

**AGENDA**  
**REGULAR DRAINAGE MEETING**  
**Wednesday, March 4, 2020 9:30 AM**

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

Documents:

[02-26-20 - DRAINAGE MINUTES.PDF](#)

4. DD H-S 4-112 - WO 2020-1 - Discuss W Possible Action, Drainage Utility Permit Application - Minerva Valley Tel. Co.

Documents:

[MINERVA VALLEY TEL. CO. UTILITY PERMIT WO 2020-1.PDF](#)  
[UTILITY PERMIT 2020-1 MINERVA VALLEY TEL CO. 2-27-20.PDF](#)  
[WO 2020-1 MINERVA VALLEY TEL CO MAP.PDF](#)

5. DD 142 & Big Four - WO 2020-2 - Discuss W Possible Action - Midland Cooperative Drainage Utility Permit Application

Documents:

[WO 2020-2 MIDLAND UTILITY PERMIT APPLICATION.PDF](#)  
[WO 2020-2 MIDLAND UTILITY PERMIT APPLICATION FORM.PDF](#)  
[WO 2020-2 MIDLAND UTILITY PERMIT MAP.PDF](#)

6. DD 38, 46, Big Four, F-H -5-75 - WO 2020-3 Discuss W Possible Action - Midland Power Cooperative Drainage Utility Permit

Documents:

[WO 2020-3 MIDLAND DRAINAGE UTILITY PERMIT.PDF](#)  
[WO 2020-3 MIDLAND COOPERATIVE DRAINAGE UTILITY PERMIT APPLICATION.PDF](#)  
[WO 2020-3 MIDLAND COOPERATIVE DRAINAGE UTILITY PERMIT MAP.PDF](#)

7. Other Business
8. Adjourn Meeting

**REGULAR DRAINAGE MEETING**  
**February 26, 2020 9:30 AM**

2/26/2020 - Minutes

1. Open Meeting

Hardin County Drainage District Chairperson Lance Granzow opened the meeting. Also present were Trustee BJ Hoffman; Trustee Renee McClellan; Hardin County Economic Development Director, Angela De La Riva; Hardin County Environmental Health Specialist, Jessica Sheridan; Lee Gallentine of Clapsaddle-Garber Associates; and Drainage Clerk Denise Smith.

2. Approve Agenda

Motion by Hoffman to approve the agenda. Second by McClellan. All ayes. Motion carried.

3. Approve Minutes

Granzow and McClellan thanked Clerk Smith for providing detailed minutes for the Drainage Meeting with Private Trustees. McClellan stated it is a good record for future reference, of what was discussed at the meeting.

Motion by Hoffman to approve the minutes to Regular Drainage Meeting dated 2-19-20 and Drainage Meeting w Private Trustees dated 2-19-20. Second by McClellan. All ayes. Motion carried.

4. DD 9 - WO 229 - Discuss W Possible Action - Set Date For Bid Letting

It was discussed last week of holding the DD 9 Bid Letting on March 25, 2020 at 10:45 at the EOC building, right before the DD 143 hearing.

Motion by Hoffman to set the date for bid letting for DD 9 WO 229 for Wednesday, March 25, 2020 at 10:45 at the Hardin County Emergency Operations Center, 1031 Edgington Ave, Eldora. Second by McClellan. All ayes. Motion carried.

5. DD 55-3 - WO 201 - Discuss W Possible Action - Notice To RR Of Damaged Box Culvert

Smith stated in previous letters communicating with the Railroad, that the correspondence had been signed by Trustee Hoffman, the letter notifying the railroad of the damaged box culvert has been prepared and is ready for signature. Smith requests clarification as to whom the Trustees would like to sign the correspondence.

Motion by Hoffman delegating signature for DD 55-3 WO 201 letter to the railroad company to Chairperson of the Drainage Board of Trustees, Lance Granzow. Second by McClellan. Motion carried.

6. DD 158 - WO 285 - Discuss W Possible Action

DD 58 - WO 285 Smith states this is a new work order, request submitted by Clint Miller. Miller states there is a ground intake on the west side of the road that has silted in with debris, intake is boiling out and water is flowing overland to culvert, goes through culvert under the road, and water continues overland once it is on the east side of the road. Miller stated it may need intake cleaned out and standpipe installed Miller also mentioned if anyone was on-site they could give him a call for more information.

Motion by Hoffman to have CGA go out and investigate and report back to the Trustees for further action. Second by McClellan. All ayes. Motion carried.

7. DD 165 - Discuss W Possible Action - Canvass Date For DD 165 Special Election

DD 165 Special Election for Private Trustees is set for March 28, 2020. Smith requests date and time to be set for DD 165 Special Election Canvass. Election results are due to Smith Monday, March 30, 2020 at 10:00 am in the Auditor's office.

Motion by Hoffman to set the date and time for DD 165 Special Election as Monday, March 25, 2020 at 10:30 AM in the large conference room at the Courthouse. Second by McClellan. All ayes. Motion carried.

8. Discuss W Possible Action -Wind Turbine Ordinance And Drainage Utility Permit Language & Process

Jessica Sheridan joined the meeting. Granzow stated we can keep this topic on the agenda until final approval of new language is complete. Granzow stated we need to move forward with this.

Hoffman stated he has some information, Hoffman received a phone call from Jacob Handsaker and had a 45 minute conversation with Handsaker about the wind turbine ordinance and drainage utility permits. Handsaker is out of the loop on the current project, where it is located and what the project entails. Hoffman explained the proposed wind turbine project and Handsaker had some good constructive criticism. Handsaker stated they have 4 turbines on their family's property, and they did have issues with their tiles due to the turbines, but luckily they knew how to fix them and did their own repairs. Handsaker stated, that in a drainage district if turbine work were to go across numerous owners properties and through numerous drainage districts, he believes that televising district facilities prior to wind turbine work will be critical. Handsaker stated that dealing with their family, they could communicate easily with the turbine company, but if you have 8 or 10 or even 20 landowners involved, it will be very difficult to ask for repairs, demanding them if they are not addressed, and how do you prove that whatever damage done was the WEC's fault. The turbine itself, the crane walk, or just heavy equipment, can cause damages to tile. Hoffman stated Handsaker was in favor of televising entire facilities. One of the other suggestions made by Handsaker to Hoffman was mandating that the cranes have a GPS unit on them and track their movement every step of the way through a field, and provide a map to the drainage clerk of it's movements. This would eliminate the opportunity for a WEC to say we never crossed that tile that is damaged, this would provide an overlay of exactly where that heavy crane traveled within a district, and will provide a historical record, so the WEC can't say that wasn't us, it was the farmer's own equipment that caused damage. Gallentine agreed that would be a great idea.

Hoffman went on that the technology to do that is not terribly expensive and worst case scenario, you hire CGA to go out and drive a Ranger to follow the crane and pay for an on-site observer the whole time the crane is in the field. Hoffman continued, it probably makes more sense to mandate that the WEC's will use this type of equipment on cranes. Handsaker explained to Hoffman that to assemble and disassemble a crane, is an \$800,000 expense, and that they don't tear the crane down each time it needs moved, the WEC's prefer to move the cranes via a crane walk. Gallentine noted they have to bring in smaller cranes to assemble the larger cranes, which leads to more heavy equipment in the field. Hoffman stated that those two things, televising tile prior to turbine construction and GPS units installed on the cranes to map their travel, were make it or break type things to make any ordinance or permitting successful. Handsaker stated having that televised record of the district tile would prevent so many problems in the future and creates a baseline of the current tile condition for future reference.

Gallentine stated the biggest problems that were encountered in Franklin County's turbine project, were determining the actual tile locations. If we televise ahead of time, we can also locate the tile, and shoot it, then go back and stake out the exact tile location for contractors. By creating an accurate GPS map of actual tile location, that may be more reliable than the hand drawn 100 year old maps. Granzow stated there should be a setback distance between the turbines themselves and district tile, although he is not sure what that setback distance should be. McClellan stated that we don't know how far the vibrations will travel from the turbine site.

Hoffman stated the harmonics are unknown at this time, it is like sticking a tuning fork in a glass of water, you will get ripples in the water, if you stick that tuning fork into a kiddie pool, you will still see ripples, and also in a full size swimming pool, you can still see ripples from those vibrations. Gallentine stated it may be different results in different areas based on age and type of tile, and soil types.

Sheridan stated she had reached out to a researcher who was a mechanical engineer to help determine setbacks from residences for the ordinance, and asked if the researcher had any experience with vibrations from turbines and drainage tile. The researcher did not have experience with that but spoke with his peers who stated that there were many variables at play, like how the tile lies in the ground in regard to he turbine, soil types and many other factors. Gallentine stated that a private tile system may have an influence, for example if a private tile line lies in close proximity to a turbine, and then travels to connect to a district tile, does that amplify those vibrations, much like a kids telephone, with two tin cans and a string tied between.

Hoffman sated there may be much more to this issue than some would lead a person to believe. Gallentine stated he liked the televising ahead of turbine construction, because then you have a baseline and you know where everything is located, and he believes televising should be done after the turbine work is completed, at least in the areas where the turbine company crossed the tiles.

Sheridan had questions about the difference between public and private tiles. Gallentine stated that district tile affects only those landowners in that district, they have a say in how their tile is maintained. If you live outside that district, you would have no input on the tile within that district. Sheridan asks if Granzow's thoughts on setbacks from tile would apply to both district and private tile. Granzow replied we can only regulate district tile, we have no say on what happens with private tile systems. Hoffman asked if there has been deliberations on how far these wind turbine setbacks should be from septic systems. Sheridan stated she did not think it was an issue, although

some septic systems may still use old clay tile, the thought was with time and transfer requirements they should all get updated anyway.

Granzow asked the group if we should look at changing our permitting process or have a development plan with the WEC, that would be a special development agreement. De La Riva stated that the televising requirements should be in the agreement. Gallentine stated even if you televise tiles in advance, he still thinks we need someone on-site doing observation to make sure things don't get broken, Gallentine stated he did not like the option of just trusting a contractor or many subcontractors down the line, to just say we will fix it if we hit it. McClellan agreed and stated she feels there should be someone on-site for observation, and it should be at the WEC's expense. Smith stated we are dependent upon the WEC's honesty that if they hit a tile, that they would actually report that they hit a tile without on-site observation. Granzow stated we have tile that 3' to 4' in size, not small tile. Gallentine stated if a contractor nicks a clay tile, and it is not obvious, from large pieces of broken tile coming up out of the trench, that nicked tile will eventually silt in after it is covered back up by the contractor, which will cause larger drainage problems later.

Gallentine stated it would be great for the utility permit to include language discussed at last week's meeting for conflict resolution. Gallentine stated that would have been very helpful in our dispute with the IRUA. Gallentine stated that if something is disrupted in the tile, and there is a dispute as to who is responsible for the repair, there needs to be a process that states how it gets remedied, rather than a standoff that ends in legal issues and attorneys. Hoffman stated that those disputes would not be covered by the variance board, and that his fear is the WEC's will just wear us down, with daily requests for changes and time spent on conflict resolution. Granzow states the ordinance says they WECs should have a \$50,000 escrow account, used for repairs, and that if funds are used from the account, the WEC would need to replenish the account. Hoffman stated in principle that is how it works until the WEC decides to stop funding repairs. McClellan stated many drainage issues and repairs can exceed \$50,000 on one project. Gallentine stated he just thinks going forward there should be some kind of conflict resolution spelled out in the permit, whether that is going to mediation, district court or a panel of 3 independent drainage engineers, just as long as there is a procedure set forth in the permit. Hoffman stated perhaps we should ask attorney Mike Richards, to see what method he would recommend for conflict resolution. Gallentine stated it would be a good idea to bring Richards into the conversation.

