

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
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Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

January 25, 2018

TO: Hamilton County Drainage Board

RE: William Krause Drain, Krause Drain Reconstruction Phase 2

Attached are the petition, plans, schedule of assessments and drainage shed map, for the William Krause Drain Phase 2. This petition was filed by the Town of Sheridan on December 15, 2016. The petition was referred to the Surveyor for report by the Drainage Board December 21, 2016. (See Hamilton County Drainage Board Minutes Book 17, page 237.) I have reviewed the petition and found it to be in proper form.

I have made a personal inspection of the land described in the petition. Upon doing so, I believe that the drain is practicable, will improve the public health, benefit a public highway and be of public utility; and that the costs, damages and expenses of the proposed drain will probably be less than the benefits accruing to the owners of land likely to be benefited.

The attached plans were prepared for the Hamilton County Drainage Board by Banning Engineering. The plans are dated January 25, 2018, Project Number 11194KRUS.

The proposed project will improve the drainage in the southeastern portion of Sheridan. The drainage facilities will be placed in the existing drainage easement of the William Krause Drain.

The William Krause Drain is an existing tiled drain on the south and southeast side of the Town of Sheridan consisting of the Main Arm, Arms 1, 2, 3 and 4 and the Jacob Boyer Arm.

The drain is located in Adams Township, Section 32, Township 20 North, Range 3 East and Section 5, Township 19 North, Range 3 East. The drain starts approximately 920-feet east of the intersection of Jarit Drive and East 2nd Street and runs generally south and west into the south and southeast portion of the Town of Sheridan.

History

The original drain petition was by Joseph Furnas and was established as the West Cicero Ditch in 1877. [See Hamilton County Drainage Board Minutes Book 4, page 129]. In 1892, George Symonds

petitioned for the drain consisting of a main drain and six arms. [See Hamilton County Drainage Board Minutes Book 4, page 129]

Many of the arms became other drains through the years including the Benton-Hinesley Drain, the William Krause Drain, and the George Beam Drain. In 1919-1920, approximately 2,215 feet of the George Symonds Drain was tiled as part of the William Krause Drain. [See Hamilton County Drainage Board Minutes Book 4, page 130].

The Jacob Boyer Drain was constructed and attached to the William Krause Drain in 1923.

The first noted significant repair on the William Krause Drain occurred in 1945.

In 1952 work was completed on the downstream headwall outlet. In 1952 the Town of Sheridan petitioned for a reconstruction/relocation of the drain along SR 47 near Park Avenue and Malott Street. 250-feet of the drain was relocated from the north side of SR 47 to the south side of SR 47. This work added 100-feet to the drain. [Clerk of Circuit Court Hearing June 15, 1953 Cause No. A9280].

The Jacob Boyer Drain and the William Krause Drain were officially separated from the George Symonds Drain and combined into the William Krause Drain at the August 22, 1994 meeting of the Drainage Board. [See Hamilton County Drainage Board Minutes Book 3, pages 275-276] The William Krause Drain was placed on maintenance and classified as an Urban Drain at the August 22, 1994 meeting of the Drainage Board. [See Hamilton County Drainage Board Minutes Book 3, pages 275-276]

The Main Arm runs from where the tile discharges to the George Symonds Drain southwesterly crossing under SR 38 and then south to 8th Street to the Jacob Boyer Arm from the south/east. The Main Arm continues west along 8th Street to South Bailey Street where it then runs south along South Bailey Street to State 47 where it turns to the west.

At South Malott Avenue, the drain crosses to the south side of State Road 47 and then crosses back to the north side at South Park Avenue.

The drain then continues west to the alley between Main and Ohio Streets to the start of Arm 1.

The Main Arm consists of the following: 3,985-LF of 24" tile installed in 1920; 90-LF of 21" tile installed in 1953; 250-LF of 18" tile installed in 1953; 50-LF of 15" tile installed in 1953; 462-LF of 12-inch tile installed in 1920 and 478-LF of 8" tile installed in 1920.

Arm 1 stubs to the north from the Main Arm at the alley between Main and Ohio Streets a distance of 66-feet and is a 6-inch tile installed in 1920.

Arm 2 stubs to the north at the alley between Main and Georgia Streets a distance of 165-feet and is a 6-inch tile installed in 1920.

Arm 3 stubs to the south from the Main Arm on the west side of Georgia Street a distance of 660-feet and is an 8-inch tile installed in 1920.

Arm 4 stubs to the south a distance of 50-feet just east of Malott Avenue and is an 18-inch tile installed in 1920.

The Jacob Boyer Arm consists of 224-LF 12-inch, 26-LF 12-inch, 369-LF 10-inch, 162-LF 8-inch, 231-LF 8-inch, 48-LF 8-inch all installed in 1924. The total length of the arm is 1,060-feet.

A project approved by the Drainage Board at the October 23, 2017 meeting of the Drainage Board (the Contract being signed at the November 13, 2017 meeting of the Drainage Board) [See Hamilton County Drainage Board Minutes Book 17, Page 517 and Page 537] is presently under construction and will reconstruct the William Krause Drain downstream of Station 30+50 of the 1920 stationing. Please refer to the report dated May 5, 2017 presented to the Drainage Board at the meeting on June 26, 2017 [See Hamilton County Drainage Board Minutes Book 17, Pages 384-391] for a detailed description of this project. In this report, this project is referred to as the Phase 1 Project.

A project approved by the Drainage Board at the June 26, 2017 meeting of the Drainage Board is presently under construction and will reconstruct the William Krause Drain between Stations 23+38 and 30+50 of the 1920 stationing. Please refer to the report dated May 5, 2017 presented to the Drainage Board at the meeting on June 26, 2017 for a detailed description of this project. In this report, this project is referred to as the OCRA project. [See Hamilton County Drainage Board Minutes Book 17, Pages 380-383).

Existing Condition

A 2013 hydraulic study for the George Symonds and William Krause watershed by Banning Engineering identified that the hydraulic capacity of the 24" tile portion of the William Krause Drain is 10 cubic feet per second and is only adequate to convey the runoff from a 1% frequency storm event. The study identified that without significant upsizing or diversion, flooding in the area served by the Main Arm of the William Krause Drain generally between Fanning Street and Hudson Street and north of 8th Street to SR 38 would be expected to continue. This area experienced significant flooding on June 20, 2011 with water overtopping SR 38 near the Apostolic Faith Church.

Reconstruction Project Phase 2

Phase 2 of this project will provide a detention facility between Stations 6+00 and 0+68 of the Phase 1 William Krause Drain Project. The area between Stations 0+68 and 0+00 of the Phase 1 Project will be a 30-foot wide spillway. This detention facility will store the runoff generated from the William Krause watershed and release the runoff at a rate that the George Symonds Drain can accept. The detention facility will be a wet bottom pond and will be an expansion of the open ditch being constructed with the Phase 1 Project. The normal pool for the pond is 926.70 and the 100-year elevation is 934.50. The emergency spillway will have an elevation of 932.50 and will be protected with an erosion control blanket as shown in the plans. The pond is controlled by an outlet control structure consisting of 150-LF of 36" RCP at a 0.1% slope. The volume of storage provided by the pond between normal pool and the spillway elevation is approximately 30 acre-feet. Soil from the excavation of the detention facility will be spread to the south and east of the open ditch constructed with the Phase 1 Project and the detention facility constructed with Phase 2. Two rock chutes are necessary for the runoff from the watershed from the Fox property south and east of the project area draining down the bank of the detention facility and the open ditch being constructed with the Phase 1 Project. One rock chute (per Detail 1 on Sheet C502) is located on the south side of the detention facility at approximately Station 3+50 of the Phase 1 Project. A second rock chute (per Detail 2 on Sheet C502) is located on the east side of the open ditch being constructed with the Phase 1 Project at approximately Station 17+00 of

the Phase 1 Project. A ford crossing will also be constructed across the open ditch being constructed with the Phase 1 Project. The ford crossing is located at approximately Station 6+25 of the Phase 1 Project which is approximately 130 feet upstream of the detention facility.

Changes to the William Krause Drain

This project will result in the following changes to the William Krause Drain. The final length of the William Krause Drain will not be able to be determined until all phases of this project are complete and the as-built drawings are submitted.

1. Eliminate 532-LF of the open ditch constructed with the Phase 1 Project between Stations 6+00 and 0+68.
2. Add detention facility between Stations 6+00 and 0+68 of the Phase 1 Project.
3. Add a spillway between Stations 0+68 and 0+00 of the Phase 1 Project.
4. Add 150-LF of 36" RCP with two End Sections as the primary outlet control structure for the pond. This pipe is parallel to the main alignment of the Phase 1 Project.

Easements

Regulated drain easement has been secured across the following parcels for this project.

1. Parcel # 01-01-32-00-00-021.000. Fox, Phyllis A, Cynthia L Ogle & Frederick L Fox Jr jt/rs
A temporary easement for the wasting of the spoil from the pond excavation was also obtained on the above mentioned tract.
2. Parcel 01-01-32-00-00-017.000. Pickett, Clifford D. & Dortha P. This easement is for the transfer or any excess spoil to the future Lamong Road right of way and for future drainage access for the future road.

