

AGENDA
REGULAR DRAINAGE MEETING
January 22, 2020 to Follow 11:00 AM
DD 86 Landowners Hearing

1. Open Meeting
2. Approve Agenda
3. Approve Minutes

Documents:

[01_08_2020 - DRAINAGE MINUTES.PDF](#)

4. Approve Claims For Payment

Documents:

[PAYABLES-DRAINAGE PUBLICATION 1-24-20.PDF](#)

- 4.I. DD 22 - WO 176 - Discuss W Possible Action - Pay Estimate No. 1
DD 22 - WO 176 - Change orders to the original bid were discussed in Meeting dated September 11, 2019, however the original Pay Estimate No. 1 for the amount of \$184,982.40 was not motioned for approval. Requesting review and motion for approval for payment and it is included in today's Claims for Payment.
- 4.II. Discuss W Possible Action - Wind Turbine Ordinance / Drainage Utility Permit
Discussion with possible action of the Wind Turbine Ordinance and Drainage Utility Permit Application.

Documents:

[UTILITY PERMIT APPLICATION ACROSS DRAINAGE DISTRICT.PDF](#)
[HARDIN COUNTY ORDINANCE 29.PDF](#)

5. DD 122 & DD 8 Lat 2 Warranty Review - Discuss W Possible Action
DD 122 & DD 8 Lat 2 - Discuss possible date for Landowners Meeting for warranty review.
6. DD 143 - WO167 - Discuss W Possible Action - Surveyor's Report & Engineer's Supplement Report
DD 143 - WO 167 - Discuss w Possible Action - Set date for Landowners Hearing on the Surveyor's Report and the Engineer's Supplement Report.

Documents:

[DD 143 - WO 167 SURVEYORS REPORT 01_02_2020.PDF](#)
[6771.6 - DD 143 SUPPLEMENT ENGRS REPORT.PDF](#)

7. DD 124 -Discuss W Possible Action - Utility Permit 2018-14 Crossing Summary
DD 124 - Clapsaddle-Garber Associates has submitted a Crossing Summary for Drainage

Utility Permit 2018-14 (Heart of Iowa).

Documents:

[2018-14 HEART OF IOWA CROSSING SUMMARY.PDF](#)

8. DD 56 - W03- Update On Reclassification Report Status
DD 56 - WO 3 - Update on status of reclassification report from Clapsaddle-Garber Associates.
9. DD 9 - Discuss W/ Possible Action - Crop Damage Claim
DD 9 - Crop damage claim submitted by landowner Jason Martin in association with WOs 209/001.
10. Other Business
11. Adjourn Meeting

REGULAR DRAINAGE MEETING
January 8, 2019 9:30 AM

1/8/2020 - Minutes

1. Open Meeting
Hardin County Drainage Trustee BJ Hoffman opened the meeting. Also present were Trustee Renee McClellan; Lee Gallentine of Clapsaddle Garber Associates, and Drainage Clerk Denise Smith.
2. Approve Agenda
Motion by McClellan to approve the agenda, second by Hoffman. All ayes. Motion carried.
3. Approve Minutes
Motion by McClellan to approve the minutes of DD 22 Landowners Meeting, dated 12-16-19, and Regular Drainage Meeting dated 01-02-2020. Second by Hoffman. All ayes. Motion carried.
4. Approve Claims For Payment
Motion by McClellan to approve the claims for payment with pay date of Friday, January 10, 2020. Second by Hoffman. All ayes. Motion carried.
5. DD 26 - WO 266 - Discuss W Possible Action - Investigation Summary

DD 26 - WO 266 - Gallentine reported that this is a wash out on the surface drain/ open ditch, there is an existing surface drain there that is in good shape, it just has a bend in it. CGA recommends a second 24" surface drain be installed near the bend and do some shaping around it. CGA was hoping that Gehrke could get to it as they were working in the area and they were too backed up.

Gallentine provided an update on work by Contractor Seward. Gallentine stated that Seward is doing well getting through the work orders, his work has been done well, and Gallentine appreciates the workload Seward had picked up.

Motion by McClellan to acknowledge the receipt of the DD 26 - WO 266 Investigation Summary and to send the work order on to contractor lottery.
6. DD 143 - WO 167 - Discuss W Possible Action - Surveyor's Report

Gallentine stated that this tile goes through Radcliffe, CGA has provided the Surveyor's Report and the Supplement to the Surveyors report, the Trustees had requested information on some possible lining, which is included in the report today. Hoffman stated he would like to wait for Trustee Granzow to be present to set the date for a Landowner's Hearing. Smith will add to the January 22nd Agenda to set the hearing date on both reports.

McClellan motioned to acknowledge the receipt of the Surveyor's Report dated 01-02-2020 and the Supplemental to the Engineer's Report dated 01-08-2020.
7. DD 1- WO 205 - Update
DD 1- WO 205 - Work Order still on hold. Landowner Marvin Kramer had planned on shaping some of the ground in that area on his own to improve drainage, as per discussion in 5/23/2018 minutes. Smith reached out to Kramer for an update. Kramer stated that weather was not conducive to dirt work this fall, and there is work on the tile in the area now. Kramer will wait until the tile work is completed and Kramer will re-evaluate then.
8. DD 122 & DD 8 Lat 2 Warranty Review - Discuss W Possible Action

DD 122 & DD 8 Lat 2 Warranty - There was a reminder on the drainage calendar, in minutes dated 6-27-2018, to have the Trustees look at the warranty at one and a half years out. Smith reached out to contractor Cole Excavating to see if any landowners had expressed concerns to the contractor. Cole Excavating reports no feedback at all on this project from landowner's. Smith reviewed the minutes to see if any landowner's had volunteered to report back on the project, none were noted. Gallentine stated that he had received no feedback on this project. Smith inquired if the Trustees would like to hold a landowners meeting for warranty review on this project.

McClellan motioned to table this item until Trustee Granzow is available. Second by Hoffman. All ayes. Motion carried.

9. Other Business

DD 160 - Gallentine stated that this work order was requested by landowner Ken Smith, the reported issue is near Ackley inside the railroad right of way by the ethanol plant, McDowell discovered the plugged tile as they are doing pattern tile work in the area. CGA verified the location of the tile outlet is in the ROW. The tile is plugged somewhere, there was poles pulled recently and it is unclear if that work is what plugged up the tile. CGA recommends McDowell go out and do repair, instead of waiting for it to pop up in the lottery. McDowell's current pattern tiling is being held up by this, and they are working onsite and able to do the repair.

McClellan motioned for Contractor McDowell to do the tile repair. Second by Hoffman. All ayes. Motion carried.

DD 165 - WO 232 Landowner Bill Ibeling had requested an update on outlet repair. Gallentine stated that he spoke with Contractor McDowell, and McDowell stated he has about a week's worth of tile work left to complete and then will go work on this WO 232 if the weather holds. Gallentine will keep Smith updated on progress. Smith will provide Ibeling with the update.

DD 124 - WO 259 - Landowner Steve Kjormoe had requested an update on this work order. Gallentine stated that Contractor Seward is working through his work orders and has been working every day, and if weather holds, Seward will get to this work order as soon as he can. Hoffman stated that in conversation with Seward, Seward stated he is working through the work orders, and some may take a bit more time, as he wants to ensure the work is done right. Smith will provide Kjormoe with an update.

10. Adjourn Meeting

Motion by McClellan to adjourn. Second by Hoffman. All ayes. Motion carried.



Hardin County

Drainage Claims with Pay Date of 1/24/2020

Description	Vendor	Amount
DD BIG 4 Lat 2 - Brush Control Spraying & Labor	B & W Control Specialists	306.25
DD 55-3 Lat 9 Tile repair parts labor tree rem	Honey Creek Land Improvement, LLC	27,228.59
DD 86- Publication of Landowner Hearing	Times Citizen	45.12
DD Big 4 L-C - Brush Control Spraying & Labor	B & W Control Specialists	187.25
DD 9 - WO 229- Prof Serv. Annex & Reclass	The Davis Brown Law Firm	450.00
DD 22 - Pay Estimate No 1	Gehrke Inc.	184,982.40
DD 52 - WO 215- Tile repair, parts, labor	Honey Creek Land Improvement, LLC	14,503.63
DD 55-3 WO 201- Tile televise, kill trees, digging	Honey Creek Land Improvement, LLC	4,175.00
DD 100 - WO 248 Tile repair, parts & labor	Honey Creek Land Improvement, LLC	2,817.44
DD Big 4 L-4 - Brush control spraying & labor	B & W Control Specialists	259.25

Total Regular Payables: 27,767.21
Total Stamped Warrants: 207,187.72



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.

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.

ORDINANCE NO. 29

HARDIN COUNTY ZONING ORDINANCE OF 1999

AMENDMENT NUMBER 2

ARTICLE XXIII. NON-COMMERCIAL WIND ENERGY CONVERSION SYSTEM PERMITTED USES AND COMMERCIAL CONDITIONAL USE WIND ENERGY CONVERSION SYSTEM STANDARDS.

Section 1. DEFINITIONS.

1. Commercial WECS: A WECS of equal to or greater than [100/40] kW in total name plate generating capacity.
2. Non-Commercial WECS: A wind energy conversion system consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a total name plate generating capacity of not more than 100 kW and which is intended to primarily reduce on-site consumption of utility power.
3. Wind Energy Conversion System (WECS): An electrical generating facility comprised of one or more wind turbines and accessory facilities, including but not limited to: power lines, transformers, substations and metrological towers that operate by converting the kinetic energy of wind into electrical energy. The energy maybe used on-site or distributed into the electrical grid.
4. Wind Turbine: A wind turbine is any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy through the use of airfoils or similar devices to capture the wind.

Section 2. "A", AGRICULTURAL DISTRICT; ARTICLE IX. "R-1", SINGLE-FAMILY RESIDENTIAL DISTRICT; ARTICLE X. "R-2", MULTI-FAMILY RESIDENTIAL DISTRICT; ARTICLE XI. "R-3", MOBILE HOME PARK DISTRICT; ARTICLE XII. "C", COMMERCIAL DISTRICT; ARTICLE XIII. "M", MANUFACTURING DISTRICT; "W", WILDERNESS PRESERVE DISTRICT; "G", CONSERVATION-GREENBELT DISTRICT.

I. PERMITTED USES:

1. Non-Commercial WECS, subject to the following standards:

- a. **Tower Height:** Parcels smaller than one acre are not recommended for the placement of WECS, and must seek a special use permit. For property sizes between one acre and two acres the tower height shall be limited to 80 ft. For property sizes of two acres or more, there is no limitation on tower height, except as imposed by FAA regulations.
- b. **Setback:** No part of the wind system structure, including guy wire anchors, may extend closer than ten (10) feet to the property boundaries of the installation site.
- c. **Noise:** Non-Commercial WECS shall not exceed 60 dBA, as measured at the closest neighboring inhabited dwelling. The level, however, may be exceeded during short-term events such as utility outages and/or severe wind storms.
- d. **Engineer Certification:** Applications for Non-Commercial WECS shall be accompanied by standard drawings of the wind turbine structure, including the tower, base, and footings. An engineering analysis of the tower showing compliance with the applicable regulations and certified by a licensed professional engineer shall also be submitted. This analysis is frequently supplied by the manufacturer.
- e. **Compliance with FAA Regulations:** Non-Commercial WECS must comply with applicable FAA regulations, including any necessary approvals for installations close to airports.
- f. **Compliance with National Electric Code:** Applications for Non-Commercial WECS shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code. This information is frequently supplied by the manufacturer.
- g. **Utility Notification:** No Non-Commercial WECS shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

Section 2. CONDITIONAL USE PERMITS FOR COMMERCIAL C-WECS STANDARDS.

The requirements of this Ordinance shall apply to all C-WECS proposed after the effective date of this Ordinance. C-WECS for which a required permit has been properly issued prior to the effective date of this Ordinance shall not be required to meet the requirements of this Ordinance; provided, that any such pre-existing C-WECS, which does not provide energy for a continuous period of twelve (12) months, shall meet the requirements of this Ordinance prior to recommencing production of energy. Also, no modification or alteration to an existing C-WECS shall be allowed without full compliance with this Ordinance.

1. General Requirements for C-WECS:

- a. **Color and Finish.** Wind Turbines shall be painted a non-reflective color. Blades may be black in order to facilitate de-icing. Finishes shall be matte or non-reflective. At C-WECS sites, the design of the buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend the C-WECS to the natural setting and existing environment. Exceptions may be made for meteorological towers, where concerns exist relative to aerial spray applicators.
- b. **Tower configuration.** All wind turbines, which are part of a C-WECS, shall be installed with a tubular, monopole type tower. Meteorological towers may be guyed.

