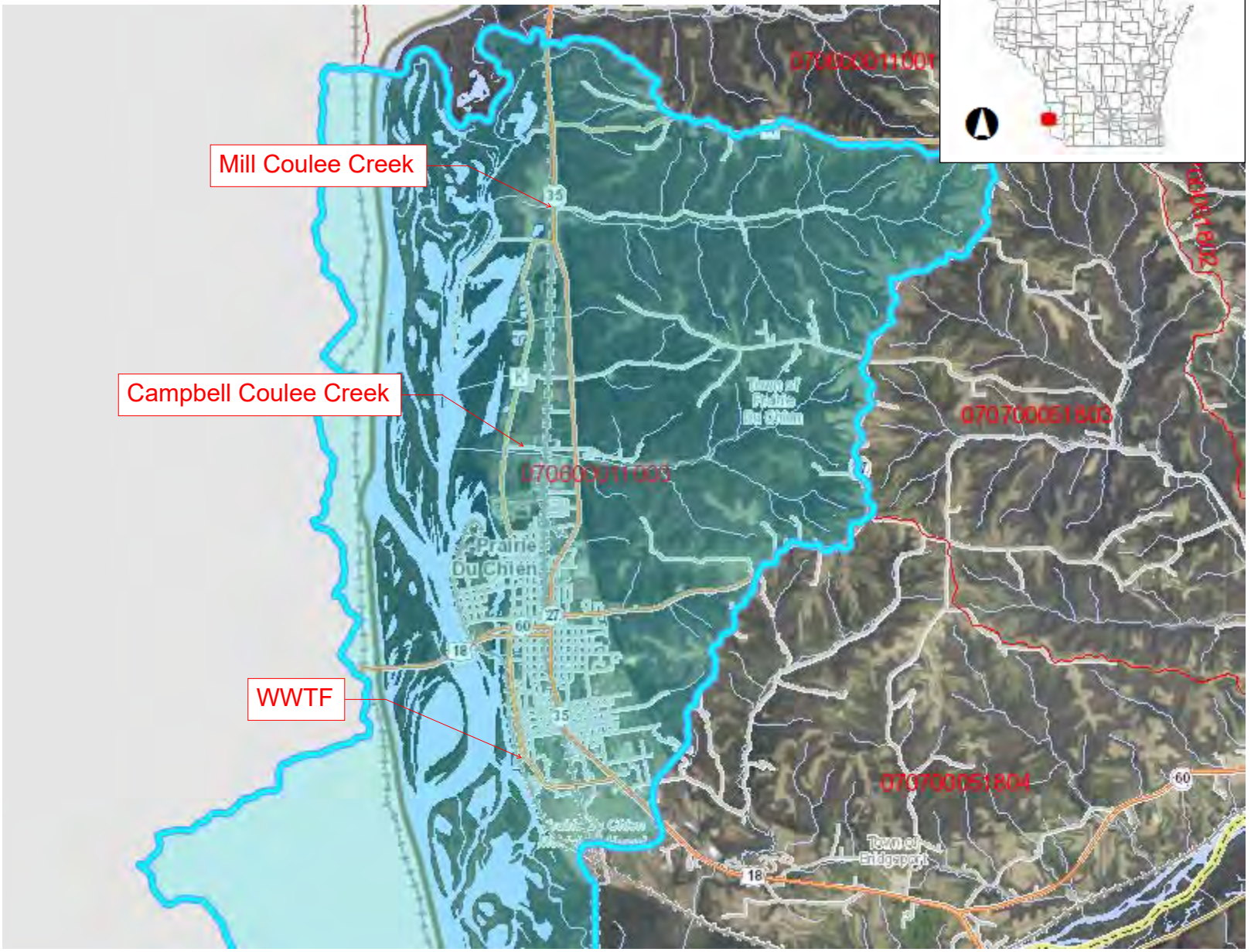
SCALE:	APPROVED BY:	DRAWN BY: SLK
DATE:		REVISED

FLOW SCHEMATIC AND PLANT DESIGN

DRAWING NUMBER 90-156-10

24 X 36 PRINTED ON NO. 1000H CLEARPRINT ●

HUC-12 Watershed Map



Legend

- 12-digit HUCs (Subwatersheds)
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water
- Index to EN_Image_Basemap_Leaf_Off

Attachemnt #6

Notes

3.0 0 1.50 3.0 Miles

NAD_1983_HARN_Wisconsin_TM

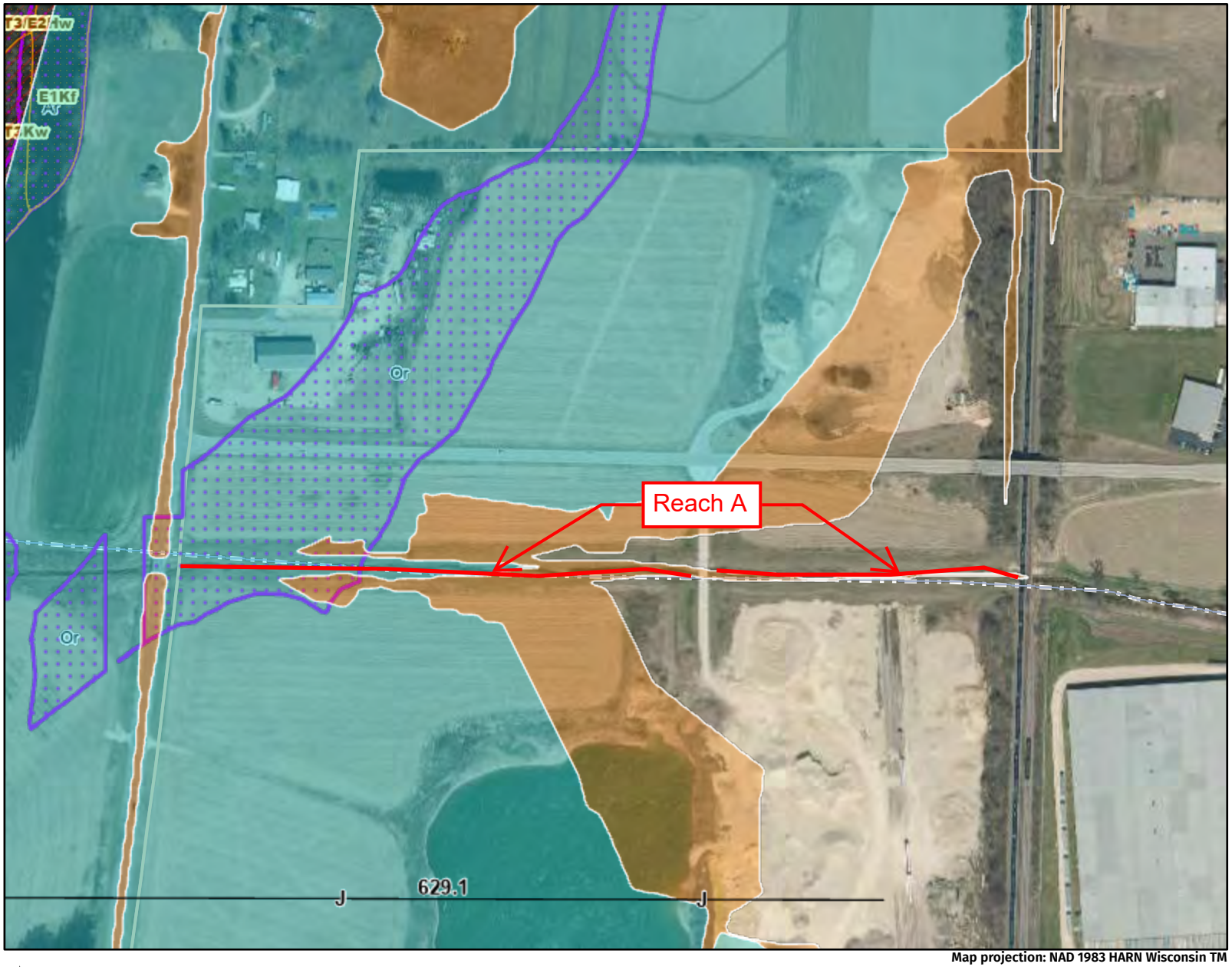
1: 95,040

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WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Attachment #7

Wetland Map - Campbell Coulee



Legend: (some map layers may not be displayed)

- FIRM Panels
- Cross-Sections

Flood Hazard Boundaries

- SFHA / Flood Zone Boundary

Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- 0.2% Annual Chance Flood Hazard
- Wetland Class Areas
- Wetland Indicators
- Rivers and Streams
- Intermittent Streams
- Rivers and Streams
- Intermittent Streams
- 24K Intermittent Streams
- 24K Streams and Rivers

Municipalities

- City

Notes:



Map projection: NAD 1983 HARN Wisconsin TM

N

Map: 0 350 700 Feet
0 100 200 Meters

Service Layer Credits:
Wetland Indicators & Soils^: Surface Water Data Viewer Team, Digitial FEMA Floodplains (National Flood Hazard Layer)*: , DNR Basic Feature VTL (WTM): Wisconsin Department of Natural Resources, GIS Section, Latest Leaf Off: , Surface Water: WiDNR, USGS, and other data, Paper FIRMS: Federal Emergency Management Agency, Wisconsin Department of Natural Resources, Wetland Inventory NWI (Dynamic): Calvin Lawrence, Dennis Weise, Nina Rihn

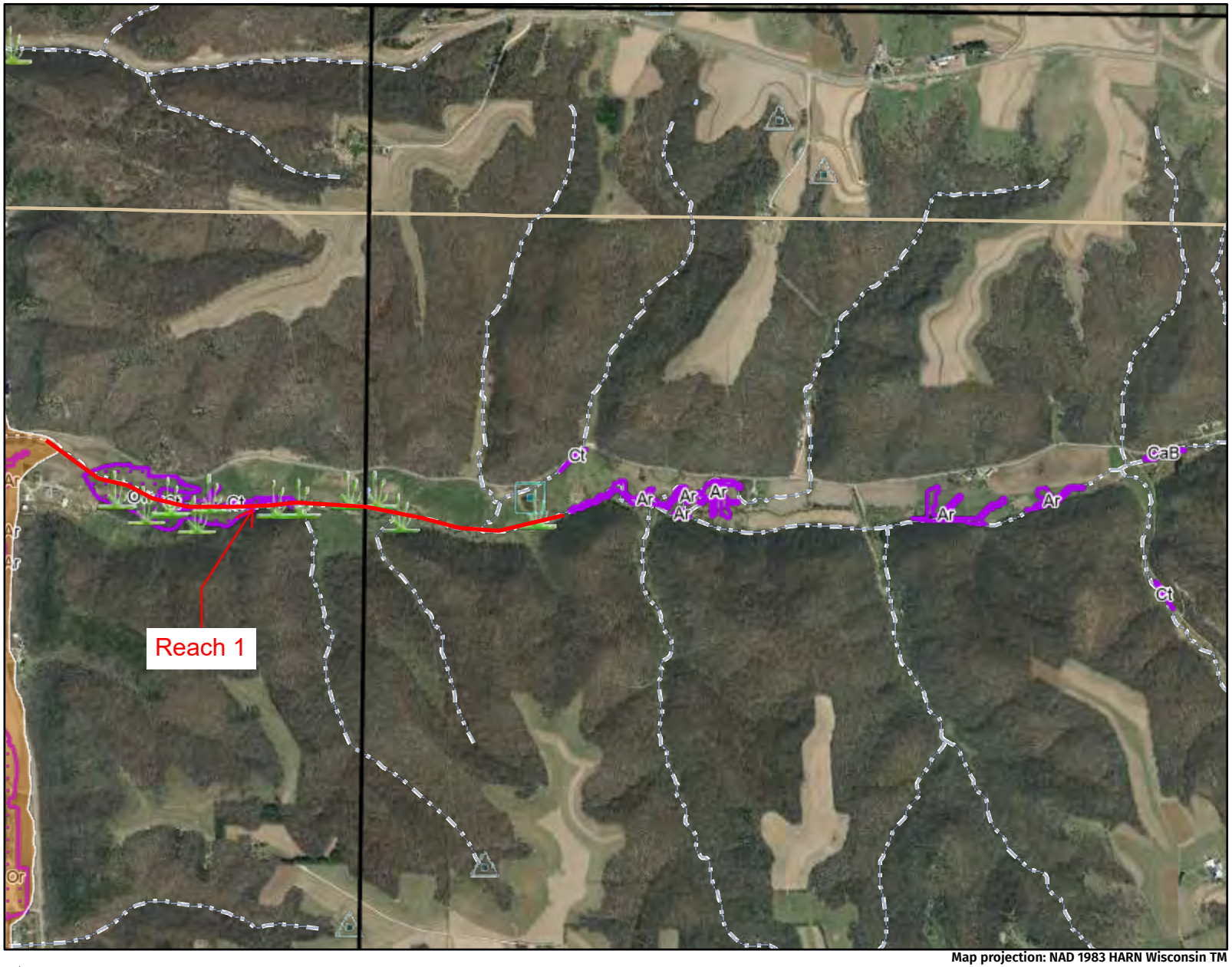
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WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Wetland Map - Mill Coulee



Legend: (some map layers may not be displayed)

FIRM Panels

Flood Hazard Boundaries

SFHA / Flood Zone Boundary

Flood Hazard Zones

0.2% Annual Chance Flood Hazard

Wetland Class Points

Dammed pond

Excavated pond

Wetland too small to delineate

Wetland Class Points

Dammed pond

Excavated pond

Wetland too small to delineate

Wetland Class Points

Dammed pond

Excavated pond

Wetland too small to delineate

Notes:



Map projection: NAD 1983 HARN Wisconsin TM

N

Map: 0 1,000 2,000 Feet

0 450 900 Meters

Service Layer Credits:
Wetland Indicators & Soils^: Surface Water Data Viewer Team, Digitial FEMA Floodplains (National Flood Hazard Layer)*: , DNR Basic Feature VTL (WTM): Wisconsin Department of Natural Resources, GIS Section, Latest Leaf Off: , Surface Water: WiDNR, USGS, and other data, Wetland Inventory NWI (Cached): , Paper FIRMS: Federal Emergency Management Agency, Wisconsin Department of Natural Resources

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Date Printed: 5/1/2026 1:24 PM

Attachment #8

COC:_____

STATEWIDE AGRICULTURAL PERFORMANCE STANDARDS COMPLIANCE SURVEY

Landowner: Mark & Tracy Pedretti **Date:** May 15, 2026

Tract Number:_____ **Conservation Staff:** _____



Circle the watershed where the survey was done.

GP01 – Galena River
GP02 – Platte River
GP03 – Little Platte River
GP04 – Lower Grant River
GP05 – Middle Grant
GP06 – Upper Grant
GP07 – Mississippi River
LW01 – Millville Creek
LW07 – Green River & Crooked Creek
LW09 – Blue River
Rush Creek

Cert. of Comp. _____ acres
Last NMP Year: 20___
_____ Acres by: _____

1.) Are livestock raised on land enrolled in the Farmland Preservation Program (FPP)?	Y	**N**	(If No, go to Question #2)
1a.) Are livestock concentrated in a WQMA?	Y	N	(If No, go to Question #1d)
1b.) Is clean water diverted away from concentrated areas?	Y	N	
1c.) Is direct runoff from concentrated areas prevented from reaching waters of the state?	Y	N	
1d.) Does the farm have milkhouse waste?	Y	**N**	(If No, go to Question 1f)
1e.) Is milkhouse waste prevented from reaching WOS?	Y	N	
1f.) Does the farm have feed storage?	**Y**	N	(If No, go to Question 1h)
1g.) Is feed leachate prevented from reaching WOS?	**Y**	N	
1h.) Do livestock have access to waters of the state?	**Y**	N	(If No, go to Question #1j)
1i.) Is there adequate sod along waters of the state?	**Y**	N	
1j.) Is manure stacked on the property?	Y	**N**	(If No, go to Question #2)
1k.) Is manure stacked in a WQMA?	Y	N	
1l.) Is clean water diverted away from manure stacks	Y	N	
1m.) Is direct runoff from manure stacks prevented from reaching waters of the state?	Y	N	
2.) Has manure storage ever been built on the property?	Y	**N**	# **Yr** (If No, go to Question #3)
2a.) If storage has been built since 5/19/1999, was it built according to NRCS standards?	Y	N	
2b.) Are any facilities leaking or failing	Y	N	
2c.) Are any facilities overflowing?	Y	N	
2d.) Have any of the facilities been closed	Y	N	# **Yr**
2e.) If they were closed after 5/19/1999, were they closed according to NRCS standards	Y	N	

COC:_____

STATEWIDE AGRICULTURAL PERFORMANCE STANDARDS COMPLIANCE SURVEY

3.) Are any or all acres of tillable land enrolled in CRP? **Y** **N** _____ Acres
(If No, go to Question #4)

4.) Are agricultural crops produced on land enrolled in FPP? **Y** **N**

4a.) Do all acres of tillable land meet tolerable soil loss? **Y** **N** _____ Acres

4b.) Does the landowner maintain a 5' tillage setback from waters of the state? **Y** **N** **N/A**

5.) Does producer have a NMP for spot check year? **Y** **N** Renter_____

5a.) If Yes, Date_____ Acres_____ from NMP Checklist

5b.) If No, is producer willing to develop or update a NMP? **Y** **N** Agronomist, Class
Agronomist Name: _____ Circle one

6.) Is chemical fertilizer applied to the pasture? **Y** **N** _____ Pasture #

_____ Acres

7.) Do cattle graze on the property? **Y** **N**

Pasture # 1

163 AU * 365 days * 35 % / **244** = 1 AU/Ac
85.5
Acres of Pasture **Exempt** **Y** or **N**

Pasture # _____

_____ AU * _____ days * _____ % / **244** = _____ AU/Ac
_____
Acres of Pasture **Exempt** **Y or N**

Pasture # _____

_____ AU * _____ days * _____ % / **244** = _____ AU/Ac
_____
Acres of Pasture **Exempt** **Y or N**

Pasture # _____

_____ AU * _____ days * _____ % / **244** = _____ AU/Ac
_____
Acres of Pasture **Exempt** **Y or N**

0 Acres of pasture needing a nutrient management plan

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Pasture Map



Legend: (some map layers may not be displayed)

Cities, Towns & Villages

Civil Town

DOA Statewide Parcel Map Database Project

Latest Leaf Off Index

Latest Leaf Off Imagery

Notes:

Map projection: NAD 1983 HARN Wisconsin TM

N

Map: 0 710 1,420 Feet
0 210 420 Meters

Service Layer Credits:
DNR Basic Feature VTL (WTM): Wisconsin Department of Natural Resources, GIS Section, Latest Leaf Off: ,
County Tax Parcels (Cached):



This map is a product generated by a DNR web mapping application.

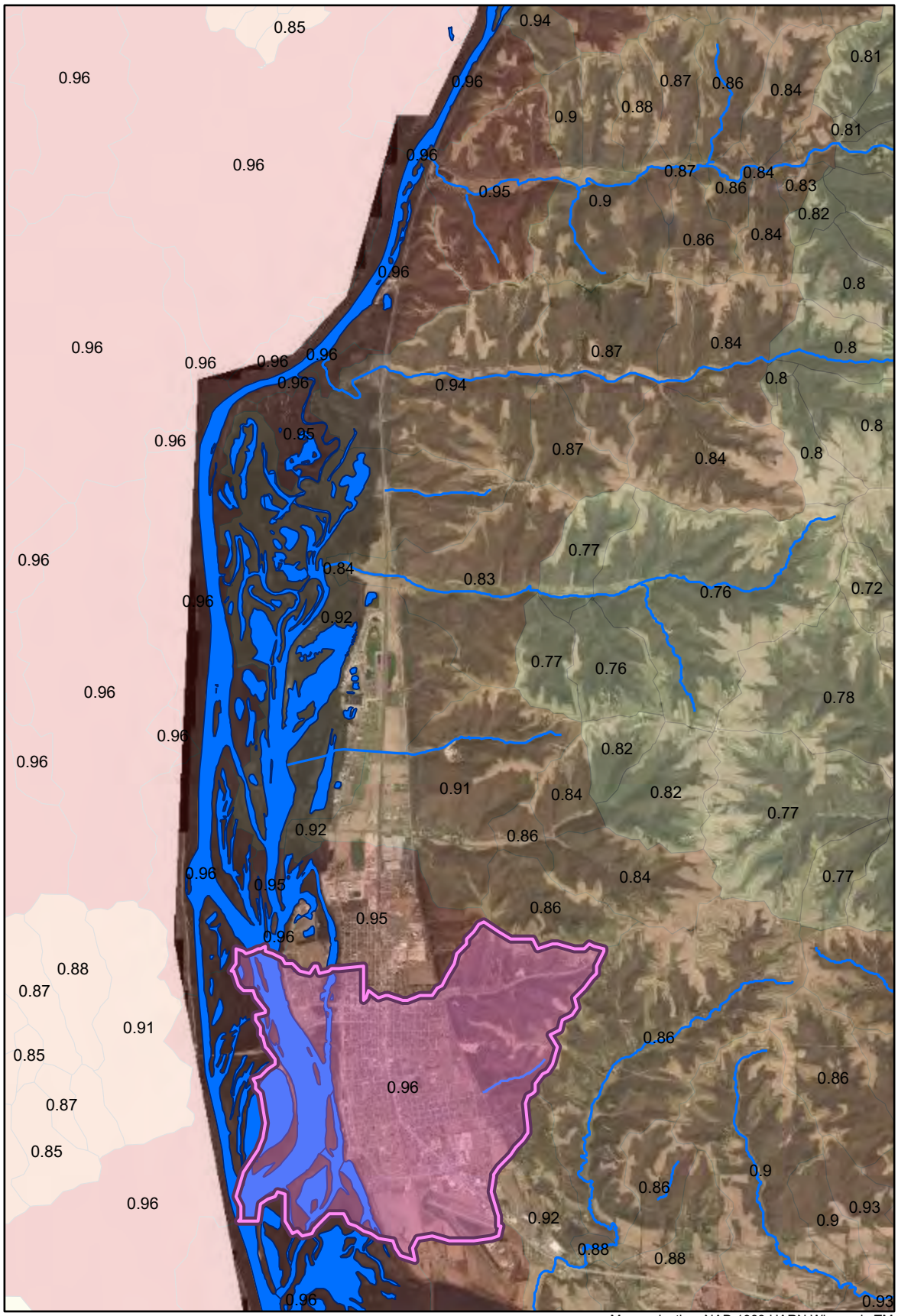
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Date Printed: 5/15/2026 1:06 PM

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Attachment #9

Sparrow Map - WWTF Outfall



Map projection: NAD 1983 HARN Wisconsin TM

N

Map: 0 7,500 15,000 Feet
0 2,000 4,000 Meters

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Date Printed: 4/24/2026 1:52 PM

Legend: (some map layers may not be displayed)

- AU Lines - River Stream Beach Shore
- AU Areas - Lake Reservoir Impoundment Wetland

SPARROW*

- 0.621401 - 0.825600
- 0.825601 - 0.947100
- 0.947101 - 1.000000
- Latest Leaf Off Index
- Latest Leaf Off Imagery

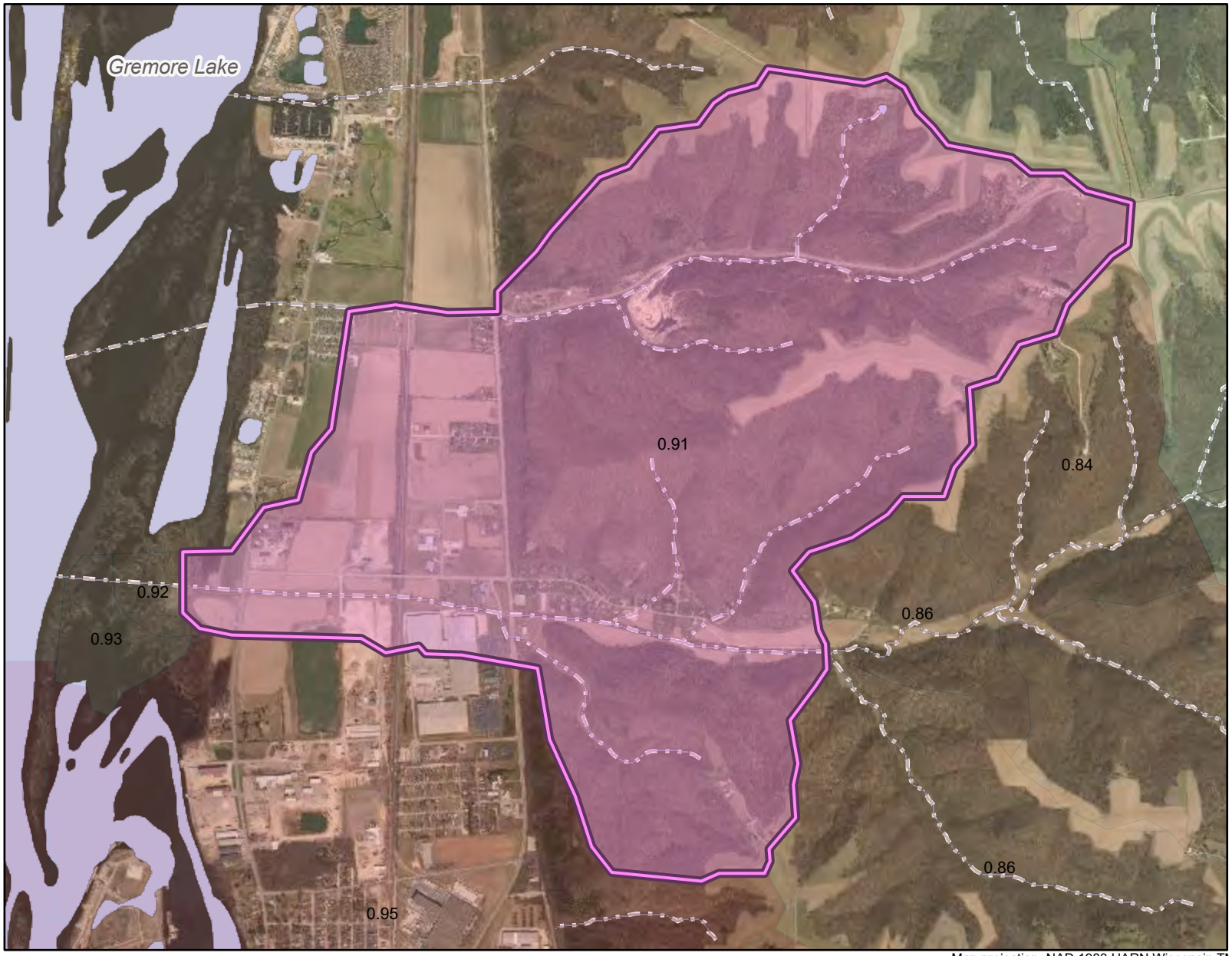
Notes:

Service Layer Credits:
DNR Basic Feature VTL (WTM): Wisconsin Department of Natural Resources, GIS Section, Latest Leaf Off:



WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Sparrow Map - Campbell Coulee



Legend: (some map layers may not be displayed)

SPARROW*

- 0.621401 - 0.825600
- 0.825601 - 0.947100
- 0.947101 - 1.000000
- Rivers and Streams
- Intermittent Streams
- Open Water
- Rivers and Streams
- Intermittent Streams
- Open Water
- 24K Intermittent Streams
- 24K Lakes and Open Water
- Latest Leaf Off Index
- Latest Leaf Off Imagery

Notes:

Map projection: NAD 1983 HARN Wisconsin TM

N

Map: 0 1,000 2,000 Feet
0 550 1,100 Meters

Service Layer Credits:
DNR Basic Feature VTL (WTM): Wisconsin Department of Natural Resources, GIS Section, Latest Leaf Off: , Surface Water: WiDNR, USGS, and other data



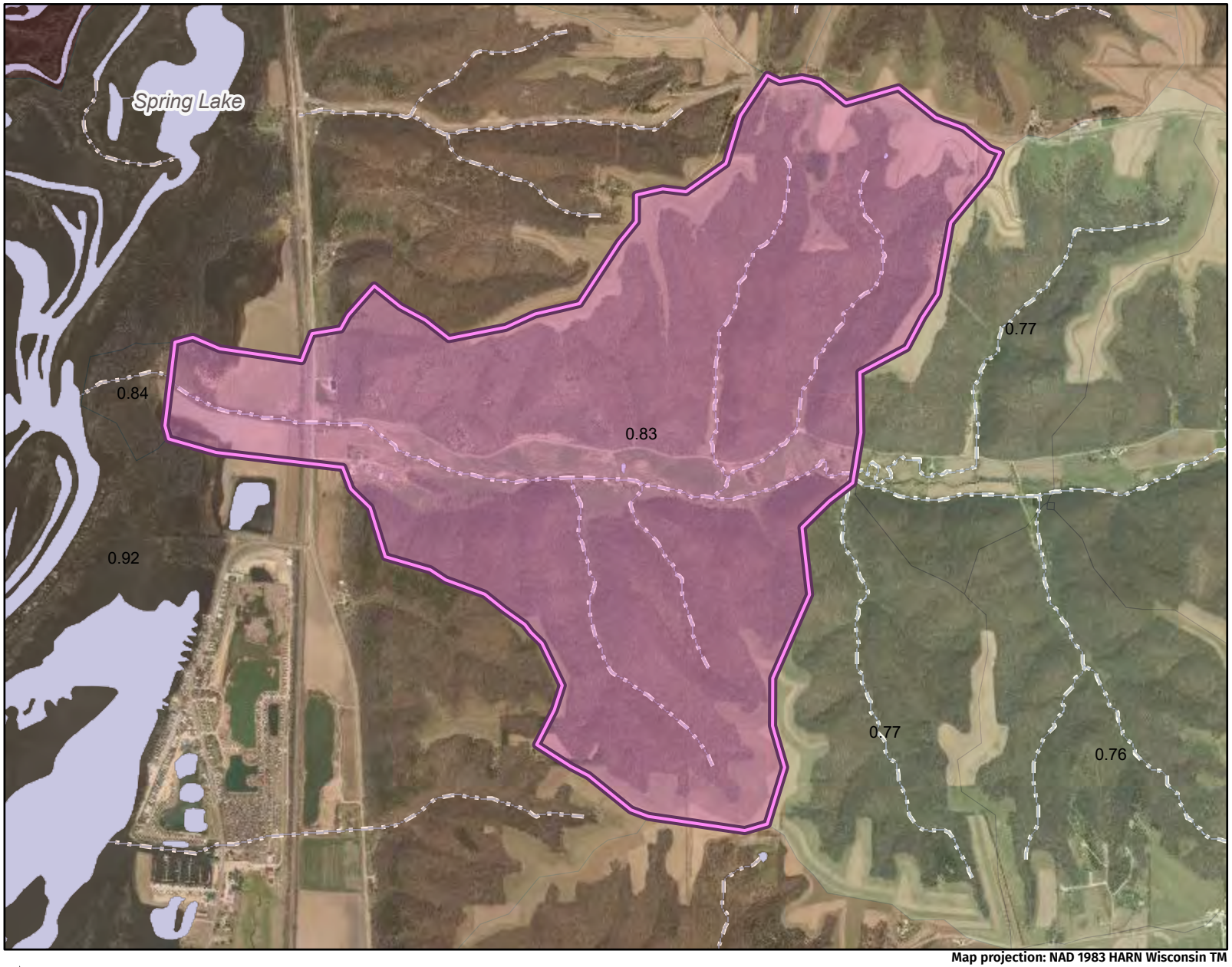
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WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Sparrow Map - Mill Coulee



Legend: (some map layers may not be displayed)

SPARROW*

- 0.621401 - 0.825600
- 0.825601 - 0.947100
- 0.947101 - 1.000000
- Rivers and Streams
- Intermittent Streams
- Open Water
- Rivers and Streams
- Intermittent Streams
- Open Water
- 24K Intermittent Streams
- 24K Lakes and Open Water
- Latest Leaf Off Index
- Latest Leaf Off Imagery

Notes:



Map projection: NAD 1983 HARN Wisconsin TM

N

Map: 0 1,000 2,000 Feet
0 560 1,120 Meters

Service Layer Credits:
DNR Basic Feature VTL (WTM): Wisconsin Department of Natural Resources, GIS Section, Latest Leaf Off: ,
Surface Water: WiDNR, USGS, and other data

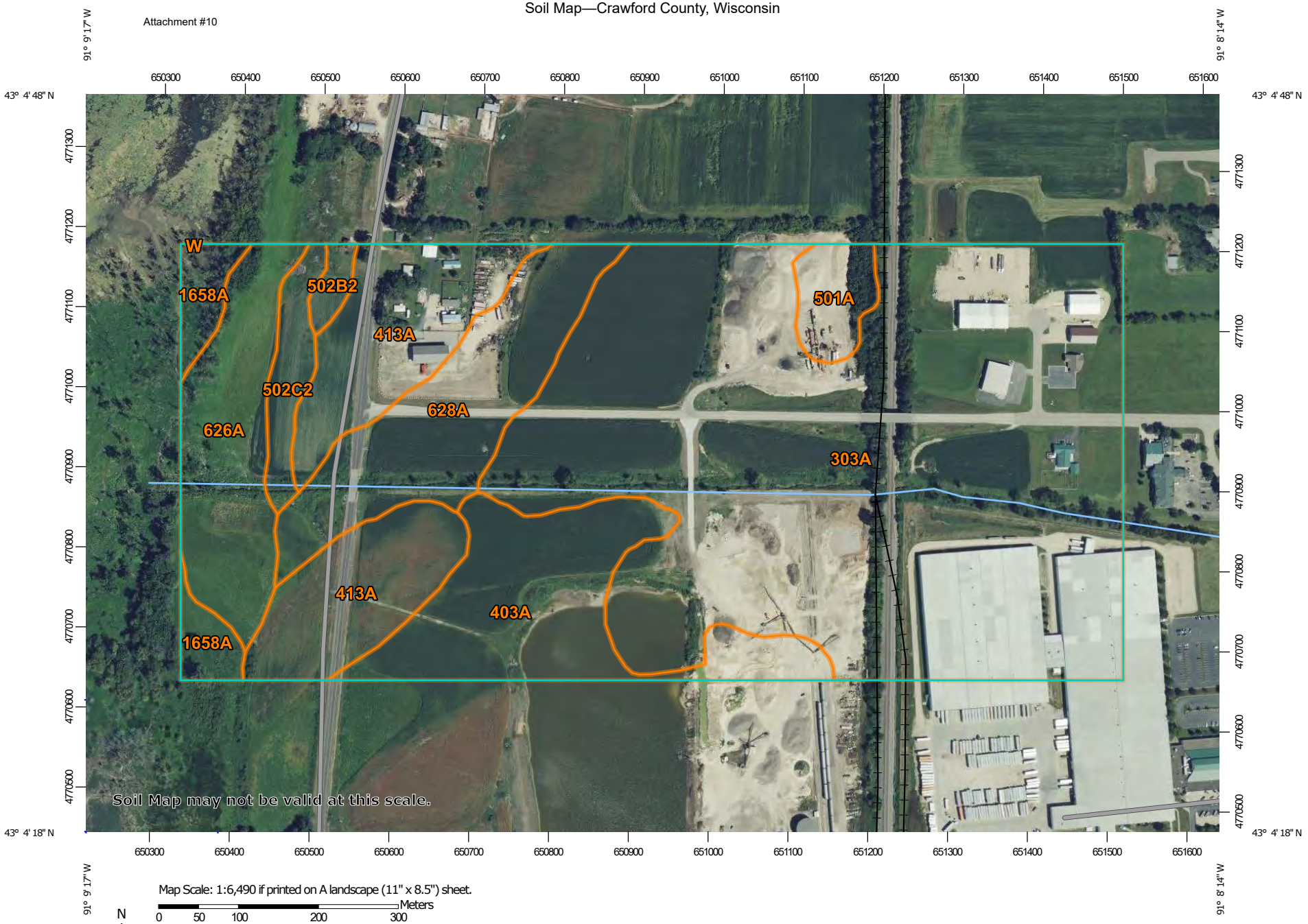
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Date Printed: 5/1/2026 1:52 PM

Attachment #10

Soil Map—Crawford County, Wisconsin



Map Scale: 1:6,490 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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 map measurements.

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

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

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

Soil Survey Area: Crawford County, Wisconsin
Survey Area Data: Version 16, Sep 6, 2022

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

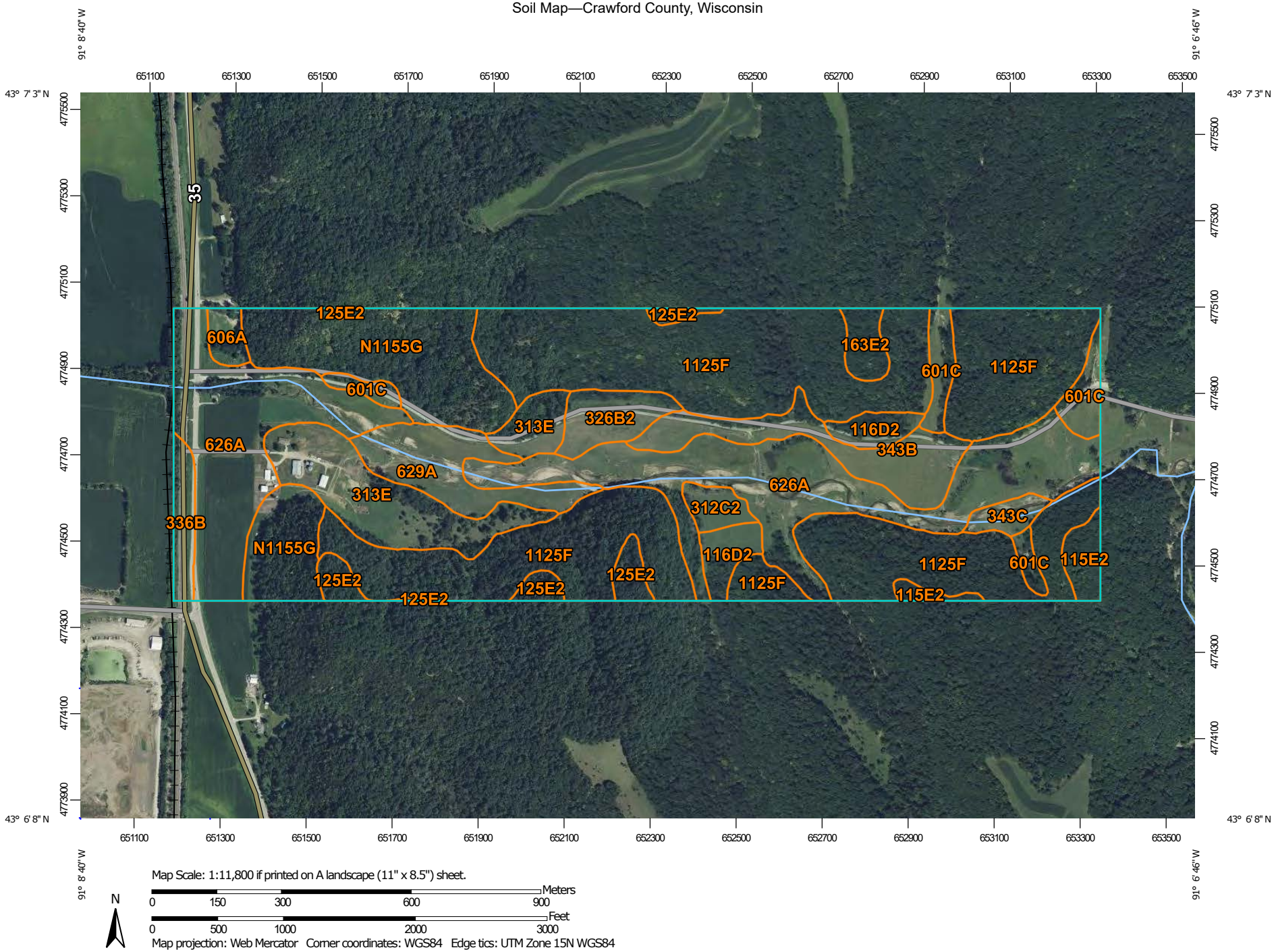
Date(s) aerial images were photographed: Jul 31, 2020—Sep 2, 2020

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
303A	Boguscreek silt loam, 0 to 3 percent slopes, occasionally flooded	86.7	54.3%
403A	Dakota silt loam, 0 to 3 percent slopes	16.5	10.3%
413A	Rasset sandy loam, 0 to 3 percent slopes	19.4	12.2%
501A	Finchford loamy sand, 0 to 3 percent slopes	3.1	2.0%
502B2	Chelsea fine sand, 2 to 6 percent slopes, moderately eroded	1.0	0.6%
502C2	Chelsea fine sand, 6 to 15 percent slopes, moderately eroded	3.2	2.0%
626A	Arenzville silt loam, 0 to 3 percent slopes, occasionally flooded	11.7	7.3%
628A	Orion silt loam, 0 to 3 percent slopes, occasionally flooded	14.3	9.0%
1658A	Algansee-Kalmarville complex, river valleys, 0 to 3 percent slopes, frequently flooded	3.7	2.3%
W	Water	0.0	0.0%
Totals for Area of Interest		**159.7**	**100.0%**

Soil Map—Crawford County, Wisconsin



Map Scale: 1:11,800 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

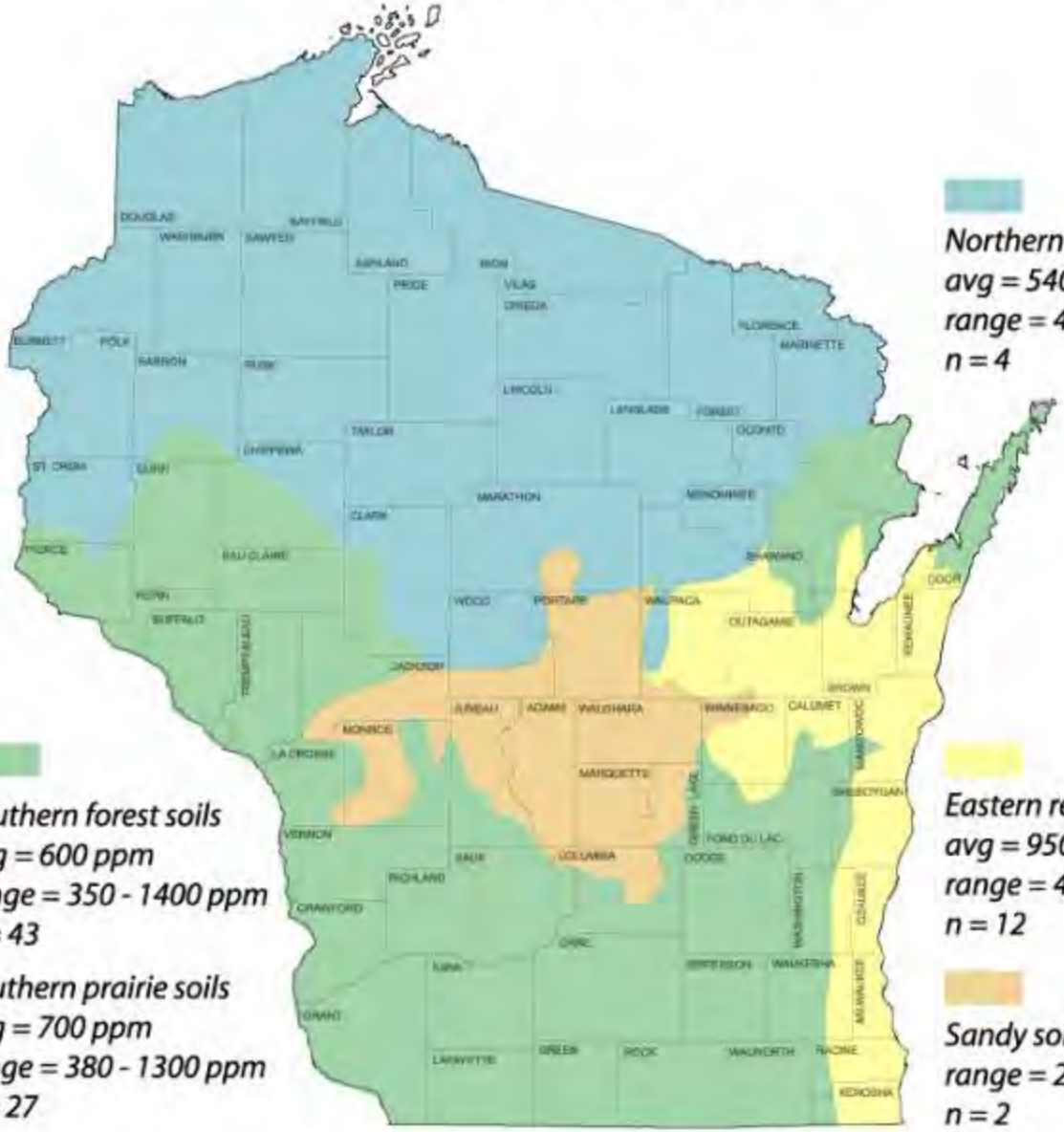
Date(s) aerial images were photographed: Jul 31, 2020—Sep 2, 2020

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
115E2	Seaton silt loam, driftless ridge, 20 to 30 percent slopes, moderately eroded	4.8	1.3%
116D2	Churchtown silt loam, 12 to 20 percent slopes, moderately eroded	7.4	2.0%
125E2	Pepin silt loam, 20 to 30 percent slopes, moderately eroded	7.5	2.1%
163E2	Elbaville silt loam, 20 to 30 percent slopes, moderately eroded	3.6	1.0%
312C2	Festina silt loam, 6 to 12 percent slopes, moderately eroded	3.2	0.9%
313E	Plumcreek silt loam, 20 to 45 percent slopes	24.8	6.8%
326B2	Medary silt loam, 0 to 6 percent slopes, moderately eroded	7.1	2.0%
336B	Toddville silt loam, 1 to 6 percent slopes	4.4	1.2%
343B	Worthen cherty silt loam, 2 to 6 percent slopes, occasionally flooded	15.6	4.3%
343C	Worthen cherty silt loam, 6 to 12 percent slopes, occasionally flooded	2.9	0.8%
601C	Beavercreek cobbly fine sandy loam, 3 to 12 percent slopes, occasionally flooded	10.5	2.9%
606A	Huntsville silt loam, 0 to 3 percent slopes, occasionally flooded	2.7	0.7%
626A	Arenzville silt loam, 0 to 3 percent slopes, occasionally flooded	80.4	22.2%
629A	Ettrick silt loam, 0 to 2 percent slopes, frequently flooded	14.4	4.0%
1125F	Dorerton, very stony-Elbaville complex, 30 to 60 percent slopes	134.9	37.2%
N1155G	Brodale-Bellechester-Rock outcrop complex, 60 to 90 percent slopes	38.3	10.6%
Totals for Area of Interest		**362.5**	**100.0%**

Soil Total P



Northern loamy soils
avg = 540 ppm
range = 480-580 ppm
n = 4

Southern forest soils
avg = 600 ppm
range = 350 - 1400 ppm
n = 43

Southern prairie soils
avg = 700 ppm
range = 380 - 1300 ppm
n = 27

Eastern red soils
avg = 950 ppm
range = 430 - 2820 ppm
n = 12

Sandy soils
range = 250 - 400 ppm
n = 2

Organic soils: range = 1330 - 1350 ppm, n = 2

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

710 Commerce Drive
PO Box 169
Watertown, WI 53094

920-261-0446 phone
920-261-1365 fax
www.rockriverlab.com

City of Prairie du Chien- Total Phosphorus Analysis 06/04/2021

Field ID	Sample ID	Total P (ppm)
Pr Do Ch	18S	599.5
Pr Do Ch	2N	601.6
Pr Do Ch	4N	520.1
Pr Do Ch	1N	632.8
Pr Do Ch	11S	508.4
Pr Do Ch	5N	767.7
Pr Do Ch	6N	691.6
Pr Do Ch	3N	542.6
Pr Do Ch	10N	777.1
Pr Do Ch	9N	339
Pr Do Ch	7N	721.1
Pr Do Ch	8N	478.9
Pr Do Ch	12S	378.9
Pr Do Ch	16S	544.6
Pr Do Ch	14S	514.1
Pr Do Ch	13S	558
Pr Do Ch	20S	460.4
Pr Do Ch	19S	437.9
Pr Do Ch	15S	496.5
Pr Do Ch	17S	539.1

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24 Sep 2020 - 3:14p R:\Prairie du Chien, City of\190283 2020 Flood Mitigation\CADD\Vena_Antoine Extension\Business Park Exp & Flood Mitigation - Overall Sheet Index.dwg by: pjun

N

W E

S

GRAPHIC SCALE FEET

0 60 120 240

SHEET 6

ANTOINE WAY

SHEET 7

SHEET 5

SHEET 4

VENA COURT

CLIFFWOOD DR.

BURLINGTON NORTHERN RAILROAD

SHEET 8

SHEET 8

SHEET 9

SHEET 9

10N 9N 8N 7N 6N 5N 4N 3N 2N 1N

20' WIDE PERMENANT EASEMENT FOR ACCESS TO CAMPBELL COULEE CREEK

CAMPBELL COULEE CREEK

20 19 18 17 16 15 14S 11S 12S 13S

20' WIDE TEMPORARY CONSTRUCTION EASEMENT

120' WIDE STORMWATER DRAINAGE EASEMENT

PERMANENT EASEMENT FOR ACCESS TO RAILROAD BRIDGE OPENING WITHIN CAMPBELL COULEE CREEK

C.T.H. "K"

vierbicher

planners | engineers | advisors

Phone: (800) 261-3898

OVERALL SHEET INDEX & BENCHMARK MAP

PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION

PRAIRIE DU CHIEN

CRAWFORD COUNTY, WISCONSIN

REVISIONS		
NO.	DATE	REMARKS

REVISIONS		
NO.	DATE	REMARKS

SCALE: AS SHOWN

DATE: AUGUST 2020

DRAFTER: PJUN

CHECKED: MMUC

PROJECT NO.: 190283

SHEET: 3 OF 16

DWG. NO.:

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

710 Commerce Drive
PO Box 169
Watertown, WI 53094

920-261-0446 phone
920-261-1365 fax
www.rockriverlab.com

Insight FS Darlington, WI- Total Phosphorus Analysis 08/22/2022

Field ID	Sample ID	Total P (ppm)
Prairie Coulee	1	330.4
Prairie Coulee	2	354.6
Prairie Coulee	3	338.1
Prairie Coulee	4	270.5
Prairie Coulee	5	325.9
Prairie Coulee	6	245.9
Prairie Coulee	7	250.7
Prairie Coulee	8	279.3
Prairie Coulee	9	383.5
Prairie Coulee	10	196.8
Prairie Coulee	11	213.5
Prairie Coulee	12	273
Prairie Coulee	13	288.2
Prairie Coulee	14	376
Prairie Coulee	15	554.5
Prairie Coulee	16	363.4
Prairie Coulee	17	483.2
Prairie Coulee	18	249.6
Prairie Coulee	19	268.6
Prairie Coulee	20	449.4

Field ID	Sample ID	Total P (ppm)
Prairie Coulee	21	323.6
Prairie Coulee	22	327.3
Prairie Coulee	23	459.1
Prairie Coulee	24	493.3
Prairie Coulee	25	251.8
Prairie Coulee	26	544.4
Prairie River	27	411.7
Prairie River	28	369.8
Prairie River	29	493.7
Prairie River	30	450.6
Prairie River	31	448.8
Prairie Coulee	32	402.5
Prairie Coulee	33	384.8
Prairie Coulee	34	539.2
Prairie Coulee	35	407
Prairie Coulee	36	284.2
Prairie Coulee	37	246.5
Prairie Coulee	38	577.1
Prairie Coulee	39	608.6
Prairie Coulee	40	441.9
Prairie Coulee	41	439.3
Prairie Coulee	42	469.8
Prairie Coulee	43	430.6
Prairie Coulee	44	446.6
Prairie Coulee	45	448.5
Prairie Coulee	46	566.3
Prairie Coulee	47	425.4
Prairie Coulee	48	420.9
Prairie Coulee	49	561.6
Prairie Coulee	50	379.9

Attachment #11

I. Introduction

The lateral recession rate of the eroding bank is a critical component for the NRCS Streambank Erosion Estimator. The following documentation provides the justification for the lateral recession rates used in the NRCS Streambank Erosin Estimator. Lateral recession rate was estimated based on the photos provided, description, and on site evaluation. The following includes representative photos of the Project Extents to be stabilized through installation of Best Management Practices (BMPs).