Sheridan stated what it would look like if we just state the WEC must replace any tile they travel over. McClellan asked what other county's permits look like. Gallentine stated that Franklin County required the WEC's to locate tile when they were boring underneath it with their equipment to lay electric lines, and then we had to provide the WEC with the elevation of the tile, then the WEC would provide CGA with the elevation of the boring, and CGA had to verify that they cleared the district tile when boring, and then CGA watched during crane walks. Franklin County did not require any televising, either before or after work was done. Gallentine stated after the fact Franklin County has requested CGA to come back out, because after you watch the crane walks and the ground is compressed and then it springs back up when the crane is removed, they would like CGA to dig up the tile at a crane walk location and near a crane walk location, but CGA does not have a baseline as far as televising to know what damages were done.

Granzow stated if we televise and locate tile, it will not require them to dig it up to give an elevation, because we would already have that from the locating process. Granzow stated that is what we need to know to have the WEC contractor bore under district facilities. Granzow asked if still want to continue to have the WEC bore under district tile. Gallentine stated that there is no reason we would want to change that requirement, he went on that the only impact it would have on the WEC is that they would have to begin their bore descent sooner, as there is a limited amount of flex in the WEC's cabling, that would just mean they go deeper for a little bit farther. Gallentine stated once they start boring, it doesn't really matter, it may just take a little longer. Sheridan asked if the WEC would bore their lines in or trench them in. Granzow stated they will trench it until they have to bore under tile or other utilities. Gallentine stated that in Franklin County, they trenched it all, except for those areas, so they will bore a conduit under those areas, then they will stop and feed their cables through the conduit then continue on with the trenching, and that is where will have televising afterwards to make sure they didn't break through the tile while boring.

Gallentine stated that in Franklin County, there was a last minute change in the route and the WEC contractor clipped a tile, they called CGA and informed them they hit a tile. Gallentine stated the contractor could have very easily not notified us. Hoffman stated that this company proposing work in Hardin County, does not have a track record of work done in Iowa. Gallentine stated that this project in Franklin County, was contractor White who was working for Eluant, which are both big players that have been around for a long time. Hoffman stated we don't know who their contractors or sub contractors will be. McClellan asked if this was the same WEC that had the turbine site by Radcliffe, Smith stated that King with RWE stated that the majority of their recent work was in Illinois and other areas of the midwest. Gallentine stated that even the two turbine projects in Franklin County are not owned by the same company, one is owned by Alliant and the other is owned by Mid-American. Granzow stated

that the newspaper stated this project would utilize feeder lines into Franklin County, but they are not related projects.

Granzow stated his biggest concerns is he does not want an added cost down the line to the landowners of Hardin County for this turbine project. Gallentine stated it is hard enough to maintain drainage systems that time decays, we do not need to accelerate it. Granzow asked if we want Mike Richards to get involved at this point. McClellan stated it might be worth our while to see what experience Mike Richards has with wind turbines, and to conflict resolution with utilities. Hoffman stated it would be worthwhile to have a drainage study session for 2 or 3 hours and have him here along with Gallentine to discuss these issues. Sheridan stated that their Zoning Commission would be having another work session before they present their recommendations on the ordinance, hopefully in a couple of weeks they will be ready to present to the Supervisors. Gallentine stated he did not bill the county for the Private Trustee meeting last week, and would not bill the county for the next work session as it is just valuable knowledge gained in moving forward.

Granzow asked if we could set a date and time to have Mike Richards come in and work with us, although he doubted Mike would have an opening to come visit with us in less than a week. Gallentine noted he will not be able to attend next week's drainage meeting, but would be available by phone for the meeting. Granzow stated that anyone who has concerns about the Drainage Utility Permit can contact the Drainage Clerk, Denise Smith so that those concerns could be shared at the next Drainage Meeting.

McClellan asked if we could have Richards available to meet with the Trustees on March 25th at 1:00 pm after the DD 143 Hearing. Smith will send Richards a copy of the Franklin County Turbine agreement, the draft of the Hardin County Ordinance and the Hardin County Drainage Utility Permit.

Smith asked on an unrelated topic, if we need attorney Richards involved in the DD 56 Hearing. Granzow stated we could ask Richards if he is available by phone for the DD 56 Hearing.

Motion by Hoffman to have Clerk Smith reach out to attorney Mike Richards to request his availability to attend a Drainage Work Session on March 25th at 1:00 pm and to attend, either in person or by phone the DD 56 Hearing, April 1, 2020. Second by McClellan. All ayes. Motion carried.

9. Other Business

10. Adjourn Meeting

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



# Drainage Work Order Request For Repair

## Hardin County

**Date:** 2/27/2020

**Work Order #:** 2020-1

**Drainage District:** DDs\DD 45 (51070)

**Sec-Twp-Rge:** 35-86-21      **Qtr Sec:** \_\_\_\_\_

**Location/GIS:** 86-21-35-400-008

**Requested By:** Aaron Landmesser

**Contact Phone:** (641) 487-7399

**Contact Email:** aaron@minervavalley.net

**Landowner (if different):** Shirley R Cowles

**Description:** DD 45- Minerva Valley Tel. Co. - 33849 LL Ave. Installation of buried fiber optic cable. Construction consists of plowing and directional boring. Cable to be placed minimum of 36" deep.

**Repair labor, materials and equipment:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Repaired By:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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

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

For Office Use Only

**Approved:** \_\_\_\_\_ **Date:** \_\_\_\_\_



# HARDIN COUNTY

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

## HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

Applicant: Minerva Valley Tel. Co.  
Company Name

104 North Pine  
Address

Zearing Iowa 50278-0176  
City State Zip

Applicant Contact: Aaron Landmesser (641) 487 - 7399  
Name Phone

aaron@minervavalley.net  
Email

Utility Type: Telecommunications

Drainage District(s) Crossed: District # DD 45

Facilities Crossed (specific tile, open ditch): District #45 lies north of 33849 LL Ave ends in open ditch

Description of Work: Installation of buried fiber optic cable. Construction consists of plowing  
*(Location plan of proposed utility must be attached.)* and directional boring. Cable to be placed minium of 36" deep.

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.

*Aaron Landmesser*  
Applicant Signature

2-26-2020  
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](mailto: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.



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

02/07/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES ELLOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> UNITEL 1128 Lincoln Mall Suite 200 Lincoln NE 68508	<b>CONTACT NAME:</b> Joanne Mohn <b>PHONE (A/C No, Ext):</b> (402) 434-7200 <b>E-MAIL ADDRESS:</b> jmohn@unitelinsurance.com	<b>FAX (A/C, No):</b> (402) 434-7272
	<b>INSURER(S) AFFORDING COVERAGE</b>	
<b>INSURED</b> Minerva Valley Telephone Company, Inc. PO Box 176 Zearing IA 50278-0176	<b>INSURER A:</b> National Farmers Union P & C	NAIC # 16217
	<b>INSURER B:</b> Hartford Casualty Insurance Co	29424
	<b>INSURER C:</b>	
	<b>INSURER D:</b>	
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

**COVERAGES**

CERTIFICATE NUMBER: 19-20 COI

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:		Y	1RU0153508	10/06/2019	10/06/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ UNLIMITED PRODUCTS - COMP/OP AGG \$ 2,000,000
A	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/>			1RU0153508	10/06/2019	10/06/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Underinsured motorist \$ 1,000,000
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			1CB0153509	10/06/2019	10/06/2020	COMBINED SINGLE LIMIT EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY <input type="checkbox"/> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		Y/N	91WEBV2698	10/06/2019	10/06/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000

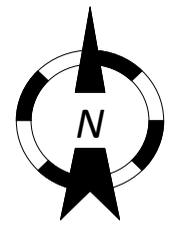
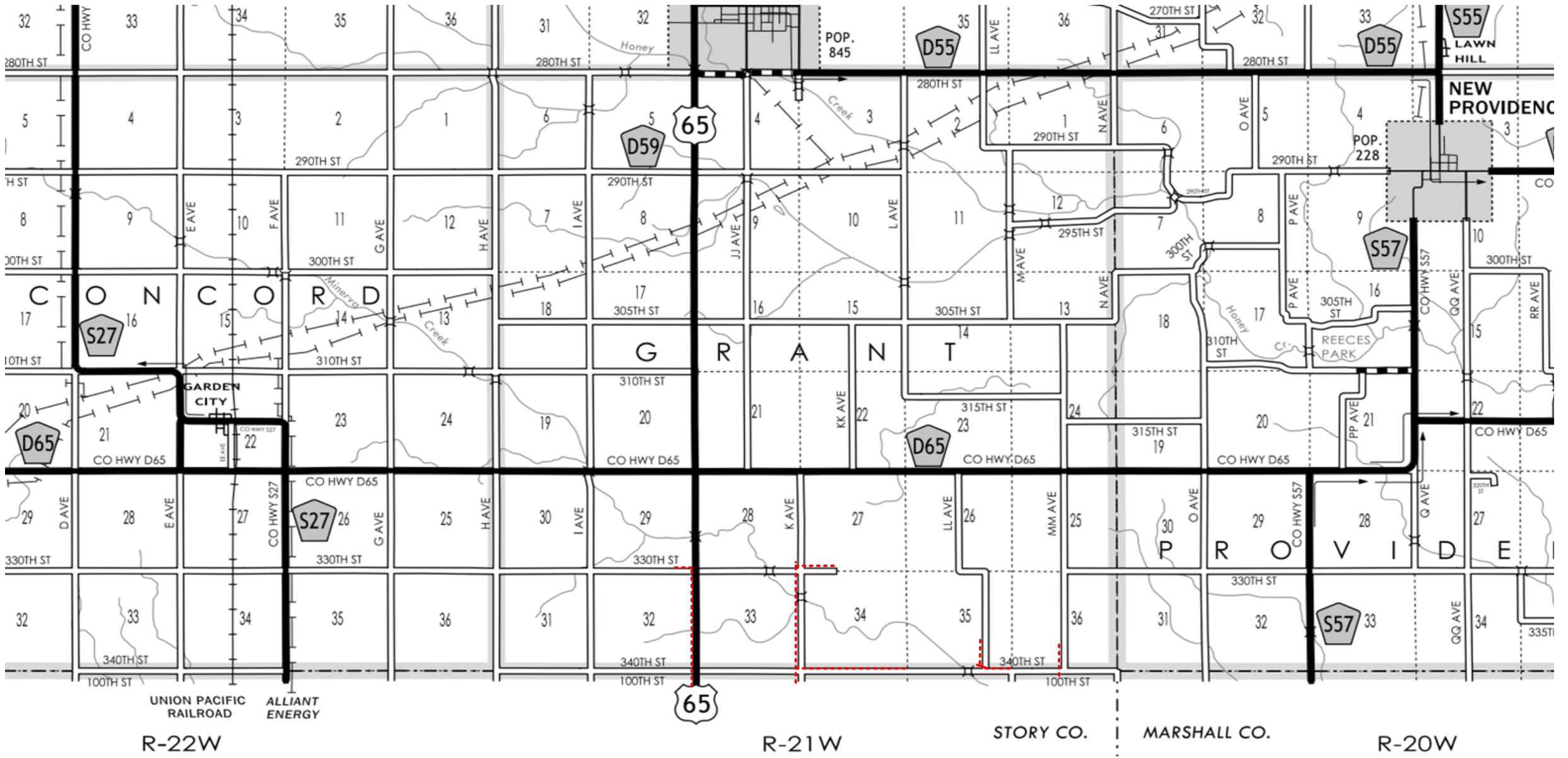
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Hardin County Engineer is included as an Additional Insured with respect to the General Liability.

