

AGENDA
REGULAR DRAINAGE MEETING
Wednesday, October 7, 2020 9:30 AM

Due to Covid-19 health concerns, this meeting is open to the public via conference call only. The meeting date and time will remain the same. You may call at that time to access the meeting by following the instructions below:

To access the meeting call: 1-(312)-626-6799, when prompted enter meeting ID code: 820 7567 2007

**You can also access the meeting online at:
<https://us02web.zoom.us/j/82075672007>**

1. Open Meeting
2. Approve Agenda
3. Approve Claims For Payment

Documents:

[PAYABLES-DRAINAGE PUBLICATION 10_09_20.PDF](#)

4. Discuss W Possible Action - Drainage Utility Permit Process
The Trustees have invited Drainage Utility Permit holders to the meeting to discuss issues with existing permits and how to create a path forward with new permits.

Documents:

[UTILITY PERMIT APPLICATION ACROSS DRAINAGE DISTRICT.PDF](#)

5. DD H-F 1 - WO 2019-5 - Discuss W Possible Action - Construction Update

Documents:

[2019-5 SUB OF ALLIANT TRUSTEE SIGNED 9_18_19.PDF](#)

6. DD 14 WO 299 - Discuss W Possible Action - Investigation Summary

Documents:

[DD 14 WO 299 - INVESTIGATION SUMMARY 10_05_2020.PDF](#)

7. DD 102 WO 265 - Discuss W Possible Action - Observation Summary

Documents:

[DD 102 WO 265 - OBSERVATION SUMMARY 10_05_20.PDF](#)

8. DD 158 - WO 285 - Discuss W Possible Action - Repair Summary

Documents:

9. Other Business
10. Adjourn Meeting



Hardin County

Drainage Claims with Pay Date of 10/9/2020

DD 9 WO 229 Eng Svcs 4/24/20 - 9/25/20	Clapsaddle-Garber Assoc	618.30
DD 11 WO 294 - Engs Svcs - 7/31/20 - 9/25/20	Clapsaddle-Garber Assoc	2,038.60
DD 22 WO 176 & 192 Eng Svcs 5/16/20 - 9/26/20	Clapsaddle-Garber Assoc	2,409.05
DD 25 WO 209 Eng Svcs 8/28/20 - 9/25/20	Clapsaddle-Garber Assoc	487.80
DD 55-3 WO 201 Eng Svcs 8/28/20 - 9/25/20	Clapsaddle-Garber Assoc	632.30
DD 56 WO 3 - Eng Svcs to 9/25/20	Clapsaddle-Garber Assoc	565.80

Total Regular Payables: 0.00
Total Stamped Warrants: 6,751.85



HARDIN COUNTY

1215 EDGINGTON AVE., SUITE 1
ELDORA, IA 50627
(641) 939-8108

HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

Applicant:

Company Name

Address

City State Zip

Applicant Contact:

Name (_____) _____ - _____
Phone

Email

Utility Type:

Drainage District(s) Crossed:

Facilities Crossed (specific tile, open ditch):

Description of Work:

*(Location plan of
proposed utility must
be attached.)*

Pursuant to Code of Iowa Section 468.186, approval is hereby requested for the right, privilege and authority to construct, operate and maintain utilities on, over, across or beneath established Hardin County Drainage Districts, subject to the attached Requirements for Construction On, Over, Across or Beneath Established Drainage District. Failure to comply with said requirements shall be ground for revocation of the permit by the Hardin County Board of Supervisors.

Applicant Signature

Date

Submit Form and Location Plan To:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Fax (641) 939-8225
drainage@hardincountyia.gov

For Office Use Only

Application Approval:

By: _____
Board of Supervisor Chairman, Acting as Drainage District Trustee

Date: _____



APPROVED PERMIT #: _____

REQUIREMENTS FOR CONSTRUCTION ON, OVER, ACROSS OR BENEATH ESTABLISHED DRAINAGE DISTRICT

Upon issuance of a permit for utilities on, over, across or beneath established Hardin County Drainage Districts, the applicant shall be governed by these requirements and shall comply with all conditions contained herein.

SECTION I – Standard Requirements

1. The Applicant shall furnish the Drainage District, or its representative, plats showing the exact location of the proposed construction. If it is found that such locations are in conflict with the present or proposed facilities and that a more desirable location is possible, the Applicant shall review such possible alignment changes. **No construction is to commence with the drainage facility without an approved application.**
2. Applicant shall comply with Iowa One-Call requirements prior to commencing any work.
3. The Drainage District shall provide Applicant access to maps or other information regarding the location of all known drainage district facilities so that reasonable care may be taken by Applicant to avoid un-necessary damage to said drainage district facilities.
4. The Applicant shall hold the Drainage District harmless from any damage that may result to the Drainage District facility because of the construction or maintenance of the utility, and shall reimburse the Drainage District for any expenditures that the Drainage District may have to make on said Drainage District facilities resulting from Applicant's construction and installation of utilities, or their subsequent repair or modification.
5. The Applicant shall take all reasonable precaution during the construction of said utility to protect and safeguard the lives and property of the public and adjacent property owners and shall hold the Drainage District harmless from any damages or losses that may be sustained by adjacent property owners on account of such construction operations. Further, Applicant agrees to replace, repair or reimburse all damages to private property occasioned by Applicant's installation of subsequent modification or repairs.
6. The Drainage District assumes no responsibility for damages to the Applicants property occasioned by any construction or maintenance operation of said Drainage District facilities, subsequent to Applicants installation.
7. A copy of a certificate of insurance naming the County/Drainage District as additional insured for their permit work shall be provided to the County Auditor prior to installation. The limit of liability under the insurance policy shall not be less than \$1,000,000 per occurrence.
8. The Applicant agrees to give the Drainage District twenty-four (24) hours (Saturday and Sunday excluded) notice of its intention to commence construction on any lands within the jurisdiction of the Drainage District. Said notice shall be made in writing to the County Auditor or to the designated Drainage District representative.
9. The Applicant agrees to place permanent, visible markers or monuments at locations where utility crosses Drainage District facilities. These monuments or markers shall identify the owners name, address and phone number.
10. The Drainage District Trustees may appoint a representative to inspect and approve all construction across Drainage District facilities as part of this permit. All compensation, wages, mileage and other expenses for this representative will be paid by the Applicant. It will be the responsibility of the Applicant to make all contacts with private parties (adjacent owners/operators) to determine the location of private drainage facilities. Said representative will also inspect all crossing of Drainage District facilities and may, if required, observe the crossing of private drainage facilities, and shall have the authority to require the Applicant to excavate and expose the crossing of any Drainage District facility where the representative believes it prudent to visually examine Applicants crossing of the Drainage District facility. Further, said representative has the authority to suspend construction and installation by the Applicant within any Drainage District jurisdiction by verbal order to the contractor at the site and a telephone call to Applicants contact person listed on page 1 within six (6) hours of the verbal order



