

**AGENDA**  
**REGULAR DRAINAGE MEETING**  
**May 8, 2019**  
**1:00 PM**

1. Open Meeting
2. Approve Agenda
3. Approve Minutes  
-May 1, 2019 Regular Drainage Meeting

Documents:

[5\\_1\\_2019 - DRAINAGE MINUTES.PDF](#)

4. Approve Claims For Payment  
-Pay Date of Friday, May 10, 2019

Documents:

[PAYABLES-DRAINAGE PUBLICATION.PDF](#)

5. DD 9 - Discuss, With Possible Action, Installing Trench
6. DD 128 - Approve Change Order #3

Documents:

[6771.2 UNSIGNED CHANGE ORDER 3.PDF](#)

7. DD 5-75 - Accept Reclassification & Set Hearing Date

Documents:

[6715.2 - DD 5-75 - MAIN TILE RECLASSIFICATION REPORT.PDF](#)  
[6715.2 - RE-MAIN TILE \(AUDITORS\).PDF](#)

8. DD 41, DD 48 & DD 9 - Approve Drainage Utility Permit Application 2019-2 With Aureon

Documents:

[DD 9-41-48.PDF](#)  
[DD9-41-48.PDF](#)

9. DD 148 - Set Election Date, Appoint Judges & Clerks

Documents:

[DATE JUDGES CLERKS.PDF](#)

10. Other Business

## 11. Adjourn Meeting

# REGULAR DRAINAGE MEETING

5/1/2019 - Minutes

1. Open Meeting

Hardin County Drainage Districts Board of Trustees Chairperson, Renee McClellan, opened the meeting. Also present were Trustees, Lance Granzow and BJ Hoffman; Landowners Sheryl and Tom Roberts; Lee Gallentine with Clapsaddle-Garber Associates (CGA); Drainage Clerk, Becca Junker.

2. Approve Agenda

Granzow approved, McClellan seconded to approve the agenda as presented. All ayes. Motion carried.

3. Approve Minutes

Hoffman moved, Granzow seconded to approve the minutes of the April 24, 2019 regular drainage meeting and the April 24, 2019 DD 9 landowner meeting. All ayes. Motion carried.

4. DD 9 - Acknowledge Engineers Report And Set Hearing Date

McClellan moved, Granzow seconded to acknowledge the receipt of the Engineer's Report dated April 30, 2019 and to set the hearing date as Wednesday, June 19, 2019 at 1:00 PM in the large conference room of the Hardin County Courthouse. All ayes. Motion carried.

Gallentine then went over his findings of a short-term fix for the flooded field with the Trustees and Roberts. He mentioned in the past if a tile isn't functioning you dig a 2-3 feet deep trench for a length and leave it open until a bid letting is held. To put a trench in place they would have to go 1900 feet long and the cuts will be up to 12 feet deep. Granzow explained that anything that is done for short term is billed to the landowners and that the Robert's are the majority landowners in this district, so he needs their input before making a decision. There was also conversation about crop damage.

Granzow moved, Hoffman seconded to have CGA find someone to place a trench. All ayes. Motion carried.

Following the motion there was more discussion on other ways to enter the field or possibly subleasing the field. Robert's then informed the board that he wanted to have a discussion with his tenant before any final decisions were made.

Granzow moved, Hoffman seconded to reconsider the pervious motion and table it until next week. All ayes. Motion carried.

5. DD 148 & DD 9- Discuss, With Possible Action, R & D Invoices

Hoffman moved, Granzow seconded to pay R & D Customs LLC invoices 053101 and 053102 in next week's claims for payment. All ayes. Motion carried.

Gallentine explained to the board that the number of hours that were billed to each district on the invoices were in favor of the districts. This helped the trustee's make their decision in paying R & D Customs LLC in full.

6. Big Four Main - Approve Work Order #250

Granzow moved, Hoffman seconded to approve Work Order #250 and for CGA to investigate. If a simple fix, CGA should continue with hiring a contractor through the lottery system. All ayes. Motion carried.

7. Other Business

R & D Customs - Hoffman moved, Granzow seconded to instruct Junker to send R & D Customs a letting notifying them that they will receive no more work until they present in front of the board.

DD 22 - Gallentine informed the trustees that CGA was on site of Randy Madden's property severing the tile today. CGA will be paying for the bill.

8. Adjourn Meeting

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



# Hardin County

Drainage Claims with Pay Date of 5/10/2019

Description	Vendor	Amount
DD 22 SVCS 1/19-4/20	Clapsaddle-Garber Assoc	237.30
DD 9 - Dug out sinkholes & replaced tile	R D Customs LLC	2,941.50
DD 21- Reclassification professional fees	Clapsaddle-Garber Assoc	507.50
DD 25- Repair to plugged Lat 3 & Main Tile	Clapsaddle-Garber Assoc	421.60
DD 38- Ongoing repairs	Williams Excavation LLC	4,785.19
DD 38- Ongoing repairs	Williams Excavation LLC	1,142.00
DD 38- Repair to Lat 4	Clapsaddle-Garber Assoc	2,113.05
DD 56- Work to date for reclassification	Clapsaddle-Garber Assoc	5,036.50
DD 123 Main- Repair to sinkhole on original main	Clapsaddle-Garber Assoc	236.30
DD 128- Installation of tile in open channel	Clapsaddle-Garber Assoc	459.90
DD 146- Conducting bid letting of main tile	Clapsaddle-Garber Assoc	253.37
DD 148- Dig and investigations	R D Customs LLC	525.00
DD 148- Reclassification	Clapsaddle-Garber Assoc	1,491.90
DD 148- Repair blowout on main	Clapsaddle-Garber Assoc	1,278.85
DD 165- Bid letting for repairs	Clapsaddle-Garber Assoc	253.37
DD 167- Repairs to main tile	Clapsaddle-Garber Assoc	290.95
Big 4 Main - Construction observation	Clapsaddle-Garber Assoc	2,382.50
DD H-F 5-75 Professional Fees- Reclassification	Clapsaddle-Garber Assoc	746.50