**CERTIFICATE HOLDER****CANCELLATION**

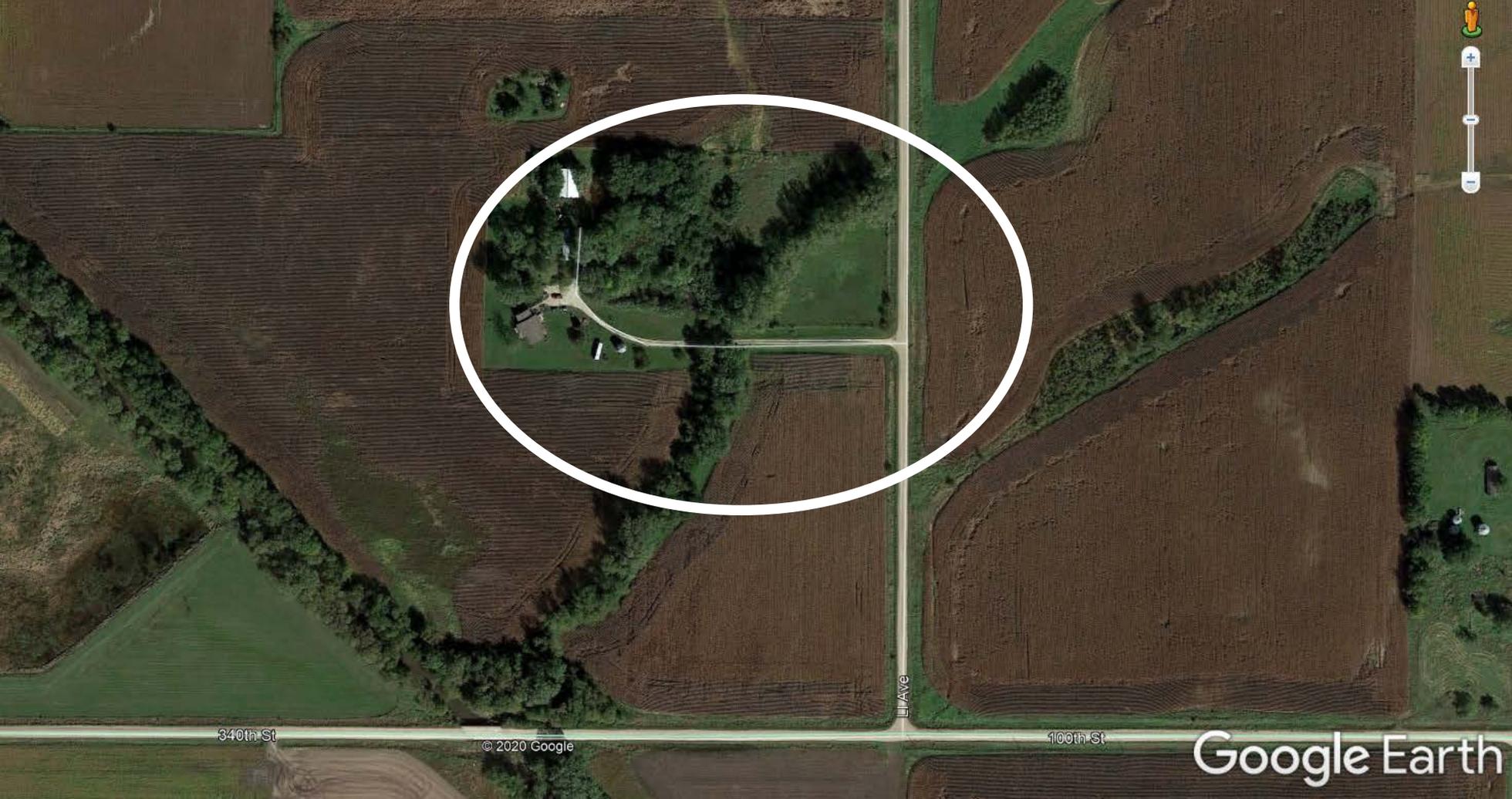
Hardin County Engineer Taylor Roll 708 16th St Eldora IA 50627	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
--	--

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Zearing, Iowa  
**Proposed Fiber Route**  
 Existing Fiber Route

State: Iowa  
 County: Hardin  
 Range: 21 W  
 Twsp: 86 N



340th St

© 2020 Google

100th St

Google Earth

**Note:** Hardin County Requires Bores 5' below and 40' each side of culvert or backhoe around all culverts at 5' depth, beginning and ending a minimum of 40' from C/L of culvert unless otherwise noted.

Sec. 2

**Hardin County:**  
All utilities in Hardin County shall be located between the bottom of the backslope and the bottom of the foreslope, unless otherwise approved in writing by the County Engineer prior to installation.

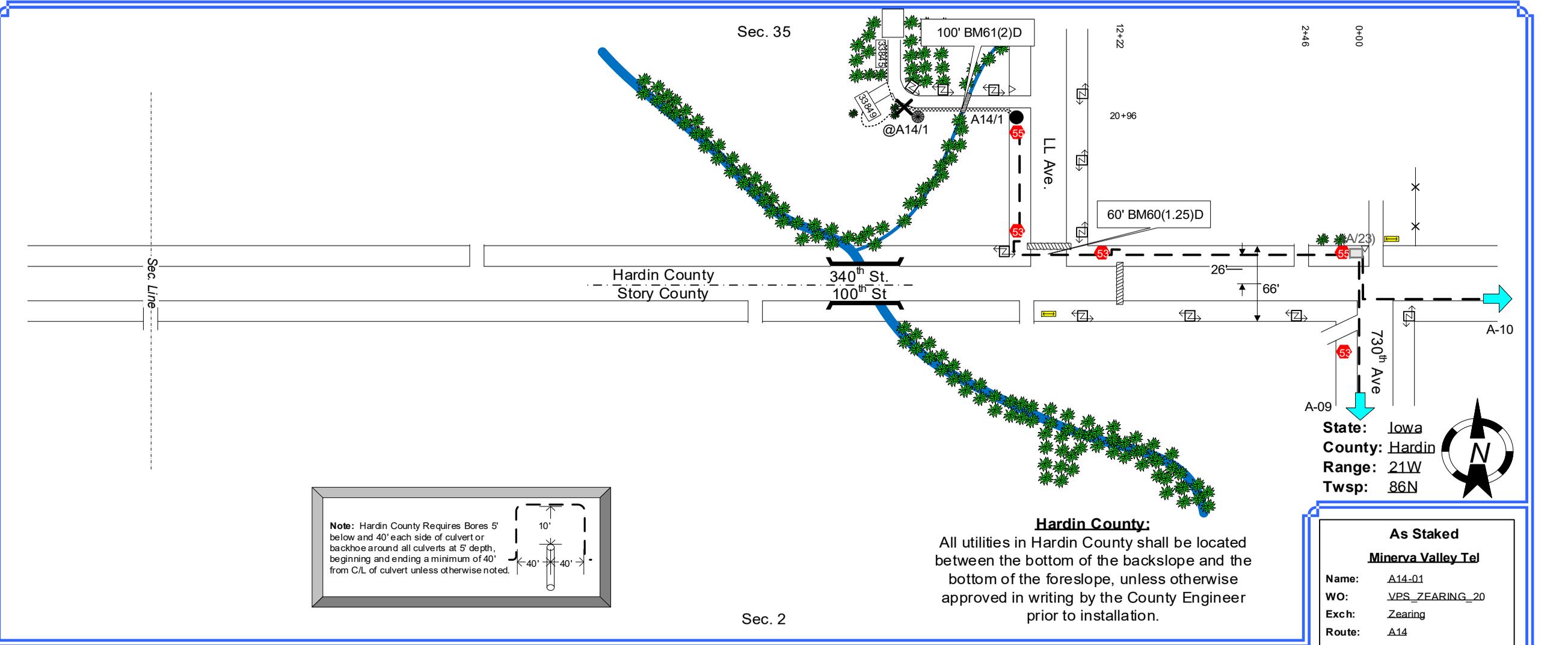
**As Staked**  
**Minerva Valley Tel**

Name: A14-01  
WO: VRS\_ZEARING\_20  
Exch: Zearing  
Route: A14  
ROW: 2' From Edge Of Road

Staked By: GSF Date: 11/2019  
Revised By: Date: \_\_\_\_\_  
Plowed By: Date: \_\_\_\_\_  
Tabbed By: Date: \_\_\_\_\_

Drawing Not to Scale

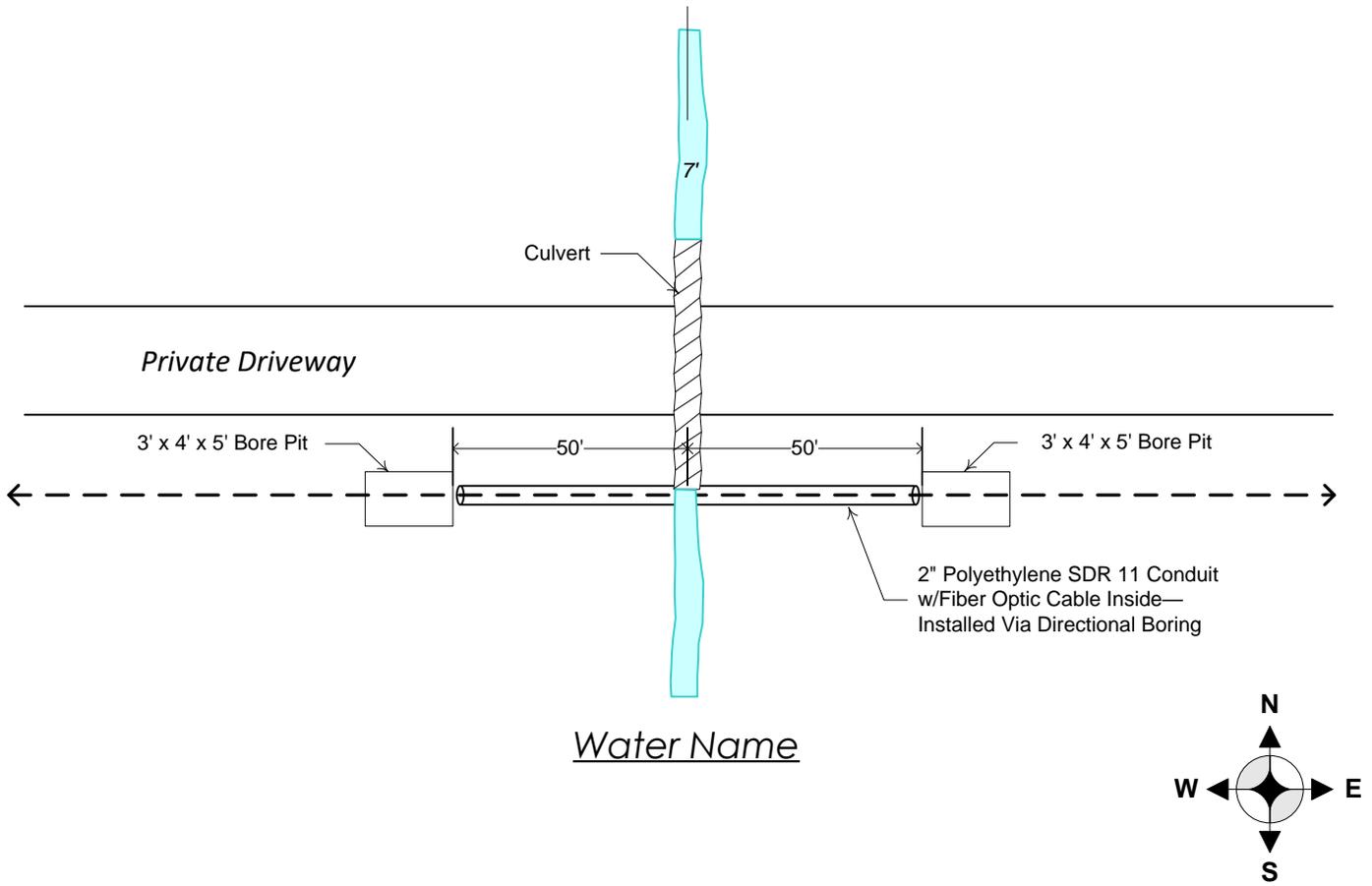
Sheet	1	of	1
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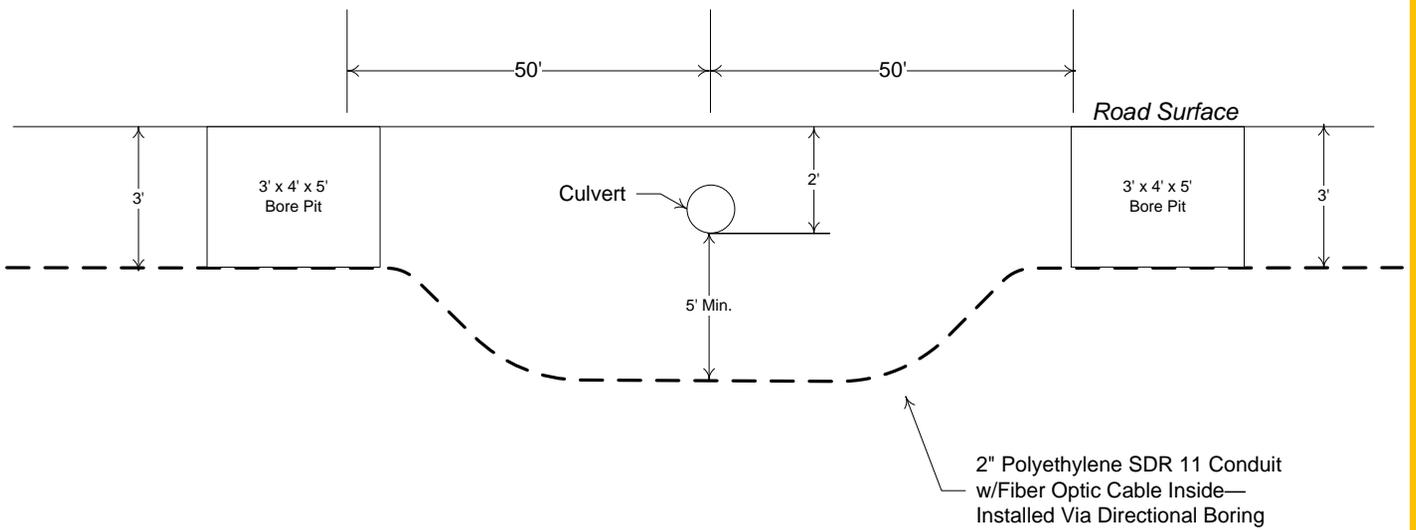
From	To	PType	Units	Feet	BM	HBFO	HO	ONT	Remarks		
(A/23)	A14/1	BHF(30R)	BFO 12W	2196	2(5/8)(8)	1	S	1	1	2	A14 Rte.
A14/1	A14/1		BFO 12	50	53	2					50' Tail In HH.
	A14/1				55	1					
	A14/1				60(1.25)D	60					
A14/1	X@A14/1		SEBO 4I	640							
	X@A14/1		SEBO 4I	640							
	X@A14/1		SEBOV(2x.75)E36	1280							