Project Cost

The estimated cost of the project is as follows:

COST ESTIMATE - Phase 2					
Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
1	Excavation - Cut/Fill	71,000	CY	\$ 5.00	\$ 355,000.00
2	INDOT Farm Field Fence	2,984	LFT	\$ 15.00	\$ 44,760.00
3	Gates for INDOT Fence	4	EA	\$ 1,000.00	\$ 4,000.00
4	Grout Existing Tiles	1	LS	\$ 5,000.00	\$ 5,000.00
5	Trees	10	EA	\$ 300.00	\$ 3,000.00
6	36" RCP	150	Lft	\$ 130.00	\$ 19,500.00
7	36"RCP End Section	2	EA	\$ 1,200.00	\$ 2,400.00

8	Channel Ford Crossing	1	EA	\$ 10,000.00	\$ 10,000.00
9	Riprap for End Sections	2	EA	\$ 1,000.00	\$ 2,000.00
10	Check Dams	3	EA	\$ 2,000.00	\$ 6,000.00
11	Rock Chutes	1	LS	\$ 14,000.00	\$ 14,000.00
12	Overflow Weir	1	EA	\$ 12,500.00	\$ 12,500.00
13	Remove old manholes	2	EA	\$ 800.00	\$ 1,600.00
14	15" Drain Outlet	2	EA	\$ 950.00	\$ 1,900.00
15	10" Drain Outlet	2	EA	\$ 700.00	\$ 1,400.00
16	24" Drain Outlet	2	EA	\$ 1,200.00	\$ 2,400.00
17	Erosion Control Blanket	2,638	SY	\$ 3.00	\$ 7,914.00
18	Seeding	27.5	AC	\$ 1,500.00	\$ 41,250.00
19	Dewatering	1	LS	\$ 25,000.00	\$ 25,000.00
				Sub-total:	\$ 559,624.00
				15% Contingency:	\$ 83,943.60
Total Phase 2 Construction:					\$ 643,567.60
Fox Property Easement					\$ 348,900.00
Faith Apostolic Church Easement					\$ 3,500.00
Faith Apostolic Church Appraisal					\$ 825.00
Sheridan Geotech					\$ 5,100.00
Fox-Search & Exam Fee					\$ 275.00
(Burrell Appraisal Service) Fox Appraisal					\$ 1,100.00
Pickett Easement					\$ 4,300.00
(STS, Inc.) Pickett Appraisal					\$ 700.00
(STS, Inc.) Fox Appraisal					\$ 2,200.00
(Burrell Apraisal Service) Fox Appraisal					\$ 550.00
Total Phase 2 Associated Expenses:					\$ 367,450.00

Total Phase 2:	\$ 1,011,017.60

The County incurred the following costs for professional services associated with the overall project. These costs are shown in the cost estimate above for Phase 2 and include the following:

1. Faith Apostolic Church Appraisal Services: \$825.00
2. Geotechnical and Utility Investigation: \$5,100.00
3. Fox Property Title Search and Exam Fee: \$ 275.00
4. Fox Property Appraisal: \$ 1,100.00
5. Fox Property Appraisal: \$2,200.00
6. Pickett Property Appraisal: \$700.00
7. Fox Property Appraisal: \$ 550.00

The County incurred the following property/easement acquisition costs associated with the overall project. These costs are shown in the cost estimate for Phase 2 above and include the following:

1. Fox Property Easement: \$348,900.00
2. Faith Apostolic Church Easement: \$3,500.00
3. Pickett Property Easement: \$ 4,300.00

The County will bid and administer the construction contract for this project.

The cost of this project, equal to \$1,011,017.60, will be paid by the Town of Sheridan through a Rural Development loan from the USDA. The loan will be paid by the town through the collection of stormwater fees. The mechanism for reimbursement from the USDA Grant for the cost of construction, property acquisition and for professional services is being finalized.

Parcels benefitted by this drain are currently assessed for the William Krause Drain. Therefore no changes in the current assessment shall be required.

I believe no damages will result to the landowners. Damages are set at zero (0).

I recommend that the Board set a hearing for this proposal for February 26, 2018.

Sincerely,



Kenton C. Ward, CFM
Hamilton County Surveyor's Office

KCW/pll

STATE OF INDIANA)
) ss:
COUNTY OF HAMILTON)

BEFORE THE HAMILTON COUNTY
DRAINAGE BOARD
NOBLESVILLE, INDIANA

IN THE MATTER OF THE
RECONSTRUCTION OF THE
William Krause Drain, Krause Drain Reconstruction Phase 2

FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the *William Krause Drain, Krause Drain Reconstruction Phase 2* came before the Hamilton County Drainage Board for hearing on *February 26, 2018*, on the Reconstruction Report consisting of the report and the Schedule of Damages and Assessments. The Board also received and considered the written objection of an owner of certain lands affected by the proposed Reconstruction, said owner being:

Evidence was heard on the Reconstruction Report and on the aforementioned objections.

The Board, having considered the evidence and objections, and, upon motion duly made, seconded and unanimously carried, did find and determine that the costs, damages and expenses of the proposed Reconstruction will be less than the benefits accruing to the owners of all land benefited by the Reconstruction.

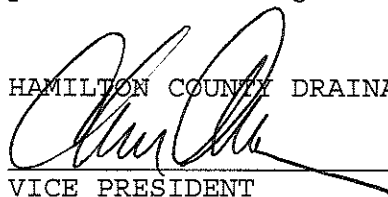
The Board having considered the evidence and objections, upon motion duly made, seconded and unanimously carried, did adopt the Schedule of Assessments as proposed, subject to amendment after inspection of the subject drain as it relates to the lands of any owners which may have been erroneously included or omitted from the Schedule of Assessments.

The Board further finds that it has jurisdiction of these proceedings and that all required notices have been duly given or published as required by law.

Wherefore, it is ORDERED, that the proposed Reconstruction of the *William Krause Drain, Krause Drain Reconstruction Phase 2* be and is hereby declared established.

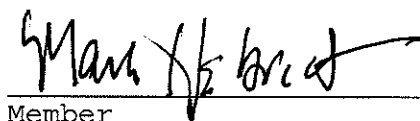
Thereafter, the Board made inspection for the purpose of determining whether or not the lands of any owners had been erroneously included or excluded from the Schedule of Assessments. The Board finds on the basis of the reports and findings at this hearing as follows:

HAMILTON COUNTY DRAINAGE BOARD



VICE PRESIDENT

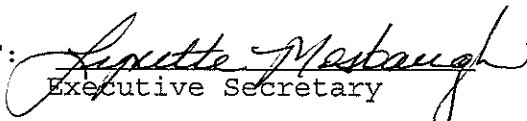
Member



Member

Alternate Member

ATTEST:


Executive Secretary

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD
IN THE MATTER OF

William Krause Drain, Krause Drain Reconstruction Phase 2

NOTICE

To Whom It May Concern and: _____

Notice is hereby given of the hearing of the Hamilton County Drainage Board concerning the reconstruction of the **William Krause Drain, Krause Drain Reconstruction Phase 2** on **February 26, 2018** at **9:00 A.M.** in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana. Construction and maintenance reports of the Surveyor and the Schedule of Assessments proposed by the Drainage Board have been filed and are available for public inspection in the office of the Hamilton County Surveyor.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY

STATE OF INDIANA)
) SS BEFORE THE HAMILTON
)
COUNTY OF HAMILTON) DRAINAGE BOARD

IN THE MATTER OF William Krause Drain, Krause Drain
Reconstruction Phase 2

NOTICE

Notice is hereby given that the Hamilton County Drainage Board at its regular meeting **February 26, 2018** adopted the reconstruction report of the Surveyor and the Amended Schedule of damages and assessments including annual assessment for periodic maintenance, finding that the costs, damages and expense of the proposed improvement would be less than the benefits which will result to the owner of lands benefited thereby.

The Board issued an order declaring the proposed improvement established. Such findings and order were marked filed and are available for inspection in the Office of the Hamilton County Surveyor.

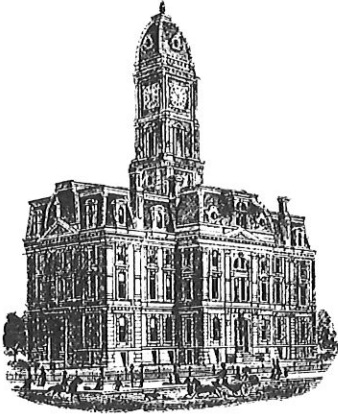
If judicial review of the findings and order of the Board is not requested pursuant to Article VIII of the 1965 Indiana Drainage Code as amended within twenty (20) days from the date of publication of this notice, the findings and order shall become conclusive.

HAMILTON COUNTY DRAINAGE BOARD

BY: Christine Altman
VICE PRESIDENT

ATTEST: Lynette Mosbaugh
SECRETARY

46060



SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

December 9, 2020

To: Hamilton County Drainage Board

RE: William Krause Phase 2 Drain Reconstruction - Final Report

This is the inspector's final report on the William Krause Phase 2 Drain Reconstruction located in Section 32 of Township 20 North Range 3 East in Adams Township, Hamilton County, Indiana.

The Surveyor's Report for the William Krause Phase 2 Drain Reconstruction dated January 25, 2018 was presented to the Drainage Board and approved on February 26, 2018 (Hamilton County Drainage Board Minutes Book (Book) 18, Pages 55-60). The reconstruction cost estimate was \$1,011,017.60 including professional services (Engineering, Surveying, Acquisition, Grant Preparation, Construction Staking, Construction Inspection, As-Built Documents). The contract was awarded to Rust Construction for the amount of \$659,819.20 on June 11, 2018 (Book 18 Pages 177-178).

William Krause Phase 2 Drain Reconstruction consisted of the excavation of 71,000 yards of dirt for the construction of a retention pond, 2,984 feet of farm fence, 152 feet of 36" RCP, 1 ford crossing, 2 check dams, 1 rock chute, 1 overflow weir, 2 - 15" drain outlets, 1,900 sq. yds of erosion control blanket and 27.5 acres of seeding.

