Final Engineer's Report

Judicial Ditch No. 15
Branch M37 Improvement

24X.136906.000

Buffalo Creek Watershed District
Renville County, Minnesota
November 2025

BOLTON & MENK
Real People. Real Solutions.

Submitted by:
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November 12, 2025

Seth Sparks
Drainage Systems Manager
Renville County Government Services Center
105 South 5th Street, Suite 319
Olivia, MN 56277

Re: Final Engineer's Report
Judicial Ditch No. 15, Branch M37 Improvement
Buffalo Creek Watershed District
Renville County, Minnesota
BMI Project No.: 24X.136906.000

Dear Seth:

We are enclosing 12 copies of the Final Engineer's Report for the proposed Judicial Ditch No. 15, Branch M37 Improvement in Renville County. With the submission of this report, the project should be ready to move toward the Final Hearing. Please work with the Board to set a date for this Hearing.

The DNR requires a 30 day review period for the report prior to the hearing. We are submitting this via electronic transfer to a designated DNR e-mail address.

In addition to the DNR, we should also notify the Renville County SWCD and NRCS offices, BWSR, as well as any other affected agencies or individuals for coordination and potential funding. Under a separate letter, we will send copies of the report to the SWCD, NRCS and BWSR offices.

Additional copies of the report should be distributed to the Buffalo Creek Watershed District members prior to the Hearing. We have also including copies of the report for the ditch petitioners.

Please check with the viewers, Dean Zimmerli, John Kolb and me prior to setting the hearing date to assure that there are no meeting conflicts.

If you have any further questions regarding the project, please feel free to contact me.

Sincerely,
Bolton & Menk, Inc.

Bill L Helget

Bill L. Helget, P.E.

cc: DNR Director, MN DNR (Digital copy of report)
John Kolb, Rinke-Noonan (Digital copy of report)
Seth Sparks, Renville County (Digital copy of report)
Dean M. Zimmerli, Gislason & Hunter LLP, Petitioners Attorney (Digital copy of report)
Petitioners: Melberg, Melberg, Novotny, Schmalz

Certification

Engineer's Report

For

Judicial Ditch No. 15 Branch M37 Improvement

In

Buffalo Creek Watershed District
Renville County, Minnesota

24X.136906.000
November 2025

PROFESSIONAL ENGINEER

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: Bill L. Helget
Typed or Printed Name: Bill L. Helget
Date: 11/6/25 License Number: 42046

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Appendix

STATE OF MINNESOTA

RENVILLE COUNTY

IN THE MATTER OF THE PETITION FOR IMPROVEMENT OF JUDICIAL DITCH NO. 15 WITHIN BUFFALO CREEK WATERSHED DISTRICT:

In November 2024, the Buffalo Creek Watershed District, acting as the Drainage Authority for Judicial Ditch No 15 Branch M37 (JD 15 Br M37) in Renville County, in accordance with Minnesota Statute 103E.215, accepted a petition for the Improvement of portions of JD 15. Subsequent to that authorization, Final field surveys were performed to obtain elevations and establish an alignment for the proposed drain tile, as well as to evaluate the outlet for the system.

On June 24th, 2025, the Drainage Authority held a preliminary hearing and found that the proposed project meets the requirements for an Improvement and they ordered the preparation of this Final Engineer's Report. The Board appointed Viewers to determine the benefits and damages for the system.

This Final Engineer's Report summarizes the findings of the research, surveys, and analysis for the Improvement and is submitted for consideration by the Ditch Authority.

I. LOCATION AND SCOPE OF THE IMPROVEMENT

Judicial Ditch No 15 Branch M37 lies within and provides drainage to a large watershed in the north-east portion of Renville County. The proposed project location lies within Section 7 and Section 18 of Preston Lake Township. The system consists of 24,763' of drainage tile. The outlet for JD 15 Branch M37 is JD 15 Main Open Ditch in section 18 of Preston Lake Township in Renville County. The project is located about 2.25 miles north of Buffalo Lake, Minnesota. The total estimated watershed for the system based on Lidar contour data, is 698 acres. The scope of the proposed improvement includes Branches M37 to M46 and M75 to M78.

The proposed project for Judicial Ditch No 15 Branch M37 includes the construction of a WASCOB and drainage pipe. Exhibit 1 shows the general location of JD 15 and the proposed project.

Field survey information was collected by Bolton & Menk, Inc. in January of 2025 and October of 2025. The survey included GPS locations and elevations for the outlet of the tile and for private and public intakes on the system. The tile system design utilizes Lidar data, provided by the Minnesota Department of Natural Resources. This data, obtained from an aerial flight, results in contours of equal elevation at 2' vertical intervals.

II. EXISTING DITCH SYSTEM

Public records regarding Judicial Ditch No 15 Branch M37 were reviewed from Renville County and Buffalo Creek Watershed District.

JD 15 was petitioned for establishment on June 26, 1916. Construction was completed on August 1, 1921.

The benefits for JD 15 were recently redetermined. Current benefits for the JD 15 system are $78,151,901.40.

III. CONDITION OF THE EXISTING DRAINAGE SYSTEM

The petitioners have requested the ditch improvements because of insufficient capacity and inadequate tile sizes to furnish sufficient capacity. The portion of the JD 15 system proposed to be improved consists of underground tiles. This Improvement will replace an existing tile system that currently has broken tile, quarter cracks, longitudinal cracks, offset joints, and sags. These broken tiles, cracks, and offset joints have allowed for roots and broken tile pieces to obstruct flow within the system.

In 2015, Renville County televised a portion of JD 15 Branch M37. Images from the televising report are shown in Exhibit 5. These images show evidence of the existing failures within the system, as described.

Also, in 2016, a small repair was completed along Branch M37. From evidence of the poor existing tile condition shown in Exhibit 5, it is assumed that more repairs would be needed in the future to keep the system in working condition if the system were to not be improved.

Table 1 below shows the existing capacity for the JD 15 Br M37 tiles proposed to be improved. As a way of evaluating the capacity of the existing tile system, an analysis has been performed of the existing system using standard engineering methods. The capacity of the existing tile has been estimated using the Mannings equation, assuming the original hydraulic efficiency of the system as constructed and subsequently improved. Estimated tile sizes and grades are based on the original design plans supplemented with limited field data collected through tile intakes and general surface grades. The amount of drainage which is needed for modern crop production has been compared to the 3/8 of an inch of runoff per day standard allowed drainage coefficient by Buffalo Creek Watershed District (BCWD). The watershed areas have been estimated using DNR Lidar maps. Table 1 shows the results of this analysis.

Table 1: Existing System Capacity						
JD 15 Br M37 Tile	Location	Drainage Area (Acres)	Existing Tile Size (Inches)	Existing Grade (%)	Calculated Capacity (CFS) n=0.013	Calculated Coefficient (In. Per Day)
Br M46	1550 LF West of CR 8 to EOP	36	6	0.30	0.31	0.20
Br M46	Br M37 to 1550 LF West of CR 8	60	9	0.10	0.52	0.21
Br M45	190 LF East of CR 8 to EOP	18	6	0.10	0.18	0.24
Br M45	Br M37 to 190 LF East of CR 8	48	7	0.10	0.27	0.13
Br M77	3500 LF East of CR 8 to EOP	8	5	0.35	0.20	0.61
Br M77	Br M43 to 3500 LF East of CR 8	17	6	0.07	0.15	0.21
Br M44	Br M43 to EOP	13	6	0.30	0.31	0.56
Br M76	Br M43 to EOP	36	5	0.29	0.19	0.12
Br M43	3000 LF East of CR8 to EOP	49	6	0.24	0.28	0.13
Br M43	Br M77 to 3000 LF East of CR8	58	7	0.24	0.42	0.17
Br M43	Br M44 to Br M77	83	8	0.24	0.59	0.17
Br M43	Br M76 to Br M44	119	10	0.14	0.82	0.16
Br M43	Br M37 to Br M76	184	16	0.05	1.72	0.22
Br M75	CR 8 to Br M37	12	5	0.58	0.26	0.52
Br M75	Br M37 to CR 8	16	6	0.10	0.18	0.26
Br M78	Br M41 to EOP	18	5	0.27	0.18	0.24
Br M42	2640 LF East of CR 8 to EOP	32	7	0.06	0.21	0.15
Br M42	Br M78 to 2640 LF East of CR 8	47	9	0.06	0.41	0.21
Br M41	Br M42 to EOP	30	6	0.10	0.18	0.14
Br M41	Br M40 to Br M42	119	12	0.10	1.13	0.23
Br M40	Br M41 to EOP	26	6	0.20	0.25	0.23
Br M40	Br M37 to Br M41	159	12	0.20	1.60	0.24
Br M39	Br M37 to EOP	18	6	0.25	0.28	0.37
Br M38	CR 8 to EOP	34	5	0.50	0.24	0.17
Br M38	470 LF East of CR8 to CR8	38	6	0.20	0.25	0.16
Br M37	Br M45 to EOP	12	5	0.14	0.13	0.26
Br M37	Br M43 to Br M45	183	14	0.06	1.32	0.17
Br M37	Br M to Br M43	698	20	0.12	4.83	0.16

As can be seen from Table 1 above, assuming the system was in good repair, the Main tile has a capacity of about 3/16" to ¼" per day. When compared to the BCWD allowed drainage coefficient of 3/8" per day, the tile main systems are only delivering about 44% of the drainage coefficient, based on the estimated tile sizes and grades. Therefore, there is inadequate capacity in the existing drainage system to provide for the efficient production of row crops. The result of this insufficient capacity is extended ponding in the low areas of the watershed and inadequate drainage of the tile lines which drain into the ditch system, thus resulting in crop stress and crop loss. Since there is evidence that the pipe system is in poor repair, the system is likely delivering even less flow than has been calculated.

IV. DISCUSSION OF THE IMPROVEMENT

As discussed earlier, the petitioners for the improvement of JD 15 Branch M37 have requested consideration for the construction of an improved tile system to increase the capacity to provide an adequate outlet. The proposed construction would consist of a drain tile reconstruction and improvement. A preliminary survey and the hydrologic and hydraulic analysis of such a drainage system was performed to establish preliminary grades and depths for the tile system. They were also used to determine quantities for construction of such a system, to determine the size of proposed tile lines, and analyze the outlet. General observations and results of the analysis are summarized as follows:

A. DESCRIPTION

As shown in Exhibit 1, the proposed Improvement consists of 6-inch to 30-inch diameter tile to replace the function of the existing JD 15 Branch M37 tile from the outlet to the upper end. It is recommended that the new tile be constructed in the same location as the existing tile and that the function of the old tile be discontinued. The township road crossings would be made by open trench methods, and the road surface restored with class 5 gravel. The County Road 8 crossings will be made by means of trenchless methods. The new tile will be constructed at a lower elevation than the existing tile in order to allow all existing tiles to be connected to the new tile to accommodate adequate drainage, to accommodate current farming practices and to provide more ground cover over the new tile to reduce the probability of crushing.

B. DESIGN DATA – TILE IMPROVEMENT

The proposed drain tile Improvement is shown in Exhibit 1. The type of pipe to be used for construction will be bid with a contractor option as follows:

1. Dual Wall or Triple Wall Polypropylene Drain Tile meeting the requirements of the American Society for Testing Materials F2376. Pipe will be bedded in granular foundation rock.

2. Dual Wall Polyethylene Drain Tile meeting the requirements of the American Society for Testing Materials F 2648. Pipe will be bedded in granular foundation rock as shown on Exhibit 1. Non-perforated pipe will be used in most areas (see Exhibit 9). The perforated pipe will include micro perforations/slots to avoid granular infiltration into the pipe. An option would be provided for the contractor to shape the bottom of the trench to conform to the pipe and eliminate some of the rock bedding material, if the pipe manufacturer would warrant the material installation.

3. Reinforced concrete pipe meeting the requirements of MnDOT Specification 2501, with the joints being covered with geotextile fabric or gasketed.

4. All County Road 8 crossings shall be installed by means of trenchless installation. For trenchless installation, the following pipe materials will be allowed:

   a) Steel casing pipe will be welded new material with minimum yield strength of 35,000 PSIG (pounds per square inch gauge). The steel casing pipe will have minimum wall thickness based on the outside diameter of the pipe.

   b) Restrained Joint C900 – Restrained joint pipe shall conform to the current requirements of AWWA C900 (DR-18) for pipe diameters 4.0-inch through 12.0-inch.

   c) Fusible C900/C905 – Butt joint fused PVC pressure pipe conforming to the current requirements of AWWA C900 (DR 18) for pipe diameters 4.0-inch through 12.0-inch or AWWA C900 (DR 25) for pipe diameters 14.0-inch through 24.0-inch.

However, a structurally stronger pipe may be required to ensure resistance to pulling stresses.

As can be seen in Table 2, the tile capacity for the Improvement System reflects a drainage coefficient of 0.375-inches/day. This is within the allowed drainage coefficient from the Buffalo Creek Watershed District of 3/8-inches/day.

Table 2: Improvement System Capacity						
JD 15 Br M37 Tile	Location	Drainage Area (Acres)	Tile Size (Inches)	Tile Grade (%)	Calculated Capacity (CFS) n=0.012	Calculated Coefficient (In. Per Day)
Br M46	1550 LF West of CR 8 to EOP	36	8	0.29	0.65	0.43
Br M46	Br M37 to 1550 LF West of CR 8	60	10	0.25	1.10	0.44
Br M45	190 LF East of CR 8 to EOP	18	6	0.30	0.31	0.41
Br M45	Br M37 to 190 LF East of CR 8	48	10	0.18	0.93	0.46
Br M77	3500 LF East of CR 8 to EOP	8	6	0.30	0.31	0.92
Br M77	Br M43 to 3500 LF East of CR 8	17	6	0.30	0.31	0.43
Br M44	Br M43 to EOP	13	6	0.75	0.49	0.89
Br M76	Br M43 to EOP	36	8	0.28	0.64	0.42
Br M43	3000 LF East of CR8 to EOP	49	10	0.24	1.08	0.52
Br M43	Br M77 to 3000 LF East of CR8	58	10	0.24	1.08	0.44
Br M43	Br M44 to Br M77	83	12	0.19	1.56	0.45
Br M43	Br M76 to Br M44	119	15	0.14	2.42	0.48
Br M43	Br M37 to Br M76	184	18	0.10	3.33	0.43
Br M75	CR 8 to Br M37	12	6	0.50	0.40	0.79
Br M75	Br M37 to CR 8	16	6	0.50	0.40	0.59
Br M78	Br M41 to EOP	18	6	0.28	0.30	0.39
Br M42	2640 LF East of CR 8 to EOP	32	8	0.20	0.54	0.40
Br M42	Br M78 to 2640 LF East of CR 8	47	10	0.15	0.85	0.43
Br M41	Br M42 to EOP	30	8	0.25	0.61	0.48
Br M41	Br M40 to Br M42	119	15	0.11	2.15	0.43
Br M40	Br M41 to EOP	26	8	0.15	0.47	0.43
Br M40	Br M37 to Br M41	159	15	0.18	2.75	0.41
Br M39	Br M37 to EOP	18	6	0.35	0.33	0.44
Br M38	CR 8 to EOP	34	8	0.33	0.70	0.49
Br M38	470 LF East of CR8 to CR8	38	8	0.33	0.70	0.44
Br M37	Br M45 to EOP	12	6	0.15	0.22	0.43
Br M37	Br M43 to Br M45	183	18	0.09	3.16	0.41
Br M37	Br M to Br M43	698	30	0.08	11.63	0.40

As can be seen, Branch M will function at 3/8-inches/day or greater. Also included, as part of the project, will be provisions to strip and replace the topsoil on the trench area, to provide rip rap as erosion protection at the outlet, and to construct several intakes on the system. It is proposed to use short intake covers for the larger intakes, use wyes at the tile connections, and the outlet pipe is proposed to be angled downstream. The detail sheet in Exhibit 1 provides more information on several of these items.

The technical specifications for the materials to be used for the project are shown in Exhibit 8. The needed temporary right-of-way for the project is shown in Exhibit 4.

C. DESIGN DATA – WASCOB

Exhibit 1 shows the location for proposed water and sediment control basin (WASCOB). The WASCOB will be designed to NRCS practice standards. Select borrow material will be sourced from excess excavated material from the overall tile installation or from an off-site borrow location secured by the Contractor. From the Agricultural Best Management Practices Handbook for Minnesota, "WASCOBs consist of an embankment across the slope of a field or minor waterway to temporarily detain and release water through a piped outlet or through infiltration. They are constructed perpendicular to the direction of flow. The key benefit of WASCOBs is detaining water from contributing areas, inducing sedimentation, and controlling the release of water, thereby reducing the erosive power of the water downstream."

The proposed basin will temporarily store overland runoff from the watershed and is proposed to be completed by constructing a berm across the natural draw in the land. The slopes on the berms in the agricultural field will be at 1V:30H or flatter on the downstream side so that the berm can still be farmed. On the upstream side it will be 1V:3H to lessen the impact on the adjacent land. The top width of the berm will be 30 feet wide so that it can be easily navigated. The material used to construct this berm will come from the adjacent farmland. This berm will create storage for runoff and will reduce the peak overland flows discharged to the JD 15 Main Open Ditch.

Table 3: Proposed Storage Summary

System	Upstream Landowner	Height (feet)	Ponding Time (hr)	Storage Created (Acre-feet)	Total Ponding Area (Acres)	Total Watershed Area (Acres)
WASCOB	SCHMALZ	1.5	40	2.3	3.7	119

D. TILE SYSTEM DEPTH

Exhibit 1 shows profile views for the proposed tile system. The minimum and maximum depths of cut to the flow line of the pipes are shown on Table 4.

Table 4: Change in Outlet Capacity		
Tile Branch	Minimum Depth	Maximum Depth
M37	4.6’	12.6’
M38	8.0’	11.7’
M39	5.7’	10.3’
M40	6.0’	7.4’
M41	6.5’	10.6’
M42	5.5’	9.4’
M43	4.0’	9.2’
M44	5.7’	7.1’
M45	5.3’	12.5’
M46	5.2’	8.2’
M75	6.3’	11.2’
M76	4.4’	5.7’
M77	4.5’	7.9’
M78	6.7’	8.5’

V. WATER QUALITY

Little change in measurable water quality is anticipated because of this Improvement. However, there are components of the Improvement that will mitigate erosion and help improve water quality on a micro watershed scale. Tile system velocities are generally low, so that soil from the surrounding envelop is seldom carried into the tile. Thus, the largest source of suspended solids in tile system drainage is from water discharging into open intakes. Although open intakes will still be used on the system, ponding occurs around these intakes for any significant storm events therefore allowing time for solids to settle rather than being discharged.

The water and sediment control basins will settle out sediment and sediment-bound pollutants. The proposed WASCOB will collect the overland flow from the watershed, which is currently directly discharging into the JD 15 open ditch. The total pollution reductions can be seen in the table below, these values were calculated using the MPCA Watershed Pollutant Load Reduction Calculator.

Table 5: Erosion Reduction			
System	Nitrogen (estimated reduction) lbs./yr.	Phosphorous (estimated reduction) lbs./yr.	Sediment (TSS) T/yr.
WASCOB 1	568	29.4	4.9

As a requirement of the MPCA Erosion Control Permit, the establishment of an erosion control plan is anticipated. Incorporation of such devices as inlet protection, riprap at the outlets and permanent grasses as soon as possible following the construction are anticipated. All of these measures will help to reduce erosion and maintain water quality during the construction of the project.

VI. ALTERNATE SOLUTIONS

A. "DO NOTHING ALTERNATIVE"

The "Do Nothing" Alternative has been discussed. However, the petitioners have experienced poor drainage throughout the drainage system for many years with the excess surface water damaging crops and resulting in frequent crop stress or crop loss. This loss of production equates to an economic loss for Renville County and the State of Minnesota. The loss results in a reduced property value for the wet acres, thus affecting the taxing capacity of the County and State. In addition, the ability of the landowners to receive a reasonable return on their investment is diminished because of this inadequate drainage.

For these reasons, the "Do Nothing" alternative has been dismissed. The economic question of the cost of the Improvement versus the benefits derived still needs to be evaluated. However, the "Do Nothing" alternative is not viewed as solving the drainage problem in the watershed.

B. REPAIR

Separable Maintenance for this project is estimated at $1,597,377.21. A repair would only work as well as was discussed in Section III of this report. Repairing the system to as constructed system would not account for changing rainfall patterns or for additional waters being discharged into the system. Current design standards by Buffalo Creek Watershed District allows a drainage coefficient of 3/8 inch/day. From Section III the current tile is approximately 45% efficient for a 3/8 inch/day coefficient. Therefore, we do not recommend going with a repair option when the landowners are requesting an improvement.

C. WETLAND RESTORATION

Another alternative would be to restore the typically flooded areas of the watershed to wetland use. This alternative would provide storage in the watershed depressional areas for the water that is currently accumulating in these areas and drowning out agricultural crops. The proposal would also have added benefits for wildlife and possibly water quality.

To be effective, this alternative would need to restore sufficient acres to wetland use so that the existing ditch system could convey the excess runoff. Utilizing NRCS data, it is estimated that about 67 acre feet of water cannot be discharged from the JD 15 watershed through the existing drainage systems in a 48-hour period following a 5-year storm event. If sufficient wetland acres were available to store this runoff at a depth of one foot, approximately 67 acres of wetland restoration would be needed to provide sufficient storage capacity for the excess runoff.

In order to convert the 67 acres to wetlands, at least twice this many acres would need to be acquired for irregular wetland shapes and marginal damp soils. Thus, about 134 acres of land would be needed. This acquisition would likely involve several properties, whose owners would voluntarily need to agree to the reversion. The estimated cost of acquisition plus reconstructing tile lines for wetland restoration would likely be about $18,000 per acre, resulting in a total cost of about $2.41 million. Wetland restoration is about 1.4 times the estimated cost for the Improvement.

Wetland restoration remains a viable option for providing some improvement in the functioning of the drainage system. If sufficient acres of wetlands could be restored, particularly in the upper part of the watershed, it could reduce the need for as large of an outlet as is proposed. Finding willing landowners to participate in a restoration project and

locating sufficient funding would be critical in order to make this option viable. Copies of this Report will be provided to the SWCD and NRCS so that early coordination can occur for potential funding and technical assistance toward this option.

D. IMPOUNDMENT

We have one location identified with the current Improvement for a WASCOB. Alternative Water Quality and Storage features have been considered as a part of the Improvement Project. Options presented to the landowners included an additional WASCOB, Side Inlets, Dry Bottom Basins, Wet (Sediment) Bottom Basins, and Saturated Buffers. The alternative WASCOB location was in the northeast quarter of section 18. The WASCOB was identified during the preliminary design stage. However, this WASCOB was determined to not be feasible. This was due to a lack of interest of additional water storage within the parcel.

VII. OTHER CONSIDERATIONS

A. PERMIT REQUIREMENTS

A permit from the Minnesota Pollution Control Agency for stormwater and erosion control for the project would be necessary. This permit requirement, which applies to any project which disturbs more than one acre of land, requires that the contractor and owner secure a permit for the project. The permit process will also require erosion control measures to be taken during construction. Typical erosion control measures include placing of riprap and grass stabilization of the ditch bank and inlet protection around installed inlet areas. The fee for this permit is currently $400.00. This permit will be applied for shortly before construction is scheduled so the contractor can sign the permit application.

A permit from Renville County Highway Department will also be necessary for the crossings of CR 8. This permit has been applied for.

B. WETLANDS

National Wetland Inventory (NWI) Maps have been reviewed to locate potential wetlands subject to regulations. No wetlands are shown on the NWI maps near the Improvement alignment. If wetlands are identified all piping running directly through must be nonperforated. Along with this all intakes that are within the wetland can be reinstalled at the same nominal size.

Impacts of the potential drainage system on individual land parcels will be evaluated by the Natural Resources Conservation Service upon filing of a Form AD 1026 by landowners. This NRCS process will identify any wetlands and measures which need to be taken in order for the drainage project to avoid impact to these wetlands. Because of federal data privacy requirements, it is not possible for non-landowners to obtain this information. Thus, the obligation for filling out these forms and doing this investigation will rest with individual landowners. We have sent out letters to all the landowners requesting this information or for them to perform this investigation.

Drainage of non-directly impacted wetlands will be controlled by supplemental drainage systems installed by private owners. Owners are advised that such supplemental drainage may not be permitted under State Wetland Conservation Act, US Army Corps of Engineers and NRCS rules and may affect US Department of Agriculture program eligibility.

C. PUBLIC AND PRIVATE BENEFITS AND COSTS

The estimated cost of the proposed Improvement to JD 15 Branch M37 is shown in Exhibit 2 of this report. Benefits for the Improvement, both public and private, will be established by the viewers and a report will be available at the final hearing.

Landowners certainly have other costs associated with construction and maintenance of their individual drainage systems. The proposed Improvement would only serve as an outlet or collector of runoff and drainage flow from the lands within the watershed. Each landowner is responsible to construct and maintain their own drainage system in order to adequately drain their farmlands. Individual benefits for an adequate drainage system are in increased crop production from farmlands.

The estimated cost of the proposed Improvement is included in this report. The public and private benefits and damages will be available at the final hearing.

D. AGRICULTURAL EFFECTS

Once installed, the lands within the improved watershed will be largely dependent on this drainage system for both surface and subsurface drainage flows. Thus it is imperative that the proposed system have adequate capacity in order to allow for modern farming operations.

It should be noted that many of the established ditch systems in Minnesota are now 70 to 100 years old. These systems are approaching the need for complete repair or replacement if the farmland is to remain productive. When feasible, it is economically imperative that these drainage systems be improved to become compatible with present day farming techniques and they be continually maintained. If properly maintained during normal growing seasons, portions of the agricultural lands in the watershed are some of the most productive in the State of Minnesota.

E. ALTERNATIVE MEASURES

Alternative measures, including those identified in the Renville County Water Management Plan and the strategies in the Buffalo Creek Watershed District Water Management Plan, have been considered in conjunction with this project. Specific proposals as part of the project to incorporate these measures include:

1. Measures to conserve, allocate and use drainage waters include the use of non-perforated tiles for the deeper installations so that groundwater is preserved for crop use and the continued infiltration which will occur in depressional areas of the watershed.

2. Measures to reduce downstream peak flows and flooding include the use of hickenbottom risers on intakes which limit the flow capacity of tile intakes, limiting the capacity of the proposed tiles to the minimum allowed standard of the Buffalo Creek Watershed District to limit downstream flows, and construction of the proposed water and sediment control basin.

3. Measures to provide adequate drainage system capacity are being accomplished by designing the size of the tile system to meet the standards of the Buffalo Creek Watershed District.

4. Measures to reduce erosion and sedimentation loss include the use of hickenbottom risers on the tile intakes which result in reduced discharge of suspended solids, the restoration of the tile trench as soon as possible so that surface erosion of the disturbed soil is reduced, the use of inlet protection during the construction so that

the discharge of suspended solids is reduced and the use of a rock filter at the outlet during construction so that suspended solids are captured. Straw mulch will also be utilized to temporarily stabilize the disturbed areas until they can be turned back over to agricultural production. The WASCOB will reduce sedimentation into the JD 15 open ditch.

F. FISH AND WILDLIFE

The threatened or endangered species having the potential to be in Renville County at the time of this report are the northern long-eared bat, and the prairie bush clover. According to the Minnesota DNR, there are no known northern long-eared bat roost trees or hibernacula in Renville County. Additionally, there are no trees to be removed as a part of the improvement, so there is no anticipated impact to the northern long-eared bat. The prairie bush clover is found within native prairie on well drained soils. The project will take place within agricultural fields, so no impact to the prairie bush clover is anticipated. Bald eagles are present in Renville County, and are protected under the Bald and Golden Eagle Protection Act. Again, there are no trees to be removed as a part of the improvement, so there is no impact to the bald eagle.

Field investigation has revealed that the only permanent wildlife habitat in the area of the Improvement is along the road ditches and building sites. These areas will not be impacted by the improvement.

Current wet areas within the project watershed do provide for transitory stop over locations for migratory waterfowl. However, these areas currently dry up following wet periods and are then under cultivation and production. It is anticipated that some of these temporary ponding areas will still exist after the construction of the Improvement although ponding times will likely be reduced. Therefore, the provisions for adequate drainage of these lands will not be of a detrimental nature to local wildlife resources.

G. GROUNDWATER

The purpose of an agricultural drainage system is to maintain the elevation of the shallow groundwater table sufficiently below the surface to provide for efficient production of crops. The level at which the groundwater will be maintained has been and will be determined by the depth of the tile system and private tiles in the area. Although the proposed Improvement is somewhat deeper than the existing tiles in the areas, the depth increase is not significant or unusual for drainage systems. Additionally, tiles that have a depth of 6 feet or greater to the invert of the pipe will be non-perforated. Therefore, no change in the availability, distribution or use of the shallow groundwater beyond that necessary for the sufficient production of crops within the watershed is anticipated by this construction.

H. ENVIRONMENTAL IMPACT

The adverse effects of the proposed Improvement are of a temporary nature and are listed as follows:

1. Disturbing the ground surface during construction could result in the loss of one crop within the construction limits.

2. The restored trench area will be less productive for the first few years following construction and will require more fertilizer to be as productive as the undisturbed adjoining farmland. The topsoil in this area will be removed and replaced in an effort to maintain the soil productivity.

3. Temporary noise and dust generation can be expected from the construction operations. These impacts are not viewed as significant since there are few residences near the proposed construction route.

4. Temporary erosion of soil may occur in the construction area until permanent ground cover and ground stabilization occurs. Although these effects need to be considered, they are probably not significantly different than the current topsoil loss that occurs annually from erosion of topsoil due to overland flow in the watershed. This construction erosion will be minimized using inlet protection, riprap and rapid establishment of permanent grass cover.

Numerous beneficial effects are anticipated from the proposed Improvement. Most of these benefits are directly attributable to increased crop production from lands presently damaged through periodic flooding and ponding. Among the most obvious benefits are:

1. Increased personal farm income.

2. Increased value of benefited farmland.

3. Contribution to the local economy through additional purchases, farm modernization and expansion.

4. Construction of the WASCOB will reduce peak flows and sedimentation into the JD 15 open ditch.

I. LAND USE

The present use of the land in the JD 15 Branch M watershed is largely agricultural. It is expected that the land will continue to be used for agricultural purposes in the future.

J. GUIDANCE TO VIEWERS REGARDING IMPROVEMENT BENEFITS

Discussions with the landowners in the JD 15 Branch M37 system has provided evidence of the condition of the existing tile systems. Previous repairs on the tile have shown that the existing tile is badly deteriorated. In addition, years of use and settlement of sections of the tile have reduced the hydraulic capacity of the tile. Even if JD 15 Branch M37 had not been petitioned for improvement, a repair is warranted.

Another way to describe this is related to the benefit of avoiding inevitable repair/reconstruction costs on the ditch. Since repair of the system, as required by Minnesota Statue 103E.705, would otherwise be paid for by the entire drainage system in order to restore the system to its as constructed, and subsequently improved, hydraulic efficiency, the cost of repair may be used to offset a portion of the improvement cost. Thus, the cost of the new tiles may be added as benefit since it avoids costs otherwise required to repair the system. With this information, it is the intent of the Improvement to replace the existing tile. Thus, a portion of the cost of the new JD 15 Branch M37 tiles should be allocated as a Repair cost. The application of this principle is known as Separable Benefits under the ditch statutes.

Due to the additional truck traffic to deliver material to the WASCOB site, it is recommended that the value of the damages per acre for the WASCOB area be twice the amount as other improvement areas. This change has been reflected in the Right of Way Table in Exhibit 4.

The amount of the Improvement which can be allocated to Separable Benefits is shown in Exhibit 3 as $1,597,377.21. It is recommended that the Board apply these Separable Benefits to the Improvement in the further ditch proceedings.

K. HYDRAULIC IMPACTS

In May of 2025 the DNR wrote an advisory letter in response to the Preliminary Engineer's Report in accordance with Minnesota Statutes. This letter looked for clarification that the hydraulic impacts of this project were completely understood and were not a detriment to downstream waters.

One of the items discussed in the letter was flow duration. The flow durations for the existing tile system and the proposed tile system were calculated and are shown on Table 5 below:

Table 6: Change in Flow Duration			
Storm Event	Existing Flow Duration (hour)	Proposed Flow Duration (hour)	Change in Flow Duration (hour)
5-year	184	65	-119
10-year	201	80	-121
25-year	214	106	-108
50-year	226	117	-109
100-year	243	120	-123

As shown in Table 5 the flow duration for the proposed condition is approximately half of the time span as for the existing condition due to the low calculated coefficients of the existing tiles within the system. Decreasing the flow duration to this significant margin while maintaining similar peak flows will benefit vegetation both within agricultural lands and within the stream bank. Vegetation exposed to excess ponding causes unneeded stress and periods of diminished coverage. Exposed and over saturated ground causes approximately two times the runoff when compared to good condition agricultural land.

HydroCAD calculations have been requested and are included in Exhibit 6 of this report.

The advisory letter discusses the use of storage areas to effectively mitigate peak flow increases and encourages the use of WASCOBs to reduce those surface flow rates and to promote settling of sediment and pollutants prior to entering downstream receiving waters. As discussed in this report, it is proposed to construct a WASCOB within the system to achieve these goals. The WASCOB proposed with the project was the only feasible storage area approved by the landowners during the preliminary stage of the project. This WASCOB stores 2.3 acre-feet of water over a 40-hour period. The total depth of the WASCOB is just over 1.5 feet. As stated in the DNR advisory report this WASCOB is beneficial to reduce surface water flow rate and promote settling of sediment and pollutants. The pollution reduction estimates have been updated to the individual practice.

The project is not located within a Drinking Water Supply Management Area as defined by the Minnesota Department of Health. The waters from this project do eventually drain into the Minnesota River and ultimately the Mississippi River. With the inclusion of the WASCOB, the overall pollutant load on the system will decrease when compared to current practices. There by reducing the burden on downstream filtration plants that use the rivers as their source of water. Therefore, this project includes mitigation measures and reduces the impacts related to drinking water protection.

VIII. ADEQUACY OF THE OUTLET

A. GENERAL INFORMATION

As mentioned earlier, the outlet for Branch M37 is into the open ditch of JD 15 in Section 18 of Preston Lake Township. The Main open ditch of JD 15 then becomes Buffalo Creek as it enters McLeod County.

B. ADEQUACY OF THE OUTLET

The adequacy of JD 15 to accept the additional flow resulting from the Improvement has been evaluated as required by the ditch statutes. This evaluation has been performed in the following manner:

1. The watershed contributing flow to the open ditch of JD 15 at the outlet for JD 15 Branch M37 has been delineated using the US Geological Survey "StreamStats" program and 3-meter Lidar information retrieved from the DNR. The StreamStats program has been used to generate peak flow rates for 5 to 100-year storm events.
2. The proposed and existing conditions were modeled in HydroCAD. It is worth noting that HydroCAD often overestimates the discharge rates compared to other models and calculation methods.
3. Rainfall data was retrieved from NOAA Atlas 14 by using Buffalo Lake, Minnesota as the data center point.

The change in outlet discharge can be seen in the table below. The outlet is taken as JD 15 Open Ditch crossing at 810th Avenue. The reason that the 810th Avenue crossing was chosen was due to an 48" RCP culvert being located at this crossing, not at County Road 8. Meaning that the culvert is the limiting factor on the ditch capacity.

Table 7: Change in Outlet Capacity

Storm Event	Existing Discharge Rate (cfs)	Proposed Discharge Rate (cfs)	Change in Discharge Rate (cfs)
5-year	181	184	+3
10-year	191	193	+2
25-year	205	206	+1
50-year	215	216	+1
100-year	223	224	+1

As can be seen from Table 7, the construction of the new system will increase flows to the JD 15 open ditch because of the larger pipe outlet. The increase in flow is not significant for the 5-year to the 100-year event. Table 8 shown below shows the change in headwater elevation for the crossing at 810th Avenue.

Table 8: Change in Headwater Elevation

Storm Event	Existing Headwater Elevation (ft)	Proposed Headwater Elevation (ft)	Change in Headwater Elevation (ft)
5-year	1061.6	1061.9	+0.3
10-year	1062.6	1062.9	+0.3
25-year	1064.1	1064.3	+0.2
50-year	1065.3	1065.4	+0.1
100-year	1066.3	1066.4	+0.1

The standard for a 48" diameter culvert in the state of Minnesota is not to overtop the road for the 50-year event according to the MnDOT Drainage Manual. The culvert crossing at the

810th Avenue will not overtop at the 100-year event after the proposed improvements. It is therefore our opinion that the outlet is adequate for the proposed Improvement.

IX. ESTIMATE OF COST

The Improvement cost estimate to construct the proposed Improvement, as described in this report, is shown in Exhibit 2. The total estimated cost for the Improvement is $1,715,891.75. That price includes the cost of administration and engineering fees.

Included in the estimate are the approximate 47 acres of agricultural land which will be temporarily taken out of production by construction. The individual landowners will be compensated for this loss through the damage process as discussed in the Viewer's Report.

The County has reached out to outside funding sources and has determined that there is a good chance that there would be funds available for the BMP (WASCOB) component of the project.

X. RECOMMENDATIONS

The proposed Improvement of JD 15 in Renville County, as described in this report, is feasible, practical and necessary to provide drainage for the cultivation of crops within the watershed area. The existing tile system is in need of an Improvement to provide proper drainage for current agricultural practices.

It is our recommendation to proceed with the Improvement as outlined in this report and that the Engineer's Final Engineer's Report be approved. If there are adequate funds, we recommend the Drainage Authority order the Improvement.