# Water Crossing Detail

## PLAN VIEW

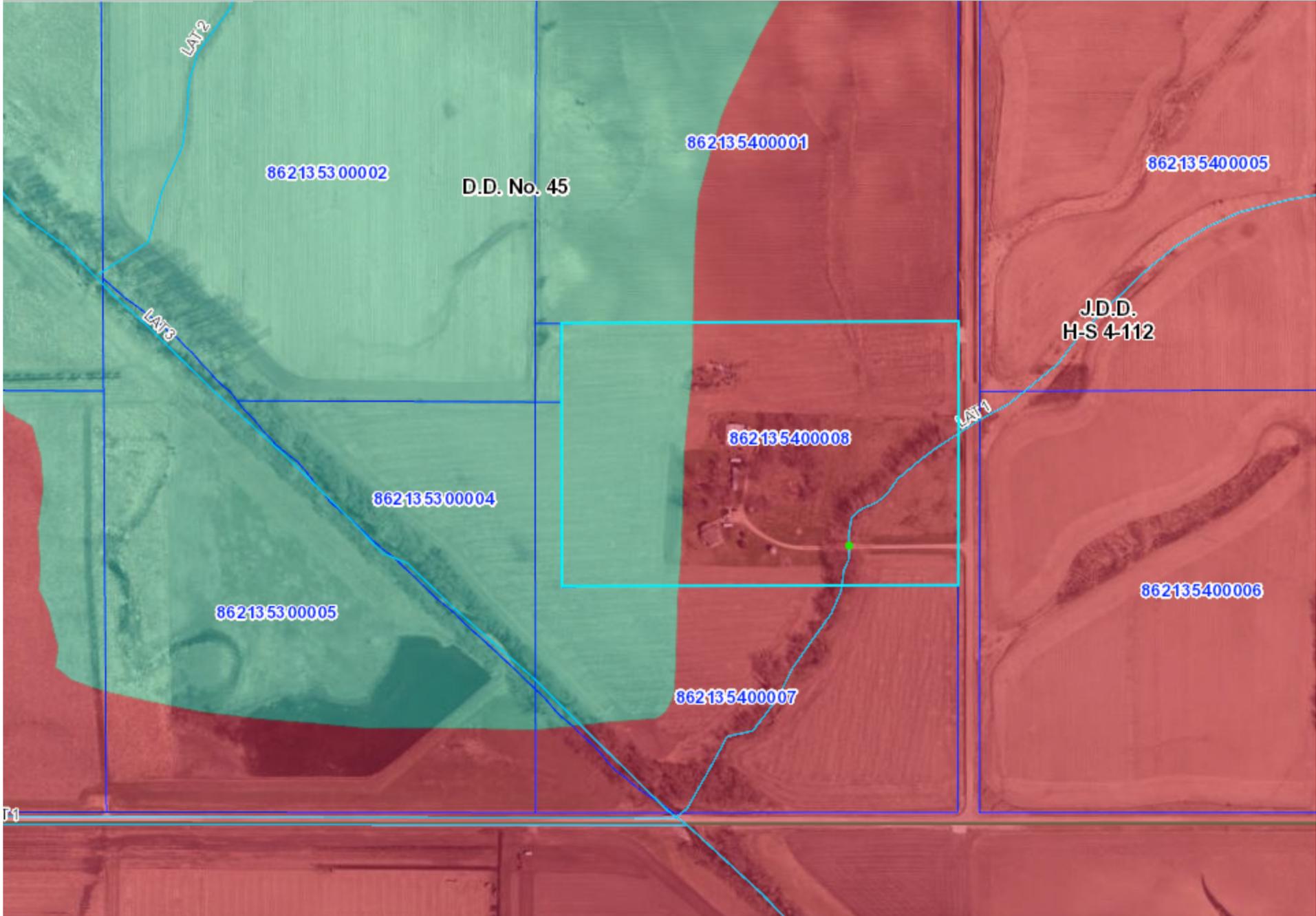


## Profile View



<b>Project Applicant:</b>	 <b>Vantage Point</b> Vantage Point Solutions 2211 N. Minnesota St. Mitchell, SD 57301 605-995-1777	<b>Water Crossing Location:</b>	
Minerva Valley Telephone Co. 104 N. Pine Zearing, Iowa 50278		Lat. 42.211305°	County: Hardin
		Long. -93.257448°	Water Name:
Project Number: VPS_ZEARING_20		Drawn By: Julie W	Date: 02.26.2020
	Crossing Number:		

This drawing is proprietary and is property of Vantage Point Solutions. This information is considered "confidential information" and is provided to the client as a tool to complete the contracted project. No use, joint use, ownership, or property rights of any kind are granted to any person or party except that which is specifically permitted in writing.



LAY 2

862135300002

D.D. No. 45

862135400001

862135400005

J.D.D.  
H-S 4-112

LAY 3

862135300004

862135400008

LAY 1

862135300005

862135400006

862135400007

T1



# Drainage Utility Permit Application

## Hardin County

**Applicant:** Midland Power Cooperative - Casey Huff

**Contact Email:** chuff@midlandpower.coop

**Contact Phone:** (515) 386-4111

**Utility Type:** N/A - Utility Permits Only

**Drainage District:** DD 142 (51156)

**Description of Work:** DD 142 & DD Big 4 Overhead line rebuild 1.5 miles along south side of 120th Map 66 Sec 17 & 18

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 #:** 2020-2

Application in TCM  
 GIS Annotation  
 Approval Emailed



# HARDIN COUNTY

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

## HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

Applicant: Midland Power Cooperative  
Company Name

1005 E Lincoln Way  
Address

Jefferson IA 50129  
City State Zip

Applicant Contact: Casey Huff (515) 386-4111  
Name Phone

chuff@midlandpower.coop  
Email

Utility Type: Overhead Electrical Primary Line

Drainage District(s) Crossed: DD 142 and DD Big Four

Facilities Crossed (specific tile, open ditch): \_\_\_\_\_

Description of Work: Overhead line rebuild 1.5 miles along  
south side of 120th Map 66 Sec 17+18  
(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.

[Signature]  
Applicant Signature

2/28/20  
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](mailto:drainage@hardincountyia.gov)

*For Office Use Only*

Application Approval:

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

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.

**Midland Power  
Cooperative**

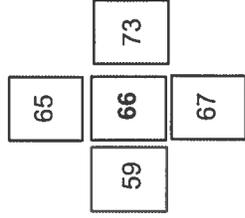


Red = A phase  
 Yellow = B phase  
 Blue = C phase  
 Peach = 2 phase  
 GREEN = 3 PHASE