There were 9 change orders on this project for additional work or field revisions on the project as allowed by IC 36-9-27-80.5. Those change orders are as follows:

Change Order #1 was to change the seeding mix the specified mix to Cereal Rye seed, change the specified erosion control mat from NAG Shoremax to the equivalent Typar Grass Protecta HD, change the specified fence to Indiana Agricultural Fencing INDOT Spec fence and the fence gate from the specified 12 foot gate to a heavy galvanized 16 foot gate. Change Order #1 was approved by the Board on August 27, 2018 (Book 18 Page 240).

Change Order #1

Item # 18 - Change Seeding Mix to Cereal Rye-----	\$0.00
Item # 12 - Change Erosion Control Type to Typar Grass Protecta HD -----	(-\$12,644.40)
Item # 2 - Change Farm Fence to Indiana Agricultural Fencing INDOT Spec --	(-\$5,194.48)
<u>Item # 2 - Change 12-foot gate to 16-foot Heavy Galvanized Gate -----</u>	<u>\$0.00</u>

Cost by Rust construction of Change Order # 1 ----- (-\$17,838.88)

Change Order #2 was to remove/crush 110 feet of 24-inch diameter clay pipe and backfill the excavated area. The tile to be removed/crushed is a remaining portion of the original Wm. Krause Drain. It will be removed from the location where it leaves the north side of the open ditch to the point where it enters the new pond that is under construction. Change Order # 2 was approved by the Board on September 24, 2018 (Book 18 Page 258).

Change Order #2

Remove 110 feet of 24-inch diameter tile & backfill the excavated area -----\$725.00

Cost by Rust construction of Change Order # 2 -----\$725.00

Change Order #3 was to add an additional 2 feet of 36" RCP. The plans call for 150 feet of 36" RCP. The 36" RCP is in 8-foot length sections and the contractor installed 19 lengths of pipe which totals 152 feet. Change Order #3 was approved by the Board on November 26, 2018 (Book 18 Page 317-318).

Change Order #3

Add 2 feet of 36-inch diameter RCP @ \$279.68 per foot -----\$559.36

Cost by Rust construction of Change Order # 3 -----\$559.36

Change Order #4 was to address some items encountered during construction of the pond. A grade control structure at the convergence of the open ditch and pond was added. The soils at this point are highly erodible and this was installed to keep the channel from cutting back from the entrance of the pond. Also addressed in this change order is two 12" outlets for existing tiles that outlet into the new pond and additional work needed at the pond outlet which included dredging and rip-rap placed on the banks at the outlet. Change Order #4 was approved by the Board on December 10, 2018 (Book 18 Page 327).

Change Order #4

Grade Control Structure and Armoring ----- \$5,595.00

Channel Alignment & Armoring ----- \$2,630.00

2 - 12-inch outlets ----- \$1,291.00

Cost by Rust construction of Change Order # 4 ----- \$9,516.00

Change Order #5 was to address some items which were not needed during construction of the pond. Change Order #5 was approved by the Board on January 9, 2019 (Book 18 Page 356).

Change Order #5

Delete one check dam ----- \$1,190.33

Delete 2 - 10" drain outlets @ \$748.72 each ----- \$1,497.44

Delete 2 - 24" drain outlets @ \$1,172.99 each ----- \$2,345.98

Delete 738 sq. yds of Erosion Control Blanket @ \$2.89 ----- \$2,132.82

Cost reduction for Rust construction of Change Order #5 ----- (-\$7,166.57)

Change Order #6 was to address some additional work needed on the Fox Property. Change Order #6 was approved by the Board on September 23, 2019 (Book 19 Pages 23-24).

Change Order #6

Regrading with dozer ----- \$10,225.00

Seed cover crop ----- \$ 1,400.00

Erosion blanket (Warranty work) ----- \$ 0.00

Field tile install ----- \$13,450.00

Cost for additional work on Fox Property - Change Order #6 ----- \$25,075.00

Change Order #7 was for the mowing and disking of the Fox property by Elevation Excavation and for tile repairs and rip-rap installation done by John Ward Construction. Change Order #7 was approved by the Board on October 14, 2019 (Book 19 Pages 33-34).

Change Order #7
 Elevation Excavation Work Order #WO-2019-00344 ----- \$9,717.50
 John Ward Construction Work Order #WO-2019-00345 ----- \$1,881.35
 Cost for additional work on Fox Property - Change Order #7 ----- \$11,598.85

Change Order #8 is for the final grading/soil finishing of the Fox Property by Law Lone Star Farms. This final grading/soil finishing was required to seed the field. Change Order #8 was approved by the Board on November 12, 2019 (Book 19 Page 62).

Change Order #8
 Law Lone Star Farms final grading/soil finishing 17 acres x 2 @ 41.18 per acre -- \$1,400.12
 Cost for additional work on Fox Property - Change Order #8 ----- \$1,400.12

Change Order #9. On September 17, 2019 Aaron Ogle requested compensation in the amount of \$4,116.00 for matters concerning the 17.5 acres of temporary easement of the Fox property.

The request addresses two items. The first is compensation for lost cropping opportunity for the 2019 growing season. The Agreement of Settlement dated February 26, 2018 stated that the project would be complete by April 1, 2019. Due to weather delays the project was not completed by April 1, 2019.

The second item is a request for compensation mowing the 17.5 acres, and for parts and labor to repair to his mower which was damaged while mowing the 17.5 acres. Order #9 was approved by the Board on January 13, 2020 (Book 19 Pages 96-98).

Change Order #9
 Mower Repair - Parts ----- \$286.00
 Mower Repair - Labor ----- \$150.00
 Mowing (part of the area had to be mowed twice) 26.5 acres @ \$20.00 per acre - \$530.00
 Loss of cropping 2019 - 17.5 acres \$180.00 per acre ----- \$3,150.00
 Cost for additional work on Fox Property - Change Order #9 ----- \$4,116.00

Contractor's Bid ----- \$659,819.20
 Change Order #1 Total ----- ~~(\$17,838.88)~~
 Change Order #2 Total ----- \$725.00
 Change Order #3 Total ----- \$559.36
 Change Order #4 Total ----- \$9,516.00
 Change Order #5 Total ----- (-\$7,166.57)
 Change Order #6 Total ----- \$25,075.00
 Change Order #7 Total ----- \$11,598.85
 Change Order #8 Total ----- \$1,400.12
 Total Reconstruction Cost ----- \$683,688.08

Engineer's Estimate ----- \$1,011,017.60
 Total Reconstruction Cost ----- \$683,688.08
 Easements & Associated Costs ----- \$367,450.00

Change Order #9 (Aaron Ogle Compensation) -----	\$4,116.00
Total Reconstruction Cost -----	\$1,055,254.08
Difference -----	-(\$44,236.48)

The Drainage Board received \$2,205,265 from the Town of Sheridan on 6/13/2018 as payment for the Town's purchase of flow capacity in and into the William Krause Drain. The funds were received as part of the Stormwater Capacity Purchase Agreement entered on the 11th day of June 2018 between the Department of Stormwater Management of the Town of Sheridan and the Hamilton County Drainage Board. All costs associated with the reconstruction of the William Krause Phases 1, 2 & 3 will be deducted from these funds. Phase 1 had \$544,829.07 of expenses associated with it, however \$92,632.50 will be added back as settlement for INDOT's assessment is paid back from 2019 to 2023. It is unknown how much interest will be paid. After Phase 1 there is approximately \$1,753,068.43 available.

After the cost of Phase 2 is deducted from the Town's purchase of flow capacity there will be approximately \$697,814.35 remaining for Phase 3.

Partial Pay Requests for this project submitted and paid as allowed in IC 36-9-27-81 are as follows:

	Date Requested	Date Paid	Billed	Retained	Paid
Pay Request #1	8/31/18	09/25/18	\$82,950.00	\$12,442.50	\$70,507.50
Pay Request #2	10/13/18	11/14/18	\$163,694.32	\$24,554.15	\$139,140.17
Pay Request #3	11/8/18	12/11/18	\$194,113.81	\$29,117.07	\$164,996.74
Pay Request #3a	11/8/18	12/18/18	\$559.36	\$83.90	\$475.46
Pay Request #4	11/30/18	12/18/18	\$182,399.68	\$27,369.95	\$155,039.73
Pay Request #5	12/20/18	01/15/19	\$20,045.02	\$3,006.75	\$17,038.27
Pay Request #6	01/12/19	02/12/19	\$1,851.92	\$277.79	\$1,574.13
Pay Request #7	04/02/2019	04/23/2019	\$96,842.11	\$0.00	\$96,842.11
Pay Request #8	10/18/2019	11/13/2019	\$25,075.00	\$0.00	\$25,075.00
Rust Construction Totals:					\$670,689.11

Statement of All Incurred Expenses Paid signed by the contractor as required in IC 36-9-27-82(b) was received on March 5, 2019 notifying the Board that all expenses incurred for labor and materials have been paid in full. The as-builts indicated that their work was completed and acceptable.

The engineering design, plans, construction staking and as-built (record) drawings were prepared by Banning Engineering and stamped by Joseph L. Miller on January 29, 2020. The as-built drawings are attached.

As of October 7, 2019, I hereby attest to and agree that the reconstruction was installed according to the specified plans and change orders and have approved such work under IC 36-9-27-82(a). All inspections have been completed. Final inspection was on October 7, 2019.

I recommend the Board approve the reconstruction as complete and acceptable.