11. The construction and maintenance of Applicants installation shall be carried on in such a manner as to not interfere with or interrupt the function of said Drainage District facilities without the express written consent of the Drainage District Representative. In the event it becomes necessary to temporarily stop the flow of water, the following shall be completed by the Applicant:
 - a. If the crossing involves a tile line, the replacement of tile with approved materials, in the manner approved by the Drainage Districts designated representative, shall be performed as rapidly as possible. If the approved method of repair is impossible and the volume of water flowing in the tile is sufficient to create the possibility of crop loss or property damage, the Contractor will be permitted to temporarily block the tile line to prevent the flow of this tile water into the pipeline, or tile line ditch. In the event this tile line is so temporarily blocked, the Contractor will be expected to provide sufficient pumping equipment to pump the impounded tile water across the construction ditch to the undisturbed tile line. Such temporary blockages of said Drainage District tile lines will be removed as rapidly as possible and any tile repairs caused by this blockage will be immediately repaired at the Applicants expense.
 - b. If the crossing involves an open ditch that is carrying sufficient flow of water to make it necessary to place a temporary dam across said open ditch, such temporary dams may be constructed only upon approval from the Drainage District designated representative. The maximum elevation of this impounded water shall be determined by the designated Drainage District representative and all excess water must be allowed to flow across the construction ditch through either a closed metal culvert pipe or by pumping. All temporary dam structures are to be removed as soon as the crossing is completed. The construction and removal of these dams shall be in such a manner that the smooth and efficient function of the drainage ditch is not impaired, with all costs and damages borne by Applicant.
12. The Applicant will at any time subsequent to the commencement of construction, and at Applicants sole expense, reconstruct or replace its installation as may be necessary to conform to new grade or alignments resulting from maintenance or construction operations by the Drainage District in connection with any of its drainage facilities. Applicant agrees to do this within forty-five (45) days of receipt of written request from the Drainage District, or such longer time period as the Drainage District may specify, without cost to the Drainage District. Such reconstruction or realignment of Applicants improvements shall be made in accordance with and approved by the Drainage District or its designated representative. If the Applicant is unable to comply within the time period specified above, the Drainage District may cause the work to be done and the Applicant will pay the cost thereof upon receipt of a statement of such costs.
13. **CROSSING OF OPEN DITCH FACILITIES.** Utility crossings shall be constructed as follows, as directed by the designated representative of the Drainage District:
 - a. Passage of installation in a horizontal plane five feet (5') below design grade of drainage ditch, as established by the Drainage District representative.
 - b. The above depth to extend to a point two (2) times the design base width of ditch either side of centerline of drainage ditch (measured along the centerline of utility) unless the existing base width is greater than the design bases width. If the existing base width is greater than the design with, the depth is to extend to a point two (2) times the existing width.
 - c. The rate of slope for transition from normal utility laying depth of crossings of drainage ditches shall not be steeper than 4:1.
 - d. If such ditch crossings occur at points of outlets of Drainage District or private tile lines or within twenty-five feet (25') of said outlets, such outlets must be relocated to a point not less than twenty-five feet (25') from such crossings. Such relocations shall be at the expense of the Applicant and as directed by the representative of the Drainage District.



14. CROSSING OF DRAINAGE DISTRICT TILE LINES. Utility crossings shall be constructed as follows, as directed by the designated representative of the Drainage District:
- a. All proposed installations must be placed under the existing Drainage District tile lines. These requirements may be waived only upon the review by and approval of the designated representative of the Drainage District. Such waiver must be in writing.
 - b. A minimum of one foot (1') clearance below existing Drainage District facilities must be maintained.
 - c. At all crossings of Drainage District tile lines with the proposed utility, one of the following must be used:
 - i. Replace Drainage District tile with reinforced concrete pipe of same or larger diameter than existing tile. Concrete pipe to be 2,000 D strength (Iowa Department of Transportation approved) with standard tongue and groove joints. Pipe to have a minimum of three (3) bolt-type connectors at each joint.
 - ii. Replace Drainage District tile with cathodic protected corrugated metal pipe. Diameter of corrugated metal pipe to be a minimum of two inches (2") larger than outside diameter of tile line being replaced. (Specifications regarding gage, cathodic protection and other details to be subject to review and approval.)
 - iii. Dual wall plastic with specific approval of Drainage District representative.
 - iv. Bore new utility installation; maintain existing tile in an undisturbed state.
 - d. The length of tile to be replaced by any of the above alternates is as follows:
 - i. Eight-inch (8") tile and smaller: Six feet (6') either side of centerline of proposed installation, measured at right angles to the centerline of installation.
 - ii. Ten inch (10") tile and larger: Ten feet (10') either side of centerline of proposed installation, measured at right angles to the centerline of installation.
 - e. At all crossings of Drainage District tile lines where the Drainage District and private tile lines are damaged by the construction, maintenance or repair of Applicants installation shall be repaired as directed by the Drainage Districts designated representative.
15. This permit is subject to existing regulations and statutes of the State of Iowa and future regulations, which may be promulgated or enacted.
16. This application is subject to revocation by Hardin County, if in its judgment it is necessary for legitimate purposes. In such event, written notice shall be provided to permit holder.
17. Applicant agrees to pay all other legitimate costs, fees and expenses associated with its crossing of the Drainage District facility, including but not limited to, publication costs, engineering costs and legal service costs. Said costs will be paid within thirty (30) days of the mailing of the statements to the Applicant.
18. Applicant agrees to provide a copy of as-built plan of the utility route and location, showing route changes that may have taken place during construction.
19. Applicant agrees to include a copy of these requirements to all bidding specifications; or if the construction and installation contract has been let by the time this permit is approved, Applicant agrees to provide a copy of these requirements to the contractor and to advise them that they are bound by the terms of these requirements.



