

DRAINAGE MEETING
DISTRICT GRANT #5
NOVEMBER 15, 2021

The Story County Drainage District Trustees met in the Public Meeting Room of the Story County Administration Building in Nevada, IA to consider a repair to the open ditch and a reclassification for Drainage District Grant #5. Members present were Lisa Heddens, chair, Latifah Faisal, and Linda Murken. Also present were Story County Drainage Clerk Scott Wall and Communications and Social Media Intern Bryce Garman, Engineers Kent Rode and Tyler Conley from Bolton & Menk, Inc., 11 landowners attending in person (attached sign-in sheet), and 9 attendees attending virtually via Zoom.

Heddens called the meeting to order at 6:03 p.m.

Murken moved, seconded by Faisal, to approve the agenda. Motion carried unanimously (MCU).

David Damerell, a landowner in the district, presented an alternative proposal (attached) for repairs to the open drainage ditch. A group of five landowners met with Kent Rode on September 10, 2021 with the goal of leveraging landowner experience with the open ditch and prior repairs/cleanouts and the impact of heavy rain events to propose an alternative to Rode's recommended full ditch repair. The group also reached out to other landowners in the district prior to and following September 10 for additional input. Damerell emphasized that he was representing only those landowners involved in drafting the alternative proposal.

While Damerell spoke some of the approximately one hour of aerial drone video of the open ditch was shown on the projection screen in the room. Damerell said the landowners had utilized the video on September 10 in drafting their proposal and had found it very useful.

Rode spoke about the video and pointed out problem areas visible in the segment of video that was running at that moment.

Damerell said the landowners do not believe that a full cleanout and repair of the open ditch is advisable at this time. The landowners are proposing that trees and shrubs be removed to 50' from the ditch centerline, that field inlets be repaired where necessary, that beaver dams be removed, and that silt be removed from around bridges and from high spots along the ditch bottom. What they are not recommending is a complete reshaping of the ditch with the bottom being taken down to its original level. They simply want the silt removed to the point where the ditch bottom is relatively level.

The engineer has estimated the cost of the landowners' proposal at \$254,500 and a revised estimate of the cost of a full repair is \$711,200 (both estimates attached). A full cleanout would probably help any tiles near the ditch bottom to drain and reduce the likelihood of water overflowing the ditch and flooding adjacent farmland. No landowners have reported issues with tile drainage or overflows and it is their belief that the additional cost of a full repair is too high to offer any reasonable return on the investment. The proposed repair is work that would have to be done as part of a full cleanout so it is not wasted money should more repairs be needed in the future.

Previous cleanouts have seen the first two miles of the ditch silt in relatively quickly and the landowners think this will continue to be a problem until issues with runoff from the land north of the open ditch are addressed. It is flow off of these lands that causes the siltation and something must be done to reduce that runoff before any full cleanout of the ditch can be done. The landowners felt it was very beneficial to meet informally as they did in generating this proposal and they would like to do the same thing

concerning the northern part of the district and addressing surface runoff before any work beyond a partial ditch cleanout is done.

The landowners want the bids for the ditch cleanout they are proposing to be based on the scope of the work. In other words, they do not want the bidders to know the engineer's estimated costs. This would lead to truly competitive bids and not to the bidders trying to get as close to the engineer's estimate as possible.

Landowner Howard Hill said he didn't feel that Damerell adequately expressed the sentiment of the landowners against a full cleanout of the open ditch. The full cleanout is absolutely unacceptable.

Landowner Ron Jensen referenced the drone video. He said that where there is a lot of water in the ditch it is being backed up by beaver dams. Where grass is growing in the bottom of the ditch it is because the flows have been so low over the past two years. One spring with normal rains will clear the grass from the ditch bottom. All of the trees and brush need to be removed and taken away, not stacked close to the ditch to dry out for burning, so the beavers can't utilize that material. Once the trees are gone the beaver dams can be removed and the rest of the issues should take care of themselves. In the partial cleanout in 1990 there were a lot of mistakes, particularly in how the culverts draining into the ditch were designed. The landowners want to have a say in supervising any work done in the district and they need to be satisfied before the contractor receives final payment.