- c. **Lighting.** C-WECS sites shall not be artificially lighted, except to the extent required by the FAA or other applicable authority. Lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by Federal Aviation Administration permits and regulations. Red strobe lights are preferred for night-time illumination to reduce impacts on migrating birds. Red pulsating incandescent lights should be avoided. Exceptions may be made for meteorological towers, where concerns exist relative to aerial spray applicators.
- d. **Signage.** All signage on site shall comply with Hardin County Sign Standards. The manufacturer's or owner's company name and/or logo may be placed upon the compartment containing the electrical generator, of the WECS. Wind turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the C-WECS sites.
- e. **Feeder Lines.** All communications and feeder lines, equal to or less than 34.5 kV in capacity, installed as part of a C-WECS shall be buried.
- f. **Waste Disposal.** Solid and hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as used oils and lubricants, shall be removed from the site in a time period as established by the Hardin County Health Department and disposed of in accordance with all applicable local, state and federal regulations.
- g. **Minimum Ground Clearance.** The blade tip of any Wind Turbine shall, at its lowest point, have ground clearance of no less than seventy-five (75) feet.
- h. **Signal Interference.** The applicant shall minimize and mitigate any interference with electromagnetic communications, such as radio, telephone or television signals caused by any C-WECS.
- i. **Federal Aviation Administration.** All C-WECS shall comply with FAA standards and permits.
- j. **Electrical Codes and Standards.** All C-WECS and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards.
- k. **Setbacks.** The following setbacks and separation requirements shall apply to all wind turbines and meteorological towers; provided that the Board of Adjustment upon recommendation by the Commission may reduce the standard setbacks and separation requirements if the intent of this Ordinance would be better served thereby. All other structures shall comply with the applicable setbacks as defined by the base zone district.
 - i. **Structures.** Each wind turbine and meteorological tower shall be set back from the nearest residence, school, hospital, church or public library, a distance no less than the greater of (a) two (2) times its total tip height or (b) one thousand (1,000) feet. Total height shall be measured at the highest point of the blade system during its rotation.
 - ii. **Property Lines.** At no time shall any part of the wind turbine and meteorological tower overhang an adjoining property without securing appropriate easements from adjoining property owners.
 - iii. **Public Right-of-Way.** Setbacks from public right-of-way, railroads, powerlines and structures shall be a minimum of 1.1 times the height of the tower and rotor.
 - iv. **Communication and Electrical Lines.** Each wind turbine and meteorological tower shall be set back from the nearest above-ground public electric power line or telephone line a distance no less than 1.1 times its total height, determined from the existing power line or telephone line.
- l. **Noise.** Audible noise due to C-WECS sites operations shall not exceed sixty (60) dBA for any period of time, when measured at any dwelling, school, hospital, church or public library existing on the date of approval of any conditional use permit from the property line.
 - i. In the event audible noise due to C-WECS operations contains a steady pure tone, such as a whine, screech, or hum, the standards for audible noise set forth in subparagraph a of this subsection shall be reduced by five (5) dBA.
 - ii. In the event the ambient noise level (exclusive of the development in question) exceeds the applicable standard given above, the applicable standard shall be adjusted so as to equal the ambient noise level. The ambient noise level shall be expressed in terms of the highest whole number sound pressure level in dBA, which is succeeded for more than five (5) minutes per hour. Ambient noise levels shall be measured at the exterior of potentially affected existing residences, schools, hospitals, churches and public libraries. Ambient noise level measurement techniques shall employ all practical means of

reducing the effect of wind generated noise at the microphone. Ambient noise level measurements may be performed when wind velocities at the proposed project site are sufficient to allow wind turbine operation, provided that the wind velocity does not exceed thirty (30) mph at the ambient noise measurement location.

- iii. In the event the noise levels resulting from the C-WECS exceed the criteria listed above, a waiver to said levels may be granted by the Board of Adjustment upon recommendation by the Commission provided that the following has been accomplished:
 1. Written consent from the affected property owners has been obtained stating that they are aware of the C-WECS and the noise limitations imposed by this Ordinance, and that consent is granted to allow noise levels to exceed the maximum limits otherwise allowed; and
 2. If the applicant wishes the waiver to apply to succeeding owners of the property, a permanent noise impact easement shall be recorded in the Office of the Hardin County Recorder which describes the burdened properties and which advises all subsequent owners of the burdened property that noise levels in excess of those permitted by this Ordinance may exist on or at the burdened property.
- m. **Safety.**
 - i. All wiring between wind turbines and the C-WECS substation shall be underground. If the developer can demonstrate the need for an overhead line and the acceptance of landowners for this line, such option may be approved conditionally by the Board of Adjustment
 - ii. Wind turbines and meteorological towers shall not be climbable up to 15 feet above ground level.
 - iii. All access doors to wind turbines and meteorological towers and electrical equipment shall be locked when not being serviced.
 - iv. Appropriate warning signage shall be placed on Wind Turbine towers, electrical equipment, and C-WECS entrances.
 - v. For all C-WECS, the manufacturer's engineer or another qualified engineer shall certify that the turbine, foundation and tower design of the C-WECS is within accepted professional standards, given local soil and climate conditions.
 - vi. For all guyed towers, visible and reflective objects, such as plastic sleeves, reflectors or tape, shall be placed on the guy wire anchor points and along the outer and innermost guy wires up to a height of eight (8) feet above the ground. Visible fencing shall be installed around anchor points of guy wires. The property owner must sign a notarized acknowledgement and consent form allowing construction of the turbine and guyed wires without fencing as required in this Ordinance to be presented to the Commission and Board of Adjustment.
- n. **Discontinuation and De-commissioning.** A C-WECS shall be considered a discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the Director outlining the steps and schedule for returning the C-WECS to service. All C-WECS and accessory facilities shall be removed to four (4) feet below ground level within one year of the discontinuation of use. Each C-WECS shall have a De-commissioning plan outlining the anticipated means and cost of removing C-WECS at the end of their serviceable life or upon becoming a discontinued use. The cost estimates shall be made by a professional engineer licensed in the State of Iowa. The plan shall also identify the financial resources be available to pay for the decommissioning and removal of the C-WECS and accessory facilities. The County reserves the right to verify that adequate decommissioning terms are contained in the land owner easement.
- o. **Avoidance and Mitigation of Damages to Public Infrastructure.**
 - i. **Roads.** Applicants shall identify all roads to be used for the purpose of transporting C-WECS, substation parts, cement, and/or equipment for construction, operation or maintenance of the C-WECS and obtain applicable weight and size permits from the impacted road authority (ies) prior to construction.
 - ii. **Existing Road Conditions.** Applicant shall conduct a pre-construction survey, in coordination with the impacted local road authority(ies) to determine existing road conditions. The survey shall include photographs and a written agreement to document

the condition of the public facility. The applicant is responsible for on-going road maintenance and dust control measures identified by the Hardin County Engineer during all phases of construction.

- iii. **Drainage System.** The Applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the C-WECS.
- p. **Required Financial Security.** The applicant shall be responsible for restoring or paying damages as agreed to by the applicable road authority(ies) sufficient to restore the road(s) and bridges to preconstruction conditions. Financial security in a manner approved by the Hardin County Attorney's Office shall be submitted covering 130% the costs of all required improvements. This requirement may be waived by the Board of Adjustment by recommendation from the Hardin County Engineer.
- q. **Submittal Requirements.** In addition to the submittal requirements defined for Conditional Use Permit applications, all applications for C-WECS must submit the following information (as applicable).
 - i. The names of project applicant
 - ii. The name of the project owner
 - iii. The legal description and address of the project.
 - iv. A description of the project including: Number, type, name plate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the electrical grid.
 - v. Site layout, including the location of property lines, wind turbines, electrical wires, interconnection points with the electrical grid, and all related accessory structures. The site layout shall include distances and be drawn to scale.
 - vi. Engineer's certification(s) as required in these supplemental standards.
 - vii. Documentation of land ownership or legal control of the property
 - viii. The latitude and longitude of individual wind turbines.
 - ix. A USGS topographical map, or map with similar data, of the property and surrounding area, including any other C-WECS within 10 rotor diameters of the proposed C-WECS.
 - x. Existing Resources Inventory.
 - xi. An Acoustical analysis
 - xii. FAA Permit Application
 - xiii. Location of all known communications towers/facilities within two (2) miles of the proposed C-WECS.
 - xiv. Decommissioning Plan.
 - xv. Description of potential impacts on nearby all C-WECS and Non C-WECS and wind resources on adjacent properties.
 - xvi. Identification of significant migratory patterns and nesting areas for birds within two (2) miles.
 - xvii. Proof of liability insurance.

HARDIN COUNTY, IOWA

2020



**SURVEYOR'S
REPORT
ON MAIN TILE
RIGHT OF WAY
DRAINAGE FOR
DISTRICT NO. 143
HARDIN COUNTY,
IOWA**



I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA

Zeb J. Stanbrough
ZEB J. STANBROUGH, P.L.S.

1-2-2020

DATE

LICENSE NUMBER: 19957
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2021
PAGES OR SHEETS COVERED BY THIS SEAL:
SHOWN ON TABLE OF CONTENTS



CLAPSADDLE-GARBER ASSOCIATES OFFICE LOCATIONS

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1523 S. Bell Avenue, Suite 101 | Ames, IA 50010
5106 Nordic Drive | Cedar Falls, IA 50613
739 Park Avenue | Ackley, IA 50601
511 Bank Street | Webster City, IA 50595

Project Office
739 Park Avenue
Ackley, IA. 50601
Phone: 641-847-3273
Fax: 641-847-2303

**Surveyor's Report on Main Tile Right of Way for
Drainage District No. 143
Hardin County, Iowa**

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Surveyor's Report on Main Tile Right of Way for Drainage District No. 143 Hardin County, Iowa

1.0 INTRODUCTION

- SCOPE OF WORK – The Hardin County Board of Supervisors, acting as District Trustees, requested Clapsaddle-Garber Associates to determine the current easement width of the Main tile of Drainage District No. 143 through the City of Radcliffe. This report will summarize the history of establishment for said Drainage District 143 and the establishment of City of Radcliffe along with the surrounding subdivisions. At the Drainage District 143 Landowner Meeting held on April 24, 2019 the results of the investigation for Work Order #167 were discussed and reviewed by the District Trustees and landowners. For reference, a copy of the meeting minutes is included in Appendix A and a copy of the Investigation Summary for Work Order #167 (as considered at the April 24, 2019 Drainage District 143 Landowner Meeting) is included in Appendix B. As a result of this meeting, the District Trustees requested Clapsaddle-Garber Associates to move ahead with the Surveyor's Report to determine the width of the easement for the Main tile through the City of Radcliffe.
- LOCATION – The area of investigation was limited to the upper end of the Main tile located in Section 29, Township 87 North (T87N), Range 22 West (R22W), Hardin County, Iowa. Specifically, the downstream limit was where the Main tile crosses the east side of Section 29 (center of East Street aka County Highway S27) at approximately $\frac{3}{8}$ mile north of Highway #175. It then goes west on Ionia Street with the upstream limit being where the Main tile crosses the south right of way line of Ionia Street at approximately $\frac{3}{4}$ mile, which is just west of May Street. For reference, a copy of a Drainage District No. 2 map by Reigles Engineering Company, showing said limits is included in Appendix C.

2.0 PARTIAL DISTRICT HISTORY – The following is a summary of the pertinent history (prior to 2014) of the main of Drainage Districts No. 2 (renamed 143 later) and 143 as obtained from the Hardin County Auditor’s drainage minutes and records and those of Clapsaddle-Garber Associates. The partial Drainage District History also includes recorded subdivision that are on file in the *Hardin County Recorder’s office*.

1881, Jun. 8 *Original Town Radcliffe*

1883, Nov. 9 *Rumper’s Addition*

1884, May 23 *Stukenberg’s Addition*

1895, Jul. 16 *Rumpers Fourth Addition*

1901 Jun. 6 *Drake and Dallard’s Addition*

1903, Aug. 15 Petition and Bond for establishment of Drainage District No. 2 was filed. Said petition indicated that a main drain, sub-mains, and laterals should be installed. Specifically, it indicated that the main should start on the west side of Section 32, run northeast and east into Section 29 to Ionia Street. There it should run east on Ionia Street to the east side of Section 29 where it would continue southeast and terminate in an open ditch.

1903 E.E. Fox is appointed as the Engineer for the project and an Engineer's Report was filed for this project. Although no copies of said report could be located, it is known to have existed as E.E. Fox revised it through a letter dated Sept. 10, 1903.

1903, Aug. 27 Publication of Notice of Drainage District No. 2 establishment.

1903, Sept. 29 Notice to Contractors for construction of Drainage District No. 2 facilities with a bid date of Nov. 11, 1903.

1906, Mar. 1 Publication of Notice of Drainage District No. 2 establishment.

1906, Jul. 7 Publication of Notice to Contractors for construction of Drainage District No. 2 facilities with a bid date of Aug. 6, 1906.

1906, Aug. 14 Construction bond with Austin Rorem for construction of Drainage District No. 2 facilities was filed.

3.0 INVESTIGATION – All investigation for this report was limited to office work only. Said investigation included to looking for right of way information for the Drainage District 143 within the City of Radcliffe. The following Hardin County offices were searched for any information regarding Drainage District 143 right of way within the City of Radcliffe:

- County Auditor’s Office
 - Transfer books – Nothing was found related to Drainage District 143 right of way
 - Current plat books – Nothing was found related to Drainage District 143 right of way
 - Old plat books – Nothing was found related to Drainage District 143 right of way

- County Engineer’s Office
 - Field books – Nothing was found related to Drainage District 143 right of way
 - Sherman Township field book – Nothing was found related to Drainage District 143 right of way

- County Recorder’s Office
 - Record subdivisions – Nothing was found related to Drainage District 143 right of way

City of Radcliffe offices were not searched for any information in regard to Drainage District 143 right of way as it is not believed that the city would have any pertinent Drainage District records that would date back to the early 1900’s. A review of the district history shows that the City of Radcliffe existed prior to the Drainage District 143 establishment and therefore the right of way were platted existed prior to said Drainage District 143.

4.0 DISCUSSION AND CONCLUSIONS – Based on the above, it appears that no width was ever stated for to Drainage District 143 right of way and that no damages paid for taking the land to establish said right of way. As the City of Radcliffe and its surrounding subdivisions were established prior to Drainage District 143, it would logical that the existing street right of way for Ionia Street (66 feet) would have been used for the Drainage District 143 right of way through the City of Radcliffe. This would explain why no damages had been paid. Essentially, the right of way for Ionia Street and Drainage District 143 right of way are one and the same from East Street (aka County Highway S27) to east side of Cleveland Street. See attached City of Radcliffe map included in Appendix D.

5.0 RECOMMENDATIONS – Definition of the Drainage District 143 right of way would help define where maintenance could be done in the future to protect and ensure Main tile performance. Therefore, it is recommended that the Hardin County Board of Supervisors, acting as District Trustees, should take action to accomplish the following:

- Approve the Surveyor’s Report as prepared by Clapsaddle-Garber Associates.
- Hold the required hearing on the proposed Surveyor’s Report.

NOTE: It should be noted that Ionia street right of way and Drainage District 143 right of way may be one and the same, but trees outside of right of way may be influencing and/or having a negative effect of the Main tile performance.