SECTION II – WIND TURBINE REQUIREMENTS

20. This Section shall apply to commercial wind turbine applicants as defined in Hardin County Ordinance 29, Article XXIII.
21. Section I above shall also apply, but to the extent the requirements of Section II herein are incompatible with those in Section I herein, those in Section II shall apply.
22. Prior to approval and issuance of a permit, applicant first shall obtain conditional approval from the Drainage District. The conditional approval shall be for each proposed site and shall require the applicant and the Drainage District to enter into an agreement containing the following terms: (1) At applicant's expense, and at District's direction and conditions, applicant shall televise the District Tile that may be impacted as determined by the District; (2) The applicant shall enter into a damages agreement with the District, per site, that: a. allocates to the applicant a percentage of fault for resulting damages to the Drainage District facilities; b. establishes damages based on replacement cost to the Drainage District; c. establishes a damages deposit; and d. requires the applicant to pay the Drainage District legal fees related to the agreement, including enforcement.
23. No permit shall be approved or issued without first entering a damages agreement as set forth in the previous paragraph. A permit will also include the following requirements:
 - A. At District's discretion, under the District's direction and conditions, and at applicant expense, applicant shall televise the District tile before and after a turbine's construction to review tile conditions;
 - B. Applicant shall use GPS to map crane walks and ingress and egress of all vehicles and equipment with a gross weight of 8,000 lbs. or greater, and shall provide this data to the District in a format approved by the District;
 - C. Applicant shall maintain a two hundred (200) foot setback from the outside of the turbine's footing to any District facilities, including open ditches, to allow for repairs to Drainage facilities;
 - D. At applicant expense, the District shall designate at its discretion an engineer/technician that the applicant shall allow to be present to observe any and all aspects of construction. These costs shall not be passed on to the landowner or District;
 - E. Wind turbine underground accessory facilities, feeder lines and cables shall be bored under District facilities at a depth approved by the District.
 - F. Applicant shall use the District engineer and local contractors approved by the District for all work pertaining to tile televising/inspection, repair and replacement. The District shall maintain a current price list for local contractors' services and rates and shall be provided at the applicant's request.
 - G. Any time a wind turbine undergoes changes, re-powering or re-blading, or any service to the turbine that requires a crane walk, the site will need to be re-televised as required in subparagraph "A" above, as well as new GPS mapping as required in subparagraph "B" above.
 - H. The District has the authority to enter upon the land and service any District facilities at any time, with or without the consent of, or prior notice to the applicant. The applicant is responsible for any cost increase experienced by the District for service and maintenance of District facilities due to a wind turbine and turbine accessory facilities and lines.
 - I. The applicant shall pay any legal costs, including reasonable attorney fees, incurred by the District related to any disputes or enforcement of these permit requirements.
24. The term "Applicant" shall mean the permit applicant, the applicant's agents, heirs, successors, assigns, and facility owners.



HARDIN COUNTY

1215 EDGINGTON AVE., SUITE 1
ELDORA, IA 50627
(641) 939-8108

HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

Applicant: Interstate Power and Light Company (subsidiary of Alliant Energy)
 Company Name
201 1st St SE
 Address
Cedar Rapids, IA 52401
 City State Zip
 Applicant Contact: Ali El-Zein (319) 786 - 4897
 Name Phone
aliel-zein@alliantenergy.com
 Email

Utility Type: Telecommunications (fiber optic cable)

Drainage District(s) Crossed: F-H-1 & 134

Facilities Crossed (specific tile, open ditch): Tile outlet in F-H-1 and road ditches in both F-H-1 & 134.

Description of Work: Installation of fiber optic cable in innerduct in the County Right of Way.

(Location plan of proposed utility must be attached.) Installation to be along US HWY 65, Cadet Rd, and Commercial Str.

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Ali El-Zein
Applicant Signature

12 AUG 2019
Date

Submit Form and Location Plan To: Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Fax (641) 939-8225
drainage@hardincountyia.gov

For Office Use Only

Application Approval:

By: Renee McCrean Date: 9/18/19
 Board of Supervisor Chairman, Acting as Drainage District Trustee

APPROVED PERMIT #: 2019-5



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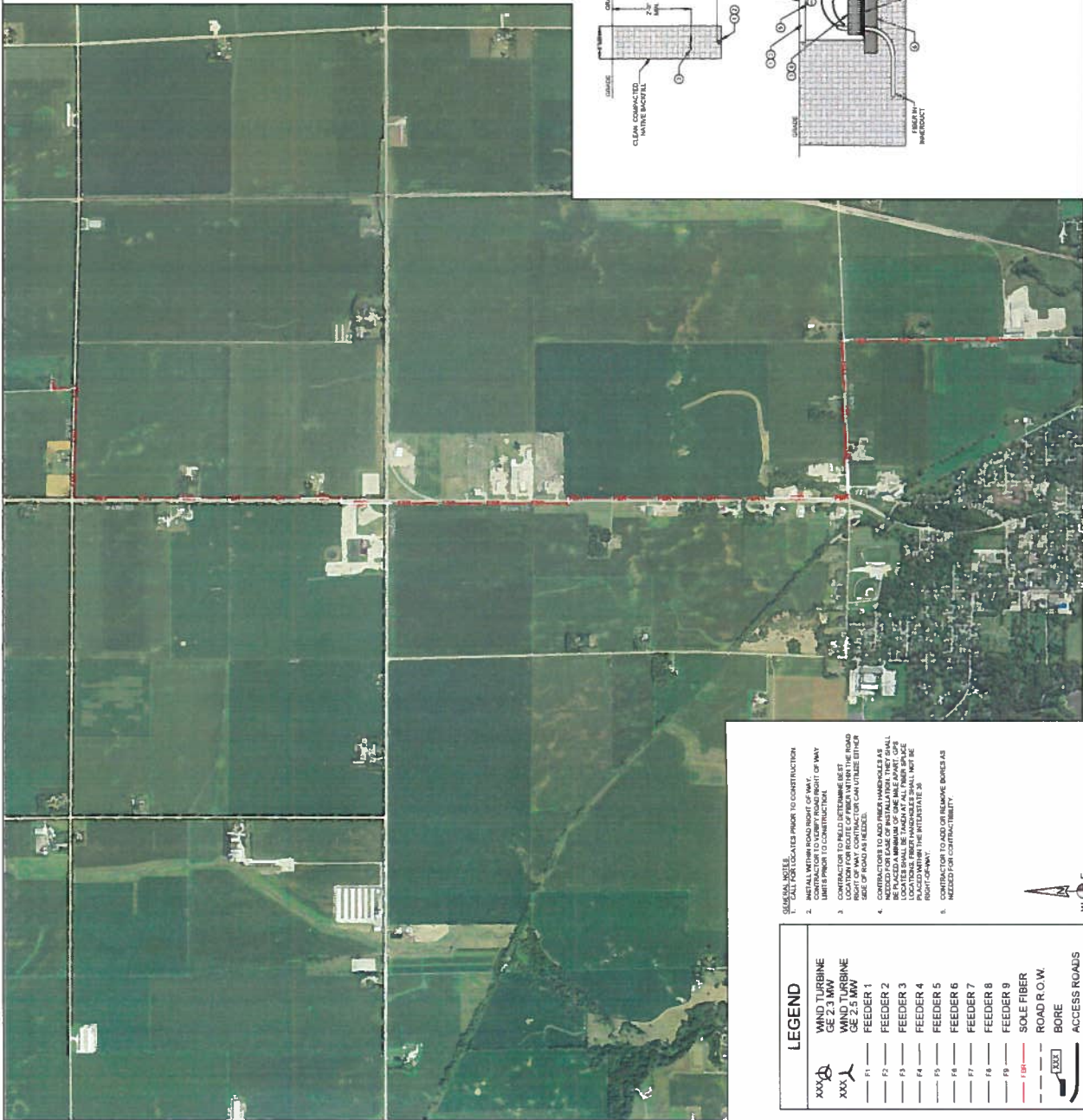
HARDIN COUNTY