Rode said the meeting on September 10 worked well from his perspective and he is fine with the proposed partial cleanout. His main concern with a partial cleanout is that, a year later, there may be problems revealed that were not apparent when the work was done. Again, he is not opposed to a partial cleanout at this time and agrees with the landowners that it would be money well spent.

Faisal thanked the landowners for taking the time and effort to put together their proposal.

Rode said most open ditches were originally dug deeper than they needed to be so, even with siltation, capacity is rarely an issue. The problem with siltation is that it can block tiles entering the bottom of the ditch but what he is hearing from the landowners is that is not a problem.

Murken asked what Kent needs to do if the trustees act on the landowners' proposal.

Rode said Bolton and Menk will have to prepare final plans and specifications and bid documents. He mentioned that he does not believe the estimated costs have to be revealed to potential contractors but those estimates are part of a public document that anyone can ask to see. In response to another question from both Murken and Damerell he said the engineering costs for those documents is included in the estimate for the landowners' proposal.

Murken asked if there were additional costs if there is a partial cleanout now and a full cleanout later. Rode said any project will never be cheaper than it is right now as costs rise every year. Beyond that, any additional cleanout will require more engineering work and mobilization costs.

Murken asked what would have to happen for the landowners to want a full cleanout?

Damerell said if the ditch was flooding adjacent lands on a frequent basis or the tiles emptying into the ditch were backing up and creating wet areas in the fields it would indicate that the ditch was not functioning properly.

Ron Jensen said the 1990 cleanout didn't help at all. That will be the result of any full cleanout. None of what has been proposed resolves the issue of siltation from water coming off the land to the north. That issue has yet to be addressed.

Damerell said the landowners need to get together to talk about the issues in the north part of Grant #5 just as they came together to create the proposal for the partial ditch cleanout.

Ron Jensen said if all the trees and brush are removed then once the beaver dams are gone he thinks people will be surprised by how much better the ditch will function. We shouldn't be removing dirt from the bottom of the ditch until something can be done about the water coming from the north that never used to come this way.

Hill said that if you review the entire drone video most of the ditch does not need to be cleaned. If there are problems in the future then we'll address just those problems and move on. Those will be maintenance issues and the landowners can deal with maintenance.

Ron Jensen said we could waste \$700,000 right now on a full cleanout or we can do the partial cleanout and get an equivalent benefit then do another two partial cleanouts before we spent \$700,000.

Rode said the county now has a program to spray the open ditches to prevent regrowth of trees once they've been removed. That program should reduce or negate the need for cleanouts like the one we are considering here.

Ron Jensen said he has land in another district that was repaired three years ago and the trees are already coming back along with the beavers so he isn't sold on the county's preventative spraying program.

Murken said what she's learned in her time with the county is that we are way behind and have a lot of catching up to do.

Murken moved, seconded by Faisal, to direct the engineer to proceed with plans, specifications, and bid documents for a partial ditch repair based on the Grant #5 landowners' proposal. MCU.

Rode said there had been extensive discussion on the reclassification of Grant #5 at the last meeting. Rather than go through all of that again he asked if there were any questions from those present on the reclassification.

Ron Jensen said there are businesses on Airport Road that are being annexed into Grant #5 that are now served by a tile the City of Nevada put in that drains their water to the east. He didn't know how to resolve that problem but he wanted the trustees to be aware of the issue.

Rode said in a large rain event those properties will still surface drain into Grant #5.

Ron Jensen said the tile Nevada had put in was directing water north into the city storm sewers.

Faisal moved, seconded by Murken, to adopt the Commissioner's Report on Reclassification of Benefits as the basis for future assessments against Grant #5. MCU.

Damerell asked if the landowners would have an opportunity to review the plans and specifications before the project is put out for bids.

Rode responded absolutely yes. That will insure that the trustees and the landowners are all on the same page.

Landowner Joyce Cofer, attending virtually, asked about the siltation in the north end of the open ditch. Was there any investigation of the culvert that drains the land north of Lincoln Way? In heavy rains it can be overwhelmed, causing water to run across the road. Would improving that culvert reduce the siltation in the north end of the ditch?

Rode said that culvert is undersized. This was addressed in the original Engineer's Report on the district. It does slow runoff from the north and anything that can speed that runoff will reduce siltation. An enlargement of that culvert was in the original report but it is not part of the partial cleanout.