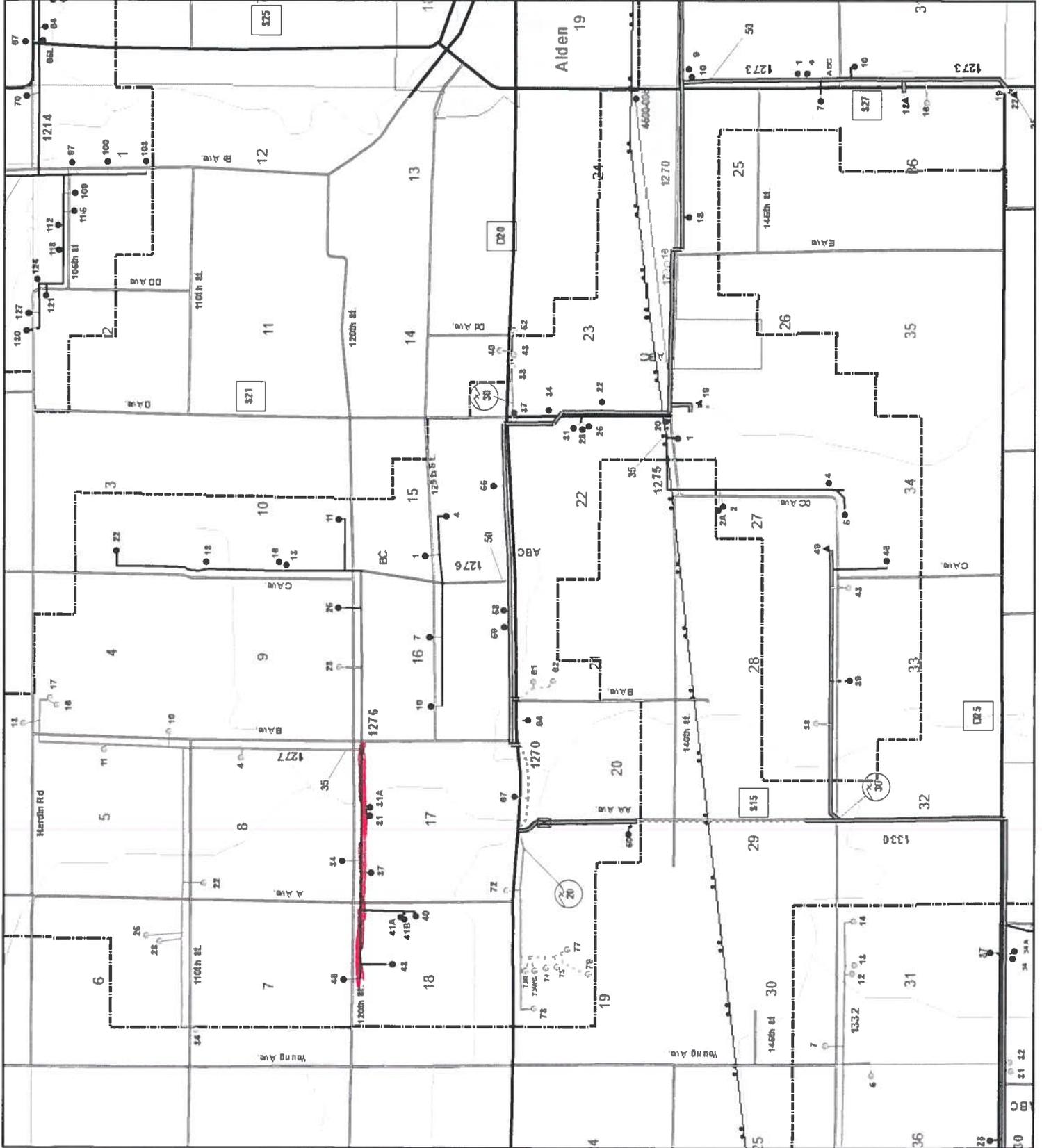
**County**  
HARDIN

**Township**  
ALDEN  
T89N R22W

**Map No.**  
66



Date: 1/3/2017









IOWA 93 MIDLAND POWER COOPERATIVE

STAKING SHEET

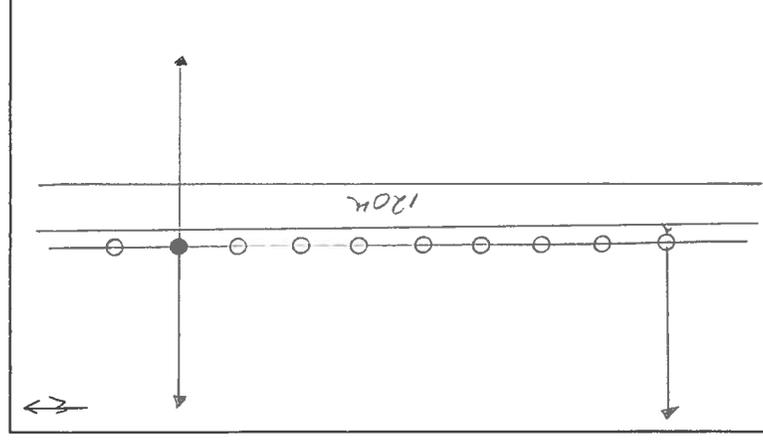
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 Sheet No. 1 of 4  
 Complt'd By \_\_\_\_\_ Date \_\_\_\_\_

WORK ORDER CODE	
New Construction	
System Improvement	<input checked="" type="checkbox"/>
Replacement	
Retire No. Replace	

County: Hardin  
 Township: Alden  
 School Dist.: \_\_\_\_\_

Sub \_\_\_\_\_  
 Feeder C  
 Phase \_\_\_\_\_  
 Line Sec. \_\_\_\_\_

Map Reference 66 Twp. 89N R. 22W Sec. 17 Wire 2 Size 1/2 Kind ACSR



Pole No.	Pri. (Back) Span.	Poles H & C Pri. Unit		Line Angle	Trans. "G"	Ground "M2"	GUY		Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No. CONST.	RET.
		Misc.	Misc.				No.	Unit "E"		Unit No. J or K	Size Span Meter				
20	225	40-5	1 A11										35-5	8	
19	227	40-5	1 A11	145.1		H11					1276-034/037		40-5	1	
18	227	35-5	1 A11			H11 P11							A1.1	9	
17	227	35-5	1 A11			H11 P11							A5.1	1	
16	227	35-5	1 A11			H11 P11							H1.1	3	
15	227	35-5	1 A11			H11 P11							P1.1	2	
14	227	35-5	1 A11			H11 P11							E1.1	1	
13	227	35-5	1 A11			H11 P11							F1.12	1	
12	227	35-5	1 A11			H11 P11									
11	154	35-5	1 A11	145.1		H11		1 E1.1	12'N F1.12		1276-031/031A				

**JOB BRIEFING**

Nominal Voltage \_\_\_\_\_  
 Fault Current Available \_\_\_\_\_  
 Hazardous Induced Voltg \_\_\_\_\_  
 Presence Protective Grds \_\_\_\_\_  
 Equipment Grounds \_\_\_\_\_  
 Pole Condition \_\_\_\_\_  
 Environmental Condition \_\_\_\_\_

Crew Initials 1 2 3 4 5 6

**CONSTRUCTION**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/0 ACSR	X		X		2195	2	4521
TOTALS							

**RETIREMENT**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS							

Const. Complt \_\_\_\_\_  
 Retmt. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

# IOWA 93 MIDLAND POWER COOPERATIVE

## STAKING SHEET

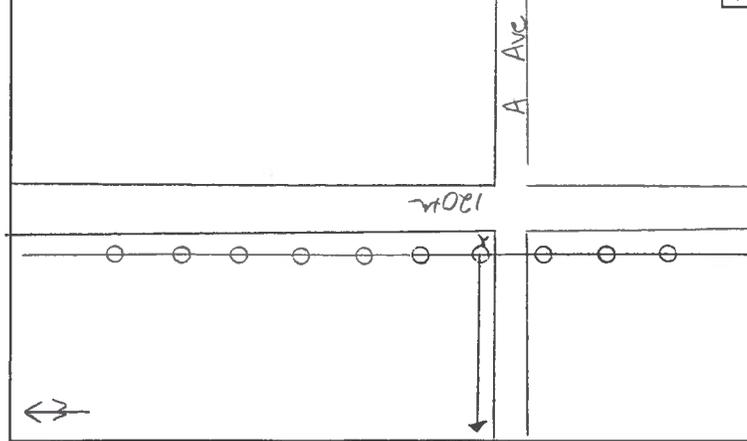
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 740c# 319-1  
 Staked By CH Date 2/4/20  
 Sheet No. 3 of 4  
 Complitd By \_\_\_\_\_ Date \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

County: Hardin  
 Township: Alden  
 School Dist.: \_\_\_\_\_

Sub \_\_\_\_\_  
 Feeder \_\_\_\_\_  
 Phase C  
 Line Sec. \_\_\_\_\_

Map Reference 66 Twp. 89N R. 22W Sec. 18 Wire 2 Size 10 Kind ACSR



Pole No.	Pri. (Back) Span.	Poles H & C		Ground	Line Trans. Angle "G"	GUY	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No. CONST.	RET.
		Misc.	Pri. Unit					Unit "E"	310				
30	222	135-5	1 A11								35-5	6	
29	222	135-5	1 A11								40-5	4	
28	222	135-5	1 A11	H1.1 P1.1							A1.1	10	
27	222	135-5	1 A1.1								A5.1	1	
26	222	135-5	1 A1.1								H1.1	3	
25	222	135-5	1 A1.1								P1.1	2	
24	225	140-5	1 A1.1	H1.1	A5.1	1 E1.1	9' N F1.12				E1.1	1	
23	225	140-5	1 A1.1	H1.1 P1.1							F1.12	1	
22	225	140-5	1 A1.1										
21	225	140-5	1 A1.1										

### CONSTRUCTION

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/0 A50	X	X	X		2232	2	4597
TOTALS	X	X	X	X			

### RETIREMENT

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS	X	X	X	X			

**JOB BRIEFING**

Nominal Voltage  
 Fault Current Available  
 Hazardous Induced Voltg  
 Presence Prctive Grds  
 Equipment Grounds  
 Pole Condition  
 Environmental Condition

Loc of Line Prctive Dvc  
 Other Utilities in Area  
 Personal Prctive Equip  
 Traffic Control  
 Job Procedure  
 Individual Job Duties  
 Other Hazards

Crew Initials 1 2 3 4 5 6

Const. Complt \_\_\_\_\_  
 Retmt. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

IOWA 93 MIDLAND POWER COOPERATIVE

WORK ORDER NO. 13325

740c# 319-1

Staked By CH Date 2/4/20

Sheet No. 4 of 4

Compltd By \_\_\_\_\_ Date \_\_\_\_\_

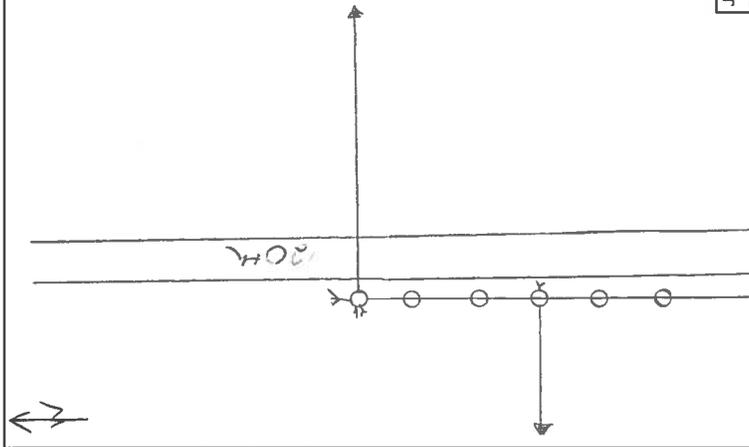
STAKING SHEET

WORK ORDER CODE	
New Construction	
System Improvement	<input checked="" type="checkbox"/>
Replacement	
Retire No. Replace	

County: Hardin  
 Township: Alden  
 School Dist.: \_\_\_\_\_

Sub 12  
 Feeder 7  
 Phase C  
 Line Sec. \_\_\_\_\_

Map Reference Lele Twp. 89N R 22W Sec. 18 Wire 2 Size 1/6 Kind ACSR



Pole No.	Pri. (Back) Span.	Poles H & C		Line Trans. Angle "G"	Ground "M2" Ohm	GUY Unit "E"	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No. CONST.	RET.
		Misc.	Misc.					Unit No. J or K	(Back) Span Meter				
36	240	40-5	41		H11	3 E11	25' W 6" 6.3 F1.12				35-5	5	
35	240	35-5	1 A11								40-5	1	
34	240	35-5	1 A11		H11 P11						A1.1	5	
33	222	35-5	1 A11	AS1	H11	1 E11	12' W F1.12			1276-043	A5.1	1	
32	222	35-5	1 A11								H1.1	3	
31	222	35-5	1 A11								P1.1	1	
											E1.1	4	
											F1.12	4	

**JOB BRIEFING**

Nominal Voltage \_\_\_\_\_  
 Fault Current Available \_\_\_\_\_  
 Hazardous Induced Voltg \_\_\_\_\_  
 Presence Prctive Grds \_\_\_\_\_  
 Equipment Grounds \_\_\_\_\_  
 Pole Condition \_\_\_\_\_  
 Environmental Condition \_\_\_\_\_

Loc of Line Prctive Dvc \_\_\_\_\_  
 Other Utilities in Area \_\_\_\_\_  
 Personal Prctive Equip \_\_\_\_\_  
 Traffic Control \_\_\_\_\_  
 Job Procedure \_\_\_\_\_  
 Individual Job Duties \_\_\_\_\_  
 Other Hazards \_\_\_\_\_