1215 EDGINGTON AVE., SUITE 1
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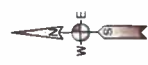
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15. This permit is subject to existing regulations and statutes of the State of Iowa and future regulations, which may be promulgated or enacted.
16. This application is subject to revocation by Hardin County, if in its judgment it is necessary for legitimate purposes. In such event, written notice shall be provided to permit holder.
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19. Applicant agrees to include a copy of these requirements to all bidding specifications; or if the construction and installation contract has been let by the time this permit is approved, Applicant agrees to provide a copy of these requirements to the contractor and to advise them that they are bound by the terms of these requirements.



LEGEND

XXX	WIND TURBINE
XXX	GE 2.3 MW WIND TURBINE
---	FEEDER 1
---	FEEDER 2
---	FEEDER 3
---	FEEDER 4
---	FEEDER 5
---	FEEDER 6
---	FEEDER 7
---	FEEDER 8
---	FEEDER 9
---	SOLE FIBER
---	ROAD R.O.W
---	BORE
---	ACCESS ROADS
---	DRAIN TILE
---	MET TOWER
---	JUNCTION BOX

- ### GENERAL NOTES
- CALL FOR LOCATES PRIOR TO CONSTRUCTION.
 - INSTALL WITHIN ROAD RIGHT OF WAY. VERIFY LOCATION TO CONSTRUCTION.
 - CONTRACTOR TO FIELD DETERMINE THE SIZE OF ROAD AS NEEDED.
 - CONTRACTOR TO ADD FIBER HANDHOLES AS NEEDED FOR EASE OF INSTALLATION. THEY SHALL BE LOCATED AT ALL SPACES AND SPACES LOCATED SHALL BE TAKEN AT ALL SPACES PLACED WITHIN THE INTERSTATE 38 RIGHT-OF-WAY.
 - CONTRACTOR TO ADD OR REMOVE BORES AS NEEDED FOR CONTRACTIBILITY.



DATE	1/11/11	BY	WJL
NO.	1	DESCRIPTION	ISSUED FOR CONSTRUCTION
NO.	2	DESCRIPTION	ISSUED FOR CONSTRUCTION
NO.	3	DESCRIPTION	ISSUED FOR CONSTRUCTION

CONFIDENTIAL
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Uiteig
 10000 Highway 100
 Suite 100
 Houston, Texas 77055
 Phone: 281-415-2000
 Fax: 281-415-2001
 Email: info@uiteig.com

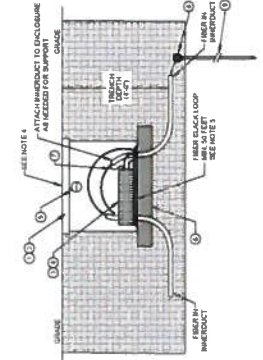
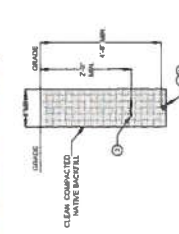


INTERSTATE POWER AND LIGHT COMPANY
 WHISPERING WILLOW WIND FARM WIND ENERGY SYSTEM
 TAMPTON, TX
 SOLE FIBER ROUTING
 01077-COL-F4

ISSUED FOR CONSTRUCTION

ITEM	ESTIMATED QUANTITY	UNIT	DESCRIPTION	MANUFACTURER PART NUMBER
01	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
02	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
03	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
04	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
05	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
06	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
07	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
08	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
09	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
10	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
11	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
12	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
13	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
14	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
15	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
16	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
17	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
18	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
19	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
20	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK

ITEM	ESTIMATED QUANTITY	UNIT	DESCRIPTION	MANUFACTURER PART NUMBER
01	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
02	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
03	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
04	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
05	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
06	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
07	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
08	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
09	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
10	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
11	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
12	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
13	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
14	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
15	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
16	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
17	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
18	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
19	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK
20	1	EA	12-STRAND BUNDLE FIBER	HAMMOCK



1. VERIFY ALL FIBER LOCATES PRIOR TO CONSTRUCTION.
 2. INSTALL WITHIN ROAD RIGHT OF WAY.
 3. CONTRACTOR TO FIELD DETERMINE THE SIZE OF ROAD AS NEEDED.
 4. CONTRACTOR TO ADD FIBER HANDHOLES AS NEEDED FOR EASE OF INSTALLATION. THEY SHALL BE LOCATED AT ALL SPACES AND SPACES LOCATED SHALL BE TAKEN AT ALL SPACES PLACED WITHIN THE INTERSTATE 38 RIGHT-OF-WAY.