Respectfully,

Andrew Conover
Inspector

KRAUSE DRAIN RECONSTRUCTION PHASE 2

SEC. 32-T20N-R3W & SEC. 05-T19N-R3E, HAMILTON COUNTY, ADAMS TOWNSHIP
ZONED: C1 & C2

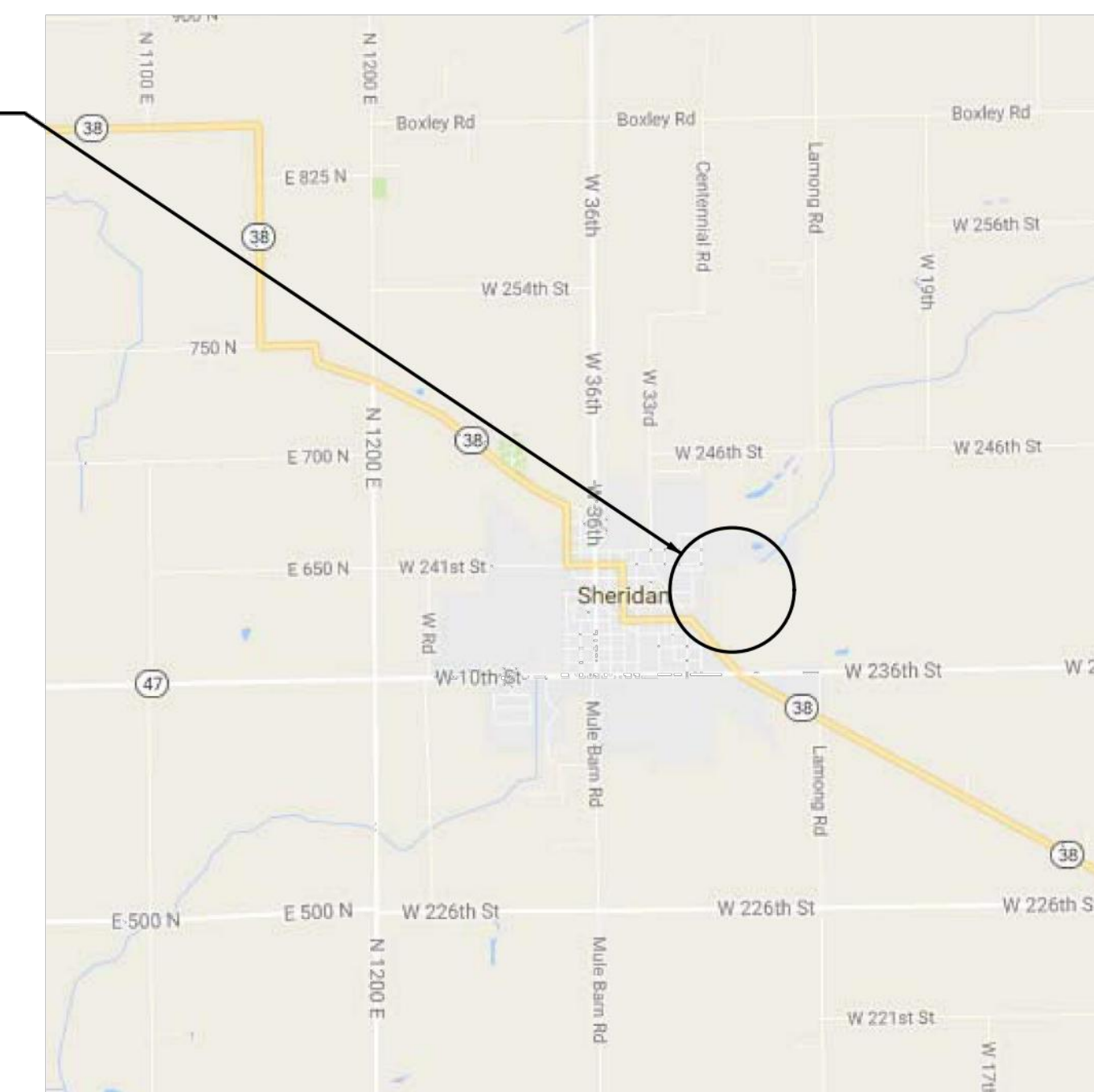
PROJECT LOCATION



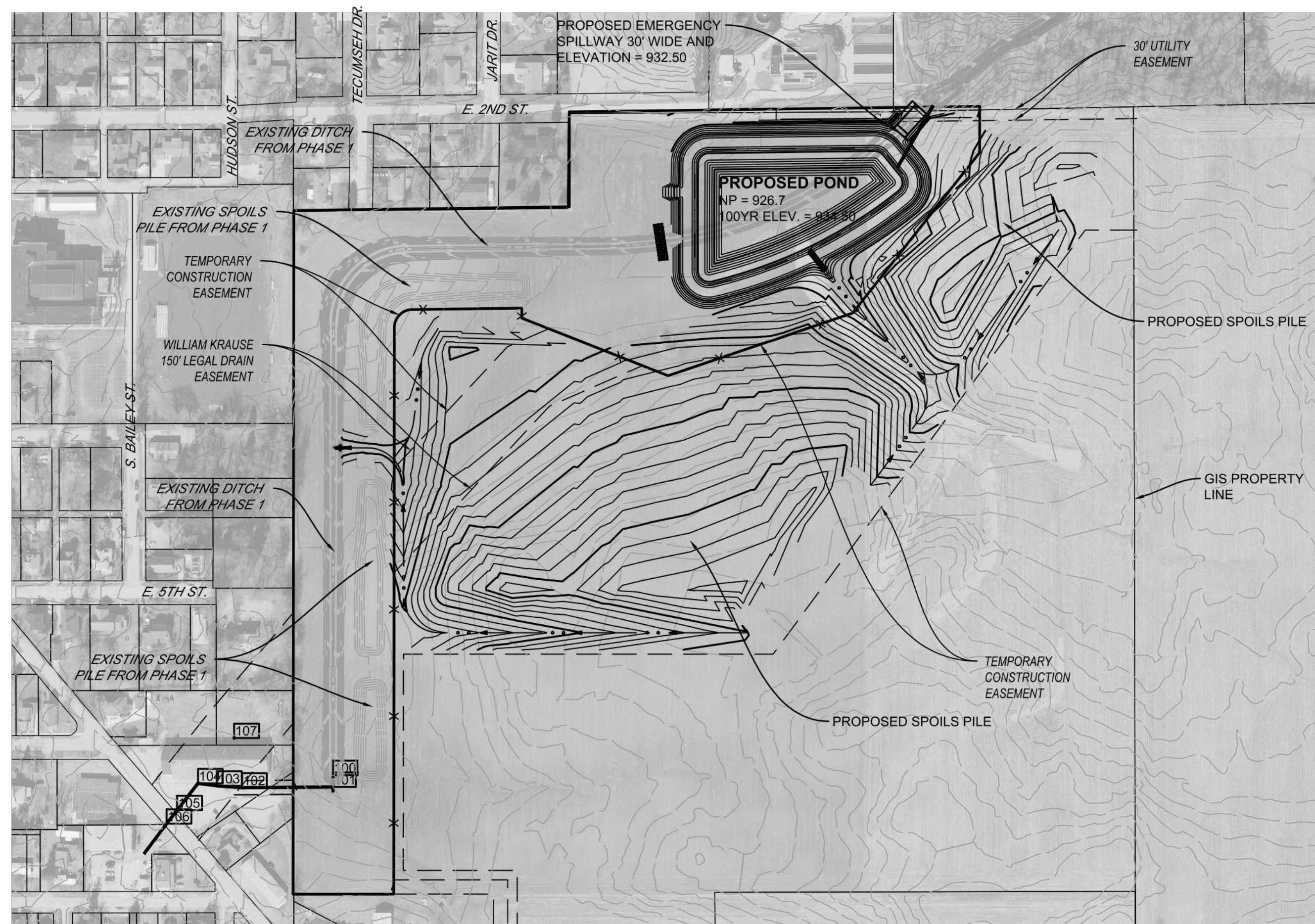
VICINITY MAP
NO SCALE

PLANS PREPARED FOR:
HAMILTON COUNTY DRAINAGE BOARD
1 HAMILTON COUNTY SQUARE, SUITE 188
NOBLESVILLE, INDIANA 46060
PHONE: 317-776-9628
CONTACT: KENTON WARD

PROJECT LOCATION



LOCATION MAP
NO SCALE



SITE MAP

SCALE: 1" = 200'

OPERATING AUTHORITIES

GAS VECTREN 18000 ALLISONVILLE ROAD NOBLESVILLE, IN 46061 317-776-5534	ELECTRIC DUKE ENERGY 390 N. MAIN STREET MARTINSVILLE, IN 46151 765-349-4012	WATER TOWN OF SHERIDAN WATER & SEWER UTILITIES 506 S. MAIN STREET SHERIDAN, IN 46069 317-758-5293
SANITARY TOWN OF SHERIDAN WATER & SEWER UTILITIES 506 S. MAIN STREET SHERIDAN, IN 46069 317-758-5293	STORM TOWN OF SHERIDAN WATER & SEWER UTILITIES 506 S. MAIN STREET SHERIDAN, IN 46069 317-758-5293	TELEPHONE AT&T 240 N. MERIDIAN STREET INDIANAPOLIS, IN 46204 317-265-3050
SCHOOL DISTRICT SHERIDAN COMMUNITY SCHOOLS 24795 N. HINESLEY ROAD SHERIDAN, IN 46069 317-758-4172	FIRE DEPARTMENT SHERIDAN FIRE DEPARTMENT 506 S. MAIN STREET SHERIDAN, IN 46069 317-758-4561	

RECORD DRAWING

PLANS PREPARED BY:

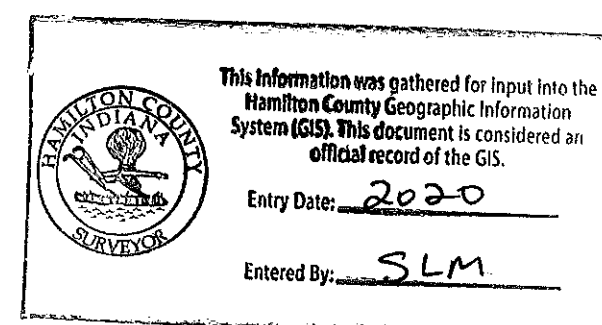
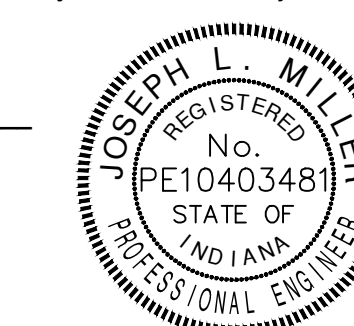
BANNING ENGINEERING
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PLAINFIELD, IN 46168
BUS: (317) 707-3700, FAX: (317) 707-3800
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

CONTACT: JOSEPH L. MILLER

Certificate of Survey

I hereby state that the record information provided herein is true and correct to the best of my knowledge and belief and was collected under my supervision with the field data completed on January 28, 2020. The record information pertains to the location and elevation of the sewer structures, the size and type of the sewer pipes, and the slope of said pipes between structures. The elevations on top of casting of the structures and their accompanying pipe inverts are accurate to within 0.05 feet and were gathered using a total station applying standard radial surveying techniques. The record locations of the subsurface drain laterals were located as marked by those responsible for construction of said sewer and are subject to the accuracy of the markings provided.

Joseph L. Miller 1/28/2020
Joseph L. Miller
Professional Engineer - PE10403481
State of Indiana



SHEET INDEX

SHEET NO	DESCRIPTION
C100	TITLE SHEET
C101-C102	OVERALL PLAN
C400-C401	EROSION CONTROL PLAN
C402	STORM WATER POLLUTION PREVENTION PLAN
C500-C502	MISCELLANEOUS DETAILS
C503	SOIL BORINGS

REVISIONS

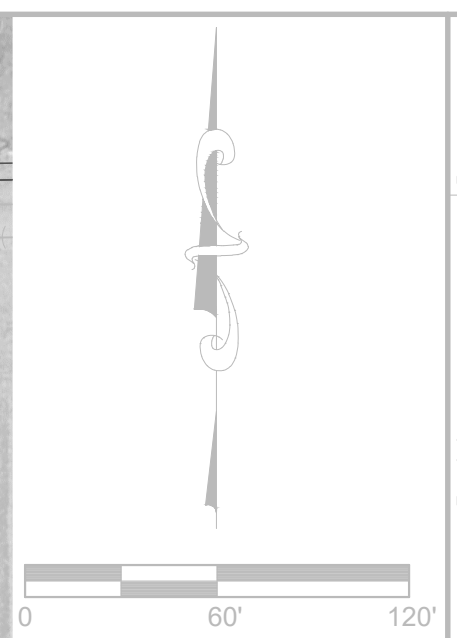
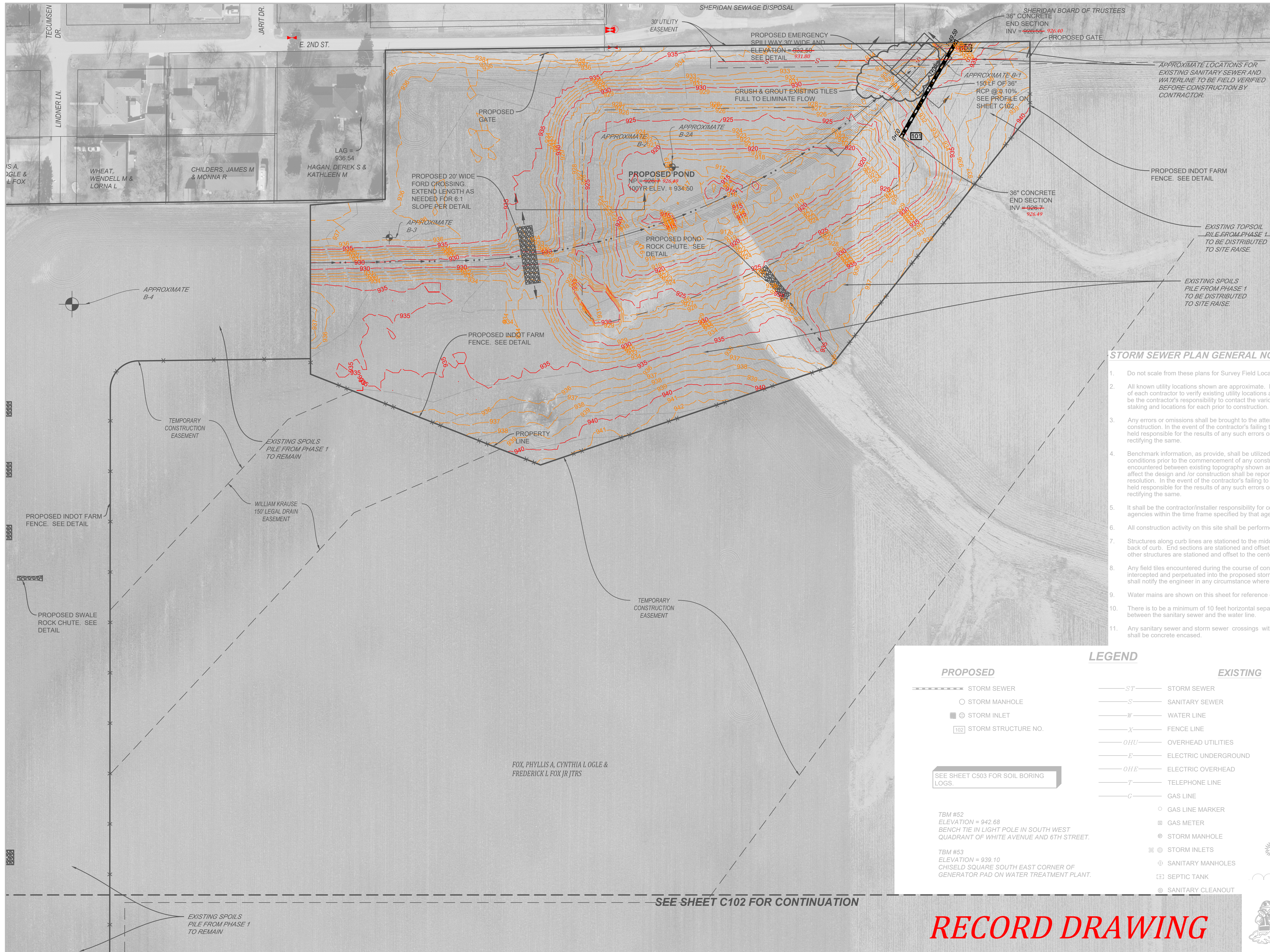
NUMBER	DESCRIPTION	DATE

CERTIFIED BY: _____

Date: 02-26-18
Project No: 11194KRUS
Sheet No:

C100





STORM SEWER PLAN GENERAL NOTES

1. Do not scale from these plans for Survey Field Locations.
2. All known utility locations shown are approximate. It shall be the responsibility of each contractor to verify existing utility locations and conditions. It shall also be the contractor's responsibility to contact the various utilities for proper staking and locations for each prior to construction.
3. Any errors or omissions shall be brought to the attention of the engineer prior to construction. In the event of the contractor's failing to give such notice, they shall be held responsible for the results of any such errors or omissions and the cost of rectifying the same.
4. Benchmark information, as provide, shall be utilized to confirm existing topographic conditions prior to the commencement of any construction activities. Any discrepancies encountered between existing topography shown and actual site conditions which could affect the design and /or construction shall be reported to the engineer immediately for resolution. In the event of the contractor's failing to give such notice, they shall be held responsible for the results of any such errors or omissions and the cost of rectifying the same.
5. It shall be the contractor/installer responsibility for contacting all permit issuing agencies within the time frame specified by that agency prior to any construction.
6. All construction activity on this site shall be performed in compliance with OSHA standards.
7. Structures along curb lines are stationed to the middle of the structure and offset to the back of curb. End sections are stationed and offset to the end of the end section. All other structures are stationed and offset to the center of the structure.
8. Any field tiles encountered during the course of construction of improvements shall be intercepted and perpetuated into the proposed storm drainage system. The contractor shall notify the engineer in any circumstance where this cannot be accomplished.
9. Water mains are shown on this sheet for reference only.
10. There is to be a minimum of 10 feet horizontal separation and 18 inches vertical separation between the sanitary sewer and the water line.
11. Any sanitary sewer and storm sewer crossings with less than 2 feet of vertical separation shall be concrete encased.