Exhibit 1: Preliminary Plans and Profiles

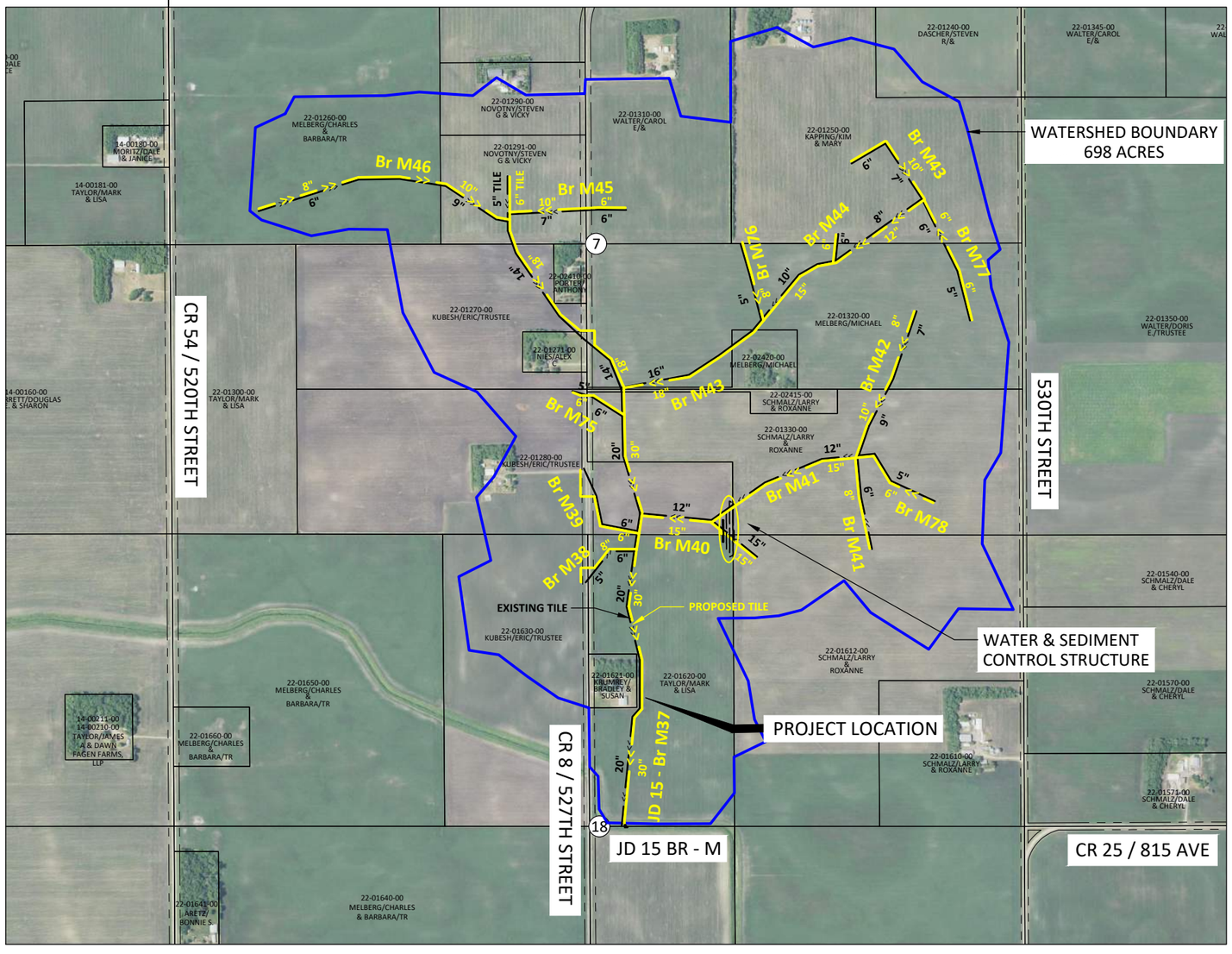
BUFFALO CREEK WATERSHED DISTRICT

PRELIMINARY PLANS FOR

JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS

DRAIN TILE, SURFACE INTAKES AND EROSION CONTROL

NOVEMBER, 2025



PARTIAL MAP OF RENVILLE COUNTY

0 600 1200

SCALE FEET

SHEET NUMBER	SHEET TITLE
GENERAL	
G0.01 - G0.02	TITLE SHEET, LEGEND
CIVIL	
C1.01 - C1.02	DETAILS, TYPICAL SECTIONS
C2.01 - C2.06	STORM WATER POLLUTION PREVENTION PLAN
C3.01	GRADING PLAN
DRAIN TILE PLAN & PROFILE	
C5.01 - C5.03	BRANCH M37
C5.04	BRANCH M38
C5.05	BRANCH M39
C5.06	BRANCH M40
C5.07	BRANCH M41
C5.08	BRANCH M42
C5.09	BRANCH M78
C5.10	BRANCH M75
C5.11 - C5.12	BRANCH M43
C5.13	BRANCH M76
C5.14	BRANCH M44
C5.15	BRANCH M77
C5.16	BRANCH M45
C5.17	BRANCH M46

THIS PLAN SET CONTAINS 28 SHEETS.

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES".

PROJECT DATUM: RENVILLE CO COORDINATES
HORIZONTAL: NAD83 (2011)
VERTICAL: NAVD88

RECORD DRAWING INFORMATION
OBSERVER:
CONTRACTOR:
DATE:

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRELIMINARY NOT FOR CONSTRUCTION

BILL H. HILGERS, P.E.
LIC. NO. 42046 DATE MM/DD/YYYY

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DESIGNED	NO.	ISSUED FOR	DATE
BMH			
DRAWN			
JGB, PAD, BMH			
CHECKED			
BLH			
CLIENT PROJ. NO.			
24X.136906.000			

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
TITLE SHEET

SHEET G0.01

EXISTING TOPOGRAPHIC SYMBOLS

- ACCESS GRATE
- AIR CONDITION UNIT
- ANTENNA
- AUTO SPRINKLER CONNECTION
- BARRICADE PERMANENT
- BASKETBALL POST
- BENCH
- BIRD FEEDER
- BOLLARD
- BUSH
- CATCH BASIN RECTANGULAR CASTING
- CATCH BASIN CIRCULAR CASTING
- CURB STOP
- CLEAN OUT
- CULVERT END
- DRINKING FOUNTAIN
- DOWN SPOUT
- ELECTRIC CAR CHARGE STATION
- FILL PIPE
- FIRE HYDRANT
- FLAG POLE
- FLARED END / APRON
- FUEL PUMP
- GRILL
- GUY WIRE ANCHOR
- HANDHOLE
- HANDICAP SPACE
- IRRIGATION SPRINKLER HEAD
- IRRIGATION VALVE BOX
- LIFT STATION CONTROL PANEL
- LIFT STATION
- LIGHT POLE
- MAILBOX
- MANHOLE-COMMUNICATION
- MANHOLE-ELECTRIC
- MANHOLE-GAS
- MANHOLE-HEAT
- MANHOLE-RECLAIMED WATER
- MANHOLE-SANITARY SEWER
- MANHOLE-STORM SEWER
- MANHOLE-UTILITY
- MANHOLE-WATER
- METER
- DRIVE-THRU MICROPHONE
- PARKING METER
- PAVEMENT MARKING
- PEDESTAL-COMMUNICATION
- PEDESTAL-ELECTRIC
- PEDESTRIAN PUSH BUTTON
- PICNIC TABLE
- POLE-UTILITY
- POST
- RAILROAD SIGNAL POLE
- REGULATION STATION GAS
- SATELLITE DISH
- SIGN TRAFFIC
- SIGNAL CONTROL CABINET
- SOIL BORING
- SIREN
- TELEPHONE BOOTH
- TILE INLET
- TILE OUTLET
- TILE RISER
- TRANSFORMER-ELECTRIC
- TREE-CONIFEROUS
- TREE-DEAD
- TREE-DECIDUOUS
- TREE STUMP
- TRAFFIC ARM BARRIER
- TRAFFIC SIGNAL
- TRASH CAN
- UTILITY MARKER
- VALVE
- VALVE POST INDICATOR
- VALVE VAULT
- VAULT
- VENT PIPE
- WATER SPIGOT
- WELL
- WETLAND DELINEATED MARKER
- WETLAND
- WET WELL
- YARD HYDRANT

PROPOSED TOPOGRAPHIC SYMBOLS

- CLEANOUT
- MANHOLE
- LIFT STATION
- STORM SEWER CIRCULAR CASTING
- STORM SEWER RECTANGULAR CASTING
- STORM SEWER FLARED END / APRON
- STORM SEWER OUTLET STRUCTURE
- STORM SEWER OVERFLOW STRUCTURE
- CURB BOX
- FIRE HYDRANT
- WATER VALVE
- WATER REDUCER
- WATER BEND
- WATER TEE
- WATER CROSS
- WATER SLEEVE
- WATER CAP / PLUG
- RIP RAP
- DRAINAGE FLOW
- TRAFFIC SIGNS

SURVEY SYMBOLS

- BENCHMARK LOCATION
- CONTROL POINT
- MONUMENT FOUND
- CAST IRON MONUMENT
- STONE MONUMENT

EXISTING TOPOGRAPHIC LINES

- RETAINING WALL
- FENCE
- FENCE-DECORATIVE
- GUARD RAIL
- TREE LINE
- BUSH LINE

SURVEY LINES

- CONTROLLED ACCESS
- BOUNDARY
- CENTERLINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- EXISTING LOT LINE
- PROPOSED LOT LINE
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- SETBACK LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- TEMPORARY EASEMENT

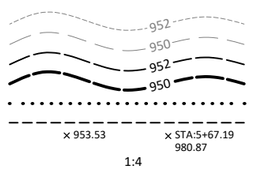
EXISTING UTILITY LINES

- FORCEMAIN
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- WATERMAIN
- WATER SERVICE
- RECLAIMED WATER

PROPOSED UTILITY LINES

- FORCEMAIN
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- WATERMAIN
- WATER SERVICE
- PIPE CASING
- TRENCHLESS PIPE (PLAN VIEW)
- TRENCHLESS PIPE (PROFILE VIEW)

GRADING INFORMATION



- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- PROPOSED CONTOUR MINOR
- PROPOSED CONTOUR MAJOR
- PROPOSED GRADING LIMITS / SLOPE LIMITS
- PROJECT LIMITS
- PROPOSED SPOT ELEVATION
- RISE:RUN (SLOPE)

HATCH PATTERNS

- BITUMINOUS
- GRAVEL
- CONCRETE

EXISTING PRIVATE UTILITY LINES

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- UNDERGROUND FIBER OPTIC
- UNDERGROUND ELECTRIC
- UNDERGROUND GAS
- UNDERGROUND COMMUNICATION
- OVERHEAD ELECTRIC
- OVERHEAD COMMUNICATION
- OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL :

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: G-A G-A UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-22.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL.	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

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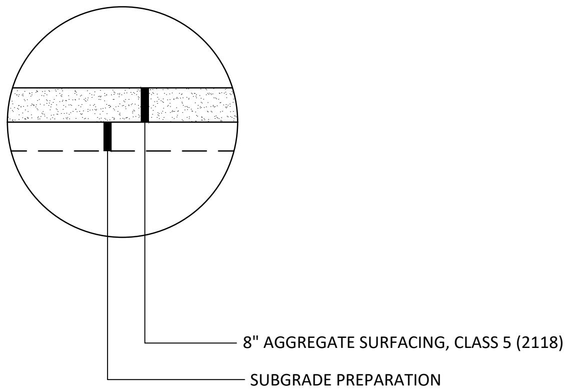
DESIGNED	BMH	NO.	ISSUED FOR / DATE
DRAWN	JGB, PAD, BMH		
CHECKED	BLH		
CLIENT PROJ. NO.	24X.136906.000		

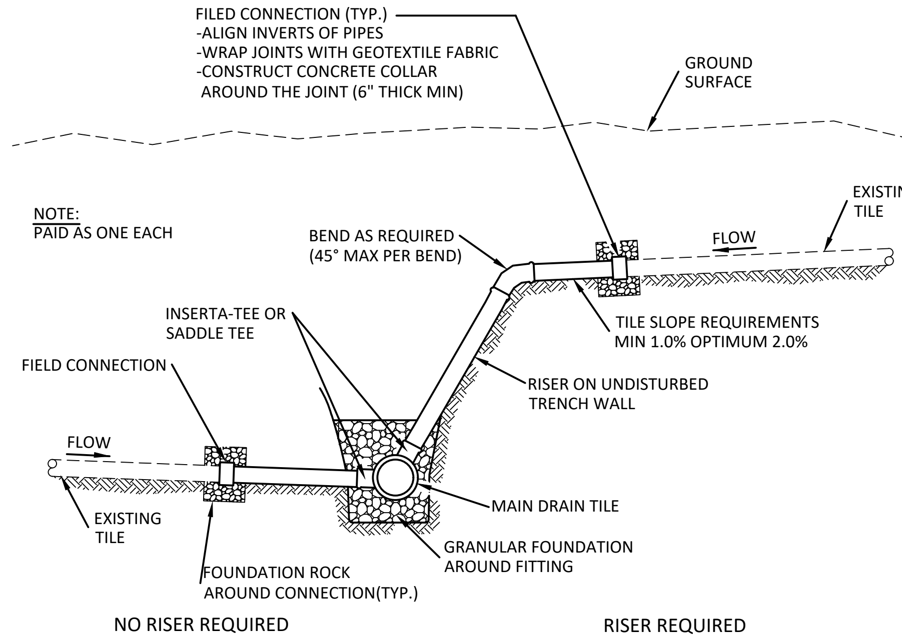
BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
LEGEND

SHEET G0.02



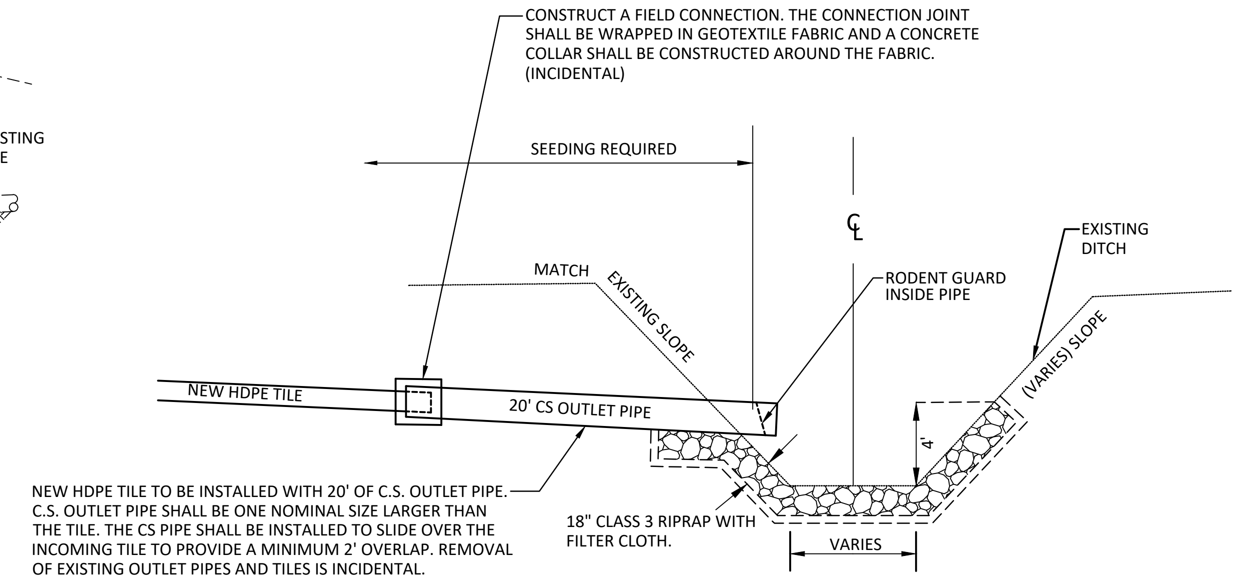
GRAVEL ROAD RESTORATION - TYPICAL SECTION

NOT TO SCALE



DRAIN TILE CONNECTION

NOT TO SCALE

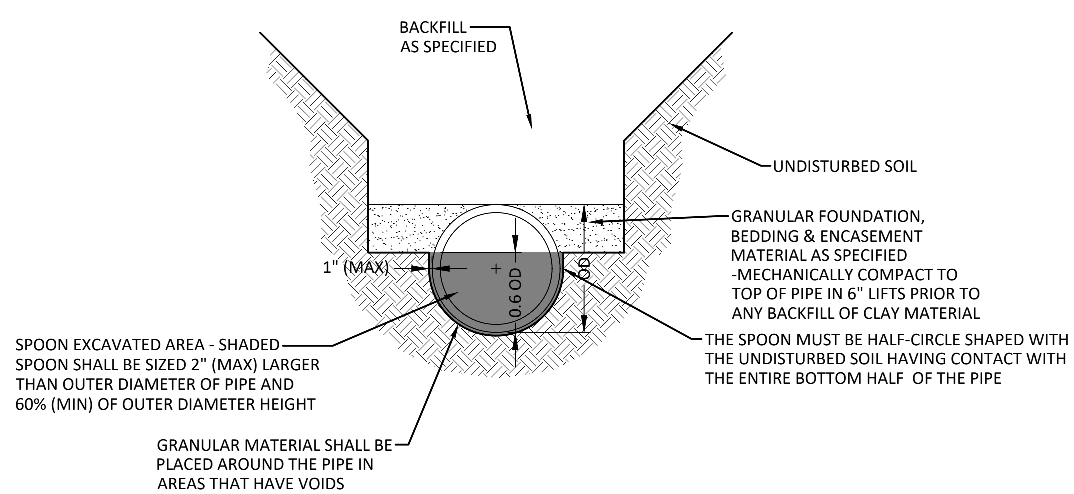


TYPICAL SECTION AT OPEN DITCH FOR HDPE TILE

NOT TO SCALE

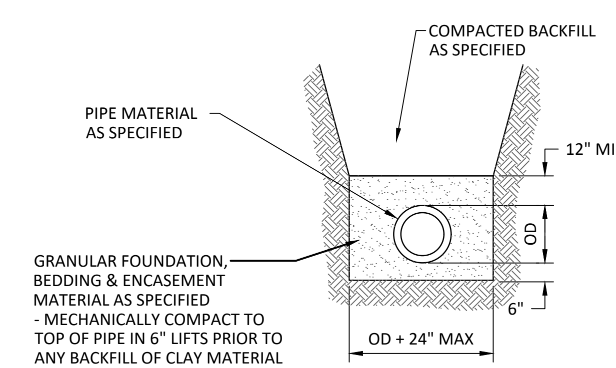
GRANULAR MATERIAL DEPTH TO INVERT TABLE (ASTM F2648)	
TILE SIZE (IN)	MAX PIPE DEPTH (FT)
4	21
6	21
8	21
10	21
12	21
15	21
18	21
24	19
30	19
36	18
42	18
48	18
60	17

NOTE: THIS TABLE IS FOR REFERENCE PURPOSES ONLY. ACTUAL MAXIMUM AND MINIMUM DEPTHS SHALL BE DETERMINED IN CONJUNCTION WITH MANUFACTURER AND TESTING AGENCIES.



HDPE "SPOON" TRENCH BEDDING DETAIL

NOT TO SCALE



HDPE RECTANGULAR TRENCH BEDDING DETAIL

NOT TO SCALE

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PRELIMINARY NOT FOR CONSTRUCTION

BILL J. HELGET, P.E.

LIC. NO. 42046 DATE MM/DD/YYYY

BOLTON & MENK

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DRAWN	JGB, PAD, BMH
CHECKED	BLH
CLIENT PROJ. NO.	24X.136906.000

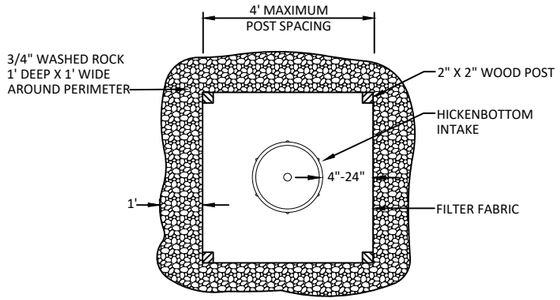
NO.	ISSUED FOR	DATE

BUFFALO CREEK WATERSHED DISTRICT

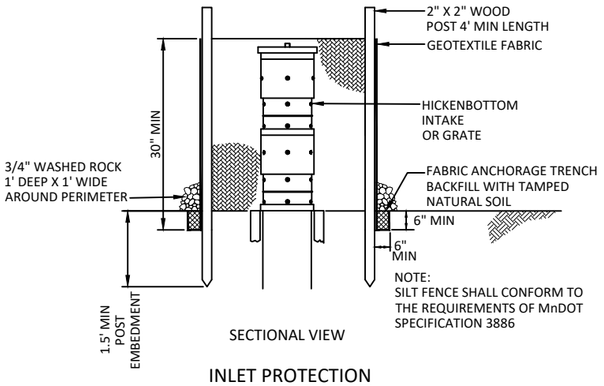
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS

DETAILS

DRAIN TILE DETAILS

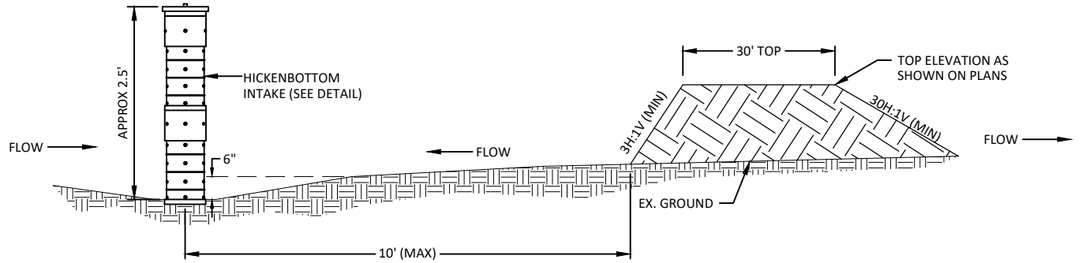


PLAN VIEW
NOT TO SCALE

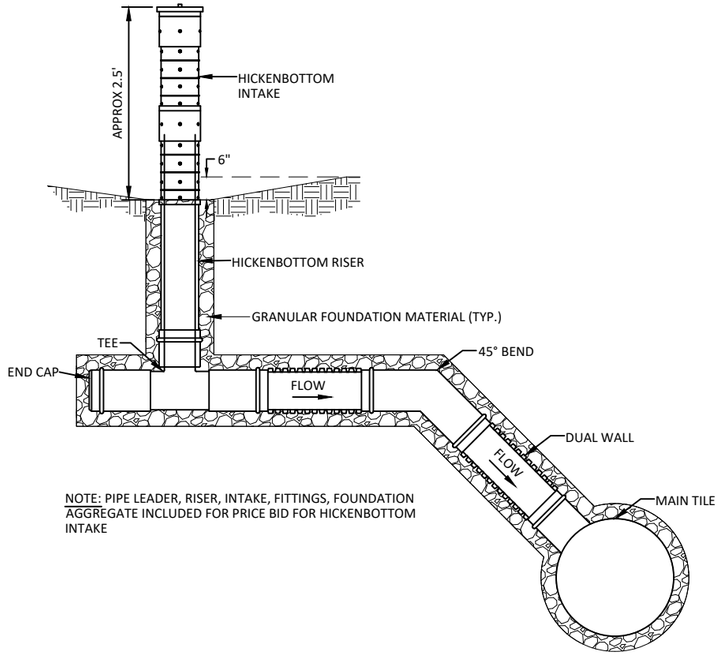


SECTIONAL VIEW

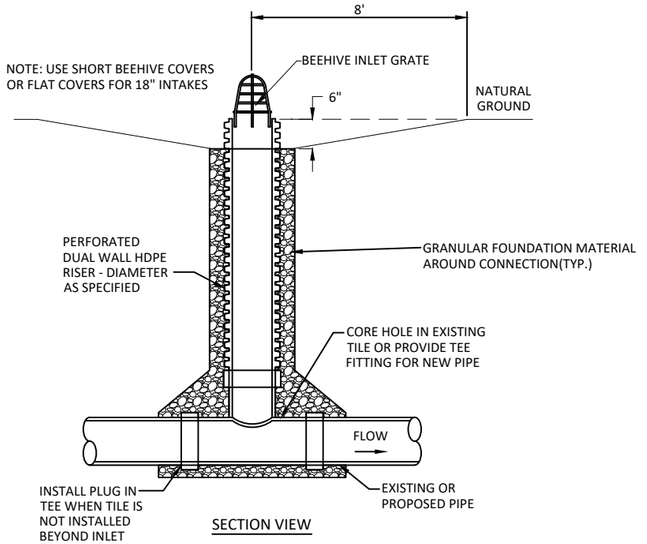
INLET PROTECTION
PREASSEMBLED SILT FENCE
NOT TO SCALE



WATER SEDIMENT CONTROL BASIN (WASCOB)
NOT TO SCALE



HICKENBOTTOM INTAKE - IN ROADSIDE DITCHES
NOT TO SCALE



SECTION VIEW

FIELD INTAKE - IN FIELDS
NOT TO SCALE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRELIMINARY NOT FOR CONSTRUCTION

BILL J. HELGET
LIC. NO. 42046 DATE MM/DD/YYYY

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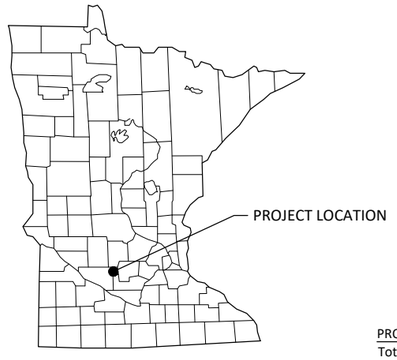
BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DETAILS
DRAIN TILE DETAILS

SHEET
C1.02

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

JD 15 BR M37 IMPROVEMENT

BUFFALO CREEK WATERSHED DISTRICT
RENVILLE COUNTY, MINNESOTA



LEGEND

- 1-MILE BOUNDARY
- PROJECT BOUNDARY
- OR — IMPAIRED, SPECIAL OR PROTECTED WATERS
- NATIONAL WETLANDS INVENTORY
- CALCAREOUS FEN
- RECEIVING WATERS

RESPONSIBLE PARTIES:
The Contractor and Owner will be joint applicants under the MPCA's General Stormwater Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program.

The Contractor shall provide one or more trained Construction SWPPP Manager(s) knowledgeable and experienced in the application of erosion prevention and sediment control BMPs that will oversee the implementation of the SWPPP, and the installation, inspection and maintenance of the erosion prevention and sediment control BMPs.

A Construction SWPPP Manager must be available for an on-site inspection within 72 hours upon request by the MPCA.

	COMPANY	CONTACT PERSON	PHONE
OWNER:	Buffalo Creek Watershed District	Larry Philips	320-510-0504
SWPPP DESIGNER:	Bolton & Menk, Inc.	Jordan Bengtson	507-810-4184
CONTRACTOR:	TBD	TBD	TBD
CONSTRUCTION SWPPP MANAGER:	TBD	TBD	TBD
PARTY RESPONSIBLE FOR LONG TERM O&M:	Buffalo Creek Watershed District	Larry Philips	320-510-0504

The SWPPP Designer, Construction SWPPP Manager, and BMP Installer must have appropriate training. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Training documentation for the SWPPP Designer is included on the Narrative sheet. The Contractor shall attach training documentation to this SWPPP for the Construction SWPPP Manager and BMP Installer prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

ADDITIONAL COMPENSATION
Payment for all work associated with Erosion and Sediment Control shall be as described in the Project Manual. Unless otherwise authorized by the Owner no additional payment shall be made for any work required to administer and maintain the site erosion and sediment control in compliance with the Minnesota Pollution Control Agency (MPCA) - General Stormwater Permit for Construction Activity (MN R100001) including but not limited to inspection, maintenance, and removal of BMPs or addition of BMPs to accommodate Contractor phasing.

DOCUMENT RETENTION
Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT.

GENERAL STORMWATER DISCHARGE REQUIREMENTS
All requirements listed in Section 5.1 of the Permit for the design of the permanent stormwater management system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

1. The expected amount, frequency, intensity, and duration of precipitation.
2. The nature of stormwater runoff and run-on at the site
3. Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
4. The range of soil particle sizes expected to be present on the site.

Permanent stormwater treatment systems for this project have been designed in accordance with the guidance in the MN Stormwater Manual in place at the time of bidding. Copies of the design information and calculations are part of this SWPPP and will be provided in digital format upon written request to the Engineer.

PROJECT AREAS:

Total Project Size (disturbed area) =	46.8	ACRES
Existing area of impervious surface =	0.1	ACRES
Post construction area of impervious surface =	0.1	ACRES
Total new impervious surface area created =	0.0	ACRES

Planned Construction Start Date:	XX/XX/XXXX
Estimated Construction Completion Date:	XX/XX/XXXX

PERMANENT STORMWATER MANAGEMENT SYSTEM:
Type of storm water management used if more than 1 acre of new impervious surface is created:

	Wet Sedimentation Basin
	Infiltration/Filtration
	Regional Pond
X	Permanent Stormwater Management Not Required
X	Less than 1 acre of impervious area created.

PROJECT LOCATION:

COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
RENVILLE	T115N	R31W	7, 18	44.7703°	-94.6059°

BMP SUMMARY	QUANTITY	UNIT
RANDOM RIPRAP, CLASS 3	30	TON
INLET PROTECTION	58	EACH
MULCH TYPE 1	92	TON
RAPID STABILIZATION METHOD 4	2375	SQ YD

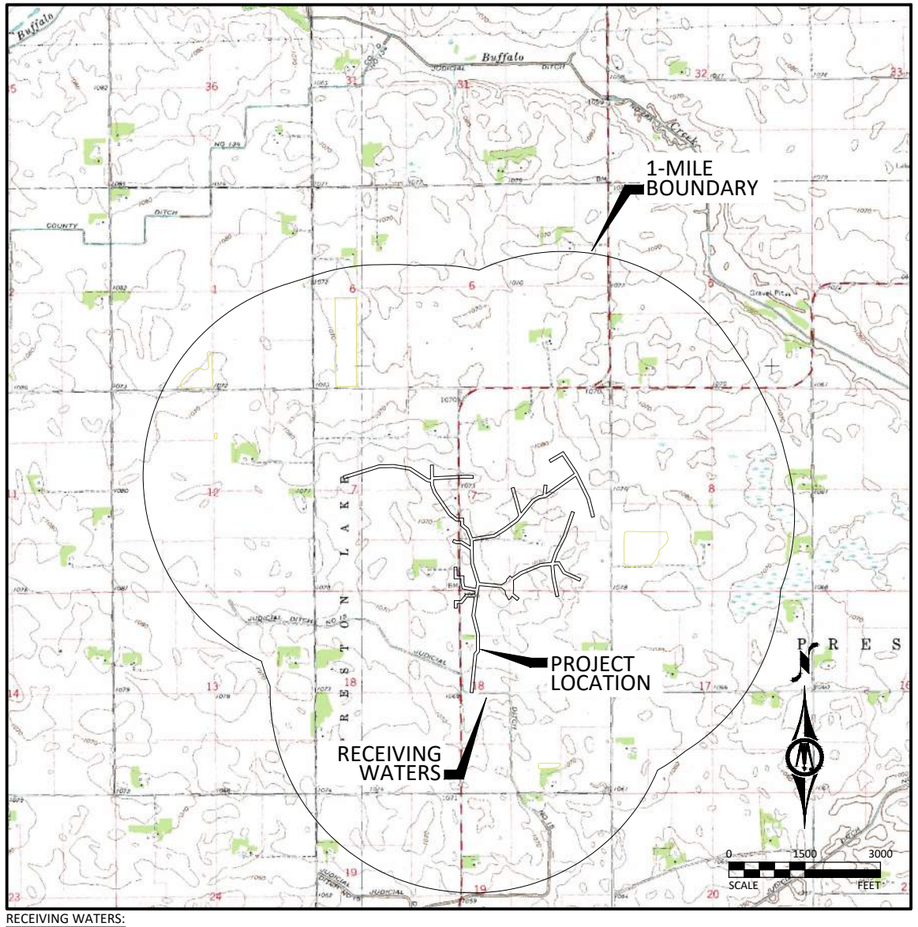
DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:
Construction activities include: WASCOB grading, drain tile installation, intake construction, temporary erosion and sediment control, and permanent stabilization.

Stormwater currently flows overland agriculture fields into drain tile and intakes. Then they ultimately drain into Judicial Ditch 15

After construction is complete stormwater will continue to flow as is for most of the watershed. Except a portion will be partially blocked by the proposed WASCOB

This project includes the following stormwater management BMPs:

- Riprap, Class 3
- Inlet Protection
- Mulch Type 1
- Rapid Stabilization Method 4



RECEIVING WATERS:
Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, within 1-mile of the project boundary are identified on the USGS 7.5 min quad map above. Receiving waters that are impaired, the impairment, and WLA are listed as follows. All specific BMPs relative to construction activities listed in the permit for special, prohibited, restricted, or impaired have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	Special, Prohibited, Restricted Water [1]	Flows to Impaired Water Within 1-Mile [2]	USEPA Approved Construction Related TMDL [3]
Judicial Ditch 15 Branch M	DITCH	NO	NO	NO

[1] Special, prohibited, and restricted waters are listed in Section 23 of the MN Construction Stormwater General Permit (MNR100001).
[2] Identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.
[3] Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

1) Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Concrete Washout, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
2) Install perimeter sediment control, inlet protection, and construction exit.
3) Install drain tile.
4) Backfilling, WASCOB construction, and final grading.
5) Add additional temporary BMPs as necessary during construction based on inspection reports.
6) Ensure final stabilization measures are complete.
7) Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
8) Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.

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Billy J. Holgate, PE
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BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
STORMWATER POLLUTION PREVENTION PLAN
SWPPP PLAN

SHEET C2.01

Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN RI0000I (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) to correct problems identified or address the following situations.

1. Contact information and training documentation for Construction SWPPP Manager and BMP Installer,
2. There is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:
   a. Types and/or Locations of BMPs
   b. Material Storage and Spill Response
   c. Fueling Plans
   d. Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and
   e. Project Phasing
3. It is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or
4. The SWPPP is not consistent with the terms and conditions of the permit.

The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.

If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.

In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.

The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.

EROSION PREVENTION PRACTICES

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.

Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.

The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.

SEDIMENT CONTROL PRACTICES

Down gradient BMPs including perimeter BMPs must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.

Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.

Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.

TEMPORARY SEDIMENTATION BASINS

A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.

DEWATERING

A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.

POLLUTION PREVENTION

Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.

Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.

Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.

Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. No engine degreasing is allowed on site. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, portable toilets, and exterior vehicle or equipment washing on the site. The SWPPP amendment shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment shall meet or exceed the minimum requirements of Section 12 of the Permit.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.

All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

The Contractor may request a change in inspection schedule for the following conditions:

a. Inspections of areas with permanent cover to be reduced to once per month,
b. Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,
c. Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.

No change in inspection schedule shall occur until authorized by the Engineer.

Inspections must include:

1. All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.
2. Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.
3. Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.
4. Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow.

Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.

Any sediment that escapes the site must be removed and the area stabilized within 7 calendar days of discovery unless precluded by legal, regulatory, or physical access in which case the work shall be completed within 7 calendar days of authorization. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.

PUBLIC WATER RESTRICTIONS:

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.

FINAL STABILIZATION

Final Stabilization is not complete until all the following requirements have been met:

1. Substantial Completion has been reached and no ground disturbing activities are anticipated.
2. Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.
3. Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the system is operating as designed.
4. All sediment has been removed from conveyance systems
5. All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.
6. For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.
7. For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.