Date: 2010.03.08 11:31:44 AM



Drainage Work Order Request For Repair

Hardin County

Date: 7/24/2020

Work Order #: WO00000299

Drainage District: DDs\DD 41 (51066)

Sec-Twp-Rge: 12-88-22 **Qtr Sec:** NE 1/4 NE 1/4

Location/GIS: 88-22-12-400-002

Requested By: Chris Blome

Contact Phone: (641) 751-3936

Contact Email: _____

Landowner (if different): John Liitschwager

Description: DD 41 - Chris Blome reports 3' blowout on DD 41 Main tile in parcel #882212400002, in SE corner of field. Can be accessed from drive on H Ave., follow grassy waterway west into field, blowout is in waterway and is flagged.

Repair labor, materials and equipment: _____

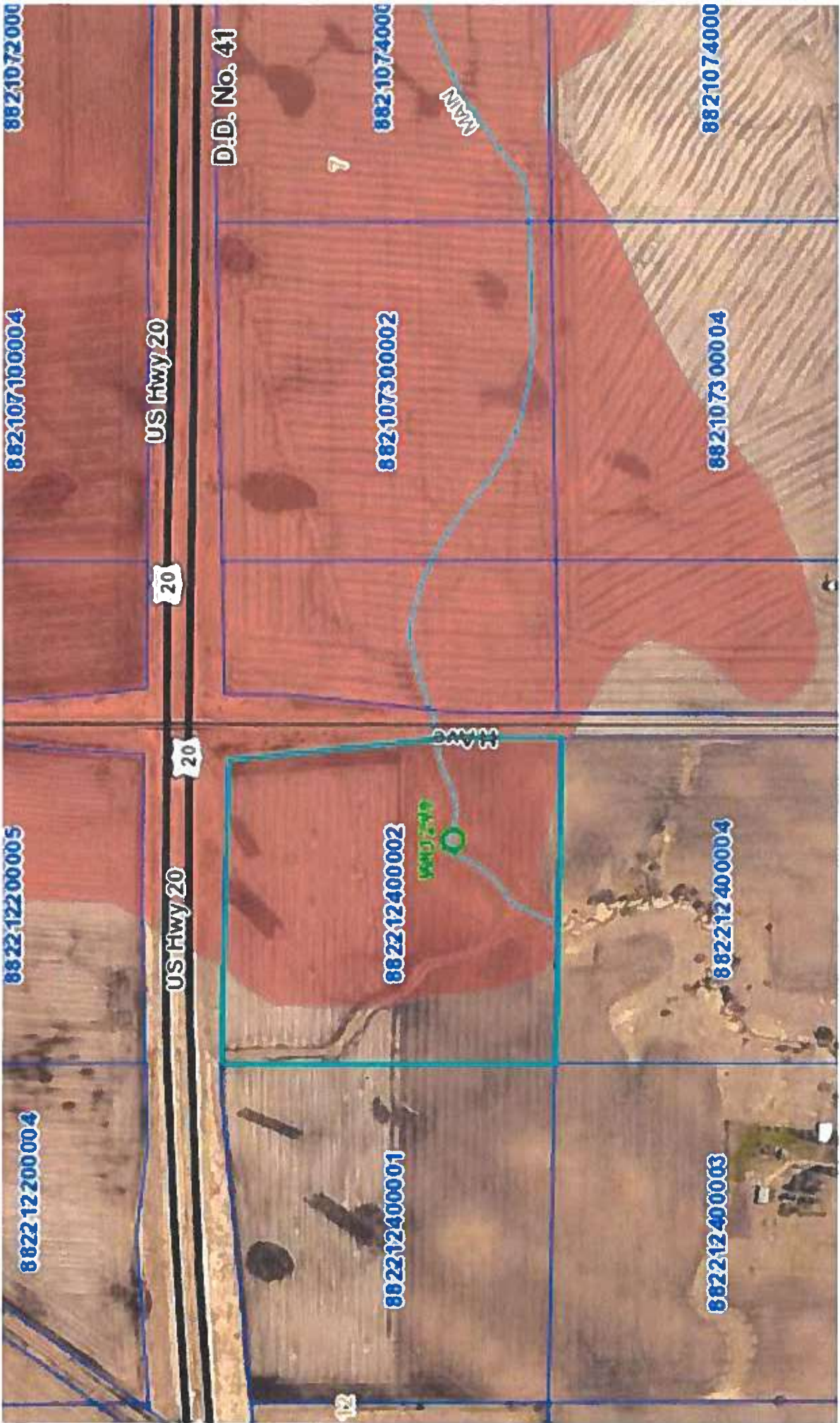
Repaired By: _____ **Date:** _____

Please reference work order # and send statement for services to:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ **Date:** _____



88210720000

882107100004

882212200005

882212200004

US Hwy 20

20

20

US Hwy 20

D.D. No. 41

7

88210740000

882107300002

882212400002

882212400001

NW1/4

88210740000

882107300004

882212400004

882212400003

12

Drainage District:

#41

Investigation/Repair Summary:

- Tenant in the NE¼ NE¼ Section 12, Township 88 North, Range 22 West reported a blowout/sinkhole over the Main tile in the SE corner of the field in the grassed waterway.
- Visual observation found the blowout/sinkhole as described with the 15-inch VCP main approximately 1½ to 2 feet deep. The Main tile in the base of the sinkhole was broken with no water flow observed.

Contractor Time and Materials (spent while CGA was on-site):

None recorded as only visual observation was performed.

Additional Actions Recommended:

- This blowout/sinkhole appears to be the Main tile near, but not within the limits of another recent spot repair project. Tile should be repaired soon through the lottery system as it is in a waterway and is readily accessible with minimal crop damage.
- With multiple tile breaks having occurred recently in this area, if more blowouts/sinkholes are reported another spot repair project may be warranted.