Ron Jensen said when he was a boy the ground between the railroad and Lincoln Way was relatively flat. Over time runoff has created the channel that is there today. At some point the bottom of the culvert under Lincoln Highway was broken, effectively lowering the culvert. Water originally eroded the land to the bottom of the culvert and has now eroded it to the lower level that exists under the road today.

Murken moved, seconded by Faisal, to adjourn. MCU. Meeting adjourned at 7:05 p.m.

Respectfully submitted,



Scott T. Wall

DRAINAGE ATTENDANCE SHEET
Drainage District Grant #5
November 15, 2021

<u>Name</u>	<u>Address</u>	<u>Owner/Tenant</u>
Randy Billing	58853 250 th	Owner
Chub Myers	25133 620 th	owner
Tracy Peterson	515 Clark Ave; Ames	City of Ames
David Pauereil		Owner
Scott Greenawald	2607 Downing St	Owner
Randy Brekke	6020 E L-Way Ames	Owner
Cindy Hildebrand	57439 250 th	Ames
Mel Hade	519 NE 41 st Ave	Dorothy Hat
Ron Jensen	21789 590 th	Owner
Ren & Ellen McEachran	59183 250 th	owner

Summary - Grant 5 Main Open Ditch Clean Out Meeting

As an outcome of the Grant 5 meeting on 26-Jul-21, trustees agreed to let landowners meet and make a proposal for the main open ditch (ditch) clean out.

A small group of landowners along the ditch met with engineer Kent Rode on 10-Sep-21 to discuss the ditch clean out proposal.

- including: Steve Bruns, David Jensen, Howard Hill, Eric Jensen, Dave Damerell

Purpose:

- Review drone footage of ditch
- Leverage landowner / engineer experience to discuss problem areas in ditch
- Formulate clean out proposal for review with Trustees

Conclusion:

- A **Partial**, not **Full** ditch clean out should be completed at this time

Discussion:

- There are several problem areas impacting effectiveness of the ditch
- Including: 1) tree/shrubs, 2) field inlets, 3) beaver dams, 4) bridge inlets and 5) ditch bottom siltation
- **Partial** ditch clean out would address the main problem areas 1) thru 4)
- This investment would also be required as part of a full ditch clean out

FILED-STORY CO AUDITOR
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10-Nov-21

- Full ditch clean out would include partial items along with panning the ditch bottom to address problem 5)
- Full ditch clean out would provide some added benefit to efficient downstream flow and to adjacent tile drainage into the ditch
- There haven't been significant ditch bank overflows in past 10-20 years
- Primary cause of siltation into ditch bottom is surface runoff from north
- If ditch bottom was panned out, expect first couple miles would fill back in 5-10 years

- Full ditch clean out would be a significant landowner investment
- Based on revised cost estimates, assessments could range from \$1600-\$3500 per 40 acre parcel compared to \$600 - \$1200 with partial clean out

- Surface runoff from north should be reviewed / discussed again with landowners prior to considering investment in full ditch clean out

Recommendation (landowners):

- Conduct partial ditch clean out as soon as feasible
 - Obtain competitive bids based on scope of work required
 - Do not provide engineering cost estimates as part of bid process

- Conduct landowner review of prior Grant 5 proposals / rulings / experience to address surface runoff from the north
 - Define options to address surface run off from the north

- Reconsider full ditch clean out or added partial ditch clean out in the future

10-Nov-21

DLD

**Engineer's Opinion of Probable Cost
Drainage District No. 5 Grant
Story County, Iowa
2021**

MAIN OPEN DITCH REPAIR - CONSTRUCTION COSTS

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
	Open Ditch Excavation	STA	63.5	\$500	\$31,750
	Spoil Bank Leveling (Two Sides)	STA	63.5	\$250	\$15,875
	Open Ditch Seeding & Fertilizing	STA	63.5	\$250	\$15,875
	Clearing & Grubbing	LS	1	\$50,000	\$50,000
	Tile Extension, 12" Dia.	LF	400	\$28	\$11,200
	Tile Extension, 15" Dia.	LF	120	\$32	\$3,840
	Tile Extension, 18" Dia.	LF	120	\$37	\$4,440
	Tile Extension, 24" Dia.	LF	120	\$60	\$7,200
	Tile Extension, 30" Dia.	LF	60	\$70	\$4,200
	Tile Extension, 36" Dia.	LF	40	\$75	\$3,000
	Surface Drain, 18" Dia.	LF	240	\$40	\$9,600
	Surface Drain, 24" Dia.	LF	240	\$50	\$12,000
	Surface Drain Apron, CMP, 18" Dia.	EA	6	\$350	\$2,100
	Surface Drain Apron, CMP, 24" Dia.	EA	6	\$400	\$2,400
	Fence Cuts	EA	10	\$100	\$1,000
	Mobilization	LS	1	\$8,700	\$8,700
	Construction Contingency	LS	1	\$16,820	\$16,820
SECTION 1 - CONSTRUCTION COST					\$200,000