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

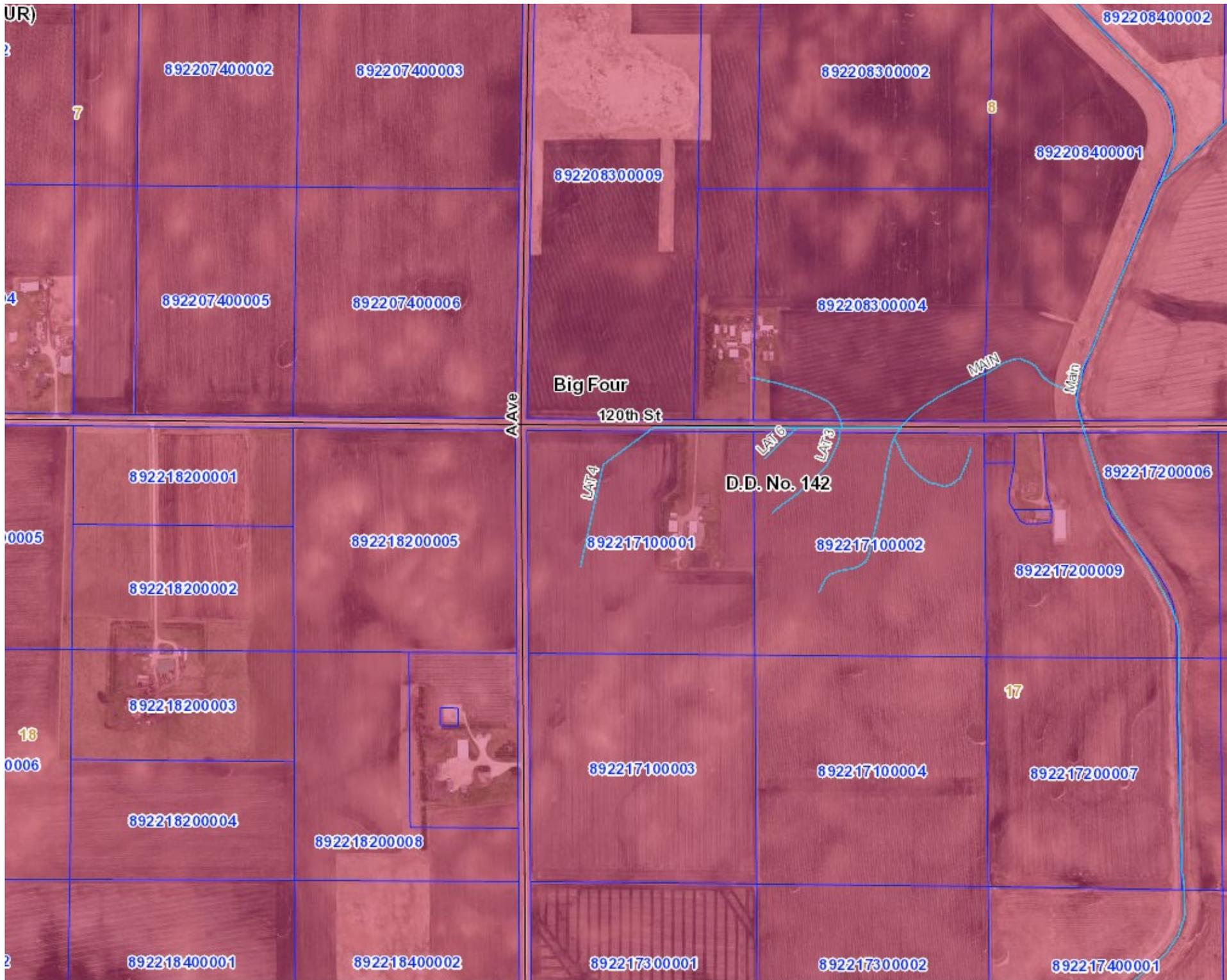
Const. Complt \_\_\_\_\_  
 Retmnt. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

CONSTRUCTION

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/2 ACSR	X	X	X		1386	2	2855
TOTALS							

RETIREMENT

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS							





# Drainage Utility Permit Application

## Hardin County

**Applicant:** Casey Huff

**Contact Email:** chuff@midlandpower.coop

**Contact Phone:** (515) 386-4111

**Utility Type:** N/A - Utility Permits Only

**Drainage District:** DDs\DD 38 (51063)

**Description of Work:** DD's 38, 46, Big Four & FH 5-75 - Midland Power Coop - Overhead line rebuild, 1.5 miles along east and west side of C ave. Map 66, sections 4 & 10.

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*

<b>Application Approval:</b>	
By: _____	Date: _____
<i>Board of Supervisor Chairman, Acting as Drainage District Trustee</i>	
<b>APPROVED PERMIT #</b> _____	<b>2020-3</b> _____
<input type="checkbox"/> Application in TCM <input type="checkbox"/> GIS Annotation <input type="checkbox"/> Approval Emailed	



# HARDIN COUNTY

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

## HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

Applicant: Midland Power Cooperative  
Company Name

1005 E Lincoln Way  
Address

Jefferson IA 50129  
City State Zip

Applicant Contact: Casey Huff (515) 386-4111  
Name Phone

chuff@midlandpower.coop  
Email

Utility Type: Overhead Electrical Primary Line

Drainage District(s) Crossed: DD No 38, DD No 46, Big Four, F-H-5-75

Facilities Crossed (specific tile, open ditch): \_\_\_\_\_

Description of Work: Overhead line rebuild 1.5 miles, along east and west side of C Ave. Map 1e6 sections 04 + 10

(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.

[Signature] 2/28/20  
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: \_\_\_\_\_ Date: \_\_\_\_\_  
*Board of Supervisor Chairman, Acting as Drainage District Trustee*

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.

# STAKING SHEET

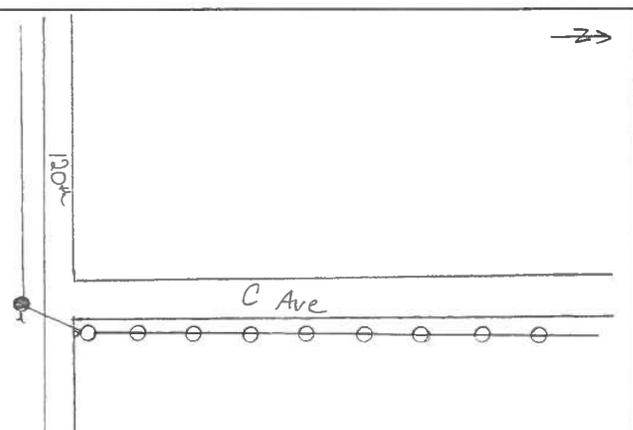
Name Line Rebuild 15m. 1P  
 Location #: 1376 -- 6610  
 Address: C Ave  
 Phone#: \_\_\_\_\_

1R Sub  
 7 Feeder  
 C Phase  
 County: Harlan  
 Township: Alden  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13326  
 740# 318-1  
 Staked By CH Date 2/2/20  
 Sheet No. 1 of 4  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 146 Twp. 89N R 22W Sec. 10 Wire 2 Size 1/0 Kind ACSR



Pole No.	Pri. (Back) Span	Poles H & C		Pri. Unit	Line Angle	Trans. "G"	Ground "W2"	Ohm No.	Unit "E"	310	Lead	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.																																																			
		Misc.	Misc.										Unit No. J or K	(Back) Span			Size Meter	CONST.	RET.																																																	
1				All																																																																
2	130	140-5	1	All			Hill	51.0	1	1	25' 5"	F112																																																								
3	232	135-5	1	All			Hill																																																													
4	232	135-5	1	All																																																																
5	232	135-5	1	All																																																																
6	235	135-5	1	All																																																																
7	235	135-5	1	All																																																																
8	235	135-5	1	All																																																																
9	235	135-5	1	All																																																																
10	235	135-5	1	All																																																																
<table border="1"> <thead> <tr> <th colspan="17">CONSTRUCTION</th> </tr> <tr> <th>Conductor</th> <th>Pri.</th> <th>Sec.</th> <th>O.H.</th> <th>URD</th> <th>Pole Line Ft.</th> <th>No. of Wires</th> <th>Total Feet</th> <th colspan="9">TOTALS</th> </tr> </thead> <tbody> <tr> <td>1/0 ACSR</td> <td>X</td> <td></td> <td></td> <td></td> <td>2001</td> <td>2</td> <td>4122</td> <td>X</td> </tr> </tbody> </table>																	CONSTRUCTION																	Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet	TOTALS									1/0 ACSR	X				2001	2	4122	X	X	X	X	X	X	X	X	X	X
CONSTRUCTION																																																																				
Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet	TOTALS																																																												
1/0 ACSR	X				2001	2	4122	X	X	X	X	X	X	X	X	X	X																																																			
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RETIREMENT																																																																				
Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet	TOTALS																																																												
								X	X	X	X	X	X	X	X	X	X																																																			

Const. Complt \_\_\_\_\_  
 Retire. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

JOB BRIEFING  
 Nominal Voltage \_\_\_\_\_  
 Fault Current Available \_\_\_\_\_  
 Hazardous Induced Voltg \_\_\_\_\_  
 Presence of Grounds \_\_\_\_\_  
 Equipment Grounding \_\_\_\_\_  
 Pole Material \_\_\_\_\_  
 Environmental Condition \_\_\_\_\_

Use of Line Protective Device  
 Other Utilities in Area \_\_\_\_\_  
 Personal Protective Equip \_\_\_\_\_  
 Traffic Control \_\_\_\_\_  
 Job Foreclosure \_\_\_\_\_  
 Inherital Job \_\_\_\_\_  
 Other Hazards \_\_\_\_\_

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

Conductor Pri. Sec. O.H. URD Pole Line Ft. No. of Wires Total Feet

1/0 ACSR X X 2001 2 4122

TOTALS X X X X X X X

Conductor Pri. Sec. O.H. URD Pole Line Ft. No. of Wires Total Feet

TOTALS X X X X X X X





# STAKING SHEET

Name: Line Rebuild 1.5 mi 10  
 Location #: 1276--0603  
 Address: C Ave  
 Phone#: \_\_\_\_\_

Sub: 12  
 Feeder: 7  
 Phase: C  
 Line Sec: \_\_\_\_\_

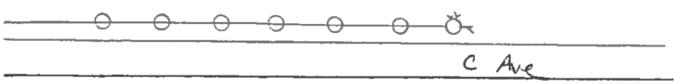
County: Hardin  
 Township: Alden  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13326  
 740c# 318-1  
 Staked By: CH Date: 2/4/20  
 Sheet No.: 4 of 4  
 Complit By: \_\_\_\_\_ Date: \_\_\_\_\_

## SKETCH OF WORK

Map Reference: 146 Twp. 89N R 22W Sec. 03 Wire 2 Size 1/0 Kind ACSL



Pole No.	Pri. (Back) Span.	Poles H & C Misc.	Pri. Unit Misc.	Line Angle	Trans. "G"	Ground "M2"	Ohm No.	Unit "E"	GUY 310	Lead	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.	
												Unit No. J or K	(Back) Span			Size Meter	CONST.
37	214	140-5	1 A1.1		H.1.1		3	EL.1		35' 10" 10' W	FL.12			1276-022	35-5	6	
36	214	135-5	1 A1.1												40-5	1	
35	214	135-5	1 A1.1												A1.1	6	
34	214	135-5	1 A1.1		H.1.1	P.1.1									A1.1	1	
33	214	135-5	1 A1.1												H.1.1	2	
32	214	135-5	1 A1.1												P.1.1	1	
31	214	135-5	1 A1.1												FL.12	3	

**JOB BRIEFING**

Normal Voltage	Loc of Line Protective Dvc
Fault Current Available	Other Utilities in Area
Hazardous Induced Voltg	Personal Protective Equip
Freshness Protective Grids	Traffic Control
Equipment Grounds	Job Procedure
Pole Condition	Individual Job Duties
Environmental Condition	Other Hazards