Inspector's Project Diary

Project: <u>DD41 Harrow Co.</u>			
CGA PN: <u>6682.4</u>	Days Charged:	Report No.	Proj. Mgr. <input checked="" type="checkbox"/>
Contractor:		Date:	
Superintendent:	Weather Conditions:	Precip.: "	Temp. Hi: ° Temp. Low: °
INSPECTOR: Time Arrived: <u>3:35</u> Time Left:		Contractor: Time Arrived: Time Left:	
1. General Remarks and Work Accomplished: <div style="text-align: center; font-family: cursive;"> <p>drove in from H. Ave To Blow-out in Grass Swale. Found Clay Tile 1 1/2' - 2' deep, broken, dry, maybe 15"</p> <p>Fix ASAP if tile is district.</p> </div>			
2. Changes or Extra Work Ordered:			
3. Test Samples Taken:			
4. Visitors to Site:			
5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:			
6. Attachments (total sheets attached <u>0</u>):			

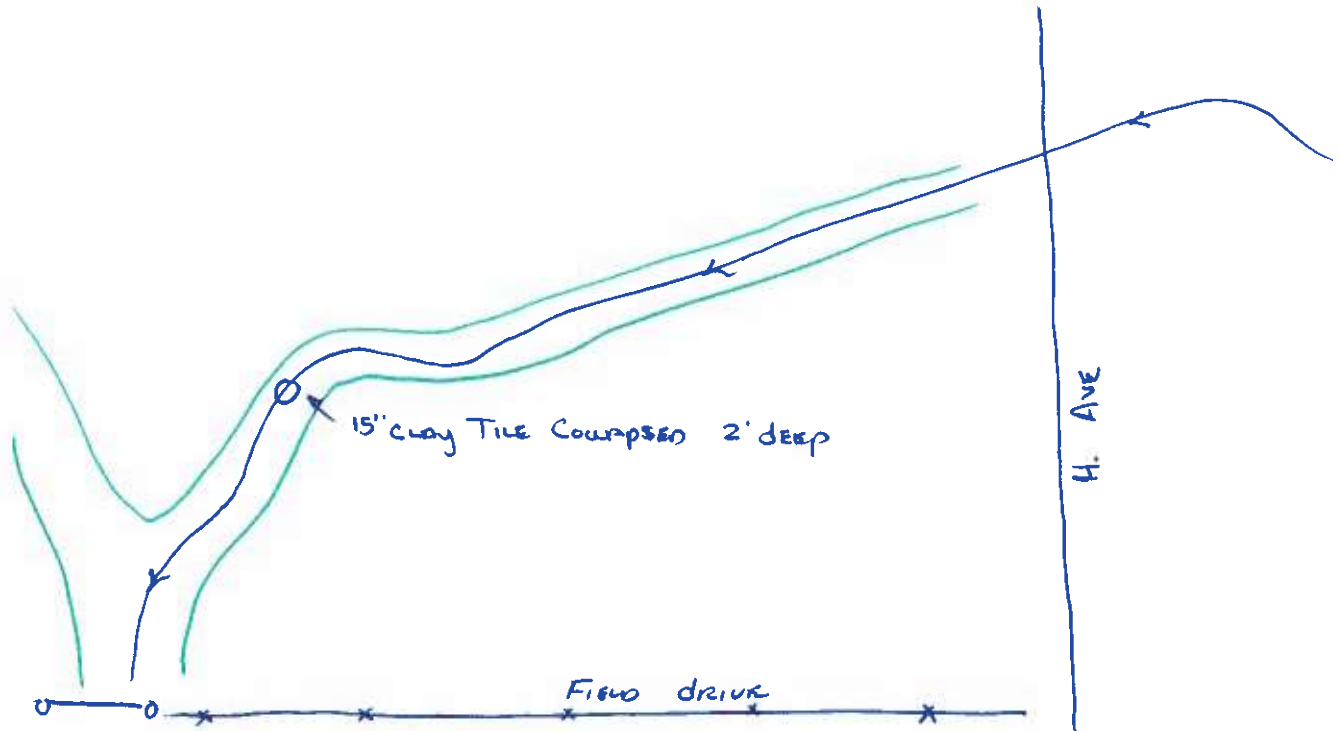
Inspector's Project Diary (continued)

CGA PN:

Report
No.

Date:

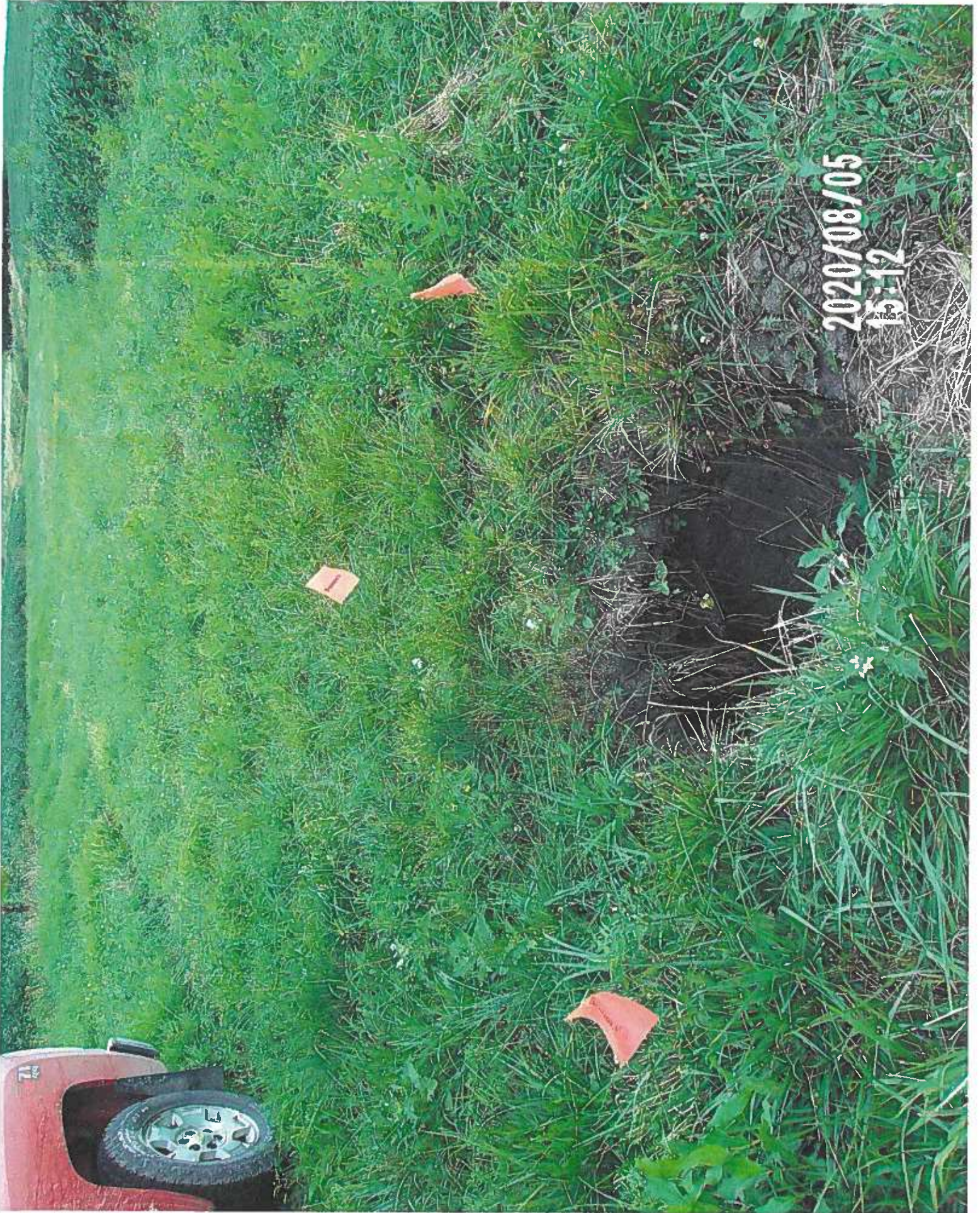
1. General Remarks and Work Accomplished (Continued):