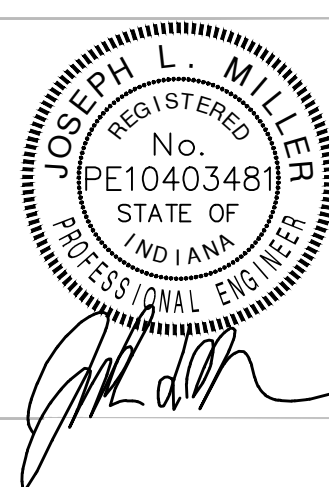
LEGEND

PROPOSED		EXISTING	
	STORM SEWER		STORM SEWER
	STORM MANHOLE		SANITARY SEWER
	STORM INLET		WATER LINE
	STORM STRUCTURE NO.		FENCE LINE
	SEE SHEET C503 FOR SOIL BORING LOGS.		OVERHEAD UTILITIES
	TBM #52 ELEVATION = 942.68 BENCH TIE IN LIGHT POLE IN SOUTH WEST QUADRANT OF WHITE AVENUE AND 6TH STREET.		ELECTRIC UNDERGROUND
	TBM #53 ELEVATION = 939.10 CHISELD SQUARE SOUTH EAST CORNER OF GENERATOR PAD ON WATER TREATMENT PLANT.		ELECTRIC OVERHEAD
			TELEPHONE LINE
			GAS LINE
			GAS LINE MARKER
			GAS METER
			STORM MANHOLE
			STORM INLETS
			SANITARY MANHOLES
			SEPTIC TANK
			SANITARY CLEANOUT
			WATER VALVE
			WATER METER
			WELL
			FIRE HYDRANT
			UTILITY POLES
			ELECTRIC METER
			ELECTRIC STRUCTURE
			HVAC UNIT
			TELEPHONE STRUCTURE
			POST
			SIGN
			MAILBOX
			TREE
			SHRUB
			TREE LINE
			LIGHT POLE

Date	Revisions

Designed: JLM
 Drawn: TMF
 Checked: [blank]
 Scale: 1" = 60'
 Date: 02-26-18

OVERALL PLAN
KRAUSE DRAIN RECONSTRUCTION PHASE 2
ADAMS TOWNSHIP
SHERIDAN, INDIANA

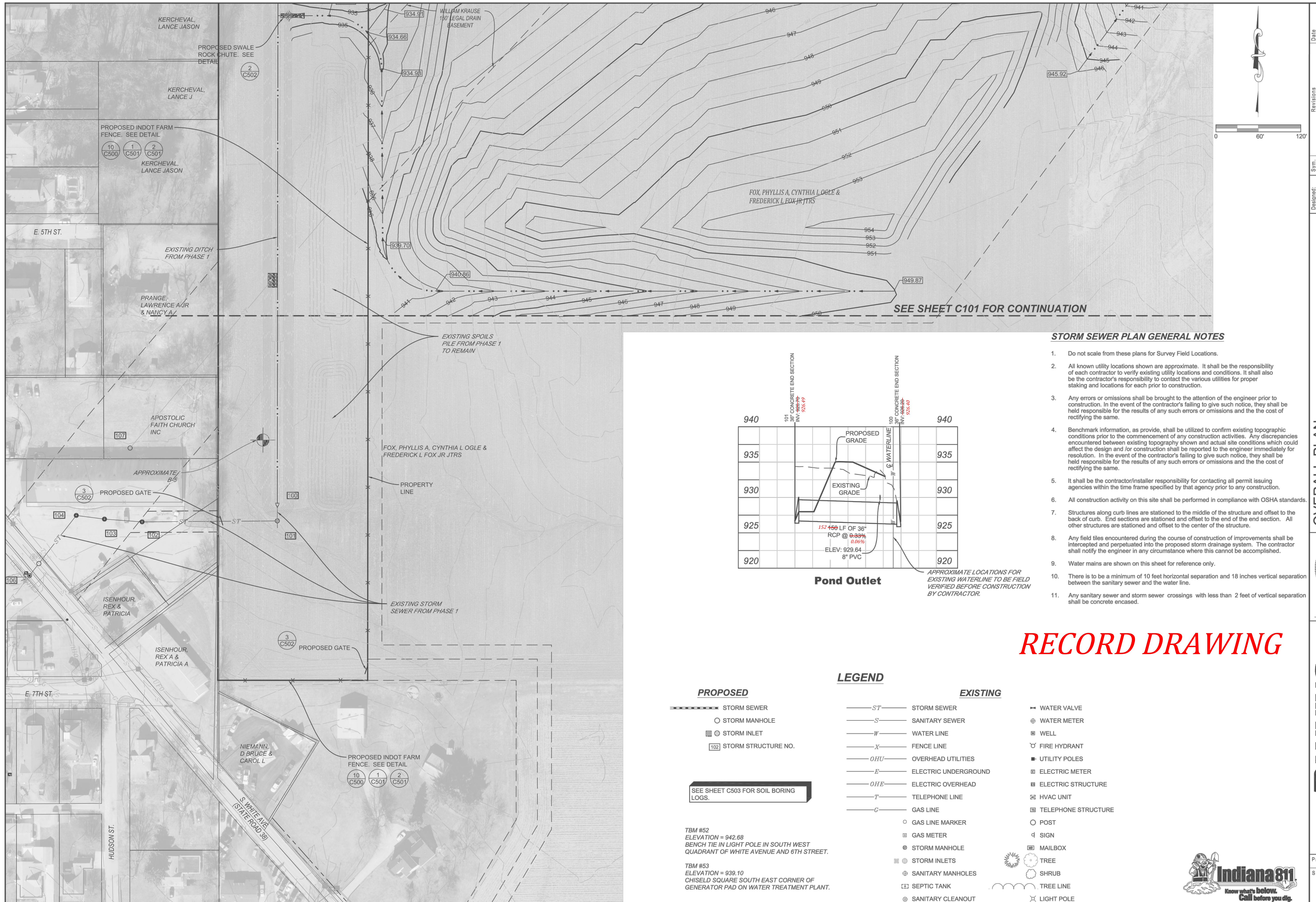


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 WEB: www.BanningEngineering.com

Project No: 11194KRUS
 Sheet No: **C101**

RECORD DRAWING

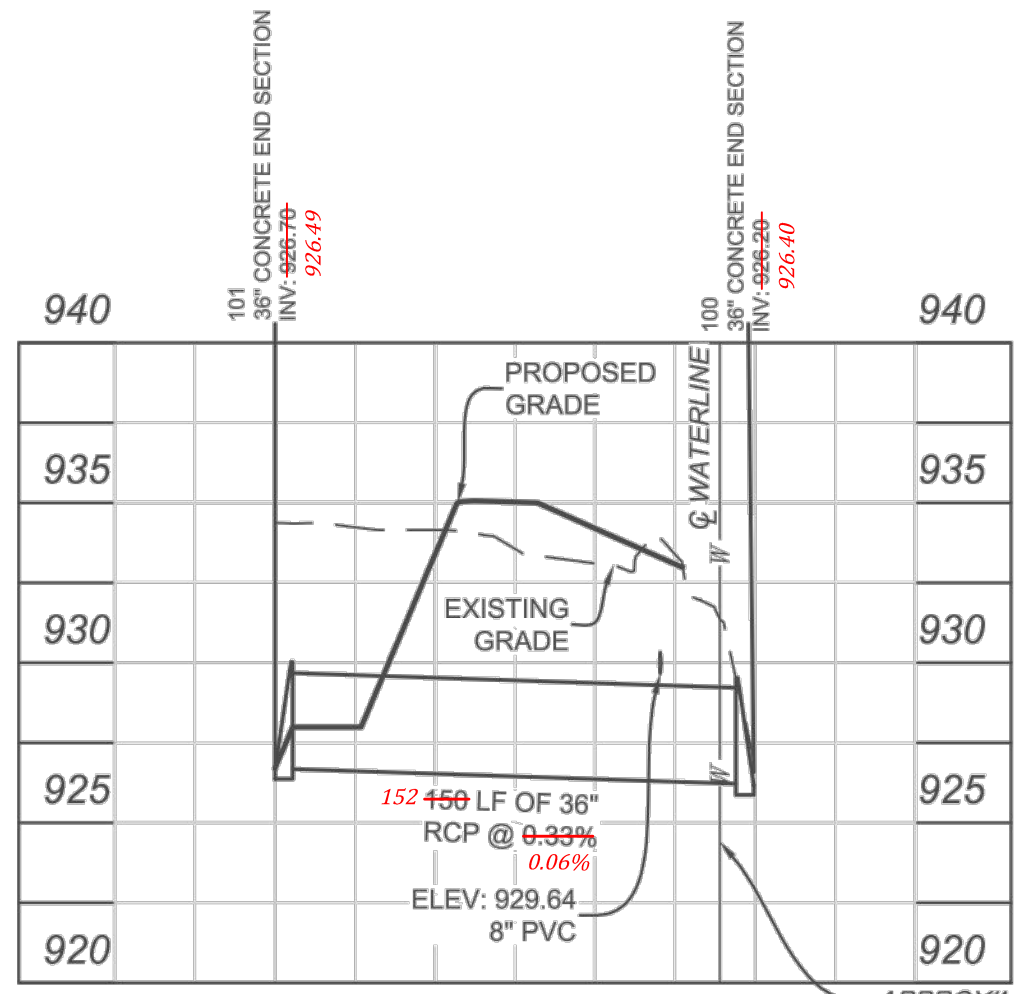




SEE SHEET C101 FOR CONTINUATION

STORM SEWER PLAN GENERAL NOTES

1. Do not scale from these plans for Survey Field Locations.
2. All known utility locations shown are approximate. It shall be the responsibility of each contractor to verify existing utility locations and conditions. It shall also be the contractor's responsibility to contact the various utilities for proper staking and locations for each prior to construction.
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Pond Outlet

APPROXIMATE LOCATIONS FOR EXISTING WATERLINE TO BE FIELD VERIFIED BEFORE CONSTRUCTION BY CONTRACTOR.

PROPOSED

- STORM SEWER
- STORM MANHOLE
- ⊕ STORM INLET
- 102 STORM STRUCTURE NO.

SEE SHEET C503 FOR SOIL BORING LOGS.

TBM #52
ELEVATION = 942.68
BENCH TIE IN LIGHT POLE IN SOUTH WEST QUADRANT OF WHITE AVENUE AND 6TH STREET.