**DRAINAGE DISTRICT 143
LANDOWNER MEETING**

4/24/2019 - Minutes

1. Open Meeting

Hardin County Drainage District Board of Trustee, Lance Granzow, opened the meeting. Also present was Trustee, Lance Granzow; Landowners Taylor Roll, Jacob Handsaker, Kris Bell, Paul Handsaker, Phyllis Drake, Jim and Helen Granzow, Doris Eike, Bryan Drake, Calvin Hyland, Carole Topp, Kathy Houck, Curt Groen, Kim and Hope Boddard; Lee Gallentine and Zeb Stanbrough with Clapsaddle-Garber Associates; Drainage Clerks Becca Junker and Tine Schlemme.

2. Approve Agenda

Hoffman moved, Granzow seconded to approve the agenda as presented. All ayes. Motion carried.

3. Explanation Of Project

Gallentine explained at the hearing for the upper end of the main tile that was back in 2017 it was requested that instead of just worrying about trees in the golf course, the entire route to the main tile be looked at for possible trees causing root issues. CGA went out and took an inventory of all the trees within 50 feet of the main tile. Referring to the Investigation Summary, Gallentine explained the trees that were a main concern due to species were highlighted. Gallentine then directed the meeting back to the Trustee's to talk about the Landowner Meeting that took place in Radcliffe that he was not in attendance of.

Granzow explained that at the Radcliffe meeting the idea was to break up the project into different targeted sections so that it did not exceed the \$50,000 threshold. Following the Radcliffe meeting, it was brought to the Trustee's attention that the Code of Iowa specifically states that separating any project to keep under the \$50,000 threshold cannot be done. The Trustee's then decided to hold another landowners meeting to decide what the next step in clearing the tile would be.

4. Comments/Discussion

Hoffman explained that his duty as a drainage district trustee is to make sure the facility is flowing water. He expressed that he does not want to stand in front of the landowners and say they have to do one thing or another, but it is his duty to in fact do something so that the facility is flowing water properly. He addressed the written and verbal responses that were received by the landowners who could not make the meeting. There were more responses of no than there were of yes to move forward. He said that his initial opinion is to go with the voice of no but there has to be an understanding by not doing anything, if things get bad and there become damages, the Trustees will have to take action right away.

Granzow then explained that there are tree roots in the tile, they can be left or they can be taken out. There are trees growing, they can be left or they can be cut down. He does not want to demolish the town, but it is his feeling the trees need to come out. If that means ordering an easement then they need to order one. The Trustees need to protect the facilities. The tree roots are going to keep growing and keep blocking the infrastructure and could cause more damage resulting in tearing up the entire title versus jet cleaning now.

The Trustees then opened the floor for discussion.

Landowners brought up cutting problematic trees down and then jet cleaning the tile. While discussing this option, Gallentine informed the landowners that jetting the tile is an option but depending what kind of jet is used, it could possibly damage the tile. There would also have to be an access point every 500-1000 feet which adds to costs. If the tile is damaged during the jetting process then there will be added costs for replacing the tile completely.

There was discussion on how much of the tile has roots blocking the flow of water. After reviewing the footage that was taken, Schlemme came up with an estimated 1000 feet of blocked tile. Roll then added that 1/3 of it has roots in the tile. It was discussed that if trees were cut, it was still very important to do something with the roots that are already in the tile.

Lining the tile through the urban area was discussed. Once the tile was lined, there would be no need to do anything with the trees because the lining would block the roots from causing problems in the tile. Granzow then stated that they are saving the trees in the district at the expense of the people who do not want the trees. The larger expense of this project is falling on the farm ground rather than the people in town. It was brought up classifying on assessed value rather than drainage benefit and it was discussed that there would have to be a petition and a possible election that majority of the landowners agree on. Schlemme informed the landowners that if this was something they wanted to do, it would be important to get legal advice.

It was then brought up by a landowner that if CGA is going to be making a report, he would like them to also look into how much it would cost to install a new tile to the side of Ionia Street. He wanted to compare the price of lining the tile to the price of installing new tile that is not under the roadway as repairing tile under the roadway is expensive.

5. Possible Action

Hoffman moved, Granzow seconded to instruct CGA to prepare a report and plans for a few different options.

- 1) CGA is to prepare a report and costs to partially and fully line the facility.
- 2) CGA is to prepare a report and costs to cut trees and clean the tile.
- 3) CGA is to prepare a report and costs to install a new tile to the side of Ionia.
- 4) CGA is to determine the current easement.

Hoffman informed the landowners that once CGA has completed the reports, another landowners meeting will be scheduled to go over the results. He also thought it would be beneficial for there to be a vendor who supplies the slip lining present to discuss and explain their products and educate both the landowners and Trustees.

6. Other Business

Hoffman thanked everyone who was present for partaking in quality, constructive dialogue.

7. Adjourn Meeting

Hoffman moved, Granzow seconded to adjourn the meeting. All ayes. Motion Carried.

Drainage District:

143

Investigation Summary:

- At the Hearing on Engineer's Report for Repairs to Upper End of Main Tile, the District Trustees requested an inventory of trees within the 50' of the Main Tile from the west end of town to the east end of town (i.e. west side of the golf course) be performed.
- CGA staff performed a site visit along the Main Tile route and found the following trees within 50' of the Main Tile (unless noted otherwise):
 - 3 Walnuts (28"-36")
 - 1 Buckeye (12")
 - 3 Oak (6"-36")
 - 12 Brush or Brush Lines
 - 1 Cedar (24")
 - 4 Blue Spruce (8"-15")
 - 13 Apple (2"-24")
 - 2 Honey Locusts (24"-36")
 - 10 Ash (10"-48")
 - 4 River Birch (24"-36")
 - 22 Soft Maple (2"-48")
 - 12 Hard Maple (8"-48")
 - 3 Mulberry (6")
 - 1 Boxelder (24")
 - 1 Sycamore (48") at 54' from tile

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

None as only investigation was performed

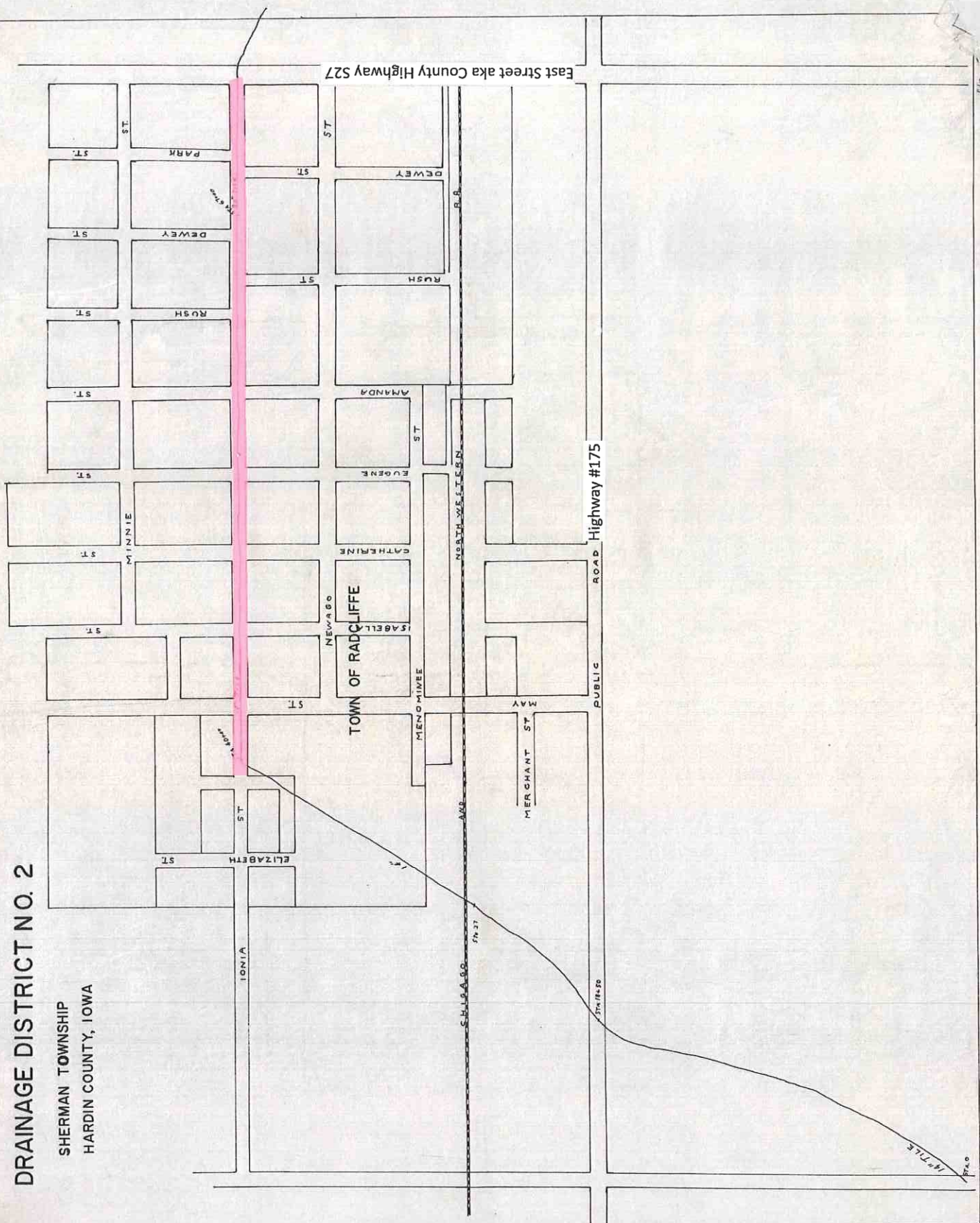
Additional Actions Recommended:

Although all trees are capable of producing tree roots which can negatively impact tile, the above yellow highlighted trees species are some that we typically find majorly impacting tile negatively. If the District Trustees do not pursue lining the Main tile, they may wish to pursue removal of at least the yellow highlighted trees as it is CGA's opinion that they will eventually (or may already be) negatively impacting the Main Tile. It is also our opinion that the cost of removal of just these trees would be over \$50,000. This cost is high enough that a hearing and engineer's report would be required.



DRAINAGE DISTRICT NO. 2

SHERMAN TOWNSHIP
HARDIN COUNTY, IOWA



East Street aka County Highway S27

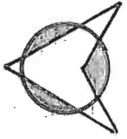
Highway #175

PUBLIC ROAD

North Arrow

100'

NORTH



CITY OF RADCLIFFE, IOWA

ST Co. Rd. S-27

ST

PARK

ST

ST

DEWEY

ST

RUSH

ST

ST

MINNIE

ST

ST

ST

IONIA

ST

CLEVELAND

ELIZABETH

ST

ST

ST

AMANDA

EUGENE

CATHERINE

ISABELLA

MAY

ST

ST

EAST

DEWEY

RUSH

ST

MENOMINEE

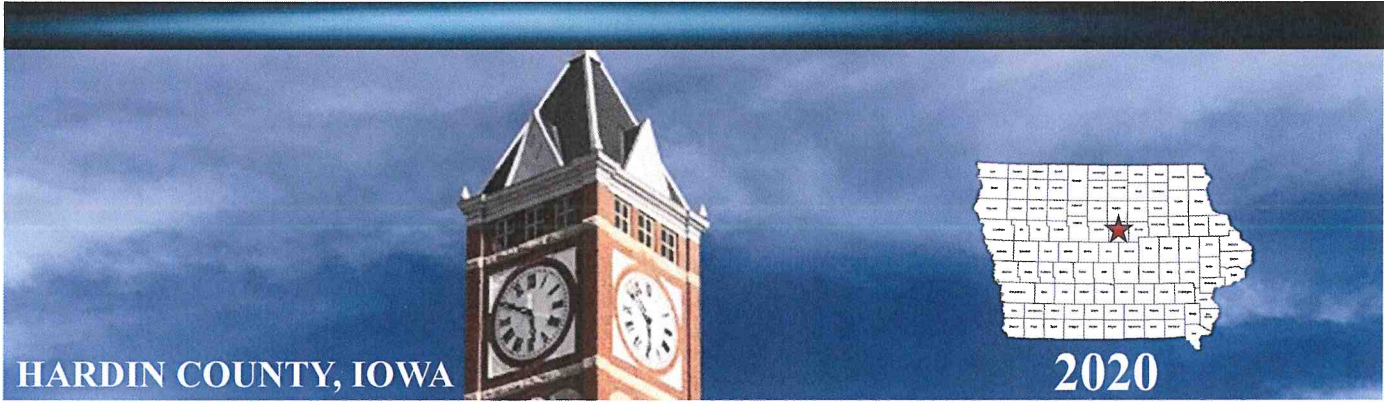
trail

Golf course

IOWA HWY. NO. 175

ST

ST



HARDIN COUNTY, IOWA

2020



**SUPPLEMENT TO
ENGINEER'S
REPORT
ON REPAIRS TO
UPPER END OF
MAIN TILE OF
DRAINAGE
DISTRICT NO. 143
HARDIN COUNTY**

	<p>I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA</p> <p><i>Lee O. Gallentine</i>, P.E. <u>Jan 8, 2020</u> LEE O. GALLENTINE, P.E. DATE</p> <p>LICENSE NUMBER: 15745 MY LICENSE RENEWAL DATE IS DECEMBER 31, 2020 PAGES OR SHEETS COVERED BY THIS SEAL: SHOWN ON TABLE OF CONTENTS</p>
--	--

	<p><u>CLAPSADDLE-GARBER ASSOCIATES OFFICE LOCATIONS</u></p>	<p>Project Office 739 Park Avenue Ackley, IA. 50601 Phone: 641-847-3273 Fax: 641-847-2303</p>
<p>16 East Main Street, PO Box 754 Marshalltown, IA 50158 1523 S. Bell Avenue, Suite 101 Ames, IA 50010 5106 Nordic Drive Cedar Falls, IA 50613 739 Park Avenue Ackley, IA 50601 511 Bank Street Webster City, IA 50595</p>		

Supplement to Engineer's Report on Repairs to Upper End of Main Tile of Drainage District No. 143, Hardin County, Iowa

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Repair General Route and Location Map	App. C
Opinion of Probable Construction Costs – Full Tile Lining	App. D
Opinion of Probable Construction Costs – Partial Tile Lining	App. E
Opinion of Probable Construction Costs – Tile Cleaning and Tree Removal	App. F
Opinion of Probable Construction Costs – Offset Tile Replacement	App. G

Supplement to Engineer's Report on Repairs to Upper End of Main Tile of Drainage District No. 143, Hardin County, Iowa

1. INTRODUCTION

- SCOPE OF WORK – The Hardin County Board of Supervisors, acting as District Trustees, requested Clapsaddle-Garber Associates to investigate and report concerning repairs to the upper end of the main tile of Drainage District No. 143. At the hearing held on August 16, 2017 and several landowner meetings since, the original Engineer's Report, subsequent investigation results (copy included in Appendix A for reference), and subsequent repair results were discussed and reviewed by the District Trustees. As a result, at the landowner meeting held on April 24, 2019 the District Trustees requested Clapsaddle-Garber Associates to move ahead with this supplement for additional options to reinstate the capacity of the Main tile along Ionia Street.