II. Campbell Coulee Creek (WBIC 5035397) - Reach A



Image A.1 – Station 8+50: Erosion at CTH 'K' Bridge



Image A.2 – Station 7+50: Erosion at CTH ‘K’ Bridge



Image A.3 – Station 7+75: Erosion under CTH ‘K’ Bridge



Image A.4 – Station 8+00: Erosion at CTH ‘K’ Bridge

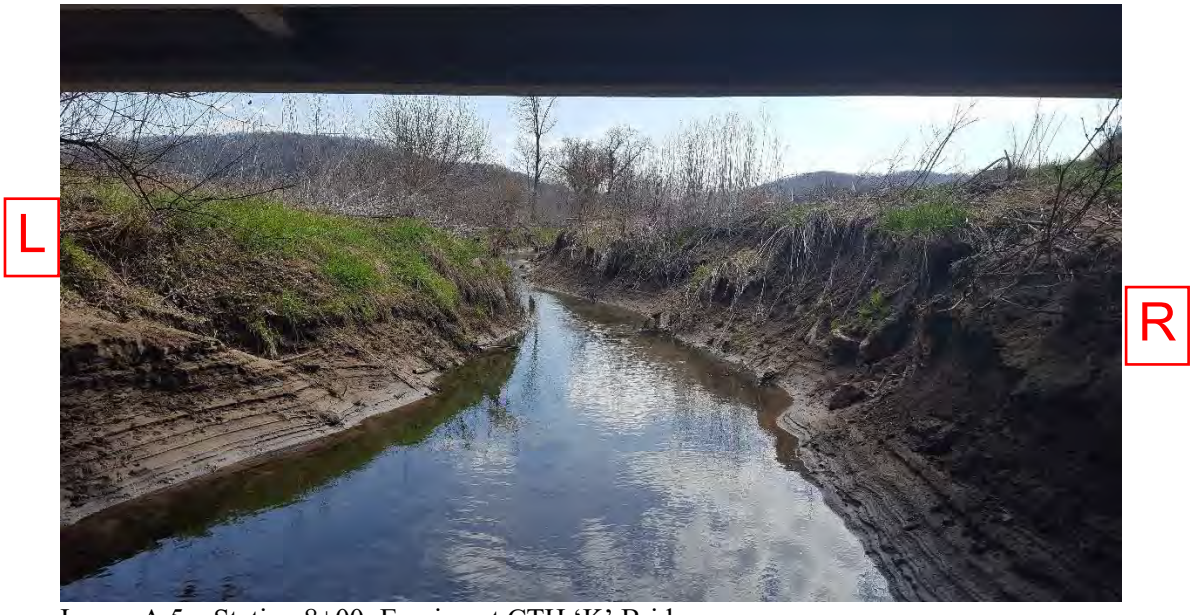


Image A.5 – Station 8+00: Erosion at CTH ‘K’ Bridge



Image A.6 – Station 11+50: Severe undercut with slump, near vertical bare banks, and vegetative overhang



Image A.7 – Station 13+50: Severe undercut with near vertical bare banks, and vegetative overhang



Image A.8 – Station 15+50: Severe undercut with near vertical bare banks, and vegetative overhang



Image A.9 – Station 18+00: Severe undercut with slump, near vertical bare banks, and vegetative overhang



Image A.10 – Station 21+50: Erosion at Prairie Sand & Gravel Bridge



Image A.11 – Station 21+85: Erosion at Prairie Sand & Gravel Bridge



Image A.12 – Station 25+00: Severe undercut with slump, near vertical bare banks, and vegetative overhang



Image A.13 – Station 28+75: Severe undercut with slump, near vertical bare banks, and vegetative overhang



Image A.14 – Station 30+00: Severe undercut, bare banks, vegetative overhang, and exposed tree roots



Image A.15 – Station 30+10: Erosion at Railroad Bridge



Image A.16 – Station 31+00: Severe undercut with slump, bare banks, and vegetative overhang



Image A.17 – Station 31+75: Severe undercut with slump, bare banks, vegetative overhang, and exposed tree roots

III. Mill Coulee Creek (WBIC 1634600) - Reach 1



Image 1.1 – Station 102+25: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.2 – Station 104+25: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.3 – Station 104+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.4 – Station 105+25: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.5 – Station 105+75: Severe undercut with slump, bare banks, vegetative overhang, and approximately **15' of previously buried drain tile exposed!**



Image 1.6 – Station 108+50: Severe undercut with slump, bare banks, vegetative overhang, and stream encroachment on fence corner post.

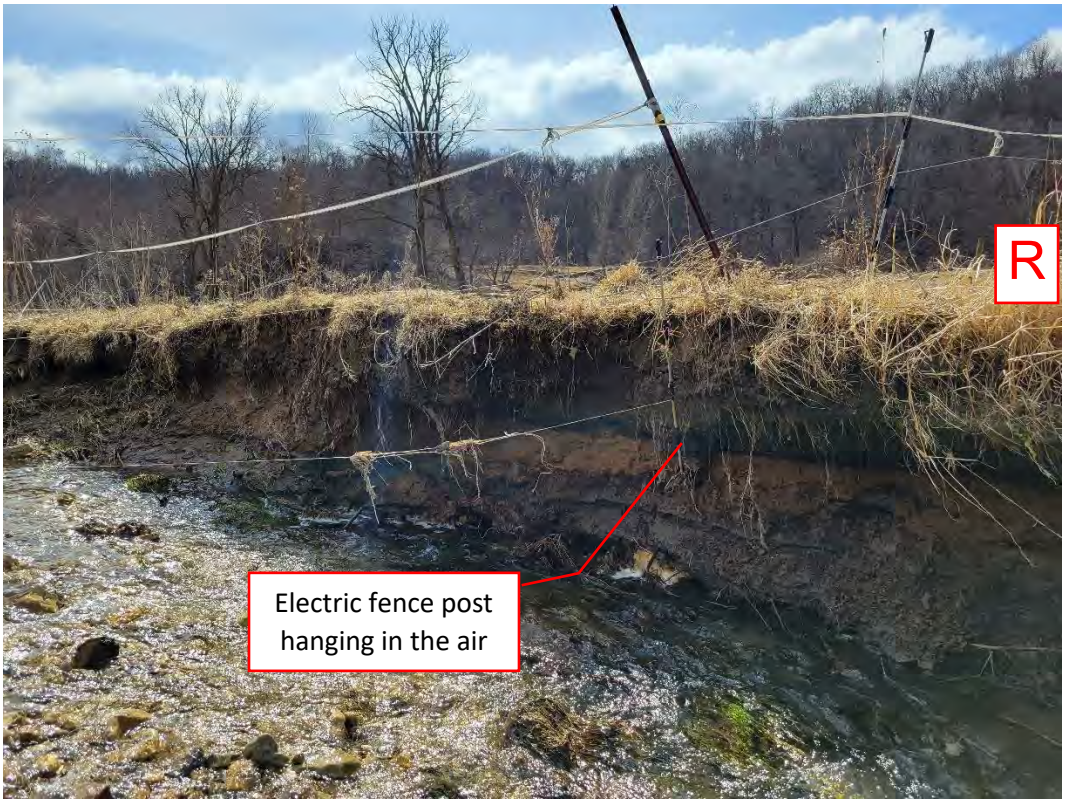


Image 1.7 – Station 110+00: Severe undercut with slump, bare banks, vegetative overhang, and fence post that has fallen into the stream.



Image 1.8 – Station 112+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.9 – Station 115+25: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.10 – Station 116+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.11 – Station 118+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.12 – Station 120+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.13 – Station 121+75: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.14 – Station 123+25: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.15 – Station 124+50: Severe undercut with slump, bare banks, and vegetative overhang

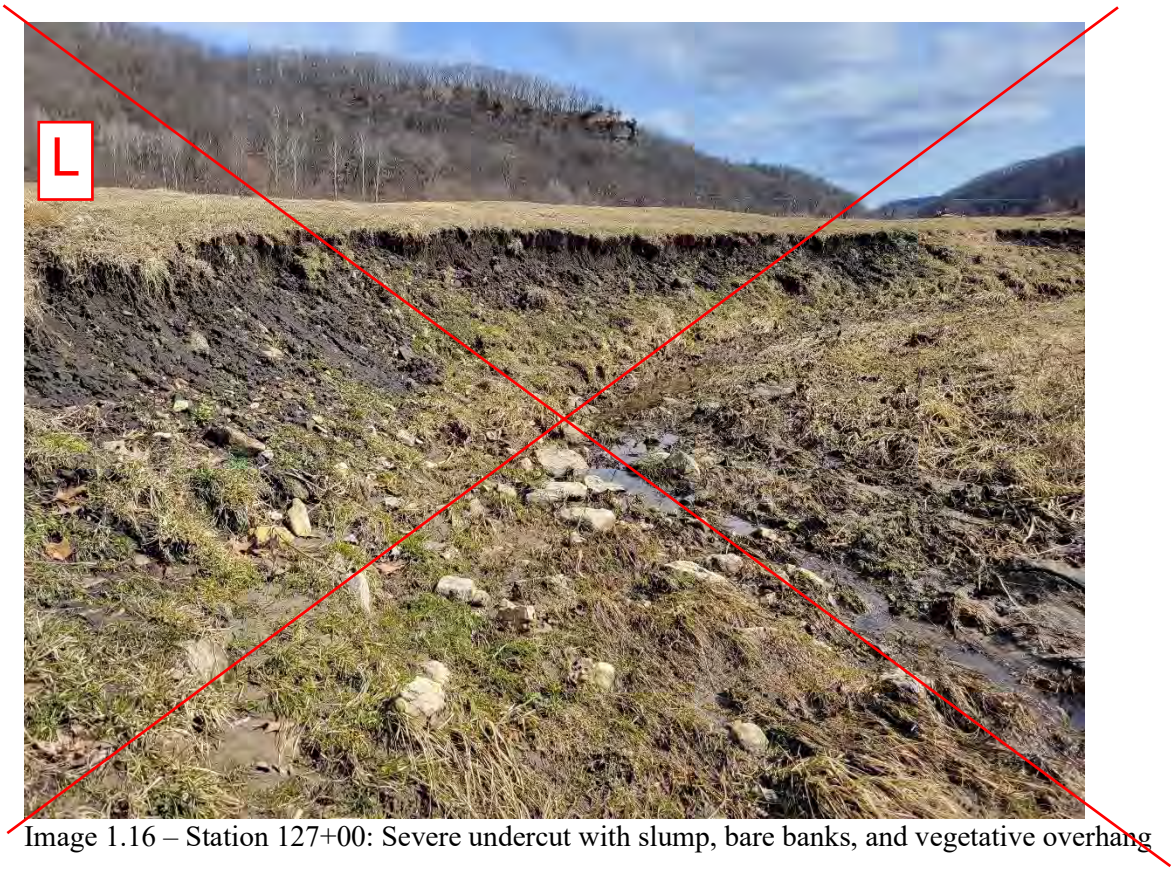


Image 1.16 – Station 127+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.17 – Station 128+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.18 – Station 139+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.19 – Station 141+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.20 – Station 142+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.21 – Station 142+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.22 – Station 142+75: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.23 – Station 143+25: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.24 – Station 144+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.25 – Station 145+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.26 – Station 147+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.27 – Station 148+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.28 – Station 151+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.29 – Station 154+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.30 – Station 156+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.31 – Station 155+00: Severe undercut with slump, bare banks, and vegetative overhang

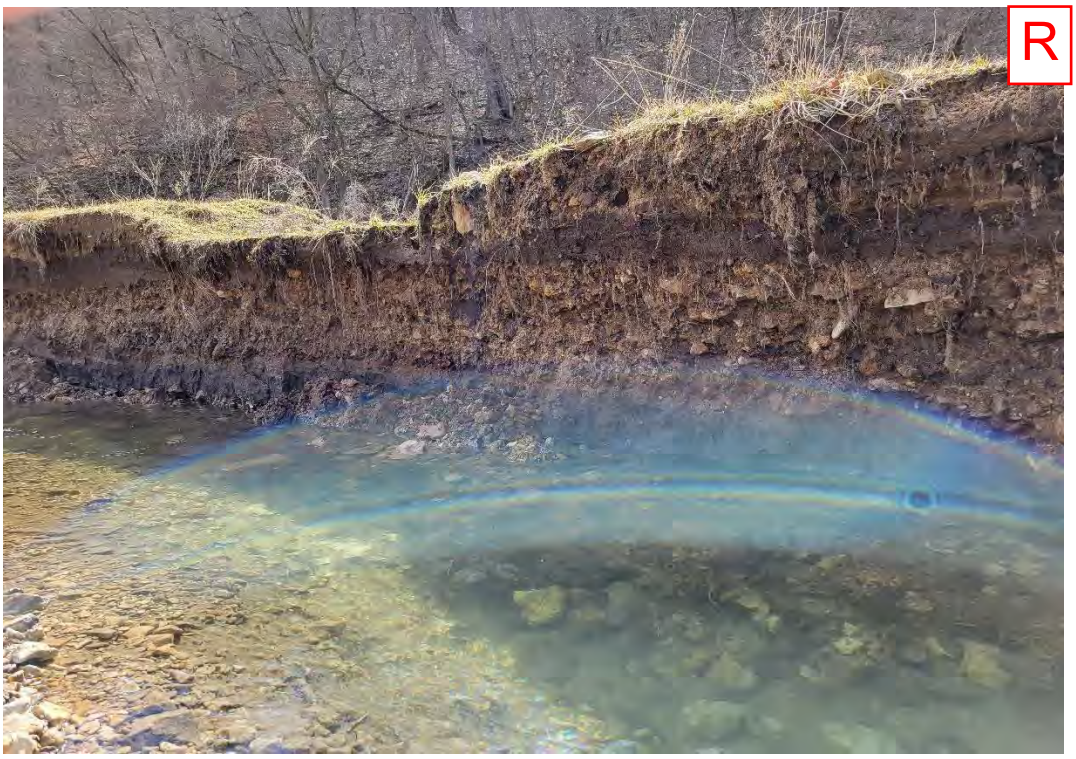


Image 1.32 – Station 157+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.33 – Station 160+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.34 – Station 161+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.35 – Station 163+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.36 – Station 164+00: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.37 – Station 165+50: Severe undercut with slump, bare banks, and vegetative overhang



Image 1.38 – Station 167+50: Severe undercut with slump, bare banks, vegetative overhang, and exposed tree roots.



Image 1.39 – Station 168+50: Severe undercut with slump, bare banks, and vegetative overhang

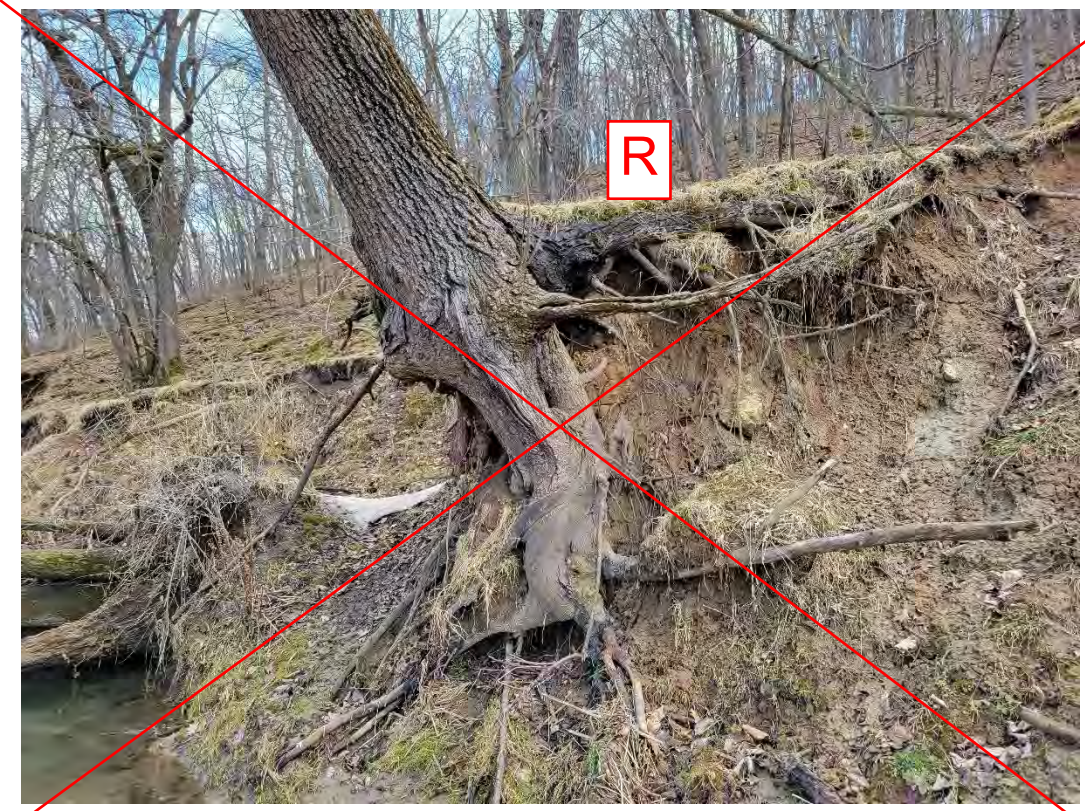


Image 1.40 – Station 169+50: Severe undercut with slump, bare banks, vegetative overhang, exposed tree roots, and tree about to fall into the stream.

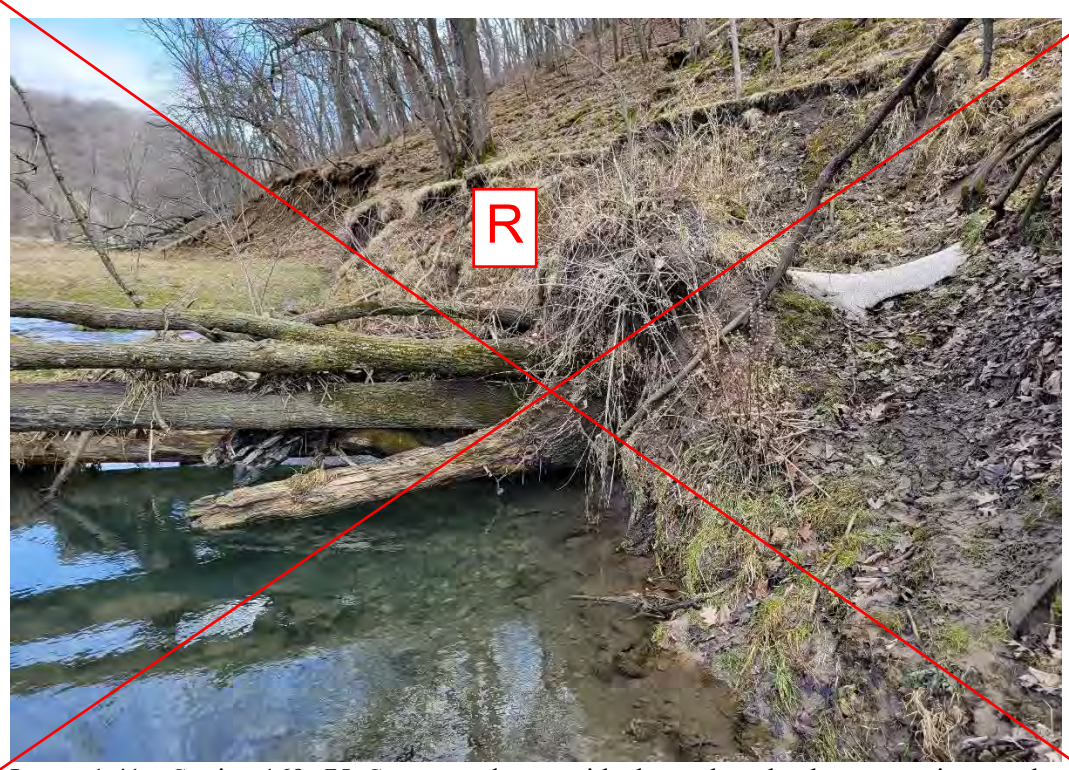


Image 1.41 – Station 169+75: Severe undercut with slump, bare banks, vegetative overhang, exposed tree roots, and trees fallen into the stream.



Image 1.42 – Station 170+25: Severe undercut with slump, bare banks, vegetative overhang, and exposed tree roots.



Image 1.43 – Station 171+00: Severe undercut with slump, bare banks, vegetative overhang, and fence falling into the stream.

Attachment #12

NRCS Excel Workbook Estimating 'Other' Erosion Types June 2006

Annual soil loss predictions for conservation planning purposes are made with current soil loss prediction technology (RUSLE2). RUSLE2 estimates sheet, rill and interrill erosion. Erosion that is seasonal in nature and caused by concentrated flow, however, is not predicted by RUSLE2.

This workbook provides conservation planners with simple tools and processes to help estimate the amount of erosion occurring in ephemeral gullies, classic gullies and on streambank erosion sites.

Definitions:

Rill Erosion: consists of the removal of soil by concentrated water running through little streamlets, or headcuts. Detachment in a rill occurs if the sediment in the flow is below the amount the load can transport and if the flow exceeds the soil's resistance to detachment. As detachment continues or flow increases, rills will become wider and deeper. Rills may be of any size but are usually less than four inches deep. Rills are:

<> generally parallel on the slope, but may converge,
<> generally of uniform spacing and dimension,
<> generally appear at different locations on the landscape from year to year,
<> generally shorter than ephemeral cropland gullies,
<> usually end at a concentrated flow channel, or an area where the slope flattens and deposition occurs,
<> are on the same portion of the slope that is used to determine the length of slope (L) for RUSLE2,
<> many small, but conspicuous channels running in the direction of slope gradient

Rill erosion is considered in the RUSLE2 calculations.

Ephemeral Gully Erosion: Small erosion channels formed on crop fields as a result of concentrated flow of runoff water. These channels are routinely eliminated by tillage of the field but return following subsequent runoff events. Ephemeral Gullies are small enough to be eliminated (temporarily) with the use of typical farm tillage equipment and they:

<> recur in the same area of concentrated flow each time they form,
<> frequently form in well-defined depressions in natural drainage ways,
<> are generally wider, deeper, and longer than the rills in the field,

Ephemeral Gullies are **not** calculated by the RUSLE2 program.

Gully Erosion: Permanent gullies are formed when channel development has progressed to the point where the gully is too wide and too deep to be tilled across. These channels carry large amounts of water after rains and deposit eroded material at the foot of the gully. They disfigure landscape and make the land unfit for growing crops. Gullies:

<> may grow or enlarge from year to year by head cutting and lateral enlarging,
<> often occur in depressions or natural drainage ways,
<> may begin as ephemeral gullies that were left in the field untreated,
<> may, over time, become partially stabilized by grass, weeds or woody vegetation,

Gully erosion is not calculated by the RUSLE2 program.

Streambank Erosion: The wearing away of streambanks by flowing water. The removal of soil from streambanks is typically caused by the direct action of stream flow and/or wind/wave action, typically occurring during periods of high flow. Streambank erosion:

<> is a natural process that generally increases when unprotected streambanks (e.g. no woody vegetation) are subject to the actions of flowing water and ice damage.

<> is a common occurrence on many Vermont river channels that are experiencing geomorphic adjustments

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The soil loss from ephemeral gullies, gullies and streambank erosion areas can be estimated by calculating the volume of soil removed by erosion processes. The volume of soil loss can be multiplied by the typical unit weight of the soil (based on soil texture) which is eroded. Approximate soil unit weights are expressed below[1]:

Soil Texture	Estimated Dry Density lb/ft^3
Gravel	110
Sand	105
Loamy Sand	100
Sandy Loam	100
Fine Sandy Loam	100
Sandy Clay Loam	90
Silt Loam	85
Silty Clay Loam	85
Silty Clay	85
Clay Loam	85
Organic	22

Procedure for estimating Ephemeral Soil Erosion:

The following formula will be used to calculate annual estimated ephemeral gully erosion:

$$\frac{\text{Ephemeral Gully } \mathbf{Length} \times \text{Gully Average } \mathbf{Width} \times \text{Gully Average } \mathbf{Depth}}{2000} \times \text{Soil Weight (lbs/ft}^3\text{)} \times \text{Occurrences per Year} = \mathbf{Estimated} \text{ Soil Loss (Tons per Year)}$$

* Ephemeral gully erosion may reform multiple times per year, and under certain conditions it may not form in a given year. The voided volume which would be calculated after a runoff event is not necessarily representative of an annual rate, but is representative of only the specific event. This erosion can be calculated for individual storms and can be summed for a yearly estimate.

1 Data from published soil surveys, laboratory data, and soil interpretation record are to be used where available. Parent materials, soil consistency, soil structure, pore space, soil texture, and coarse fragments all influence unit weight.

Procedure for estimating Gully Soil Erosion:

The following formula will be used to calculate annual estimated classic gully erosion:

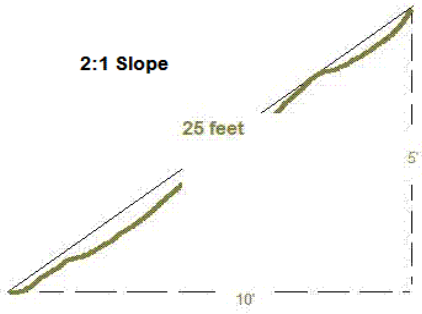
$$\frac{\text{Gully } \underline{\textbf{Length}} \text{ X (Average } \underline{\textbf{Width}} \text{ X Average } \underline{\textbf{Depth}} \text{ X 0.5) X } \underline{\textbf{Soil Weight}} \text{ (lbs/ft3)}}{2000} \;/\; \text{Formation Years} = \underline{\textbf{Estimated}} \text{ Soil Loss Per Year (Tons)}$$

Procedure for estimating Streambank Soil Erosion (Direct Volume Method):

The following formula will be used to calculate annual estimated streambank erosion unless a field measurement procedure[2] is used:

$$\frac{\text{ing Bank } \underline{\textbf{Length}} \text{ X Eroding Bank } \underline{\text{Height}} \text{ X } \underline{\text{Lateral Recession Rate}} \text{ (FT/YR) X } \underline{\text{Soil Weight}} \text{ (lb}}{2000} = \underline{\textbf{Estimated}} \text{ Soil Loss Per Year (Tons)}$$

** Eroding bank height is measured along the bank, not the vertical height of bank. Example: if vertical height of an eroding streambank is 5 feet, and the bank is on a 2:1 slope, the total eroding bank distance is 25 feet -- 1/2 (Base X Height).



***The average annual recession rate is the thickness of soil eroded from a bank surface (perpendicular to the face) in an average year.

Stream bank erosion sometimes presents itself as a major occurance in a given year, whereas the same bank may not erode significantly for a period of years if no major runoff events occur. Recession rates need to be calculated as an average of years when erosion does and does not occur. Recession rate is not calculated as the erosion occurring after a single event.

Use available resources to assist in the estimation of recession rate: use past and present aerial photography, old survey records, and any other information that helps to determine the bank condition at known times in the past. When such information is lacking or insufficient, field observations and professional judgement are needed to estimate recession rates.
It is often not possible to directly measure recession rates in the field. Therefore, the following table has been included which relates recession rates to narrative descriptions of banks eroding at different rates (Table from NRCS Wisconsin guidance).

Lateral Recession Rate (ft/yr)	Category	Description
0.01-0.05	Slight	Some bare bank but active erosion not readily apparent. Some rills but no vegetative overhang. No exposed tree roots.
0.06-0.2	Moderate	Bank is predominantly bare with some rills and vegetative overhang. Some exposed tree roots but no slumps or slips.
0.3-0.5	Severe	Bank is bare with rills and severe vegetative overhang. Many exposed tree roots and some fallen trees and slumps or slips. Some changes in cultural features such as fence corners missing and realignment of roads or trails. Channel cross section becomes U-shaped as opposed to V-shaped.
0.5+	Very Severe	Bank is bare with gullies and severe vegetative overhang. Many fallen trees, drains and culverts eroding out and changes in cultural features as above. Massive slips or washouts common. Channel cross section is U-shaped and stream course may be meandering.