SITE STABILIZATION COMPLETION:

Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than:	14 calendar days

SITE INSPECTION INTERVAL:

A trained person shall routinely inspect the entire construction site during active construction at an interval of no more than:	7 calendar days

SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:

1)	Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
2)	Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat?	NO
3)	Does any portion of this site discharge to a Calcareous fen.	NO
4)	Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site?	NO
5)	Have any Karst features have been identified in the project vicinity?	NO
6)	Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO
7)	Has the MN DNR promulgated "work in water restrictions" for any Public Water this site disharges to during fish spawning?	NO

TYPE OF PERMIT	PERMITTING AGENCY	PERMIT STATUS AND CONDITIONS
Construction Stormwater NPDES	MPCA	

SWPPP DESIGNER TRAINING DOCUMENTATION:

UNIVERSITY OF MINNESOTA
Jordan Bengtson
Construction Site Management (May 31 2026)
Design of Construction SWPPP (May 31 2028)

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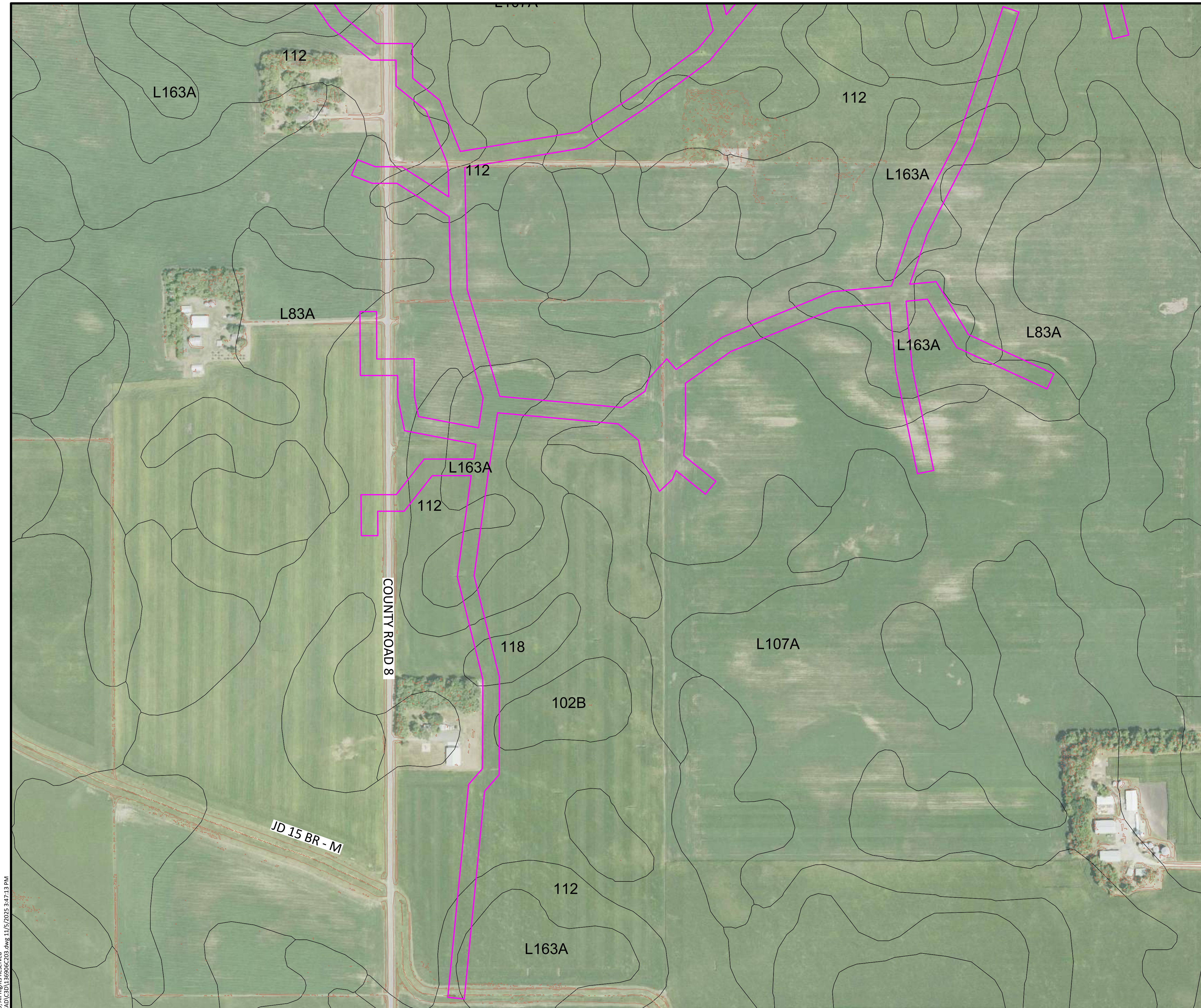
BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
STORMWATER POLLUTION PREVENTION PLAN
SWPPP NARRATIVE

SHEET C2.02



LEGEND

- PROJECT BOUNDARY
- SOIL TYPE
- STEEP SLOPES (>33.3%)
- RECEIVING WATERS

0 250 500
SCALE FEET

SOIL TYPE SUMMARY

Map Unit Symbol	Soil Name	Hyd. Soil Group	Erodibility
MUSYM	MUNAME	HYDGRP	MUHELCL
102B	CLARION LOAM, 2 TO 6 PERCENT SLOPES	C	CLASS 1
112	HARPS CLAY LOAM, 0 TO 2 PERCENT SLOPES	C/D	NHEL
118	CRIPPIN LOAM, 1 TO 3 PERCENT SLOPES	B/D	CLASS 1
L107A	CANISTEO-GLENCOE COMPLEX, 0 TO 2 PERCENT SLOPES	C/D	NHEL
L163A	OKOBOJI SILTY CLAY LOAM,0 TO 1 PERCENT SLOPES	C/D	NHEL
L83A	WEBSTER CLAY LOAM, 0 TO 2 PERCENT SLOPES	C/D	NHEL
L85A	NICOLLET CLAY LOAM, 1 TO PERCENT SLOPES	C/D	CLASS 1

NHEL - Not Highly Erodible Land
PHEL - Potentially Highly Erodible Land
HEL - Highly Erodible Land

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

DESCRIPTION	SHEET NO.
SITE MAP	C2.01
DIRECTION OF FLOW	C2.05 - C2.06
FINAL STABILIZATION	C2.05 - C2.06
SOILS	C2.03 - C2.04
DRAINAGE STRUCTURES	C1.02
STORM SEWER PLAN & PROFILE SHEETS	C5.01 - C5.17
EROSION & SEDIMENT CONTROL DETAILS	C1.02
EROSION CONTROL TABULATION	C2.01
TURF ESTABLISHMENT TABULATION	C2.01
NARRATIVE & NOTES	C2.01 - C2.02

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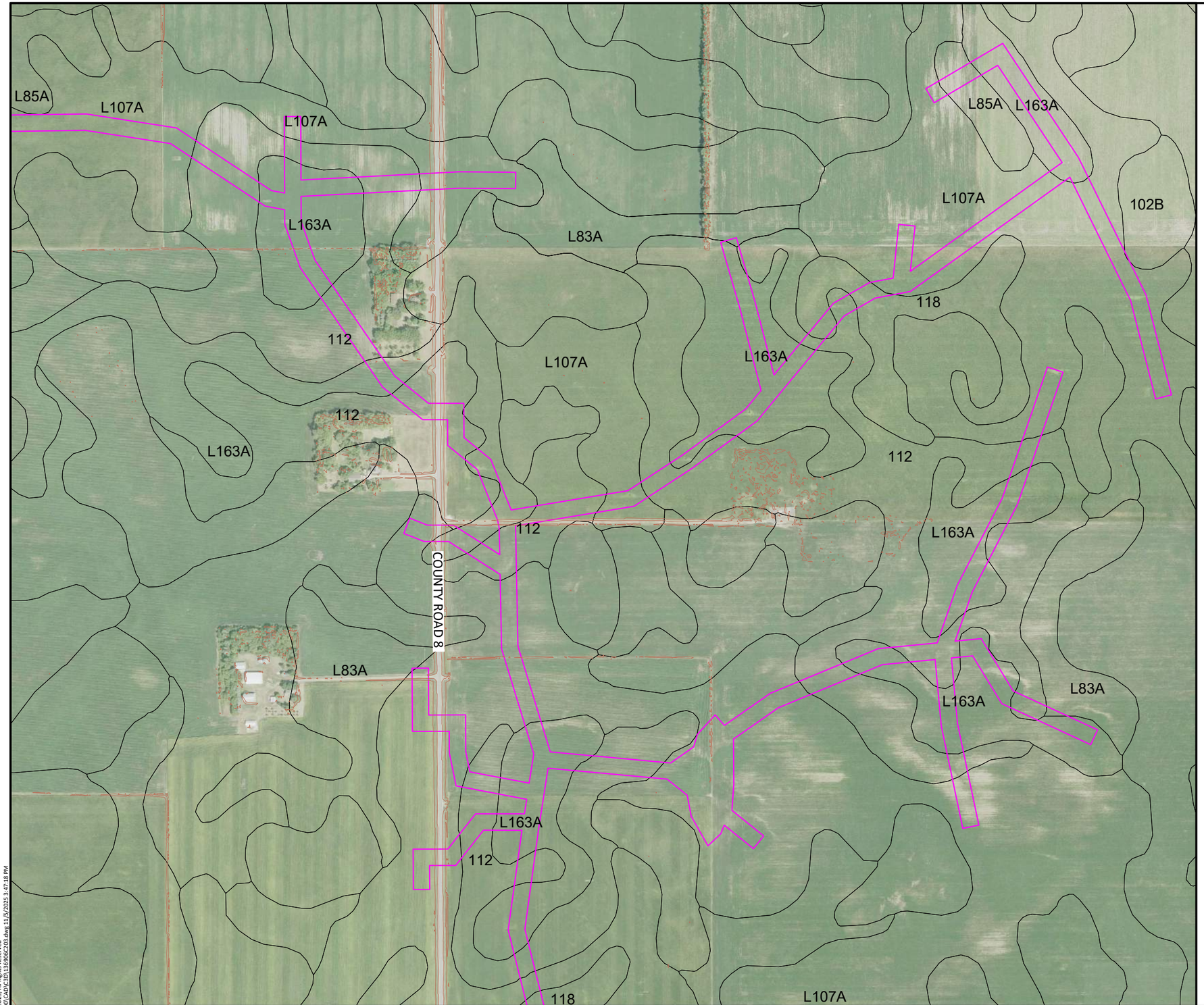
BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
STORMWATER POLLUTION PREVENTION PLAN
SOIL MAP



LEGEND

- PROJECT BOUNDARY
- SOIL TYPE
- STEEP SLOPES (>33.3%)
- RECEIVING WATERS

0 100 200
SCALE FEET

SOIL TYPE SUMMARY

Map Unit Symbol	Soil Name	Hyd. Soil Group	Erodibility
MUSYM	MUNAME	HYDGRP	MUHELCL
102B	CLARION LOAM, 2 TO 6 PERCENT SLOPES	C	CLASS 1
112	HARPS CLAY LOAM, 0 TO 2 PERCENT SLOPES	C/D	NHEL
118	CRIPPIN LOAM, 1 TO 3 PERCENT SLOPES	B/D	CLASS 1
L107A	CANISTEO-GLENCOE COMPLEX, 0 TO 2 PERCENT SLOPES	C/D	NHEL
L163A	OKOBOJI SILTY CLAY LOAM,0 TO 1 PERCENT SLOPES	C/D	NHEL
L83A	WEBSTER CLAY LOAM, 0 TO 2 PERCENT SLOPES	C/D	NHEL
L85A	NICOLLET CLAY LOAM, 1 TO PERCENT SLOPES	C/D	CLASS 1

NHEL - Not Highly Erodible Land
PHEL - Potentially Highly Erodible Land
HEL - Highly Erodible Land

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

DESCRIPTION	SHEET NO.
SITE MAP	C2.01
DIRECTION OF FLOW	C2.05 - C2.06
FINAL STABILIZATION	C2.05 - C2.06
SOILS	C2.03 - C2.04
DRAINAGE STRUCTURES	C1.02
STORM SEWER PLAN & PROFILE SHEETS	C5.01 - C5.17
EROSION & SEDIMENT CONTROL DETAILS	C1.02
EROSION CONTROL TABULATION	C2.01
TURF ESTABLISHMENT TABULATION	C2.01
NARRATIVE & NOTES	C2.01 - C2.02

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PRELIMINARY NOT FOR CONSTRUCTION

Bill H. Hilgert, P.E.
LIC. NO. 42046 DATE MM/DD/YYYY

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DESIGNED	NO.	ISSUED FOR	DATE
BMH			
DRAWN			
JGB, PAD, BMH			
CHECKED			
BLH			
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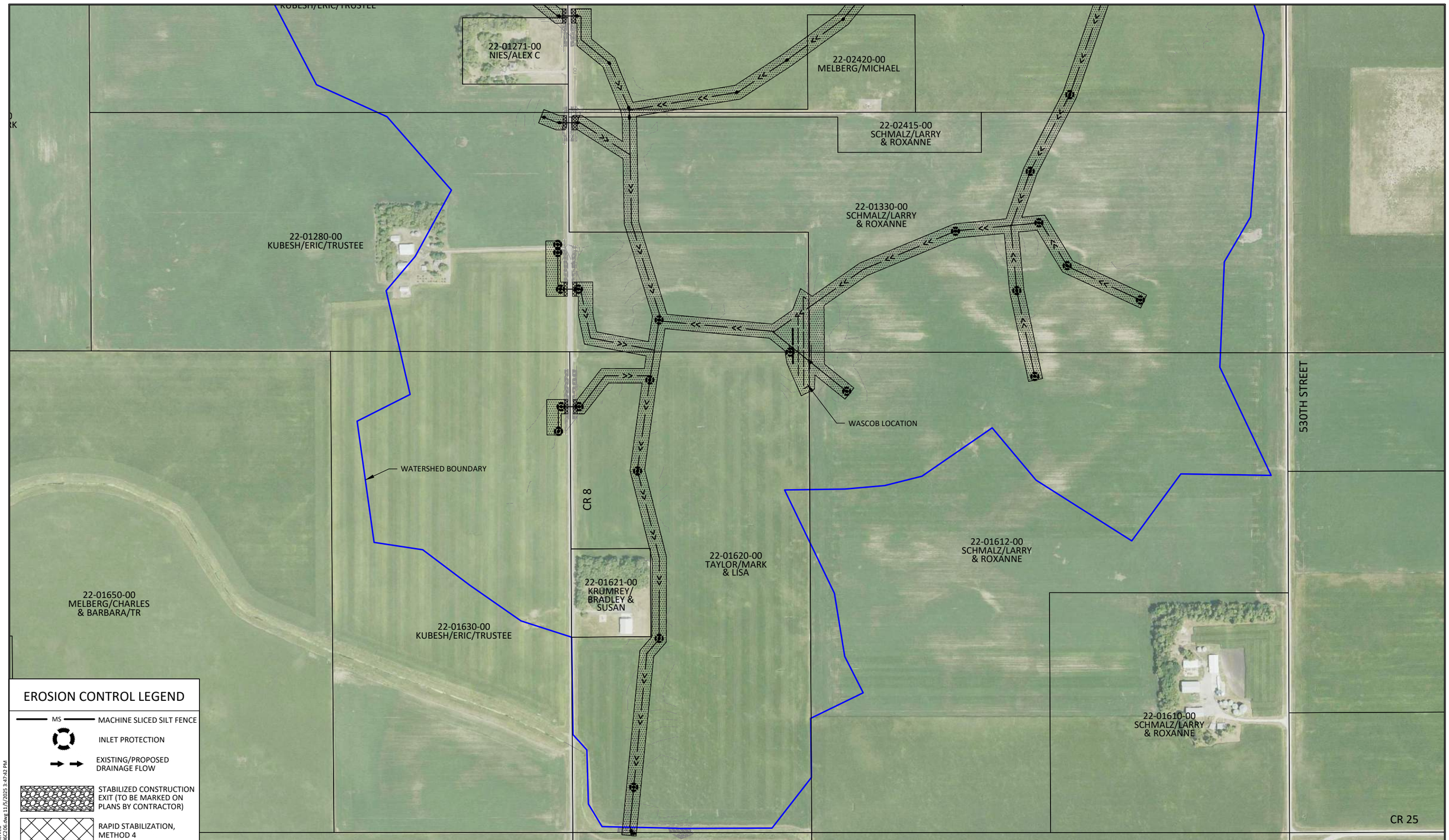
BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
STORMWATER POLLUTION PREVENTION PLAN
SOIL MAP

SHEET C2.04



EROSION CONTROL LEGEND

- MS — MACHINE SLICED SILT FENCE
- INLET PROTECTION
- EXISTING/PROPOSED DRAINAGE FLOW
- STABILIZED CONSTRUCTION EXIT (TO BE MARKED ON PLANS BY CONTRACTOR)
- RAPID STABILIZATION, METHOD 4
- HYDRAULIC MULCH MATRIX MnDOT 3884.2.8.2 @ 2500 LB/ACRE

HORZ. SCALE 0 250 500 FEET

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BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
STORMWATER POLLUTION PREVENTION PLAN
EROSION CONTROL PLAN

SHEET C2.05

HORZ. 0 250 500
SCALE FEET

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BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
STORMWATER POLLUTION PREVENTION PLAN
EROSION CONTROL PLAN

SHEET C2.06

WASCOB - 1
DESIGN STORM = 10 YEAR
DRAW DOWN TIME = 40 HR
WATER STORED = 2.3 ACRE-FEET
WATER SURFACE AREA = 3.7 ACRES

F&I:
1340 CY - COMMON EMBANKMENT

NOTE: SEE BRANCH M40 DRAIN TILE PLAN FOR ADDITIONAL DETAILS.

257+00
255+00
254+00
253+00
252+00
251+45.76
PI: 251+45.76
PI: 251+39.63
PI: 207+43.74
209+00
208+00
212+00
211+00
213+00
Br 41
Br 40

PROPERTY LINE

EXISTING CONTOUR LINE

GRADE AREA TO DRAIN TO INTAKE

PROPOSED CONTOUR LINE

PROPOSED CONSTRUCTION LIMITS (TYP.)

30' TOP

30:1

1065
1066
1067

22-01330-00
SCHMALZ/LARRY & ROXANNE

22-01612-00
SCHMALZ/LARRY
& ROXANNE

22-01280-00
KUBESH/ERIC/TRUSTEE

22-01620-00
TAYLOR/MARK
& LISA

N

HORZ. SCALE 0 25 50 FEET

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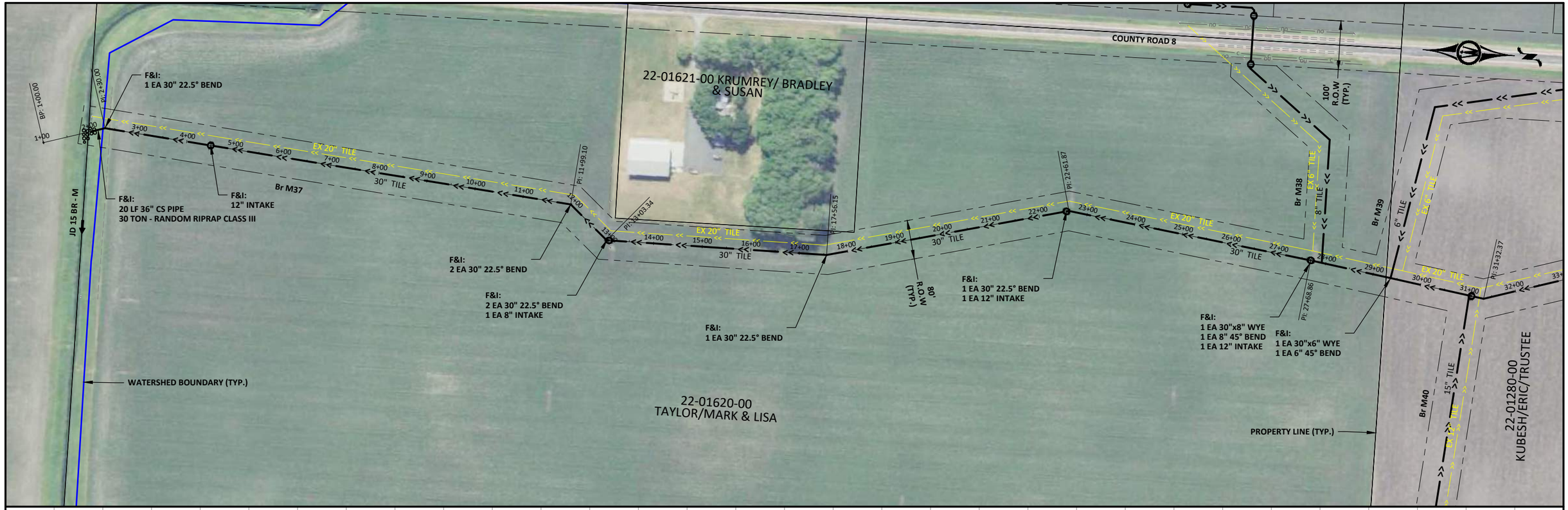
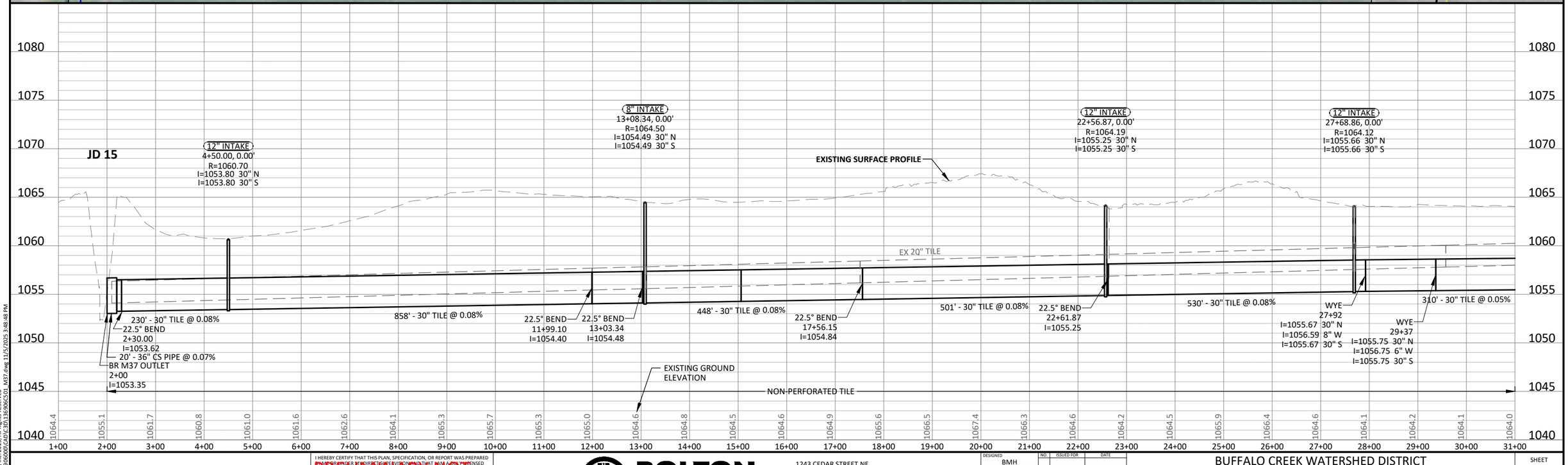
CHECKED: BLH			
CLIENT PROJ. NO.: 24X.136906.000			

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
BR M41 WASCOB - GRADING PLAN
WASCOB - 1

SHEET C3.01





HORZ. SCALE 0 100 200 FEET
VERT. SCALE 0 5 10 FEET

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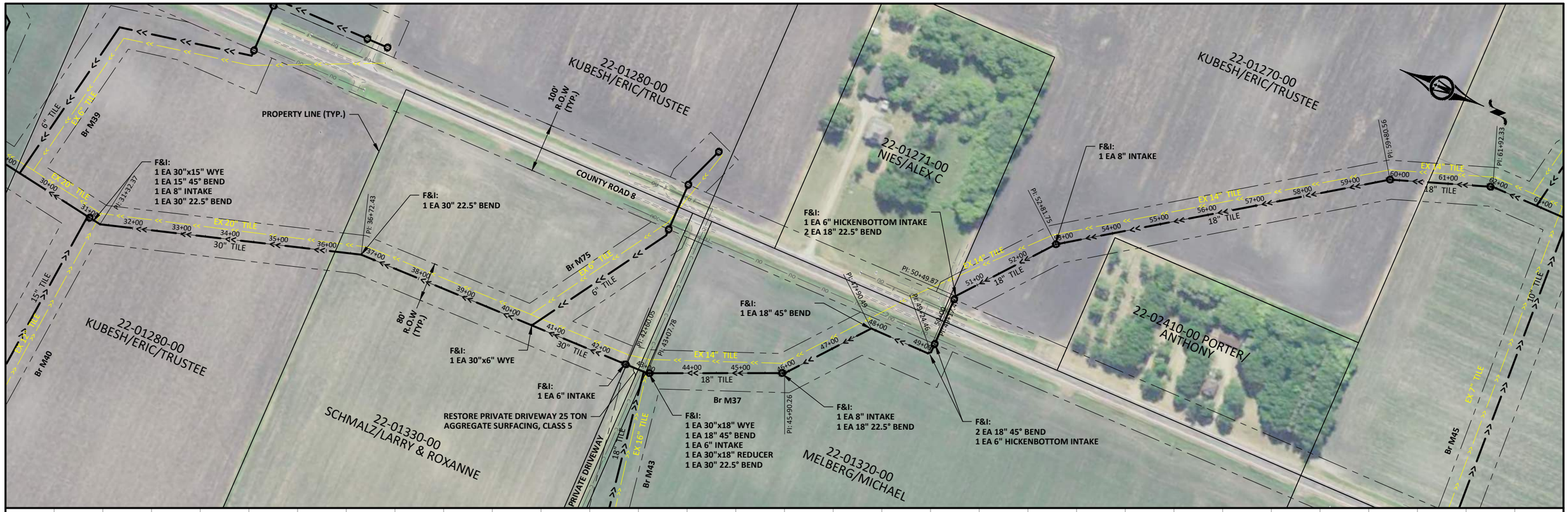
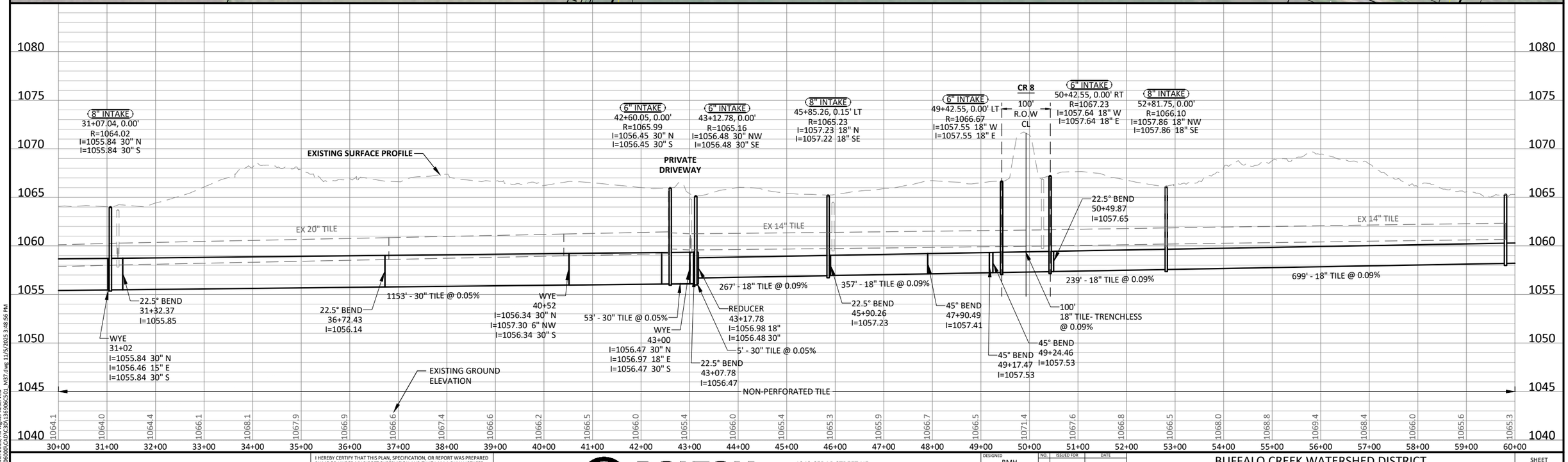
BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M37
STA 1+00 - STA 31+00

SHEET C5.01





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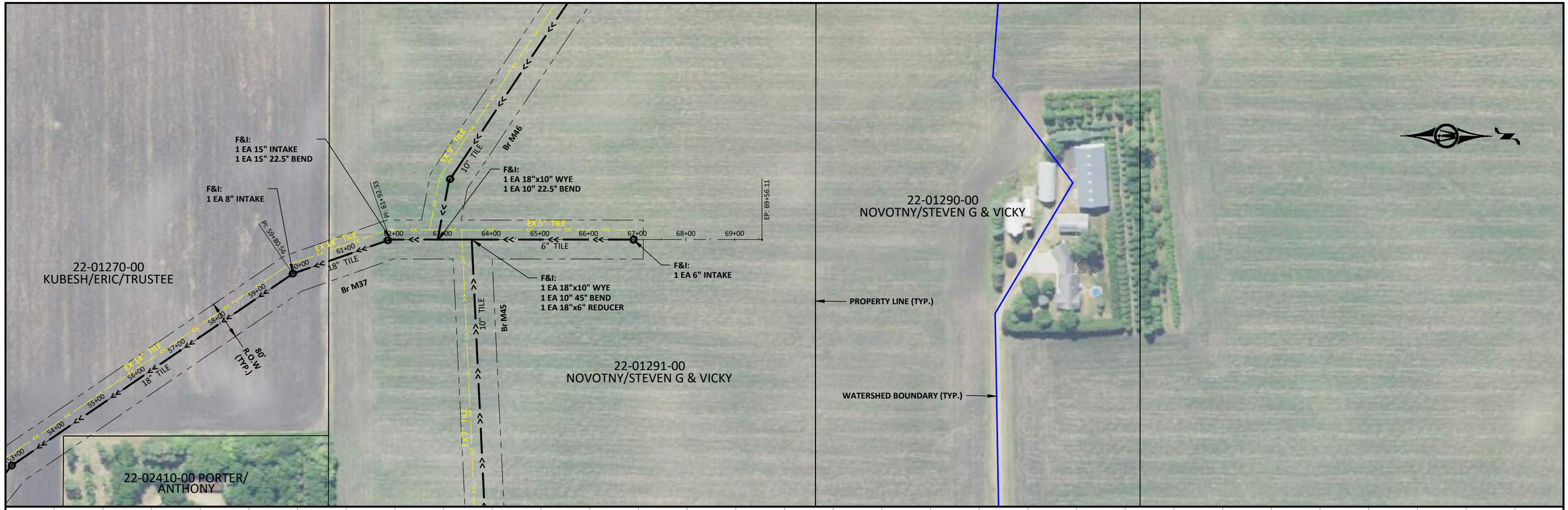
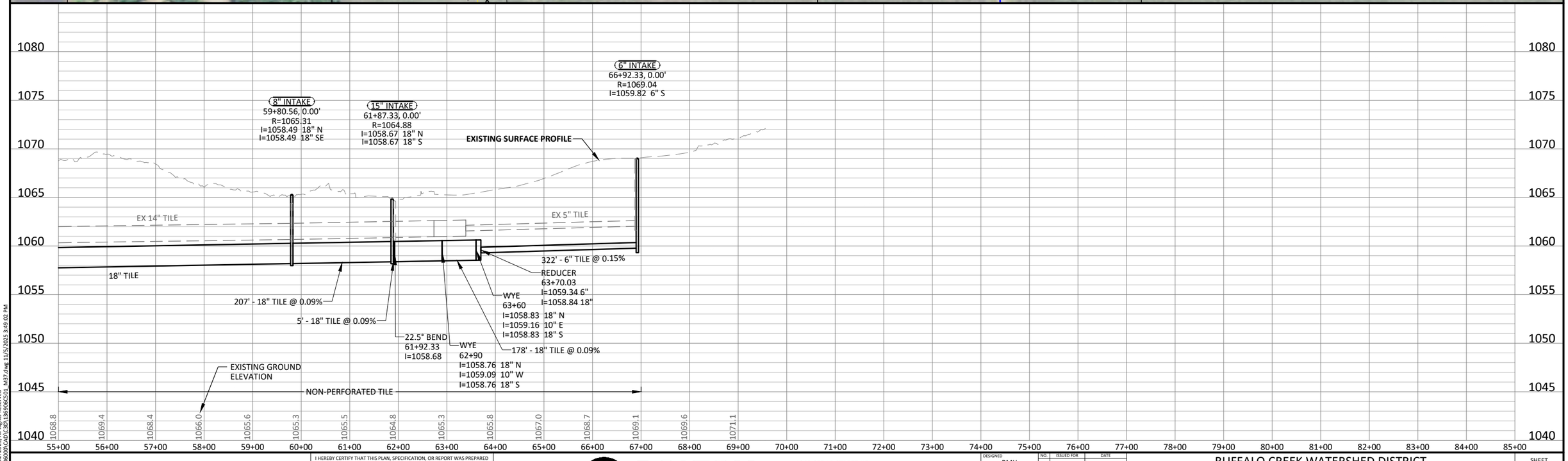
BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M37
STA 30+00 - STA 60+00

SHEET C5.02





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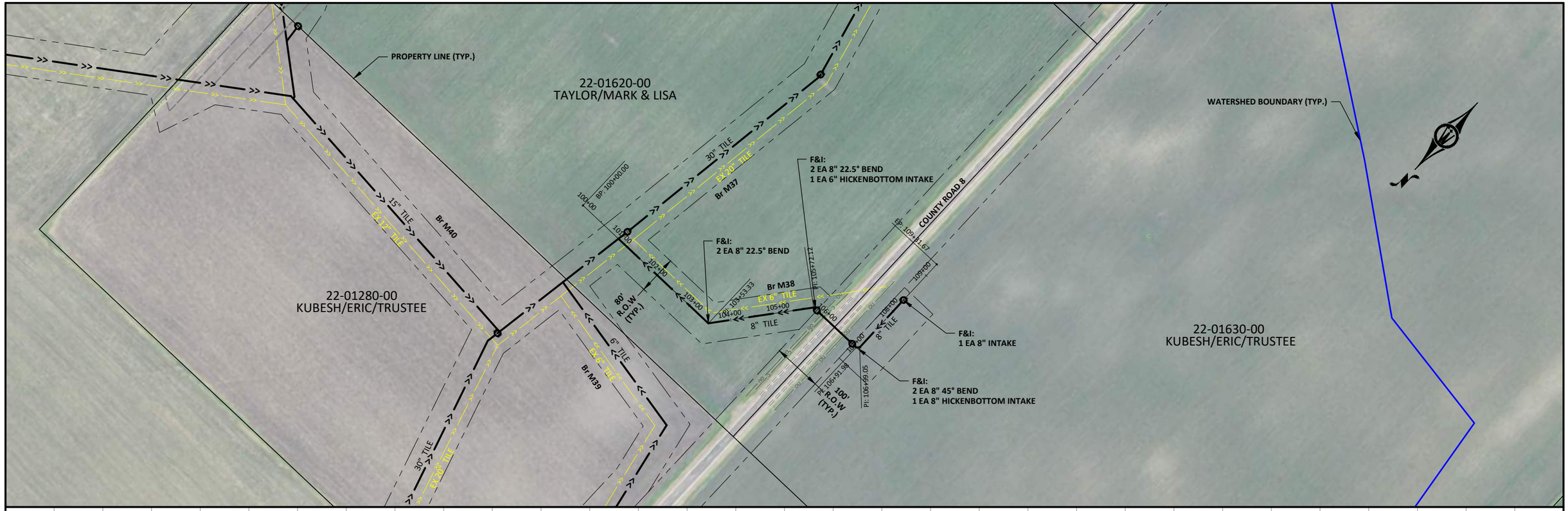
BUFFALO CREEK WATERSHED DISTRICT

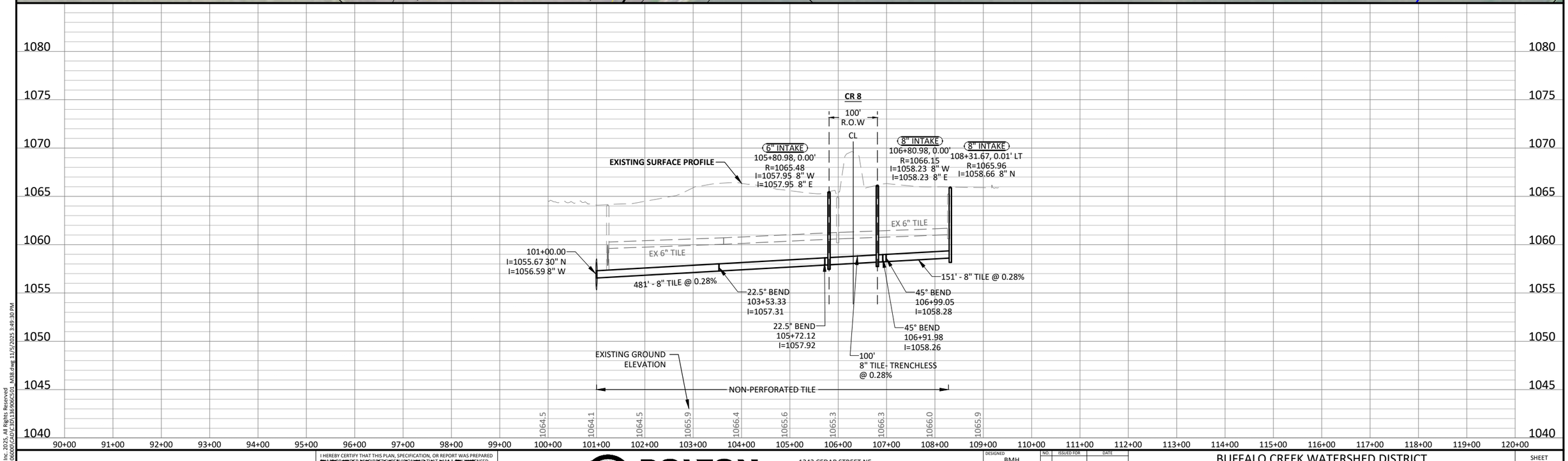
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS

DRAIN TILE PLAN - BR M37

STA 55+00 - STA 85+00

SHEET C5.03





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BRIAN L. HEIDEMANN LIC. NO. 42046 DATE MM/DD/YYYY

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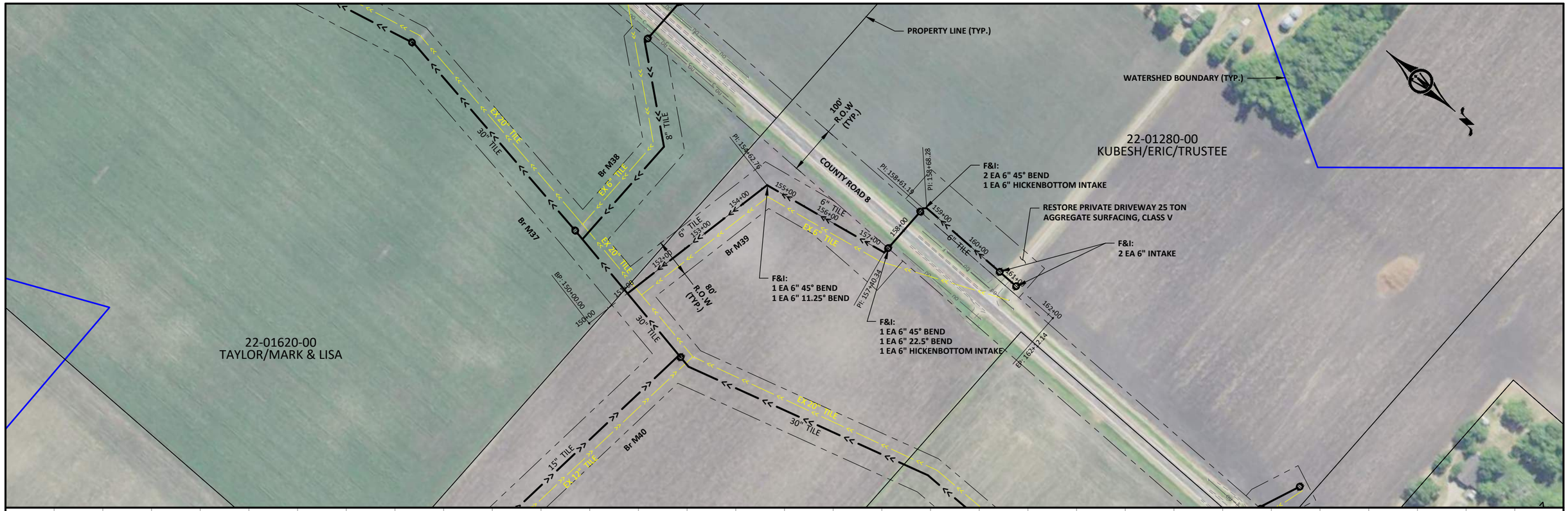
BUFFALO CREEK WATERSHED DISTRICT

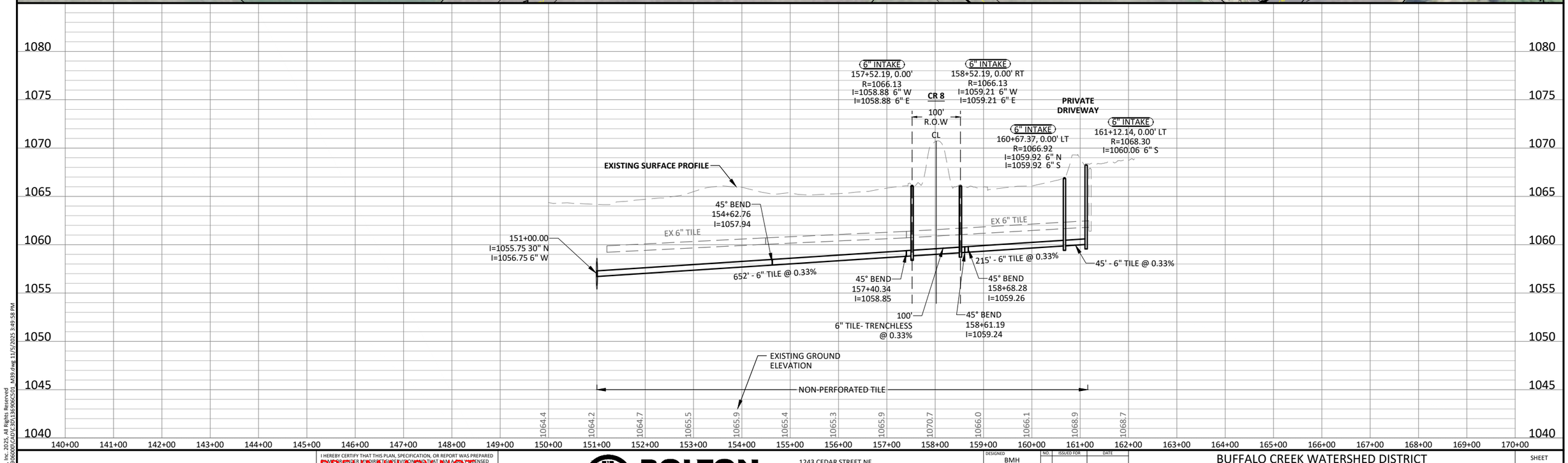
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS

DRAIN TILE PLAN - BR M38

STA 90+00 - STA 120+00

SHEET C5.04





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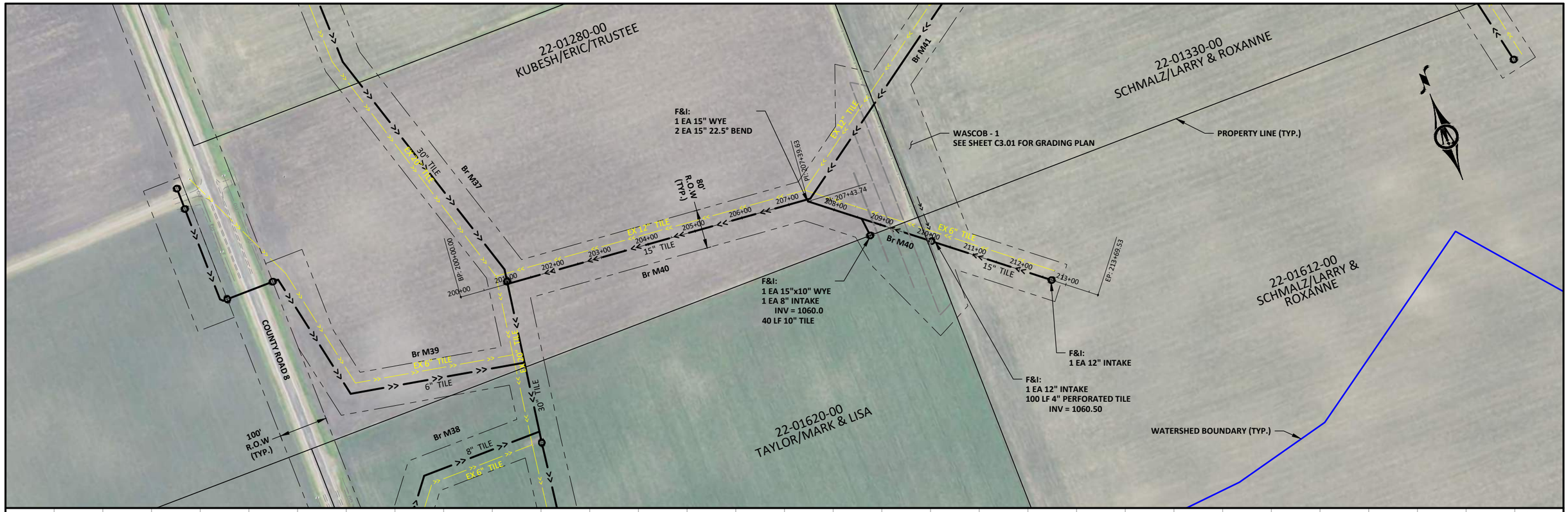
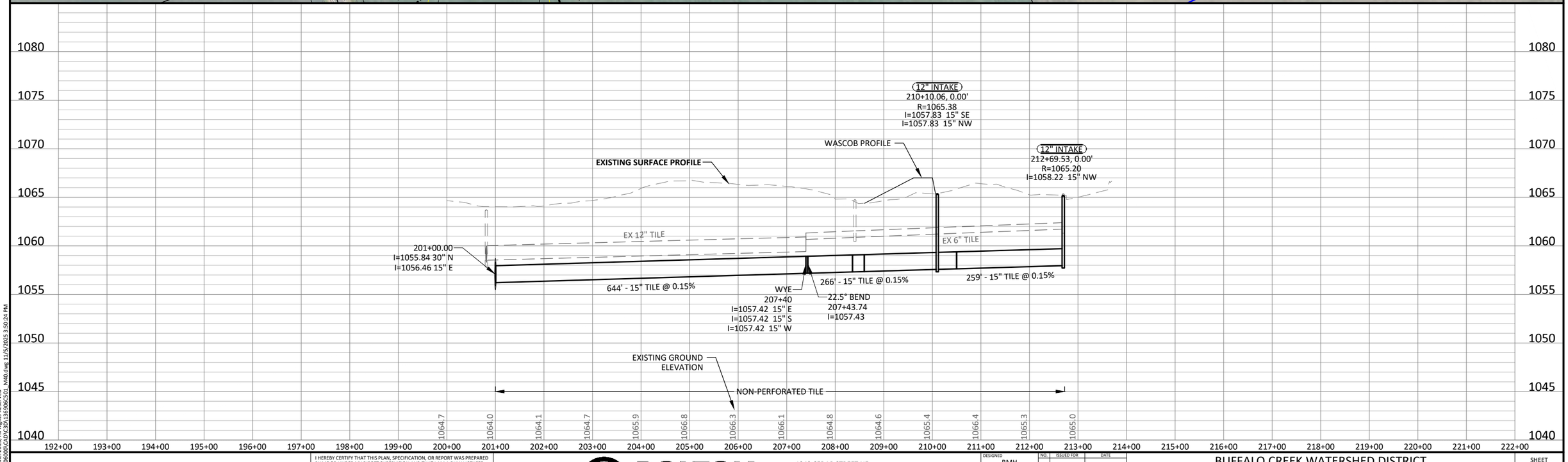
BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M39
STA 140+00 - STA 170+00

SHEET C5.05





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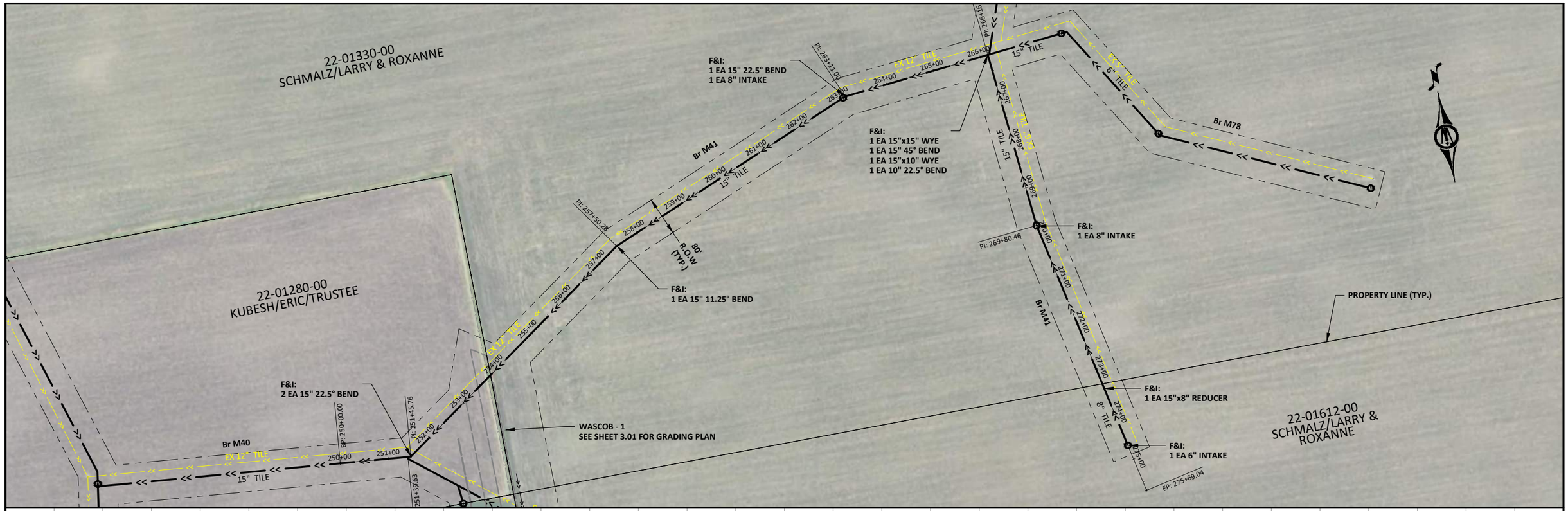
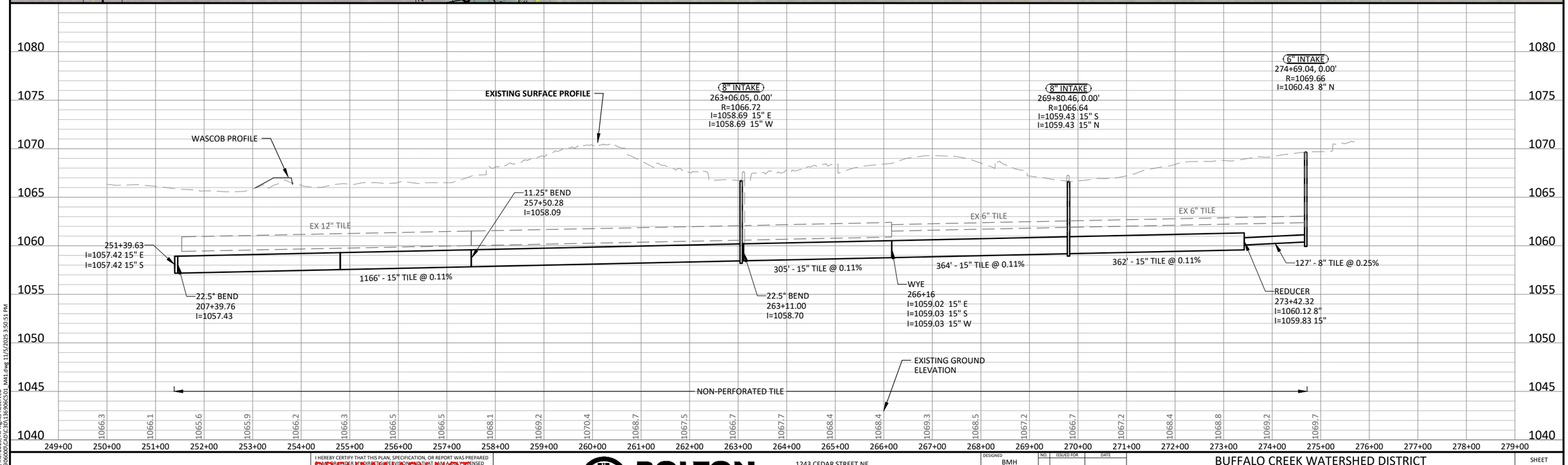
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M40
STA 192+00 - STA 222+00

SHEET C5.06





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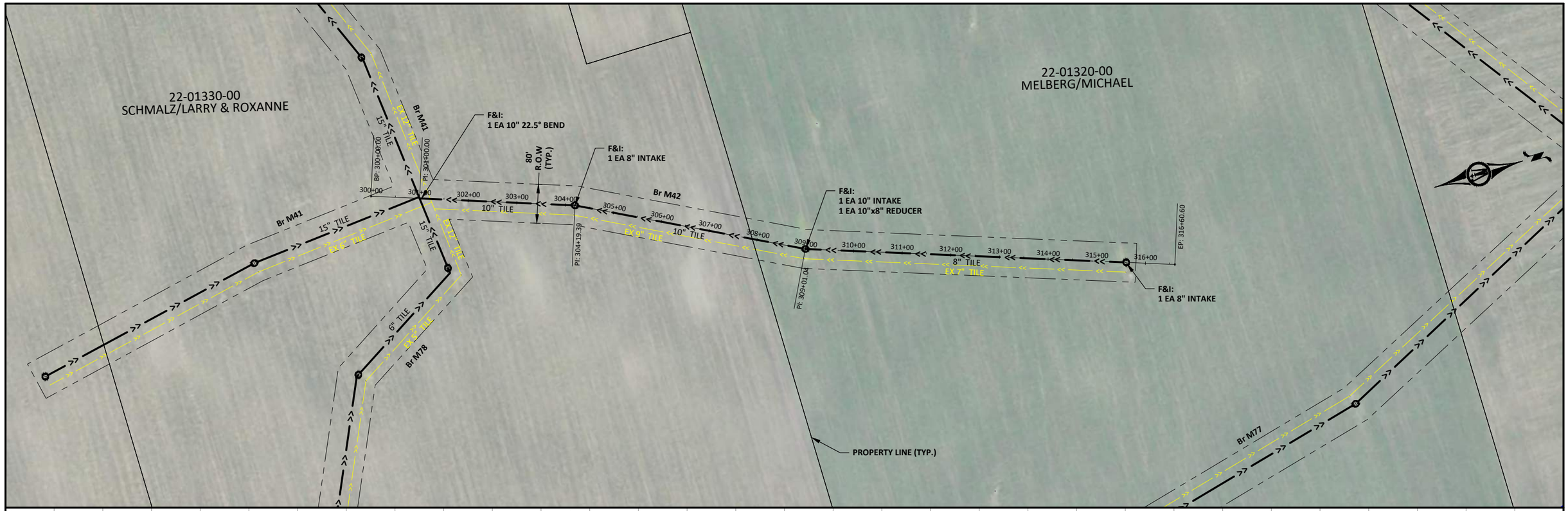
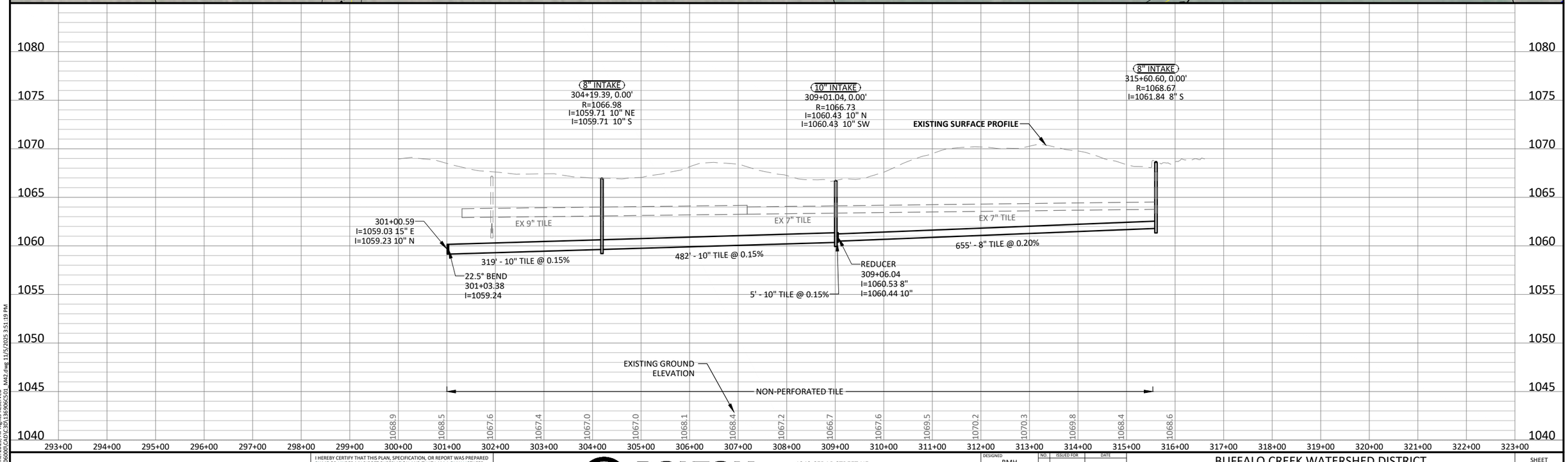
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M41
STA 249+00 - STA 279+00

SHEET C5.07





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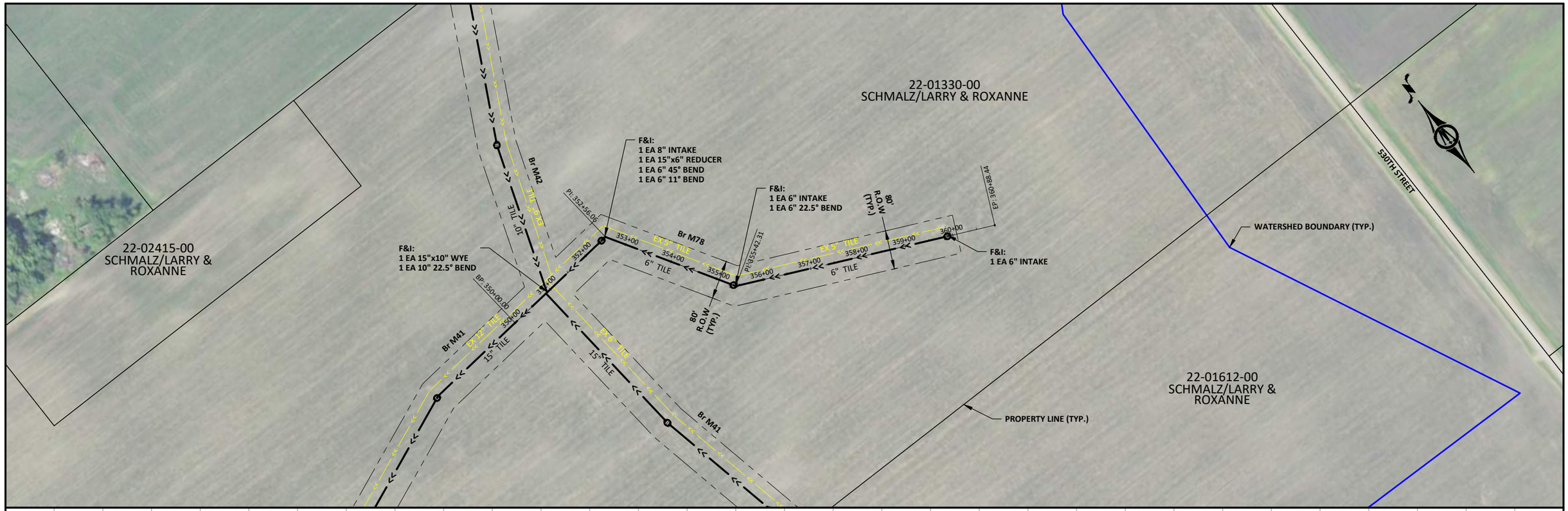
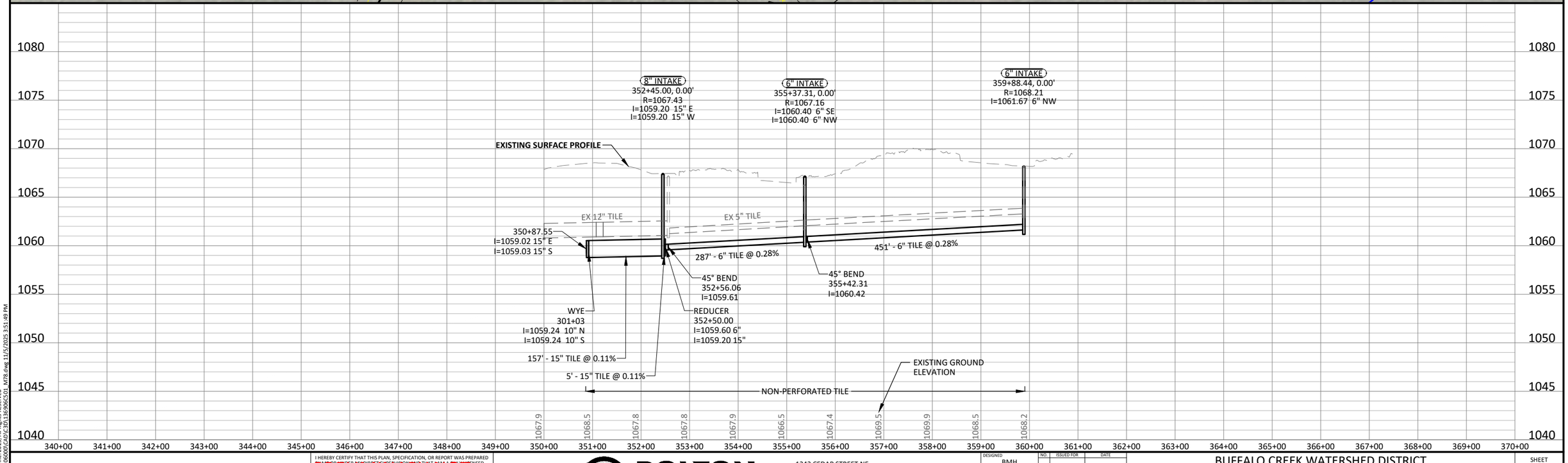
DRAIN TILE PLAN - BR M42
STA 293+00 - STA 323+00

SHEET C5.08





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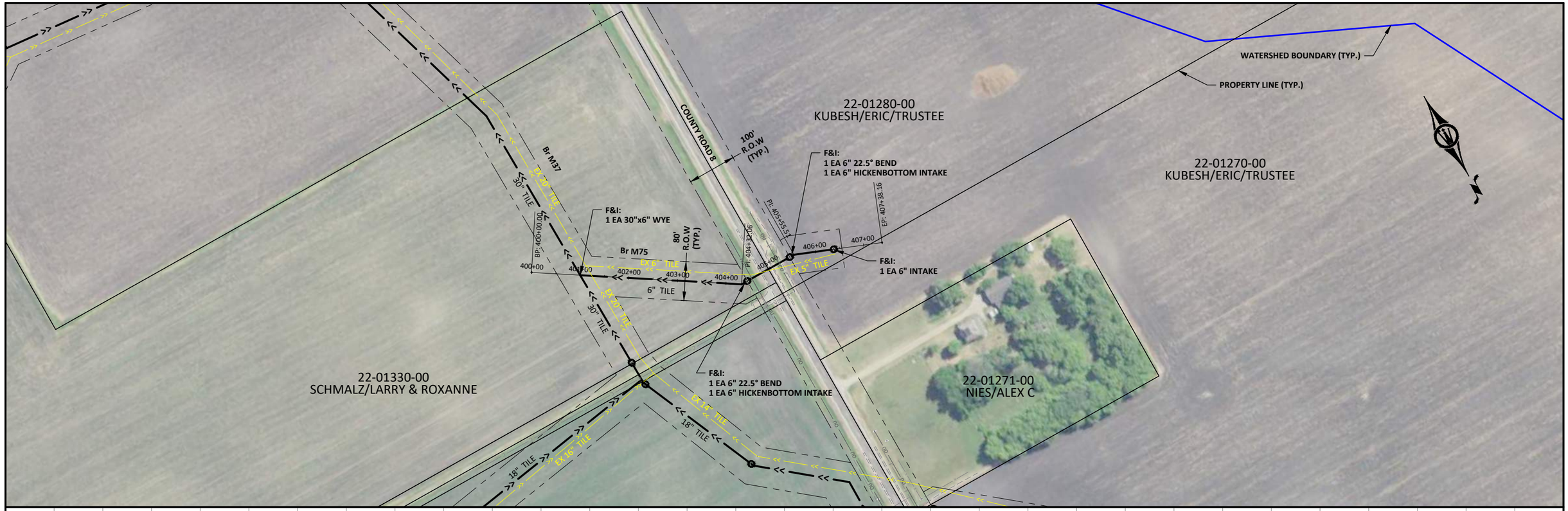
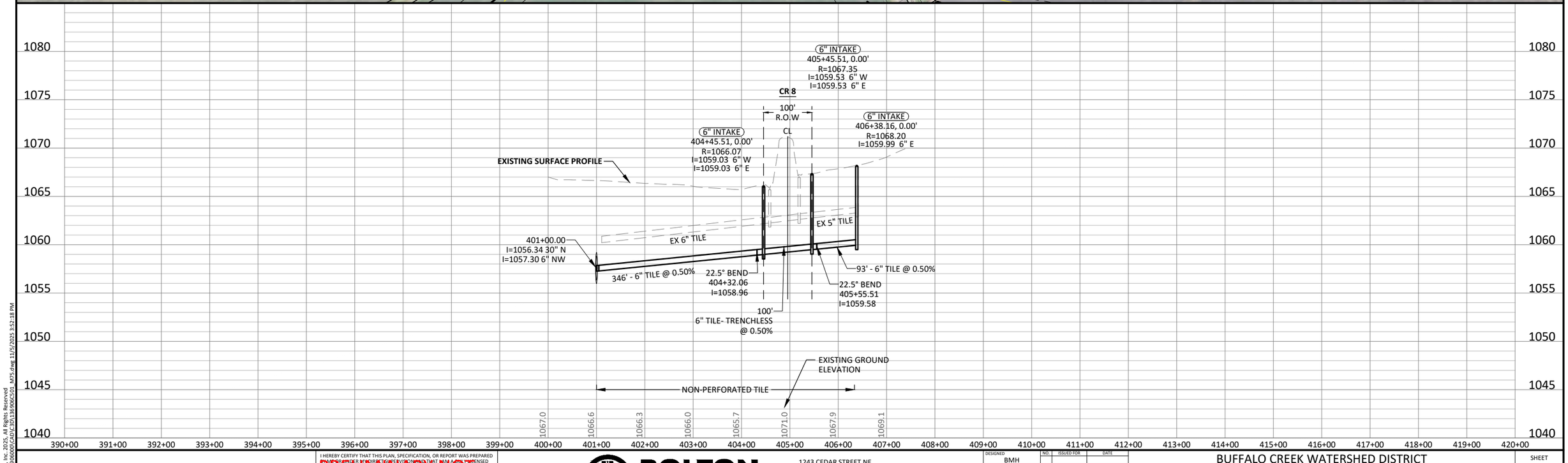
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M78
STA 340+00 - STA 370+00

SHEET C5.09





HORZ. SCALE 0 100 200 FEET
VERT. SCALE 0 5 10 FEET

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~~PRELIMINARY NOT FOR CONSTRUCTION~~

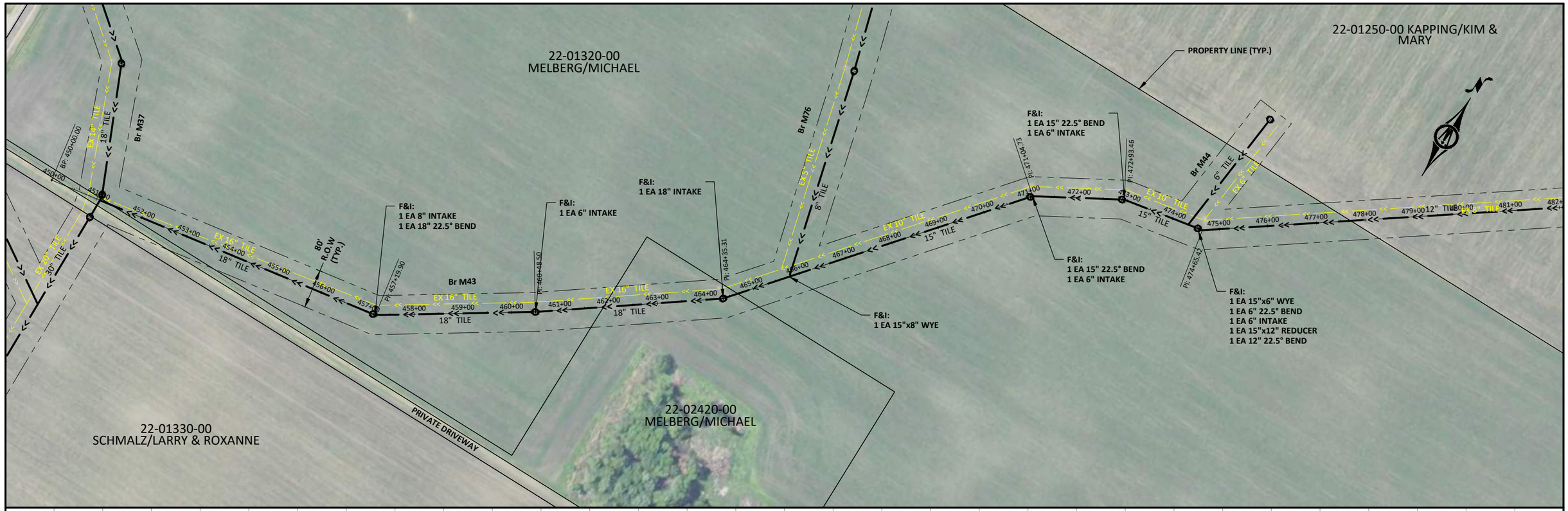
BILLY H. BLEGEN, P.E.
LIC. NO. 42046 DATE MM/DD/YYYY

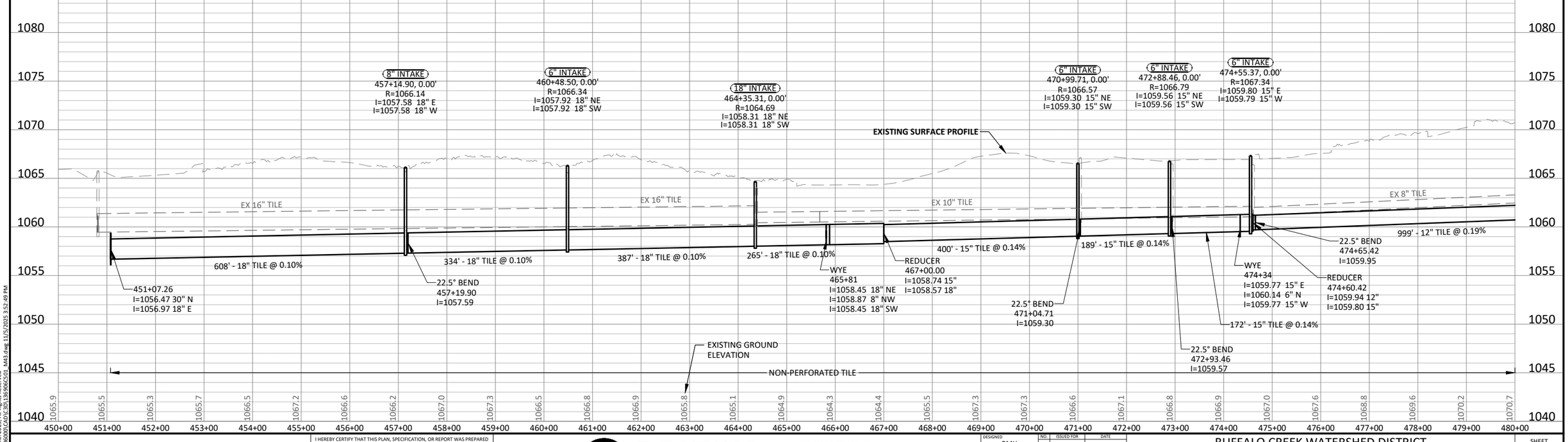
BOLTON & MENK
1243 CEDAR STREET NE
SLEEPY EYE, MN 56085
Phone: (507) 810-4184
Email: SleepyEye@bolton-menk.com
www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
BMH			
DRAWN			
JGB, PAD, BMH			
CHECKED			
BLH			
CLIENT PROJ. NO.			
24X.136906.000			

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M75
STA 390+00 - STA 420+00

SHEET C5.10





HORZ. SCALE 0 100 200 FEET

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PRELIMINARY NOT FOR CONSTRUCTION

BRIAN L. HILGERS, P.E. LIC. NO. 42046 DATE MM/DD/YYYY

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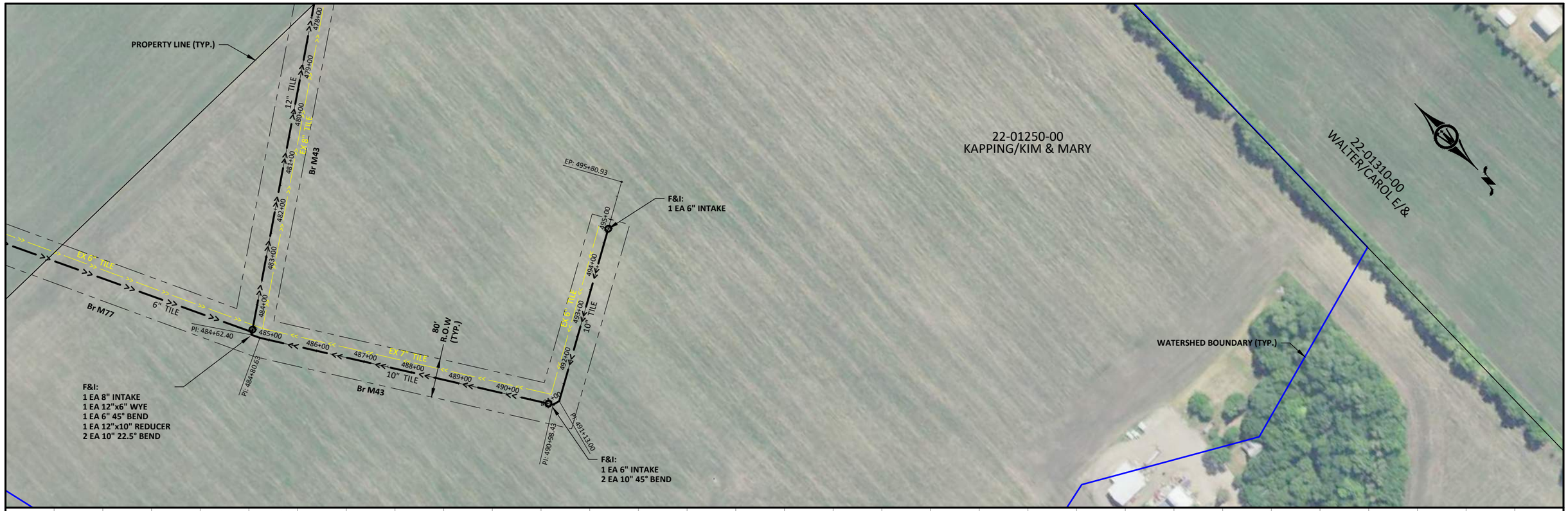
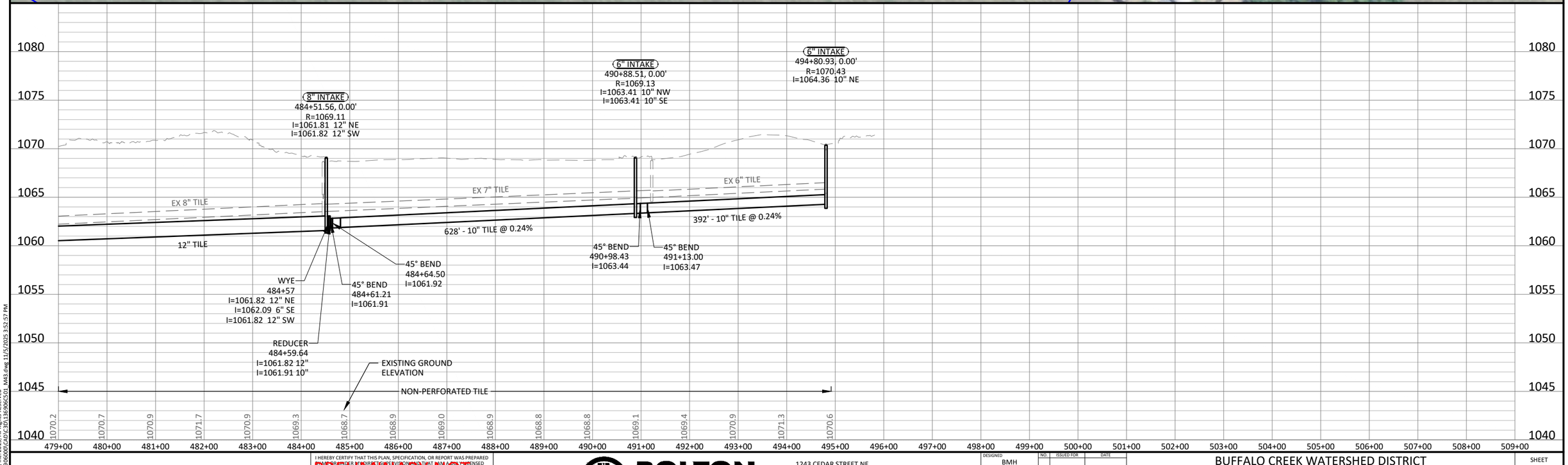
DRAWN	JGB, PAD, BMH
CHECKED	BLH
CLIENT PROJ. NO.	24X.136906.000

NO.	ISSUED FOR	DATE

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M43
STA 450+00 - STA 480+00

SHEET C5.11





HORZ. SCALE 0 100 200 FEET

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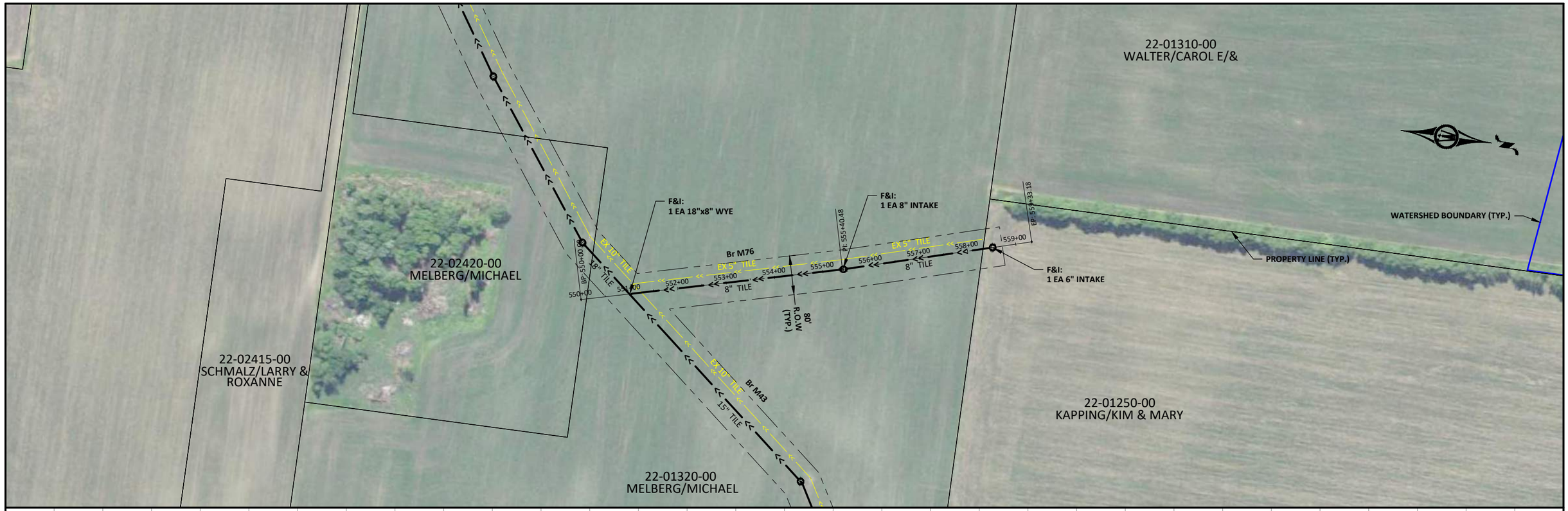
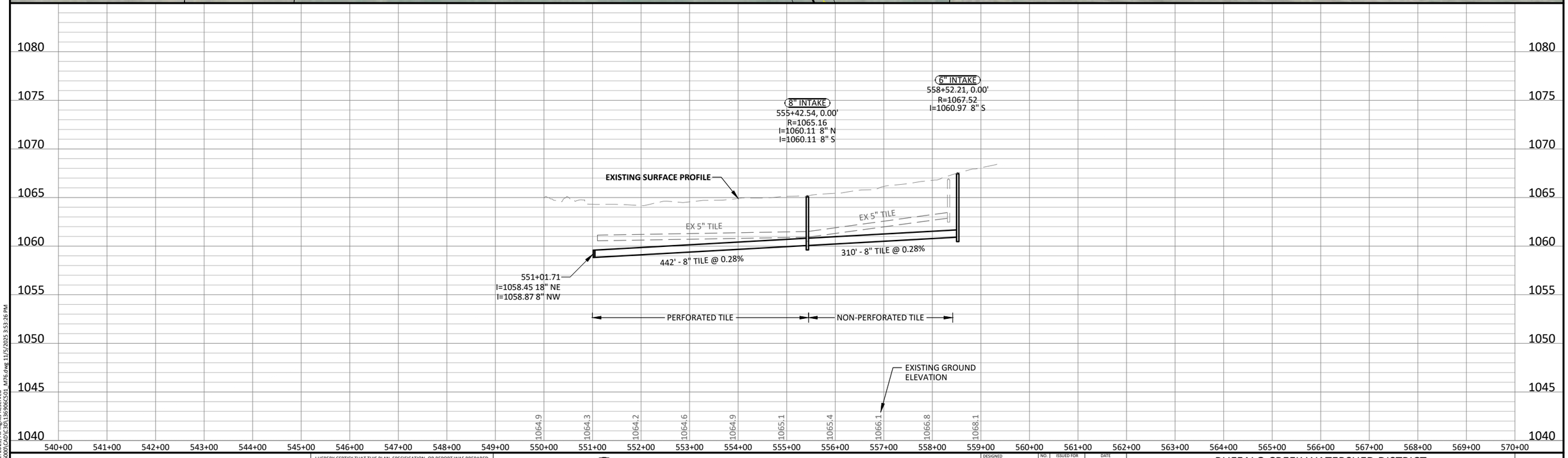
JGB, PAD, BMH			
CHECKED			
BLH			
CLIENT PROJ. NO.			
24X.136906.000			

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M43
STA 479+00 - STA 509+00

SHEET C5.12

H:\RNCO\24\X136906000\CAD\C3D\136906C501_M43.dwg 11/5/2025 3:52:57 PM





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CLIENT PROJ. NO.	24X.136906.000

NO.	ISSUED FOR	DATE

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M76
STA 540+00 - STA 570+00

SHEET C5.13

22-02420-00
MELBERG/MICHAEL

22-02415-00
SCHMALZ/LARRY &
ROXANNE

PROPERTY LINE (TYP.)