2. REPAIR METHODS – To repair the issues discussed in the original report along Ionia Street that haven't already been repaired, there are several options, but the following are some of the ones discussed at the above mentioned hearings and meetings:

Full Tile Lining

- Remove tree roots and debris from the existing Main tile by either jet cleaning or mechanical cutting.
- Prevent roots from infiltrating the existing Main tile again by installing a CIPP liner.
- For reference, the general route and location of said cutting and lining are shown on the map included in Appendix C.

Partial Tile Lining

- Remove tree roots and debris from the existing Main tile by either jet cleaning or mechanical cutting. This would be only where tree root infiltration has previously been identified (assumed to be $\frac{1}{3}$ of length of the full tile lining length based on April 24, 2019 meeting minutes).
- Prevent roots from infiltrating the existing Main tile again by installing a CIPP liner in this same length.
- For reference, the general route and location of said cutting and lining are shown on the map included in Appendix C.

Tile Cleaning and Tree Removal

- Remove tree roots and debris from the existing Main tile by either jetting cleaning or mechanical cutting.
- Remove trees identified as problematic within 50 feet of either side of the existing Main tile. For reference, they are highlighted yellow in subsequent investigation results included in Appendix A.
- For reference, the general route and location of said cutting are shown on the map included in Appendix C.

Offset Tile Replacement

- Install a new Main tile on either the north side or south side of Ionia Street pavement (depending upon number of existing utilities at these locations). The offset Main tile would connect to the existing Main tile in the golf course and would connect back into the existing Main tile west of May Street.
- Remove trees within 50 feet of either side of the rerouted Main tile.
- For reference, the general route and location of said replacement is shown on the map included in Appendix C.

With the above-mentioned repairs, the following should be noted:

- All of the above options would only remove obstructions in the Main tile at locations of proposed work. Any obstructions at other locations would remain in the existing Main tile.
- All private connections repairs would be reconnected to the Main tile after repairs.
- Repair of any of the key issues identified under the discussions and conclusions of the original report (except roots and rock/soil) on the existing Main tile have either been

completed are not necessary for cleaning and/or lining. For reference, a table stating said spot locations is included in Appendix B.

- All options would require installation of access manholes in the area of repair.
- The Offset Tile Replacement option would abandon the existing Main tile in place.
- All options except the Full Tile Lining option would require future monitoring for additional tree growth and root infiltration.
- The Offset Tile Replacement option would not provide for reconnection of any private connections on the opposite side of Ionia Street that the offset Main tile is installed (assumed number of private connections to be half of total for other options).
- The Tile Cleaning and Tree Removal option would involve removing trees outside of the existing right of way of Ionia Street.
- The pipe sizes used are those that are currently manufactured that most closely meet or exceed the current main tile size.
- It is our understanding of Iowa Code that the removal of hedges, trees, and obstructions is a power given to the Drainage District Trustees through Iowa Code Chapter 468.138 and 468.139.
- Repairs have historically been viewed as not having an impact on jurisdictional wetlands. As such, individual landowners should consult with applicable staff at the Hardin County NRCS office to verify the existence of said jurisdictional wetlands and that there will be no impact on them.

Per Iowa Code Chapter 468.126, the above actions would be considered a repair. As such, Subsection 1, paragraph c of Chapter 468.126 states "If the estimated cost of the repair does not exceed fifty thousand dollars, the board may order the work done without conducting a hearing on the matter. Otherwise, the board shall set a date for a hearing. . ." The opinion of probable construction cost contained in the Opinion of Probable Construction Costs section of this report exceeds said \$50,000 limit. Therefore, a hearing will be required. Per Iowa Code Chapter 468.126.1.g, the right of remonstrance does not apply to the proposed repairs.

3. OPINION OF PROBABLE CONSTRUCTION COSTS – Using the above methods of repair, an itemized list of project quantities and associated opinions of probable construction costs was compiled and is included in Appendices D, E, F and G of this report. A summary of said costs (to the nearest dollar) are as follows:

METHOD	DRAINAGE COEFF.	TOTAL COST
Full Tile Lining	Existing	\$ 455,366
Partial Tile Lining	Existing	\$ 270,944
Tile Cleaning and Tree Removal	Existing	\$ 342,616
Offset Tile Replacement	Existing	\$ 455,022

It should be noted that said costs include materials, labor, and equipment supplied by the contractor to complete the necessary improvement and includes applicable engineering, construction observation, and project administration fees by Clapsaddle-Garber Associates. However, said costs do not include any interest, legal fees, county administrative fees, crop damages, other damages, previous repairs, engineering fees to date, wetland mitigation fees, or reclassification fees (if applicable). As always, all costs shown are opinions of Clapsaddle-Garber Associates based on previous lettings on other projects. Said costs are just a guideline and are not a guarantee of actual costs.

4. RECOMMENDATIONS – There is a definite need to perform one of the repairs from the original report or this supplement. The repair would remove some or all of the current restrictions to the Main tile and extend the life span of the Main tile. Therefore, it is recommended that the Hardin County Board of Supervisors, acting as District Trustees, should take action to accomplish the following:
- Approve the Supplement to Engineer’s Report as prepared by Clapsaddle-Garber Associates.
 - Hold the required hearing or hearings on the proposed repair.
 - Adopt one of the recommendations of the Original Report or Supplement to Engineer’s Report.
 - Direct Clapsaddle-Garber Associates to prepare plans and specifications for the proposed repair.
 - Direct Clapsaddle-Garber Associates to proceed with receiving bids from interested contractors.
 - Award contract to the lowest responsible contractor.
 - If desired or required by Iowa Code, proceed with reclassification proceedings.

Drainage District:

143

Investigation Summary:

- At the Hearing on Engineer's Report for Repairs to Upper End of Main Tile, the District Trustees requested an investigation of who owned the fiber optic utilities that were bored through the Main Tile.
- Based on information from the Iowa One-Call service, it appeared that the most likely utility at issue was Radcliffe Telephone Company.
- Contacted Radcliffe Telephone Company via telephone on November 11, 2018 and they indicated that they use orange conduit for their fiber optic line.
- Attached photographs (Pic #1 and Pic #2) from CCTV inspection clearly show that conduit bored through the Main Tile is orange. The locations of said fiber optic lines being bored through the Main Tile are shown on the attached CCTV Investigation Map.

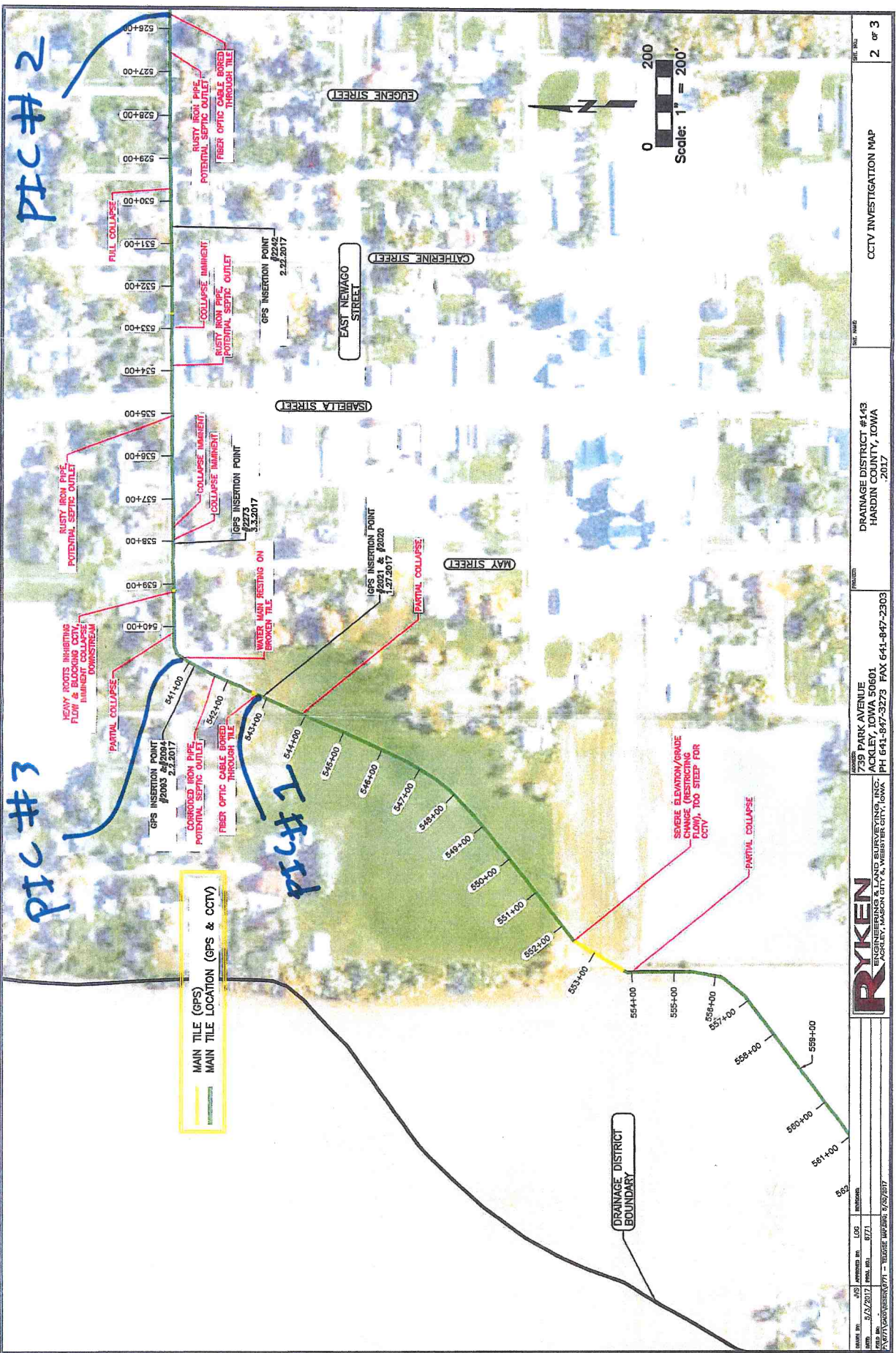
Contractor Time and Materials (spent while CGA was on-site):

None as only investigation was performed.

Additional Actions Recommended:

Radcliffe Telephone Company should remove their fiber optic lines from the Main Tile and repair the Main Tile at these two locations. The repair should be observed, documented, and performed to applicable Drainage District standards. It is CGA's opinion that this should be done at no cost to the drainage district unless there is an agreement or Iowa Code section that states otherwise.





DATE: 5/1/2017	PROJECT: DRAINAGE DISTRICT #143 HARDIN COUNTY, IOWA 2017	DATE: 5/2/2017	SCALE: 1" = 200'
PROJECT: 739 PARK AVENUE ACKLEY, IOWA 50601 PH 641-847-3273 FAX 641-847-2303	PROJECT: DRAINAGE DISTRICT #143 HARDIN COUNTY, IOWA 2017	PROJECT: CCTV INVESTIGATION MAP	PROJECT: 2 of 3
 RYKEN ENGINEERING & LAND SURVEYING, INC. ACKLEY, IOWA CITY & WEBSTER CITY, IOWA			