**Total Regular Payables:** 237.30  
**Total Stamped Warrants:** 24,865.98

# Change Order

No. 3

Date of Issuance: April 29, 2019 Effective Date: April 29, 2019

Project: Drainage District Repairs	Owner: Drainage District Trustees	Owner's Contract No.:
Contract:		Date of Contract: May 2, 2018
Contractor: Hands On Excavating		Engineer's Project No.:6771.2

**The Contract Documents are modified as follows upon execution of this Change Order:**

**Description:** For the DD 128 portion of this project, the landowner has requested that a different borrow site be used, the proposed tile be shifted to be shallower, and the open ditch only be filled to be a crossable waterway. The contractor has requested to use **flex dual wall tile without rock bedding/backfill**. At no cost, within 2 years of installation the contractor will CCTV the tile and replace any tile with deformation in excess of 12%.

**Attachments (list documents supporting change):** E-mails from contractor/supplier detailing Change Order #3.

**CHANGE IN CONTRACT PRICE:**

**CHANGE IN CONTRACT TIMES:**

Original Contract Price:	Original Contract Times:	<input checked="" type="checkbox"/> Calendar days
\$149,516.85	Substantial completion (date): 11-30-2018	
Increase from previously approved Change Order No. <u>1</u> to No. <u>2</u> :	Increase from previously approved Change Order No. <u>1</u> to No. <u>2</u> :	
\$ 30,911.50	Substantial completion (date): 5-1-2019	
Contract Price prior to this Change Order:	Contract Times prior to this Change Order:	
\$180,428.35	Substantial completion (date): 5-1-2019	
Increase of this Change Order:	Increase of this Change Order:	
\$ 0.00	Substantial completion (date): 6-1-2019	
Contract Price incorporating this Change Order:	Contract Times with all approved Change Orders:	
\$180,428.35	Substantial completion (date): 6-1-2019	

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (Authorized Signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Date: _____	Date: _____	Date: _____
Approved by Funding Agency (if applicable): _____		Date: _____

## Lee Gallentine

---

**From:** Jacob Handsaker <handsaker@gmail.com>  
**Sent:** Monday, April 29, 2019 10:42 PM  
**To:** Lee Gallentine  
**Subject:** Fwd: Dean Bright  
**Attachments:** Hardin County Drainage District 128 Pipe Max Deflection 4-26-19.pdf

Lee,

Attached is a letter from Prinsco stating their accepted deflection for the 8" dual wall pipe. I would like to formally request a change order for the use of flex dual wall pipe installed for the DD128 project, and a change of the path to use a path that follows the waterway instead of straight thru the hill to reduce depth of cut. Included in this change order is the responsibility for Hands On Excavating to pay for a televised report of this pipe at the request of the district trustees. They can choose the time frame within two years of installation. Should the pipe be found inadequate Hands On will replace the failed pipe at Hands On expense.

Also, due to the fact that this request is being considered on May 1 which was the previous completion date of this project I would also ask for a 1 month extension. We are also waiting on the outlet pipe for Big 4 and have been told there is a 3-4 week lead time on the aluminized pipe that was added last week. It is on order through Midwest pipe supply in mason city.

Thank you.

Sent from my iPhone

Begin forwarded message:

**From:** Jason Ahrenholz <[JasonA@prinsco.com](mailto:JasonA@prinsco.com)>  
**Date:** April 26, 2019 at 3:02:28 PM CDT  
**To:** Jacob Handsaker <[handsaker@gmail.com](mailto:handsaker@gmail.com)>  
**Cc:** Jarvis Mulholland <[Jarvis.Mulholland@prinsco.com](mailto:Jarvis.Mulholland@prinsco.com)>  
**Subject:** RE: Dean Bright

Good Afternoon Jacob,

Attached is a letter than addresses the maximum deflection in the 8" flex pipe.

Let me know if you have any other questions.

Thanks!

**Jason Ahrenholz, P.E.**  
Director of Engineering

**Prinsco** | Water Management Solutions  
1717 16<sup>th</sup> St. NE, Willmar, MN 56201  
o. [320.222.6834](tel:320.222.6834) | f. [320.222.6820](tel:320.222.6820) | w. [prinsco.com](http://prinsco.com)



Jacob Handsaker  
Hands On Excavating LLC  
Handsaker Farms  
Radcliffe, Iowa 50230  
P. 515 460 6294  
F. 1-800-852-8337  
E. [handsaker@gmail.com](mailto:handsaker@gmail.com)

[www.handsonexcavating.com](http://www.handsonexcavating.com)

**Is there anything more that I can do for just you?**



April 25, 2019

Jacob Handsaker  
Hands On Excavating, LLC  
Handsaker Farms  
Radcliffe, IA 50230

Re: Hardin County Drainage District 128 Maximum Pipe Deflection

Mr. Handsaker,

Prinsco's GOLDFLEX 8" flexible dual wall has been requested to be used on the project listed above in lieu of standard 8" GOLDFLO dual wall sticks. Prinsco GOLDFLEX flexible dual wall pipe offers increased flow capacity over single wall pipe with the ability to be installed with a plow boot.