2 The best way to quantify streambank erosion is to measure it directly in the field. The basic procedure in measuring streambank erosion is to survey, flag, or in some way fix a “before" image of the channel you are evaluating in order to establish the baseline condition. Changes due to erosion can then be monitored over time by going back to the study area and re-measuring from the fixed reference points.
Channel cross-sections can be surveyed and plotted on a periodic basis to monitor change. Stakes or pins can be driven into channel banks flush with the surface. The amount of stake or pin exposed due to erosion is the amount of change at the streambank erosion site between your times of observation.
The time required to monitor a site often precludes this method of data collection. The Direct Volume Method can be used to estimate streambank erosion at your site.

Acknowledgements: This Excel workbook was created as a planning tool for use by conservation planners. The basic format and content of the tool is a compilation of various similar tools, processes and procedures employed by NRCS in several states including: Indiana, Iowa, Kansas, Maryland, Michigan, Missouri, Nebraska, Oklahoma, South Dakota and Wisconsin. Some of the terminology in the 'Definitions' section of this Readme document closely mirrors these sources.

NRCS Streambank and Irrigation Ditch Erosion Estimator (Direct Volume Method)

Farmer / Cooperator Name: City of Prairie du Chien
Tract Number: Varies
Evaluated By: L. Hoppman
Evaluation Date: May 1, 2025

Field Number	Eroding Strmbnk Reach #; or Ditch Side/Bottom	Eroding Bank or Ditch Length (Feet)	Eroding Bank Height; or Ditch Bottom Width* (Feet)	Area of Eroding Strmbank or Ditch (FT^2)	Lateral or Ditch Bottom Recession Rate (Estimated) (FT / Year)	Estimated Volume (FT^3) Eroded Annually	Soil Texture	Approximate Pounds of Soil per FT^3	Estimated Soil Loss (Tons/Year)	Average Soil Total Phosphorus (ppm)	Estimated Phosphorus Loss (Pounds/Year)
DEBRAD, INC. Property (Reach A)	A.1R	925	7.12	6,586	0.50	3,293	Silt Loam	85	140	516.3	145
	A.2R	1200	6.44	7,728	0.50	3,864	Silt Loam	85	164	474.5	156
	A.3R	150	14.76	2,214	0.50	1,107	Silt Loam	85	47	558.0	53
	A.1L	925	6.99	6,466	0.25	1,616	Silt Loam	85	69	579.0	80
	A.2L	1200	12.28	14,736	0.10	1,474	Silt Loam	85	63	624.7	78
	A.3L	150	10.63	1,595	0.50	797	Silt Loam	85	34	632.8	43
Pedretti Property (Reach 1)	1R	159	11.25	1,789	0.50	894	Silt Loam	85	38	354.6	27
	2R	39	8.57	332	0.50	166	Silt Loam	85	7	354.6	5
	3R	426	6.94	2,959	0.50	1,480	Silt Loam	85	63	354.6	45
	4R	991	4.92	4,875	0.50	2,437	Silt Loam	85	104	290.3	60
	10R	258	6.13	1,582	0.50	791	Silt Loam	85	34	376.0	25
	12R	165	12.05	1,983	0.50	992	Silt Loam	85	42	363.4	31
	13R	257	6.61	1,696	0.50	848	Silt Loam	85	36	249.6	18
	14R	177	15.73	2,784	0.50	1,392	Silt Loam	85	59	449.4	53
	15R	291	7.94	2,311	0.50	1,155	Silt Loam	85	49	449.4	44
	16R	368	12.78	4,703	0.50	2,352	Silt Loam	85	100	410.3	82
	1L	172	8.54	1,469	0.50	734	Silt Loam	85	31	334.3	21
	2L	135	7.21	973	0.50	487	Silt Loam	85	21	334.3	14
	3L	610	7.11	4,337	0.50	2,169	Silt Loam	85	92	334.3	62
	4L	149	6.90	1,028	0.50	514	Silt Loam	85	22	325.9	14
	5L	326	6.71	2,187	0.50	1,094	Silt Loam	85	46	250.7	23
	7L	213	1.40	298	0.50	149	Silt Loam	85	6	554.5	7
	8L	154	4.85	747	0.50	373	Silt Loam	85	16	554.5	18
	9L	254	3.40	864	0.50	432	Silt Loam	85	18	483.2	18
	10L	173	6.34	1,097	0.50	548	Silt Loam	85	23	268.6	13
	12L	595	14.43	8,586	0.50	4,293	Silt Loam	85	182	459.1	168
	13L	97	6.23	604	0.50	302	Silt Loam	85	13	544.4	14
	14L	64	11.35	726	0.50	363	Silt Loam	85	15	544.4	17
		10,622.1		**TOTAL**		**36,116**			**1,534**		**1,334**

Reach	STA	Top of Bank Elevation	Bottom of Bank Elevation	Vertical Bank	Horizontal Bank	Bank Height
A.1L	8+20	626.00	621.00	5	7.0	8.60
A.1L	10+00	626.00	622.00	4	4.0	5.66
A.1L	12+00	627.00	623.00	4	6.0	7.21
A.1L	14+00	628.00	623.00	5	5.0	7.07
A.1L	16+00	628.00	624.00	4	5.0	6.40
AVERAGE				**4.40**	**5.40**	**6.99**
A.2L	18+00	630.00	624.00	6	9.0	10.82
A.2L	20+00	636.00	625.00	11	14.0	17.80
A.2L	22+25	634.00	626.00	8	7.0	10.63
A.2L	24+00	635.00	628.00	7	10.0	12.21
A.2L	26+00	634.00	624.00	10	7.0	12.21
A.2L	28+00	636.00	630.00	6	8.0	10.00
AVERAGE				**8.00**	**9.17**	**12.28**
A.3L	29+40	639.00	631.00	8	7.0	10.63
AVERAGE				**8.00**	**7.00**	**10.63**
1L	102+75	633.09	626.85	6.24	6.7	9.16
1L	104+00	632.00	628.93	3.07	7.3	7.92
AVERAGE				**4.66**	**7.00**	**8.54**
2L	105+50	634.00	629.00	5	5.2	7.21
AVERAGE				**5.00**	**5.20**	**7.21**
3L	111+75	637.49	634.11	3.38	7.4	8.14
3L	114+00	638.47	636.01	2.46	5.3	5.84
3L	116+00	640.18	635.94	4.24	6.0	7.35
AVERAGE				**3.36**	**6.23**	**7.11**
4L	119+50	643.41	640.00	3.41	4.3	5.49
4L	120+25	644.43	640.44	3.99	7.3	8.32
AVERAGE				**3.70**	**5.80**	**6.90**
5L	125+50	648.53	644.69	3.84	5.5	6.71
AVERAGE				**3.84**	**5.50**	**6.71**
7L	140+50	664.68	663.82	0.86	1.1	1.40
AVERAGE				**0.86**	**1.10**	**1.40**
8L	142+50	669.77	665.96	3.81	5.0	6.29
8L	143+50	670.44	668.00	2.44	2.4	3.42
AVERAGE				**3.13**	**3.70**	**4.85**
9L	147+75	675.35	673.05	2.3	2.5	3.40
AVERAGE				**2.30**	**2.50**	**3.40**
10L	154+75	682.54	678.78	3.76	5.1	6.34
AVERAGE				**3.76**	**5.10**	**6.34**
12L	163+50	694.75	688.01	6.74	11.6	13.42
12L	166+50	698.83	691.22	7.61	12.6	14.72
12L	167+50	700.67	694.64	6.03	13.9	15.15
AVERAGE				**6.79**	**12.70**	**14.43**
13L	170+50	700.65	695.50	5.15	3.5	6.23
AVERAGE				**5.15**	**3.50**	**6.23**
14L	171+25	704.32	695.09	9.23	6.6	11.35
AVERAGE				**9.23**	**6.60**	**11.35**

Reach	STA	Top of Bank Elevation	Bottom of Bank Elevation	Vertical Bank	Horizontal Bank	Bank Height
A.1R	8+20	627.00	621.00	6	5.0	7.81
A.1R	10+00	627.00	622.00	5	4.0	6.40
A.1R	12+00	627.00	623.00	4	5.0	6.40
A.1R	14+00	628.00	623.00	5	4.0	6.40
A.1R	16+00	631.00	624.00	7	5.0	8.60
AVERAGE				**5.40**	**4.60**	**7.12**
A.2R	18+00	630.00	624.00	6	6.0	8.49
A.2R	20+00	629.00	626.00	3	4.0	5.00
A.2R	22+25	633.00	628.00	5	4.0	6.40
A.2R	24+00	633.00	629.00	4	4.0	5.66
A.2R	26+00	634.00	629.00	5	4.0	6.40
A.2R	28+00	633.00	630.00	3	6.0	6.71
AVERAGE				**4.33**	**4.67**	**6.44**
A.3R	29+40	638.00	631.00	7	13.0	14.76
AVERAGE				**7.00**	**13.00**	**14.76**
1R	101+75	633.65	629.60	4.0	10.5	11.25
AVERAGE				**4.05**	**10.50**	**11.25**
2R	104+25	635.14	628.83	6.3	5.8	8.57
AVERAGE				**6.31**	**5.80**	**8.57**
3R	106+50	634.00	630.03	4.0	5.5	6.78
3R	107+25	635.62	630.21	5.4	5.3	7.57
3R	109+50	636.16	631.96	4.2	4.9	6.45
AVERAGE				**4.53**	**5.23**	**6.94**
4R	111+75	636.42	634.81	1.6	4.6	4.87
4R	114+00	638.38	635.59	2.8	3.5	4.48
4R	116+00	640.79	638.21	2.6	5.8	6.35
4R	118+25	641.49	638.20	3.3	1.5	3.62
4R	122+00	645.60	642.92	2.7	4.5	5.24
4R	122+75	645.76	642.91	2.9	4.1	4.99
AVERAGE				**2.63**	**4.00**	**4.92**
10R	138+50	663.65	661.60	2.0	6.9	7.20
10R	140+50	667.05	663.22	3.8	3.3	5.06
AVERAGE				**2.94**	**5.10**	**6.13**
12R	145+25	676.86	668.74	8.1	8.9	12.05
AVERAGE				**8.12**	**8.90**	**12.05**
13R	151+50	679.45	676.05	3.4	4.4	5.56
13R	153+00	682.36	678.65	3.7	6.7	7.66
AVERAGE				**3.56**	**5.55**	**6.61**
14R	157+00	684.32	680.66	3.7	15.3	15.73
AVERAGE				**3.66**	**15.30**	**15.73**
15R	159+25	687.87	683.03	4.8	6.3	7.94
AVERAGE				**4.84**	**6.30**	**7.94**
16R	161+00	689.22	686.60	2.6	10.9	11.21
16R	166+25	701.28	692.69	8.6	11.5	14.35
AVERAGE				**5.60**	**11.20**	**12.78**

Attachment #13

Water Quality Trading
Operation and Maintenance Plan

Introduction:
The Water Quality Trading (WQT) Operation and Maintenance (O&M) Plan is meant to be a working document and should be updated as new trading practices are implemented. Currently, the Operation and Maintenance Plan revolves around the Best Management Practice (BMP) construction along a stream/river. The attached *Streambank BMP Inspection Form* should be completed during annual inspections of BMPs and following major storm events. Inspection forms shall be retained for at least five (5) years to ensure compliance with the WQT Plan.

Publicly Owned BMP:
City representative to complete inspection form annually and following major storm events. The form will then be provided to the Maintenance Supervisor following inspection. The City will address maintenance issues identified during inspection within 30 days. Substantial maintenance issues may require an extended timeframe for generation of plans, specifications, and a public bid process to perform the work. Inspections and O&M activities shall be reported in the annual WQT Report sent to the DNR.

Privately Owned BMP:
City representative to complete inspection form annually and following major storm events. The form will then be provided to the Maintenance Supervisor following inspection. The City will address maintenance issues identified during inspection within 30 days. Substantial maintenance issues may require an extended timeframe for generation of plans, specifications, and a public bid process to perform the work. Maintenance expenses will be incurred by either by the City or Private Property Owner depending on agreement with the City. The Private Property Owner will be allowed to perform maintenance activities at the expense of the Private Property Owner. Inspections and O&M activities shall be reported in the annual WQT Report sent to the DNR.

Quality Assurance:
Riprap gradation and composition shall be provided for each source of material. Streambank shaping and riprap shall be installed per the Crawford County Land Conservation Department and NRCS Standards. Contractors to supply rock that is approved by the NRCS and meets criteria in Wisconsin Construction Spec.9.

Installation:
- Staking provided by the Engineer.
- Do not place riprap over frozen or spongy subgrade surfaces.
- Place riprap as indicated on Construction Plans. Do not dump rip-rap over the bank.
- Blend riprap with existing bank.
- Spread soil out in a layer of less than 4” and seed down. Do not spread soil in wetlands.
- Provide temporary fencing, if deemed necessary, in pasture areas to allow vegetation to establish properly.
- All disturbed areas and soil must be seeded and mulched.

Practice Registration:
The purpose of the “Water Quality Trading Management Practice Registration” form is to report to DNR that a management practice identified in the trading plan has been properly installed and is established and effective. This information will be used to track implementation progress, verify compliance and

perform audits, as necessary. A registration form should be submitted for every management practice that has been identified in the trading plan. If practices are established prior to trading plan submittal, registration forms may be submitted with the trading plan. Otherwise, registration forms should be submitted during the permit term as practices become effective or with the annual report. A blank *Water Quality Trading Management Practice Registration Form 3400-207* is attached and should be submitted following implementation of the trading practice.

Tracking Procedures:
The City will track credits used monthly. The City will report credit usage to the DNR on a monthly basis in the Discharge Monitoring Reports (DMRs). The annual report will summarize the 12 months of credit usage and credit generation. The City will report to DNR any concern that they have that may result in a need to modify the trade agreement and/or this trade plan. For example, a need to generate additional credits based on discharge.

Inspections/Maintenance Considerations:

- A *BMP Inspection Form* is attached.
    - ID: As noted on Construction Plans
    - Condition of BMP: Excellent; Good; Fair; or Poor
    - Maintenance Estimate: Provide an estimate for how long the maintenance will take to complete or a dollar value for completion. This will help determine if the City will perform the work or if the City will hire another entity to perform the work.
    - Date Completed: Following completion of the required maintenance, input the date of completion.
    - Comments: Provide the required maintenance activity along with any other useful information. If the cell provided is not large enough for Comments, write "See Back of Sheet" and provide comments on the reverse side of the Form.
    - Photos Taken: The inspector shall take photographic evidence to represent and archive the condition of each BMP.
- Following installation, inspect the disturbed areas closely over the next few months to ensure that seeding grows.
- BMPs may settle or shift especially after flooding events or freeze/thaw.
- May need to control weed and brush growth.
- Inspect stabilized areas as needed.
- At a minimum, inspect after major storm events.
- Monitoring the measures provided in the Grazing Plan are being followed for applicable BMP sites.
    - If livestock cause routine damage to the streambank, a Livestock Access BMP will be installed per NRCS 578 *Stream Crossing*.
- If a BMP has been damaged, repair it promptly to prevent a progressive failure.
- If repairs are needed repeatedly at a location, evaluate the site to determine if the original design conditions have changed.

Routine Maintenance Items that can be performed by City:

- Evaluate BMP condition
  - Reconstruct/replace BMPs that have settled, shifted, or washed out.
- Manage Vegetation
  - Remove invasive/noxious plants.
  - Resees areas as necessary.
- Manage Garbage
  - Remove garbage and other debris that could otherwise impair the streambank stability.

Monthly Certification:
Each month, the City will certify that the BMPs are maintained and operating in a manner consistent with this Water Quality Trading Plan or provide a statement noting noncompliance with this Plan. The monthly Discharge Monitoring Report (DMR) will include the following statement as a certification of compliance when the Credit Generating Practice is operating in a manner consistent with the Plan:

> "I certify that to the best of my knowledge that the management practices identified in the approved water quality trading plan as the source of phosphorus credits is installed, established and properly maintained."

Annual Inspection:
An annual inspection of the BMPs will be performed by a licensed Professional Engineer to ensure that the BMPs are functioning as intended in order to meet the requirements of the WQT Plan.

Noncompliance:
The City will notify DNR by telephone call to DNR's regional wastewater compliance engineer within 24 hours or next business day of becoming aware that phosphorus credits used or intended for use by City are not being generated as outlined in this Water Quality Trading Plan.

The City will submit a written notification within five days after the City recognizes that the phosphorus credits are not being generated as outlined in the Trading Plan. DNR may waive the requirement for submittal for a written notice within five days and instruct the City to submit the written notice with the next regularly scheduled monitoring report required by City's WPDES Permit.

The written notification should include:

- Description of noncompliance and cause.
- Period of noncompliance including dates and times.
- Schedule for attaining compliance including time and steps toward compliance.
- Plan to prevent reoccurrence of the noncompliance.

Notification of Trade Agreement Termination:
If a trade agreement or the trading plan needs to be terminated during the permit term, the permittee should submit a Notice of Termination to the wastewater engineer/specialist to inform DNR of the termination. DNR staff should use this information to determine if a permit modification is required due to the termination, the termination will result in non-compliance, or other permit actions are required due to the termination. When credits are reduced or eliminated for any reason, the permittee is still required to meet their WQBELs without any grace period. To prevent noncompliance with WQBELs, changes to trading plans must be addressed before credits are lost. Modifying the permit/trading plan will require at least 180 days. A blank *Notification of Water Trade Agreement Termination Form 3400-209* is attached and should be submitted to DNR prior to practice termination, no later than the submittal date of the annual report.

DELTA 3
Platteville, Wisconsin
Dubuque, Iowa
P 608.348.5355
P 563.542.9005
E mail@delta3eng.biz
W www.delta3eng.biz

Streambank BMP Inspection Form

Date & Time:	
Inspector/Title:	
Weather:	
Reason for Inspection:	Monthly ☐ Precipitation Event ☐ Annual P.E. ☐ Other ☐:
Last Inspection Photos Date*:	

* inspection photos should be taken annually at minimum

ID	Vegetative Condition	Structural Condition	Required Maintenance	Maintenance Estimate (Time and/or Cost)	Date Maintenance Completed	Comments

Photos Taken? ☐ Yes ☐ No

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Water Quality Trading Management Practice Registration

Form 3400-207 (R 1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., this form must be completed by any WPDES permittee that is using water quality trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number WI-	Facility Site Number

Facility Address	City	State	ZIP Code

Project Contact Name (if applicable)	Address	City	State	ZIP Code

Project Name

Broker/Exchange Information (if applicable)

Was a broker/exchange be used to facilitate trade? ◯ Yes ◯ No

Broker/Exchange Organization Name	Contact Name

Address	Phone Number	Email

Trade Registration Information (Use a separate form for each trade agreement)

Type	Trade Agreement Number	Practices Used to Generate Credits	Anticipated Load Reduction	Trade Ratio	Method of Quantification
◯ Urban NPS ◯ Agricultural NPS ◯ Other					

County	Closest Receiving Water Name	Land Parcel ID(s)	Parameter(s) being traded

The preparer certifies all of the following:

- I have completed this document to the best of my knowledge and have not excluded pertinent information.
- I certify that the information in this document is true to the best of my knowledge.

Signature of Preparer	Date Signed

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed

Leave Blank – For Department Use Only

Date Received		Trade Docket Number
Entered in Tracking System ☐ Yes	Date Entered	Name of Department Reviewer

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Notification of Water Trade Agreement Termination

Form 3400-209 (1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., and ch. NR 217 Wis. Adm. Code, this form must be completed by any WPDES permittee that is using water quality trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number WI-	Facility Site Number

Facility Address	City	State	ZIP Code

Project Contact Name (if applicable)	Address	City	State	ZIP Code

Project Name

Credit Generator Information

Credit generator type (select all that apply):

- ☐ Permitted Discharge (non-MS4/CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☐ Urban nonpoint source discharge
- ☐ Agricultural nonpoint source discharge
- ☐ Other - Specify:

Trade Agreement number(s) to be terminated including affected land parcel ID(s):

Amount of trading credit being terminated	Effective date of termination

Reason for termination

Is this agreement being updated or replaced?

- ◯ Yes
- ◯ No
- ◯ Unsure

Will this termination result in non-compliance with the effective limit or other permit requirements?

- ◯ Yes; Name: _____
- ◯ No
- ◯ Unsure

The preparer certifies all of the following:

- I am familiar with the specifications submitted for this application, and I believe all applicable items in this checklist have been addressed.
- I have completed this document to the best of my knowledge and have not excluded pertinent information.

Signature of Preparer	Date Signed

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed

Attachment #14

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24 Sep 2020 - 3:10p R:\Prairie du Chien, City of\190283 2020 Flood Mitigation\CADD\Venq_Antoine Extension\Business Park Exp & Flood Mitigation - Title, Gen Notes and Details.dwg by: pjun

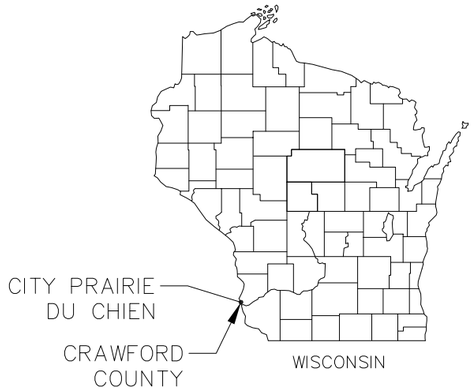
PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION

ANTOINE WAY & VENA COURT EXTENSIONS

CAMPBELL COULEE CREEK IMPROVEMENTS

CITY OF PRAIRIE DU CHIEN, WISCONSIN

ISSUED: 9/24/2020





SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES AND LEGEND
3	OVERALL SHEET INDEX & BENCHMARK MAP
4–6	PLAN & PROFILES – ANTOINE WAY/VENA CT
7	POND SITE PLAN
8–9	CAMPBELL COULEE CREEK PLANS
10	TYPICAL SECTION – CAMPBELL COULEE
11	BRIDGE TYPICAL SECTION – CAMPBELL COULEE
12–16	DETAILS

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

THE LOCATION OF EXISTING UTILITIES, BOTH UNDERGROUND AND OVERHEAD ARE APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.

CALL DIGGER'S HOTLINE
1-800-242-8511

SITE BENCHMARKS

1	TOP NUT HYDRANT ELEV = 642.57	6	TOP NUT HYDRANT ELEV = 642.47
2	TOP NUT HYDRANT ELEV = 642.31	7	TOP NUT HYDRANT ELEV = 640.28
3	TOP NUT HYDRANT ELEV = 640.09	8	TOP NUT HYDRANT ELEV = 643.26
4	TOP NUT HYDRANT ELEV = 642.62	9	TOP NUT HYDRANT ELEV = 646.37
5	TOP NUT HYDRANT ELEV = 642.47		

Water Quality Trading Plan - Reach A

vierbicher
planners | engineers | advisors
Phone: (800) 261-3898

TITLE SHEET
PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION
PRAIRIE DU CHIEN
CRAWFORD COUNTY, WISCONSIN

REVISIONS
NO. DATE REMARKS

REVISIONS
NO. DATE REMARKS

SCALE
AS SHOWN

DATE
AUGUST 2020

DRAFTER
PJUN

CHECKED
MMUC

PROJECT NO.
190283

SHEET
1 OF 16

DWG. NO.

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TOPOGRAPHIC SYMBOL LEGEND

- EXISTING BOLLARD
- EXISTING FLAG POLE
- EXISTING MAILBOX
- EXISTING MONITORING WELL
- EXISTING POST
- EXISTING SIGN (TYPE NOTED)
- EXISTING PARKING METER
- EXISTING CURB INLET
- EXISTING ENDWALL
- EXISTING FIELD INLET RECTANGULAR
- EXISTING FIELD INLET
- EXISTING ROOF DRAIN CLEANOUT
- EXISTING ROOF DRAIN
- EXISTING STORM MANHOLE
- EXISTING STORM MANHOLE RECTANGULAR
- EXISTING SANITARY CLEANOUT
- EXISTING SANITARY MANHOLE
- EXISTING SEPTIC VENT
- EXISTING FIRE HYDRANT
- EXISTING FIRE DEPARTMENT CONNECTION
- EXISTING WATER MAIN VALVE
- EXISTING CURB STOP
- EXISTING WELL
- EXISTING WATER MANHOLE
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING AIR CONDITIONING PEDESTAL
- EXISTING DOWN GUY
- EXISTING ELECTRIC MANHOLE
- EXISTING ELECTRIC RECTANGULAR MANHOLE
- EXISTING ELECTRIC PEDESTAL
- EXISTING TRANSFORMER
- EXISTING ELECTRIC METER
- EXISTING GUY POLE
- EXISTING LIGHT POLE
- EXISTING GENERIC LIGHT
- EXISTING UTILITY POLE
- EXISTING TV MANHOLE
- EXISTING TV RECTANGULAR MANHOLE
- EXISTING TV PEDESTAL
- EXISTING TELEPHONE MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING UNIDENTIFIED MANHOLE
- EXISTING UNIDENTIFIED UTILITY VAULT
- EXISTING HANDICAP PARKING
- EXISTING TRAFFIC SIGNAL
- EXISTING SHRUB
- EXISTING CONIFEROUS TREE
- EXISTING DECIDUOUS TREE
- EXISTING BORING

TOPOGRAPHIC LINEWORK LEGEND

- EXISTING UNDERGROUND CABLE TV
- EXISTING OVERHEAD CABLE TV
- EXISTING FIBER OPTIC LINE
- EXISTING OVERHEAD TELEPHONE LINE
- EXISTING UNDERGROUND TELEPHONE
- EXISTING RETAINING WALL
- EXISTING CHAIN LINK FENCE
- EXISTING GENERAL FENCE
- EXISTING WIRE FENCE
- EXISTING WOOD FENCE
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING GUY LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING OVERHEAD GENERAL UTILITIES
- EXISTING SANITARY FORCE MAIN (SIZE NOTED)
- EXISTING SANITARY SEWER LINE (SIZE NOTED)
- EXISTING STORM SEWER LINE (SIZE NOTED)
- EXISTING EDGE OF TREES
- EXISTING WATER MAIN (SIZE NOTED)
- EXISTING WETLAND DELINEATION
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

SURVEY LEGEND

- BENCHMARK
- FOUND CHISELED "X"
- PUBLIC LAND CORNER AS NOTED
- FOUND NAIL
- FOUND 1" ø IRON PIPE
- FOUND 2" ø IRON PIPE
- FOUND P.K. NAIL
- FOUND 1 1/4" ø IRON ROD
- FOUND 3/4" ø IRON ROD
- FOUND RAILROAD SPIKE
- SET CHISELED "X"
- SET NAIL
- SET P.K. NAIL
- SET 1 1/4" ø IRON ROD
- SET 3/4" ø IRON ROD
- SET RAILROAD SPIKE
- GENERAL CONTROL POINT

GRADING LEGEND

- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- DITCH CENTERLINE
- SILT FENCE
- DISTURBED LIMITS
- BERM
- DRAINAGE DIRECTION
- PROPOSED SLOPE ARROWS
- EXISTING SPOT ELEVATIONS
- PROPOSED SPOT ELEVATIONS
- STONE WEEPER
- VELOCITY CHECK
- INLET PROTECTION
- EROSION MAT CLASS____
- EROSION MAT CLASS____
- TRACKING PAD
- RIP RAP

PROPOSED UTILITY LEGEND

- STORM SEWER PIPE
- STORM SEWER MANHOLE
- STORM SEWER ENDWALL
- STORM SEWER CURB INLET
- STORM SEWER CURB INLET W/MANHOLE
- STORM SEWER FIELD INLET
- ROOF DRAIN CLEANOUT
- SANITARY SEWER PIPE (GRAVITY)
- SANITARY SEWER PIPE (FORCE MAIN)
- SANITARY SEWER LATERAL PIPE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- WATER MAIN
- WATER SERVICE LATERAL PIPE
- FIRE HYDRANT
- WATER VALVE
- CURB STOP
- WATER VALVE MANHOLE
- PROPOSED PIPE INSULATION
- GAS MAIN
- ELECTRIC SERVICE

ABBREVIATIONS

STMH – STORM MANHOLE
FI – FIELD INLET
CI – CURB INLET
CB – CATCH BASIN
EW – ENDWALL
SMH – SANITARY MANHOLE

CONSTRUCTION AND GENERAL NOTES:

1. INSTALL A 50'L X 20'W X 1.5'D ANTI TRACKING PAD AT THE ENTRANCE OF THE PROJECT. THE ANTI TRACKING PAD SHALL BE REPLACED AS NECESSARY TO ACCOMMODATE UTILITY CONSTRUCTION.