Crew Initials: 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**CONSTRUCTION**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/0	452	X		X	1498	2	3085
TOTALS							

**RETIREMENT**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS							

Const. Complt \_\_\_\_\_  
 Retmt. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

# STAKING SHEET

Name Line Rebuild 15m. 1p  
 Location #: 1276 -- 6610  
 Address: C Ave  
 Phone#: \_\_\_\_\_

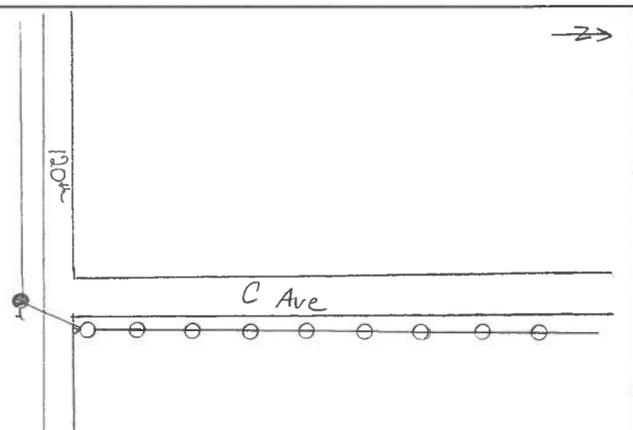
12 Sub  
 7 Feeder  
 C Phase  
 Line Sec. \_\_\_\_\_

County: Horton  
 Township: Alden  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	
System Improvement	<input checked="" type="checkbox"/>
Replacement	
Retire No. Replace	

WORK ORDER NO. 13326  
 740c# 318-1  
 Staked By CH Date 2/4/20  
 Sheet No. 1 of 4  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 14E Twp. R9N R 22W Sec. 10 Wire 2 Size 1/0 Kind ACSR



Pole No.	Pri. (Back) Span.	Pass H & C		Pri. Unit	Line Angle	Trans -G-	Ground -M2-	Ohm	No. -E-	GUY 310	Lead	Anchor -F-	SECONDARY		Misc. & Remarks	Unit	No.	
		Misc.	Misc.										Unit No. J or K	(Back) Span Meter			CONST.	RET.
10	235	1	35-5	1	All										35-5	8		
9	235	1	35-5	1	All										40-5	1		
8	235	1	35-5	1	All										40-5	8		
7	235	1	35-5	1	All										All	3		
6	235	1	35-5	1	All										All	2		
5	232	1	35-5	1	All										St.01	1		
4	232	1	35-5	1	All										El.1	1		
3	232	1	35-5	1	All										El.12	1		
2	130	1	40-5	1	All										Al.1	1		
1																		

Const. Complt \_\_\_\_\_  
 Retire Complt \_\_\_\_\_  
 Material Ticker Complt \_\_\_\_\_  
 500 BH 9-00

JOB BRIEFING

Nominal Voltage	Loc of Line Protective Dvc
Fault Current Available	Other Utilities in Area
Hazardous Induced Voltg	Personal Protective Equip
Presence Protective Gnds	Traffic Control
Equipment Grounds	Job Procedure
Pole Condition	Individual Job Duties
Environmental Condition	Other Hazards

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

CONSTRUCTION

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/0 ACSR	X		X		2001	2	4122
TOTALS	X	X	X	X			

RETIREMENT

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS	X	X	X	X			

# STAKING SHEET

Name Line Rebuild 15 mi. p  
 Location #: 1276--6161D  
 Address: C Ave  
 Phone#: \_\_\_\_\_

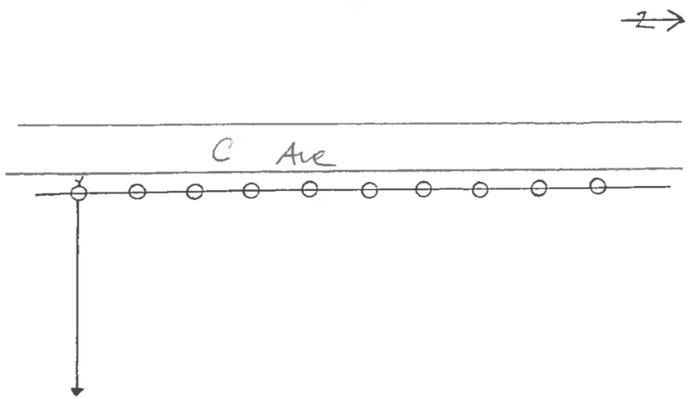
Sub 12  
 Feeder 7  
 Phase C  
 Line Sec. \_\_\_\_\_

County: Hardin  
 Township: Aldan  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13326  
 740c# 318-1  
 Staked By CH Date 2/4/20  
 Sheet No. 2 of 4  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 66 Twp. 89N R. 22W Sec. 10 Wire 2 Size 1/0 Kind ACRR



Pole No.	Pri. (Back) Span.	Poles H & C		Pri. Unit	Line Trans. "G"	Ground "M2"	Ohm No.	Unit "E"	GUY 310	Lead	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.						
		Misc.	Misc.									Unit No. J or K	(Back) Span			Meter	CONST.	RET.				
10	303	1	35-5	A1.1										35-5	9							
19	202	1	35-5	A1.1										40-5	1							
18	202	1	35-5	A1.1										A1.1	10							
17	202	1	35-5	A1.1										A5.1	1							
16	202	1	35-5	A1.1										H1.1	3							
15	232	1	35-5	A1.1										P1.1	2							
14	232	1	35-5	A1.1										E1.1	1							
13	232	1	35-5	A1.1										F1.12	1							
12	232	1	35-5	A1.1																		
11	235	1	40-5	A1.1	A5.1	H1.1																
CONSTRUCTION																						
Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet															
1/0 ACSR	X		X		3570	2	7354															
TOTALS	X	X	X	X																		
RETIREMENT																						
Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet															
1276-013/016																						
TOTALS	X	X	X	X																		

Const. Complt \_\_\_\_\_  
 Retmt. Complt \_\_\_\_\_  
 Material Ticker Complt \_\_\_\_\_  
 500 BH 9-00

JOB BRIEFING  
 Nominal Voltage \_\_\_\_\_  
 Fault Current Available \_\_\_\_\_  
 Hazardous Induced Voltg \_\_\_\_\_  
 Presence Prctive Grds \_\_\_\_\_  
 Equipment Grounds \_\_\_\_\_  
 Pole Condition \_\_\_\_\_  
 Environmental Condition \_\_\_\_\_

Loc of Line Prctive Dvc  
 Other Utilities in Area \_\_\_\_\_  
 Personal Prctive Equip \_\_\_\_\_  
 Traffic Control \_\_\_\_\_  
 Job Procedure \_\_\_\_\_  
 Individual Job Duties \_\_\_\_\_  
 Other Hazards \_\_\_\_\_

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/0 ACSR	X		X		3570	2	7354
TOTALS	X	X	X	X			

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1276-013/016							
TOTALS	X	X	X	X			



# STAKING SHEET

Name Line Rebuild 15 mi 10  
 Location #: 1276--022  
 Address: C Ave  
 Phone #: \_\_\_\_\_

12 Sub  
7 Feeder  
C Phase  
 Line Sec. \_\_\_\_\_

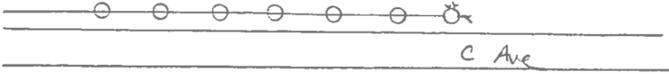
County: Hardin  
 Township: Alden  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13326  
 740c# 318-1  
 Staked By CH Date 2/4/20  
 Sheet No. 4 of 4  
 Comptd By \_\_\_\_\_ Date \_\_\_\_\_

## SKETCH OF WORK

Map Reference 166 Twp. 89N R 22W Sec. 03 Wire 2 Size 1/0 Kind ACSR



Pole No.	Pri. (Back) Span.	Poles H & C		Pri. Unit	Line Trans. "G"	Ground "M2" Ohm	No. Unit "E"	GUY	Lead	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No. CONST.	No. RET.
		Misc.	Misc. Angle								Unit	(Back) Span				
37	214	140-5	1	A4.1			3	EL.1	15' 10" W	F1.2			1276-022	35-5	6	
36	214	135-5	1	A4.1										HO-5	1	
35	214	135-5	1	A4.1										A1.1	6	
34	214	135-5	1	A4.1										A4.1	1	
33	214	135-5	1	A4.1										H1.1	2	
32	214	135-5	1	A4.1										P1.1	1	
31	214	135-5	1	A4.1										EL.1	3	
														F1.2	3	

JOB BRIEFING			
<input type="checkbox"/>	Nominal Voltage	<input type="checkbox"/>	Loss of Line Protective Dvc
<input type="checkbox"/>	Fault Current Available	<input type="checkbox"/>	Other Utilities in Area
<input type="checkbox"/>	Hazardous Induced Voltg	<input type="checkbox"/>	Personnel Protective Equip
<input type="checkbox"/>	Presence Frictive Grds	<input type="checkbox"/>	Traffic Control
<input type="checkbox"/>	Equipment Grounds	<input type="checkbox"/>	Job Procedure
<input type="checkbox"/>	Pole Condition	<input type="checkbox"/>	Individual Job Duties
<input type="checkbox"/>	Environmental Condition	<input type="checkbox"/>	Other Hazards

Const. Compt \_\_\_\_\_  
 Retm. Compt \_\_\_\_\_  
 Material Ticket Compt \_\_\_\_\_  
 500 BH 9-00

CONSTRUCTION			
Conductor	Pri. Sec.	D.H. URD	Pole Line Ft.
1/0 ACSR	X	X	1498
			2
			3085
TOTALS	X	X	X

RETIREMENT			
Conductor	Pri. Sec.	O.H. URD	Pole Line Ft.
TOTALS	X	X	X



# STAKING SHEET

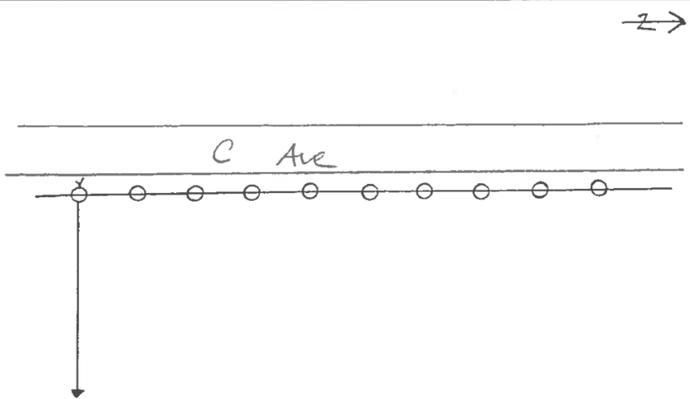
Name Line Rebuild 15 mi. 16  
 Location #: 1276-61610  
 Address: C Ave  
 Phone#: \_\_\_\_\_

12 Sub  
 7 Feeder  
 C Phase  
 County: Howard  
 Township: Adrian  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Rebate No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13326  
 740c# 318-1  
 Staked By CH Date 2/4/20  
 Sheet No. 2 of 4  
 Completed By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 66 Twp. 89N R 22W Sec. 10 Wire 2 Size 1/0 Kind AC2R



Pole No.	Pri. (Back) Span.	Poles H & C		Pri. Unit	Line Trans. "G" Angle	Ground "M2" Ohm No. "E"	Anchor "F" No. Unit or K	SECONDARY (Back) Span Meter	Misc. & Remarks	Unit	No.		
		Misc.	Misc. Angle								CONST.	RET.	
20	203	35-5	1	A1.1						35-5	9		
19	202	35-5	1	A1.1						40-5	1		
18	202	35-5	1	A1.1						A1.1	10		
17	202	35-5	1	A1.1						A5.1	1		
16	202	35-5	1	A1.1						H1.1	3		
15	232	35-5	1	A1.1						P1.1	2		
14	232	35-5	1	A1.1						E1.1	1		
13	232	35-5	1	A1.1						F1.12	1		
12	232	35-5	1	A1.1									
11	235	40-5	1	A1.1	45.1	H1.1							
TOTALS													