Proper installation and soil support are critical to the long term performance of all flexible pipe. Prinsco recommends that installation of the GOLDFLEX pipe is in alignment with the GOLDFLEX installation guide and ASTM F449 – *Standard Practice for Subsurface Installation of Corrugated Polyethylene Pipe for Agricultural Drainage or Water table Control.*

GOLDFLEX is a flexible pipe that is designed to deflect to shed the overburden load. With proper soil support around the pipe, the deflection can be limited. For agricultural applications, Prinsco typically recommends a maximum of 10-12% deflection on the inside of the pipe. Provided the pipe does not experience pipe deflection in excess 12%, the pipe will perform as intended.

If you have any questions, feel free to contact either Jarvis Mulholland or myself at 800-992-1725.

Very Truly Yours,

Jason Ahrenholz, P.E.  
Director of Engineering  
Prinsco, Inc.

Encl: Prinsco GOLDFLEX Installation Guide



**Introduction**

Prinsco’s Goldflex® is a flexible dual-wall pipe for the agricultural market. 8”, 12”, and 15” Goldflex is available in large coils and can be installed using a trencher or tile plow with a proper boot, thereby eliminating the need for workers in an open trench. The information presented here details recommendations for boot design, burial depths, and installation techniques, along with additional considerations for installing Goldflex pipe.

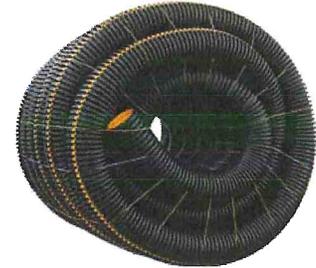


Figure 1: Goldflex Pipe

**Boot Design Recommendations**

Optimizing factors of boot width, bend radius, shaped bottom, and cutting plate width will allow the pipe to move through the boot while also providing proper support to the installed pipe.

The width of the inside of the boot shall be approximately **3” wider** than the outside diameter (OD) of the pipe (Figure 2). Therefore, a boot for 12” Goldflex pipe will be 17.5” wide considering the OD of a 12” pipe is approximately 14.5” (Table 1). The excess width will help aid in initially feeding the pipe through the boot.

The boot shall have a minimum **40” to 50” bend radius** depending on the pipe diameter (Table 1). Many commercial boots have a greater bend radius, which may be considered for use for installation of Goldflex. Contact your Prinsco representative for questions on specific boots.

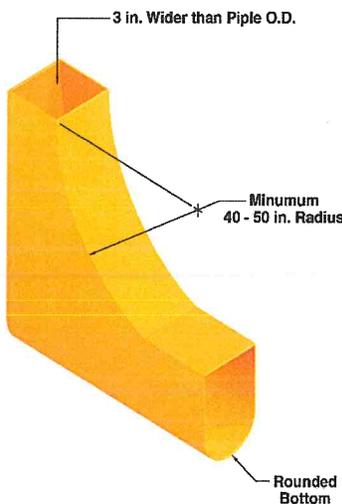


Figure 2: Boot Design Example

Table 1: Goldflex Pipe and Recommended Boot Dimensions

Nominal Pipe ID	Approx. Pipe OD	Boot Width	Minimum Boot Bend Radius
8" (200mm)	9.25" (240mm)	12.25" (315mm)	40" (1000mm)
12" (300mm)	14.5" (365mm)	17.5" (440mm)	50" (1250mm)
15" (375mm)	17.75" (445mm)	20.75" (520mm)	50" (1500mm)

The boot shall have a **rounded bottom** similar to the OD of the pipe to provide the installed pipe with proper support.

The cutting plate shall be roughly **6” wider** than the OD of the pipe to allow room for the boot and pipe to be pulled through the trench with ease while leaving enough soil in tact to provide proper support around the pipe.

**Burial Depth**

The maximum burial depth is significantly influenced by the quality and compaction level of the soil backfill around the pipe. Goldflex, along with all flexible pipe, relies on the strength of the soil around it to help carry the overburden load. In a tile plow application, an adequately shaped trench bottom is necessary to provide support to the pipe. With this in mind, the maximum recommended burial depth for Goldflex pipe installed in native soil by a tile plow is **8 feet**. Reference Prinsco’s *Agricultural Installation Guide* for additional information.



### Installation Recommendations

- To aid with installation, a support should be used to help guide the pipe from the ground into the boot and avoid obstacles (Figure 3). If a guide is not used, someone should walk with the tile plow to support the pipe and form an even arch into the boot.
- Split couplers and a generous amount of tile tape should be used when connecting two ends of Goldflex pipe coils to ensure they do not pull apart during installation. A double-wide split coupler may also be utilized to further secure the connection.

### Additional Considerations

Below are some additional considerations that should be made when installing Goldflex pipe:

- An overcut, or sub-cut, may be required for deeper burial depths (Figure 4). The depth and use of an overcut will vary based on pipe diameter, soil type, moisture content, ground temperature, etc.
- Special care shall be taken when water table depths are at or near the ground surface. Soil strength and support around the pipe may be reduced with high water levels, thus reducing the load-carrying strength of the installed pipe.
- The same care and methods that are used for single-wall installations are recommended for Goldflex as well. Refer to Prinsco's *Agricultural Installation Guide* for additional installation recommendations.