SECTION 1 - NON-CONSTRUCTION COSTS

<u>Item</u>	<u>Description</u>	<u>Total</u>
	CONSTRUCTION RELATED DAMAGES	\$5,500
	FINANCE	\$10,000
	ENGINEERING SERVICES	
	DESIGN DEVELOPMENT	\$17,600
	BIDDING	\$5,000
	INSPECTION	\$8,000
	STAKING	\$4,000
	CONSTRUCTION ADMINISTRATION	\$4,400
NON-CONSTRUCTION COST TOTAL		\$54,500

TOTAL ESTIMATED ASSESSABLE COST	\$254,500
ESTIMATED AVERAGE COST PER BENEFITED ACRES (10178.27)	\$25.00
ESTIMATED AVERAGE COST PER ACRE PER YEAR (10 YEARS, 6% INTEREST)	\$3.20
ESTIMATED AVERAGE COST PER ACRE PER YEAR (20 YEARS, 6% INTEREST)	\$2.06

**Engineer's Opinion of Probable Cost
Drainage District No. 5 Grant
Story County, Iowa
2021**

MAIN OPEN DITCH REPAIR - CONSTRUCTION COSTS

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Total</u>
	Open Ditch Excavation	STA	305	\$500	\$152,500
	Spoil Bank Leveling (Two Sides)	STA	305	\$250	\$76,250
	Open Ditch Seeding & Fertilizing	STA	305	\$250	\$76,250
	Clearing & Grubbing	LS	1	\$50,000	\$50,000
	Tile Extension, 12" Dia.	LF	1,500	\$28	\$42,000
	Tile Extension, 15" Dia.	LF	240	\$32	\$7,680
	Tile Extension, 18" Dia.	LF	240	\$37	\$8,880
	Tile Extension, 24" Dia.	LF	240	\$60	\$14,400
	Tile Extension, 30" Dia.	LF	60	\$70	\$4,200
	Tile Extension, 36" Dia.	LF	40	\$75	\$3,000
	Surface Drain, 18" Dia.	LF	480	\$40	\$19,200
	Surface Drain, 24" Dia.	LF	480	\$50	\$24,000
	Surface Drain Apron, CMP, 18" Dia.	EA	12	\$350	\$4,200
	Surface Drain Apron, CMP, 24" Dia.	EA	12	\$400	\$4,800
	Fence Cuts	EA	20	\$100	\$2,000
	Mobilization	LS	1	\$24,500	\$24,500
	Construction Contingency	LS	1	\$51,140	\$51,140
SECTION 1 - CONSTRUCTION COST					\$565,000

SECTION 1 - NON-CONSTRUCTION COSTS

<u>Item</u>	<u>Description</u>	<u>Total</u>
	CONSTRUCTION RELATED DAMAGES	\$26,300
	FINANCE	\$28,300
	ENGINEERING SERVICES	
	DESIGN DEVELOPMENT	\$42,200
	BIDDING	\$5,000
	INSPECTION	\$22,600
	STAKING	\$11,300
	CONSTRUCTION ADMINISTRATION	\$10,500
NON-CONSTRUCTION COST TOTAL		\$146,200
TOTAL ESTIMATED ASSESSABLE COST		\$711,200
ESTIMATED AVERAGE COST PER BENEFITED ACRES (10178.27)		\$69.87
ESTIMATED AVERAGE COST PER ACRE PER YEAR (10 YEARS, 6% INTEREST)		\$8.96
ESTIMATED AVERAGE COST PER ACRE PER YEAR (20 YEARS, 6% INTEREST)		\$5.75