2. THE CONTRACTOR IS REQUIRED TO MAKE EROSION CONTROL INSPECTIONS AT THE END OF EACH WEEK AND WHEN 0.5 INCHES OF RAIN FALLS WITHIN 24 HOURS. INSPECTION REPORTS SHALL BE PREPARED AND FILED AS REQUIRED BY THE DNR. ALL MAINTENANCE WILL FOLLOW AN INSPECTION WITHIN 24 HOURS. REPORTS SHALL BE SUBMITTED TO ENGINEER WEEKLY.

3. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DURING CONSTRUCTION TO PUBLIC PROPERTY, PRIVATE PROPERTY OR UTILITIES.

4. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY THE ENGINEER, PRIOR TO PLACING ORDER OF ANY SUCH ITEM.

5. EXISTING TOPOGRAPHIC INFORMATION IS BASED ON FIELD OBSERVATIONS. CONTRACTOR SHALL VERIFY TOPOGRAPHIC INFORMATION PRIOR TO STARTING CONSTRUCTION.

6. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND ENSURE PROPER CLEARANCE OF NEW UTILITIES.

7. THE CONTRACTOR SHALL REMOVE ANY SEDIMENT TRACKED ONTO ADJACENT ROADS BY THE MEANS OF STREET SWEEPING (NOT FLUSHING) AT THE END OF EACH WORK DAY.

8. EXCESS MATERIAL GENERATED FROM CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFF SITE.

9. RIGHT OF WAY AND PROPERTY LINES ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING PROPERTY CORNER MONUMENTATION. ANY MONUMENTS DISTURBED BY CONTRACTOR SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

10. CONTRACTOR SHALL COORDINATE WITH DRY UTILITY COMPANY'S REGARDING ANY POTENTIAL CONFLICTS AND COORDINATE RELOCATIONS AS MAY BE REQUIRED.

11. CONTRACTOR SHALL COORDINATE w/ PROPERTY OWNERS/RESIDENTS REGARDING ACCESS TO DRIVEWAYS AND UTILITY SHUT–OFFS.

12. NO TREES ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

AGENCIES:

EMERGENCY – FIRE, RESCUE,
AMBULANCE, POLICE
DIAL 911

LARRY GATES
CITY OF PRAIRIE DU CHIEN – WATER
214 BLACKHAWK AVE.
PRAIRIE DU CHIEN, WI 53821
PHONE: 608–326–8213
CELL: 608–306–0360

TERRY MEYER
CITY OF PRAIRIE DU CHIEN – SANITARY SEWER
400 W. LOCKWOOD
PRAIRIE DU CHIEN, WI 53821
PHONE: 608–326–8534
CELL: 608–306–0365

UTILITIES:

GAS
MG&E
MARK OEHLER
PHONE: 608–326–2417

TELEPHONE
CENTURY TEL
STEVE NELSON
PHONE: 608–342–4369

ELECTRIC
ALLIANT ENERGY
DENNIS STEPHENSON
PHONE: 608–342–4114

CABLE TV
MEDIACOM
PHONE: 608–326–4487

vierbicher
planners | engineers | advisors
Phone: (800) 261-3898

GENERAL NOTES

PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION
PRAIRIE DU CHIEN
CRAWFORD COUNTY, WISCONSIN

REVISIONS

NO.	DATE	REMARKS

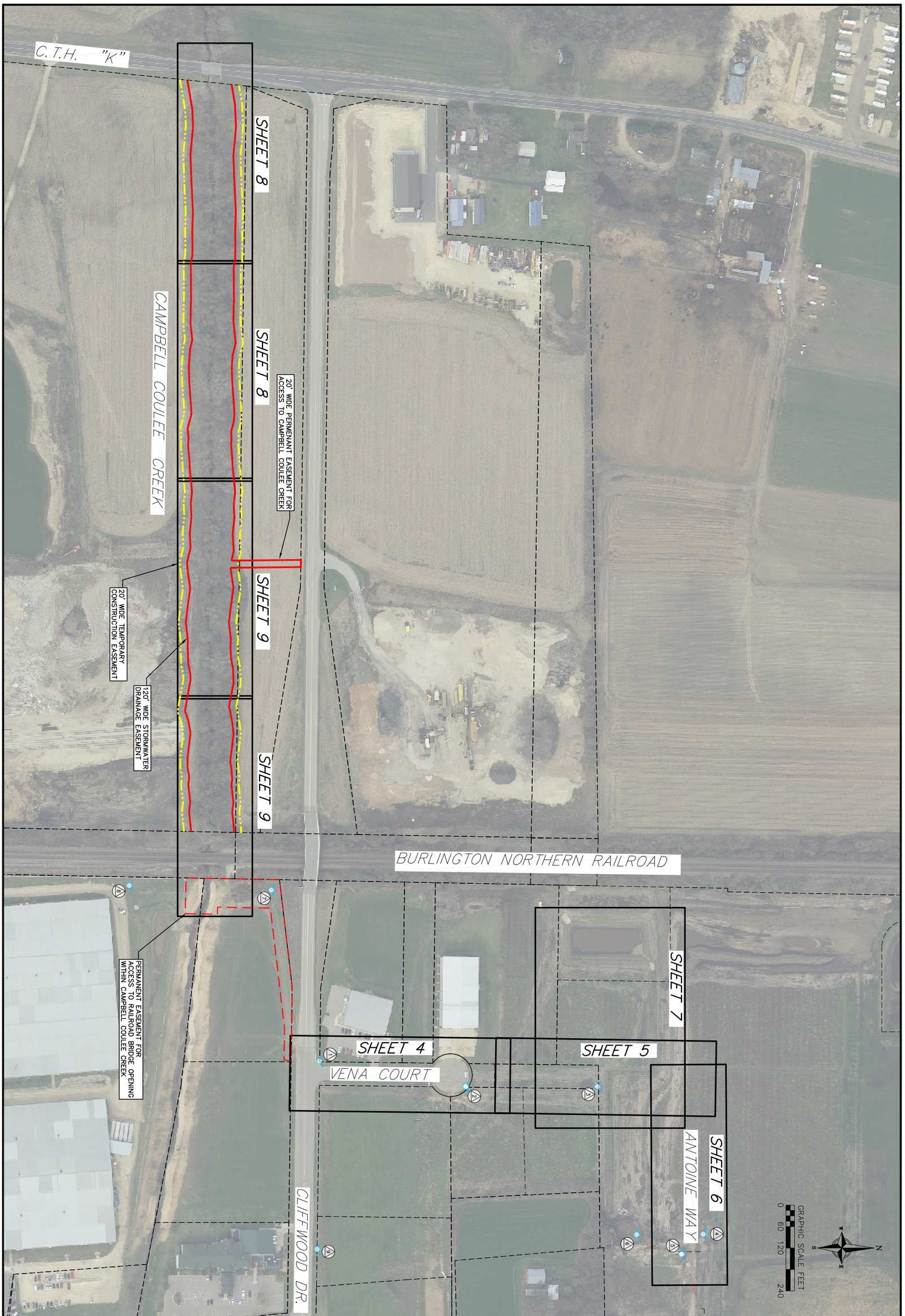
REVISIONS

NO.	DATE	REMARKS

SCALE: AS SHOWN
DATE: AUGUST 2020
DRAFTER: PJUN
CHECKED: MMUC
PROJECT NO.: 190283
SHEET: 2 OF 16
DWG. NO.:

24 Sep 2020 - 3:11p R:\Prairie du Chien, City of\190283 2020 Flood Mitigation\CADD\Vero_Antoine Extension\Business Park Exp & Flood Mitigation - Title, Gen Notes and Details.dwg by: pjun

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DWG. NO.	3 OF 16
SHEET	
PROJECT NO.	190283
CHECKED	MMJC
DRAFTER	PJUN
DATE	AUGUST 2020
SCALE	AS SHOWN

REVISIONS			REVISIONS		
NO.	DATE	REMARKS	NO.	DATE	REMARKS

OVERALL SHEET INDEX & BENCHMARK MAP

PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION
PRAIRIE DU CHIEN
CRAWFORD COUNTY, WISCONSIN

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planners | engineers | advisors
Phone: (800) 261-3898

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24 Sep 2020 - 3:17p R:\Prairie du Chien, City of\190283 2020 Flood Mitigation\CADD\Veno_Antoine Extension\Business Park Exp & Flood Mitigation - Campbell Coulee Creek Plan.dwg by:pjun

N

W E

S

GRAPHIC SCALE FEET

0 10 20 40

CONTRACTOR TO STAY WITHIN PERMANENT AND TEMPORARY CONSTRUCTION LIMITS THROUGHOUT CONSTRUCTION

120' WIDE STORMWATER DRAINAGE EASEMENT

RIPRAP, SEE DETAIL, TYP

SILT FENCE ALONG STREAM BANK EDGES, TYP

CONTRACTOR TO REMOVE EXISTING DEBRIS, TREES AND STUMPS WITHIN GRADING LIMITS

CONTRACTOR TO PROTECT EXISTING STREAM AS REQUIRED. NO GRADING TO OCCUR BELOW THE ORDINARY HIGH WATER MARK OF THE STREAM 1' (+/-) ABOVE BOTTOM OF STREAM

20' WIDE TEMPORARY CONSTRUCTION EASEMENT

CONTRACTOR TO EROSION MAT SLOPES AFTER TOPSOIL RESPREAD AND FINAL GRADING IS COMPLETE.

DEBRAD INC

P/L

MATCH

R/W

A.1L

A.1R

A.2L

A.2R

C.T.H. "K"

CAMPBELL COULEE CREEK

vierbicher
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CAMPBELL COULEE CREEK PLAN

PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION
PRAIRIE DU CHIEN
CRAWFORD COUNTY, WISCONSIN

REVISIONS NO.	DATE	REMARKS

REVISIONS NO.	DATE	REMARKS

SCALE: AS SHOWN

DATE: AUGUST 2020

DRAFTER: PJUN

CHECKED: MMUC

PROJECT NO.: 190283

SHEET: 8 OF 16

DWG. NO.:

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24 Sep 2020 - 3:17p R:\Prairie du Chien, City of\190283 2020 Flood Mitigation\CADD\Venq_Antoine Extension\Business Park Exp & Flood Mitigation - Campbell Coulee Creek Plan.dwg by:pjun

20' WIDE PERMENANT EASEMENT FOR ACCESS TO CAMPBELL COULEE CREEK

CONTRACTOR TO EROSION MAT SLOPES AFTER TOPSOIL RESPREAD AND FINAL GRADING IS COMPLETE.

CONTRACTOR TO PROTECT EXISTING STREAM AS REQUIRED. NO GRADING TO OCCUR BELOW THE ORDINARY HIGH WATER MARK OF THE STREAM 1' (+/-) ABOVE BOTTOM OF STREAM

SILT FENCE ALONG STREAM BANK EDGES, TYP

RIPRAP, SEE DETAIL, TYP

120' WIDE STORMWATER DRAINAGE EASEMENT

CONTRACTOR TO REMOVE EXISTING DEBRIS, TREES AND STUMPS WITHIN GRADING LIMITS

CONTRACTOR TO PROTECT EXISTING BRIDGE DURING CONSTRUCTION

EXISTING PRAIRIE SAND & GRAVEL DILLMAN BRIDGE

CONTRACTOR TO STAY WITHIN PERMANENT AND TEMPORARY CONSTRUCTION LIMITS THROUGHOUT CONSTRUCTION

20' WIDE TEMPORARY CONSTRUCTION EASEMENT

DEBRAD INC

CAMPBELL COULEE CREEK

P/L

MATCH

BURLINGTON NORTHERN RAILROAD

R/W

A.2L A.3L A.2R A.3R

TRITPT LLC

CONTRACTOR TO REMOVE EXISTING DEBRIS, STUMPS AND TREES WITHIN THE CREEK

PERMANENT EASEMENT FOR ACCESS TO RAILROAD BRIDGE OPENING WITHIN CAMPBELL COULEE CREEK

N

W E

S

GRAPHIC SCALE FEET

0 10 20 40

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CAMPBELL COULEE CREEK PLAN

PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION
PRAIRIE DU CHIEN
CRAWFORD COUNTY, WISCONSIN

REVISIONS

NO.	DATE	REMARKS

REVISIONS

NO.	DATE	REMARKS

SCALE
AS SHOWN

DATE
AUGUST 2020

DRAFTER
PJUN

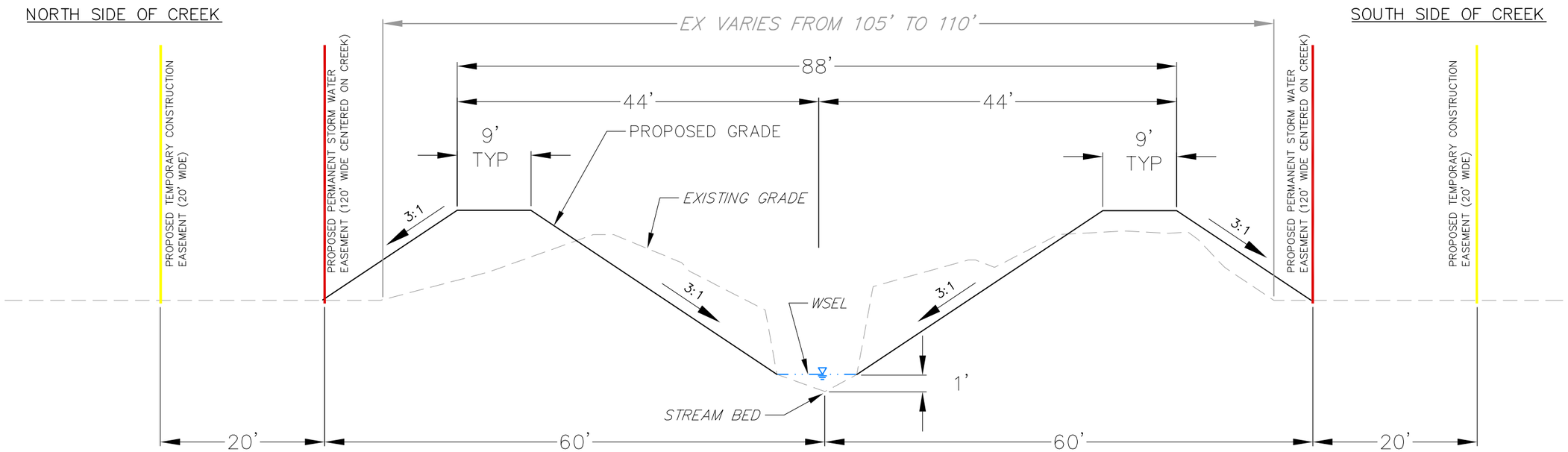
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MMUC

PROJECT NO.
190283

SHEET
9 OF 16

DWG. NO.

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1/10 TYPICAL CREEK CROSS SECTION
NOT TO SCALE

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TYPICAL SECTION - CAMPBELL COULEE CREEK
PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION
PRAIRIE DU CHIEN
CRAWFORD COUNTY, WISCONSIN

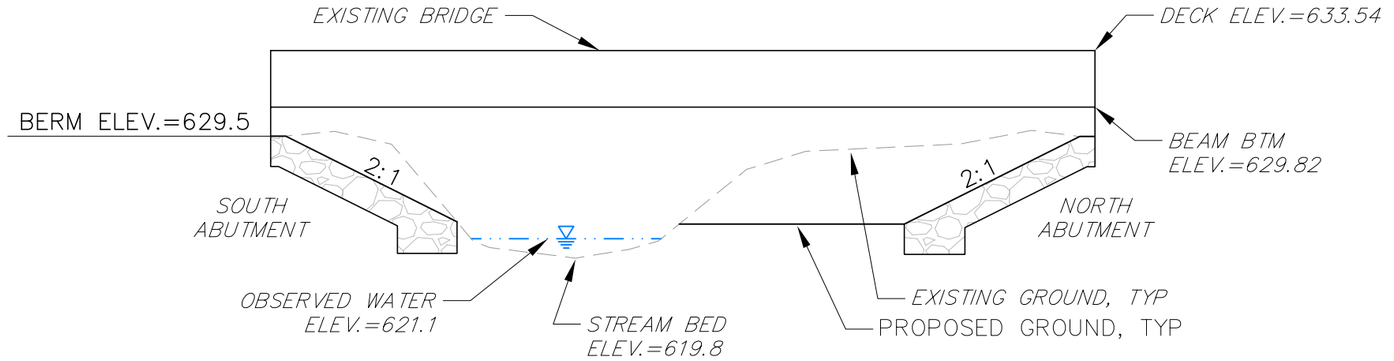
REVISIONS			
NO.	DATE	REMARKS	

REVISIONS			
NO.	DATE	REMARKS	

SCALE: AS SHOWN
DATE: AUGUST 2020
DRAFTER: PJUN
CHECKED: MMUC
PROJECT NO.: 190283
SHEET: 10 OF 16
DWG. NO.:

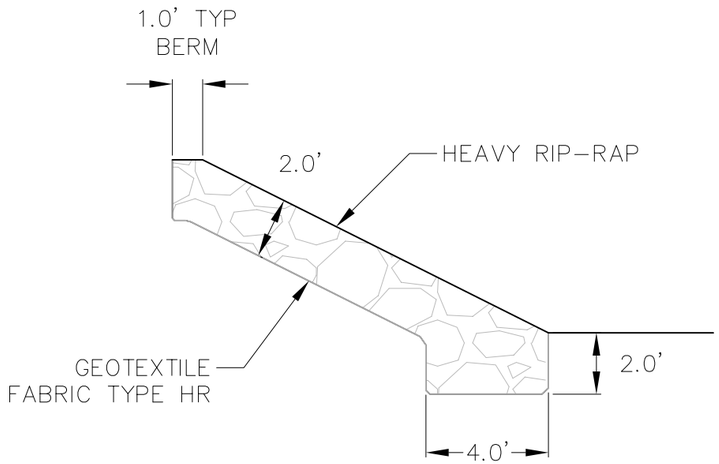
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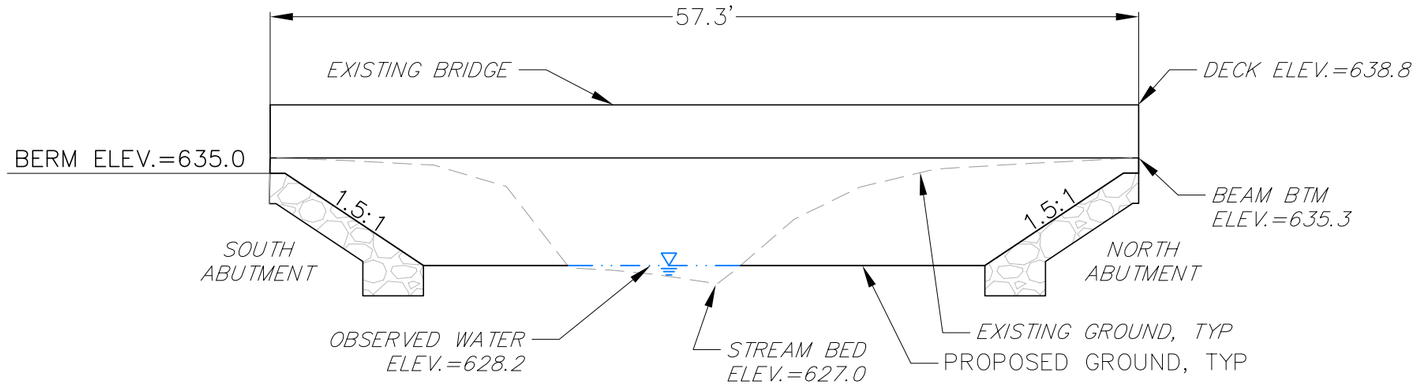


1/11 CTH K BRIDGE
LOOKING WEST

EXISTING OPENING AREA = 257 S.F.
PROPOSED OPENING AREA = 363 S.F.

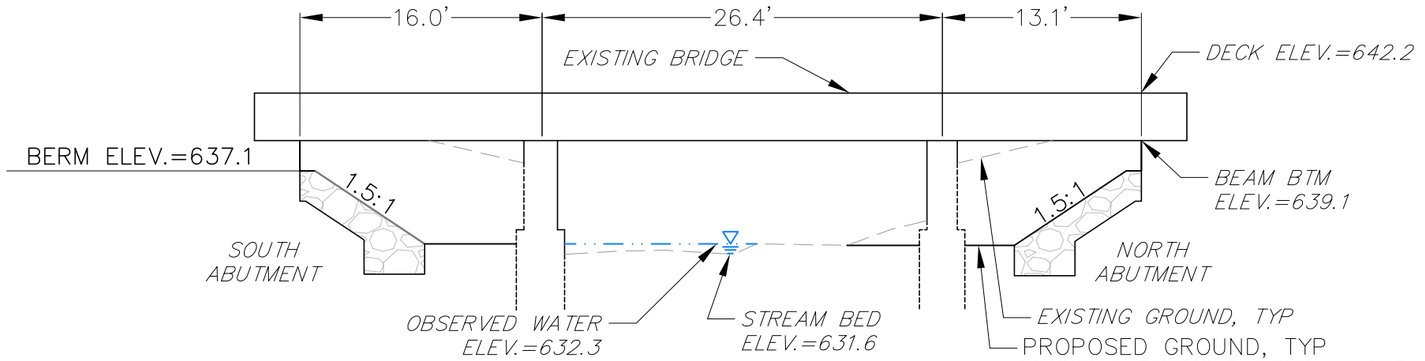


2/11 RIP-RAP DETAIL
AT BOTH ENDS OF BRIDGE



3/11 DILLMAN BRIDGE
LOOKING WEST

EXISTING OPENING AREA = 157 S.F.
PROPOSED OPENING AREA = 345 S.F.



4/11 RAIL ROAD BRIDGE
LOOKING WEST

EXISTING OPENING AREA = 178 S.F.
PROPOSED OPENING AREA = 312 S.F.

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BRIDGE TYPICAL SECTION - CAMPBELL COULEE
PDCH BUSINESS PARK EXPANSION & FLOOD MITIGATION
PRAIRIE DU CHIEN
CRAWFORD COUNTY, WISCONSIN

REVISIONS		
NO.	DATE	REMARKS

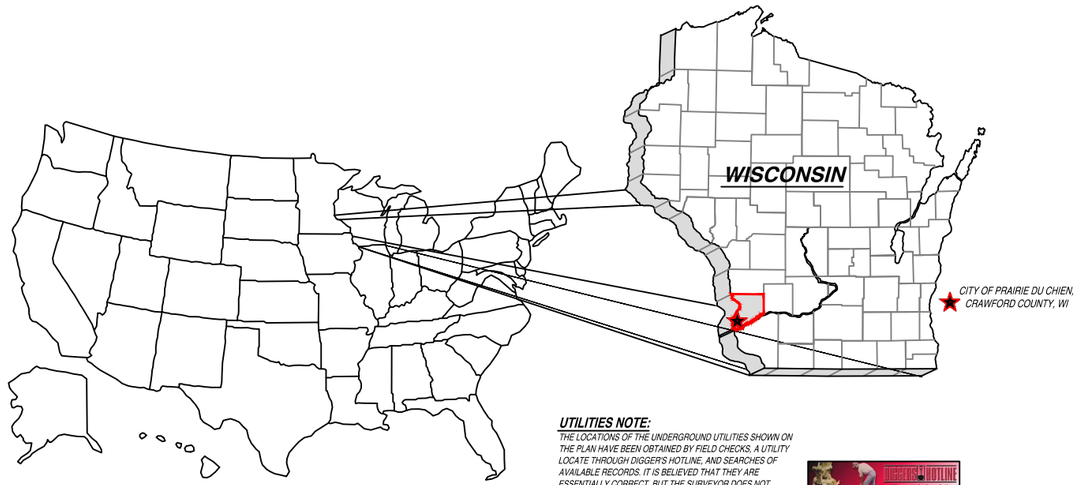
REVISIONS		
NO.	DATE	REMARKS

SCALE: AS SHOWN
DATE: AUGUST 2020
DRAFTER: PJUN
CHECKED: MMUC
PROJECT NO.: 190283
SHEET: 11 OF 16
DWG. NO.:

24 Sep 2020 - 3:15p R:\Prairie du Chien, City of\190283 2020 Flood Mitigation\CADD\Bridge Cross Sections.dwg by: pjun

PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK

OWNER:CITY OF PRAIRIE DU CHIEN



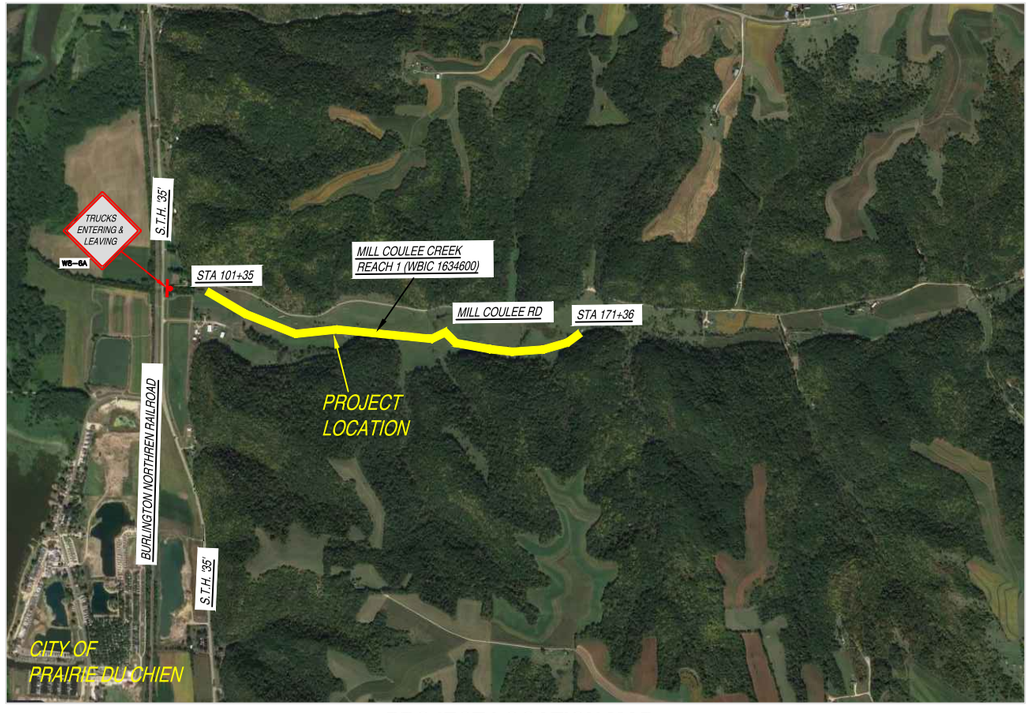
UTILITIES NOTE:
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS, A UTILITY LOCATE THROUGH DIGGER'S HOTLINE, AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS W/ THE UTILITY COMPANIES AND THE " CITY OF PRAIRIE DU CHIEN " PRIOR TO STARTING ANY EXCAVATION.