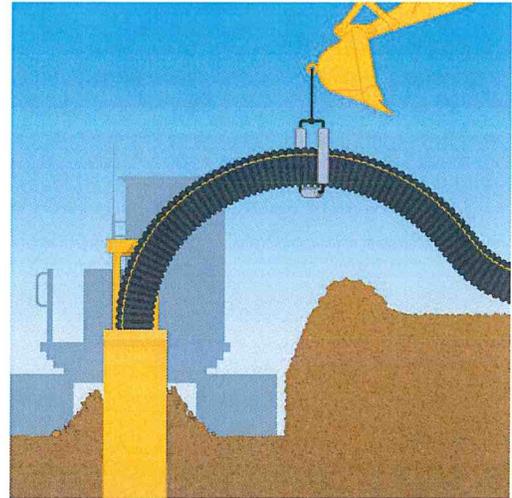


Figure 3: Goldflex Support Guide

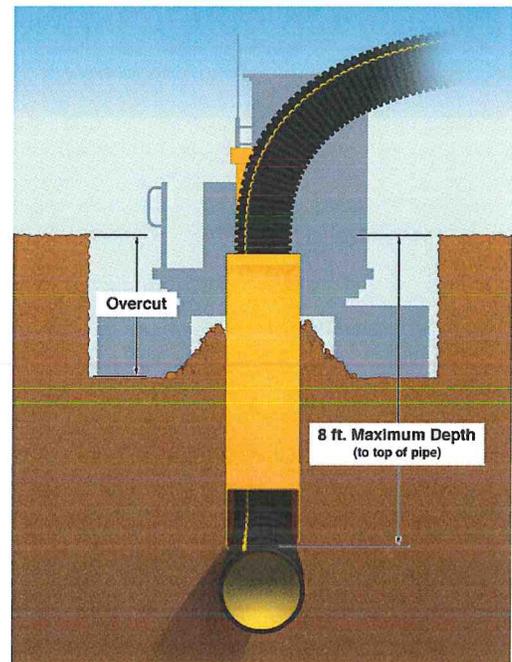


Figure 4: Goldflex Burial Depth and Overcut

## Lee Gallentine

---

**From:** Jacob Handsaker <handsaker@gmail.com>  
**Sent:** Tuesday, April 09, 2019 2:50 PM  
**To:** Lee Gallentine  
**Cc:** Tina Schlemme; Becca Junker  
**Subject:** Re: Dean Bright

Lee,  
In response to the Dean Bright questions, I do not see it affecting the price of the project. Also, since we are changing up the project I would like to pose the question of plowing in dual wall 8" instead of Digging in the 8" dual wall. I know the question will be, will it hold up? I will make the commitment that Hands On Excavating will plow the pipe in and in one year pay for the televising of the tile. Should the pipe be deflected in an unacceptable manor Hands On Excavating will cover the full cost of replacement of any areas deemed necessary. I have talked to the pipe manufacturer and they are addressing this with their engineers as well for their blessing. Should any party say no tho this proposal we will just maintain course of digging in the 8" dual wall. I see this as an opportunity to test a new idea and see first hand the results. Please let me know your thoughts.  
Thanks.

Sent from my iPhone

On Apr 3, 2019, at 10:43 AM, Lee Gallentine <[LGallentine@cgaconsultants.com](mailto:LGallentine@cgaconsultants.com)> wrote:

Jacob,  
Thanks for talking with Dean. I greatly appreciate it.

My main question is how this will affect the project costs (i.e. if an change order is issued, what dollar amount would be on it).

Assuming that it doesn't affect the project costs, I would have the following comments:

1. I am fine with using a different hill as a borrow area.
2. The plan was to fill the open ditch in so that it can be crossed and acts as a waterway for surface drainage. I assume that this is what Dean means by not filling it in totally.
3. I am fine with shifting the tile to shallower ground.
4. If the area is too wet, I am fine waiting, but hopefully we can get the work done before crops are planted to avoid crop damage claims.

Once you let me know how the project costs would be affected, I can talk to the District Trustees and verify that they are ok with the modifications. Just let me know if you have any questions in the meantime.

Thanks,

**Lee O. Gallentine, PLS & PE**  
**Vice President**

<image001.png>

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

Office:641-847-3273  
Mobile: 515-689-5339  
[lgallentine@cgaconsultants.com](mailto:lgallentine@cgaconsultants.com)  
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Ackley | Ames | Cedar Falls | Marshalltown | Webster City

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

<image002.png> <image003.png> 

**From:** Jacob Handsaker <[handsaker@gmail.com](mailto:handsaker@gmail.com)>  
**Sent:** Tuesday, April 02, 2019 6:39 PM  
**To:** Lee Gallentine <[LGallentine@cgaconsultants.com](mailto:LGallentine@cgaconsultants.com)>  
**Subject:** Dean Bright

Lee,

I met with Dean on site on 4/2/19. He has some concerns with the project. I told him that I would pass them along to you. He would rather not take the dirt from the hill that was originally planned. He would rather it come from the hill that is directly to the north of the ditch. He would like it leveled out a little bit but not filled up. He also would like the tile to follow closer to the edge of the current grass area rather than go through the hill so deep. He states that he believes we will have quite a difficult time working in there due to how wet the area always is. It doesn't sound like he is against the project but would like some modifications. I told him that we would take out all the trees and he said that would be fine. He said we could burn them onsite as well. I would like to know how to proceed. I have moved equipment into another project for now to keep things going and will re-address this as we gather more information. Dean said that farm is going to beans this year also.