TBM #53
ELEVATION = 939.10
CHISEL SQUARE SOUTH EAST CORNER OF GENERATOR PAD ON WATER TREATMENT PLANT.

LEGEND

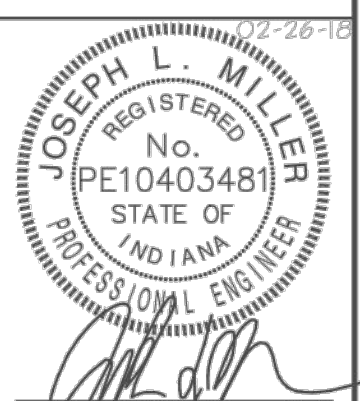
- ST --- STORM SEWER
- S --- SANITARY SEWER
- W --- WATER LINE
- X --- FENCE LINE
- OHU --- OVERHEAD UTILITIES
- E --- ELECTRIC UNDERGROUND
- OHE --- ELECTRIC OVERHEAD
- T --- TELEPHONE LINE
- G --- GAS LINE
- GAS LINE MARKER
- ⊕ GAS METER
- ⊕ STORM MANHOLE
- ⊕ STORM INLETS
- ⊕ SANITARY MANHOLES
- ⊕ SEPTIC TANK
- ⊕ SANITARY CLEANOUT

EXISTING

- WATER VALVE
- ⊕ WATER METER
- ⊕ WELL
- ⊕ FIRE HYDRANT
- ⊕ UTILITY POLES
- ⊕ ELECTRIC METER
- ⊕ ELECTRIC STRUCTURE
- ⊕ HVAC UNIT
- ⊕ TELEPHONE STRUCTURE
- POST
- ⊕ SIGN
- ⊕ MAILBOX
- ⊕ TREE
- ⊕ SHRUB
- ⊕ TREE LINE
- ⊕ LIGHT POLE

RECORD DRAWING

OVERALL PLAN
KRAUSE DRAIN RECONSTRUCTION PHASE 2
ADAMS TOWNSHIP
SHERIDAN, INDIANA



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Project No: 11194KRUS
Sheet No:
C102



OFFICE OF THE HAMILTON COUNTY SURVEYOR

ANCHOR FOR CONCRETE END SECTIONS

SIDE PROFILE
STEEL ALL THROUGHT
1/2" DIA. DIAGONAL BRACE

TOP VIEW

END PROFILE
STEEL ALL THROUGHT
1/2" DIA. DIAGONAL BRACE
1" LONG

3" - WIDTH OF END SECTION

ALUMINUM SPACERS TO BE TWO PER FOOT
END SECTION - 5' ALUMINUM
END SECTION - 4' ALUMINUM

5
C501

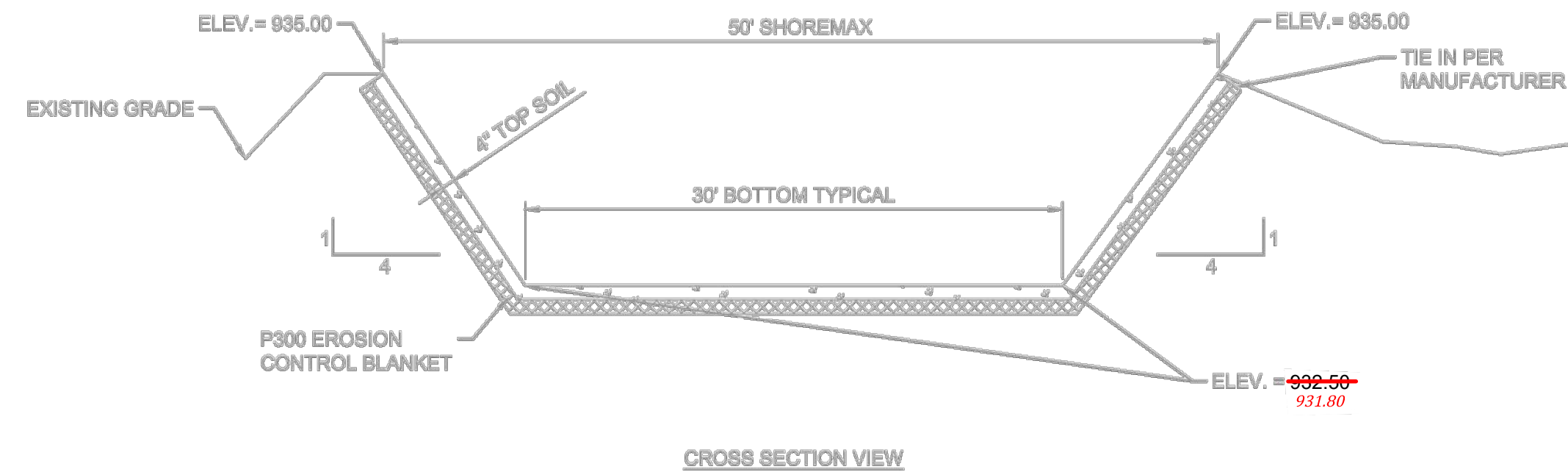
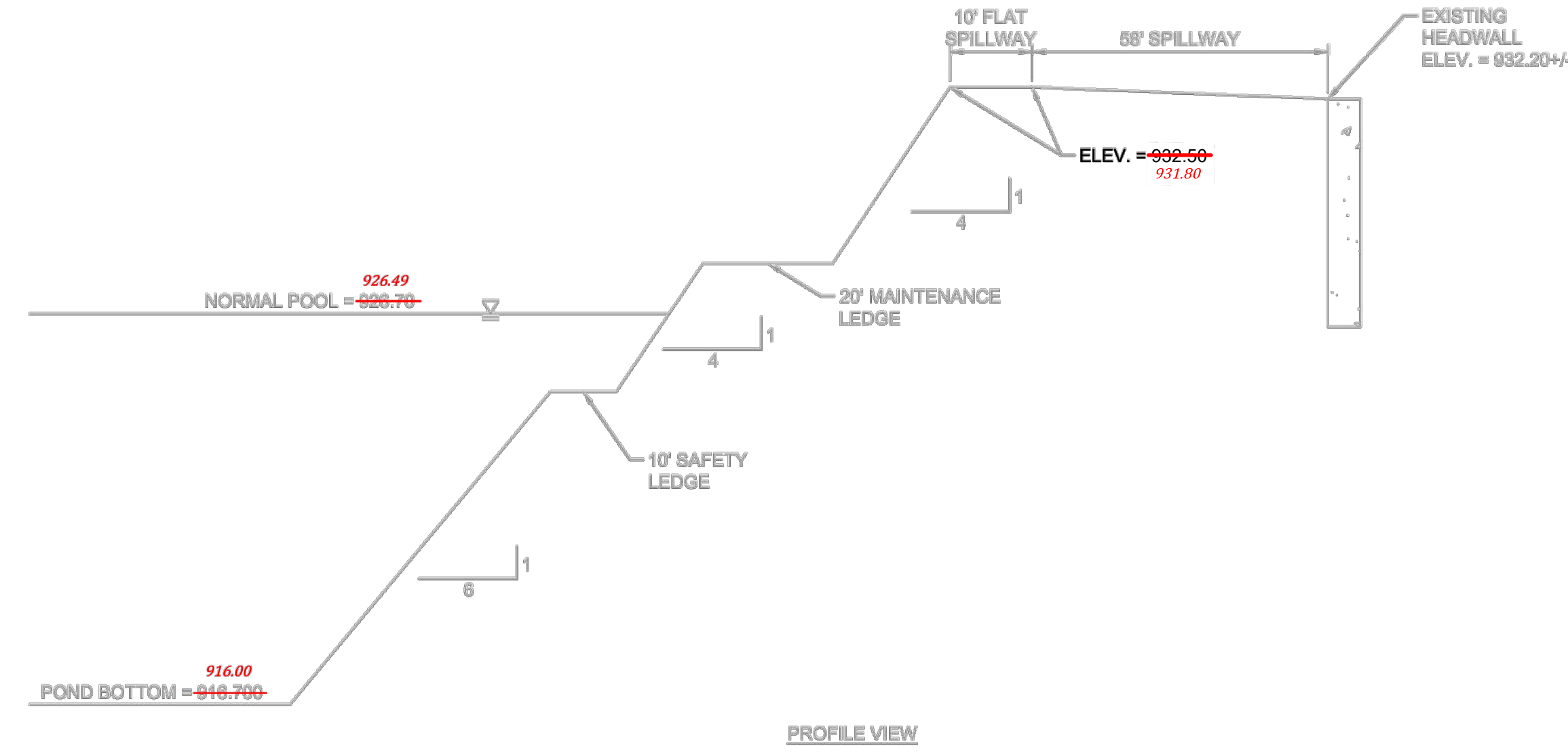
DRAWING NOT TO SCALE

HAMILTON COUNTY SURVEYOR'S OFFICE

REVISION: 1 JAN 2000

STANDARD PLAN 0-5

APPROVED: [Signature]
KENTON C. VANDER HAMILTON COUNTY SURVEYOR



CROSS SECTION VIEW

SPILLWAY
NO SCALE

4A
C501

GENERAL NOTES
1. See Standard Drawing E 603-PP17-01 for Post Chart.