PIC # 2

2/2/2017

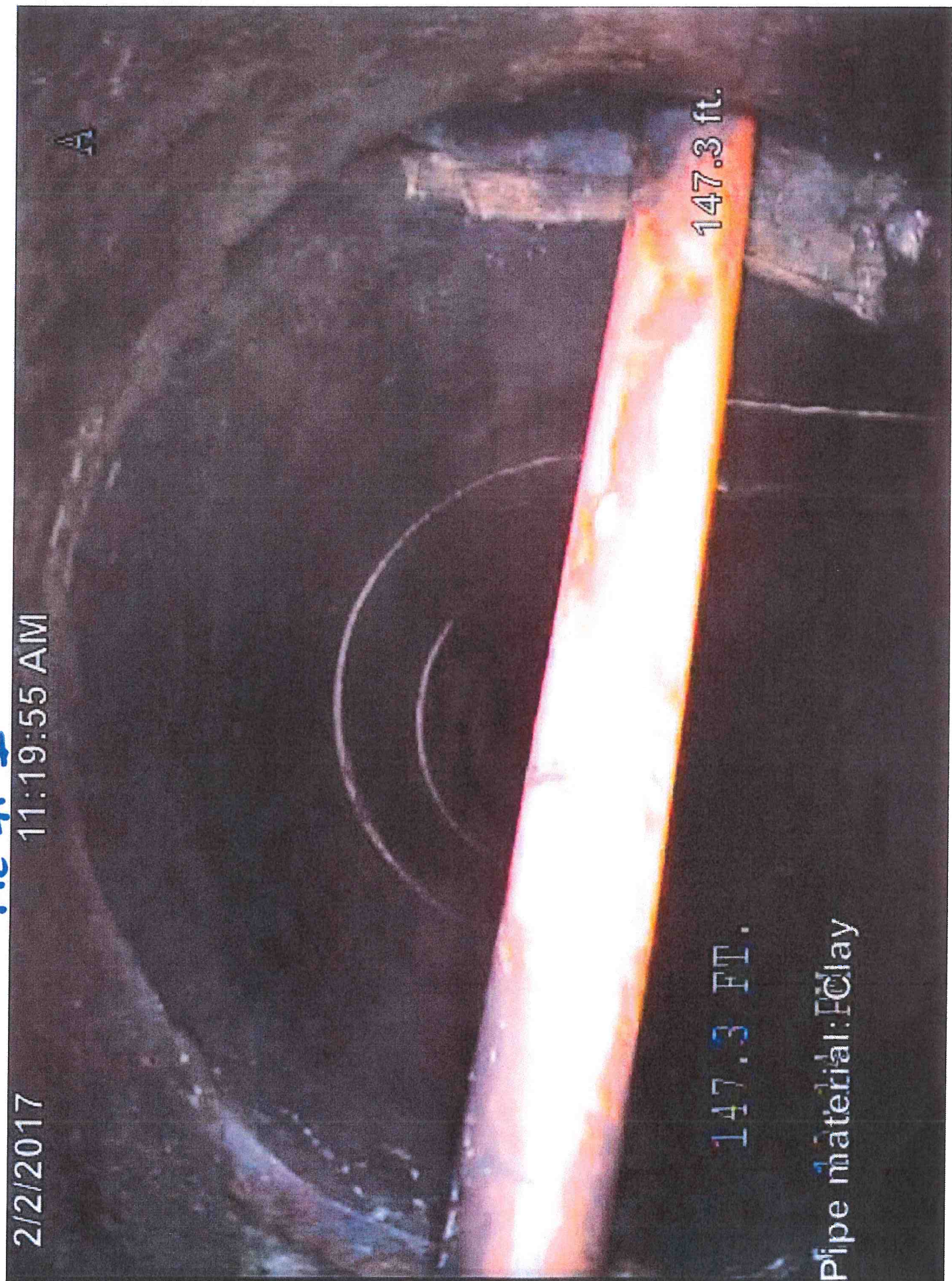
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A

147.3 ft.

147.3 FT.

Pipe material: FClay



PEC # 2

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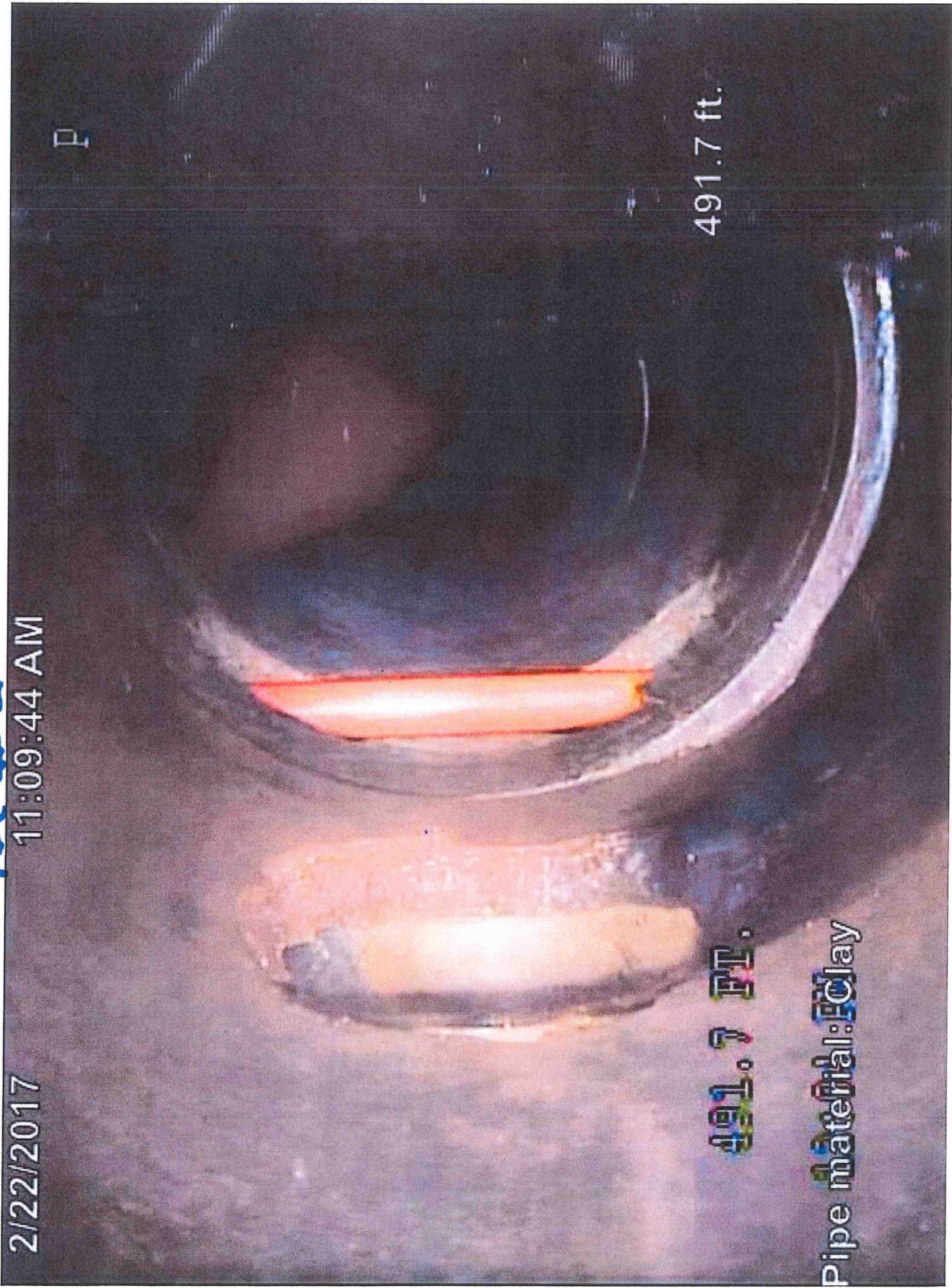
2/22/2017

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491.7 ft.

491.7 FT.

Pipe material: ECJlay



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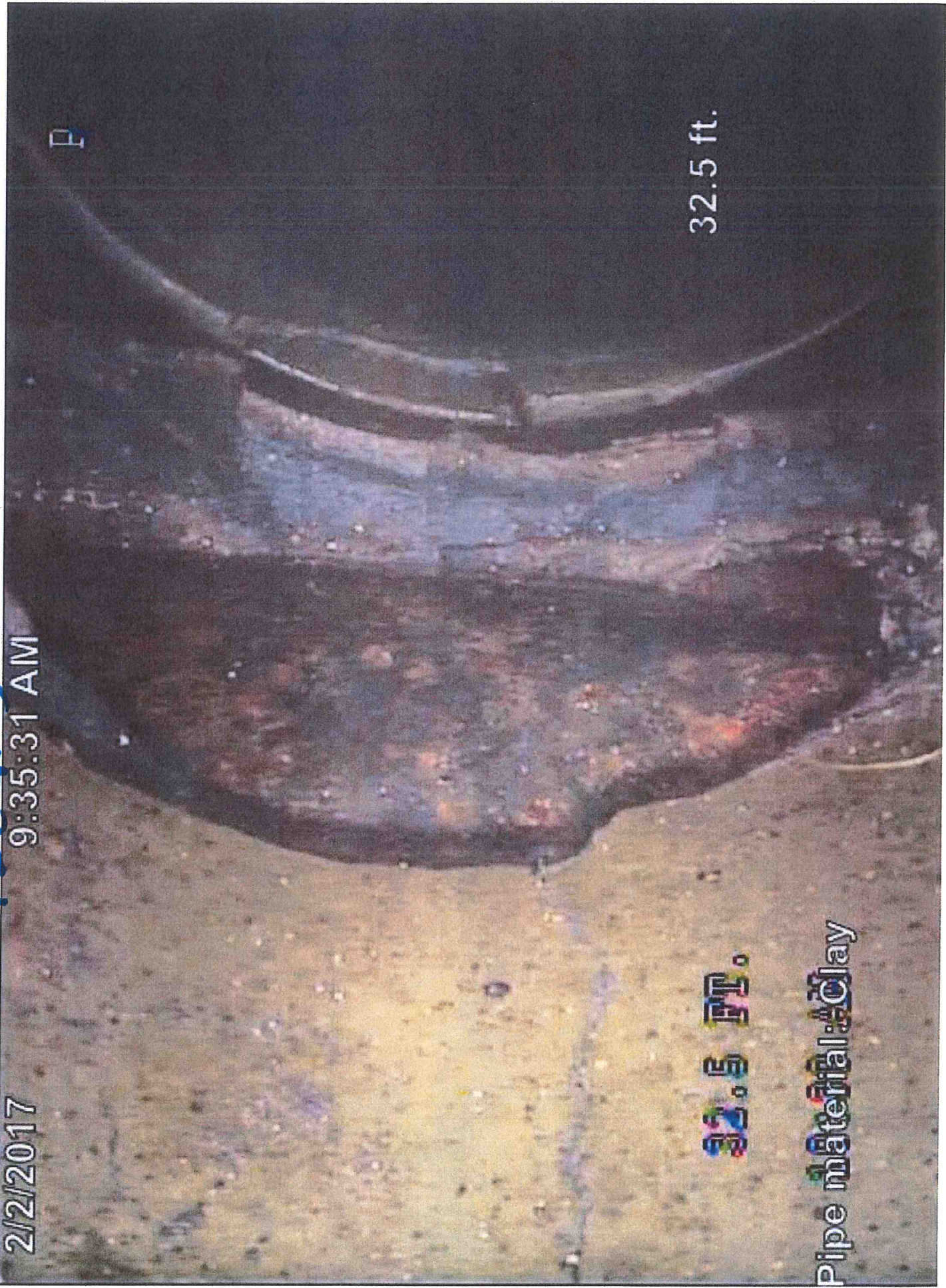
2/2/2017

F

32.5 ft.

32.5 FT.

Pipe material: Clay



Drainage District:

143

Investigation Summary:

- At the Hearing on Engineer's Report for Repairs to Upper End of Main Tile, the District Trustees requested an inventory of trees within the 50' of the Main Tile from the west end of town to the east end of town (i.e. west side of the golf course) be performed.
- CGA staff performed a site visit along the Main Tile route and found the following trees within 50' of the Main Tile (unless noted otherwise):
 - 3 Walnuts (28"-36")
 - 1 Buckeye (12")
 - 3 Oak (6"-36")
 - 12 Brush or Brush Lines
 - 1 Cedar (24")
 - 4 Blue Spruce (8"-15")
 - 13 Apple (2"-24")
 - 2 Honey Locusts (24"-36")
 - 10 Ash (10"-48")
 - 4 River Birch (24"-36")
 - 22 Soft Maple (2"-48")
 - 12 Hard Maple (8"-48")
 - 3 Mulberry (6")
 - 1 Boxelder (24")
 - 1 Sycamore (48") at 54' from tile

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

None as only investigation was performed

Additional Actions Recommended:

Although all trees are capable of producing tree roots which can negatively impact tile, the above yellow highlighted trees species are some that we typically find majorly impacting tile negatively. If the District Trustees do not pursue lining the Main tile, they may wish to pursue removal of at least the yellow highlighted trees as it is CGA's opinion that they will eventually (or may already be) negatively impacting the Main Tile. It is also our opinion that the cost of removal of just these trees would be over \$50,000. This cost is high enough that a hearing and engineer's report would be required.



Drainage District:

143

Investigation Summary:

At the Hearing on Engineer's Report for Repairs to Upper End of Main Tile, the District Trustees requested an opinion of probable construction cost to line the existing Main tile from the west end of town to the east end of town (i.e. west side of the golf course).

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

None as only investigation was performed

Additional Actions Recommended:

Based on conversations with some lining companies and recent bid letting for sanitary sewer lining, CGA drafted the attached Engineer's Opinion of Probable Construction Costs. Said opinion is just below \$500,000. This cost is high enough that a hearing and engineer's report would be required.