Just wanted to fill you in.

Thanks.

Jacob Handsaker  
Hands On Excavating LLC  
Handsaker Farms  
Radcliffe, Iowa 50230  
P. 515 460 6294  
F. 1-800-852-8337  
E. [handsaker@gmail.com](mailto:handsaker@gmail.com)

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**Is there anything more that I can do for just you?**



# RECLASSIFICATION COMMISSION REPORT FOR MAIN TILE DRAINAGE DISTRICT NO. 5-75 FRANKLIN AND HARDIN COUNTIES, IOWA



**CLAPSADDLE-GARBER ASSOCIATES OFFICE LOCATIONS**  
 16 East Main Street, PO Box 754 | Marshalltown, IA 50158  
 1523 S. Bell Avenue, Suite 101 | Ames, IA 50010  
 5106 Nordic Drive | Cedar Falls, IA 50613  
 739 Park Avenue | Ackley, IA 50601  
 511 Bank Street | Webster City, IA 50595

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

**Reclassification Commission Report for  
Main Tile  
Drainage District No. 5-75  
Franklin and Hardin Counties, Iowa**

<b>Table of Contents</b>	Pg. 1
<b>Report</b>	
Introduction	Pg. 2
Background Information	Pg. 3
Evaluations	Pgs. 4-5
Exceptions	Pg. 5
Conclusion	Pg. 5
<b>Appendices</b>	
Certificates of Oath of Commissioners	App. A
Boundary Map	App. B
Reclassification Sheets	App. C

**Reclassification Commission Report for  
Main Tile  
Drainage District No. 5-75  
Franklin and Hardin Counties, Iowa**

1.0 INTRODUCTION - The District Trustees appointed a Reclassification Commission to reclassify the lands within the drainage boundaries of Drainage District No. 5-75 relative to the Main tile. For reference, the Certificates of Oath of Commissioners are included in Appendix A. This action by the District Trustees was a result of a request of landowners within the drainage district. This report will summarize the background information gathered and the evaluation process used by the Commissioners to reclassify said lands and present the resulting reclassification.

2.0 BACKGROUND INFORMATION - In addition to reviewing lands within the District, the Reclassification Commission also looked at the following supporting documents supplied by Clapsaddle Garber Associates:

- Existing Classification for Drainage District No. 5-75 from the Hardin and Franklin Counties Drainage Clerks.
- Soil Surveys from USDA website.
- Maps of District Boundaries and Facilities from the Hardin County Drainage Clerk.
- Aerial/Tract Maps from the Hardin and Franklin Counties GIS websites.
- Recorded Boundary Surveys from the Hardin and Franklin Counties Recorder's Offices.

Using the above information, the Reclassification Commission gathered the following background information:

- 2.1 Tract Verification - This step involved verification that each tract number from the existing classification was within the District boundaries and were appropriately sized (i.e. 40 acres or less according to recognized or legal divisions). In addition, it was verified that all lands within the mapped district boundaries had tract numbers. For those that weren't appropriately sized or did not have tract numbers, additional tract numbers were created.
- 2.2 Acreage Verification - This step involved verification of the acreages contained within the existing classification for Drainage District No. 5-75. For the tract numbers that previously had acreages stated and were totally contained within the mapped District No. 5-75 watershed, the acreage was compared to that available from the GIS websites or recorded boundary surveys and corrected as necessary.
- 2.3 Acreage Generation - This step involved generation of the acreages for all the remaining tract numbers (i.e. those without acreages previously stated in the existing classification, those created in the Tract Verification process above or those that were not totally contained within the mapped District No. 5-75 watershed). For lands whose tract numbers were partially contained within the mapped District Boundaries, the acreage was measured from a composite overlay of the maps of District Boundaries with the linework from the GIS websites. For reference, a copy of Boundary Map is included in the appendix.
- 2.4 Soils Type Determination - This step involved differentiation of the soil types based on their properties (i.e. very poorly drained, poorly drained, well drained and excessively well drained), and the percentage of each within each tract number. This was measured from a composite overlay of the soil surveys with property lines from the GIS websites.
- 2.5 Proximity Determination - This step involved determination of the proximity or distance to the District facilities (i.e. Main). All distances were measured from the approximate centroid of each tract number along the shortest straight-line route to the Main. This was measured from a composite overlay of the maps of the Main with the property lines from the GIS websites.

3.0 EVALUATIONS - Using the above background information, the Reclassification Commission evaluated and determined benefits using the following method:

3.1 Soil Factor - This factor was calculated as an indication of the "need" for the District facilities based upon the natural soil characteristics for each tract number. It was the weighted total of the soil types after placing the following percentage values upon each soil type:

- Very Poorly Drained = 85%
- Poorly Drained = 55%
- Well Drained = 10%
- Excessively Well Drained = 0%

These percentages were based upon the Reclassification Commission's determination that the Excessively Well Drained soils typically do not need the District facilities to be productive, Well Drained soils typically needed very little of the District facilities to be productive, and the Poorly Drained and Very Poorly Drained soils typically relied heavily on the District facilities to be productive.