FARM FIELD TYPE FENCE CORNER

1
C501

STANDARD DRAWING E 603-PP17-01
FARM FIELD TYPE FENCE

STANDARD METHOD

DIAGONAL BRACE CONNECTION

ALTERNATE METHOD

TYPICAL CAPS FOR TUBULAR POSTS

2
C501

STANDARD DRAWING E 603-PP17-04
BRACE CONNECTIONS AND POST CAPS

OFFICE OF THE HAMILTON COUNTY SURVEYOR

DEBRIS GUARD

SIDE PROFILE

TOP VIEW

Apron	V-bar	Pin	H-bar	Bolt	W-plate
Size	Size	Size	Size	Size	Size
Inches	Inches	Inches	Inches	Inches	Inches
18	1/2	3/8	3/8	1/2	4
24	5/8	3/4	3/4	1/2	4
30	5/8	3/4	3/4	1/2	4
36	5/8	3/4	3/4	1/2	4
42	5/8	3/4	3/4	1/2	4
48	5/8	3/4	3/4	1/2	4
54	5/8	3/4	3/4	1/2	4
60	5/8	3/4	3/4	1/2	4
66	5/8	3/4	3/4	1/2	4
72	5/8	3/4	3/4	1/2	4
78	5/8	3/4	3/4	1/2	4
84	5/8	3/4	3/4	1/2	4

NOTES:
1. BASE & PLATES ARE HOT-ROLLED STEEL.
2. BASE PLATES & PIPES ARE PRIMED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVANNEED.
4. DO NOT REMOVE PIPES WILL BE ALLOWED.
5. DEBRIS GUARD SHALL BE REMOVABLE.

6
C501

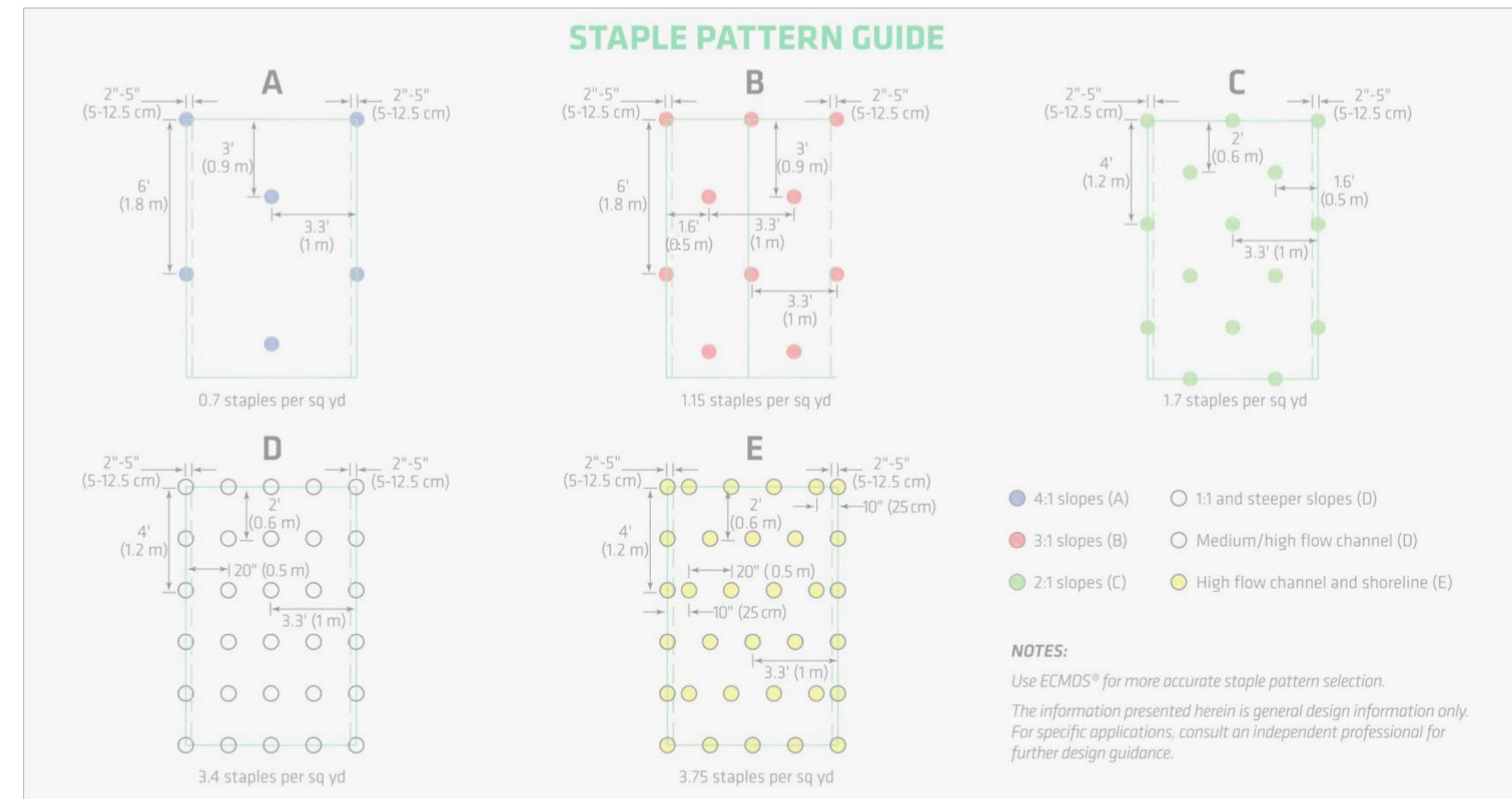
DRAWING NOT TO SCALE

HAMILTON COUNTY SURVEYOR'S OFFICE

REVISION: 1 JAN 2000

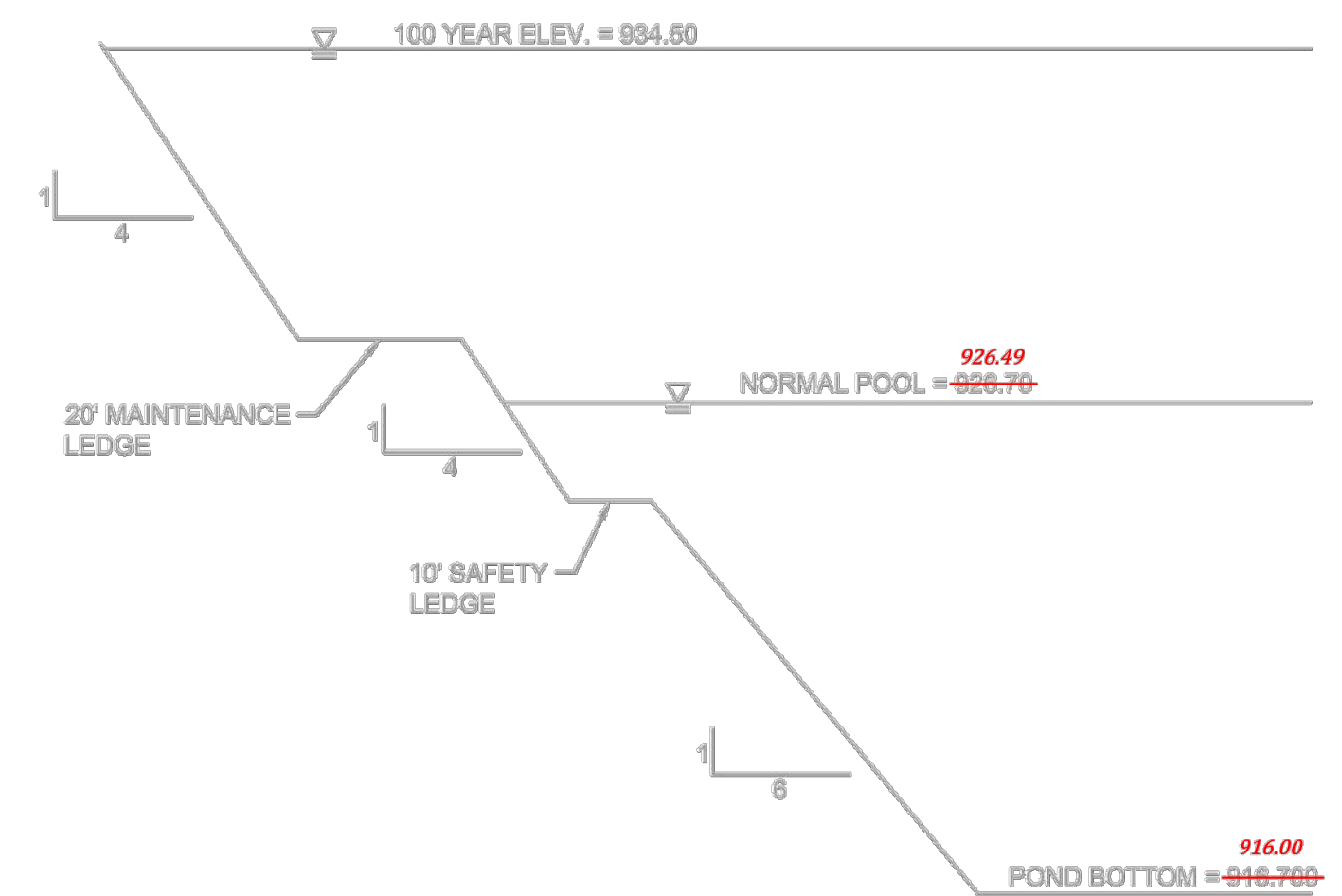
STANDARD PLAN D-12

APPROVED: [Signature]
KENTON C. VANDER HAMILTON COUNTY SURVEYOR



STAPLE PATTERNS FOR P300 EROSION CONTROL BLANKET
NO SCALE

4B
C501



RECORD DRAWING

MISCELLANEOUS DETAILS
KRAUSE DRAIN RECONSTRUCTION PHASE 2
ADAMS TOWNSHIP
SHERIDAN, INDIANA

JOSEPH L. MILLER
REGISTERED PROFESSIONAL ENGINEER
No. PE1040348
STATE OF INDIANA

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Project No: 11184KRUS

Sheet No:

C501