DIGGERS HOTLINE
Wisconsin's One Call Notification Center

DIGGERS HOTLINE IS OPEN:
24 HOURS A DAY, 7 DAYS A WEEK, 365 DAYS A YEAR!
TO NOTIFY DIGGERS HOTLINE OF YOU INTENT TO DIG CALL:
MILWAUKEE AREA: (414) 259-1181
TOLL FREE: (800) 242-8511
HEARING IMPAIRED (TDD) (800) 542-2289

SHEET INDEX:

SHEET TITLE:	SHEET DESCRIPTION:	DATE OF ISSUE:	DATE OF REVISION:
G000	TITLE SHEET & PROJECT LOCATION MAP	AUGUST 23, 2024	-
G001	LEGEND & GENERAL NOTES	AUGUST 23, 2024	-
C101 - C109	PLAN VIEW	AUGUST 23, 2024	-
C201	DETAILS - EROSION CONTROL & NOTES	AUGUST 23, 2024	-
C202	DETAILS - STREAM BANK	AUGUST 23, 2024	-



PROJECT LOCATION MAP
SCALE: N.T.S.

1. *THE SIGN LOCATIONS SHOWN ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL INSTALL TRAFFIC CONTROL SIGNS PER WISCONSIN DEPARTMENT OF TRANSPORTATION (DOT) STANDARDS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).*
2. *THE SIGNS SHOWN ARE THE MINIMUM TRAFFIC CONTROL THAT WILL BE REQUIRED FOR THE PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL TRAFFIC CONTROL MEASURES DURING CONSTRUCTION TO MEET THE STANDARDS OF THE WISCONSIN DOT AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS DIRECTED BY THE PROJECT ENGINEER.*

PROJECT INFORMATION:

OWNER:
CITY OF PRAIRIE DU CHIEN
MAYOR - DAVE HEMMER
214 EAST BLACKHAWK AVENUE
P.O. BOX 324
PRAIRIE DU CHIEN, WI 53821
(608) 326-6406

OWNER:
CITY OF PRAIRIE DU CHIEN
ADMINISTRATOR - CHAD ABRAM
214 EAST BLACKHAWK AVENUE
P.O. BOX 324
PRAIRIE DU CHIEN, WI 53821
(608) 326-6406

UTILITY DIRECTOR:
CITY OF PRAIRIE DU CHIEN
LARRY GATES
214 EAST BLACKHAWK AVENUE
P.O. BOX 324
PRAIRIE DU CHIEN, WI 53821
(608) 326-6406

WASTE WATER - LEAD OPERATOR:
CITY OF PRAIRIE DU CHIEN
TODD WHYTE
214 EAST BLACKHAWK AVENUE
P.O. BOX 324
PRAIRIE DU CHIEN, WI 53821
(608) 326-8534

WATER - LEAD OPERATOR:
CITY OF PRAIRIE DU CHIEN
BILL RODENKIRCH
214 EAST BLACKHAWK AVENUE
P.O. BOX 324
PRAIRIE DU CHIEN, WI 53821
(608) 326-8213

STREET DEPARTMENT:
CITY OF PRAIRIE DU CHIEN
SUPERINTENDENT - NICK GILBERTS
214 EAST BLACKHAWK AVENUE
P.O. BOX 324
PRAIRIE DU CHIEN, WI 53821
(608) 326-8213

ELECTRIC UTILITY:
SCENIC RIVERS
MR. CHAD OLMSTEAD
231 N. SHERIDAN STREET
LANCASTER, WI 53813
OFFICE: (608) 723-2121
CELL: (608) 642-0254

ELECTRIC UTILITY:
ALLAINT ENERGY
MR. ALLAN MUMM
2200 E. CAMPION BLVD.
PRAIRIE DU CHIEN, WI 53821
OFFICE: (608) 326-9481
CELL: (608) 732-7925

NATURAL GAS UTILITY:
MADISON GAS & ELECTRIC COMPANY
MR. MIKE POWERS
526 E. DECKER STREET
VIROQUA, WI 54665
(608) 637-3139

TELEPHONE & CABLE TELEVISION:
CENTURYLINK
MR. DOUG MCGOWAN
135 N. BONSON
PLATTEVILLE, WI 53818
(608) 482-5377

ENGINEER:
DELTA 3
EVERY ANGLE COVERED
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING
GRAND MSTONE • LAND DEVELOPMENT • PLANNING & CADD SERVICES
875 SOUTH CHESTNUT STREET — PHONE: (608) 348-5355
PLATTEVILLE, WISCONSIN 53818
898 JACKSON STREET — PHONE: (563) 542-9005
DUBUQUE, IOWA 52001

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK
PRAIRIE DU CHIEN, WISCONSIN
PROJECT LOCATION: MILL COULEE CREEK
OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE. PRAIRIE DU CHIEN, WI 53821

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
--/--/----		-.-----

PRELIMINARY

PROJECT NUMBER	D22-056
SHEET SCALE	NOT TO SCALE
DRAWN BY	C. COYIER
DATE ISSUED	AUGUST 23, 2024
SHEET DESC.	TITLE SHEET & PROJECT LOCATION MAP

SHEET TITLE:
G000

SHEET NUMBER # **01 of 10**

LEGEND

EX. CON. MANHOLE
EX. ECC. MANHOLE
EX. LIFT STATION
EX. CLEAN OUT
EX. FIRE HYDRANT
EX. WATER SERVICE
EX. WATER VALVE
EX. YARD HYDRANT
EX. CATCH BASIN
EX. STORM INLET
EX. NATURAL GAS VALVE
EX. NATURAL GAS METER
EX. POWER POLE
EX. LIGHT POLE
EX. WARNING SIREN
EX. TEL. PEDESTAL
EX. MAILBOX
EX. LP TANK
EX. SATELLITE DISH
Ex. POST OR POLE
EX. STREET SIGN
EX. EVERGREEN TREE
EX. DECIDUOUS TREE
EX. TREE STUMP
EX. BUSH/SHRUB
EX. TREE/BRUSH LINE
EX. WINDMILL
EX. PARK BENCH
EX. BENCHMARK
SURVEY CONTROL POINT
EX. PROPERTY PIN
R/W — RIGHT-OF-WAY
P/L — PROPERTY LINE
EASEMENT
San. Lat. — EX. SAN. S. LATERAL
6" San. S. — EX. 6" SAN. S. MAIN
8" San. S. — EX. 8" SAN. S. MAIN
10" San. S. — EX. 10" SAN. S. MAIN
12" San. S. — EX. 12" SAN. S. MAIN
15" San. S. — EX. 15" SAN. S. MAIN
EX. FLOW DIRECTION
E — EX. CAPPED SERVICE
EX. WATER SERVICE
4" Water — EX. 4" WATER MAIN
6" Water — EX. 6" WATER MAIN
8" Water — EX. 8" WATER MAIN
10" Water — EX. 10" WATER MAIN
12" Water — EX. 12" WATER MAIN
12" St. Sewer — EX. <12" STORM SEWER
EX. 12" STORM SEWER
15" St. Sewer — EX. 15" STORM SEWER
18" St. Sewer — EX. 18" STORM SEWER
24" St. Sewer — EX. 24" STORM SEWER
27" St. Sewer — EX. 27" STORM SEWER
30" St. Sewer — EX. 30" STORM SEWER
36" St. Sewer — EX. 36" STORM SEWER
42" St. Sewer — EX. 42" STORM SEWER
48" St. Sewer — EX. 48" STORM SEWER
EX. CURB AND GUTTER
GAS — EX. U.GRD N. GAS UTILITY
UGE — EX. U.GRD ELECTRIC UTILITY
UGC — EX. U.GRD CABLE TV UTILITY
TEL — EX. U.GRD TELEPHONE UTILITY
FO — EX. U.GRD FIBER OPTIC UTILITY
OHE — EX. OVERHEAD ELECTRIC
EX. FENCE
EX. RAILROAD TRACKS
99 — EX. CONTOUR
EX. DRAINAGE SWALE

PROP. SANITARY SEWER LATERAL
PROP. <6" SANITARY SEWER MAIN
PROP. 6" SANITARY SEWER MAIN
PROP. 8" SANITARY SEWER MAIN
PROP. 10" SANITARY SEWER MAIN
PROP. 12" SANITARY SEWER MAIN
PROP. 15" SANITARY SEWER MAIN
PROP. 18" SANITARY SEWER MAIN
PROP. CIPP LINER
PROP. FLOW DIRECTION
PROP. WATER SERVICE
PROP. <4" WATER MAIN
PROP. 4" WATER MAIN
PROP. 6" WATER MAIN
PROP. 8" WATER MAIN
PROP. 10" WATER MAIN
PROP. 12" WATER MAIN
PROP. 15" WATER MAIN
PROP. <12" STORM SEWER
PROP. 12" STORM SEWER
PROP. 15" STORM SEWER
PROP. 18" STORM SEWER
PROP. 24" STORM SEWER
PROP. 30" STORM SEWER
PROP. 36" STORM SEWER
PROP. 48" STORM SEWER
PROP. CURB AND GUTTER
PROP. CURB BACK OPENING
GAS — PROP. U.GRD GAS UTILITY
UGE — PROP. U.GRD ELECTRIC UTILITY
UGCTV — PROP. U.GRD CABLE TV UTILITY
UGT — PROP. U.GRD TELEPHONE UTILITY
FIBER — PROP. U.GRD FIBER OPTIC UTILITY
OHE — PROP. OVERHEAD ELECTRIC
CAUTION NATURAL GAS — PROP. CROSSING OF N. GAS UTILITY
PROP. UTILITY POLE
PROP. LIGHT POLE
PROP. FENCE
TEMPORARY EASEMENT
CONSTRUCTION EASEMENT
ESTIMATED DISTURBANCE LIMITS
99 — PROP. CONTOUR
PROP. DRAINAGE SWALE
PROP. SILT FENCE
PROP. EROSION CONTROL SEDIMENT LOG
PROP. PAVEMENT MARKING
PAINTED TRAFFIC ARROW
ADA PARKING DESIGNATION
10 — PARKING STALL COUNT
5'R / 0+00 — RADIUS POINT/SIZE STA. ON CENTERLINE
PROP. HANDICAP RAMP WITH DETECTABLE WARNING FIELD
SOIL BORING LOCATION
RIVER FLOW DIRECTION
PROP. 4' DIA. SANITARY MANHOLE
PROP. 5' DIA. SANITARY MANHOLE
PROP. MANHOLE CHIMNEY REHABILITATION / TOP ADJUSTMENT
PROP. SANITARY LIFT STATION

PROP. TYPE "X" CURB & GUTTER
PROP. REVERSE-PITCH CURB & GUTTER
PROP. HOT MIX ASPHALT PAVEMENT (DRIVEWAY)
PROP. 4" CONCRETE SIDEWALK
PROP. 6" CONCRETE PAVEMENT
PROP. 8" CONCRETE PAVEMENT
PROP. GRAVEL SHOULDER / DRIVEWAY
EROSION MATTING (MILD SLOPES)
EROSION MATTING (STEEP SLOPES)
PROP. REGRADING AND LANDSCAPING
PROP. RIP-RAP
PROP. STORM STRUCTURES - PROFILE
PROP. STORM PIPE(RCP) - PROFILE
PROP. STORM PIPE(CMP OR HDPE) - PROFILE
PROP. SANITARY STRUCTURE - PROFILE
PROP. WATER MAIN PIPE - PROFILE
PROP. CLAY LINER - PROFILE
PROP. SANITARY SEWER FORCE MAIN - PROFILE
PROP. SPOT REPAIR - PROFILE / PLAN VIEW
PROP. CASING PIPE - PROFILE
PROP. CLEARING AND GRUBBING
PROP. BUILDING REMOVAL
PROP. SIDEWALK REMOVAL
PROP. PRESSURE-REDUCING VALVE STATION
PROP. FIRE HYDRANT
PROP. WATER SERVICE
PROP. WATER SERVICE W/ VALVE BOX SLEEVE
PROP. WATER VALVE
PROP. WATER BEND - HORIZONTAL
PROP. WATER BEND - VERTICAL
PROP. WATER BEND <5°
PROP. WATER TEE
PROP. WATER CROSS
PROP. WATER REDUCER
PROP. MJ PLUG
PROP. 4' DIA. STORM MANHOLE
PROP. 5' DIA. STORM MANHOLE
PROP. INLET
PROP. 4' DIA. INLET
PROP. 6' DIA. INLET
PROP. 4' DIA. CATCH BASIN- W/ 2'X3' CASTING
PROP. 5' DIA. CATCH BASIN- W/ 2'X3' CASTING
PROP. 6' DIA. CATCH BASIN- W/ 2'X3' CASTING
PROP. 4'X6' CATCH BASIN W/2'X3' CASTING
PROP. CURB OPENING CASTING
PROP. 2'X3' CATCH BASIN
PROP. ADJUSTED CATCH BASIN TOP
PROP. WISDOT TYPE 8 INLET
PROP. WISDOT TYPE 9 INLET
PROP. CMP ENDWALL
PROP. RCP ENDWALL

KEY NOTES [100] :

100 PROPOSED SILT FENCE FOR EROSION CONTROL.
101 PROPOSED SEDIMENT LOG FOR EROSION CONTROL.
102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
103 RE-GRADE YARD/DITCH LINE (MIN. SLOPE 1.0%).
104 PROPOSED EROSION MAT CLASS I, TYPE 'B'.
105 INSTALL TYPE 'D' INLET PROTECTION.
106 PROPOSED MAIL BOX RELOCATION.
107 ITEM TO REMAIN.
108 CONTRACTOR TO REMOVE ITEM.
109 PROPOSED TURBIDITY BARRIER (TYP.) (SEE DETAIL - SHEET C203).
110 PROPOSED EROSION CONTROL REVEGETATIVE MAT (ECRM).
111 REMOVE AND SALVAGE TO OWNER IN PRE-CONSTRUCTION CONDITION.
112 REINSTALL STREET SIGN AS PER OWNER/WISDOT REQUIREMENTS.
113 PROPOSED STREAM BANK GRADING (2:1 SLOPE) WITH RIP-RAP TO TOP OF BANK (SEE DETAIL - SHEET C202).
114 PROPOSED STREAM BANK GRADING (6:1 SLOPE)(SEE DETAIL - SHEET C202).
200 PROPOSED SANITARY SEWER [SIZE].
201 NEW SANITARY SEWER LATERAL [SIZE].
202 REPLACE EXISTING SANITARY SEWER LATERAL.
203 RECONNECT EXISTING SANITARY SEWER LATERAL.
204 CONNECTION TO EXISTING SANITARY SEWER PIPE/STRUCTURE.
205 REMOVE EXISTING SANITARY SEWER PIPE /STRUCTURE.
206 REHABILITATE SANITARY MANHOLE; SEE TABLE 'B'.
207 SANITARY SEWER SPOT REPAIR.
208 ABANDON AND CAP EXISTING SANITARY SEWER.
209 ABANDON EXISTING SANITARY SEWER LATERAL.
210 CONTRACTOR TO FIELD VERIFY SANITARY SEWER LATERAL LOCATION/ACTIVITY AND REPLACE ACCORDING TO ENGINEER.
300 PROPOSED WATER MAIN [SIZE].
301 NEW WATER SERVICE [SIZE].
302 REPLACE EXISTING WATER SERVICE WITH 1" WATER SERVICE.
303 RECONNECT EXISTING WATER SERVICE.
304 DIRECTIONAL DRILL PROPOSED WATER SERVICE.
305 CONNECTION TO EXISTING WATER MAIN.
306 EXISTING HYDRANT TO BE REMOVED AND SALVAGED TO OWNER.
307 REMOVE EXISTING WATER MAIN VALVE BOX/STRUCTURE.
308 ADJUST EXISTING WATER MAIN VALVE BOX.
309 ABANDON, DRAIN, & CAP EXISTING WATER MAIN.
310 ABANDON EXISTING WATER SERVICE.
311 CONTRACTOR TO FIELD VERIFY WATER SERVICE LOCATION/ACTIVITY AND REPLACE ACCORDING TO ENGINEER.
400 PROPOSED STORM SEWER [SIZE].
401 CONNECT EXISTING ROOF DRAIN TO CURB OPENING
402 CONNECTION TO EXISTING STORM SEWER PIPE/STRUCTURE.
403 REMOVE EXISTING STORM SEWER PIPE/STRUCTURE.
404 ABANDON & CAP EXISTING STORM SEWER.
405 ADJUST EXISTING STORM STRUCTURE.
500 TREE & STUMP TO BE REMOVED (LESS THEN 12")
501 TREE & STUMP TO BE REMOVED (12" & GREATER)
502 SHRUB TO BE REMOVED.
503 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.
504 REMOVE AND REINSTALL/REPLACE EXISTING LANDSCAPING, FENCE, RETAINING WALL, ETC. (IF NECESSARY).
505 REMOVE EXISTING LANDSCAPING, FENCE, RETAINING WALL, ETC.
506 POLE/PEDESTAL TO BE SECURED BY UTILITY COMPANY DURING CONSTRUCTION.
507 POLE TO BE RELOCATED BY UTILITY COMPANY.
508 GUY WIRE TO BE RELOCATED BY UTILITY COMPANY.
509 PEDESTAL TO BE RELOCATED BY UTILITY COMPANY.
510 UTILITY CONFLICT - TO BE RELOCATED/ADJUSTED BY UTILITY COMPANY.
511 POTENTIAL UTILITY CONFLICT - VERIFY WITH UTILITY COMPANY.
512 **CAUTION!** - UTILITY CROSSING.
600 REMOVE EXISTING CURB & GUTTER.
601 PROPOSED 24" CONCRETE CURB & GUTTER.
602 PROPOSED 30" CONCRETE CURB & GUTTER.
603 PROPOSED 36" CONCRETE CURB & GUTTER.
604 MATCH TO EXISTING CURB & GUTTER.
605 PROVIDE TYPE 'X' CURB.
606 PROVIDE REVERSE-PITCH CURB & GUTTER.
607 PROVIDE CURB TAPER.
608 REMOVE ASPHALT/CONCRETE/WALL/STEPS.
609 PROPOSED 4" CONCRETE SIDEWALK.
610 PROPOSED 6" CONCRETE SIDEWALK/DRIVEWAY.
611 PROPOSED 6" CONCRETE PAVEMENT.
612 PROPOSED 8" CONCRETE PAVEMENT.
613 PROPOSED CONCRETE STEPS. STEP RISE HEIGHT AND STEP TREAD DEPTH SHALL MEET APPLICABLE BUILDING CODES. CONTRACTOR SHALL CONFIRM REQUIRED NUMBER OF STEPS WITH PROJECT ENGINEER PRIOR TO INSTALL.
614 PROPOSED 2' GRAVEL SHOULDER.
615 REGRADE EXISTING GRAVEL.
616 PROPOSED GRAVEL DRIVEWAY.
617 REMOVE & REPLACE GRAVEL DRIVEWAY.
618 REMOVE GRAVEL DRIVEWAY & REPLACE WITH BITUMINOUS DRIVEWAY/APRON.
619 REMOVE & REPLACE HMA PAVEMENT.
620 REMOVE & REPLACE HMA PAVEMENT DRIVEWAY.
621 PROPOSED HMA PAVEMENT.
622 MATCH TO EXISTING EDGE PAVEMENT.
623 PROPOSED RESIDENTIAL HMA PAVEMENT DRIVEWAY.
624 PROPOSED COMMERCIAL HMA PAVEMENT DRIVEWAY.
625 REMOVE & REPLACE 4" CONCRETE SIDEWALK.
626 REMOVE & REPLACE 6" CONCRETE SIDEWALK/DRIVEWAY.
627 PROPOSED HANDICAP RAMP WITH - D. WARN. FIELD [S.F.].
628 SAW CUT PCC PAVEMENT.
629 SAW CUT HMA PAVEMENT.
630 PROPOSED BITUMINOUS WEDGE CURB.

NOTES:

TRAFFIC CONTROL NOTE:
ALL CONTRACTORS MUST CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE REQUIREMENTS OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION. ONE LANE OF TRAFFIC MUST REMAIN OPEN DURING AND AFTER ALL CONSTRUCTION ACTIVITIES FOR EMERGENCY VEHICLE ACCESS.

STREET SIGN NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING, STORING, AND RESETTING ALL PERMANENT SIGNS. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING SIGNS UNTIL REMOVED. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL TEMPORARY SIGNS THAT MAY BE REQUIRED.

TRAFFIC SIGN NOTE:
CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC SIGNS FOR ANY TRAFFIC SIGNS DISTURBED DURING CONSTRUCTION. ALL DISTURBED TRAFFIC SIGNS MUST BE REPLACED AND INSTALLED AS PER LOCAL REGULATIONS AT THE COMPLETION OF THE PROJECT.

EROSION CONTROL NOTE:
CONTRACTOR TO INSTALL BACKFILL MATERIAL INTO THE EXCAVATED TRENCH AS SOON AS POSSIBLE TO IMPLEMENT EROSION CONTROL.

PROPERTY LINE AND RIGHT-OF-WAY NOTE:
ALL RIGHT-OF-WAYS AND PROPERTY LINES SHOWN ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES ONLY. A PROPERTY SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR SHOULD BE COMPLETED TO DETERMINE THE ACTUAL PROPERTY LINE AND RIGHT-OF-WAY LOCATIONS.

MAILBOX RELOCATION NOTE:
CONTRACTOR TO RELOCATE EXISTING MAILBOXES DURING CONSTRUCTION (COORDINATE AND VERIFY WITH LOCAL POSTAL SERVICE ON LOCATION). RESET BEHIND CURB AND GUTTER OR SHOULDER ACCORDING TO THE REQUIREMENTS OF THE LOCAL POSTMASTER UPON COMPLETION OF STREET CONSTRUCTION.

TREE TRIMMING NOTE:
CONTRACTOR TO PROPERLY TRIM ALL TREE BRANCHES, ROOTS, AND BUSHES DISTURBED DUE TO CONSTRUCTION.

TREE REMOVAL NOTE:
CONTRACTOR TO CONTACT ENGINEER OR ***CITY OF PRAIRIE DU CHIEN*** FOR VERIFICATION PRIOR TO ANY TREE REMOVAL.

SAW CUT NOTE:
CONTRACTOR TO PROVIDE FULL DEPTH SAW CUTS AND REPLACE PAVEMENT.

UTILITIES NOTE:
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS, A UTILITY LOCATE THROUGH DIGGER'S HOTLINE, AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS W/ THE UTILITY COMPANIES AND ***THE CITY OF PRAIRIE DU CHIEN*** PRIOR TO STARTING ANY EXCAVATION.

SITE RESTORATION NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT OF ALL DISTURBED PROJECT AREA COMPONENTS INCLUDING, BUT NOT LIMITED TO, EXISTING CONCRETE, BITUMINOUS PAVEMENT, GRAVEL, CULVERTS, WATER AND SANITARY SEWER SYSTEM COMPONENTS, STORM SEWER SYSTEM COMPONENTS, TREES, LAWN ORNAMENTS, FENCING, YARD LANDSCAPING, RETAINING WALLS, MAILBOXES, AND LANDSCAPE AREAS.

PROPERTY DAMAGES:
THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ADJACENT PROPERTY AND FOR ANY DAMAGE TO THE SITE OR TO ADJACENT PROPERTY INCIDENTAL TO THE CONSTRUCTION ACTIVITIES. AFTER THE COMPLETION OF CONSTRUCTION, ANY AREAS ADJACENT TO THE CONSTRUCTION SITE DAMAGED BY THE CONTRACTOR DURING EXECUTION OF THE CONTRACT SHALL BE RESTORED TO MATCH THE PRECONSTRUCTION CONDITIONS.

DISCIPLINE	DESIGNATION
REMOVAL	R
GENERAL	G
CIVIL	C
LANDSCAPE	L
AQUATIC	AQ
ARCHITECTURAL	A
STRUCTURAL	S
ELECTRICAL	E
INSTRUMENTATION/CONTROLS	N
PROCESS	D
PLUMBING	P
HVAC /MECHANICAL	M

DISCIPLINE DESIGNATORS

TYPE	DESIGNATION
NOTES & SCHEDULES	0
PLANS	1
ELEVATIONS & DETAILS	2
CROSS-SECTIONS	3
DIAGRAMS	4

DRAWING SHEET DESIGNATION

C102
DRAWING NUMBER
DRAWING SHEET DESIGNATION
DISCIPLINE DESIGNATION (MAY HAVE MULTIPLE)

SHEET NUMBER IDENTIFICATION

ENGINEER:
DELTA 3
EVERY ANGLE COVERED
PROFESSIONAL CIVIL, MUNICIPAL & STRUCTURAL ENGINEERING
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES
825 SOUTH CHESTNUT STREET, PLATTEVILLE, WISCONSIN 53818 — PHONE: (608) 348-5355
898 JACKSON STREET, DUBUQUE, IOWA 52001 — PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

CONSENT STATEMENT
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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK
PRAIRIE DU CHIEN, WISCONSIN
PROJECT LOCATION: MILL COULEE CREEK
OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:	BY:	
--/--/----	-----	

PRELIMINARY	
PROJECT NUMBER	D22-056
SHEET SCALE	NOT TO SCALE
DRAWN BY	C. COYIER
DATE ISSUED	AUGUST 23, 2024
SHEET DESC.	LEGEND & GENERAL NOTES

SHEET TITLE:
G001

SHEET NUMBER # 02 of 10



KEY NOTES [100] :

102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
109 PROPOSED TURBIDITY BARRIER (TYP.); SEE DETAIL - SHEET C202.
113 PROPOSED STREAM BANK GRADING (2:1 SLOPE) WITH RIP-RAP TO TOP OF BANK; SEE DETAIL - SHEET C202.
114 PROPOSED STREAM BANK GRADING (6:1 SLOPE)(SEE DETAIL - SHEET C202).
503 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.