22-01320-00
MELBERG/MICHAEL

22-01250-00
KAPPING/KIM & MARY

Br M43

15" TILE

Br M44

6" TILE

EX 6" TILE

BP: 600+00.00

EP: 604+73.50

80'
R.O.W
(TYP.)

600+00 601+00 602+00 603+00 604+00

F&I:
1 EA 6" INTAKE

12" TILE

EX 6" TILE

6" INTAKE
603+73.50, 0.00'
R=1067.92
I=1061.51 6" S

EXISTING SURFACE PROFILE

601+00.00
I=1059.77 15" E
I=1060.14 6" N

EX 6" TILE

274' - 6" TILE @ 0.50%

NON-PERFORATED TILE

EXISTING GROUND
ELEVATION

1069.8 1066.9 1067.3 1068.4 1068.0

1080 1075 1070 1065 1060 1055 1050 1045 1040

585+00 586+00 587+00 588+00 589+00 590+00 591+00 592+00 593+00 594+00 595+00 596+00 597+00 598+00 599+00 600+00 601+00 602+00 603+00 604+00 605+00 606+00 607+00 608+00 609+00 610+00 611+00 612+00 613+00 614+00 615+00

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VERT. 0 5 10 SCALE FEET

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24X.136906.000			

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M44
STA 585+00 - STA 615+00

SHEET
C5.14

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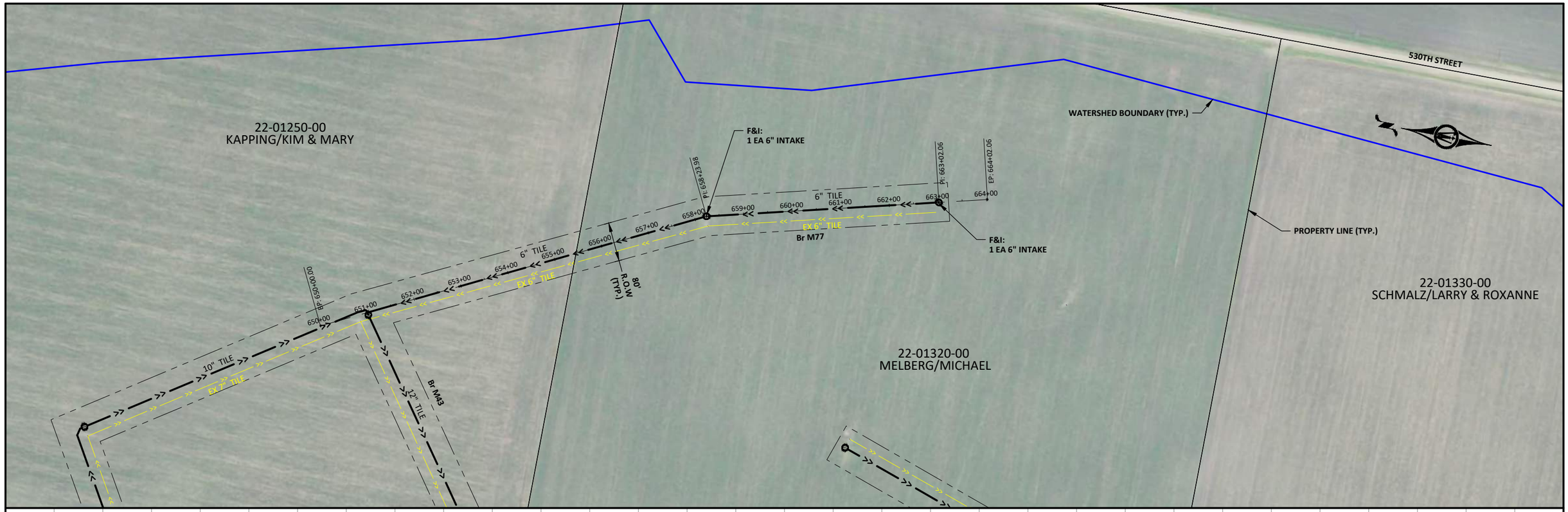

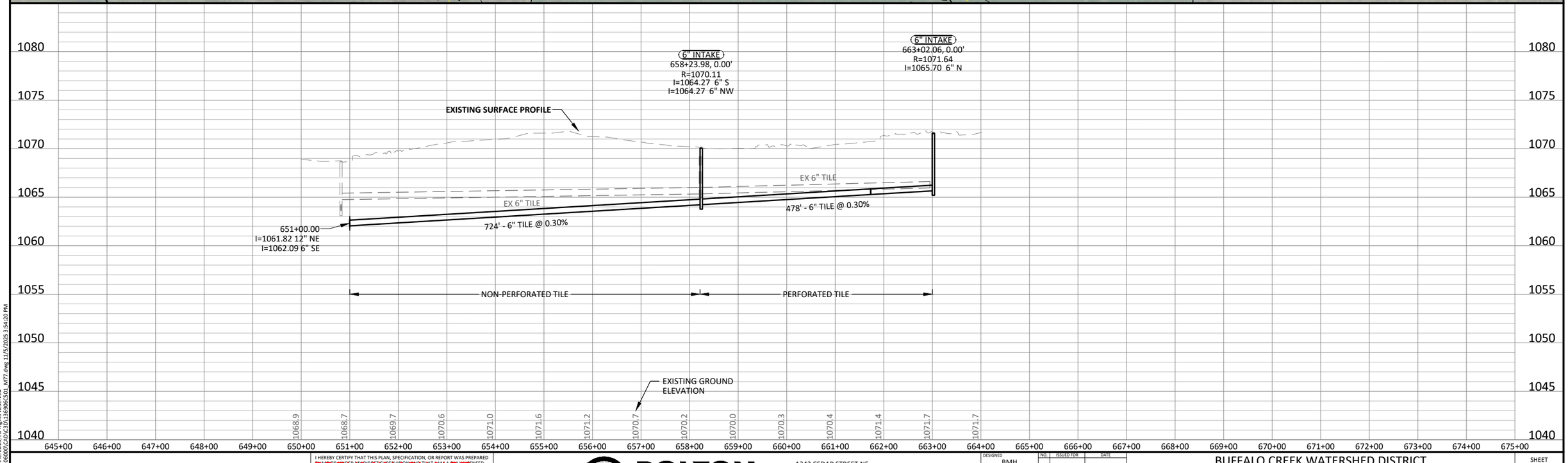

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BILL L. HILGERT, PE
LIC. NO. 42046 DATE MM/DD/YYYY

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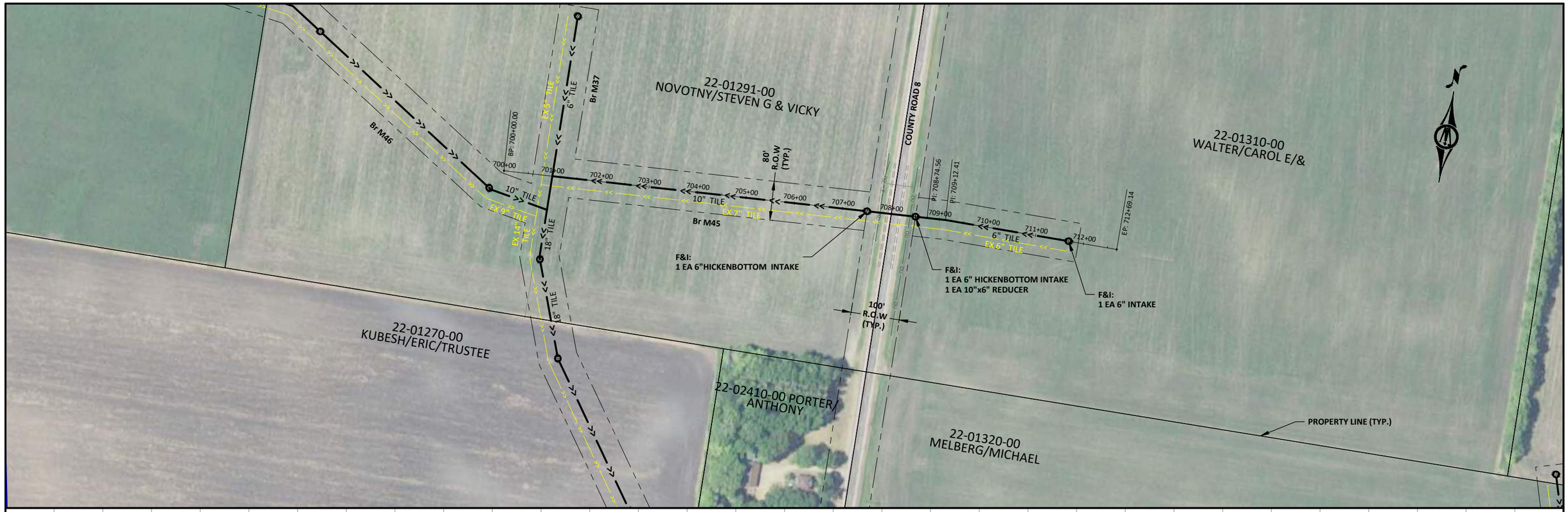
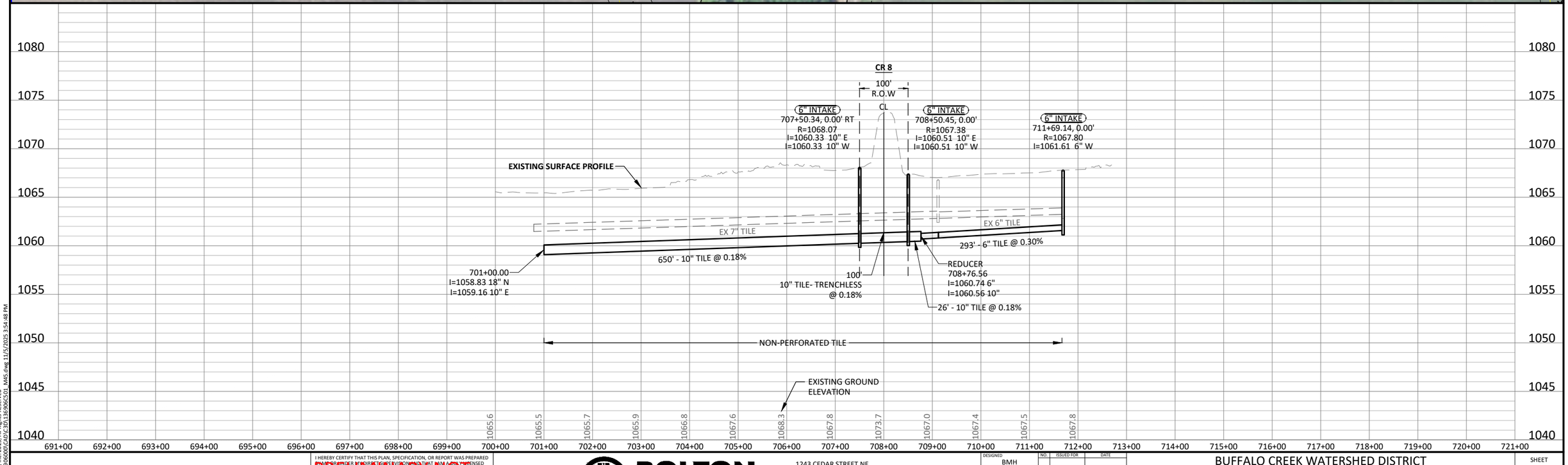
CHECKED	BLH
CLIENT PROJ. NO.	24X.136906.000

NO.	ISSUED FOR	DATE

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M77
STA 645+00 - STA 675+00

SHEET C5.15





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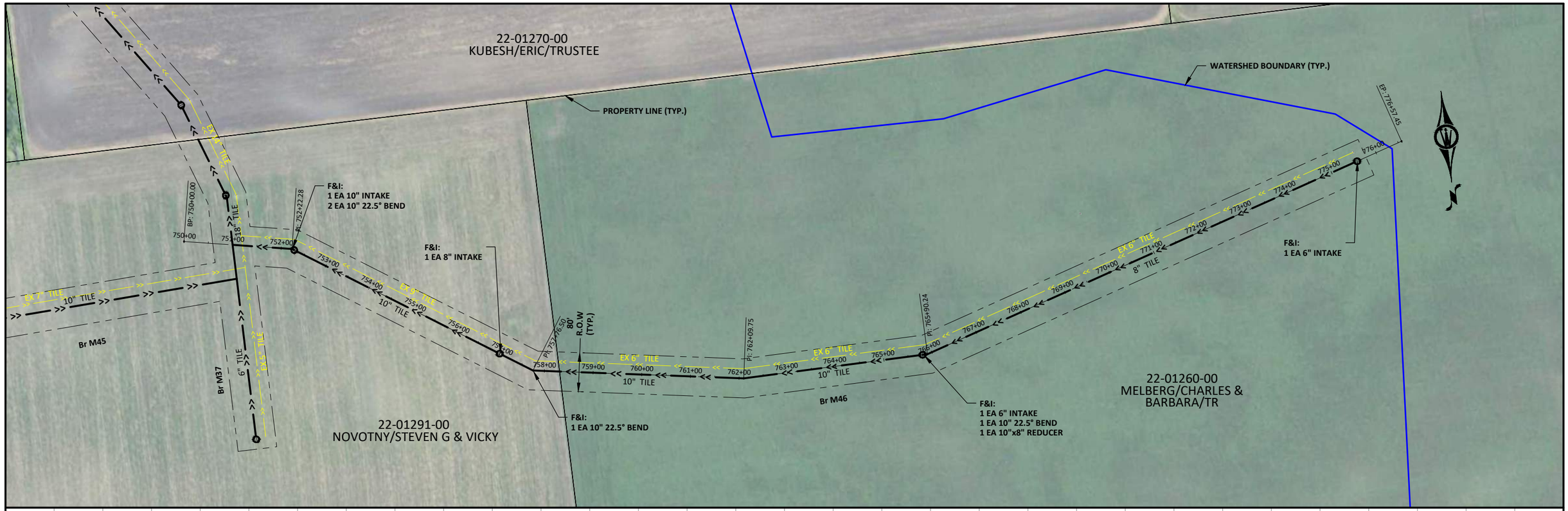
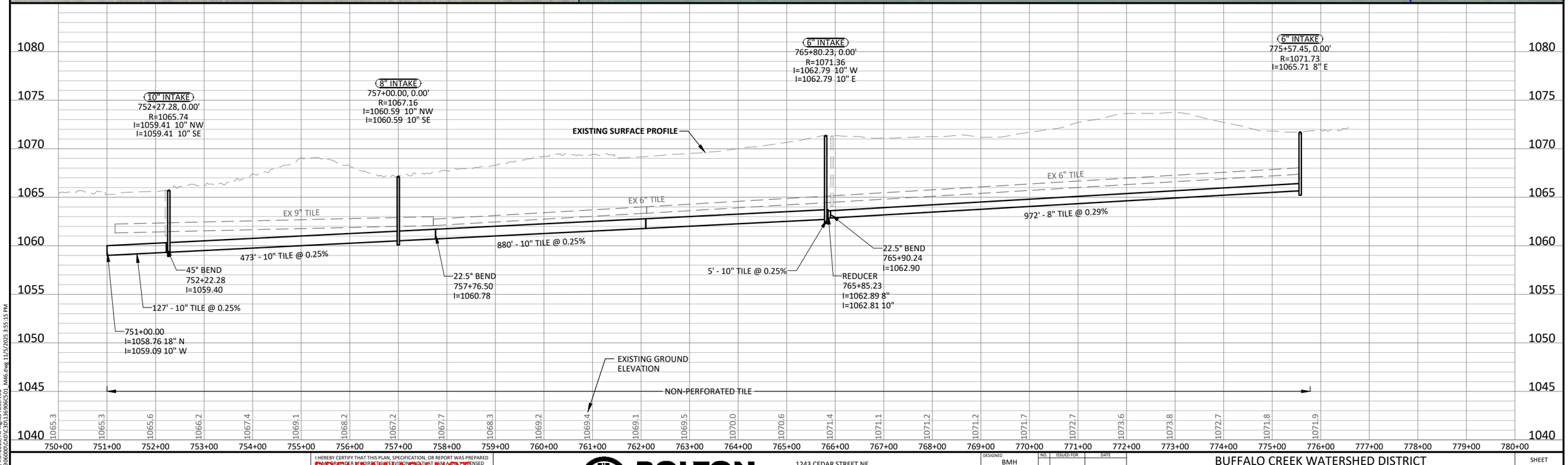
CHECKED	BLH
CLIENT PROJ. NO.	24X.136906.000

NO.	ISSUED FOR	DATE

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M45
STA 691+00 - STA 721+00

SHEET C5.16





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DESIGNED	BMH
DRAWN	JGB, PAD, BMH
CHECKED	BLH
CLIENT PROJ. NO.	24X.136906.000

NO.	ISSUED FOR	DATE

BUFFALO CREEK WATERSHED DISTRICT
JUDICIAL DITCH 15 BRANCH M37 IMPROVEMENTS
DRAIN TILE PLAN - BR M46
STA 750+00 - STA 780+00

SHEET C5.17

Exhibit 2: Preliminary Cost Estimate

ENGINEER'S ESTIMATE - IMPROVEMENT

Judicial Ditch 15 Br-M37 Improvement
Renville County, MN
24X.136906.000

BOLTON & MENK
Real People. Real Solutions.

Date: 11/7/2025

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount
BASE BID					
1	MOBILIZATION	1	LUMP SUM	$50,000.00	$50,000.00
2	COMMON EMBANKMENT - WASCOB (CV) (P)	1340	CU YD	$10.50	$14,070.00
3	AGGREGATE SURFACING CLASS 5	50	TON	$40.00	$2,000.00
4	EXPLORATORY EXCAVATION	130	HOUR	$300.00	$39,000.00
5	CONNECT TO EXISTING DRAIN TILE	124	EACH	$1,000.00	$124,000.00
6	6" INTAKE	31	EACH	$1,000.00	$31,000.00
7	8" INTAKE	17	EACH	$1,250.00	$21,250.00
8	10" INTAKE	2	EACH	$1,500.00	$3,000.00
9	12" INTAKE	5	EACH	$1,750.00	$8,750.00
10	15" INTAKE	1	EACH	$2,000.00	$2,000.00
11	18" INTAKE	1	EACH	$2,250.00	$2,250.00
12	4" SINGLE WALL PERFORATED TILE	100	LIN FT	$10.00	$1,000.00
13	6" HDPE PERFORATED TILE	480	LIN FT	$18.00	$8,640.00
14	6" HDPE NON-PERFORATED TILE	3760	LIN FT	$18.00	$67,680.00
15	6" TILE, TRENCHLESS	200	LIN FT	$150.00	$30,000.00
16	8" HDPE PERFORATED TILE	460	LIN FT	$20.00	$9,200.00
17	8" HDPE NON-PERFORATED TILE	2740	LIN FT	$20.00	$54,800.00
18	8" TILE, TRENCHLESS	100	LIN FT	$200.00	$20,000.00
19	10" HDPE NON-PERFORATED TILE	4060	LIN FT	$22.00	$89,320.00
20	10" TILE, TRENCHLESS	100	LIN FT	$250.00	$25,000.00
21	12" HDPE NON-PERFORATED TILE	1000	LIN FT	$25.00	$25,000.00
22	15" HDPE NON-PERFORATED TILE	4340	LIN FT	$27.00	$117,180.00
23	18" HDPE NON-PERFORATED TILE	3560	LIN FT	$30.00	$106,800.00
24	18" TILE, TRENCHLESS	100	LIN FT	$400.00	$40,000.00
25	30" HDPE NON-PERFORATED TILE	4120	LIN FT	$50.00	$206,000.00
26	36" CS PIPE WITH RODENT GUARD	20	LIN FT	$250.00	$5,000.00
27	RANDOM RIPRAP, CLASS 3	30	TON	$120.00	$3,600.00
28	INLET PROTECTION	59	EACH	$175.00	$10,325.00
29	MULCH TYPE 1	92	TON	$400.00	$36,800.00
30	RAPID STABILIZATION METHOD 4	2375	SQ YD	$3.25	$7,718.75
				ESTIMATED BASE BID TOTAL:	**$1,161,383.75**
	TEMPORARY ROW DAMAGES (TILE)	44.05	ACRES	$600.00	$26,430.00
	TEMPORARY ROW DAMAGES (WASCOB)	3.14	ACRES	$1,200.00	$3,768.00
				SUBTOTAL:	$1,191,581.75
				20% CONTINGENCY:	$238,320.00
				TOTAL ESTIMATED CONSTRUCTION COST:	**$1,429,901.75**
				DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:	$285,990.00
				TOTAL ESTIMATED PROJECT COST:	**$1,715,891.75**

ENGINEER'S ESTIMATE IMPROVEMENT

Judicial Ditch 15 Br-M37 Improvement
Renville County, MN
24X.136906.000

BOLTON & MENK
Real People. Real Solutions.

Date: 4/11/2025

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount	BR M37 QTY	BR M37 TOTAL	BR M38 QTY	BR M38 TOTAL	BR M39 QTY	BR M39 TOTAL	BR M40 QTY	BR M40 TOTAL	BR M41 QTY	BR M41 TOTAL	BR M42 QTY	BR M42 TOTAL	BR M78 QTY	BR M78 TOTAL
BASE BID																			
1	MOBILIZATION	1	LUMP SUM	$50,000.00	$50,000.00	0.36	$18,075.45	0.04	$2,018.00	0.04	$2,133.51	0.04	$2,198.10	0.08	$3,906.81	0.04	$2,153.67	0.03	$1,357.18
2	COMMON EMBANKMENT - WASCOB (CV) (P)	1,340	CU YD	$10.50	$14,070.00							1,340	$14,070.00						
3	AGGREGATE SURFACING CLASS 5	50	TON	$40.00	$2,000.00	25	$1,000.00			25	$1,000.00								
4	EXPLORATORY EXCAVATION	130	HOUR	$300.00	$39,000.00	38	$11,400.00	4	$1,200.00	5	$1,500.00	6	$1,800.00	12	$3,600.00	7	$2,100.00	5	$1,500.00
5	CONNECT TO EXISTING DRAIN TILE	124	EACH	$1,000.00	$124,000.00	32	$32,000.00	4	$4,000.00	5	$5,000.00	6	$6,000.00	12	$12,000.00	7	$7,000.00	5	$5,000.00
6	6" INTAKE	31	EACH	$1,000.00	$31,000.00	5	$5,000.00	1	$1,000.00	4	$4,000.00			1	$1,000.00			2	$2,000.00
7	8" INTAKE	17	EACH	$1,250.00	$21,250.00	5	$6,250.00	2	$2,500.00			1	$1,250.00	2	$2,500.00	2	$2,500.00	1	$1,250.00
8	10" INTAKE	2	EACH	$1,500.00	$3,000.00											1	$1,500.00		
9	12" INTAKE	5	EACH	$1,750.00	$8,750.00	3	$5,250.00					2	$3,500.00						
10	15" INTAKE	1	EACH	$2,000.00	$2,000.00	1	$2,000.00												
11	18" INTAKE	1	EACH	$2,250.00	$2,250.00														
12	4" SINGLE WALL PERFORATED TILE	100	LIN FT	$10.00	$1,000.00							100	$1,000.00						
13	6" HDPE PERFORATED TILE	480	LIN FT	$18.00	$8,640.00														
14	6" HDPE NON-PERFORATED TILE	3,760	LIN FT	$18.00	$67,680.00	340	$6,120.00			920	$16,560.00							740	$13,320.00
15	6" TILE, TRENCHLESS	200	LIN FT	$150.00	$30,000.00					100	$15,000.00								
16	8" HDPE PERFORATED TILE	460	LIN FT	$20.00	$9,200.00														
17	8" HDPE NON-PERFORATED TILE	2,740	LIN FT	$20.00	$54,800.00			640	$12,800.00					140	$2,800.00	660	$13,200.00		
18	8" TILE, TRENCHLESS	100	LIN FT	$200.00	$20,000.00			100	$20,000.00										
19	10" HDPE NON-PERFORATED TILE	4,060	LIN FT	$22.00	$89,320.00							40	$880.00			820	$18,040.00		
20	10" TILE, TRENCHLESS	100	LIN FT	$250.00	$25,000.00														
21	12" HDPE NON-PERFORATED TILE	1,000	LIN FT	$25.00	$25,000.00														
22	15" HDPE NON-PERFORATED TILE	4,340	LIN FT	$27.00	$117,180.00							1,180	$31,860.00	2,220	$59,940.00			170	$4,590.00
23	18" HDPE NON-PERFORATED TILE	3,560	LIN FT	$30.00	$106,800.00	1,960	$58,800.00												
24	18" TILE, TRENCHLESS	100	LIN FT	$400.00	$40,000.00	100	$40,000.00												
25	30" HDPE NON-PERFORATED TILE	4,120	LIN FT	$50.00	$206,000.00	4,120	$206,000.00												
26	36" CS PIPE WITH RODENT GUARD	20	LIN FT	$250.00	$5,000.00	20	$5,000.00												
27	RANDOM RIPRAP, CLASS 3	30	TON	$120.00	$3,600.00	30	$3,600.00												
28	INLET PROTECTION	59	EACH	$175.00	$10,325.00	16	$2,800.00	3	$525.00	4	$700.00	2	$350.00	4	$700.00	3	$525.00	3	$525.00
29	MULCH TYPE 1	92	TON	$400.00	$36,800.00	24	$9,600.00	2	$800.00	4	$1,600.00	4	$1,600.00	8	$3,200.00	6	$2,400.00	4	$1,600.00
30	RAPID STABILIZATION METHOD 4	2,375	SQ YD	$3.25	$7,718.75	575	$1,868.75	450	$1,462.50	450	$1,462.50								
			ESTIMATED BASE BID TOTAL:		**$1,161,383.75**		**$414,764.20**		**$46,305.50**		**$48,956.01**		**$64,508.10**		**$89,646.81**		**$49,418.67**		**$31,142.18**
	TEMPORARY ROW DAMAGES (TILE)	44.05	ACRES	$600.00	$26,430.00	11.78	$7,068.00	1.10	$660.00	1.63	$978.00	2.12	$1,272.00	4.24	$2,544.00	2.64	$1,584.00	1.62	$972.00
	TEMPORARY ROW DAMAGES (WASCOB)	3.14	ACRES	$1,200.00	$3,768.00							0.99	$1,188.00	2.15	$2,580.00				
				SUBTOTAL:	$1,191,581.75		$421,832.20		$46,965.50		$49,934.01		$66,968.10		$94,770.81		$51,002.67		$32,114.18
				20% CONTINGENCY:	$238,320.00		$84,380.00		$9,390.00		$9,990.00		$13,390.00		$18,950.00		$10,200.00		$6,420.00
				TOTAL ESTIMATED CONSTRUCTION COST:	**$1,429,901.75**		**$506,212.20**		**$56,355.50**		**$59,924.01**		**$80,358.10**		**$113,720.81**		**$61,202.67**		**$38,534.18**
				DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:	$285,990.00		$101,250.00		$11,280.00		$11,980.00		$16,070.00		$22,740.00		$12,240.00		$7,710.00
				TOTAL ESTIMATED PROJECT COST:	**$1,715,891.75**		**$607,462.20**		**$67,635.50**		**$71,904.01**		**$96,428.10**		**$136,460.81**		**$73,442.67**		**$46,244.18**

ENGINEER'S ESTIMATE IMPROVEMENT

Judicial Ditch 15 Br-M37 Improvement
Renville County, MN
24X.136906.000

BOLTON & MENK
Real People. Real Solutions.

Date: 11/7/2025

Item No.	Item	Estimated Quantity	Unit	Unit Price	BR M75 QTY	BR M75 TOTAL	BR M43 QTY	BR M43 TOTAL	BR M76 QTY	BR M76 TOTAL	BR M44 QTY	BR M44 TOTAL	BR M77 QTY	BR M77 TOTAL	BR M45 QTY	BR M45 TOTAL	BR M46 QTY	BR M46 TOTAL
BASE BID																		
1	MOBILIZATION	1	LUMP SUM	$50,000.00	0.03	$1,485.79	0.15	$7,462.54	0.02	$1,102.69	0.01	$378.88	0.03	$1,536.02	0.05	$2,663.21	0.07	$3,528.16
2	COMMON EMBANKMENT - WASCOB (CV) (P)	1,340	CU YD	$10.50														
3	AGGREGATE SURFACING CLASS 5	50	TON	$40.00														
4	EXPLORATORY EXCAVATION	130	HOUR	$300.00	3	$900.00	22	$6,600.00	4	$1,200.00	1	$300.00	6	$1,800.00	5	$1,500.00	12	$3,600.00
5	CONNECT TO EXISTING DRAIN TILE	124	EACH	$1,000.00	3	$3,000.00	22	$22,000.00	4	$4,000.00	1	$1,000.00	6	$6,000.00	5	$5,000.00	12	$12,000.00
6	6" INTAKE	31	EACH	$1,000.00	3	$3,000.00	6	$6,000.00	1	$1,000.00	1	$1,000.00	2	$2,000.00	3	$3,000.00	2	$2,000.00
7	8" INTAKE	17	EACH	$1,250.00			2	$2,500.00	1	$1,250.00							1	$1,250.00
8	10" INTAKE	2	EACH	$1,500.00													1	$1,500.00
9	12" INTAKE	5	EACH	$1,750.00														
10	15" INTAKE	1	EACH	$2,000.00														
11	18" INTAKE	1	EACH	$2,250.00			1	$2,250.00										
12	4" SINGLE WALL PERFORATED TILE	100	LIN FT	$10.00														
13	6" HDPE PERFORATED TILE	480	LIN FT	$18.00									480	$8,640.00				
14	6" HDPE NON-PERFORATED TILE	3,760	LIN FT	$18.00	440	$7,920.00					280	$5,040.00	740	$13,320.00	300	$5,400.00		
15	6" TILE, TRENCHLESS	200	LIN FT	$150.00	100	$15,000.00												
16	8" HDPE PERFORATED TILE	460	LIN FT	$20.00					460	$9,200.00								
17	8" HDPE NON-PERFORATED TILE	2,740	LIN FT	$20.00					320	$6,400.00								
18	8" TILE, TRENCHLESS	100	LIN FT	$200.00													980	$19,600.00
19	10" HDPE NON-PERFORATED TILE	4,060	LIN FT	$22.00			1,030	$22,660.00							680	$14,960.00	1,490	$32,780.00
20	10" TILE, TRENCHLESS	100	LIN FT	$250.00											100	$25,000.00		
21	12" HDPE NON-PERFORATED TILE	1,000	LIN FT	$25.00			1,000	$25,000.00										
22	15" HDPE NON-PERFORATED TILE	4,340	LIN FT	$27.00			770	$20,790.00										
23	18" HDPE NON-PERFORATED TILE	3,560	LIN FT	$30.00			1,600	$48,000.00										
24	18" TILE, TRENCHLESS	100	LIN FT	$400.00														
25	30" HDPE NON-PERFORATED TILE	4,120	LIN FT	$50.00														
26	36" CS PIPE WITH RODENT GUARD	20	LIN FT	$250.00														
27	RANDOM RIPRAP, CLASS 3	30	TON	$120.00														
28	INLET PROTECTION	59	EACH	$175.00	3	$525.00	9	$1,575.00	2	$350.00	1	$175.00	2	$350.00	3	$525.00	4	$700.00
29	MULCH TYPE 1	92	TON	$400.00	2	$800.00	16	$6,400.00	2	$800.00	2	$800.00	4	$1,600.00	4	$1,600.00	10	$4,000.00
30	RAPID STABILIZATION METHOD 4	2,375	SQ YD	$3.25	450	$1,462.50									450	$1,462.50		
	ESTIMATED BASE BID TOTAL:					**$34,093.29**		**$171,237.54**		**$25,302.69**		**$8,693.88**		**$35,246.02**		**$61,110.71**		**$80,958.16**
	TEMPORARY ROW DAMAGES (TILE)	44.05	ACRES	$600.00	0.75	$450.00	8.01	$4,806.00	1.32	$792.00	0.46	$276.00	2.17	$1,302.00	1.74	$1,044.00	4.47	$2,682.00
	TEMPORARY ROW DAMAGES (WASCOB)	3.14	ACRES	$1,200.00														
	SUBTOTAL:					$34,543.29		$176,043.54		$26,094.69		$8,969.88		$36,548.02		$62,154.71		$83,640.16
	20% CONTINGENCY:					$6,910.00		$35,210.00		$5,220.00		$1,790.00		$7,310.00		$12,430.00		$16,730.00
	TOTAL ESTIMATED CONSTRUCTION COST:					**$41,453.29**		**$211,253.54**		**$31,314.69**		**$10,759.88**		**$43,858.02**		**$74,584.71**		**$100,370.16**
	DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:					$8,290.00		$42,250.00		$6,260.00		$2,150.00		$8,770.00		$14,920.00		$20,070.00
	TOTAL ESTIMATED PROJECT COST:					**$49,743.29**		**$253,503.54**		**$37,574.69**		**$12,909.88**		**$52,628.02**		**$89,504.71**		**$120,440.16**

Exhibit 3: Separable Maintenance

SEPARABLE MAINTENANCE

Judicial Ditch 15 Br-M37 Improvement
Renville County, MN
24X.136906.000

BOLTON & MENK
Real People. Real Solutions.

Date: 4/28/2025

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount
BASE BID					
1	MOBILIZATION	1	LUMP SUM	$50,000.00	$50,254.21
2	AGGREGATE SURFACING CLASS 5	50	TON	$40.00	$2,000.00
3	EXPLORATORY EXCAVATION	127	HOUR	$300.00	$38,100.00
4	CONNECT TO EXISTING DRAIN TILE	127	EACH	$1,000.00	$127,000.00
5	6" INTAKE	35	EACH	$1,000.00	$35,000.00
6	8" INTAKE	6	EACH	$1,250.00	$7,500.00
7	10" INTAKE	1	EACH	$1,500.00	$1,500.00
8	12" INTAKE	1	EACH	$1,750.00	$1,750.00
9	15" INTAKE	1	EACH	$2,000.00	$2,000.00
10	18" INTAKE	1	EACH	$2,250.00	$2,250.00
11	6" HDPE TILE	9034	LIN FT	$18.00	$162,612.00
12	6" STM TRENCHLESS	329	LIN FT	$150.00	$49,350.00
13	8" HDPE TILE	3023	LIN FT	$20.00	$60,460.00
14	8" STM TRENCHLESS	75	LIN FT	$200.00	$15,000.00
15	10" HDPE TILE	2819	LIN FT	$22.00	$62,018.00
16	12" HDPE TILE	2246	LIN FT	$25.00	$56,150.00
17	15" HDPE TILE	1754	LIN FT	$27.00	$47,358.00
18	15" STM TRENCHLESS	100	LIN FT	$350.00	$35,000.00
19	18" HDPE TILE	1345	LIN FT	$30.00	$40,350.00
20	24" HDPE TILE	4120	LIN FT	$35.00	$144,200.00
21	30" CS PIPE WITH RODENT GUARD	20	LIN FT	$200.00	$4,000.00
22	RANDOM RIPRAP, CLASS 3	25	TON	$120.00	$3,000.00
23	INLET PROTECTION	45	EACH	$150.00	$6,750.00
24	MULCH TYPE 1	92	TON	$400.00	$36,800.00
25	RAPID STABILIZATION METHOD 4	2375	SQ YD	$3.00	$7,125.00
				ESTIMATED BASE BID TOTAL:	**$997,527.21**
	TEMPORARY ROW DAMAGES	44.05	ACRES	$600.00	$26,430.00
				SUBTOTAL:	$1,023,957.21
				30% CONTINGENCY:	$307,190.00
				TOTAL ESTIMATED CONSTRUCTION COST:	**$1,331,147.21**
				DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:	$266,230.00
				TOTAL ESTIMATED PROJECT COST:	**$1,597,377.21**

SEPARABLE MAINTENANCE

Judicial Ditch 15 Br-M37 Improvement
Renville County, MN
24X.136906.000

BOLTON & MENK
Real People. Real Solutions.