JOB BRIEFING

Nominal Voltage	Loc of Line	Protective Dvc
Fault Current Available	Other Utilities in Area	Personal Protective Equip
Hazardous Induced Voltg	Traffic Control	Job Procedure
Presence Protective Grds	Individual Job Duties	Other Hazards
Equipment Grounds		
Pole Condition		
Environmental Condition		

Retmnt. Complet \_\_\_\_\_  
 Material Ticket Complet \_\_\_\_\_  
 500 BH 9-90

CONSTRUCTION

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/0 ACSR	X		X		3570	2	7354
TOTALS							

RETIREMENT

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS							

# STAKING SHEET

Name Line Repair 1.5mi 10  
 Location #: 1276--66 03  
 Address: C Ave  
 Phone#: \_\_\_\_\_

County: Harlan  
 Township: Alden  
 School Dist.: \_\_\_\_\_  
 Line Sec. \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Replac No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13326  
 740c# 318-1  
 Staked By CH Date 2/4/20  
 Sheet No. 3 of 4  
 Compt By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 66 Twp. 89N R 22D Sec. 03 Wire 2 Size 1/0 Kind ACSR



Pole No.	Pri. (Back) Span.	Poles H & C		Pri. Unit	Line Trans. "G"	Ground "M2"	Om No.	Unit "E"	GUY		Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.	
		Misc.	Misc.						Lead	Unit No. J or K		(Back) Span	Size Meter			CONST.	RET.
20	214	135-5	1	All										35-5	4		
29	214	135-5	1	All										40-5	5		
28	194	140-5	1	All										45-3	1		
27	285	140-5	1	All										All	8		
26	133	145-3	1	All										AC-1	2		
25	133	140-5	1	All										UAI	1		
24	203	140-5	1	All										UAI	2		
23	203	140-5	1	All										1276-018			
22	203	135-5	1	All										Set 10' Deep			
21	203	135-5	1	All													

Const. Complt \_\_\_\_\_  
 Retmt. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

JOB BRIEFING

Normal Voltage	_____	Loc of Line Protective Dvc	_____
Fault Current Available	_____	Other Utilities in Area	_____
Hazardous Induced Voltg	_____	Personal Protective Equip	_____
Equipment Protective Grds	_____	Traffic Control	_____
Equipment Grounds	_____	Job Procedure	_____
Pole Condition	_____	Individual Job Duties	_____
Environmental Condition	_____	Other Hazards	_____

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

CONSTRUCTION

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/0 ACSR	X		X		1985	2	4089
TOTALS	X	X	X	X			

RETIREMENT

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS	X	X	X	X			



**Midland Power  
Cooperative**

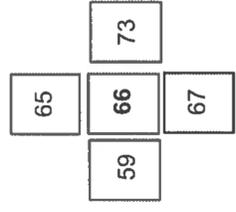


Red = A phase  
 Yellow = B phase  
 Blue = C phase  
 Peach = 2 phase  
 GREEN = 3 PHASE

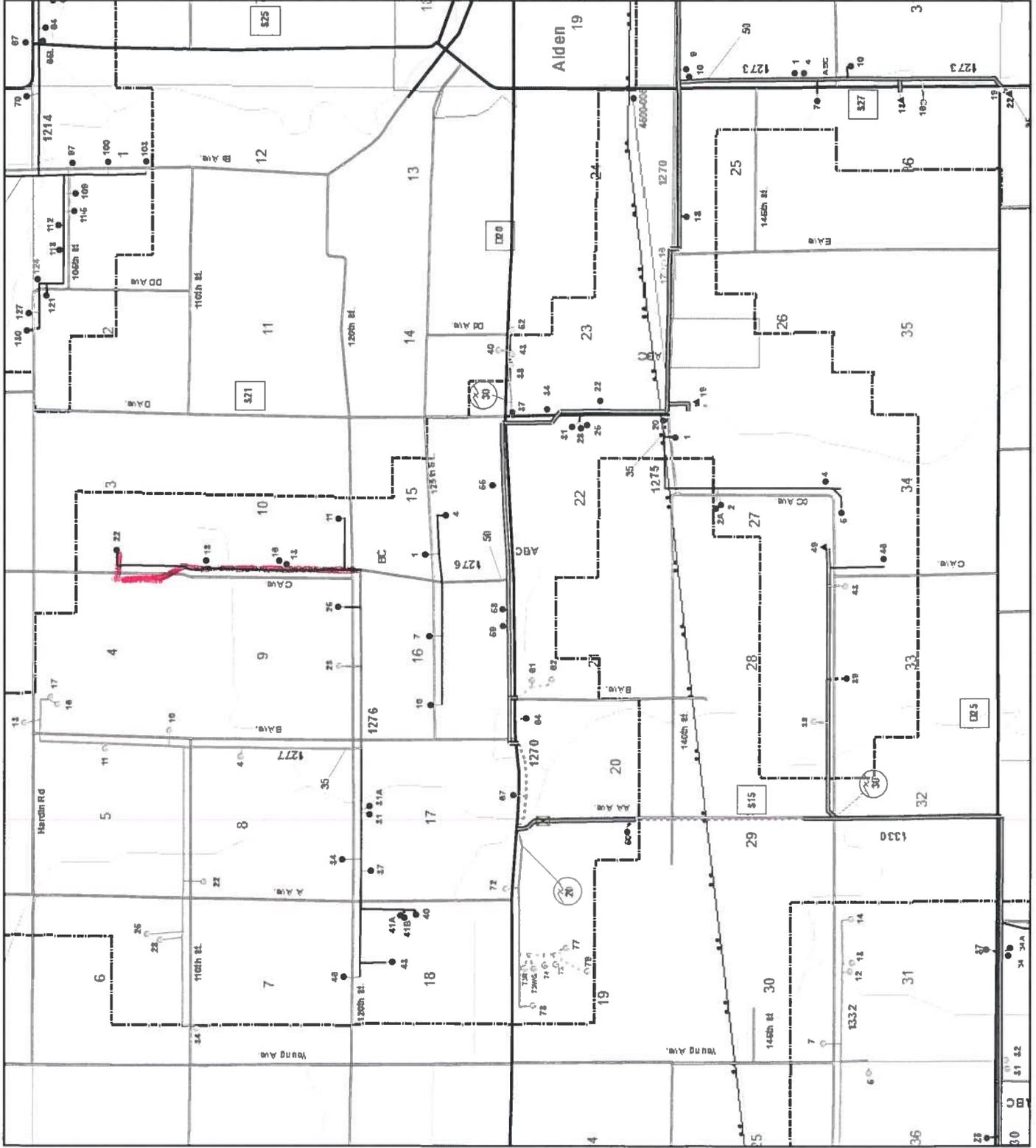
**County**  
HARDIN

**Township**  
ALDEN  
T89N R22W

**Map No.**  
66



Date: 1/3/2017



**Midland Power  
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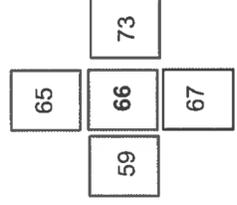


Red = A phase  
 Yellow = B phase  
 Blue = C phase  
 Peach = 2 phase  
 GREEN = 3 PHASE

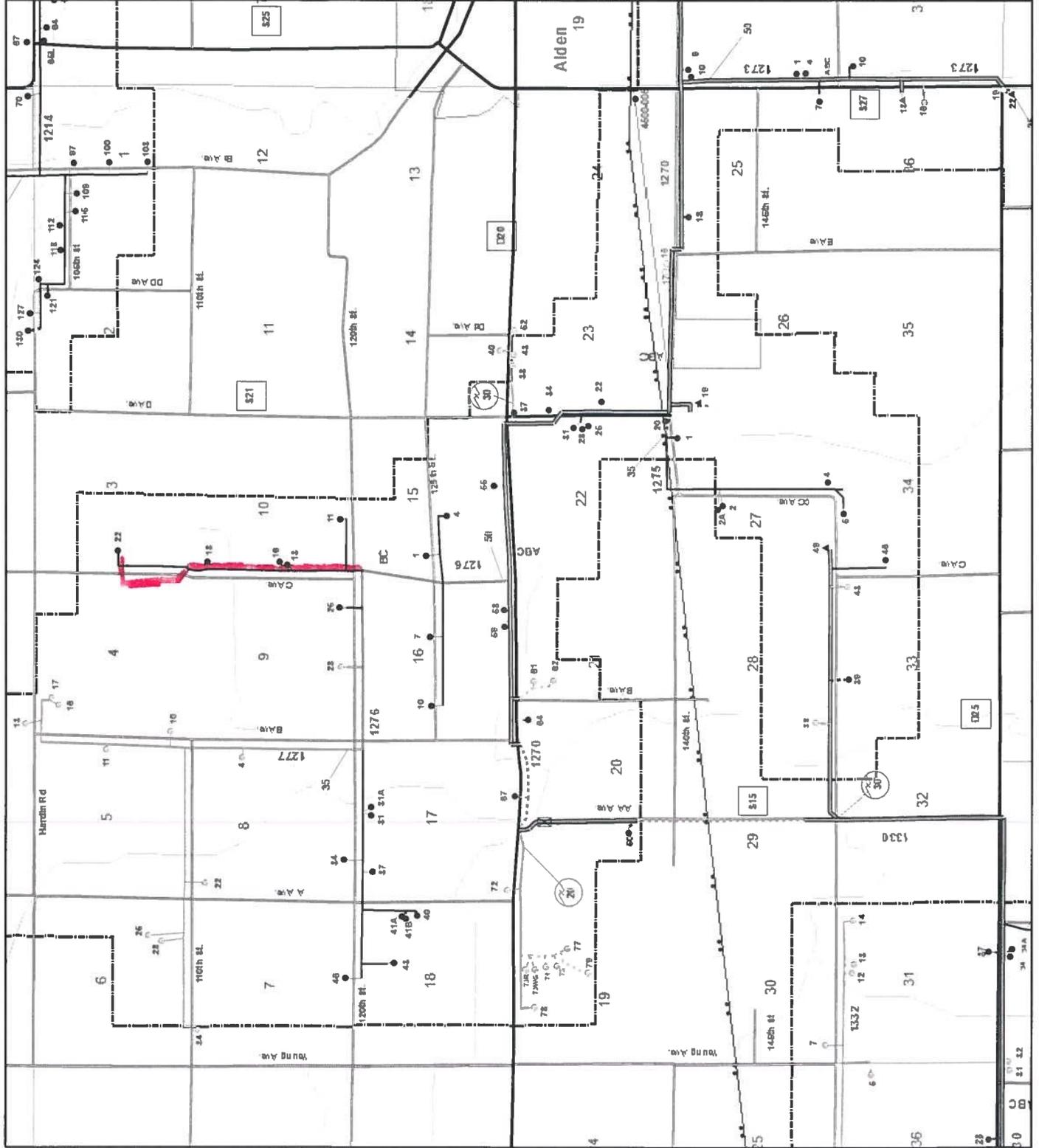
**County**  
HARDIN

**Township**  
ALDEN  
T89N R22W

**Map No.**  
66



Date: 1/3/2017



**Midland Power  
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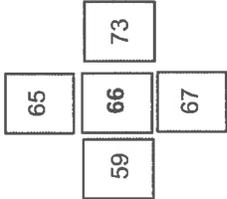


Red = A phase  
 Yellow = B phase  
 Blue = C phase  
 Peach = 2 phase  
 GREEN = 3 PHASE

**County**  
HARDIN

**Township**  
ALDEN  
T89N R22W

**Map No.**  
66



Date: 1/3/2017