3.2 Facility Proximity Factor - This factor was calculated as an indication of "availability" of the District facilities (Main) based upon the distance each tract number was from said District facilities. Since there was a large range in the distances measured (i.e. 50± feet to 1,296± feet), this factor was necessary to compare the tract numbers relative to each other. Therefore, the tract number which had the farthest measured distance received a Facility Proximity Factor of 10 and the tract number which had the closest measured distance received a Facility Proximity Factor of 100. All other tract numbers received a Facility Proximity Factor calculated in proportion to this range based upon their measured distance.

3.3 Combined Factor - This factor was the composite of the above two factors (i.e. Soil Factor and Facility Proximity Factor). The Combined Factor was calculated as follows:

$$\text{Facility Proximity Factor} \times \text{Soil Factor}$$

Once the Combined Factor was determined, it was used as an indication of benefit received (i.e. the tract number with the highest Combined Factor was the closest to the District facilities and had the soils in most need of the District facilities).

3.4 % Benefit - This is the benefit each tract number receives using the Combined Factor based on a scale of 100 (i.e. the highest Combined Factor is 100 and all other Combined Factors are calculated in ratio to that).

3.5 Units Assessed - This combines the amount of benefit along with the land area that is benefitted. For each tract number, this is calculated as:

$$\% \text{ Benefit} \times \text{Number of Acres} \times 100$$

3.6 % Units Assessed - This is the percentage of units assessed for each tract number as a portion of the total units assessed for the entire District facility. Unlike the % Benefit which was a percentage comparing each tract number to the most benefitted tract number, the % Units Assessed compares each tract number to the total of the District facility.

3.7 Percent Levy - This is an indication of the levy amount necessary to pay for a project. For this report, it is at 100%, but will be adjusted as needed in the future by the Drainage Clerk to pay for future bills.

3.8 Assessment for Project (entire tract basis) - This is the amount that each tract number must pay in total to cover 100% of the levy. It is important to note that it has been calculated using a sample cost of \$200,000. For each tract number, this is calculated as:

$$\% \text{ Units Assessed} \times \$200,000$$

3.9 Assessment for Project (per acre basis) - This is the amount that each tract number must pay per acre to cover 100% of the levy. Although this was not used in an active role by the Reclassification Commission, some landowners find it to be valuable information. It is important to note that it is calculated using a sample cost of \$200,000. For each tract number, this is calculated:

$$\text{Assessment for Project (entire tract basis)} / \text{Number of Acres}$$

4.0 EXCEPTIONS: - With any process, there are inevitably exceptions and this reclassification was no different. While the above method was used for the vast majority of the tract numbers, the following are exceptions to the above process:

4.1 For tract numbers which are highly irregular in shape (i.e. long narrow pieces of land) or do not have accurate soil maps available, Proximity and Soil Factors were not calculated. Instead, the average Combined Factor for all the other tract numbers was used. The only tract numbers to which this applies are roadways and are highlighted pink on the reclassification sheets contained in the appendix (i.e. tract numbers F12 and H2).

5.0 CONCLUSION: - Using all the above, the Reclassification Commission generated reclassification sheets for the entire drainage district. For reference, copies are included in the appendix. It is recommended moving forward that the District Trustees, should take action to accomplish the following:

- Approve the Reclassification Commission Report.
- Hold the required hearing.
- Adopt the Reclassification Commission Report as the basis for all current and future repairs and improvements.



## CERTIFICATE

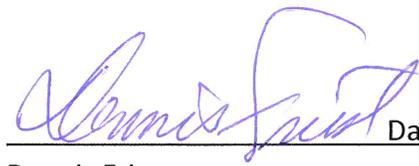
Denny Friest, a resident freeholder of Hardin County, Iowa, hereby certify:

That I, along with the other reclassification commissioners for Franklin-Hardin Drainage District No. 5-75, have examined and inspected lands within the Drainage District, have reviewed original maps of the Drainage District, aerial maps of the lands within the Drainage District, and soil maps showing soil types for the lands within the Drainage District.

That I, along with the other reclassification commissioners for Franklin-Hardin Drainage District No. 5-75, completed the reclassification of the lands within the Drainage District relative to the Main Tile. Said reclassification has fixed the percentages of benefits in tracts according to the recognized and legal divisions of 40 acres or less using a graduated scale of benefits, numbered according to the benefit to be received, with the lands receiving the greatest benefit marked on a scale of 100 and those benefited in a less degree marked with such percentage of one hundred as the benefit received is in proportion to.

That I, along with the other reclassification commissioners for Franklin-Hardin Drainage District No. 5-75, performed said reclassification in accordance with Chapter 468, Code of Iowa, to the best of my ability, skill, and judgment. The attached list is the final determination of reclassification and assessment for each tract of land in the Drainage District for all repairs and future improvements to the facilities in the Drainage District. That this report is a true and correct transcript of said reclassification of lands and apportionments of benefits made by said reclassification commission.

COMMISSIONER:

 Date: 4/22/19

Dennis Friest  
14263 County Hwy D-65  
Radcliffe, IA 50230

## CERTIFICATE

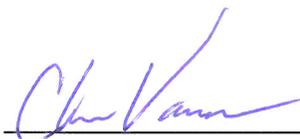
Chris Vanness, a resident freeholder of Franklin County, Iowa, hereby certify:

That I, along with the other reclassification commissioners for Franklin-Hardin Drainage District No. 5-75, have examined and inspected lands within the Drainage District, have reviewed original maps of the Drainage District, aerial maps of the lands within the Drainage District, and soil maps showing soil types for the lands within the Drainage District.