By: Z.J.S.
 Date: 11/21/2018
 Checked By: L.O.G.
 Date: 11/21/2018

Engineer's Opinion of Probable Construction Costs

Project: Main Tile for D.D. #143

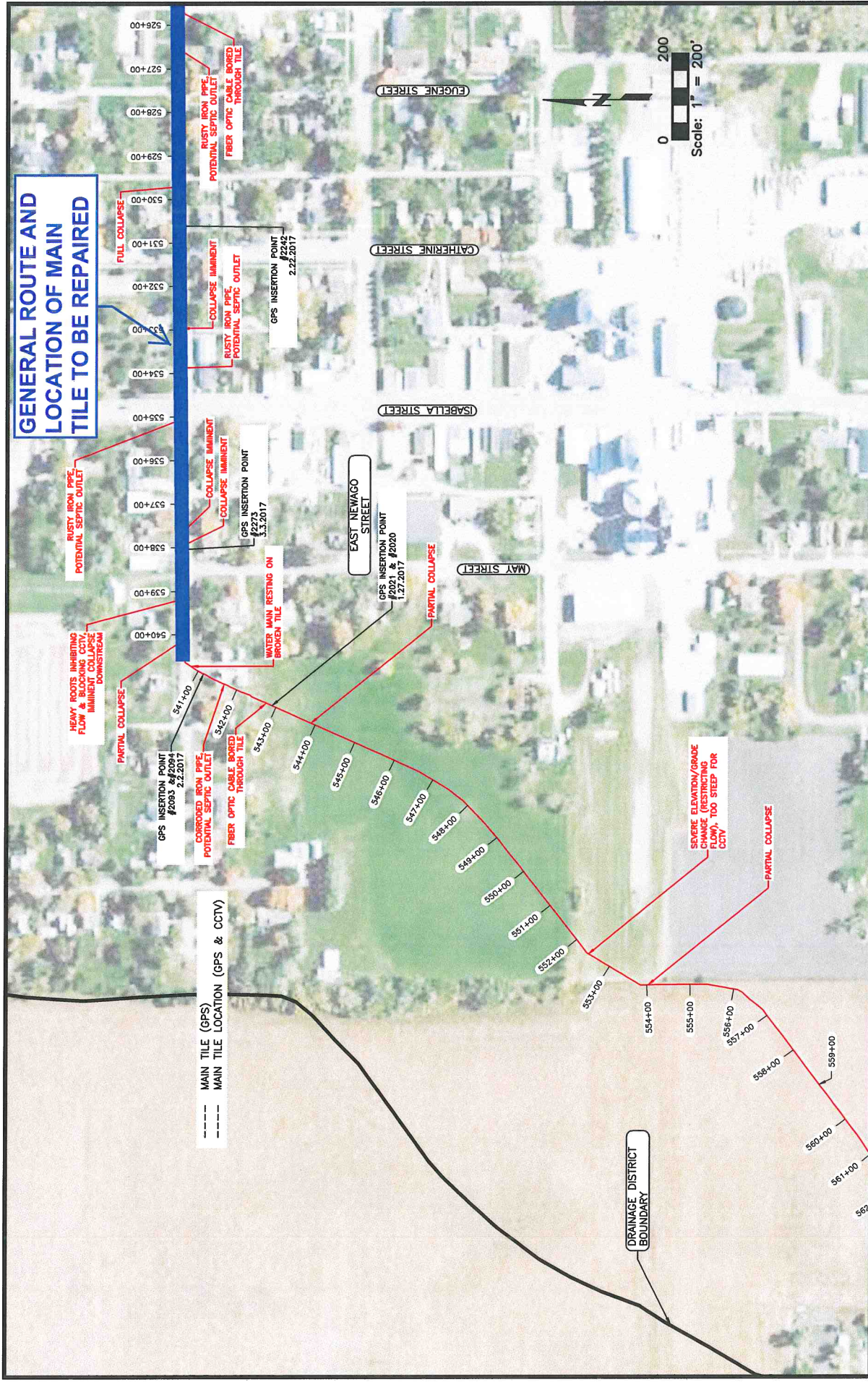
Location: City of Radcliffe, Hardin County, Iowa

TILE LINING	ITEM #	DESCRIPTION	Unit Cost	Units	Quantity	Units	Total Cost	
	CONSTRUCTION COSTS							
	101	TILE CLEANING	\$ 5.00	LF	4609	LF	\$ 23,045.00	
	102	14-INCH TILE LINING	\$ 35.00	LF	1315	LF	\$ 46,025.00	
	103	18-INCH TILE LINING	\$ 50.00	LF	2558	LF	\$ 127,900.00	
	104	20-INCH TILE LINING	\$ 60.00	LF	736	LF	\$ 44,160.00	
	105	ACCESS MANHOLES	\$ 10,000.00	EA	9	EA	\$ 90,000.00	
	106	REINSTATE TAP	\$ 200.00	EA	87	EA	\$ 17,400.00	
	107	REMOVE AND REPLACE ASPHALT	\$ 60.00	SY	150	SY	\$ 9,000.00	
	108	TRAFFIC CONTROL	\$ 5,000.00	LS	1	LS	\$ 5,000.00	
CONSTRUCTION SUBTOTAL							\$ 362,530.00	
Contingency (10%)							\$ 36,253.00	
CONSTRUCTION TOTAL							\$ 398,783.00	
Engr. & Const. Observation (25%)							\$ 99,695.75	
TOTAL DISTRICT COST							\$ 498,478.75	

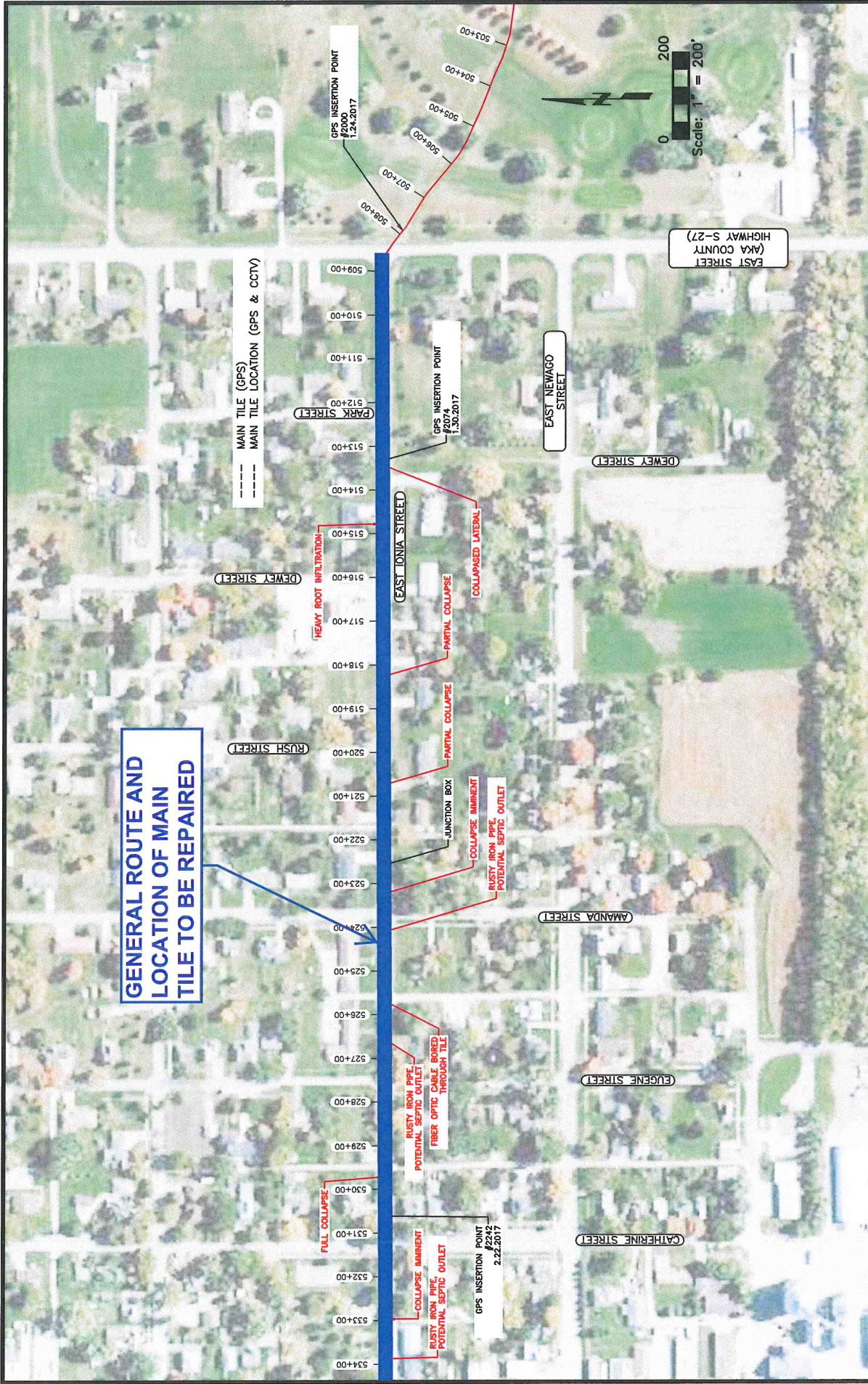
Tabulated Defects

	GPS #2273 Upstream	GPS #2273 Downstream	GPS #2242 Downstream	GPS #2242 Upstream	GPS #2094 Downstream	GPS #2074 Upstream	GPS #2000 Upstream
Total	3508						
Total Length Televised (ft)	108	538	804	198	194	931	735
Date:	3/3/2017	3/3/2017	2/22/2017	2/22/2017	2/2/2017	1/30/2017	1/24/2017
Top crack (ft)	63	286	552	29	122	484	164
Side crack (ft)	30	128	62	4	9	418	21
Bottom crack (ft)	53	0	0	8	0	423	6
Partial or imminent collapse (#)	4	10	9	0	3	22	4
Debris (ft)	4	20	0	0	195	69	597
Offset Joint (#)	8	14	15	15	8	232	45
Soil/voids visible in offset joint (#)	7	6	9	10	5	25	18
Holes (non-fixed) (#)	1	5	6	0	3	4	1
Holes (fixed) (#)	1	2	0	0	2	6	1
Iron pipe, potentially septic outlet	0	2	2	0	0	0	0
Water main crushing	0	0	0	0	1	0	0

GENERAL ROUTE AND LOCATION OF MAIN TILE TO BE REPAIRED



DRAWN BY: JWS DATE: 5/3/2017 PROJECT: 739 PARK AVENUE, ACKLEY, IOWA 50601 CLIENT: HARRISBURG CITY & WATER UTILITIES, INC. PROJECT: 739 PARK AVENUE, ACKLEY, IOWA 50601 CLIENT: HARRISBURG CITY & WATER UTILITIES, INC.	APPROVED BY: LDC DATE: 5/3/2017 PROJECT: 739 PARK AVENUE, ACKLEY, IOWA 50601 CLIENT: HARRISBURG CITY & WATER UTILITIES, INC.	REVISIONS: 571 PROJECT: 739 PARK AVENUE, ACKLEY, IOWA 50601 CLIENT: HARRISBURG CITY & WATER UTILITIES, INC.	DRAINAGE DISTRICT #143 HARRISBURG CITY, IOWA 2017	CCTV INVESTIGATION MAP 2 of 3
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**GENERAL ROUTE AND
LOCATION OF MAIN
TILE TO BE REPAIRED**

--- MAIN TILE (GPS)
--- MAIN TILE LOCATION (GPS & CCTV)

DRAWN BY: JUS DATE: 5/3/2017 PLOT NO.: 1707120400000001	APPROVED BY: LOS DATE: 5/3/2017 PLOT NO.: 1707120400000001	PROJECT: 3935 PARK AVENUE AND SURVEYING, INC. ENGINEERS AND SURVEYORS HARSHEN CITY, IOWA PH 641-847-3373 FAX 641-847-2303	PROJECT: DRAINAGE DISTRICT #143 HARDIN COUNTY, IOWA 2017	SHEET NO.: 3 OF 3
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By: L.O.G.
 Date: 1/7/2020
 Checked By: L.O.G.
 Date: 1/7/2020

Engineer's Opinion of Probable Construction Costs
Project: Main Tile for D.D. #143 (Ionia Street Only)
 Location: City of Radcliffe, Hardin County, Iowa

FULL TILE LINING	ITEM #	DESCRIPTION	Unit Cost	Units	Quantity	Units	Total Cost	
	CONSTRUCTION COSTS							
	1000	TILE CLEANING	\$ 5.00	LF	3275	LF	\$ 16,375.00	
	1001	18-INCH OR 20-INCH TILE LINING	\$ 70.00	LF	2525	LF	\$ 176,750.00	
	1002	22-INCH OR 24-INCH TILE LINING	\$ 95.00	LF	750	LF	\$ 71,250.00	
	1003	ACCESS MANHOLES	\$ 10,000.00	EA	4	EA	\$ 40,000.00	
	1004	PRIVATE CONNECTIONS	\$ 200.00	EA	60	EA	\$ 12,000.00	
	1005	REMOVE AND REPLACE ASPHALT	\$ 60.00	SY	80	SY	\$ 4,800.00	
	1006	TRAFIC CONTROL	\$ 10,000.00	LS	1	LS	\$ 10,000.00	
	CONSTRUCTION SUBTOTAL							\$ 331,175.00
Contingency (10%)							\$ 33,117.50	
CONSTRUCTION TOTAL							\$ 364,292.50	
Engr. & Const. Observation (25%)							\$ 91,073.13	
TOTAL CONSTRUCTION COST							\$ 455,365.63	



By: L.O.G.
 Date: 1/7/2020
 Checked By: L.O.G.
 Date: 1/7/2020

Engineer's Opinion of Probable Construction Costs
Project: Main Tile for D.D. #143 (Ionia Street Only)
 Location: City of Radcliffe, Hardin County, Iowa

PARTIAL TILE LINING	ITEM #	DESCRIPTION	Unit Cost	Units	Quantity	Units	Total Cost	
	CONSTRUCTION COSTS							
	2000	TILE CLEANING	\$ 20.00	LF	1100	LF	\$ 22,000.00	
	2001	18-INCH OR 20-INCH TILE LINING	\$ 100.00	LF	850	LF	\$ 85,000.00	
	2002	22-INCH OR 24-INCH TILE LINING	\$ 125.00	LF	250	LF	\$ 31,250.00	
	2003	ACCESS MANHOLES	\$ 10,000.00	EA	4	EA	\$ 40,000.00	
	2004	REINSTATE TAP	\$ 200.00	EA	20	EA	\$ 4,000.00	
	2005	REMOVE AND REPLACE ASPHALT	\$ 60.00	SY	80	SY	\$ 4,800.00	
	2006	TRAFIC CONTROL	\$ 10,000.00	LS	1	LS	\$ 10,000.00	
	CONSTRUCTION SUBTOTAL							\$ 197,050.00
Contingency (10%)							\$ 19,705.00	
CONSTRUCTION TOTAL							\$ 216,755.00	
Engr. & Const. Observation (25%)							\$ 54,188.75	
TOTAL CONSTRUCTION COST							\$ 270,943.75	



By: L.O.G.
 Date: 1/7/2020
 Checked By: L.O.G.
 Date: 1/7/2020

Engineer's Opinion of Probable Construction Costs
Project: Main Tile for D.D. #143 (Ionia Street Only)
 Location: City of Radcliffe, Hardin County, Iowa