GENERAL NOTES:

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2. CONTRACTOR TO INSTALL EROSION CONTROL AND TURBIDITY BARRIER PRIOR TO COMMENCING CONSTRUCTION.
3. CONTRACTOR TO CLEAR AND GRUB ALL PROPOSED GRADING LOCATIONS.
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7. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

ENGINEER:
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898 JACKSON STREET, DUBUQUE, IOWA 52001 — PHONE: (563) 542-9005

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TELEPHONE: (608) 348-5355

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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK

PRAIRIE DU CHIEN, WISCONSIN

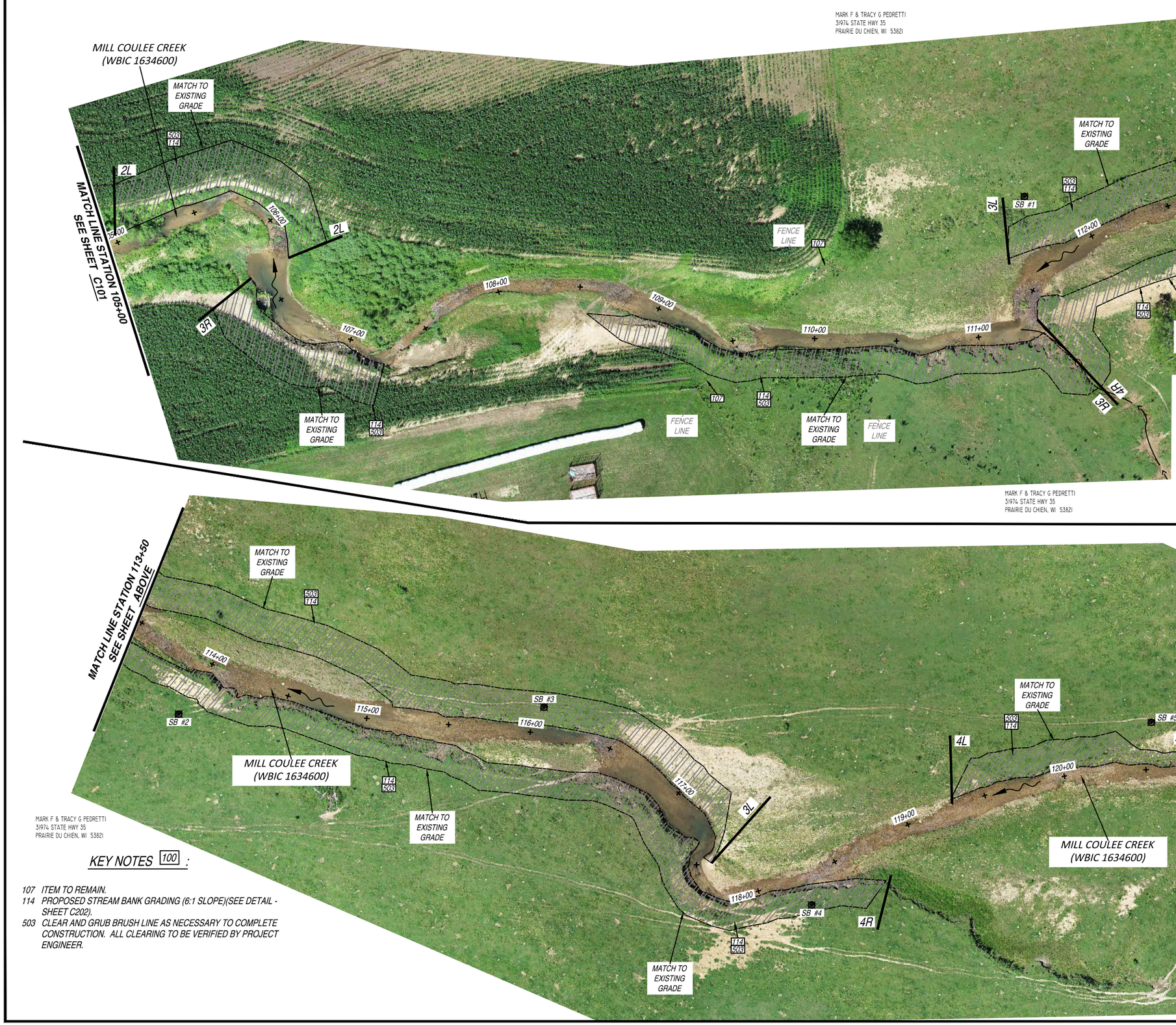
PROJECT LOCATION: MILL COULEE CREEK
OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
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PRELIMINARY	
PROJECT NUMBER	D22-056
SHEET SCALE	SEE BAR SCALE
DRAWN BY	LOGAN HOPPMAN
DATE ISSUED	JULY 22, 2024
SHEET DESC.	PLAN VIEW

SHEET TITLE:
C101

SHEET NUMBER # **03 of 10**



KEY NOTES 100 :

107 ITEM TO REMAIN.
114 PROPOSED STREAM BANK GRADING (6:1 SLOPE)(SEE DETAIL - SHEET C202).
503 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.

GENERAL NOTES:

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7. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

ENGINEER:

DELTA 3
EVERY ANGLE COVERED

PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING
GRANT WRITING • LAND DEVELOPMENT • PLANNING & GIS/CAD SERVICES

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PLATTEVILLE, WISCONSIN 53818

898 JACKSON STREET PHONE: (563) 542-9005
DUBUQUE, IOWA 52001

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

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DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK

PRAIRIE DU CHIEN, WISCONSIN

PROJECT LOCATION: MILL COULEE CREEK

OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821

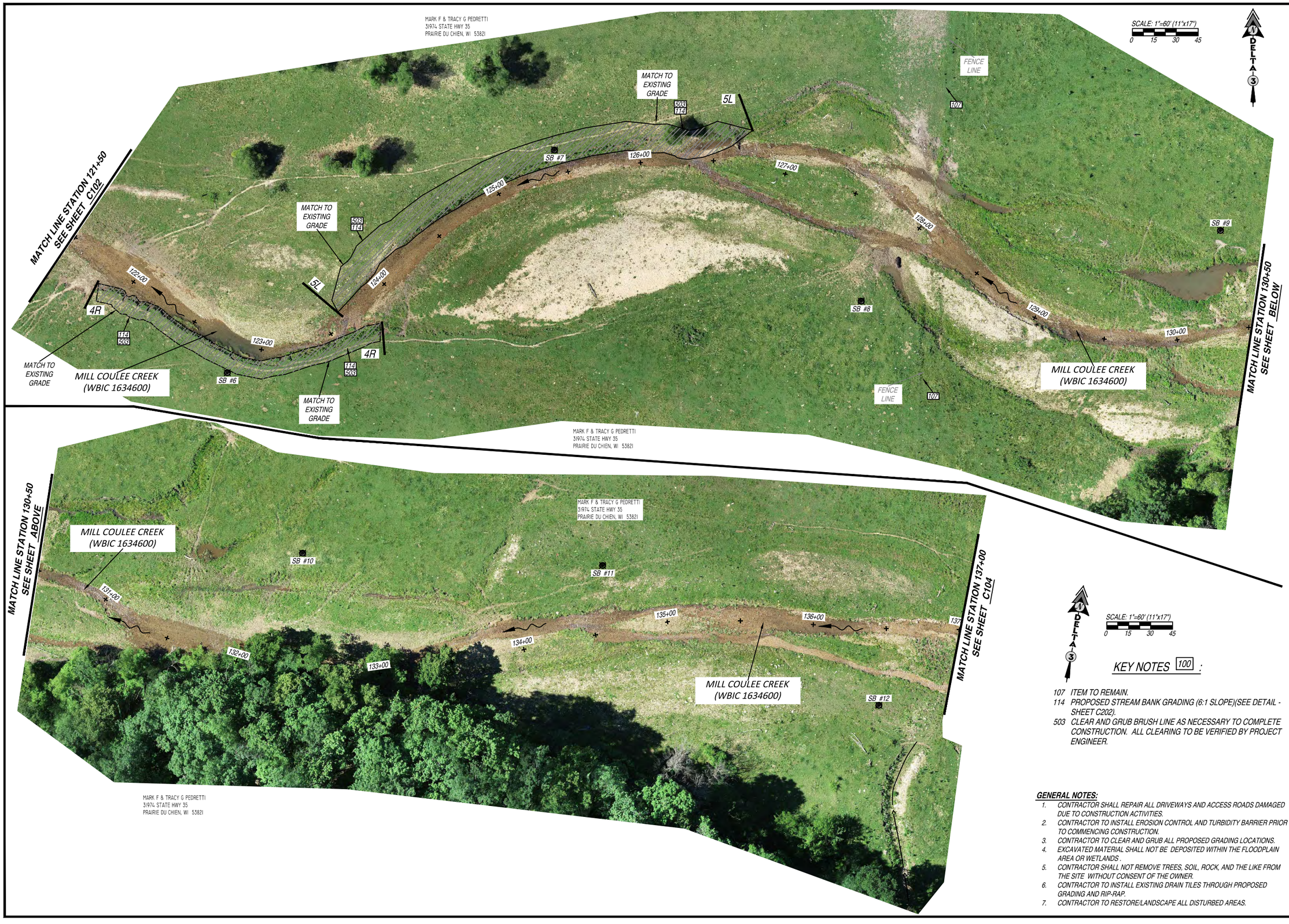
REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
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PRELIMINARY	
PROJECT NUMBER	D22-056
SHEET SCALE	SEE BAR SCALE
DRAWN BY	LOGAN HOPPMAN
DATE ISSUED	JULY 22, 2024
SHEET DESC.	PLAN VIEW

SHEET TITLE:

C102

SHEET NUMBER # 04 of 10



KEY NOTES [100] :

107 ITEM TO REMAIN.
114 PROPOSED STREAM BANK GRADING (6:1 SLOPE)(SEE DETAIL - SHEET C202).
503 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.

GENERAL NOTES:

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7. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

ENGINEER:
DELTA 3
EVERY ANGLE COVERED
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING
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825 SOUTH CHESTNUT STREET PHONE: (608) 348-5355
PLATTEVILLE, WISCONSIN 53818
898 JACKSON STREET PHONE: (563) 542-9005
DUBUQUE, IOWA 52001

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. JORDAN FURE, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK

PRAIRIE DU CHIEN, WISCONSIN

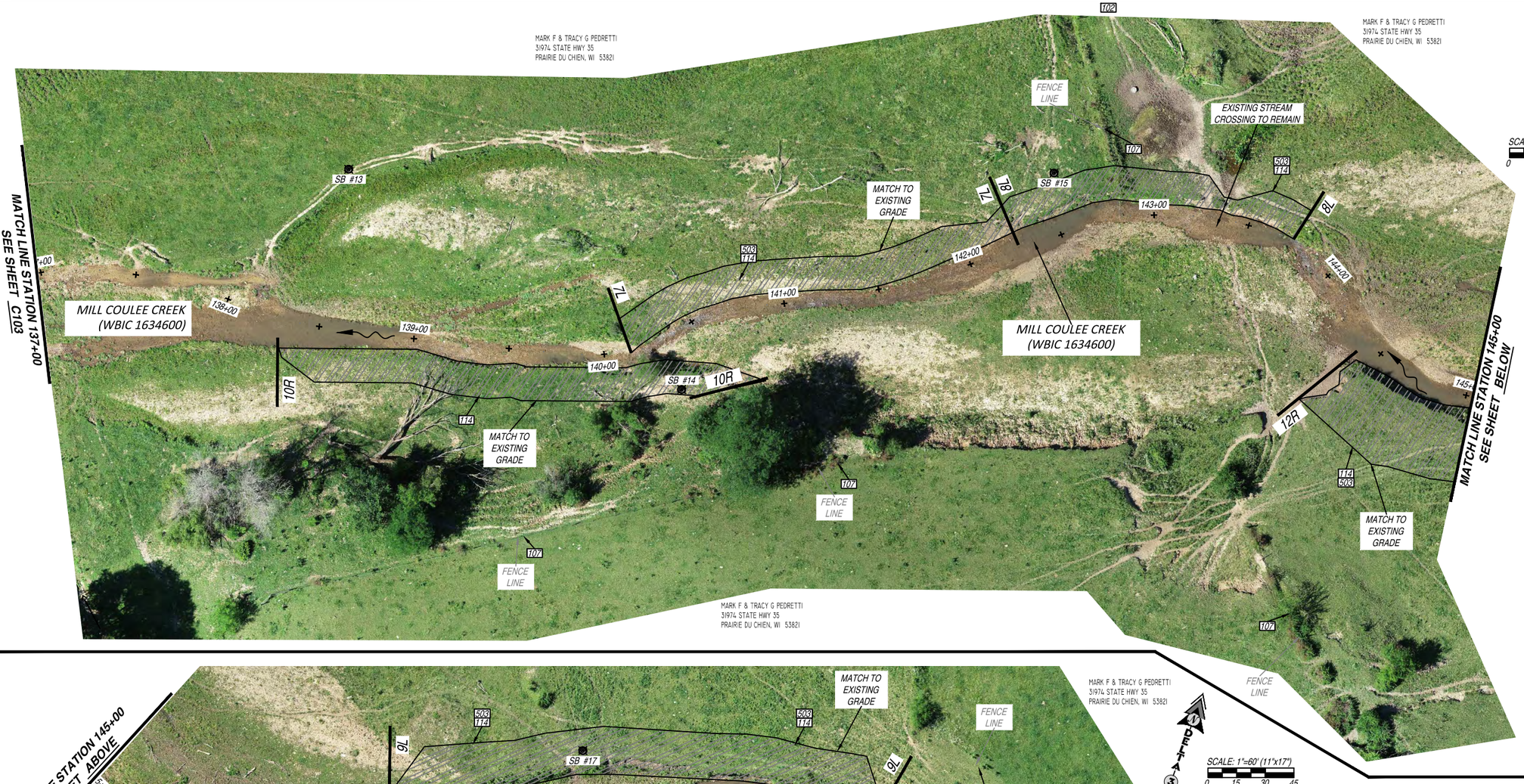
PROJECT LOCATION: MILL COULEE CREEK
OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
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PRELIMINARY	
PROJECT NUMBER	D22-056
SHEET SCALE	SEE BAR SCALE
DRAWN BY	LOGAN HOPPMAN
DATE ISSUED	JULY 22, 2024
SHEET DESC.	PLAN VIEW

SHEET TITLE:
C103

SHEET NUMBER # **05 of 10**



ENGINEER:

DELTA 3
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PLATTEVILLE, WISCONSIN 53818
888 JACKSON STREET PHONE: (563) 542-9005
DUBUQUE, IOWA 52001

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DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK

PRAIRIE DU CHIEN, WISCONSIN

PROJECT LOCATION: MILL COULEE CREEK
PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821
OWNER: CITY OF PRAIRIE DU CHIEN

GENERAL NOTES:

1. CONTRACTOR SHALL REPAIR ALL DRIVEWAYS AND ACCESS ROADS DAMAGED DUE TO CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO INSTALL EROSION CONTROL AND TURBIDITY BARRIER PRIOR TO COMMENCING CONSTRUCTION.
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6. CONTRACTOR TO INSTALL EXISTING DRAIN TILES THROUGH PROPOSED GRADING AND RIP-RAP.
7. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

KEY NOTES [100] :

102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
107 ITEM TO REMAIN.
113 PROPOSED STREAM BANK GRADING (2:1 SLOPE) WITH RIP-RAP TO TOP OF BANK; SEE DETAIL - SHEET C202.
114 PROPOSED STREAM BANK GRADING (6:1 SLOPE)(SEE DETAIL - SHEET C202).
503 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.

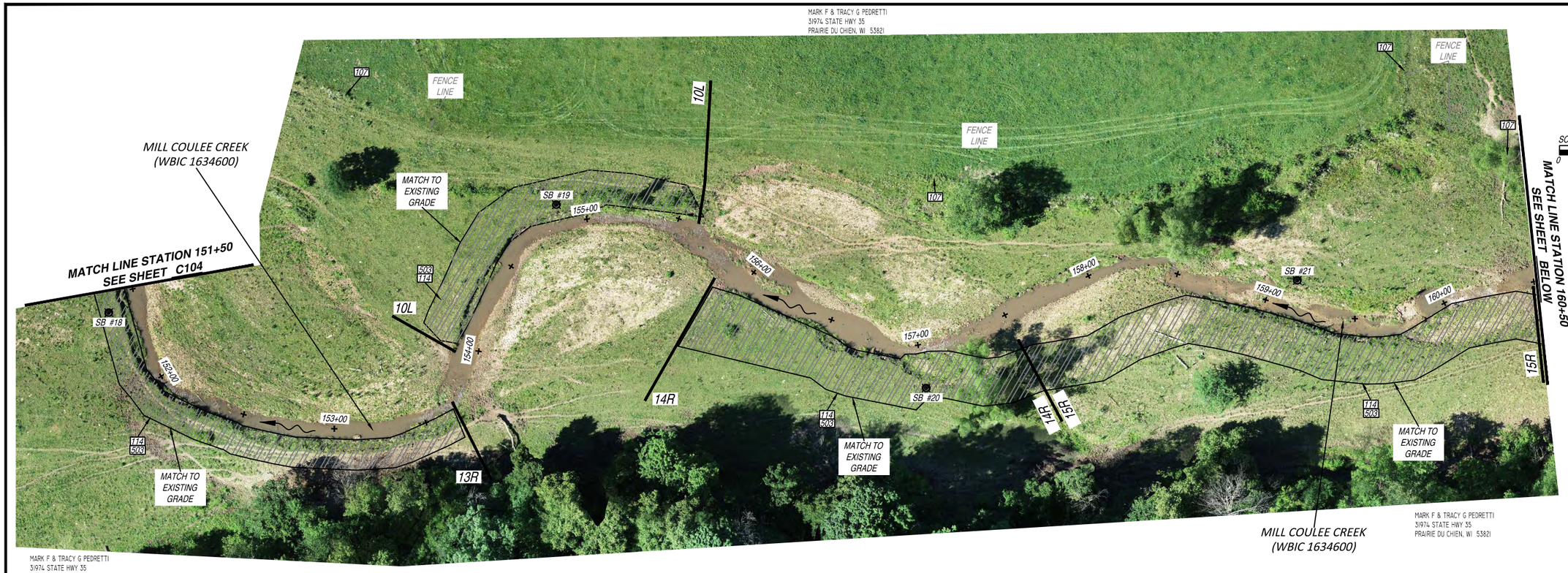
REVISIONS:		
NO	DATE	DESCRIPTION
AS-BUILT:		BY:
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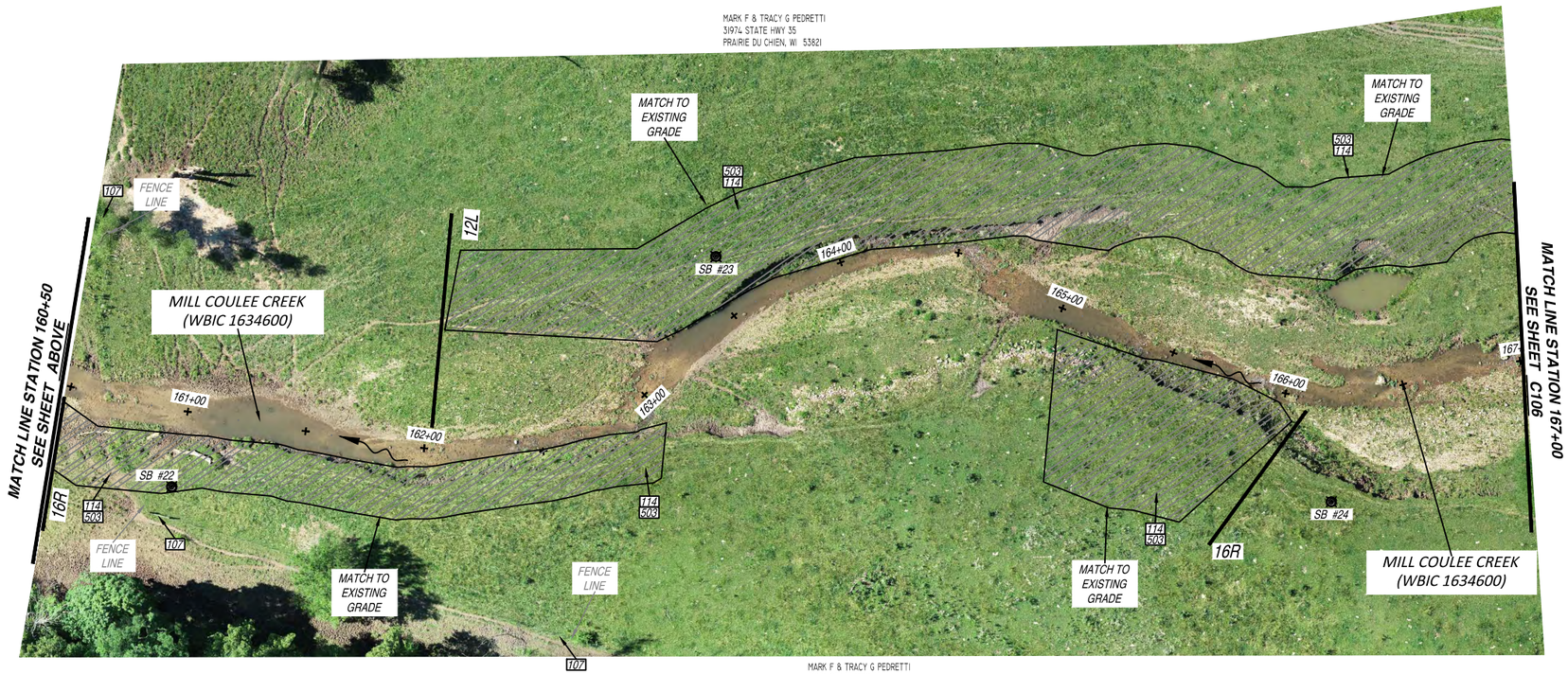
PRELIMINARY	
PROJECT NUMBER	D22-056
SHEET SCALE	SEE BAR SCALE
DRAWN BY	LOGAN HOPPMAN
DATE ISSUED	JULY 22, 2024
SHEET DESC.	PLAN VIEW

SHEET TITLE:

C104

SHEET NUMBER # 06 of 10





SCALE: 1"=60' (11"x17")
0 15 30 45

KEY NOTES [100] :

107 ITEM TO REMAIN.
114 PROPOSED STREAM BANK GRADING (6:1 SLOPE)(SEE DETAIL - SHEET C202).
503 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.

SCALE: 1"=60' (11"x17")
0 15 30 45

GENERAL NOTES:

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ENGINEER:
DELTA 3
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DUBUQUE, IOWA 52001

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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK
PRAIRIE DU CHIEN, WISCONSIN

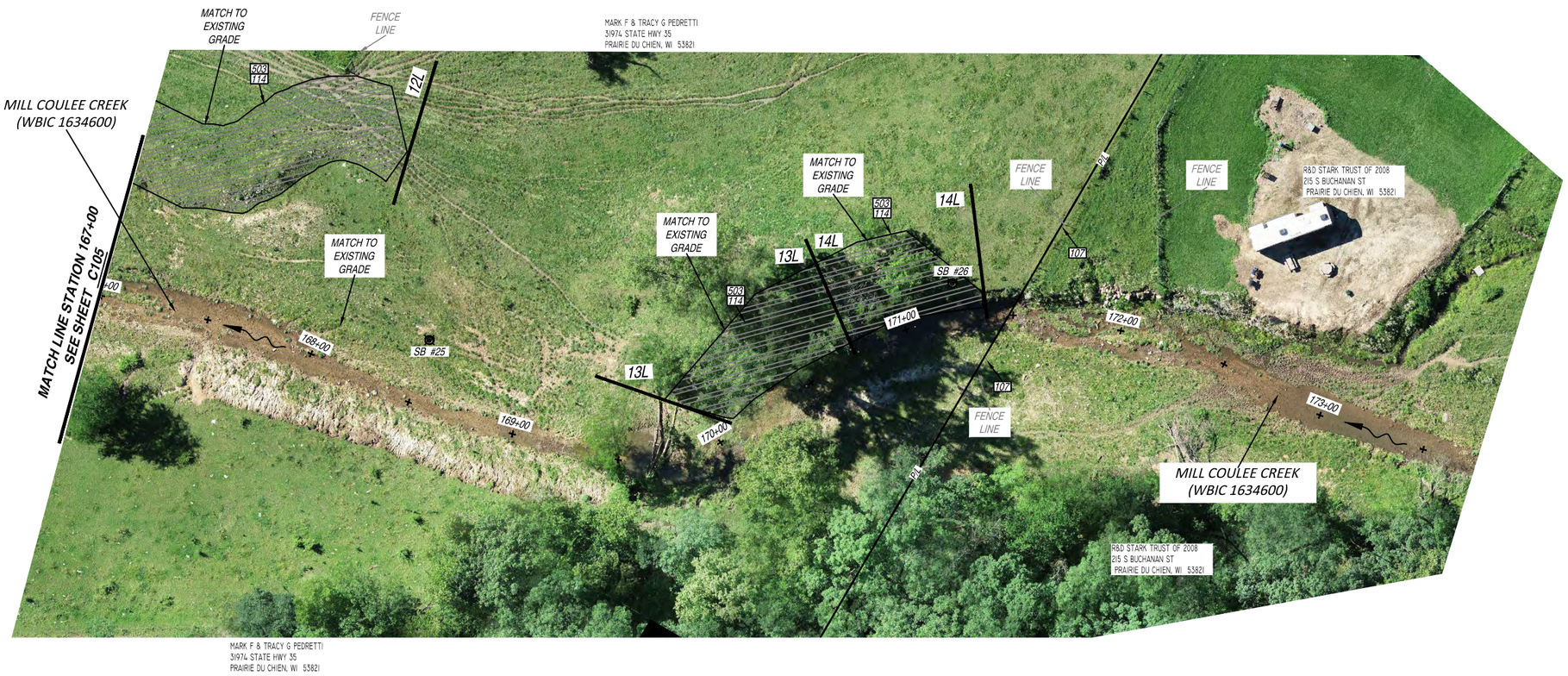
PROJECT LOCATION: MILL COULEE CREEK
OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
--/--/----		-,-----

PRELIMINARY	
PROJECT NUMBER	D22-056
SHEET SCALE	SEE BAR SCALE
DRAWN BY	LOGAN HOPPMAN
DATE ISSUED	JULY 22, 2024
SHEET DESC.	PLAN VIEW

SHEET TITLE:
C105

SHEET NUMBER # **07 of 10**



N
DELTA 3

SCALE: 1"=60' (11"x17")
0 15 30 45

KEY NOTES [100] :

107 ITEM TO REMAIN.
114 PROPOSED STREAM BANK GRADING (6:1 SLOPE)(SEE DETAIL - SHEET C202).
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ENGINEER:
DELTA 3
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DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

CONSENT STATEMENT
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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK

PRAIRIE DU CHIEN, WISCONSIN

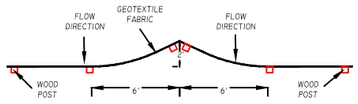
PROJECT LOCATION: MILL COULEE CREEK
OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
--/--/----		-.-----

PRELIMINARY	
PROJECT NUMBER	D22-056
SHEET SCALE	SEE BAR SCALE
DRAWN BY	LOGAN HOPPMAN
DATE ISSUED	JULY 22, 2024
SHEET DESC.	PLAN VIEW

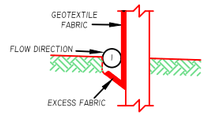
SHEET TITLE:
C106

SHEET NUMBER # **08 of 10**



SILT FENCE - JOINING TWO LENGTHS DETAIL

SCALE: N.T.S.