12"-15" Clay Till Compose



Looking downstream



2020/08/05
15:12

Drainage District:

#102

Observation Summary:

- During construction to the CREP wetland Project in the SW¼ Section 18, Township 86 North, Range 20 West, Main tile replacement downstream of the wetland was observed and documented while CGA was on-site relative to spoon-bucket installation only.
- Excavation and installation of 30-inch RCP tile was completed with a spoon-bucket excavator, with no rock bedding or backfill being installed during replacement of the Main Tile as soil conditions were favorable (i.e. clay or solid black dirt in bottom of most of trench). Collars were fabric wrapped and excavation was backfilled with on-site soil.

Contractor Time and Materials (spent while CGA was on-site):

None recorded as project is facilitated through CREP wetland contract.

Additional Actions Recommended:

None at this time.





Drainage Work Order Request For Repair

Hardin County

Date: 2/24/2020

Work Order #: WO00000285

Drainage District: DDs\DD 158 (51175)

Sec-Twp-Rge: _____ Qtr Sec: _____

Location/GIS: _____

Requested By: _____

Contact Phone: _____

Contact Email: _____

Landowner (if different): _____

Description: DD 158 - Ground intake on W side of road has silted in w debris, and intake is boiling out & water is flowing overland to culvert and continues to overland once it is on the E side of road. May need intake cleaned out and standpipe installed.

Repair labor, materials and equipment: _____

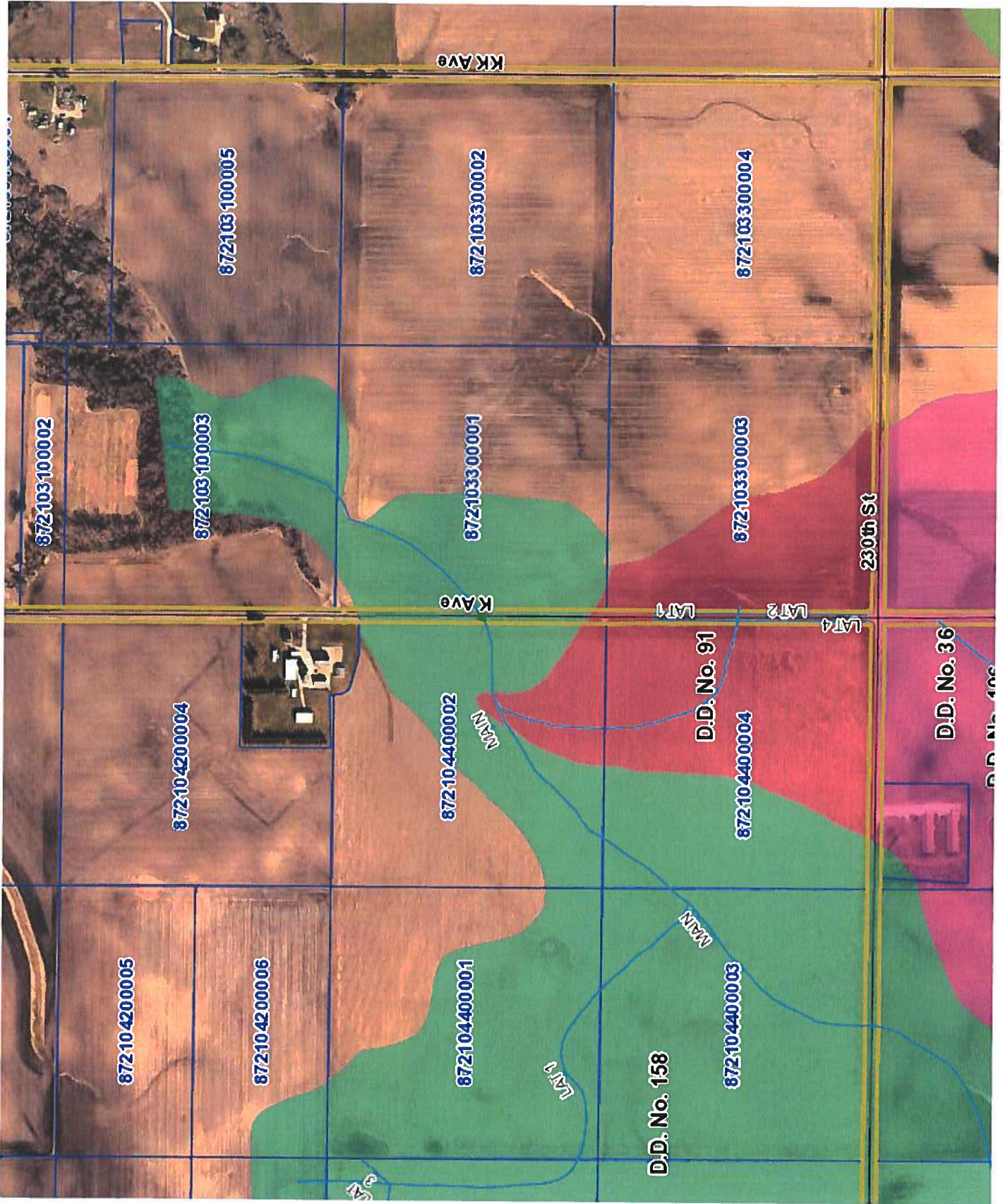
Repaired By: _____ Date: _____

Please reference work order # and send statement for services to:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ Date: _____