Date: 4/28/2025

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount	BR M37 QTY	BR M37 TOTAL	BR M38 QTY	BR M38 TOTAL	BR M39 QTY	BR M39 TOTAL	BR M40 QTY	BR M40 TOTAL	BR M41 QTY	BR M41 TOTAL	BR M42 QTY	BR M42 TOTAL	BR M78 QTY	BR M78 TOTAL	BR M75 QTY	BR M75 TOTAL
BASE BID																					
1	MOBILIZATION	1	LUMP SUM	$50,000.00	$50,254.21	0.33	$16,456.87	0.04	$1,903.42	0.05	$2,706.38	0.04	$2,034.09	0.08	$4,102.92	0.04	$2,084.25	0.02	$1,246.82	0.03	$1,460.83
2	AGGREGATE SURFACING CLASS 5	50	TON	$40.00	$2,000.00	25	$1,000.00			25	$1,000.00										
3	EXPLORATORY EXCAVATION	127	HOUR	$300.00	$38,100.00	33	$9,900.00	4	$1,200.00	4	$1,200.00	6	$1,800.00	13	$3,900.00	6	$1,800.00	4	$1,200.00	3	$900.00
4	CONNECT TO EXISTING DRAIN TILE	127	EACH	$1,000.00	$127,000.00	33	$33,000.00	4	$4,000.00	4	$4,000.00	6	$6,000.00	13	$13,000.00	6	$6,000.00	4	$4,000.00	3	$3,000.00
5	6" INTAKE	35	EACH	$1,000.00	$35,000.00	5	$5,000.00	1	$1,000.00			2	$2,000.00	3	$3,000.00	3	$3,000.00	3	$3,000.00	2	$2,000.00
6	8" INTAKE	6	EACH	$1,250.00	$7,500.00	3	$3,750.00	1	$1,250.00	1	$1,250.00									1	$1,250.00
7	10" INTAKE	1	EACH	$1,500.00	$1,500.00																
8	12" INTAKE	1	EACH	$1,750.00	$1,750.00	1	$1,750.00														
9	15" INTAKE	1	EACH	$2,000.00	$2,000.00	1	$2,000.00														
10	18" INTAKE	1	EACH	$2,250.00	$2,250.00																
11	6" HDPE TILE	9,034	LIN FT	$18.00	$162,612.00	500	$9,000.00	730	$13,140.00	741	$13,338.00	429	$7,722.00	904	$16,272.00			733	$13,194.00	451	$8,118.00
12	6" STM TRENCHLESS	329	LIN FT	$150.00	$49,350.00			85	$12,750.00	180	$27,000.00									64	$9,600.00
13	8" HDPE TILE	3,023	LIN FT	$20.00	$60,460.00											661	$13,220.00				
14	8" STM TRENCHLESS	75	LIN FT	$200.00	$15,000.00																
15	10" HDPE TILE	2,819	LIN FT	$22.00	$62,018.00											560	$12,320.00				
16	12" HDPE TILE	2,246	LIN FT	$25.00	$56,150.00							753	$18,825.00	1,493	$37,325.00						
17	15" HDPE TILE	1,754	LIN FT	$27.00	$47,358.00	1,754	$47,358.00														
18	15" STM TRENCHLESS	100	LIN FT	$350.00	$35,000.00	100	$35,000.00														
19	18" HDPE TILE	1,345	LIN FT	$30.00	$40,350.00																
20	24" HDPE TILE	4,120	LIN FT	$35.00	$144,200.00	4,120	$144,200.00														
21	30" CS PIPE WITH RODENT GUARD	20	LIN FT	$200.00	$4,000.00	20	$4,000.00														
22	RANDOM RIPRAP, CLASS 3	25	TON	$120.00	$3,000.00	25	$3,000.00														
23	INLET PROTECTION	45	EACH	$150.00	$6,750.00	10	$1,500.00	2	$300.00	1	$150.00	2	$300.00	3	$450.00	3	$450.00	3	$450.00	3	$450.00
24	MULCH TYPE 1	92	TON	$400.00	$36,800.00	24	$9,600.00	2	$800.00	4	$1,600.00	4	$1,600.00	8	$3,200.00	6	$2,400.00	4	$1,600.00	2	$800.00
25	RAPID STABILIZATION METHOD 4	2,375	SQ YD	$3.00	$7,125.00	575	$1,725.00	450	$1,350.00	450	$1,350.00									450	$1,350.00
			ESTIMATED BASE BID TOTAL:		**$997,527.21**		**$328,239.87**		**$37,693.42**		**$53,594.38**		**$40,281.09**		**$81,249.92**		**$41,274.25**		**$24,690.82**		**$28,928.83**
	TEMPORARY ROW DAMAGES	44.05	ACRES	$600.00	$26,430.00	11.78	$7,068.00	1.10	$660.00	1.63	$978.00	2.12	$1,272.00	4.24	$2,544.00	2.64	$1,584.00	1.62	$972.00	0.75	$450.00
			SUBTOTAL:		$1,023,957.21		$335,307.87		$38,353.42		$54,572.38		$41,553.09		$83,793.92		$42,858.25		$25,662.82		$29,378.83
			30% CONTINGENCY:		**$307,190.00**		$100,590.00		$11,510.00		$16,370.00		$12,470.00		$25,140.00		$12,860.00		$7,700.00		$8,810.00
			TOTAL ESTIMATED CONSTRUCTION COST:		**$1,331,147.21**		**$435,897.87**		**$49,863.42**		**$70,942.38**		**$54,023.09**		**$108,933.92**		**$55,718.25**		**$33,362.82**		**$38,188.83**
			DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:		$266,230.00		$87,180.00		$9,970.00		$14,190.00		$10,800.00		$21,790.00		$11,140.00		$6,670.00		$7,640.00
			TOTAL ESTIMATED PROJECT COST:		**$1,597,377.21**		**$523,077.87**		**$59,833.42**		**$85,132.38**		**$64,823.09**		**$130,723.92**		**$66,858.25**		**$40,032.82**		**$45,828.83**

SEPARABLE MAINTENANCE

Judicial Ditch 15 Br-M37 Improvement
Renville County, MN
24X.136906.000

BOLTON & MENK
Real People. Real Solutions.

Date: 4/28/2025

Item No.	Item	Estimated Quantity	Unit	Unit Price	BR M43 QTY	BR M43 TOTAL	BR M76 QTY	BR M76 TOTAL	BR M44 QTY	BR M44 TOTAL	BR M77 QTY	BR M77 TOTAL	BR M45 QTY	BR M45 TOTAL	BR M46 QTY	BR M46 TOTAL
BASE BID																
1	MOBILIZATION	1	LUMP SUM	$50,000.00	0.16	$7,866.10	0.02	$1,216.83	0.01	$409.30	0.04	$2,232.84	0.05	$2,564.38	0.08	$3,969.16
2	AGGREGATE SURFACING CLASS 5	50	TON	$40.00												
3	EXPLORATORY EXCAVATION	127	HOUR	$300.00	22	$6,600.00	4	$1,200.00	1	$300.00	8	$2,400.00	6	$1,800.00	13	$3,900.00
4	CONNECT TO EXISTING DRAIN TILE	127	EACH	$1,000.00	22	$22,000.00	4	$4,000.00	1	$1,000.00	8	$8,000.00	6	$6,000.00	13	$13,000.00
5	6" INTAKE	35	EACH	$1,000.00	8	$8,000.00	2	$2,000.00	1	$1,000.00	2	$2,000.00	2	$2,000.00	1	$1,000.00
6	8" INTAKE	6	EACH	$1,250.00												
7	10" INTAKE	1	EACH	$1,500.00											1	$1,500.00
8	12" INTAKE	1	EACH	$1,750.00												
9	15" INTAKE	1	EACH	$2,000.00												
10	18" INTAKE	1	EACH	$2,250.00	1	$2,250.00										
11	6" HDPE TILE	9,034	LIN FT	$18.00	359	$6,462.00	810	$14,580.00	247	$4,446.00	1,538	$27,684.00	256	$4,608.00	1,336	$24,048.00
12	6" STM TRENCHLESS	329	LIN FT	$150.00												
13	8" HDPE TILE	3,023	LIN FT	$20.00	1,584	$31,680.00							778	$15,560.00		
14	8" STM TRENCHLESS	75	LIN FT	$200.00									75	$15,000.00		
15	10" HDPE TILE	2,819	LIN FT	$22.00	1,037	$22,814.00									1,222	$26,884.00
16	12" HDPE TILE	2,246	LIN FT	$25.00												
17	15" HDPE TILE	1,754	LIN FT	$27.00												
18	15" STM TRENCHLESS	100	LIN FT	$350.00												
19	18" HDPE TILE	1,345	LIN FT	$30.00	1,345	$40,350.00										
20	24" HDPE TILE	4,120	LIN FT	$35.00												
21	30" CS PIPE WITH RODENT GUARD	20	LIN FT	$200.00												
22	RANDOM RIPRAP, CLASS 3	25	TON	$120.00												
23	INLET PROTECTION	45	EACH	$150.00	9	$1,350.00	2	$300.00	1	$150.00	2	$300.00	2	$300.00	2	$300.00
24	MULCH TYPE 1	92	TON	$400.00	16	$6,400.00	2	$800.00	2	$800.00	4	$1,600.00	4	$1,600.00	10	$4,000.00
25	RAPID STABILIZATION METHOD 4	2,375	SQ YD	$3.00									450	$1,350.00		
			ESTIMATED BASE BID TOTAL:			**$155,772.10**		**$24,096.83**		**$8,105.30**		**$44,216.84**		**$50,782.38**		**$78,601.16**
	TEMPORARY ROW DAMAGES	44.05	ACRES	$600.00	8.01	$4,806.00	1.32	$792.00	0.46	$276.00	2.17	$1,302.00	1.74	$1,044.00	4.47	$2,682.00
			SUBTOTAL:			$160,578.10		$24,888.83		$8,381.30		$45,518.84		$51,826.38		$81,283.16
			30% CONTINGENCY:			$48,170.00		$7,470.00		$2,510.00		$13,660.00		$15,550.00		$24,380.00
			TOTAL ESTIMATED CONSTRUCTION COST:			**$208,748.10**		**$32,358.83**		**$10,891.30**		**$59,178.84**		**$67,376.38**		**$105,663.16**
			DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:			$41,750.00		$6,470.00		$2,180.00		$11,840.00		$13,480.00		$21,130.00
			TOTAL ESTIMATED PROJECT COST:			**$250,498.10**		**$38,828.83**		**$13,071.30**		**$71,018.84**		**$80,856.38**		**$126,793.16**

Exhibit 4: Right-of-Way Table

Judicial Ditch 15 Br-M37 Improvement
Buffalo Creek Watershed District
Right-of-way Table
H:\RNCO\24X136906000\3_Design\A_Calculations\[1360906_ROW.xlsx]Sheet1

7-Nov-25

H:\RNCO\24X136906000\3_Design\A_Calculations\[1360906_ROW.xlsx]Sheet1

				Tile Improvement Right-of-Way Damages					Amount/Ac
Parcel No.	**Property Owner**	**Legal Description**		**Station to Station**		**Length**	**Width**	**Area (Acres)**	**$600**
Branch M37									
22.01291.00	STEVEN G & VICKY NOVOTNY	SE 1/4, NW 1/4	7-115-31	67+12	60+59	653	80	1.20	$720.00
22.01270.00	ERIC KUBESH	NE 1/4, SW 1/4	7-115-31	60+59	50+43	1016	80	1.87	$1,122.00
22.01320.00	MICHAEL MELBERG	NW 1/4, SE 1/4	7-115-31	49+43	43+05	638	80	1.17	$702.00
22.02420.00	MICHAEL MELBERG	NW 1/4, SE 1/4	7-115-31	43+05	42+88	17	80	0.03	$18.00
22.02415.00	LARRY & ROXANNE SCHMALZ	SW 1/4, SE 1/4	7-115-31	42+88	42+62	26	80	0.05	$30.00
22.01330.00	LARRY & ROXANNE SCHMALZ	SW 1/4, SE 1/4	7-115-31	42+62	36+18	644	80	1.18	$708.00
22.01280.00	ERIC KUBESH	SW 1/4, SE 1/4	7-115-31	36+18	29+27	691	80	1.27	$762.00
22.01620.00	MARK & LISA TAYLOR	NW 1/4, NE 1/4	18-115-31	29+27	15+64	1363	80	2.50	$1,500.00
		SW 1/4, NE 1/4	18-115-31	15+64	1+96	1368	80	2.51	$1,506.00
Branch M38									
22.01630.00	ERIC KUBESH	NE 1/4, NW 1/4	18-115-31	108+51	106+91	160	80	0.29	$174.00
22.01620.00	MARK & LISA TAYLOR	NW 1/4, NE 1/4	18-115-31	105+81	101+40	441	80	0.81	$486.00
Branch M39									
22.01280.00	ERIC KUBESH	SE 1/4, SW 1/4	7-115-31	161+32	158+52	280	80	0.51	$306.00
22.01280.00	ERIC KUBESH	SW 1/4, SE 1/4	7-115-31	157+52	151+40	612	80	1.12	$672.00
Branch M40									
22.01280.00	ERIC KUBESH	SW 1/4, SE 1/4	7-115-31	201+39	209+21	782	80	1.44	$864.00

Judicial Ditch 15 Br-M37 Improvement
Buffalo Creek Watershed District
Right-of-way Table
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7-Nov-25

H:\RNCO\24X136906000\3_Design\A_Calculations\[1360906_ROW.xlsx]Sheet1

				Tile Improvement Right-of-Way Damages					Amount/Ac
Parcel No.	**Property Owner**	**Legal Description**		**Station to Station**		**Length**	**Width**	**Area (Acres)**	**$600**
22.01620.00	MARK & LISA TAYLOR	NW 1/4, NE 1/4	18-115-31	209+21	210+00	79	80	0.15	$90.00
	WASCOB	NW 1/4, NE 1/4	18-115-31	207+73	210+00			0.33	$396.00
22.01612.00	LARRY & ROXANNE SCHMALZ	NW 1/4, NE 1/4	18-115-31	210+00	212+90	290	80	0.53	$318.00
	WASCOB	NW 1/4, NE 1/4	18-115-31	210+00	212+90			0.66	$792.00
Branch M41									
22.01280.00	ERIC KUBESH	SW 1/4, SE 1/4	7-115-31	251+76	253+80	204	80	0.37	$222.00
	WASCOB	SW 1/4, SE 1/4	7-115-31	251+75	253+80			0.41	$492.00
22.01330.00	LARRY & ROXANNE SCHMALZ	SW 1/4, SE 1/4	7-115-31	253+80	261+44	764	80	1.40	$840.00
	WASCOB	SW 1/4, SE 1/4	7-115-31	253+80	256+63			1.74	$2,088.00
		SE 1/4, SE 1/4	7-115-31	261+44	273+32	1188	80	2.18	$1,308.00
22.01612.00	LARRY & ROXANNE SCHMALZ	NE 1/4, NE 1/4	18-115-31	273+32	274+89	157	80	0.29	$174.00
Branch M42									
22.01330.00	LARRY & ROXANNE SCHMALZ	SE 1/4, SE 1/4	7-115-31	301+44	307+90	646	80	1.19	$714.00
22.01320.00	MICHAEL MELBERG	NE 1/4, SE 1/4	7-115-31	307+90	315+81	791	80	1.45	$870.00
Branch M78									
22.01330.00	LARRY & ROXANNE SCHMALZ	SE 1/4, SE 1/4	7-115-31	351+28	360+08	880	80	1.62	$972.00
Branch M75									
22.01280.00	ERIC KUBESH	SE 1/4, SW 1/4	7-115-31	406+55	405+46	109	80	0.20	$120.00
22.01330.00	LARRY & ROXANNE SCHMALZ	SW 1/4, SE 1/4	7-115-31	404+46	401+48	298	80	0.55	$330.00

Judicial Ditch 15 Br-M37 Improvement
Buffalo Creek Watershed District
Right-of-way Table
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7-Nov-25

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				Tile Improvement Right-of-Way Damages					Amount/Ac
Parcel No.	**Property Owner**	**Legal Description**		**Station to Station**		**Length**	**Width**	**Area (Acres)**	**$600**
Branch M43									
22.01320.00	MICHAEL MELBERG	NW 1/4, SE 1/4	7-115-31	451+37	461+89	1052	80	1.93	$1,158.00
22.02420.00	MICHAEL MELBERG	NW 1/4, SE 1/4	7-115-31	461+89	464+67	278	80	0.51	$306.00
22.01320.00	MICHAEL MELBERG	NW 1/4, SE 1/4	7-115-31	464+67	471+60	693	80	1.27	$762.00
		NE 1/4, SE 1/4	7-115-31	471+60	477+71	611	80	1.12	$672.00
22.01250.00	KIM & MARY KAPPING	SE 1/4, NE 1/4	7-115-31	477+71	495+01	1730	80	3.18	$1,908.00
Branch M76									
22.01320.00	MICHAEL MELBERG	NW 1/4, SE 1/4	7-115-31	551+49	558+32	683	80	1.25	$750.00
22.01250.00	KIM & MARY KAPPING	SW 1/4, NE 1/4	7-115-31	558+32	558+72	40	80	0.07	$42.00
Branch M44									
22.01320.00	MICHAEL MELBERG	NE 1/4, SE 1/4	7-115-31	601+42	602+84	142	80	0.26	$156.00
22.01250.00	KIM & MARY KAPPING	SE 1/4, NE 1/4	7-115-31	602+84	603+94	110	80	0.20	$120.00
Branch M77									
22.01250.00	KIM & MARY KAPPING	SE 1/4, NE 1/4	7-115-31	651+41	655+46	405	80	0.74	$444.00
22.01320.00	MICHAEL MELBERG	NE 1/4, SE 1/4	7-115-31	655+46	663+22	776	80	1.43	$858.00
Branch M46									
22.01260.00	CHARLES & BARBARA MELBERG	SW 1/4, NW 1/4	7-115-31	775+77	763+93	1184	80	2.17	$1,302.00

Judicial Ditch 15 Br-M37 Improvement

Buffalo Creek Watershed District

Right-of-way Table

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7-Nov-25

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				Tile Improvement Right-of-Way Damages					Amount/Ac
Parcel No.	**Property Owner**	**Legal Description**		**Station to Station**		**Length**	**Width**	**Area (Acres)**	**$600**
		SE 1/4, NW 1/4	7-115-31	763+93	758+31	562	80	1.03	$618.00
22.01291.00	STEVEN G & VICKY NOVOTNY	SE 1/4, NW 1/4	7-115-31	758+31	751+41	690	80	1.27	$762.00
Branch M45									
22.01291.00	STEVEN G & VICKY NOVOTNY	SE 1/4, NW 1/4	7-115-31	701+40	707+50	610	80	1.12	$672.00
22.01310.00	CAROL WALTER	SW 1/4, NE 1/4	7-115-31	708+50	711+89	339	80	0.62	$372.00
	Total					**Total Improvement Right-of-Way Damages =**		**47.19**	**$30,198.00**

Exhibit 5: Televising Images


J 15 Novotony going north across driveway 14 inch_
No Data
02:28PM
10Nov15
+225.9f


J.15 Novotony going south in 14 inch_
No Data
02:37PM
10Nov15
+009.3f


J 15 Novotony going south in 14 inch_
No Data
02:37PM
10Nov15
+049.7f


J 15 Novotony going north across driveway 14 inch_
No Data
02:25PM
10Nov15
+009.9f


going south from previous run in 20 inch_
No Data
03:38PM
10Nov15
+211.3f


going south from previous run in 20 inch_
No Data
03:48PM
10Nov15
+015.4f

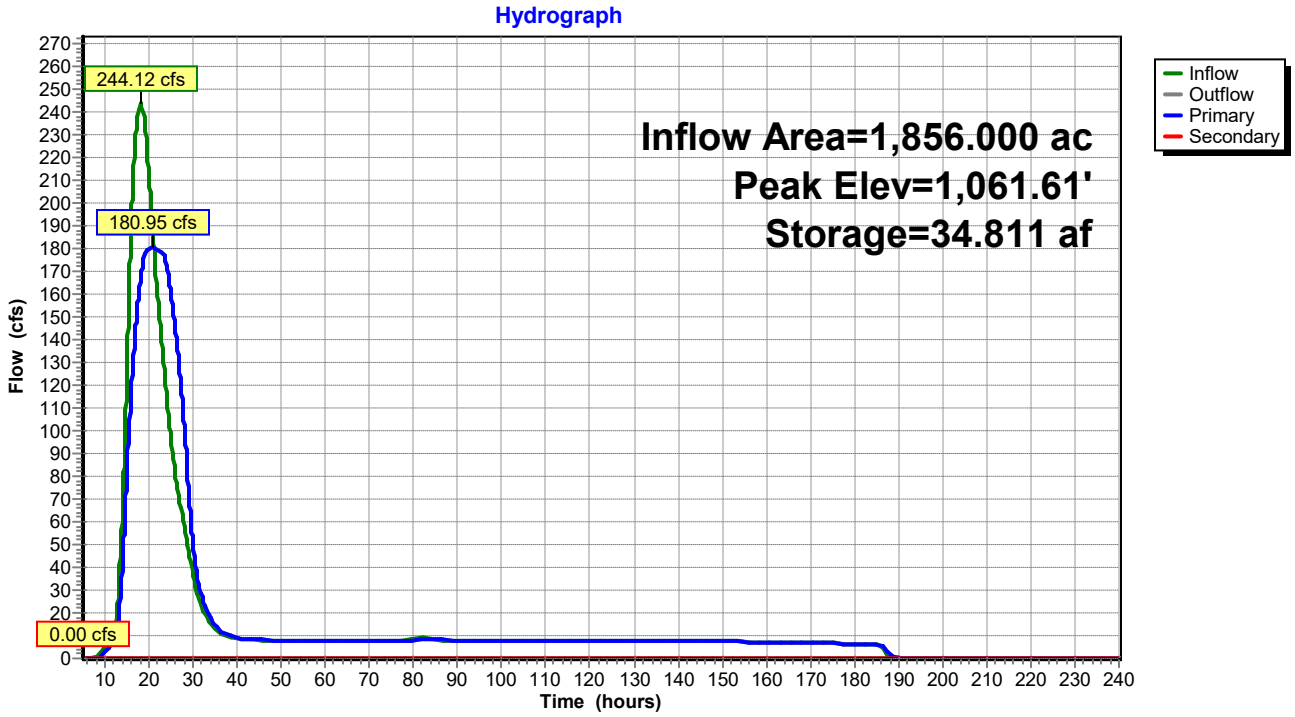

coming up 20 in outlet going north_
No Data
09:17AM
11Nov15
+095.0f


going south from previous run in 20 inch_
No Data
03:37PM
10Nov15
+165.9f

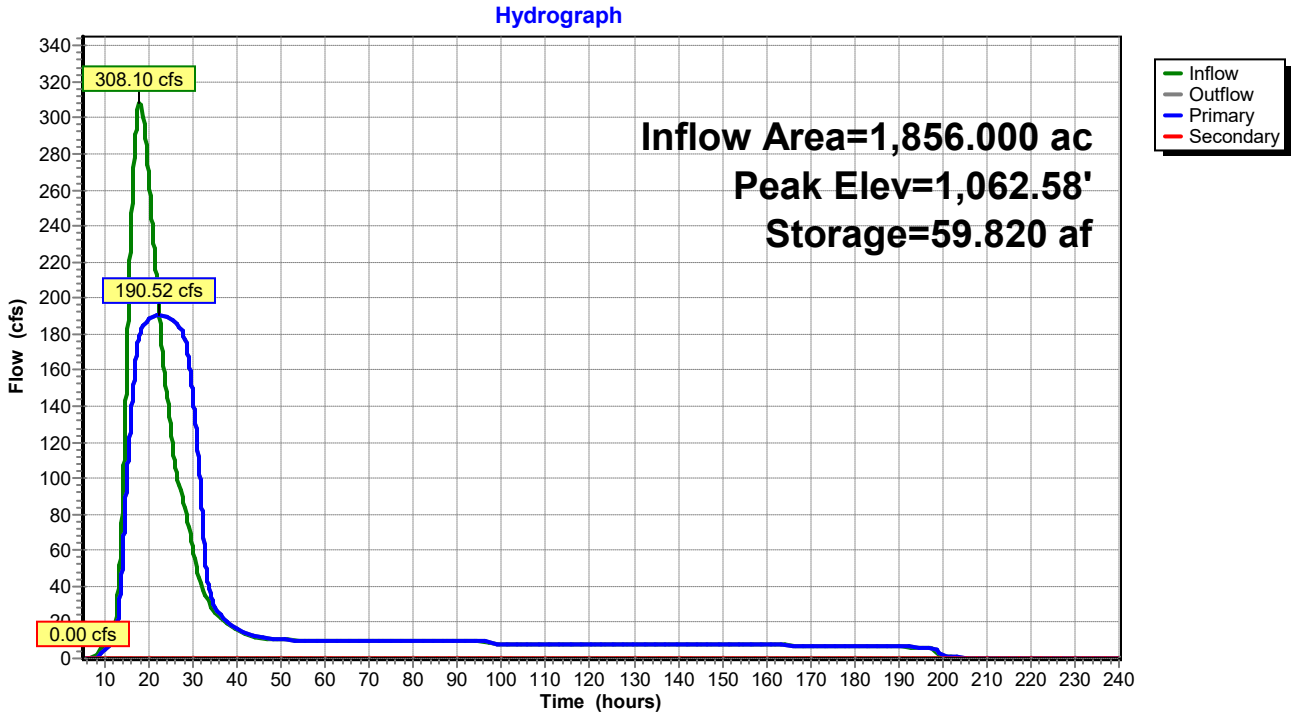

going north from prior run filling in gap_
No Data
09:51AM
11Nov15

Exhibit 6: Hydrographs

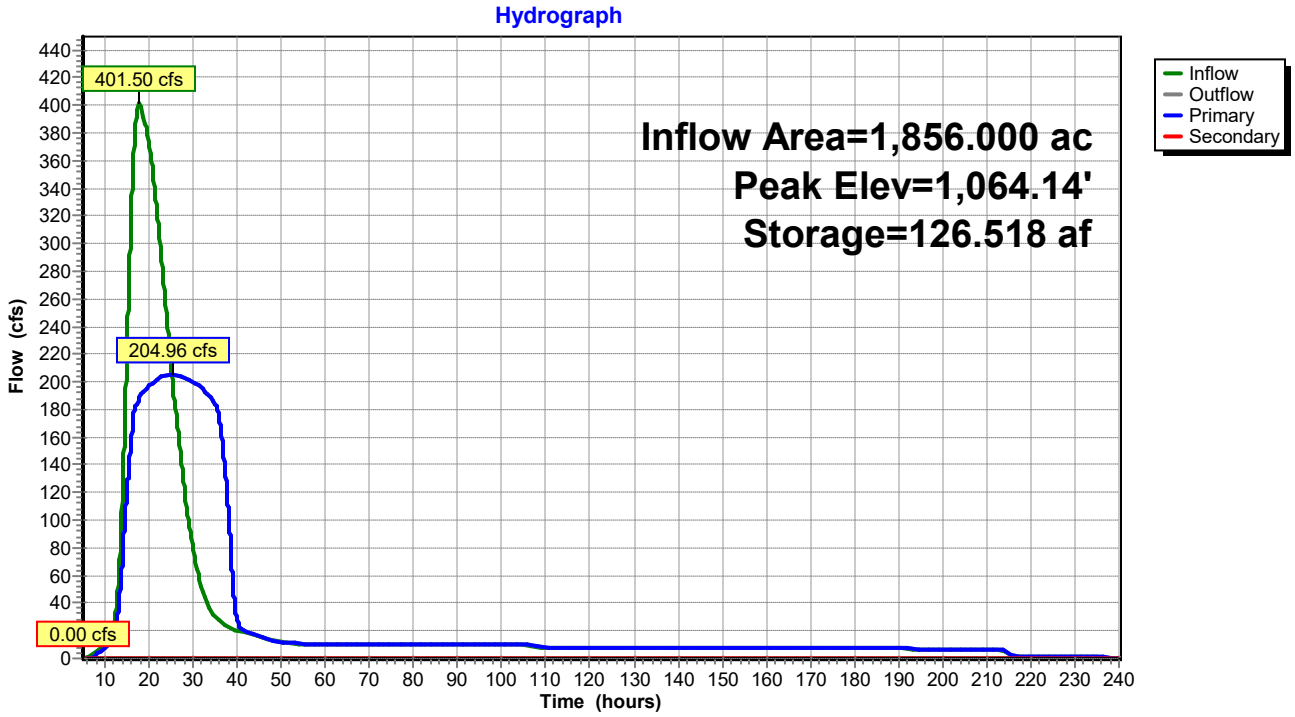
Pond 27P: CR 25



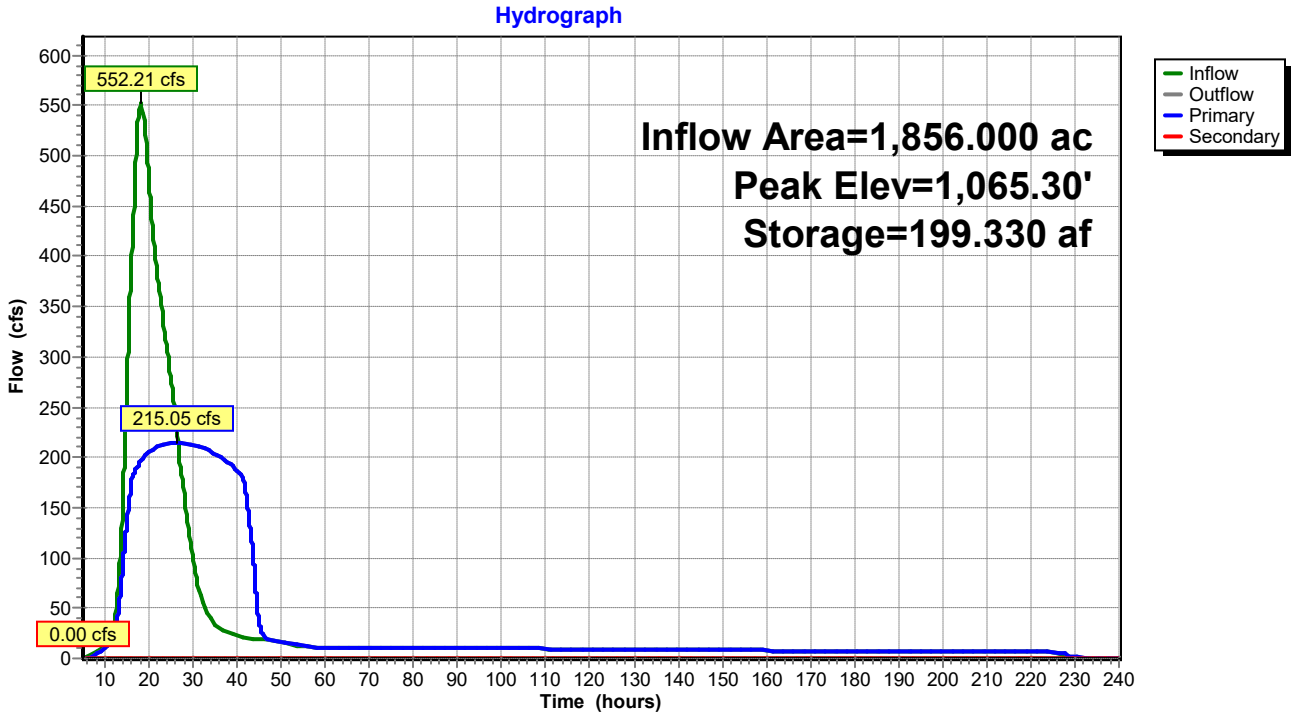
Pond 27P: CR 25



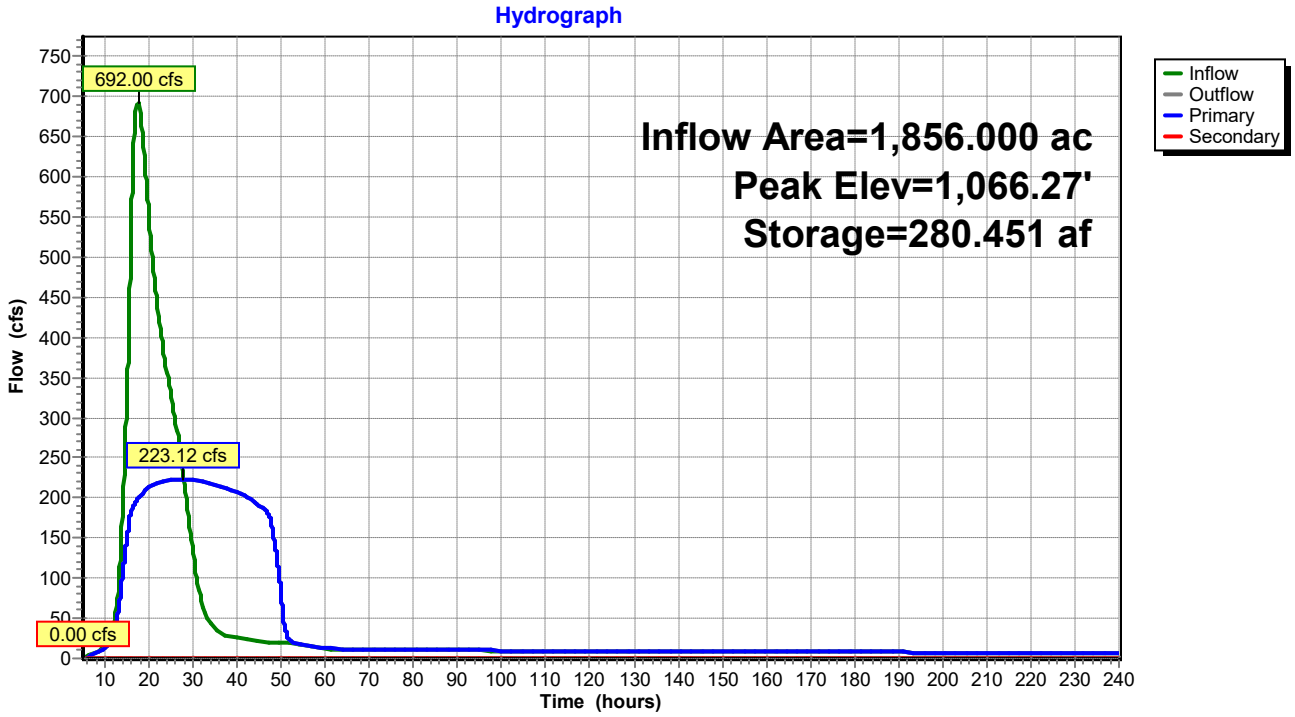
Pond 27P: CR 25



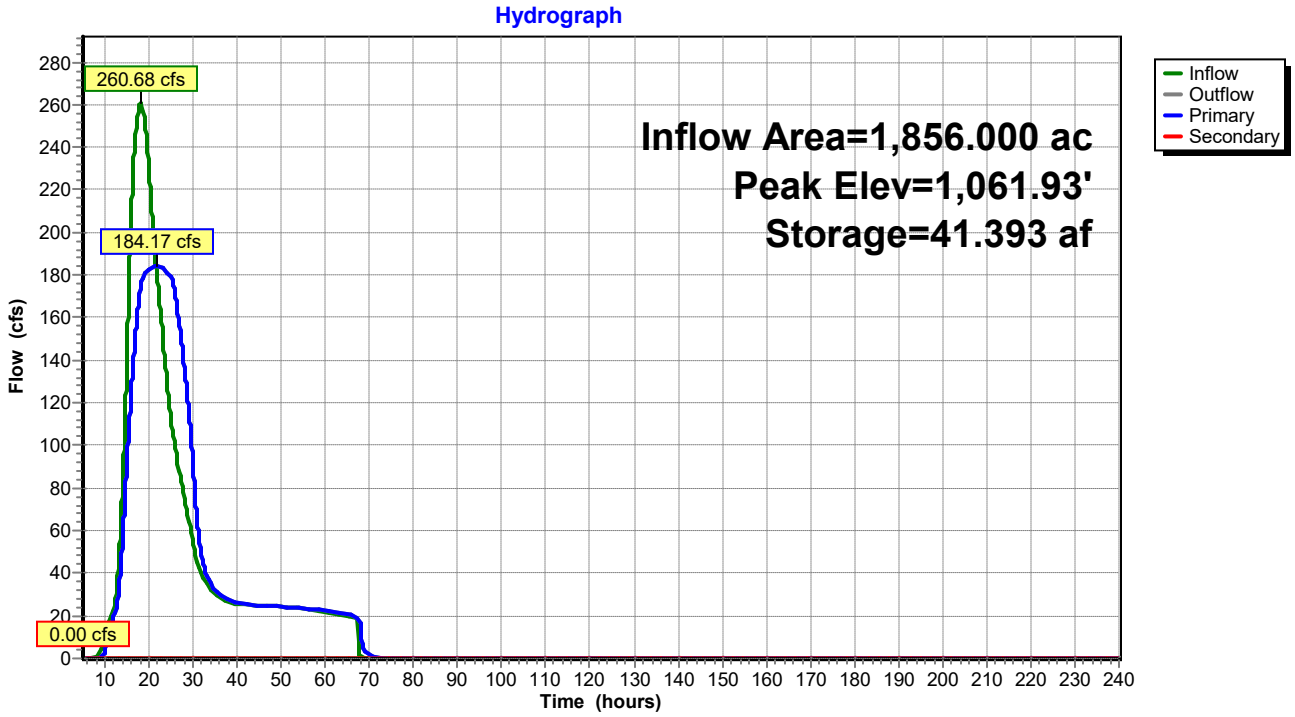
Pond 27P: CR 25



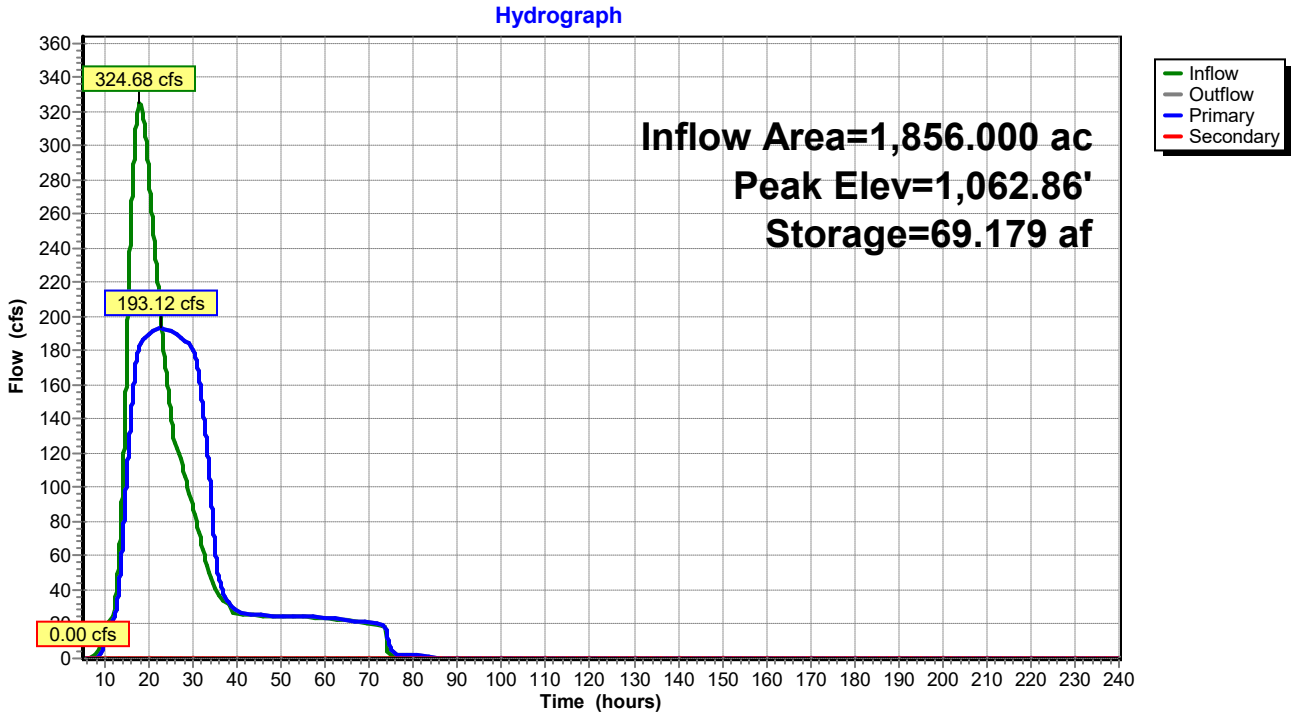
Pond 27P: CR 25



Pond 21P: CR 25



Pond 21P: CR 25



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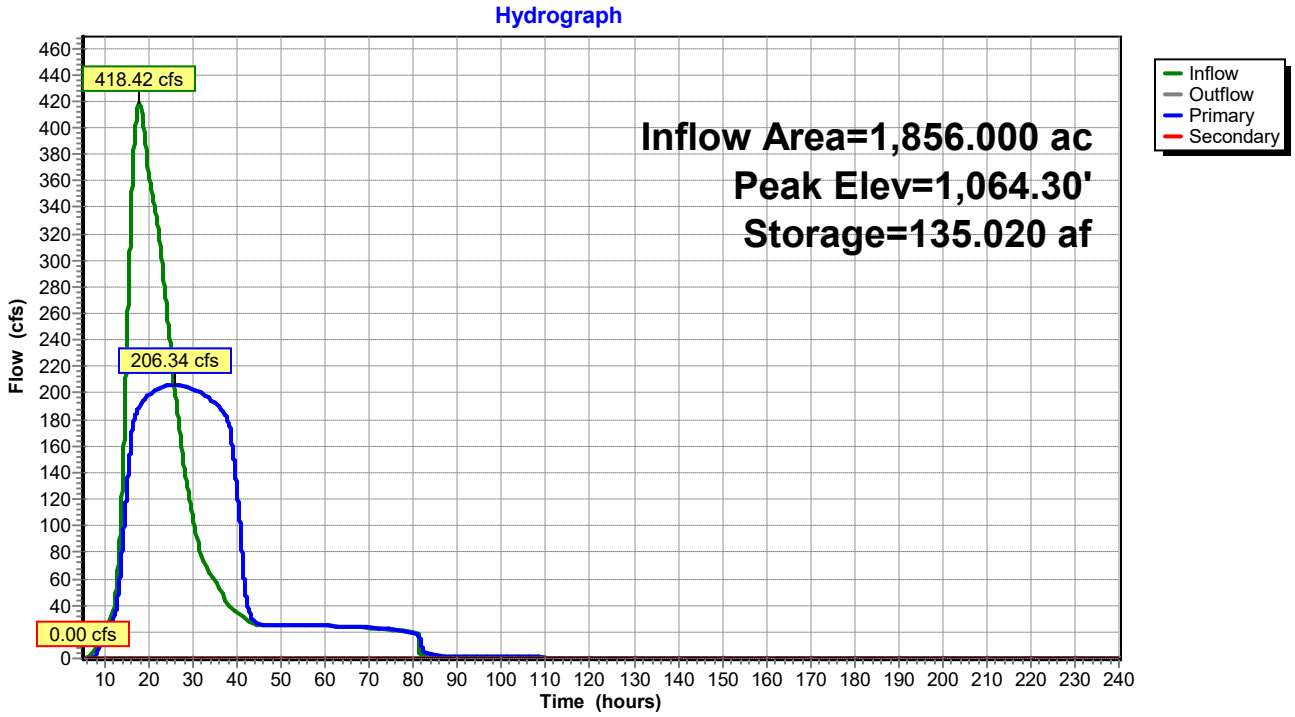