That I, along with the other reclassification commissioners for Franklin-Hardin Drainage District No. 5-75, completed the reclassification of the lands within the Drainage District relative to the Main Tile. Said reclassification has fixed the percentages of benefits in tracts according to the recognized and legal divisions of 40 acres or less using a graduated scale of benefits, numbered according to the benefit to be received, with the lands receiving the greatest benefit marked on a scale of 100 and those benefited in a less degree marked with such percentage of one hundred as the benefit received is in proportion to.

That I, along with the other reclassification commissioners for Franklin-Hardin Drainage District No. 5-75, performed said reclassification in accordance with Chapter 468, Code of Iowa, to the best of my ability, skill, and judgment. The attached list is the final determination of reclassification and assessment for each tract of land in the Drainage District for all repairs and future improvements to the facilities in the Drainage District. That this report is a true and correct transcript of said reclassification of lands and apportionments of benefits made by said reclassification commission.

COMMISSIONER:



Date: 4-18-19

Chris Vanness

634 170<sup>th</sup> Street

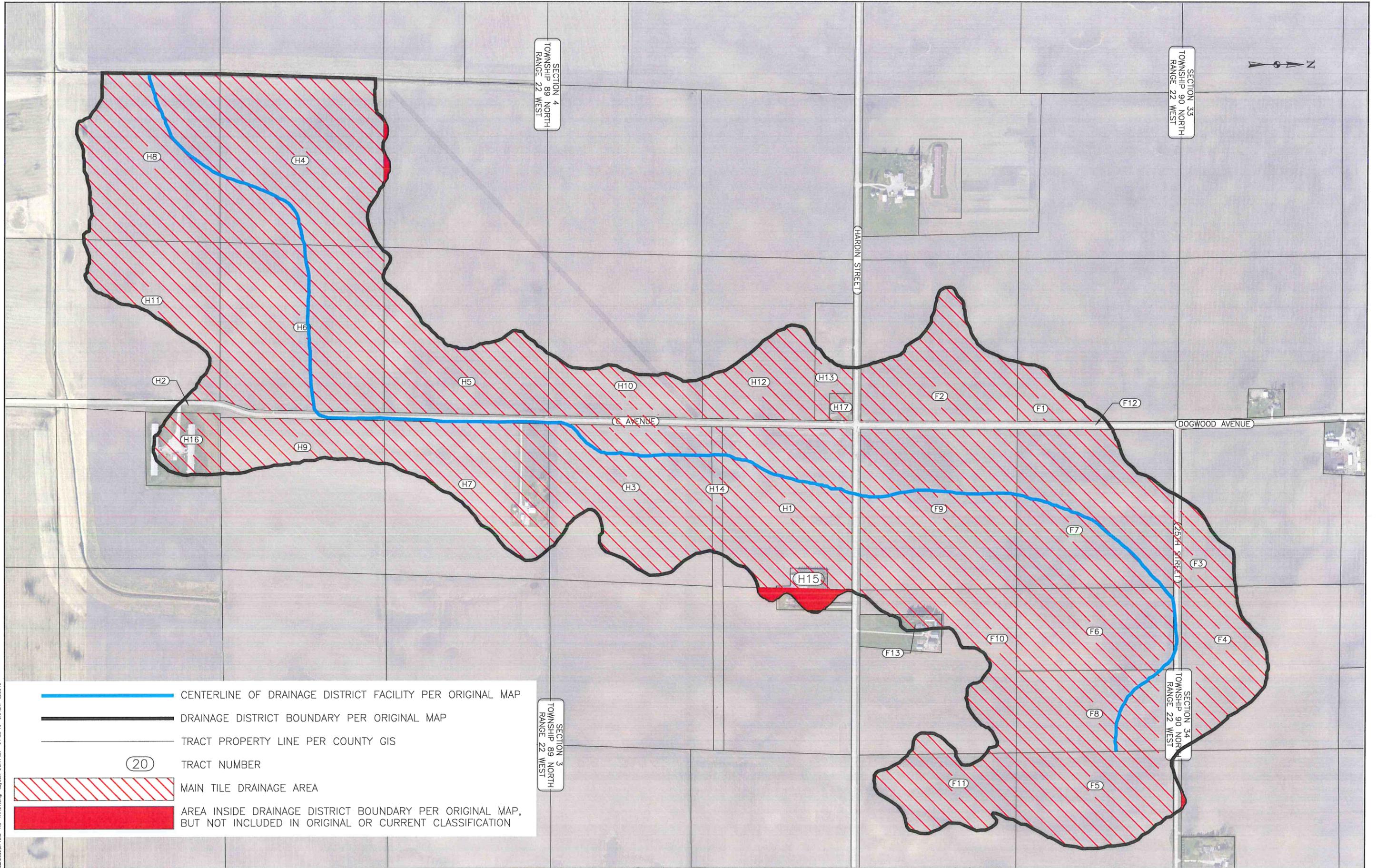
Latimer, IA 50452

SECTION 4  
TOWNSHIP 89 NORTH  
RANGE 22 WEST

SECTION 33  
TOWNSHIP 90 NORTH  
RANGE 22 WEST

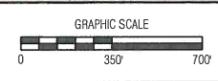
SECTION 3  
TOWNSHIP 89 NORTH  
RANGE 22 WEST