TILE CLEANING AND TREE REMOVAL	ITEM #	DESCRIPTION	Unit Cost	Units	Quantity	Units	Total Cost	
	CONSTRUCTION COSTS							
	3000	TILE CLEANING	\$ 5.00	LF	3275	LF	\$ 16,375.00	
	3001	TREE REMOVAL	\$ 3,000.00	EA	48	EA	\$ 144,000.00	
	3002	SEEDING AND RESTORATION	\$ 500.00	EA	48	EA	\$ 24,000.00	
	3003	ACCESS MANHOLES	\$ 10,000.00	EA	4	EA	\$ 40,000.00	
	3004	PROTRUDING TAP GRINDING	\$ 1,000.00	EA	10	EA	\$ 10,000.00	
	3005	REMOVE AND REPLACE ASPHALT	\$ 60.00	SY	80	SY	\$ 4,800.00	
	3006	TRAFFIC CONTROL	\$ 10,000.00	LS	1	LS	\$ 10,000.00	
	CONSTRUCTION SUBTOTAL							\$ 249,175.00
Contingency (10%)							\$ 24,917.50	
CONSTRUCTION TOTAL							\$ 274,092.50	
Engr. & Const. Observation (25%)							\$ 68,523.13	
TOTAL CONSTRUCTION COST							\$ 342,615.63	



By: L.O.G.
 Date: 1/7/2020
 Checked By: L.O.G.
 Date: 1/7/2020

Engineer's Opinion of Probable Construction Costs

Project: Main Tile for D.D. #143 (Ionia Street Only)

Location: City of Radcliffe, Hardin County, Iowa

OFFSET TILE REPLACEMENT	ITEM #	DESCRIPTION	Unit Cost	Units	Quantity	Units	Total Cost	
	CONSTRUCTION COSTS							
	4000	24" DUAL WALL POLYPROPYLENE OR RCP TILE	\$ 55.00	LF	750	LF	\$ 41,250.00	
	4001	18" DUAL WALL POLYPROPYLENE OR RCP TILE	\$ 45.00	LF	2525	LF	\$ 113,625.00	
	4002	24" x 18" POLYPROPYLENE OR RCP REDUCER	\$ 650.00	EA	1	EA	\$ 650.00	
	4003	CONCRETE COLLAR	\$ 400.00	EA	2	EA	\$ 800.00	
	4004	PRIVATE CONNECTIONS	\$ 500.00	EA	30	EA	\$ 15,000.00	
	4005	SEEDING AND RESTORATION	\$ 20,000.00	LS	1	LS	\$ 20,000.00	
	4006	DRIVEWAY OR SIDEWALK REMOVAL & REPLACEMENT	\$ 2,000.00	EA	15	EA	\$ 30,000.00	
	4007	REMOVE AND REPLACE ASPHALT	\$ 80.00	SY	620	SY	\$ 49,600.00	
4008	ACCESS MANHOLES	\$ 10,000.00	EA	4	EA	\$ 40,000.00		
4009	TRAFFIC CONTROL	\$ 20,000.00	LS	1	LS	\$ 20,000.00		
CONSTRUCTION SUBTOTAL							\$ 330,925.00	
Contingency (10%)							\$ 33,092.50	
CONSTRUCTION TOTAL							\$ 364,017.50	
Engr. & Const. Observation (25%)							\$ 91,004.38	
TOTAL CONSTRUCTION COST							\$ 455,021.88	



Drainage Utility Permit Application

Hardin County

Applicant: Jay Duncan

Contact Email: jduncan@heartofiowa.coop

Contact Phone: (641) 486-2211

Utility Type: Communications

Drainage District: Drainage Districts \DD 124 (51139)

Description of Work: Heart of Iowa
502 Main St
PO Box 130
Union, IA 50258

Dig up existing 12 pair copper cable and swing into 2 new peds for new house. Swing 1.25" HDPE joint bored with power company into ped and install 6 pair copper cable cross D41.

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 Districts. 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
Phone (641) 939-8111
Fax (641) 939-8245
drainage@hardincountyia.gov

For Office Use Only

Application Approval:

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

APPROVED PERMIT #: 2018-14

- Application in TCM
- GIS Annotation
- Approval Emailed

Drainage District:

#124

Utility Crossing Summary:

- Utility company (Heart of Iowa Communication) requested to pass the Main tile in the south road ditch for County Highway D41.
- Heart of Iowa installed their cable in an existing conduit that was previously installed by Midland Power (see attached email dated 05/09/2018). Said previous conduit install cleared what was thought to be the VCP Main tile at the toe of the road.
- Per 11/27/2019 Drainage Meeting minutes (attached), the VCP tile at the toe of the road is not active and the active Main tile is south of the overhead power lines on the south side of County Highway D41 road ditch. Thus, the utility never crossed the active Main tile and no direct observation or permit was necessary.

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

None recorded as CGA was not on-site. All work was completed by Heart of Iowa.

Additional Actions Recommended:

None at this time since the Main tile was never crossed.



Lee Gallentine

From: Jay Duncan <jduncan@heartofiowa.coop>
Sent: Thursday, May 09, 2019 8:24 AM
To: Lee Gallentine
Subject: RE: Drainage Utility Permit 2018-14 Approval

Lee, We would like to dig this up on Monday. Do we want to meet before then. All of our work will be South of the tile. The conduit is a 1.25" HDPE conduit the power company pulled back with their bore.

From: Lee Gallentine <LGallentine@cgaconsultants.com>
Sent: Monday, May 6, 2019 3:35 PM
To: Jay Duncan <jduncan@heartofiowa.coop>
Cc: TSchlemme@hardincountyia.gov; Becca Junker <BJunker@hardincountyia.gov>
Subject: RE: Drainage Utility Permit 2018-14 Approval

Jay,
Per your request, attached is a copy of the original district map.

On a separate thought, if you are just pulling your line through a conduit that was installed when the power went in, you may not need us to verify the installation as the power company already had theirs approved. Could you get me more details on the conduit?

Just let me know.

Thanks,

Lee O. Gallentine, PLS & PE
Vice President



Clapsaddle-Garber Associates, Inc. (CGA)
739 Park Avenue
Ackley, Iowa 50601

Office: 641-847-3273
Mobile: 515-689-5339
lgallentine@cgaconsultants.com
www.cgaconsultants.com

Ackley | Ames | Cedar Falls | Marshalltown | Webster City

[CLICK HERE to sign up for CGA news and updates!](#)



From: Jay Duncan <jduncan@heartofiowa.coop>
Sent: Monday, April 29, 2019 3:57 PM
To: Lee Gallentine <LGallentine@cgaconsultants.com>
Cc: TSchlemme@hardincountyia.gov
Subject: RE: Drainage Utility Permit 2018-14 Approval

I would take any maps you have also.

From: Jay Duncan
Sent: Monday, April 29, 2019 3:52 PM
To: 'Lee Gallentine' <LGallentine@cgaconsultants.com>
Cc: 'TSchlemme@hardincountyia.gov' <TSchlemme@hardincountyia.gov>
Subject: RE: Drainage Utility Permit 2018-14 Approval

Hello Lee, We will be doing this project in the next couple of weeks. We need to dig up our cable on the South side of the Road. We have a conduit across the road that went in with the power company bore. We will be in contact with you when we get things rolling.

Jay

From: Lee Gallentine <LGallentine@cgaconsultants.com>
Sent: Monday, November 26, 2018 8:01 AM
To: Jay Duncan <jduncan@heartofiowa.coop>; Tina Schlemme <TSchlemme@hardincountyia.gov>
Subject: RE: Drainage Utility Permit 2018-14 Approval

Jay,
Thanks for letting us know. I will put the file aside until we hear from you in the spring.
Thanks,

Lee O. Gallentine, PLS & PE
Vice President



Clapsaddle-Garber Associates, Inc. (CGA)
739 Park Avenue
Ackley, Iowa 50601

Office: 641-847-3273
Mobile: 515-689-5339
lgallentine@cgaconsultants.com
www.cgaconsultants.com

Ackley | Ames | Cedar Falls | Marshalltown | Webster City



From: Jay Duncan <jduncan@heartofiowa.coop>
Sent: Friday, November 23, 2018 1:38 PM
To: Tina Schlemme <TSchlemme@hardincountyia.gov>
Cc: Lee Gallentine <LGallentine@cgaconsultants.com>
Subject: RE: Drainage Utility Permit 2018-14 Approval

FYI- We will not be doing this work until spring 2019.
Jay

From: Tina Schlemme <TSchlemme@hardincountyia.gov>
Sent: Thursday, November 1, 2018 4:11 PM
To: Jay Duncan <jduncan@heartofiowa.coop>
Cc: Lee Gallentine <LGallentine@cgaconsultants.com>
Subject: Drainage Utility Permit 2018-14 Approval

The Trustees approved your Drainage Utility Permit #2018-14 for copper cable install across D41 to new house.

- Please contact our Drainage Engineer, Lee Gallentine, before any construction begins.
Lee Gallentine
lgallentine@cgaconsultants.com
(641) 847-3273
- Please note item #10 of the permit application stating the applicant will be responsible for expenses owed to the drainage engineer for tile location, observation, etc.

Thanks!
Tina



TINA SCHLEMME
REAL ESTATE AND DRAINAGE CLERK

[HTTP://WWW.HARDINCOUNTYIA.GOV](http://www.hardincountyia.gov)

REGULAR DRAINAGE MEETING
November 27, 2019 11:00 AM

11/27/2019 - Minutes

1. Open Meeting

Hardin County Board of Trustees Chairperson, Renee McClellan opened the meeting. Also present were Trustee Lance Granzow, Trustee BJ Hoffman; via conference call - Lee Gallentine with Clappsaddle-Garber Associates (CGA); Contractor Adam Seward; Landowners Curt Groen and Jean Groen; and Drainage Clerk, Denise Smith.

2. Approve Agenda

Hoffman moved, Granzow seconded to approve the agenda as presented. All ayes. Motion carried.

3. Approve Minutes

Hoffman moved, Granzow seconded to approve the minutes for Regular Drainage Meeting dated 11/20/2019. All ayes. Motion carried.

4. DD 150 - Approve Drainage Utility Permit Application 2019-3 With Midland Power Cooperative

DD 150 - Midland Power Cooperative submitted a Drainage Utility Permit Application to cross through DD 150, and they have proposed a simple crossing that runs over 1 tile at the road crossing on County Hwy D41, where the tile goes under the highway. The power lines will run along the highway, and only cross over the one single tile line. Granzow stated that Midland will need to follow and understand the permit process. Lee Gallentine stated where Midland is doing overhead work, all they have to do is go out and locate the tile and make sure they don't put a power pole through it. Once Midland located the tile, CGA will go out and shoot photos to verify tile location in relation to poles, once Midland sets the poles, CGA will shoot additional photos, and it should be a pretty simple process.

Granzow moved to approve the Midland Power Cooperative Drainage Utility Permit Application 2019-3. Hoffman seconded. All ayes. Motion carried.

5. DD 124 - WO #225 Discuss, W/ Possible Action, Contractor Update

DD 124 -WO #225 - Smith stated Adam Seward was present today to give an update on WO #225. Seward was directed to go out and locate 2 tiles, run his locator up the tiles, and report his findings back to the Trustees. Seward reports the dead tile is located to the south and it is broken in so many places that he could only run the locator up about 50' to 75' before hitting dirt or cement that the tile is crushed in with. Seward pulled off the tile, not knowing if the Trustees wanted him to take equipment up there and actually dig it up and locate it all the way, which he didn't feel was worth the money to do because the tile has no water running through it and he thinks it has been tiled over, and either crushed or abandoned.

Gallentine asked if that tile is dead, where does the second tile go then. Seward stated it goes up approximately 300' then crosses the highway, but in order to continue to follow that tile, he would have to dig and put the probe in again. Seward was not ready to do that until he had clearance from the highway or CGA and there is still crops in where he would have to dig, so he is waiting for Nick Patton to harvest. Gallentine asked if both tile are the same size, and were they both the larger 24" tiles. Seward said yes roughly, he thought it may get reduced back as it goes back in the farm field, but this would all be cement or clay tile. Gallentine asked if the tile that was still active had water flowing through it. Seward replied yes it did have water flowing through it at about 75%, he recommends to leave it alone until it has a problem. Seward said his understanding was that there were suck holes reported on the old tile, he states the tile is just giving way and it is caved in and not a suck hole. The other problem is that the tile is right next to a Heart of Iowa line, which made locating difficult as they both use a copper line, Seward's locator is copper and the HOI line is copper as well, it could be a bit odd.

Seward's recommendation is to kill the tile, fill it in with dirt and proceed that way. Gallentine asked where the other active tile is. Seward stated it runs along the highway, along ditch bottom, almost on the field side bank, even further south of the old tile. Gallentine asked if it is south of the power lines. Seward stated yes, it is approximately 3' south of the power lines. Gallentine said ok it is south of the power lines, and he is asking because we had a utility permit with Midland when they built a house and we thought they were going to cross our tile, and Midland dug up the old clay one thats right on the toe or shoulder of the road, but it sounds like that is the dead tile so that didn't matter. Seward says correct, and thinks we should just leave well enough alone and maintain the small holes we do have now and he does not foresee the new tile having any issue whatsoever. Gallentine stated to be

sure to put that in writing so they can call you up when it does, and his only concerns were the suck holes on the side of the road. Gallentine stated if those suck holes are on the dead tile then the only district tile out there is the active tile and not the dead tile. Seward says correct, and there is no reason for him to go any further, Gallentine said if it is not an active tile there is no reason to go any further. Seward stated that the holes should still be filled in, Gallentine agreed and said now the issue is whether that is a district problem or a secondary roads issue.

Seward stated since it was our old tile, it is probably our responsibility but that was up to the Supervisors to decide. Gallentine stated that if it is abandoned it may not necessarily be our responsibility, but it is the district's call on what they want to do. Seward stated if they decide to make a work order, he will go extract the old tile and fill in ditch and grade it, and if not he will move on to the next work order. Gallentine stated please note this in the district history so that if there are any other issues in the future, this is noted that it is a dead tile. Smith will put that info in the work order notes and District's file. Granzow stated that the District wanted to keep this at a minimal a cost as possible, which would mean leave it for Secondary roads. McClellan says then we leave it for Secondary Roads. Granzow stated that they can fill it in, and asked if there was any water flowing through the old tile. Seward replied, no water is flowing through the dead tile. McClellan directed Smith to notify Secondary Roads that this is their issue now and to make notes in the District files.