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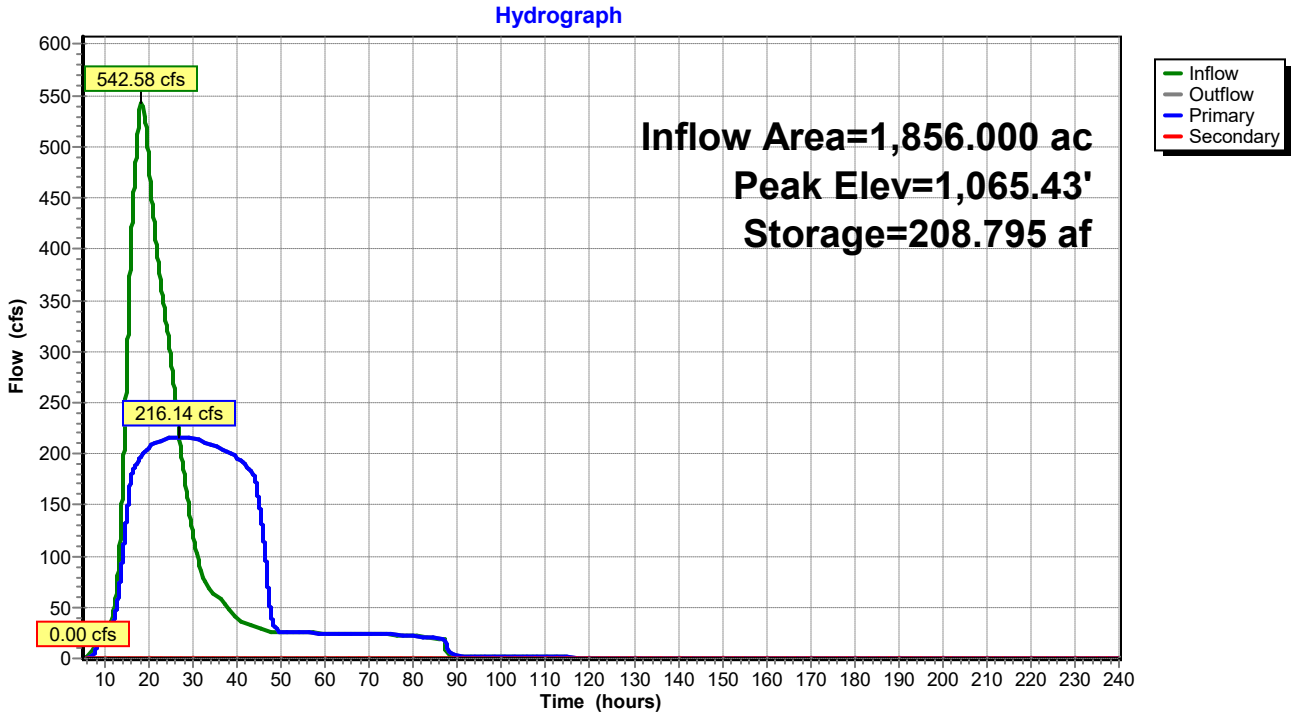

Pond 21P: CR 25

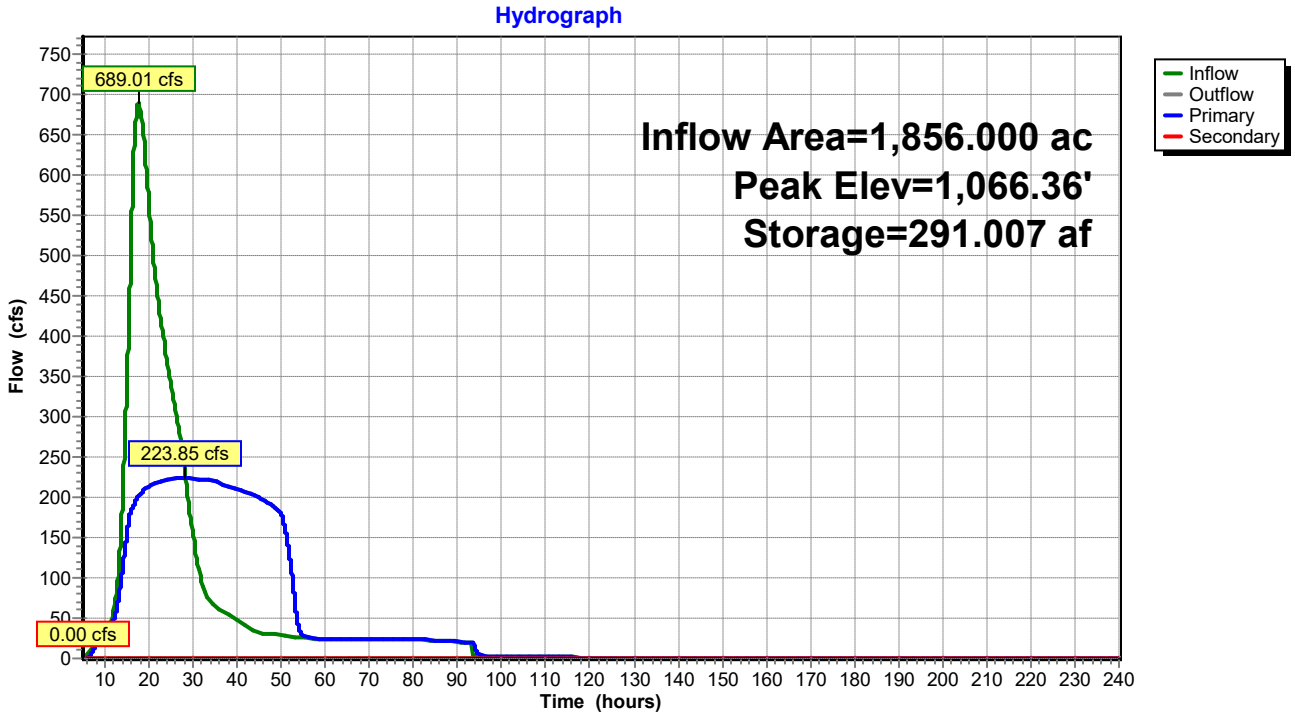

Exhibit 7: Notice to Proceed

STATE OF MINNESOTA
BUFFALO CREEK WATERSHED DISTRICT
DRAINAGE AUTHORITY FOR RENVILLE, SIBLEY, MCLEOD JUDICIAL DITCH 15, BRANCH M-37

The matter of the petition of Melberg, et al., for the improvement of Renville, Sibley, McLeod Judicial Ditch 15, Branch M-37	**Preliminary Hearing Order**

The Board of Managers of the Buffalo Creek Watershed District, seated as the Drainage Authority for the improvement of Renville, Sibley, McLeod Judicial Ditch 15, Branch M-37, met at 6:00 p.m. on June 24, 2025, at the Glencoe City Center, 1107 – 11th Street East, Glencoe Minnesota in Suite 103. The hearing was held according to Minnesota Statutes Section 103E.261. Having considered the preliminary engineer's report, the DNR preliminary advisory report and the comments and testimony received at the hearing, Manager Kramer moved, seconded by Manager Lindeman, for adoption of the following:

Findings:

1. The Drainage Authority met at 6:00 p.m. on June 24, 2025, at the Glencoe City Center for the preliminary hearing on the Engineer's Preliminary Survey Report related to the petition of Melberg, et al., for the improvement of Renville, Sibley, McLeod Judicial Ditch 15, Branch M-37.

2. The hearing was held according to Minnesota Statutes Section 103E.261.

3. The Drainage Authority's attorney presented the history of the proceedings through the preliminary hearing and summarized the requirements of the drainage code.

4. The hearing was noticed according to statute after filing of the preliminary engineer's report and delivery of said report to the Department of Natural Resources (DNR) for preliminary review and preparation of a preliminary advisory report.

5. The Drainage Authority's attorney presented an examination of the petition and bond to determine their sufficiency.

6. The Drainage Authority finds the following regarding the sufficiency of the petition:

    a. The Board's attorney verified the signatures and ownership interests of the petitioners. The petition has been signed by 50% (4 out of 8) of the owners of the property affected by the proposed improvement, which is over the 26% required. (103E.215)

b. The petition was properly filed with the Board of Managers to initiate improvement proceedings. For the purpose of a properly filed petition for improvement of a drainage system within the Watershed District, the Board of Managers composes the Drainage Authority for the improvement and, if the improvement is ordered and constructed, for all subsequent actions on the drainage system, or portion thereof. (103D.625)
c. The petition properly designated the drainage system proposed to be improved by number and map description that identifies the drainage system.
d. The petition alleges that the drainage system has insufficient capacity or needs enlarging to furnish sufficient capacity.
e. The petition describes the improvement, including the names and addresses of owners of the 40-acre tracts or government lots and property that the improvement passes over.
f. The petition alleges that the proposed improvement is necessary and will be of public utility and promote the public health.
g. The petition contains an agreement by the petitioners that they will pay all costs and expenses that may be incurred if the improvement proceedings are dismissed.
h. The petition was accompanied by cash bond in the amount of $10,000. The initial cash bond has been replaced by an irrevocable bank letter of credit with an initial face value of $100,000. The bond is adequate surety and has been reviewed by the Board's attorney. The bond is conditioned to pay the costs incurred if the proceedings are dismissed or a contract is not awarded to construct the drainage system proposed in the petition. (103E.215)
i. The costs incurred before the proposed drainage project is established may not exceed the amount of the petitioners' bond. A claim for expenses greater than the amount of the bond may not be paid unless the bond amount is increased or an additional bond is filed. If the Drainage Authority determines that the cost of the proceeding will be greater than the petitioners' bond before the proposed drainage project is established, the Drainage Authority shall require an increase in the bond amount or an additional bond to cover all costs to be filed within a prescribed time. The proceeding will be stopped until the additional bond prescribed by the Drainage Authority is filed. If the additional bond is not filed within the time prescribed, the proceedings will be dismissed.
j. The Board's attorney has reviewed the petition and bond and determined they meet the requirements of these proceedings.

7. A copy of the preliminary engineer's report was provided to the DNR Commissioner and BWSR inviting advisory review. By letter dated May 21, 2025, the commissioner provided comments (preliminary advisory report) on the preliminary engineer's report. The comments were read into the record.

8. The engineer presented its preliminary engineer's report.

9. The drainage system is located in Sections 7 and 18 in Preston Lake Township, Renville County. The outlet for JD 15 Branch M37 is JD 15 Main Open Ditch in section 18 of Preston Lake Township in Renville County.

10. JD 15, Branch M-37, and its branches proposed to be improved have insufficient capacity to meet current farming practices and drainage needs. The installation of larger tile is required to furnish sufficient drainage capacity and fulfill its original intended purpose.

11. JD 15, Branch M-37, and its branches proposed to be improved are in need of repair. The tile system was constructed in 1916 and is now over 100 years old and is past its functional life. Tiles of this age typically experience displacement of individual pipe sections, which decrease the functional cross-section of the pipe and consequently decrease the capacity from its as-built condition. Numerous repairs have been required in recent years to repair blow-outs and other failures of the system. It is likely that deterioration will continue to accelerate due to its age. The existing tile cannot easily be modified to increase its capacity and must be replaced in its entirety.

12. Though captioned as the improvement of JD 15, Branch M-37, The improvement involves several branches to JD 15 for which Branch M-37 provides the outlet to the main channel of JD 15. The proposed project includes improving Branches M-37, M-38, M-39, M-40, M-41, M-42, M-43, M-44, M-45, M-46, M-75, M-76, M-77 and M-78.

13. The preliminary engineer's report indicates that the problems being experienced within JD 15 and its branches proposed to be improved are due to both insufficient capacity and disrepair of the tile system.

14. During the hearing, the engineer addressed the DNR comments.

15. The Board invited comment from landowners present at the hearing.

16. Comments were received during the hearing and addressed to the satisfaction of the Board. No comments were received expressing concern about the project.

17. The proposed improvement of JD 15 and its branches as petitioned and as addressed in the engineer's preliminary report is feasible, necessary, will be of public utility and benefit, and promote public health.

18. The environmental and land use criteria in the drainage code have been adequately considered by the engineer and, as directed herein, will be further investigated in considering the final scope of improvement.

19. Based on the engineer's evaluation of the receiving watercourse, the outlet for the proposed improvement is adequate. However, the Board acknowledges the concerns

raised by the DNR regarding both capacity and stability of the outlet and downstream, receiving waters.

20. The Drainage Authority has identified a viewing team, consisting of at least three disinterested residents of the state, qualified to assess benefits and damages, available to view this project and willing to perform the duties of viewers for this project.

Based on the foregoing findings, the Joint Drainage Authority adopts the following:

Order:

a. The Board accepts and adopts the preliminary engineer's report for the petitioned improvement.

b. The Board, upon filing this preliminary hearing order with the Renville (as majority) County Auditor-Treasurer, orders the engineer to make a detailed survey with plans and specifications for the proposed drainage project and submit a detailed survey report to the Drainage Authority as soon as possible.

c. The Board directs the engineer to address comments of the DNR commissioner. If feasible, the engineer should include changes in the final project plans.

d. The Board directs the engineer to continue to work through the processes contained in statutes section 103E.015 to ensure that environmental, land use, and multipurpose water management criteria are considered for inclusion in final project plans. This consideration should include an attempt to directly coordinate with the DNR staff to further clarify and address both concerns raised and any disagreement between the engineer and the DNR's comments as contained in the DNR preliminary advisory report.

e. The Board directs the engineer to continue to coordinate, in addition to the coordination which occurred in advance of this order, with the Soil and Water Conservation District, and the county and USDA planning authorities about potential external sources of funding and technical assistance for environmental, land use, and multipurpose water management features or alternatives.

f. The Board directs the engineer to request additional information about potential funding or technical assistance for environmental, land use, and multipurpose water management features or alternatives from the executive director of the Board of Water and Soil Resources.

g. The Board appoints the following viewers to determine the benefits and damages to all property affected by the proposed drainage project and make a viewers' report:

James (Jim) Wiedemann

Steven (Steve) Johnson
David (Dave) Schmidt

h. The viewers shall subscribe to an oath to faithfully perform their duties.

i. The Board directs the viewers, once qualified, to work with the engineer and to commence viewing as soon as practical upon receipt of the engineer's design plans and specifications indicating the efficiency of the drainage system improvement.

j. The engineer is directed to assist the viewers in identifying properties receiving a hydrological improvement from the project and in identifying properties responsible for increased sedimentation in downstream areas of the watershed or responsible for increased drainage system maintenance or increased drainage system capacity because the natural drainage on the properties has been altered or modified to accelerate the drainage of water from the property.

After discussion, the Board President called the question. The question was on the adoption of the foregoing Findings and Order, and there were 3 yeas and 0 nays as follows:

	Yea	Nay	Absent	Abstain
BELTER	☒	☐	☐	☐
MELBERG	☐	☐	☐	☒
STUEWE	☐	☐	☒	☐
LINDEMAN	☒	☐	☐	☐
KRAMER	☒	☐	☐	☐

Upon vote, the President declared the motion Passed.

_____/////s////_____ Dated: June 24, 2025
Donald Belter, President

* * * * * * * * * * *

I, Matt Melberg, Secretary of the Buffalo Creek Watershed District, do hereby certify that I have compared the above motion, findings and order with the original thereof as the same appears of record and on file with the Board of Managers and find the same to be a true and correct transcript thereof as adopted by and filed with the Board of Managers, on June 24, 2025.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 24th day of June, 2025.

_____////s////_____
Matt Melberg

Exhibit 8: Technical Specifications

TECHNICAL SPECIFICATIONS

for

Judicial Ditch No. 15
Branch M37 Improvement

Renville County, MN

SECTION 02 32 19 - EXPLORATORY EXCAVATION

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment, and performances of all work and services necessary or incidental to conducting a subsurface investigation as shown on the drawings, as specified herein, and/or as specified by the Engineer.

1.2 METHOD OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items will be paid according to the referenced specification or as modified below:

1. The unit price bid for exploratory excavation will include all costs of labor, equipment, and ultimate disposal required to complete the work, as specified.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances will not be individually paid in the absence of a specific bid item for the work. The costs will be included in the unit price bid for the associated removal and excavation items. Such items of work include but are not limited to:

1. Exploratory excavation without prior authorization and approval by the Engineer.

2. Exploratory excavation to locate and connect to existing pipes unless the Engineer agrees that excavation beyond what could be considered reasonable is required.

3. Materials for re-grouting of inverts.

B. All costs of off-site disposal of excess excavated material and debris including but not limited to hauling, fees, and permits for such disposal.

1.3 SPECIFICATION REFERENCES

A. The following referenced Specifications will apply to this Section:

1. MnDOT 2123.

B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.4 SUBMITTALS

A. No submittals for this Section.

PART 2 - PRODUCTS

2.1 MATERIALS

A. No exception to this specification is made.

PART 3 - EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. The Contractor shall:

1. Perform underground utility exploration as directed by the Engineer which involves excavation to locate pipelines for location and elevation verification. Failure to perform exploratory excavation as directed by the Engineer shall be a reason to withhold payment. Alternatively, the Engineer may elect to have all costs (material, labor, equipment, ect.) to connect existing tiles to the Main Tile Line be

incidental to the proposed tile where exploratory excavation was not completed as directed by the Engineer.

2. Clean debris and gravel which is present before the Project, out of existing manholes and catch basins along the Project and to regrout the inverts, as directed by the Engineer.
3. Other work associated with the Project, as directed by the Engineer.
4. Exploratory excavation shall consist of, at a minimum, a rubber-tired backhoe, operator, and laborer to find the tile. And additional equipment and personnel that the contractor chooses to use as a part of exploratory excavation shall be incidental. Any time and equipment necessary to backfill the excavation shall be incidental.
5. Where exploratory excavation is performed in a location that will not be disturbed later, the backfill will be placed and compacted to the density specified elsewhere in these Specifications for the type of utility located.

******END OF SECTION******

SECTION 31 20 00 - EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment, and performances of all work and services necessary or incidental to the excavation and embankment of the site improvements as indicated on the drawings or as specified herein.

1.2 DEFINITIONS

A. Compacted Volume (CV) – The volume of material placed as determined by computing the difference between original and final cross-sections by the average end area method.

B. Excavated Volume (EV) – The volume of material excavated as determined by computing the difference between original and final cross-sections by the average end area method.

C. Excess Material - Material that is not needed to complete the earthwork balance.

D. Subcut - Excavation performed below the proposed subgrade elevation shown on the plans to remove unsuitable material.

E. Subgrade - The top surface of a roadbed upon which the pavement structure (including aggregate base and/or granular subbase) is to be constructed. This is also a general term denoting the soil foundation upon which a proposed improvement is to be placed.

F. Suitable Material - Sand, silty sand, or low plasticity clay soils with no organic content. The Engineer shall make the final determination as to what material will be considered suitable.

G. Topsoil - Any soil, generally black, containing organic material.

H. Unsuitable Material - Soil with organic content including topsoil, swamp deposits, peat, muck, or other material deemed by the Engineer to be unsuitable for fill or embankment construction.

1.3 METHOD OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items will be paid according to the referenced specification or as modified below:

1. Common Excavation:

(a) Measurement and payment for Common Excavation will be based upon the cubic yard (P).

2. Common Embankment:

(a) Measurement and payment for Common Embankment will be based upon the cubic yard (P).

3. Granular Foundation Rock

(a) Measurement and payment for Granular Foundation Rock will be based upon the linear foot (LF).

4. Rock Excavation

(a) No extra payment will be made for rock excavation.

5. Items specifically identified in the Schedule of Unit Prices will be compensated in accordance with the description of measurement and payment contained in the section applicable to the individual item. Otherwise, no direct compensation will be granted for compliance with the provisions contained herein.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances will not be individually paid in the absence of a specific bid item for the work. The costs will be included in the unit price bid for the associated excavation items. Such items of work include but are not limited to:

1. Separating, salvaging, stockpiling, and spreading of topsoil will be included in the price bid for common excavation and common embankment.
2. Subcutting the existing topsoil before placing embankment in all areas with proposed impoundments will be included in the price bid for common excavation and common embankment.
3. Salvaging and separately stockpiling suitable aggregate base material.
4. Separating, salvaging, stockpiling, and placing suitable material for use in embankment areas.

1.4 SPECIFICATION REFERENCES

A. The following referenced Specifications will apply to this Section:

1. MnDOT 2106.
2. MnDOT 2574.

B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.5 SUBMITTALS

A. No submittals for this section.

PART 2 - PRODUCTS

2.1 MATERIALS

A. All suitable excess excavated material will remain the property of the Owner and will be loaded, hauled, placed as directed (i.e. leveling), and compacted at a site chosen by the Owner within the project site. If the Owner requires the suitable excess material to be stockpiled, the Contractor shall load, haul, and shape the material to produce uniform stockpile(s).

PART 3 - EXECUTION

3.1 GENERAL

A. Excavated topsoil and suitable material for reuse in the project will be segregated and stockpiled at a site selected by the Contractor.

B. Frozen material will not be allowed for roadway or building pad construction. The Engineer shall approve locations for placement of frozen material.

C. All excavations will be kept free of water during the placement of fill.

D. The Contractor shall utilize methods and equipment for excavating that will minimize the disturbance to the subgrade. The use of backhoes rather than scrapers or front-end loaders may be required to minimize repeated passes of equipment over wet subgrade soils.

E. Sufficient common excavation will be utilized by the Contractor to replace the soil shrinkage from excavation which occurs through the course of construction handling and compaction. The Contractor shall make their estimate of the amount of shrinkage that will occur.

F. Topsoil

1. Once the salvaged topsoil is stockpiled, the Contractor shall estimate any potential shortage or surplus of topsoil possible in meeting the other provision of this Contract and notify the Engineer of the estimate.

2. The priority in re-distributing the topsoil on site will be to meet the minimum depths required over the entire project area.

G. In areas where filling above the existing grade is necessary to establish the final designed elevation, the Contractor shall fully remove the topsoil and organic material to the level of stable underlying sand or clay before backfilling with suitable embankment material.

H. The Contractor shall make their determination as to whether the proposed grading has been completed according to the plans. When the Contractor determines that the grading has been completed, he will notify the Engineer. Neither the Owner nor the Engineer will provide any intermediate acceptance of the grading improvements until all of the gradings have been completed and all topsoil has been spread.

3.2 COMPACTION

A. All embankment grading will be compacted using the Quality Compaction Method.

3.3 FIELD QUALITY CONTROL

A. Samples for testing shall be taken from material at locations approved by the Engineer. All sampling methods shall be approved by the Engineer.

B. The Contractor shall coordinate the site grading and inform the Engineer when the roadway subgrade is ready for test rolling, before installing any aggregate base. The Engineer may order some subgrade correction before allowing the installation of the aggregate base.

C. Should any of the specified tests or inspections fail, the Contractor may arrange and pay for additional tests or inspections as may be necessary to satisfy the Engineer that the specified requirements have been met.

*****END OF SECTION*****

SECTION 31 23 13 - SUBGRADE PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment, and performance of all work and services necessary or incidental to the subgrade preparation as indicated on the drawings or as specified herein.

1.2 METHOD OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items will be paid according to the referenced specification or as modified below:

1. No direct payment will be made for subgrade preparation. Costs will be included in the unit prices bid for the various excavation items.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances will not be individually paid in the absence of a specific bid item for the work. The costs will be included in the unit price bid for the various excavation items. Such items of work include but are not limited to:

1. Drying and adding water to the subgrade.
2. Subgrade excavation, furnishing stabilizing aggregate, geotextile fabric installation, compaction, regrading, and/or other efforts necessary to repair the subgrade after satisfying the rolling test and failing to protect the integrity of the subgrade.
3. Test rolling the compacted subgrade.

1.3 SPECIFICATION REFERENCES

A. MnDOT 2112 will apply to this Section.

B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.4 SUBMITTALS

A. No submittals for this section.

PART 2 - PRODUCTS

2.1 MATERIALS

A. No exception to the referenced specification is made.

PART 3 - EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. At the end of each day, and before the placement of aggregate base, the Contractor shall eliminate surface indentations, including those caused by sheeps foot rollers and tractor cleats, and roll the surface with a steel wheel or rubber-tired roller.

B. The Contractor shall disc, scarify, shape and compact the street subgrade or existing base, adding water or drying as may be necessary to give uniform and desired density.

C. If the subgrade is unstable and the instability is due to excessive moisture, the subgrade will be scarified and dried over a reasonable period. When the material has reached acceptable moisture limits, the material will be returned to the roadbed and compacted into place to the proper elevation. The roadbed will once again be test rolled. If the material continues to be unstable, the Engineer may authorize the removal of the undesirable material as subgrade excavation.

D. Once the subgrade has been test rolled and accepted by the Engineer, no traffic or construction equipment will be permitted to operate directly on the subgrade without the prior approval of the Engineer. All equipment will be restricted to operating only in areas where the aggregate base has been installed to its full design depth. If inclement weather occurs after a test roll, and before placement of the aggregate base or first course of bituminous, the test roll will be voided and a new test roll will be performed.

E. The subgrade will be compacted in accordance with the Quality Compaction Method.

3.2 FIELD QUALITY CONTROL

A. "Blue Top" stakes will be provided by the Contractor at 50 foot intervals to confirm that the subgrade is constructed to the required grades and elevations. Methods other than "Blue Top" staking may be allowed if approved by the Engineer.

B. The compacted subgrade will be test rolled using a fully loaded aggregate truck (tandem) in a pattern approved by the Engineer. The subgrade stability will be considered adequate when the surface shows less than 1.0 inch of yielding or rutting after one pass, or as otherwise approved by the Engineer.

******END OF SECTION******

SECTION 31 23 19 - DEWATERING

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment, and performances of all work and services necessary or incidental to the dewatering of trenches as necessary to construct the elements shown on the drawings or as specified herein.

B. This item will be considered exempt from the requirements of Supplementary Condition 13.03.

1.2 METHOD OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items will be paid according to the referenced specification or as modified below:

1. No payment will be made for dewatering for the construction.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances will not be individually paid in the absence of a specific bid item for the work. The costs will be included in the unit price bid for the dewatering items, as indicated. Such items of work include but are not limited to:

1. The cost of furnishing discharge pumps, rock, piping including bends, and adapters, include in the price bid for tile construction.

2. Interference of other underground structures and utilities.

3. Protection of existing improvements from damage, include in the price bid for tile construction.

4. Installing a portion of the tile, allowing the area to dewater, and returning later to finish the installation, shall be included in the price bid for tile construction.

1.3 SPECIFICATION REFERENCES

A. MnDOT 2451 will apply to this Section.

B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.4 SUBMITTALS

A. No submittals for this section.

PART 2 - PRODUCTS

2.1 MATERIALS

A. No exception to this section is made.

PART 3 - EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. The Contractor shall furnish and install all necessary discharge piping and obtain all permits, easements, rights-of-way, etc. to convey and discharge the water at a sufficient distance from the project area to eliminate recharge of the groundwater at the project site.

B. Water from dewatering operations will not be discharged where it will pond or cause damage to cropland or personal property due to the presence of standing or flowing water.

C. The Contractor shall be responsible for obtaining all necessary permits required for dewatering prior to the beginning of dewatering. The Contractor shall provide a plan for the discharge showing the discharge

location, energy dissipation, and water quality treatment. The discharge rate, location, and water quality will meet all local, State, and Federal requirements.

******END OF SECTION******

SECTION 31 37 00 - RIPRAP

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment, and performances of all work and services necessary or incidental to construct the riprap and geotextile fabric as indicated on the drawings or as specified herein.

1.2 METHODS OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items will be paid according to the referenced specification or as modified below:

1. Payment for riprap will be by the Ton based on actual weigh tickets. The amount bid will be compensation in full for all costs of excavating, removing, and disposing of, if necessary, all materials encountered in the course of riprap placement.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances will not be individually paid in the absence of a specific bid item for the work. The costs will be included in the unit price bid for the associated rip-rap items. Such items of work include but are not limited to:

1. Geotextile fabric filter.

2. Excavation is required to place rip-rap.

1.3 SPECIFICATION REFERENCES

A. The following referenced Specifications will apply to this Section:

1. MnDOT 2511.

2. MnDOT 3601.

3. MnDOT 3733.

B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.4 SUBMITTALS

A. No submittals for this section.

PART 2 - PRODUCTS

2.1 MATERIALS

A. The material to be used will be the class riprap and fine filter aggregate shown on the plans as specified in MnDOT 3601.

B. The geotextile fabric shall meet the requirements of MnDOT 3733, Type 4, unless otherwise shown on the plans.

PART 3 - EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. No exception to the referenced specification is made.

******END OF SECTION******

SECTION 32 15 00 - AGGREGATE SURFACING

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to construct the aggregate surfacing / shouldering as indicated on the drawings or as specified herein.

1.2 METHODS OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items shall be paid according to the referenced specification or as modified below:

1. No exception to the referenced specification is made.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances shall not be individually paid in the absence of a specific bid item for the work. The costs shall be included in the unit price bid for the associated aggregate surfacing items. Such items of work include but are not limited to:

1. Protecting existing improvements and previously accepted in-process improvements from damage.
2. Subgrade excavation, furnishing stabilizing aggregate, geotextile fabric installation, compaction, regrading and/or other efforts necessary to repair the subgrade after satisfying the rolling test and failing to protect the integrity of the subgrade.
3. The cost of all labor, equipment and materials necessary for meeting the testing requirements of field quality control, if required.
4. Furnishing and installing blue tops for aggregate surfacing.
5. Test rolling of the compacted aggregate surface using a fully loaded tandem axle truck.

1.3 SPECIFICATION REFERENCES

A. MnDOT 2118 shall apply to the construction of aggregate surfacing, except as modified herein.

B. MnDOT 2221 shall apply to the construction of aggregate shouldering, except as modified herein.

C. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.4 SUBMITTALS

A. Provide the following test results for each source of aggregate:

1. Two gradation tests One percent crushing test (only if requested by Engineer).
2. One aggregate quality test (only if requested by Engineer).

PART 2 - PRODUCTS

2.1 MATERIALS

A. Materials included here consist of new aggregate surfacing, Class 5. If additional rock is used to provide a coarser Class 5 gradation, the added materials must pass the Los Angeles Rattler (L.A.R.) test.

PART 3 - EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. At the end of each day the Contractor shall eliminate surface indentations, including those caused by sheeps foot rollers, tractor tires and tracked equipment, and roll the surface with a steel wheel or rubber tired roller.

B. The depth and class of aggregate surfacing to be constructed shall be as shown on the plans. Aggregate surfacing construction shall take place only after the subgrade or aggregate base condition and grade has been examined by the Engineer.

C. Existing aggregate surfacing shall be salvaged prior to commencing trenching activities and shall be restored after underground construction is completed.

D. Compaction of the aggregate surfacing courses shall be by the Quality Compaction Method.

E. The compacted aggregate surface shall be test rolled using a fully loaded tandem axel truck in a pattern approved by the Engineer. The stability of the compacted aggregate shall be considered adequate when the surface shows less than one ¾-inch of yielding or rutting after one pass, or as otherwise approved by the Engineer. Test rolling shall be incidental.

3.2 SOURCE QUALITY CONTROL

A. The Owner may arrange for and pay all costs associated with having the following testing performed:

1. One gradation test for each 500 tons or 275 cubic yards (CV) of each class of aggregate.

2. One percent crushing test (if required by the Engineer).

3. One aggregate quality test (if required by the Engineer).

B. Samples for testing shall be taken from material in stock at locations approved by the Engineer. All sampling methods shall be approved by the Engineer.

C. The Contractor shall cooperate fully with the individuals performing the tests.

******END OF SECTION******

SECTION 32 92 00 – TURF AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to turf restoration as indicated on the drawings or as specified herein.

B. A variety of different seeding mixtures may be utilized on this project. The Contractor shall refer to the plan for the locations of the different turf establishment areas.

C. Temporary seeding may be necessary during construction in erosion sensitive areas. The Contractor shall do temporary seeding work as specified herein, as required to comply with the MPCA permit, or as directed by the Engineer.

1.2 METHOD OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items shall be paid according to the referenced specification or as modified below:

1. All measurements for payments for turf establishment items shall be based on the Unit Price bid per item.

B. The furnishing and installing specific items and/or the performance of work under certain circumstances shall not be individually paid in the absence of a specific bid item for the work. The costs shall be included in the unit price bid for the associated seeding and sodding items. Such items of work include but are not limited to:

1. Complying with the Minnesota Pollution Control Agency (MPCA) – General Storm Water Permit for Construction Activity.
2. Application of starter fertilizer on all areas to be seeded shall be included in the price bid for seeding.
3. Subgrade preparation and topsoil placement as required on all areas shown on the plans.
4. Maintenance of newly seeded areas, as specified, include in the unit price for the associated items.
5. All re-work necessary to repair areas that do not grow.

1.3 SPECIFICATION REFERENCES

A. The following referenced Specifications will apply to this Section:

1. MnDOT 2574.
2. MnDOT 2575.
3. MnDOT 3876.
4. MnDOT 3877.
5. MnDOT 3878.
6. MnDOT 3881.
7. MnDOT 3882.
8. MnDOT 3884.
9. MnDOT 3885.

B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.4 SUBMITTALS

A. Seeding - Certificates of Compliance for seed mixture.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Seeding

1. The seed mixtures to be used shall be: 25-141 (Mesic General Roadside), unless otherwise specified on the plans or within the specifications.
2. All application rates for MnDOT mixes, except temporary seed, are 150 percent the specified rate.
3. Type 1 mulch shall consist of clean straw with no pasture hay at a rate of 2 tons/Ac.
4. Temporary seeding, if required shall use Seed Mixture – 110B Oats.
5. Temporary Stabilization in Ag. Areas over the pipe trench areas shall be completed by furnishing and installing type 1 mulch at a rate of 2 tons/AC.
6. Seed must be obtained from as close to the project site as reasonably possible with an emphasis on obtaining seed from the local ecotype region.
7. Source identified (Yellow tag) seed through the Minnesota Crop Improvement Association (MCIA) unless otherwise approved by the Engineer.
8. All seed shall be supplied as pure-live seed (PLS).
9. All seed and seed mixes shall conform to State seed requirements for noxious weed content.
10. All seed and seed mixes shall conform to State labeling requirements. For all species in the mix, the label and or invoice shall include the county of origin, and if from Canada, the province.

B. Imported Topsoil

1. Unless otherwise indicated on the plans, imported topsoil borrow for general use as a turf growing medium shall comply with MnDOT 3877.2.A.
2. Unless otherwise indicated on the plans, imported topsoil borrow for use as a plant growing medium in designated areas such as landscape beds shall meet the requirements of MnDOT 3877.2.B.

C. Fertilizer

1. Fertilizer shall be 10-10-10, type 3 (slow release).
2. Fertilizer shall be applied at a rate of 350 lbs/acre.

D. Rapid Stabilization

1. Rapid Stabilization, Method 4, shall be performed at the outlet and at other locations designated by the Engineer. The work shall include seeding and fertilizing at the rates above and covering the seeded area with Category 3 erosion control blanket.

PART 3 - EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. GENERAL

1. Prior to construction, the Owner, Engineer and Contractor shall observe the existing storm water outfall and discharge area and shall document the existing conditions. Upon completion of surface restoration (i.e., turf establishment), the storm water outfall and discharge area shall be observed and all increased sediment deposits shall be removed and disposed of by the Contractor. All increases in sediment deposits shall be considered to have originated from the project site.

2. Prior to construction, the Owner, Engineer and Contractor shall review the project to identify critical areas that could require rapid stabilization during the construction process and develop a plan to either mitigate disturbance to those areas or identify the methods of rapid stabilization most appropriate.

3. If Contractor fails to install and/or perform the appropriate rapid stabilization practices and immediate ditch seeding within 7 days following final slope shaping, the Contractor will **be subject to a $500 per calendar day deduction for non-compliance**.

4. The subgrade shall be shaped to the approximate contour of the finished surface. All construction debris shall be removed from the area prior to the placement of the topsoil. The subgrade shall be loosened with a disc or harrow to a depth of 6.0-inches prior to application of the topsoil.