872103100002

872103100003

872103100005

872103300001

872103300002

872103300003

872103300004

230th St

872104200004

872104400002

D.D. No. 91

872104400004

D.D. No. 36

872104200005

872104200006

872104400001

D.D. No. 158

872104400003

Drainage District:

#158

Investigation/Repair Summary:

- Per The recommended actions of the Investigation Summary, returned to excavate and investigate the issues documented in the NE¼ SE¼ of Section 4, Township 87 North, Range 21 West.
- Removed the debris from the west intake, finding no standing water in said intake. Visual observation of the outlet for the intake showed an 8-inch VCP tile, connected to an 8-inch single wall HDPE tile, indicating that a previous repair had been conducted in the area. Excavated the outlet tile and found the 8-inch VCP tile downstream of the single wall HDPE to be crushed, with the 18-inch concrete Main tile cracked and sagging.
- Due to the condition of the Main tile in the excavation, another previous repair visible, and the previously recorded boiling of water out of the intake, CCTV inspection was conducted in the upstream and downstream directions to determine if the rest of the Main tile was in similarly poor condition as well as what would cause the recorded backup of flow. The resulting findings can be found on the attached tabulation.
- During CCTV inspection, a large piece of broken concrete pipe was found washed in the downstream direction of the insertion point (East road ditch of K Avenue) to be severely restricting flow, likely causing the observed backup. Excavated at the location of the concrete piece in the flowline and removed the obstruction. While completing the removal, sections of the 18-inch Concrete Main tile collapsed, and large gaps at joints were also found. Repaired the Main tile with 18-inch dual wall HDPE tile, rock bedding and backfill, and ¾ concrete collars on each end of the repair. During this work, the 8-inch offset tile for the beehive intake was damaged by the contractor, and subsequently repaired with 8-inch single wall HDPE, rock bedding and backfill, with a ¾ concrete collar at one end and a factory HDPE snap coupler at the other end of the repair.
- During CCTV inspection in the upstream direction (West of K Avenue), multiple sections of previous repairs were encountered. Said previous repairs consisted of 18-inch CMP tile, which had since been leaking and corroded to a point at which repair was necessary to avoid a future collapse. In the same stretch of tile, a previous repair with 18-inch single wall HDPE, and several sections of 18-inch concrete tile in poor structural condition were encountered.
- Excavated and removed the tile that was to be replaced, as well as exposing the fiberoptic cable running parallel to K Avenue. Repaired the Main tile with 18-inch dual wall HDPE, rock bedding and backfill, and ¾ concrete collars at each end of the repair. The existing beehive intake in the west road ditch was also removed and replaced with an HDPE Tee and Hickenbottom riser and intake.
- During the excavation and repair of the Main tile, a private 12-inch VCP tile running parallel to the Main was damaged by the contractor. Said tile was repaired with 12-inch dual wall HDPE tile, rock bedding and backfill, and ¾ concrete collars at each end of the repairs. A secondary 4-inch private tile connected to the 12-inch private tile was connected using an HDPE factory Tee and ¾ concrete collar.
- All excavations were filled with on-site soil and graded to match the surrounding topography. Road ditches were graded to provide positive drainage towards the intakes and road box culvert.
- Sub-base and gravel were applied to areas where the traveled surface of the road was affected by excavations and vibratory compacted in place.



Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials Sheet. Crop damage is included in this tabulation.

Additional Actions Recommended:

- Secondary Roads or the contractor should be contacted to seed the areas disturbed by excavations in the K Avenue road ditch.
- Secondary Roads should also be informed that there is a large amount of soil buildup within the K Avenue box culvert as well as the surrounding ditches that need cleaned out.
- Crop damage reports filed by the Landowner should be reviewed and approved as appropriate (see attached tabulation for recorded damage areas).



Tabulated Contractor Time and Materials

Date	Totals	6/18/2020	6/24/2020	6/25/2020	6/26/2020	6/29/2020	6/30/2020
Workman (hrs)	131 1/6	20 1/2	13 1/3	51 2/3	21 3/4	12 1/4	11 2/3
Mini Excavator (hrs)	52 2/3	7 1/2	5 1/3	14 2/3	10	7 1/2	7 2/3
Skidloader (hrs)	61 1/4	2 3/4	5 1/3	14 2/3	10	12 1/2	16
CCTV Truck (hrs)	2 3/4	3 1/2					
Concrete Collars	Yes						
Rock Bedding	Yes						
8" HDPE Coupler (ea)	1			1			
18" Dual Wall HDPE Tile (ft)	78 3/5			50 1/2	28 1/9		
8" Single Wall HDPE Tile (ft)	3			3			
18"x18"x8" Dual Wall HDPE Tee (ea)	1				1		
12" Dual Wall HDPE (ft)	21 1/5				13 2/3	7 1/2	
12"X12"x4" Dual Wall HDPE Tee (ea)	1				1		
12" Snap Coupler (ea)	1				1		
4" Single Wall HDPE Tile (ft)	1 2/3				1 2/3		
4" Snap Coupler (ea)	1				1		
Crop Damage (ac)	1/3				1/3		
Intake and Riser (ea)	1					1	

Tabulated Defects

	Total	GPS #235 UPSTREAM	GPS #234 DOWNSTREAM
Total Length Televised (ft)	1026.8	986	40.8
Date:		6/19/2020	6/18/2020
Top crack (ft)	641.6	610	31.6
Side crack (ft)	0	0	0
Bottom crack (ft)	641.6	610	31.6
Partial or imminent collapse (#)	0	0	0
Full collapse (#)	0	0	0
Debris (ft)	1	0	1
Offset Joint (#)	7	6	1
Soil/voids visible in offset joint (#)	2	2	0
Single Wall HDPE (non-deformed) (ft)	0	0	0
Dual Wall HDPE (ft)	3.3	0	3.3
CMP (rusty) (ft)	20.7	20.7	0