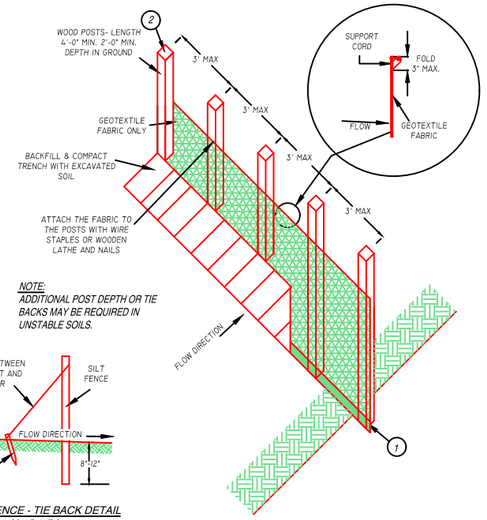
SILT FENCE - TRENCH DETAIL

SCALE: N.T.S.

GENERAL NOTES- SILT FENCE:

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION (MOST CURRENT EDITION) AND THE APPLICABLE SPECIAL PROVISIONS.

1. *TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.*
2. *WOOD POST SHALL BE A MINIMUM SIZE OF 1-1/8" X 1-1/8" OF OAK OR HICKORY.*



SILT FENCE INSTALLATION DETAIL

SCALE: N.T.S.

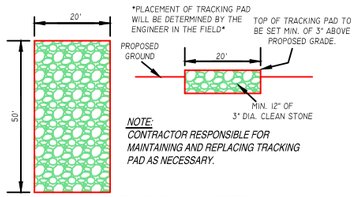
NOTE:
ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS.

SILT FENCE - TIE BACK DETAIL

SCALE: N.T.S.

SILT FENCE DETAILS

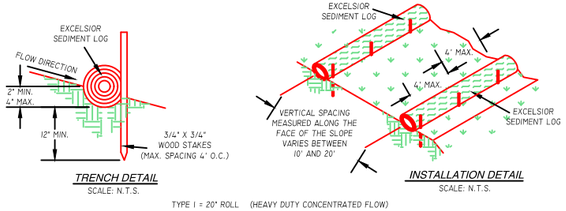
SCALE: N.T.S.



NOTE:
CONTRACTOR RESPONSIBLE FOR MAINTAINING AND REPLACING TRACKING PAD AS NECESSARY.

TRACKING PAD DETAIL

SCALE: N.T.S.



TRENCH DETAIL

SCALE: N.T.S.

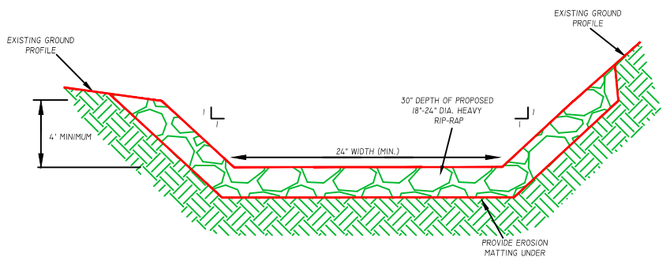
INSTALLATION DETAIL

SCALE: N.T.S.

TYPE 1 = 20" ROLL (HEAVY DUTY CONCENTRATED FLOW)
TYPE 2 = 12" ROLL (HEAVY CONCENTRATED FLOW)
TYPE 3 = 9" ROLL (MILD CONCENTRATED FLOW)
TYPE 4 = 6" ROLL (LOW CONCENTRATED FLOW)

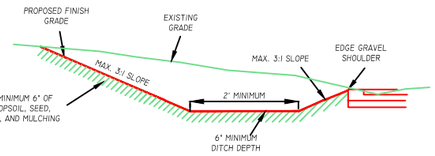
EROSION CONTROL SEDIMENT LOG

SCALE: N.T.S.



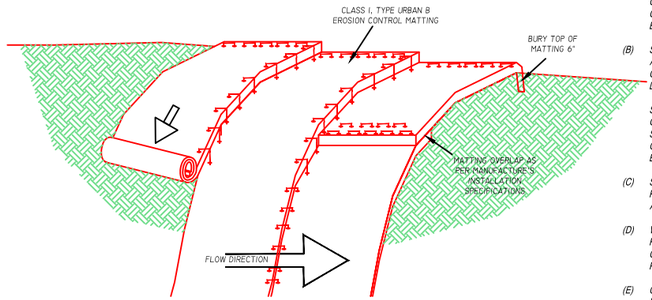
RIP-RAP DRAINAGE DITCH DETAIL

SCALE: N.T.S.



REGRADED DITCH DETAIL

SCALE: N.T.S.



EROSION MATTING NOTES:

1. *PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND MULCH AND SEED.*
2. *BEGIN AT THE TOP OF THE SHOULDER (OR CHANNEL) BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.*
3. *ROLL THE BLANKETS DOWN (STARTING AT DOWNSTREAM PROCEEDING UPSTREAM) HORIZONTALLY ACROSS THE SLOPE.*
4. *THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MANUFACTURE'S RECOMENDED OVERLAP.*
5. *WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH AN OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.*
6. *IN HIGH CHANNEL APPLICATIONS, A STAPLE SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER THE ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGERED PATTERN.*
7. *THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.*

EROSION MATTING - SLOPE INSTALLATION DETAIL

SCALE: N.T.S.

EROSION CONTROL NOTES:

1. *GENERAL EROSION NOTES AND MAINTENANCE MEASURES ARE ILLUSTRATED ON THE PLAN SHEETS. AFTER AWARD OF THE CONTRACT, THE GENERAL CONTRACTOR SHALL INSTALL ALL BEST MANAGEMENT PRACTICES AS SHOWN ON THE PLAN SHEETS. ONCE INSTALLED, THE GENERAL CONTRACTOR SHALL CONTACT DELTA 3 ENGINEERING, INC. (608-348-5355). ONCE NOTIFIED DELTA 3 ENGINEERING INC. WILL VISIT THE SITE WITHIN 5 DAYS TO REVIEW THE SITE WITH THE GENERAL CONTRACTORS SUPERINTENDENT. UPON VISITING THE SITE, THE CONSULTING ENGINEER AND THE GENERAL CONTRACTORS SUPERINTENDENT WILL REVIEW THE SITE FOR COMPLIANCE WITH THE EROSION CONTROL MEASURES. IF AND WHEN ALL BEST MANAGEMENT PRACTICES REQUIRED TO COMMENCE SITE CONSTRUCTION ARE IN PLACE, THE CONSULTING ENGINEER AND PROJECT SUPERINTENDENT WILL SIGN AND CERTIFY THIS FACT. THIS REVIEW AND CERTIFICATION SHALL TAKE PLACE PRIOR TO THE REQUIRED PRE-CONSTRUCTION MEETING. THE SITE SUPERINTENDENT SHALL MAINTAIN AN AS-BUILT COPY OF THE EROSION CONTROL MEASURES ON SITE AT ALL TIMES. ANY ACTIVITIES INVOLVING INSTALLATION OF BEST MANAGEMENT PRACTICES SHALL BE INDICATED ON THE AS-BUILT PLAN WITH AN INSTALLED TIME AND DATE. RECORDED INFORMATION SHALL BE PERMANENTLY PLACED ON THE SITE MAP INCLUDING ANY CHANGES MADE TO THE BEST MANAGEMENT PRACTICES. IF THE SITE MAP BECOMES HARD TO READ, THE INITIAL DRAWING SHALL BE SAVED AND A CLEAN COPY SHALL BE ISSUED IN ORDER TO CONTINUE RECORDING ANY ON-SITE EROSION CONTROL ACTIVITY.*
2. *A COMPLETE COPY OF ALL INSPECTION REPORTS, PLAN REVISIONS, ETC., MUST BE RETAINED AT THE PROJECT SITE AT ALL TIMES DURING DURATION OF THE PROJECT AND KEPT IN THE PERMANENT PROJECT RECORDS FOR AT LEAST FIVE YEARS FOLLOWING SUBMISSION OF THE NOTICE OF TERMINATION (NOT).*
3. *THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL SUB-CONTRACTORS INVOLVED IN GROUND DISTURBING ACTIVITY COMPLY WITH THE EROSION CONTROL REQUIREMENTS.*
4. *DAILY INSPECTIONS BY THE PROJECT SUPERINTENDENT AND MONTHLY INSPECTIONS BY THE OWNER'S CONSTRUCTION MANAGER MUST BE MADE TO DETERMINE THE EFFECTIVENESS OF THE EROSION CONTROL MEASURES. THE GENERAL CONTRACTOR IS TO INSPECT EROSION AND SEDIMENT CONTROLS WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES AS NECESSARY WITHIN 24 HOURS OF INSPECTION.*
5. *ONCE THE SITE REACHES FINAL STABILIZATION, ALL PERMANENT EROSION AND SEDIMENTATION CONTROLS ARE INSTALLED AND ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE REMOVED, THE GENERAL CONTRACTOR AND OWNER MUST COMPLETE A FINAL SITE INSPECTION. UPON APPROVAL BY OWNER, THE OWNER AND GENERAL CONTRACTOR, AS APPLICABLE, MUST COMPLETE AND SUBMIT A NOTICE OF TERMINATION (NOT) FORM TO BE SUBMITTED TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES.*
6. *A RECORD OF THE DATES WHEN MAJOR GROUND-DISTURBING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE INITIATED MUST BE MAINTAINED UNTIL THE NOT IS FILED. CONTROLS MUST BE IN PLACE DOWN GRADIENT OF GROUND-DISTURBING ACTIVITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.*
7. *A LOG OF ALL INSPECTIONS BY FEDERAL, STATE, OR LOCAL STORM WATER OR OTHER ENVIRONMENTAL AGENCIES SHALL BE KEPT BY THE GENERAL CONTRACTOR. THE LOG SHALL INCLUDE THE DATE AND TIME OF VISIT AND WHETHER A REPORT WAS ISSUED OR WILL BE ISSUED AS A RESULT OF THE INSPECTION. ANY REPORTS ISSUED SHALL BE FAXED TO THE DELTA 3 ENGINEERING INC. 608-348-5455 (FAX).*
8. *SOIL STABILIZATION - THE PURPOSE OF SOIL STABILIZATION IS TO PREVENT SOIL FROM LEAVING THE SITE. IN THE NATURAL CONDITION, SOIL IS STABILIZED BY NATIVE VEGETATION. THE PRIMARY TECHNIQUE TO BE USED AT THIS PROJECT FOR STABILIZING SITE SOIL WILL BE TO PROVIDE A PROTECTIVE COVER OF TURF GRASS OR PAVEMENT.*

   (A) TEMPORARY SEEDING OR STABILIZATION - AREAS MAY BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL SEED, STRAW MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKET. WHERE CONDITIONS ARE FAVORABLE, AREAS SHALL BE TEMPORARILY STABILIZED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY CEASES. ALL DISTURBED GROUND WHERE THERE WILL NOT BE CONSTRUCTION FOR LONGER THAN 14 DAYS MUST BE SEEDED OR OTHERWISE STABILIZED.

   (B) PERMANENT SEEDING OR SOD - ALL AREAS AT FINAL GRADE MUST BE SEEDED OR SODDED WITHIN 3 DAYS AFTER COMPLETION OF THE MAJOR CONSTRUCTION ACTIVITY. EXCEPT FOR SMALL LEVEL SPOTS, SEEDED AREAS SHOULD GENERALLY BE PROTECTED WITH MULCH. ALL AREAS TO BE SEEDED WILL ALSO HAVE TOPSOIL AND OTHER AMENDMENTS AS STATED IN WISDOT SPECIFICATION SECTION 02900-PLANTING.

   (C) MULCHING - ALL AREAS THAT ARE TEMPORARY OR PERMANENT SEEDED SHALL BE MULCHED ACCORDING TO SECTION 627 - MULCHING OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. ALL MULCH IS TO BE ANCHORED UTILIZING METHOD A, B, OR C.

   (D) EROSION CONTROL MATTING - FOR ANY SLOPES GREATER THAN 3:1, EROSION MATTING IS REQUIRED.
9. *STRUCTURAL CONTROLS - BEFORE ANY MAJOR GRADING ACTIVITIES, THE FOLLOWING BEST MANAGEMENT PRACTICES SHALL BE INSTALLED ON THE PROPOSED SITE - SILT FENCE, TEMPORARY TRACKING PAD, AND STORM SEWER INLET PROTECTION.*

   (A) SILT FENCE - SILT FENCE IS A SYNTHETIC PERMEABLE WOVEN OR NON-WOVEN FABRIC TYPICALLY INCORPORATING WOODEN OR METAL SUPPORT STAKES AT INTERVALS SUFFICIENT TO SUPPORT THE FENCE, WATER, AND SEDIMENT RETAINED BY THE FENCE. SILT FENCE CAN ALSO BE INSTALLED WITH A WIRE FENCE BACKING. THE FENCE IS DESIGNED TO RETAIN SEDIMENT-LADEN WATER AND ALLOW SETTLEMENT OF SUSPENDED SOILS BEFORE THE STORM WATER FLOWS THROUGH THE FABRIC FOR DISCHARGE DOWNSTREAM. SILT FENCE SHALL BE LOCATED AS SHOWN ON THE PLAN SHEETS. THE SILT FENCE TO BE INCLUDED FOR THIS PROJECT SHALL BE CONSTRUCTED PER WISCONSIN DNR TECHNICAL STANDARDS FOR SILT FENCE (CODE 1056).

   (B) TEMPORARY TRACKING PAD - ALL ACCESS POINTS FROM THE PUBLIC STREET INTO THE CONSTRUCTION SITE SHALL INCLUDE A TRACKING PAD COMPOSED OF COURSE STONE TO THE DIMENSIONS SHOWN ON DETAIL SHEET (C201). ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORKDAY.

   (C) STORM SEWER INLET PROTECTION - CURB AND GRATED INLETS ARE PROTECTED FROM THE INTRUSION OF SILT AND SEDIMENT THROUGH A VARIETY OF SEDIMENT CONTROL PRACTICES TO ALLOW SETTLEMENT OF SUSPENDED SOILS BEFORE DISCHARGING INTO THE STORM SEWER. GRATED INLETS TYPICALLY INCLUDE A STURDY FRAME WRAPPED IN GEOTEXTILE FABRIC OR SEDIMENT LOG PERIMETER TO SLOW THE FLOW OF WATER AND ALLOW PONDING WHERE SEDIMENT MAY SETTLE OUT. CURB INLETS TYPICALLY INCLUDE SEDIMENT LOG BARRIERS HELD IN PLACE WITH GEOTEXTILE FABRIC. OTHER MANUFACTURED PRODUCTS ARE ALSO AVAILABLE. ALL STORM DRAINS SHALL BE PROTECTED BY USING STRAW BALES, SEDIMENT LOGS, FABRIC, OR EQUIVALENT BARRIER.

   FINAL SITE STABILIZATION IS ACHIEVED WHEN TURF GRASS COVER PROVIDES PERMANENT STABILIZATION FOR AT LEAST 70 PERCENT OF THE DISTURBED SOIL SURFACE, EXCLUSIVE OF AREAS THAT HAVE BEEN PAVED.
10. *OTHER POLLUTANT CONTROLS*

    (A) DUST CONTROL - CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION EXIT. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION EQUIPMENT.

    WATER TRUCKS OR OTHER DUST CONTROL AGENTS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE GENERAL CONTRACTOR TO A DEGREE THAT IS ACCEPTABLE TO THE OWNER'S CONSTRUCTION MANAGER, AND IN COMPLIANCE WITH APPLICABLE LOCAL AND STATE DUST CONTROL REGULATIONS. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED (AS DESCRIBED ELSEWHERE), WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.

    (B) SOLID WASTE DISPOSAL - NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, ARE ALLOWED TO BE DISCHARGED FROM THE SITE WITH STORM WATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. THE CONTAINERS WILL BE EMPTIED AS NECESSARY BY A CONTRACT TRASH DISPOSAL SERVICE AND HAULED AWAY FROM THE SITE. THE LOCATION OF SOLID WASTE RECEPTACLES SHALL BE SHOWN AND APPROVED BY THE OWNER.

    SUBSTANCES THAT HAVE THE POTENTIAL FOR POLLUTING SURFACE AND/OR GROUNDWATER MUST BE CONTROLLED BY WHATEVER MEANS NECESSARY IN ORDER TO ENSURE THAT THEY DO NOT DISCHARGE FROM THE SITE. FOR EXAMPLE, SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IN THIS REGARD, POTENTIALLY POLLUTING SUBSTANCES SHOULD BE HANDLED IN A MANNER CONSISTENT WITH THE IMPACT THEY REPRESENT.

    (C) SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES MUST BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND MUST BE SERVICED BY A COMMERCIAL OPERATOR.

    (D) WATER SOURCE - NON-STORM WATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER. WATER USED FOR CONSTRUCTION WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLIER, OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE. IT CAN BE RETAINED IN THE PONDS UNTIL IT INFILTRATES AND EVAPORATES.

    (E) CONCRETE WASTE FROM CONCRETE READY-MIX TRUCKS - DISCHARGE OF EXCESS OR WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS WILL BE ALLOWED ON THE CONSTRUCTION SITE, BUT ONLY IN SPECIFICALLY DESIGNATED DIKED AREAS PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASH WATER AND STORM WATER THAT WILL BE DISCHARGED FROM THE SITE. ALTERNATIVELY, WASTE CONCRETE CAN BE PLACED INTO FORMS TO MAKE RIP-RAP OR OTHER USEFUL CONCRETE PRODUCTS. THE CURED RESIDUE FROM THE CONCRETE WASHOUT DIKED AREAS SHALL BE DISPOSED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS. THE JOB SITE SUPERINTENDENT IS RESPONSIBLE FOR ASSURING THAT THESE PROCEDURES ARE FOLLOWED.

    (F) FUEL TANKS - TEMPORARY ON-SITE FUEL TANKS FOR CONSTRUCTION VEHICLES SHALL MEET ALL STATE AND FEDERAL REGULATIONS. TANKS SHALL HAVE APPROVED SPILL CONTAINMENT WITH THE CAPACITY REQUIRED BY THE APPLICABLE REGULATIONS. THE TANK SHALL BE IN SOUND CONDITION FREE OF RUST OR OTHER DAMAGE WHICH MIGHT COMPROMISE CONTAINMENT. HOSES, VALVES, FITTINGS, CAPS, FILLER NOZZLES, AND ASSOCIATED HARDWARE SHALL BE MAINTAINED IN PROPER WORKING CONDITION AT ALL TIMES.
11. *MINIMIZING EROSION AND RUNOFF DURING TRENCH OPERATIONS*

    (A) EXCAVATED TRENCH MATERIALS SHALL BE PLACED ON THE UPPER SIDE OF THE TRENCH WHILE THE TRENCH IS OPEN.

    (B) EXCAVATED TRENCH MATERIAL, UPON COMPLETING WORK IN TRENCH, SHALL BE PLACED BACK IN THE TRENCH OR HAULED AWAY TO A PROPER SPOIL SITE. THE TRENCH SHALL BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY.

ENGINEER:

DELTA 3
(EVERY ANGLE COVERED)
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING
GRANT WRITING • LAND DEVELOPMENT • PLANNING & GIS SERVICES
835 SOUTH CHESTNUT STREET PHONE: (608) 348-5355
PLATTEVILLE, WISCONSIN 53818
898 JACKSON STREET PHONE: (563) 542-9055
DUBUQUE, IOWA 52001

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. JORDAN FURE, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK

PRAIRIE DU CHIEN, WISCONSIN

PROJECT LOCATION: MILL COULEE CREEK
OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821

REVISIONS:		
NO	DATE	DESCRIPTION
AS-BUILT:		BY:
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PRELIMINARY

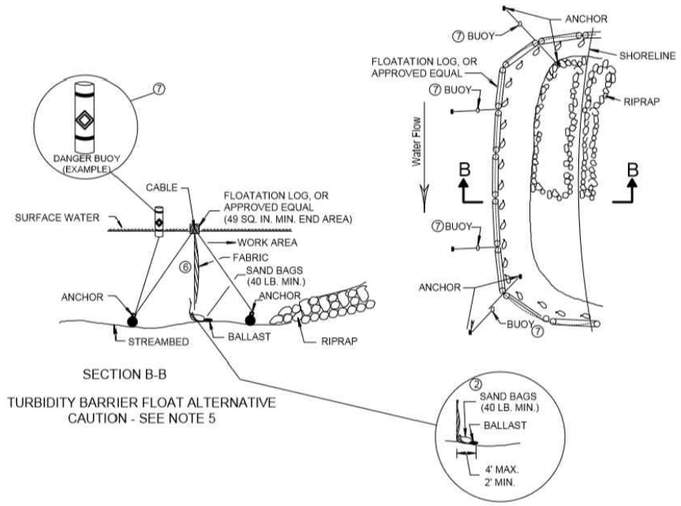
PROJECT NUMBER	D22-056
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	JULY 22, 2024
SHEET DESC.	DETAILS - EROSION CONTROL & NOTES

SHEET TITLE:

C201

SHEET NUMBER # **9 of 10**

Figure 1. Turbidity Barrier Placement Details



SECTION B-B

TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 5

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD AND THE APPLICABLE SPECIAL PROVISIONS

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS OR PROJECT MANAGERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER OR PROJECT MANAGER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

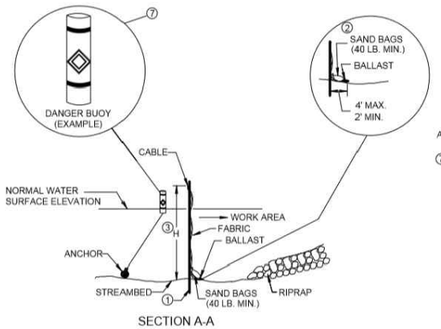
③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER OR PROJECT MANAGER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

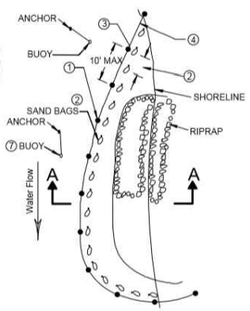
⑥ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑦ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



SECTION A-A

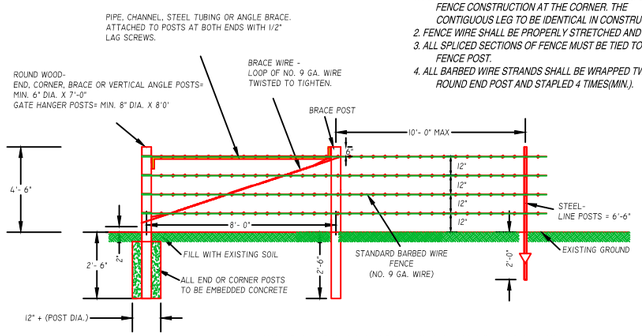
TURBIDITY BARRIER STANDARD POST INSTALLATION



PLAN VIEW

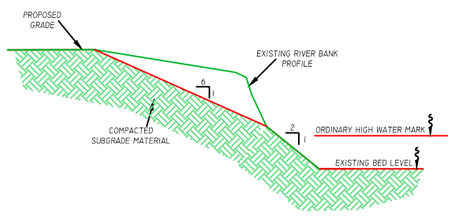
NOTE:

1. FENCE DETAIL (AS ILLUSTRATED) SHOWS ONE LEG OF FENCE CONSTRUCTION AT THE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL IN CONSTRUCTION.
2. FENCE WIRE SHALL BE PROPERLY STRETCHED AND TIED.
3. ALL SPLICED SECTIONS OF FENCE MUST BE TIED TO A FENCE POST.
4. ALL BARBED WIRE STRANDS SHALL BE WRAPPED TWICE ROUND END POST AND STAPLED 4 TIMES(MIN.).



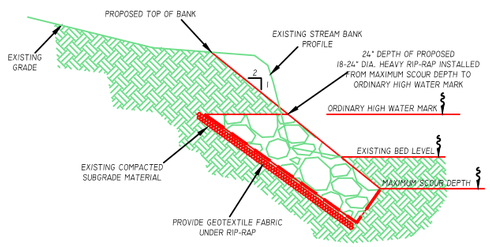
FENCE INSTALLATION DETAIL (IF APPLICABLE)

SCALE: N.T.S.



STREAM BANK GRADING (6:1 SLOPES) DETAIL

SCALE: N.T.S.



STREAM BANK GRADING (2:1 SLOPES) WITH RIP-RAP TO TOP OF BANK DETAIL

SCALE: N.T.S.

ENGINEER:

DELTA 3
(EVERY ANGLE COVERED)
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES
875 SOUTH CHESTNUT STREET, PLATTEVILLE, WISCONSIN 53818 PHONE: (608) 348-5355
898 JACKSON STREET, DUBUQUE, IOWA 52001 PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. JORDAN FURE, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

CONSENT STATEMENT

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PROPOSED 2023 STREAM IMPROVEMENTS - MILL COULEE CREEK

PRAIRIE DU CHIEN, WISCONSIN

PROJECT LOCATION: MILL COULEE CREEK
OWNER: CITY OF PRAIRIE DU CHIEN; P.O. BOX 324; 214 EAST BLACKHAWK AVE; PRAIRIE DU CHIEN, WI 53821

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
--/--/----		-.-----

PRELIMINARY	
PROJECT NUMBER	D22-056
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	JULY 22, 2024
SHEET DESC.	DETAILS - STREAM BANK

SHEET TITLE:

C202

SHEET NUMBER # **10 of 10**