6. Discuss W/ Possible Action - Contractor Availability

Smith stated that at the last meeting the Trustees had asked Smith to reach out to out of county contractors, she reached out to 25 out of county contractors. Of the 25, only 4 replied that they were interested in doing work in Hardin County. Those 4 contractors include A&B Trenching who has worked with Gallentine on projects in Franklin County, he said he would send an updated Certificate of Insurance. Casey Crawford Trenching of State Center said they were interested in spring work but they were booked out through this fall. Hatch Grading and Contracting out of Dysart said they are interested, and they have a tile crew that will be wrapping up their current projects soon, Hatch has returned to Smith a list of his rates, services and equipment available, Certificate of Insurance which includes workman's comp coverage, so he is ready to go. Ricken Tiling from Melbourne said yes, they were interested in work in Hardin County, and Smith sent them an email, no reply as of yet. Smith did get four "maybe" replies from contractors, Hall Backhoe & Trenching out of Roland, Hayes Brothers Drainage out of Grundy Center, Schoppe's out of State Center and Weidemann's out of Dows, and Smith sent them all an email with our policy and the required information they would need to return to us to be considered. Smith has not heard back from them but will follow up with them after the Thanksgiving holiday. McClellan asked if Smith had heard back from Justin Ross, Smith stated that she understood either Gallentine or the Trustees were reaching out to Ross. Gallentine stated he has not had a chance to reach out to Ross yet on that single work order, that the landowner wanted an update on.

Smith stated she has passed on all of Hatch's information to Gallentine, so if there is something the Trustees would like to do to direct Hatch or to decide which work orders he might be suited for, Smith will leave that up to the Trustees. Granzow wanted to remind everyone that we are still looking at in county contractors first, Smith agreed. Gallentine stated that now that Seward has the WO #225 done, that will free him up. Gallentine asked Seward what his availability was. Seward stated he is ready for the next work order. Gallentine stated that Seward is the logical choice for the next ones on the list, and asked how many work orders does he think he can handle a week. Seward stated that it will depend on size of the job. Gallentine stated the next 4 weeks will be critical as to whether or not we can get them done or not. Seward stated that he can start working on them, weather permitting. Gallentine stated it would not get any drier between now and the end of the year. Seward said as long as the landowner is ok with us tracking across the field and potentially making ruts, or does not get froze out he is ready, Seward did purchase an ice pick for his excavator which should allow him to get through frozen ground better now. Gallentine stated, be sure to contact the landowner ahead of time, and if they say no we have to wait and the landowners need to understand that by the time it dries out we may no longer have a contractor available immediately.

Wind Turbines - Gallentine asked how many work orders Seward thought he could handle, because if he can only handle one a week it is obvious we should get someone else on the line right now as we have at least 6 to 8 open work orders waiting on contractors. Seward said as long as Gallentine has an idea how long it should take that he could meet their standards, Gallentine asked if Seward had full time availability, 5 days a week for drainage work. Seward stated yes he does. Gallentine stated then lets see how many we can get through next week and go from there if the Trustees are ok with that. All Trustees, replied yes they are fine with that. Gallentine will email Seward some work orders, and Seward can start contacting landowners. All agreed it was a good solution and they would like to stay in county with contractors whenever possible.

7. Other Business

DD 22 - Smith had reached out on DD 22 to the Forterra Rep to see if they would attend our landowners meeting on December 16th at 9:00 am. Jim Sweeney responded and said a rep from Forterra will attend the Landowners

Meeting on December 16th, so someone from Forterra will be here to address issue of tile quality on this project.

Smith asked if we need to have a conversation about windmills and drainage. County Attorney, Darrell Meier had recently visited with Smith regarding windmills and drainage and it raised a few questions which Smith may not be experienced enough yet to answer. Some of those questions include do our Joint Drainage Districts with other counties and our private Trustee Districts need to approve Drainage Utility Permits as well, Smith is aware that the Supervisors acting as Trustees, would review/approve Permit applications for DD's in which they act as Trustees, but was unsure if private Trustee Districts or Joint Districts would have to meet to review/approve Drainage Utility Permits. Granzow stated that if we are the controlling county in a Joint District and the permit is in our county, then the Supervisors acting as Trustees would review/approve those applications. Gallentine stated that is how it has been done in the past, and if the windmill is in Hardin County, the utility will still have to submit the permit to Hardin County whether we are the controlling district or not. Smith stated in her discussion, Meier was researching whether we need to be more restrictive, less restrictive or similar to what other counties do in regards to windmill permitting, simply due to the sheer size and weight of the windmills and the equipment that would be crossing over our district facility tile in the process of assembling those windmills.

Smith stated that it appeared to her, that the areas where there are newly proposed windmill sites, are heavily drained areas of the county and Smith is looking for feedback from the Trustees as to their thoughts. Smith asked if this was a conversation that we need to facilitate with Gallentine who has the engineering experience and include Attorney Meier who has the legal experience to decide what that policy looks like or to decide how that policy will be affected, Smith stated we of course have the Drainage Utility Permit in place that a windmill utility must submit to the Trustees. Hoffman asked does any decision the Supervisors make supercede what the Drainage Districts can or can't do, the Supervisors directed County Attorney Meier to research how the county as whole should deal with wind turbine development. Hoffman asked if we want to wait until we get the legal opinion from Attorney Meier before we make these decisions. Hoffman queried should we have Smith invite Attorney Meier to attend our next regular meeting to discuss this topic with them, thinking as Drainage Trustees, rather than as County Supervisors. Granzow agreed. Gallentine stated we could forward on the copy of the wind turbine agreement that Franklin County uses to Meier as a framework for reference. Smith replied she has already provided Meier with that form and has provided Meier with a copy of Hardin County's utility Permit as well.

Open Ditch Spraying - Granzow asked if we needed to bid open ditch spraying, it was discussed in previous meetings that open ditch spraying was not required to be bid as the costs were billed to each district and would not exceed \$50,000 in costs per district. Granzow asked if we could discuss this with Seward at next week's meeting. Seward replied yes, and that he had submitted an estimate this morning. Smith will add it to next week's agenda. Seward submitted an estimate but the 2020 chemical price lists are not out yet, but he will update that as soon as new prices are available. Hoffman asked if Seward would gather expert info on best chemicals/practices. Seward said yes he would.

Potential Assessment for Legal Fees & Administrative Costs - Smith had been working on the potential assessment project to cover legal fees and a portion of the Drainage Clerk's salary that the Trustees had tasked her with several weeks ago and had questions for the Trustees. Smith has been working on the classifications for each district, and has done 92 districts so far out of the 270 on her list. Smith reached out for feedback from another county on how they do this process. Smith spoke with Wright County to gather some feedback on how they do this process, as this is the first time she has done it. Granzow stated we are trying to do what no other counties want to do, the Clerk is currently full time drainage only, and is paid from rural services and the general fund, the Drainage Clerk should be 100% paid by Drainage. Hoffman stated someone in Radcliffe doesn't contribute anything to drainage but are currently paying a portion of the clerk's salary. Hoffman stated when we put together drainage minutes, agendas, or when we get legal opinions, that should be paid by Drainage. Granzow stated that other counties add 3% over the costs of active drainage projects or a flat administrative fee on top of the projects. Granzow stated that if a DD has a \$10,000 project or a \$1,000,000 project, that 3% is vastly different on each project, then only your active districts are paying all the costs but all the districts can access the Clerk or legal opinions that may affect all DD's, so the busy ditricts bear the burden but all gain the benefits. Granzow stated that no one wants to do the work that Smith is doing because it is tedious and time consuming, so other counties just charge the percentage instead. Hoffman stated once the work is done, the next time this would be assessed it would be an easier process if the spreadsheets are all done and just need updating, Smith agreed. Granzow said if a district chooses not to pay into this, you can decommission your district and would then not be part of this assessment.

Smith stated that Wright County had come up with a budget estimate of the costs they would like to cover which included a minimum legal cost estimate, salary costs, and costs for a summer intern that helped with Drainage and then created a spreadsheet to hit their target amount. Smith stated that in previous discussion, the Trustees had mentioned a base estimate for Hardin County was \$45,000, just to say this would be a base place for us to begin on what this potential assessment might look like. Smith created a spreadsheet witch reflected if we were to do a \$500, \$1,000 or \$2,000 assessment per district to see what those numbers would look like. With 92 districts

figured so far, at a \$500 potential assessment per district that would generate \$65,000, at \$1,000 potential assessment per district it would generate \$107,000, at \$2,000 potential assessment per district it would generate \$194,000. Smith is at the point now where these numbers are more than we anticipated. Smith explained what Wright County did was to do either a one cent, one and a half cent, two cent or two and half cent assessment to each unit per district which would generate more of the \$5 minimum assessments which we had discussed, which may reduce these potential assessment amounts. If you have larger acres of benefit you may be paying more than the \$5 minimum assessment and if you have fewer acres of benefit, you may just be paying a \$5 minimum assessment. Smith stated that Wright County used to do this assessment every 3 years and that if generation of funds was at \$45,000 per year, they would then assess every 3 years to generate 3x the \$45,000 goal. Wright County found this to be burdensome to go through the preparation to do this so they then went to doing this assessment every 5 years, they still found it was a difficult task to go through and do all the work to prepare the assessment, Wright Co did end up switching to just doing the 3% over their current project costs. They would use that fund and move into a drainage administration account and have a very in depth spreadsheet that looks at the total amount needed to collect to meet their estimated budget needs then adds that into the total amount assessed which tells them how much to move into their administrative fund annually.

That being said, Smith would like feedback from the Trustees as to if she should move forward with the assessment amounts we are attempting to look at now, and does this generate numbers in the ballpark that they are interested in or does she need to look at this in a different way or look at a lower assessment amount less than \$500. Smith stated that this is new to her, she needs to understand what the Trustees would like to see. Granzow stated we should continue at the \$500 level and look at doing the assessment every 3 years if it would be enough to last 3 years and not doing it annually would save on postage. Granzow stated that he didn't think the 3% option was legal, as that money should stay with that district, and didn't think it could be dumped into an administrative fund. Smith stated when we talk about all the DD's should share the legal costs how would that look on the Clerk's end in structuring this, there is a section in code that is 468.154 that allows for additional help for the auditor for the expense of a drainage clerk so there is a place in code that allows us to do that, Smith said she checked that out in code because she was unsure if it was possible as well. It looks like it is doable, and as we look at these IRUA invoices for example, that are waiting to be paid because we were trying to figure out how do we make this account code to pay these invoices from, that would be spread over all the districts. Smith stated she needs direction.

Hoffman stated we have a group of people in Hardin County that are very litigious, and there is a Supreme Court ruling that is going to come out about if Iowa Citizens for Community Improvement can sue the State of Iowa. Hoffman is concerned that this group will not give up, and at some point we will have another Des Moines Waterworks type lawsuit, and finding the money to hire quality legal counsel to protect the life and livelihood of our farmers. Hoffman stated we want good representation when it comes to that, and not having any money in the pot to pay good legal counsel could cost a lot of Hardin County landowners their lives and livelihood. If we say Curt, we know that was your manure that ended up down in Des Moines, I am afraid that that's what it will come down to, you can't help but think they are looking for a paycheck and to politicize how horrible our farmers are. Granzow said we don't budget in our regular County budget for these legal fees. Hoffman stated we would be out there fighting with other counties to find the best legal counsel, Hoffman wants to preserve his property for future generations and if that means having some extra money on hand is probably the best bet going forward. Granzow said if the money would be available it would be used eventually down the line.

McClellan stated she would like to see it get assessed only every 5 years as it is such a process to go through to set it up. Granzow stated he was fine with that. Hoffman said he would like to see it sunset at some point, and maybe that \$1,000 potential assessment level might be good to build a nest egg up front, and the next time we assess we can see how much is left and don't tax next time or change the frequency. Hoffman stated he looks at how expensive it is to just post our legal notices and attorney Mike Richards does a great job, and Hoffman wants to make sure we have the best representation for our people and if Mike Richards or an attorney asks if we have the cash to retain them, and if another county has the money, they will get the better representation.

Granzow stated he is not trying to tax anyone more if they are in a district but this is a district we are maintaining because the code of Iowa tells us we must. McClellan said we would also include any districts that have private Trustees because they would be included in any legal opinions we receive. Granzow asked how many we many districts are on the clerk's list, Smith stated we have 270 on the list, which includes, private trustee districts, inactive districts, laterals and joint districts, which would be pared down to ensure districts are not charged twice. Granzow stated that the Big Four includes many districts for example, and to sure they are only on the list once. Hoffman stated that if we are going to do it, that we want to be respective of the Clerk's time and of the work it takes to compile it, and will make it equitable later. Smith stated she does not mind the work, and will make it as accurate as possible, Smith said once the spreadsheets are set up, it will be only need updated if the classification percentages should change or the amount of the potential assessment would change.

Granzow stated this is the hard way to get there, but thinks it is the correct way to do it, he does not like the way the other counties tag onto projects. Gallentine asked if other counties were based off percentage of acres. Smith stated that Wright County said they are based on the number of units, which was 5,546,485 units, Smith needed clarification if Wright County's units were parcels or acres. Gallentine stated it is probably a unit of benefit, just to make sure we use the existing classifications, and not to base it solely on acres. Smith stated she is using the percentage of benefits based off the classification reports that Tyler generates for that drainage district. Gallentine said that would be on the right track. Granzow asked Gallentine if we were separating open ditches, and we had some questions specific to open ditches. Gallentine said the thought process may have been that open ditches have spraying/maintenance cost that closed tile do not, and have clean outs more often than tiles do. Perhaps the thought process was that open ditches have maintenance more often that may take more of the clerk's time. Granzow said, let's not worry about that then.

Hoffman directed Smith to work through this at her own pace and report back to the Trustees with the current potential assessment levels in the spread sheet.

8. Adjourn Meeting

Granzow moved. Hoffman seconded. All ayes. Motion carried.