5. The topsoil shall be shaped to the approximate contour of the finished surface, with a minimum depth of 12.0-inches. All construction debris, rocks and trash shall be removed from the area prior to seeding. The topsoil shall be loosened with a disc or harrow to its full depth prior to seeding.

6. The Contractor shall be responsible for providing water and maintenance for a period of 30 calendar days, or until final acceptance by the Owner, to firmly establish the seed. The term maintenance includes mowing, weed control and watering, as necessary. Failure to perform this work within 24-hours of notification of non-compliance may result in the Owner or Engineer arranging for completion of the work by others. A contract deduction will be made equal to the total of all costs to perform such work so arranged, including but not limited to, labor, materials, equipment and administrative costs.

7. Where dormant seeding is authorized, the maintenance period will be extended to include the first 30 calendar days after the beginning of the growing season. The beginning of growing season will be defined as bud burst.

B. SEEDING REQUIREMENTS

1. Turf establishment by seeding shall be done utilizing the various combinations of seed mixtures, fertilizing and mulching.

2. Areas prepared for seeding shall be free of rocks, debris and clumps of soil. The areas shall be graded uniformly, and vegetated areas shall be raked free of chunks exceeding 1-inch diameter.

3. Seed shall be applied with a drill seeder, unless otherwise approved by the Owner.

4. The Contractor shall furnish weight tickets documenting pounds of fertilizer placed, and pounds of seed placed. The seed tickets shall show individual plant species along with the percent purity and percent germination. The fertilizer tickets shall show mix proportions. The Contractor shall also furnish its QA/QC data to the Engineer.

5. Dormant seeding and snow seeding may be utilized in accordance with the referenced specification and technical memorandum, provided the final acceptance standards are met.

6. Use of seed mix carriers: In some cases, it can be beneficial to add seed mix carriers to mixes such as cracked corn, vermiculite or sand, the choice often depends on the type of seeder used. Manufacturers of seeding equipment should be consulting about carrier recommendations. The material used and rate applied must be approved by the Engineer prior to use. The cost of seed mix carriers will be incidental to the unit price bid for the seed.

7. Final acceptance of seeding will be based on an established growth of 6.0-inches with a uniform density to cover 70 percent of the designated area, free of weeds and bare spots. Any re-seeding necessary shall be performed at the Contractor's expense.

******END OF SECTION******

SECTION 33 05 06 - TRENCHING AND BACKFILLING

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment, and performances of all work and services necessary or incidental to the maintenance of utility service, trench excavation, bedding, and backfill necessary for the construction of underground utilities and structures, as indicated on the drawings or as specified herein.

1.2 DEFINITIONS

A. Excess Material - Material that is not needed to complete the earthwork balance.

B. Suitable Material - Sand, silty sand, or low plasticity clay soils with no organic content. The Engineer shall make the final determination as to what material will be considered suitable.

C. Unsuitable Material - Soil with organic content including topsoil, swamp deposits, peat, muck, or other material deemed by the Engineer to be unsuitable for fill or embankment construction.

D. Flexible Pipe Materials – For this specification section, flexible pipe materials will include the following:

1. Polyvinyl chloride (PVC) pipe – solid wall and profile wall pipe.
2. Polypropylene profile wall pipe.
3. High-density polyethylene pipe – solid wall and profile wall pipe.
4. Corrugated steel or aluminum pipe.

E. Rigid Pipe Materials – For this specification section, rigid pipe materials will include the following:

1. Reinforced concrete pipe.

1.3 METHOD OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items will be paid according to the referenced specification or as modified below:

1. Rock Excavation

(a) No extra payment will be made for rock excavation.

2. Items specifically identified in the Schedule of Unit Prices will be compensated following the description of measurement and payment contained in the section applicable to the individual item. No direct compensation will be granted for compliance with the provisions contained herein.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances will not be individually paid in the absence of a specific bid item for the work. The costs will be included in the unit price bid for the individual pipeline items associated with the stated specific item or work effort. Such items of work include but are not limited to:

1. Interference with other above and underground structures and utilities.
2. The removal and restoration, or protection of existing structures and utilities that are shown on the plans and for which there is no bid item for removing and restoring or working around the utility.
3. Any dewatering is necessary for construction.
4. Foundation materials placed instead of performing necessary dewatering.
5. Bulkheading of existing pipes to be abandoned in place.

6. Granular foundation, granular bedding, and granular encasement materials.
7. Granular foundation materials used as bedding materials in the specified bedding zone.
8. The removal and disposal of native materials that are unsuitable for bedding and/or backfill.
9. Providing and maintaining flow through the existing tiles.
10. The replacement of all material displaced due to shrinkage or loss during the excavation and backfilling operations.
11. The removal of excess materials above the original topography resulting from the additional volume created from pipe bedding, utility pipe, and/or underground structures.
12. Delays due to other utility conflicts that result during construction.
13. Protecting existing improvements and previously accepted elements of this construction from damage.
14. Protecting the inverts of other utility pipes from the accumulation of debris and soil, the removal of blockages that threaten to damage property, and/or the cleaning of both the newly constructed lines and the existing lines of all debris and soil that accumulated during the construction.
15. Providing temporary bypass pumping/control of stormwater flows around the construction zone.
16. The use of special construction techniques such as trench boxes, sheeting, shoring, etc., will be included in the price bid for the associated items being installed.
17. Compaction testing and compaction, if required, will be included in the price bid for the associated items being installed.
18. Shaping and grading of the construction zone so that farming operations can be easily accomplished, and surface drainage is restored following construction.
19. Off-site disposal of debris and any fees and permits for the disposal of those materials.

1.4 SPECIFICATION REFERENCES

A. CEAM 2600 will apply, except as modified herein.

B. MnDOT 2451 will apply, except as modified herein.

C. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.5 SUBMITTALS

A. Gradation Test Results for any granular borrow materials.

B. Two separate tests, as required in Source Quality Control provisions of individual sections contained herein, from material stockpiles of aggregates to be used on this project. These tests may be run by the Contractor or its supplier during aggregate production.

PART 2 - PRODUCTS

2.1 GRANULAR MATERIALS

A. Granular Foundation - Granular foundation (Rock) material will be rock material, with the gradation limits meeting MnDOT Course Filter Aggregate, 3149. This material shall be used for the granular bedding and granular encasement materials for the tile construction:

Granular Foundation	
Sieve Size	Percent Passing
2-inch	100
1½-inch	95 - 100
¾-inch	20 - 60
# 4	1 - 10

PART 3 - EXECUTION

3.1 EXCAVATION AND PREPARATION OF TRENCH

A. Interference and Protection of Underground Structures

1. If an existing utility is shown on the plans and there is no bid item for removing and restoring, or working around the utility, the Contractor shall be required to remove and restore, or protect the utility.

2. The inverts of existing tiles, culverts, drains, etc. will be protected during construction. The Contractor is responsible to inspect and clean, if necessary, all lines which have become compromised by the construction operations.

B. Excavation Limits and Requirements

1. The trench for all flexible pipe will be undercut 6.0-inches below the pipe barrel to permit the installation of granular bedding or foundation material.

2. The trench for all rigid pipe will be undercut 3.0-inches below the pipe barrel, or as shown in the bedding detail, to permit the installation of granular bedding or foundation material.

3. The Contractor shall install and operate a dewatering system to maintain all trenches free of water wherever necessary. The Contractor shall make their subsurface investigations and determine what dewatering methods to utilize to prevent such damage.

4. The Contractor shall be responsible for any damage to adjacent structures or buildings caused by the dewatering operations.

5. Use of granular foundation material in place of performing dewatering is permitted.

6. All excess excavated material will remain the property of the Owner and will be loaded, hauled, placed, and compacted at a site chosen by the Owner within 5 miles of the site. All unsuitable excess excavated material, except for topsoil will become the property of the Contractor and will be removed from the site and disposed of at a site secured by the Contractor.

3.2 INSTALLATION OF PIPE AND FITTINGS

A. The Contractor shall keep accurate records as to the location of the tile connections, utility crossings, etc. either constructed or encountered during the construction Measurements to lines shall be taken from the two nearest permanent structures (i.e., roads, intakes, etc.). Final payment for the project will not be made until the information is in the possession of the Owner.

B. When connection to an existing tile is required, the Contractor shall expose and verify the elevation of the existing tile before laying any pipe toward, or away from, the connection point. If the elevation of the existing tile does not match the elevation shown on the plans, the Contractor shall notify the Engineer, at which time the Engineer may adjust the proposed grades.

C. Connection and Assembly of Joints

1. For dual wall polyethylene pipe, a soil tight joint is required.

2. If a reinforced concrete pipe is used, the Contractor may at its discretion choose to wrap each joint with a geotextile filter fabric, as specified, rather than place mastic in the joint.

D. Bulkheading Open Pipe Ends

1. The Contractor shall furnish, install and maintain a temporary, water-tight plug adequately blocked in place to prevent flooding of the existing downstream tile system. The plug will be placed at the beginning of the project or the end of each working day at the end of the day's operation.

2. When flows are diverted from an existing tile to be abandoned in place, the Contractor will construct a water-tight plug on the open end of the abandoned pipe.

3. Permanent watertight plugs will be constructed with concrete grout with a thickness of not less than 1 pipe diameter.

3.3 BEDDING AND BACKFILLING OPERATIONS

A. Backfill material around all utilities will be compacted with hand machines. The maximum lift thickness will be 6.0-inches.

B. Flexible Pipe Materials

1. The pipe will be bedded and backfilled with granular foundation material compacted to 95 percent Standard Proctor Density or as recommended by the pipe manufacturer, whichever is denser, from 6.0-inches below the bottom of the pipe to 12.0-inches above the top of the pipe the full width of the trench. The Contractor shall bed and backfill the pipe as shown on the plan details.

2. Where the trench foundation is unstable and not suitable for bedding, the trench will be undercut until acceptable conditions are found. The Contractor shall then install compacted foundation material to meet the line and grade specified on the plan.

3. Select native material will be used as a trench backfill above the granular bedding up to the bottom of the subgrade except in those conditions where the top of the pipe is less than 12.0-inches from the bottom of the subgrade in which case granular material compacted to 100 percent Standard Proctor Density will be used as trench backfill the full width of the trench to the bottom of the subgrade excavation zone.

C. Rigid Pipe Materials

1. In ordinary or stable trench conditions, the bottom of the trench will be first excavated to a depth of approximately 15 percent of the outside pipe diameter below the established grade for the bottom of the pipe. Then the bottom of the trench will be further excavated to allow for the placement of 6.0-inches of granular bedding for a width of at least 60 percent of the outside diameter of the pipe. A pipe will be placed on the bottom of the pre-shaped excavated trench. The bottom of the excavated trench will be shaped to fit the circumference of the pipe up to 0.15 of the outside diameter of the pipe. The Contractor shall encase the pipe from the 0.15 outside diameter to the 0.60 diameter height of the pipe with granular material compacted to 95 percent Standard Proctor Density or as recommended by the pipe manufacturer, whichever is denser.

2. Where the trench foundation is unstable and not suitable for bedding, the trench will be undercut until acceptable conditions are found. The Contractor shall then install compacted foundation material to meet the line and grade specified on the plan.

3. Select native material may be used as trench backfill above the granular bedding up to the bottom of the subgrade except in those conditions where the top of the pipe is less than 12.0-inches from the bottom of the subgrade in which case granular material compacted to 100 percent Standard proctor Density will be used as trench backfill the full width of the trench to the bottom of the subgrade excavation zone.

D. Tile Intakes

1. All tile intakes, and miscellaneous structures will be backfilled with granular foundation rock and will be compacted with a hand-operated motorized compactor.

E. All trench backfill will be compacted in accordance with the Quality Compaction Method.

3.4 SOURCE QUALITY CONTROL

A. The Contractor shall arrange for having the following testing performed:

1. One gradation test per every 500 tons or 275 cu yd (CV) of granular materials.

3.5 FIELD QUALITY CONTROL

A. No exception to the referenced Specification is made.

*****END OF SECTION****

SECTION 33 41 16.11 - AGRICULTURAL DRAIN TILE

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to drain tile construction as indicated on the drawings or as specified herein.

1.2 METHOD OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items shall be paid according to the referenced specification or as modified below:

1. Drain Tile

(a) Measurement of main line drain tile shall be along the centerline of the pipe. Payment shall be at the unit price bid for the specified size, type and class of pipe, regardless of depth.

2. Tile Connections

(a) Measurement for the connection of existing lateral drain tile to the new main line tile where necessary shall be per each connection and paid for at the unit price bid.

(b) Since the number of necessary connections is unknown, the Owner reserves the right to increase or decrease the quantity by any amount with no adjustment in unit price.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances shall not be individually paid in the absence of a specific bid item for the work. The costs shall be included in the unit price bid for the drain tile items, as indicated. Such items of work include but are not limited to:

1. Excavating, salvaging, stockpiling, and replacing topsoil over the trench in agricultural and turf areas, include in the price bid for drain tile or drain tile repair.

2. Furnishing, installing and compacting granular foundation bedding and encasement material for the tile construction.

3. Furnishing and placing pipe joint sealer and geotextile fabric at pipe joints, include in the price bid for drain tile.

4. Furnishing and installing necessary bends, adapters and couplers, and the cutting and removing and/or realigning of the existing lateral tile encountered during main line construction, include in the price bid per LINEAR FOOT for drain tile.

5. Decommissioning the existing tile.

6. Marking the location of existing tiles with lathe so that the engineer can record the location on the plan.

7. Connection of existing lateral drain tiles to the new main tile, including the lateral tile, inserta tee, tees, wyes, bends and fittings, include in the price bid for lateral tile connection.

8. Performing the required deep tillage of all disturbed areas, include in the price bid for drain tile.

9. Salvaging, stockpiling and reuse of existing aggregate surfacing material at driveway and roadway crossings include in the price bid for drain tile.

10. Trench excavation, backfill and compaction, include in the price bid for drain tile.

11. Bulkheading of existing pipes to be abandoned in place, include in the price bid for drain tile.

12. Maintenance of an appropriate drain tile outlet during construction, include in the price bid for drain tile.
13. Dewatering or trench pumping necessary for drain tile construction, include in the price bid for drain tile.
14. Removing and replacing fences as necessary to construct the improvements, include in the price bid for drain tile.
15. Removing and disposing of miscellaneous trees and brush necessary to construct the improvements, include in the price bid for drain tile.
16. Delays due to other utility conflicts, which result during the course of construction, include in the price bid for drain tile.
17. Protecting existing improvements from damage include in the price bid for drain tile.
18. Protecting the inverts of other pipes from the accumulation of debris and soil, the removal of blockages which threaten to damage property, and/or the clearing of both the newly constructed lines and the existing lines of all debris and soil which accumulated during construction, include in the unit price bid for drain tile.
19. Interference and protection of underground structures and utilities include in the price bid for drain tile.
    (a) The removal and restoration, or protection of existing utilities for which there is no bid item for removing and restoring, or working around the utility.
    (b) The utility information included on the Plan may not be complete and is furnished from information supplied by various utility companies as an indication of the presence of utility lines in the vicinity of construction. The Contractor shall contact the utility companies to determine the extent and exact location of their facilities. In the event of accidental damage to any such facility, the Contractor shall immediately notify the utility company and cooperate fully in whatever is necessary to repair such facility or restore service.
20. Providing temporary bypass pumping / control of storm water flows around the service line if needed.

1.3 SPECIFICATION REFERENCES

A. Reference Section 02320 of these Specifications for trench excavation, bedding and backfill, except as modified herein.

B. CEAM Specification No. 2621 shall apply to construction of pipe sewers/drain tile, except as modified herein.

C. Reference Section 33 05 06 “Trenching and Backfilling” of this Project Manual, except as modified herein.

D. MnDOT 2501 shall apply to the construction of pipe culvert, outlet pipe and appurtenance items, except as modified herein.

E. MnDOT Specification No. 2503 shall apply to measurement and payment of pipe sewers/drain tile, except as modified herein.

F. MnDOT Standard Plates Manual with latest revisions.

G. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

PART 2 - PRODUCTS

2.1 DRAIN TILE

A. Polyethylene Pipe

1. Dual wall perforated and non-perforated corrugated polyethylene pipe shall conform to the requirements of ASTM F2648 with smooth interior and annular exterior corrugations. Joints shall be bell and spigot meeting ASTM F2648 and shall be soil tight. The gasket shall meet the requirements of ASTM F477. Pipe shall be perforated or non-perforated as indicated on the plans. Perforated pipe shall include micro perforations/slots to avoid granular infiltration into the pipe.
2. Single wall corrugated polyethylene pipe shall conform to the requirements of ASTM D3350.
3. Fittings for lateral tiles and intakes shall conform to ASTM 2306. Joints shall be bell and spigot soil tight.
4. Connections of private tiles and unknown laterals up to 18-inches in diameter shall use inserta-tee connectors or approved equal.
5. Connections of known laterals as shown on the plans, and private tiles and unknown laterals greater than 18-inches in diameter shall use fabricated wye fittings.
6. No internal push in fittings will be allowed.

2.2 CS TILE

A. Corrugated Steel Pipe

1. No exception to the referenced specification is made.

2.3 HEAVY DUTY DRAIN TILE

A. Polypropylene Pipe

1. Polypropylene Pipe shall conform to the requirement of ASTM F2736 and ASASHTO M330. Joints shall be bell and spigot meeting ASTM F2881 and shall be silt tight. The gasket shall meet the requirements of ASTM F477. Pipe shall be non-perforated.
2. Fittings for bends and known lateral tile connections shall be bell and spigot meeting ASTM F2764. Fittings shall be bedded and encased with foundation aggregate.
3. Connections of private tile lines and unknown laterals shall use inserta-tee connectors or approved equals and shall be bedded and encased with foundation aggregate.

2.4 RC TILE

A. Reinforced Concrete Pipe (MnDOT 3236)

1. No exception to the referenced specification is made.

2.5 RC APRON

1. No exception to the referenced specification is made.

2.6 GEOTEXTILE FABRIC

A. MnDOT 3733, Type I, non-woven for use in wrapping joints in drain tile joints (minimum 24-inch width).

B. MnDOT 3711, Type I knit sock for use as a sock on the perforated polyethylene drain tile. Overlap joints by 12 inches.

2.7 GRANULAR MATERIAL

A. No exception to the referenced specification is made.

PART 3 - EXECUTION

3.1 INSTALLATION OF PIPE AND FITTINGS

A. Polyethylene Drain Tile

1. All piping shall be installed in accordance with the details in the Plans. Foundation aggregate (Rock) shall be installed around the pipe as noted. All fittings shall be encased in Granular Foundation rock.
2. Dual Wall Polyethylene Drain Tile may be installed by the "spoon method," where the soil is shaped to fit the outside diameter of the pipe provided the following conditions are met:
   (a) The soil conditions are adequate to provide support and will stand without sloughing.
   (b) The pipe manufacturer or supplier shall provide evidence that the pipe can be satisfactorily installed by this method, with a recommendation on the maximum depth at which this installation is permissible.
   (c) Specific installation procedures are provided, specifying the maximum diameter of the shaped trench and the height to which the shaping needs to extend, foundation aggregate material shall be furnished and installed around and to the top of the pipe as shown on the details.
   (d) The pipe manufacturer provides a letter or other document which verifies that the standard warranty for the pipe will be valid under this installation method.
   (e) All voids around the outside of the pipe shall be filled with foundation aggregate material.
   (f) The spoon shall extend above the mid-point of the pipe by approximately 3 inches.
3. The Contractor shall install an intake and tile markers on both sides of the road at each road crossing at the right-of-way.

B. Equipment

1. The use of rubber-tired earth moving equipment shall not be permitted on the agricultural fields until after the topsoil has been stripped except for exploratory excavations. Topsoil striping shall be performed with an excavator. Backfill and leveling shall be accomplished with dozers.

C. Bulkheading Open Pipe Ends

1. When flows are diverted from an existing drain tile to be abandoned in place, the Contractor shall construct a water-tight plug on the open ends of the abandoned tile. The plugs shall be constructed with concrete grout and with a thickness of not less than 1 pipe diameter.

D. Backfilling

1. The initial lift of backfill, from the top of the pipe to 2' higher, shall be gently placed with a backhoe to avoid placing rocks on the pipe and to avoid impacting the pipe.

E. Utility Crossings

1. The Utility companies shall be notified prior to constructing a tile across their utility line. The Contractor shall follow any special requirements when working around the utility line.

F. Salvage and Reinstall Fence

1. Salvage existing fences where shown on the plans and/or required for the construction of the project, including posts and hardware. Replace when construction is completed, including new posts and wire if needed.

G. Decommissioning Existing Tile

1. All existing laterals and private tile that are connected to the existing tile shall be reconnected to the new tile. Where the new tile alignment is substantially in the same location as the existing tile, the existing tile shall be removed from service by breaking the pipe at a minimum of 200-foot intervals. Where the new tile alignment deviates from the existing tile, the existing tile shall be connected to the new tile on the downstream end and plugged at the upstream end when the new alignment and existing alignment once again converge.

3.2 DRAIN TILE CONNECTIONS

A. Connect to Main Tile

1. When connection to an existing tile or concrete main is made, the Contractor shall expose and verify the elevation of the existing tile prior to laying any tile to, or from, the connection point. If the elevation of the existing tile does not match the elevation shown on the plans, the Contractor shall notify the Engineer, at which time the Engineer may adjust the proposed grades.
2. When connecting to a plastic main appropriate fittings shall be furnished and installed for the connection so that the main tile does not need to be cut for the connection.
3. If there is a vertical elevation difference of more than 2 feet between the existing tile and the new tile connection, the existing tile shall be reconstructed upstream to a point where the tile can be laid at a 45-degree slope to the connection. The tile shall rest on undisturbed soil or soil which has been compacted to a density of the adjacent soil.

3.3 ROADWAY AND DRIVEWAY CROSSINGS

A. Where the proposed tile crosses an aggregate surfaced roadway or driveway, the crossing shall be accomplished by open cutting of the surface.

B. Prior to crossing of the roadway or driveway, all existing aggregate surfacing material over the full width of the trench shall be salvaged and stockpiled.

C. The salvaged aggregate material shall be utilized in the upper portions of the trench backfill in the roadway areas or for temporary surfacing as directed by the Engineer.

D. Signage and maintenance of traffic shall be as specified elsewhere herein.

******END OF SECTION******

SECTION 33 42 00.01 – SURFACE WATER INTAKES

PART 1 - GENERAL

1.1 SUMMARY

A. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to intake construction as indicated on the drawings or as specified herein.

1.2 METHOD OF MEASUREMENT AND PAYMENT

A. Measurement and compensation for the following items shall be paid according to the referenced specification or as modified below:

1. Surface Water Intake

(a) Measurement for Surface Water Intake shall be by the EACH. The amount bid shall be compensation in full for all costs of furnishing and installing the intake, for each designated size, the pipe to connect the intake to the main, inserta-tee and any fitting, as shown on the detail in the plan set.

(b) The surface water intakes at roadway right of ways shall have a Hickenbottom risers.

(c) The surface water intakes in the fields shall be low profile intakes as shown on the plans.

B. The furnishing and installing of specific items and/or the performance of work under certain circumstances shall not be individually paid. The costs shall be included in the unit price bid for the intake items, as indicated. Such items of work include but are not limited to:

1. Locating and connecting to drain tile, include in the price bid for Surface Water Intakes.
2. The costs of furnishing bends and adapters include in the price bid for Surface Water Intakes.
3. Trench excavation, backfill and compaction, include in the price bid for Surface Water Intakes.
4. Furnishing and installing a Hickenbottom riser, or approved equal, on the intake.
5. Furnishing and installing an Agri-Drain beehive inlet grate or approved equal.
6. Furnishing and installing clean foundation aggregate for the blind/rock intakes and a cap on top of the riser pipe.
7. Furnishing and installing a tile and field marker at each intake.

1.3 SPECIFICATION REFERENCES

A. Reference Section 02320 of these Specifications for trench excavation, bedding and backfill, except as modified herein.

B. MnDOT Standard Plates Manual with latest revisions.

C. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

PART 2 - PRODUCTS

2.1 PIPE AND FITTINGS

A. Dual Wall polyethylene pipe as specified in Section 33 41 16.11 “Agricultural Drain Tile” of this Project Manual.

B. Hickenbottom tee and riser sections or approved equal.

C. Agri-Drain beehive inlet grate or approved equal.

D. Geotextile Fabric for surface water intakes shall be Mn/DOT 3733, Type II, non-woven for use in wrapping joints in pipe.

PART 3 - EXECUTION

A. Surface water intake locations and sizes will be staked by the Engineer as the project progresses. Surface water intakes shall be constructed within two days following the tile construction.

B. The Contractor shall assure that surface water always has an outlet into either the existing tile system, or once it is constructed, the new tile. If the Contractor fails to provide such an outlet, any claims for crop damages will be deducted from payments to the Contractor.

C. Additional grading shall be performed around the intakes to permit farming operations around the intakes.

******END OF SECTION******

Exhibit 9: Drain Tile Type Map

JD 15 BR M37 IMPROVEMENTS

RENVILLE COUNTY, MN

PERFORATED DRAIN TILE MAP

NOVEMBER 2025

BOLTON & MENK

14-00180-00 MORITZ/DALE & JANICE
14-00180-00 MORITZ/DALE & JANICE
14-00181-00 TAYLOR/MARK & LISA
22-01260-00 MELBERG/CHARLES & BARBARA/TR
22-01290-00 NOVOTNY/STEVEN G & VICKY
22-01291-00 NOVOTNY/STEVEN G & VICKY
22-01310-00 WALTER/CAROL E/&
22-01240-00 DASCHER/STEVEN R/&
22-01250-00 KAPPING/KIM & MARY
22-01345-00 WALTER/CAROL E/&
22-01340-00 WALTER/CAROL E/&
22-01370-00 WALTER/ALLEN J & MARIE
22-01350-00 WALTER/DORIS E./TRUSTEE
22-01540-00 SCHMALZ/DALE & CHERYL
22-01570-00 SCHMALZ/DALE & CHERYL
22-01571-00 SCHMALZ/DALE & CHERYL
22-01610-00 SCHMALZ/LARRY & ROXANNE
22-01612-00 SCHMALZ/LARRY & ROXANNE
22-01320-00 MELBERG/MICHAEL
22-02420-00 MELBERG/MICHAEL
22-02415-00 SCHMALZ/LARRY & ROXANNE
22-01330-00 SCHMALZ/LARRY & ROXANNE
22-01280-00 KUBESH/ERIC/TRUSTEE
22-01630-00 KUBESH/ERIC/TRUSTEE
22-01621-00 KRUMREY/ BRADLEY & SUSAN
22-01620-00 TAYLOR/MARK & LISA
22-01650-00 MELBERG/CHARLES & BARBARA/TR
22-01270-00 KUBESH/ERIC/TRUSTEE
22-02410-00 PORTER/ ANTHONY
22-01271-00 NIES/ALEX C
14-00160-00 STARRETT/DOUGLAS E. & SHARON
22-01300-00 TAYLOR/MARK & LISA

Br M46
Br M45
Br M43
Br M44
Br M75
Br M77
Br M42
Br M41
Br M78
Br M40
Br M39
Br M38
Br M79
JD 15 - Br M37

5" TILE
6" TILE

WATERSHED BOUNDARY
698 ACRES

EXISTING TILE
PROPOSED TILE

530TH STREET
CR 54 / 520TH STREET
CR 8 / 527TH STREET

7
8
17
18

JD 15

N

HORZ. SCALE
0 400 800
FEET

DRAIN TILE LEGEND

- PROPOSED DRAIN TILE, NON-PERFORATED
- PROPOSED DRAIN TILE, PERFORATED
- EXISTING DRAIN TILE

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Exhibit 10: Petition for Improvement

PETITION FOR IMPROVEMENT OF DRAINAGE SYSTEM
JUDICIAL DITCH NO. 15 BRANCH M-37

TO: THE BOARD OF MANAGERS OF THE BUFFALO CREEK WATERSHED DISTRICT AS THE DRAINAGE AUTHORITY FOR JUDICIAL DITCH NO. 15 (RENVILLE, SIBLEY, MCLEOD COUNTIES)

Petitioners respectfully represent, state and request the following:

1. **Jurisdiction.**

The undersigned Petitioners constitute: (1) at least 26% of the owners of the property affected by the proposed improvement; (2) at least 26% of the owners of property that the proposed improvement passes over; (3) the owners of at least 26% of the property area affected by the proposed improvement; or (4) the owners of at least 26% of the property area that the proposed improvement passes over.

2. **Designation of Drainage System.**

This Petition requests the improvement of the drainage system known by and designated as Judicial Ditch No. 15 located in Renville County, Minnesota.

3. **Need for Improvement.**

The drainage system has insufficient capacity or needs enlarging or extending to furnish sufficient capacity or a better outlet. The drainage system is out of repair and the improvement petitioned for herein is for a separable portion of the drainage system. Therefore, a portion of the cost may be assessed as a repair.

4. **Description of Proposed Improvement.**

The proposed improvement would consist of improving Branch M-37 of JD 15, along with certain tributary branches of Branch M-37 of JD 15. These branches currently consist of buried tile. These branches would be enlarged and their capacity increased to meet the maximum permitted drainage coefficient currently in effect, which Petitioners understand to be 3/8th of an inch drainage coefficient. The improvement would occur along Branch Nos. M-37, M-38, M-39, M-40, M-41, M-42, M-43, M-45, M-46, M-75, M-76, M-77, and M-78 (all tributaries of Branch M-37 of JD 15) along the entire length of such branches to the point where Branch M-37 outlets into the open ditch portion of JD 15 Branch M. A map showing the proposed improvement is attached hereto as **Exhibit A**.

Set forth below is a list of the 40-acre tracts or government lots that the proposed improvement would pass over, together with the names and addresses of the owners of those tracts; to-wit:

	Owner	Address	PID	Description	Sec	Twp	Rge	County
1	Kim & Mary Kapping	PO Box 141 Newfolden, MN 56738	22-01250-00	SW ¼ NE ¼	7	115N	31W	Renville
2	Kim & Mary Kapping	PO Box 141 Newfolden, MN 56738	22-01250-00	SE ¼ NE ¼	7	115N	31W	Renville
3	Charles & Barb Melberg Trusts	55351 Co Rd 38 Buffalo Lake, MN 55314	22-01260-00	Gov. Lot 5	7	115N	31W	Renville
4	Charles & Barb Melberg Trusts	55351 Co Rd 38 Buffalo Lake, MN 55314	22-01260-00	Gov. Lot 6	7	115N	31W	Renville
5	Marlys A Kubesh Trust	2160 Beacon Drive SW Rochester, MN 55902	22-01270-00	Gov. Lot 10	7	115N	31W	Renville
6	Marlys A Kubesh Trust	2160 Beacon Drive SW Rochester, MN 55902	22-01280-00	Gov. Lot 15	7	115N	31W	Renville
7	Marlys A Kubesh Trust	2160 Beacon Drive SW Rochester, MN 55902	22-01280-00	Gov. Lot 16	7	115N	31W	Renville
	Larry & Roxanne Schmalz	81635 530th Street Buffalo Lake, MN 55314	22-01330-00	Gov. Lot 16	7	115N	31W	Renville
8	Larry & Roxanne Schmalz	81635 530th Street Buffalo Lake, MN 55314	22-01330-00	SW ¼ SE ¼	7	115N	31W	Renville
9	Larry & Roxanne Schmalz	81635 530th Street Buffalo Lake, MN 55314	22-01330-00	SE ¼ SE ¼	7	115N	31W	Renville
10	Steven G & Vicky Novotny	82371 Co Rd 8 Buffalo Lake, MN 55314	22-01291-00	Gov Lot 7	7	115N	31W	Renville
11	Loren Walter Disclaimer Trust	82382 Co Rd 8 Buffalo Lake, MN 55314	22-01310-00	Gov. Lot 8	7	115N	31W	Renville
12	Michael Melberg	55193 Co Rd 38 Buffalo Lake, MN 55314	22-01320-00	Gov. Lot 9	7	115N	31W	Renville
13	Michael Melberg	55193 Co Rd 38 Buffalo Lake, MN 55314	22-01320-00	NW ¼ SE ¼	7	115N	31W	Renville
14	Michael Melberg	55193 Co Rd 38 Buffalo Lake, MN 55314	22-01320-00	NE ¼ SE ¼	7	115N	31W	Renville
15	Larry & Roxanne Schmalz	81635 530th Street Buffalo Lake, MN 55314	22-01612-00	NW ¼ NE ¼	18	115N	31W	Renville
16	Mark & Lisa Taylor	79219 Co Rd 8 Buffalo Lake, MN 55314	22-01620-00	Gov. Lot 1	18	115N	31W	Renville
17	Mark & Lisa Taylor	79219 Co Rd 8 Buffalo Lake, MN 55314	22-01620-00	Gov. Lot 8	18	115N	31W	Renville
18	Marlys A Kubesh Trust	2160 Beacon Drive SW Rochester, MN 55902	22-01630-00	Gov. Lot 2	18	115N	31W	Renville

5. Public Utility and Health.

The proposed improvement will be of public utility and will promote the public health.

6. **Agreement by Petitioners.**

The undersigned Petitioners have been informed and understand that they may not withdraw as a petitioner at any time after this Petition is accepted by the drainage authority, except with the written consent of all other Petitioners on the filed Petition. Also, the undersigned Petitioners acknowledge and agree that they will pay all costs and expenses that may be incurred if the improvement proceedings are dismissed.

7. **Cost Bond.**

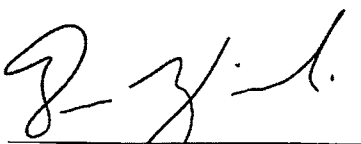
One or more petitioners shall cause a bond to be filed or a check to be delivered in the amount of at least $10,000.00 payable to the drainage authority. The bond or payment will be conditioned to pay the costs incurred if the proceedings are dismissed or if a contract is not awarded to construct the proposed improvement described in the petition.

WHEREFORE, the Petitioners respectfully request the following:

a. That the drainage authority accept this Petition, review it and determine that it is legally adequate; and

b. That the drainage authority appoint an engineer for purposes of the proposed improvement and direct the engineer to prepare an engineer's preliminary report for the proposed improvement, including allowing the engineer to analyze other potential routes for the proposed improvement and whether separable maintenance may be employed. Petitioners request that **ISG, Inc. Engineers** be appointed as project engineers because of their familiarity with the feasibility study previously completed for this project.

Dated: October 1, 2024



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Phone: 507-354-3111

[Signature pages to follow]

SIGNATURE PAGE FOR
PETITION FOR IMPROVEMENT TO JUDICIAL DITCH NO. 15 BRANCH M-37
(RENVILLE, SIBLEY, MCLEOD COUNTIES, MINNESOTA)

Name of Petitioner(s) (please print or type):

Michael Melberg

Ownership (check one):

_____ Individual
_____ Co-Owners (# of co-owners: _____)
_____ Partner (name of partnership: _____)
_____ Corporation or limited liability company (name of corporation or LLC: _____)
_____ Trust (complete name of trust: _____)
_____ Other (explanation: _____)

Statement of Authority:

The undersigned states and represents that if he or she is executing in a representative capacity, he or she has the authority to execute on behalf of the respective partnership, corporation, limited liability company, trust or other such entity.

The above-named Petitioner(s) owns the following tract(s) which the proposed improvement will pass over or which is affected by the proposed improvement.

Tract Description	Section	Township	Range	County

Dated: 8-2-2024 _____
(signature)

Dated: _____ _____
(signature)

Dated: _____ _____
(signature)

SIGNATURE PAGE FOR
PETITION FOR IMPROVEMENT TO JUDICIAL DITCH NO. 15 BRANCH M-37
(RENVILLE, SIBLEY, MCLEOD COUNTIES, MINNESOTA)

Name of Petitioner(s) (please print or type):

Barbara Melberg

Charles Melberg

Ownership (check one):

____ Individual
__✓_ Co-Owners (# of co-owners: 2)
____ Partner (name of partnership: _____)
____ Corporation or limited liability company (name of corporation or LLC: _____)
____ Trust (complete name of trust: _____)
____ Other (explanation: _____)

Statement of Authority:

The undersigned states and represents that if he or she is executing in a representative capacity, he or she has the authority to execute on behalf of the respective partnership, corporation, limited liability company, trust or other such entity.

The above-named Petitioner(s) owns the following tract(s) which the proposed improvement will pass over or which is affected by the proposed improvement.

Tract Description	Section	Township	Range	County

Dated: 9-18-24 Barbara Melberg (signature)

Dated: 9-18-24 Charles Melberg (signature)

Dated: _____ _____ (signature)

SIGNATURE PAGE FOR
PETITION FOR IMPROVEMENT TO JUDICIAL DITCH NO. 15 BRANCH M-37
(RENVILLE, SIBLEY, MCLEOD COUNTIES, MINNESOTA)

Name of Petitioner(s) (please print or type):

Steve Novotny

Vicky Novotny

Ownership (check one):

_____ Individual
_____ Co-Owners (# of co-owners: _____)
_____ Partner (name of partnership: _____)
_____ Corporation or limited liability company (name of corporation or LLC: _____)
_____ Trust (complete name of trust: _____)
_____ Other (explanation: _____)

Statement of Authority:

The undersigned states and represents that if he or she is executing in a representative capacity, he or she has the authority to execute on behalf of the respective partnership, corporation, limited liability company, trust or other such entity.

The above-named Petitioner(s) owns the following tract(s) which the proposed improvement will pass over or which is affected by the proposed improvement.

Tract Description	Section	Township	Range	County

Dated: _____ _____ (signature)

Dated: _____ _____ (signature)

Dated: _____ _____ (signature)

SIGNATURE PAGE FOR
PETITION FOR IMPROVEMENT TO JUDICIAL DITCH NO. 15 BRANCH M-37
(RENVILLE, SIBLEY, MCLEOD COUNTIES, MINNESOTA)

Name of Petitioner(s) (please print or type):

Larry Schmalz

Roxanne Schmalz

Ownership (check one):

___ Individual
X Co-Owners (# of co-owners: ____)
___ Partner (name of partnership: _____)
___ Corporation or limited liability company (name of corporation or LLC: _____)
___ Trust (complete name of trust: _____)
___ Other (explanation: _____)

Statement of Authority:

The undersigned states and represents that if he or she is executing in a representative capacity, he or she has the authority to execute on behalf of the respective partnership, corporation, limited liability company, trust or other such entity.

The above-named Petitioner(s) owns the following tract(s) which the proposed improvement will pass over or which is affected by the proposed improvement.

Tract Description	Section	Township	Range	County

Dated: 9-14-24

Larry Schmalz
(signature)

Dated: 9-14-24

Roxanne Schmalz
(signature)

Dated: _____

_____
(signature)

EXHIBIT A
MAP OF PROPOSED IMPROVEMENT

Renville COUNTY
Service · Stewardship · Shared Responsibility

JD 15 Br-37 Tile Main and Tile Branch Overview

- Judicial Ditch 15
- Tile Petitioned to be Improved
- Section
- Township
- Tax Parcel

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