SECTION 34  
TOWNSHIP 90 NORTH  
RANGE 22 WEST



 CENTERLINE OF DRAINAGE DISTRICT FACILITY PER ORIGINAL MAP  
 DRAINAGE DISTRICT BOUNDARY PER ORIGINAL MAP  
 TRACT PROPERTY LINE PER COUNTY GIS  
 TRACT NUMBER  
 MAIN TILE DRAINAGE AREA  
 AREA INSIDE DRAINAGE DISTRICT BOUNDARY PER ORIGINAL MAP, BUT NOT INCLUDED IN ORIGINAL OR CURRENT CLASSIFICATION

P:\6715.2\CADD\Quantities\6715.2 - RE - TRACT.dwg - Layout - CGA Plot - 04-22-19 - 9:54am - ZBS343



NO.	REVISION	BY	DATE	NO.	REVISION	BY	DATE

 Clapsaddle-Garber Associates, Inc.  
 Toll Free (800) 542-7981  
 www.cgaconsultants.com

DESIGNED: ZJS DATE: ###  
 DRAWN: JVS DATE: ###  
 CHECKED: LOG DATE: ###  
 APPROVED: LOG DATE: ###

**D.D. 5-75 RECLASSIFICATION**  
FRANKLIN AND HARDIN COUNTIES, IOWA

**MAIN TILE BOUNDARY MAP**

PROJECT NO. 6715.2  
 SHEET NO. 1

Main Title

Tract	Taxing District	Parcel	Entity	Sec-Twp-Rng	Legal	Acres	% Benefit	Units Assessed	% Units Assessed	Percent of Levy	Assessment for Project (entire tract basis)	Assessment for Project (per acre basis)
H1		892203100006	Ellingson, Scott Ellingson, Cynthia	3-89-22	NW FRL NW EX 1.24A TR	31.2	82.77%	2582.57	7.335%	100	\$14,669.13	\$470.16
H2		11	Alden Township Roads			10.13	60.52%	612.90	1.741%	100	\$3,481.28	\$343.78
H3		892203100004	Moreland, Sharon T Revocable Trust	3-89-22	SW NW EX N 2.5ACRES	31	81.07%	2513.05	7.137%	100	\$14,274.27	\$460.46
H4		892204400003	Peterson, Beverly A - LE	4-89-22	SW SE	38	90.42%	3435.97	9.758%	100	\$19,516.49	\$513.59
H5		892204400002	Summit Farms, LLC	4-89-22	NE SE	22	75.32%	1657.01	4.706%	100	\$9,411.92	\$427.81
H6		892204400004	Peterson, Beverly A - LE	4-89-22	SE SE	39	89.06%	3473.39	9.865%	100	\$19,729.06	\$505.87
H7		892203300001	Jass, Pauline H Clifton Jass, James H	3-89-22	NW SW E OF HY	21	59.62%	1252.06	3.556%	100	\$7,111.75	\$338.65
H8		892209200001	Peterson, Beverly A - LE	9-89-22	NW NE	29	98.19%	2847.41	8.087%	100	\$16,173.45	\$557.71
H9		892203300003	Jass, Pauline H Clifton Jass, James H	3-89-22	SW SW E OF HWY	11	83.43%	917.73	2.606%	100	\$5,212.74	\$473.89
H10		892204200006	Summit Farms, LLC	4-89-22	SE NE EX N2.5A	9.36	44.75%	418.83	1.189%	100	\$2,378.95	\$254.16
H11		892209200002	Peterson, Beverly A - LE	9-89-22	NE NE	17	16.21%	275.49	0.782%	100	\$1,564.81	\$92.05
H12		892204200004	Doering, Brian T Doering, Lisa M	4-89-22	NE FRL NE & N2.5A SE NE EX TRACTS	10.02	57.14%	572.50	1.626%	100	\$3,251.84	\$324.54
H13		892204200002	Doering, Brian T Doering, Lisa M	4-89-22	PARCEL A IN NE NE (COM NE COR W250'POB W722'S340'E972'N120' W250'N220'POB)	5.69	40.99%	233.24	0.662%	100	\$1,324.80	\$232.83
H14		892203100003	Ellingson, Scott Ellingson, Cynthia	3-89-22	N5A S 1/2 NW FRL	2	93.44%	186.89	0.531%	100	\$1,061.53	\$530.77
H15		892203100007	Hartmann, Kurt A Wenzel, Brenda R	3-89-22	PARCEL IN N1/2 NW (COM N1/4 COR W1156.8' POB W59.05' S235.13' W268.5' S305.5' E144.5' S112.5' E190'N367.8' POB)	1.24	23.37%	28.98	0.082%	100	\$164.58	\$132.73
H16		892210100005	Janes, Kyle A Janes, Todd J	10-89-22	BEG NW COR S605.3' E622.45' N605.3' W622.45' POB"	3	17.19%	51.58	0.146%	100	\$292.96	\$97.65
H17		892204200003	Carlson, Duane A	4-89-22	COM NE COR W250' S220' E250' N220'POB	0.93	55.92%	52.00	0.148%	100	\$295.39	\$317.62
F1	203 000	13-33-400-002-00	Doering, Brian & Doering, Lisa	33-90-22	NE SE	8	42.39%	339.08	0.963%	100	\$1,926.01	\$240.75
F2	203 000	13-33-400-005-00	Doering, Brian & Doering, Lisa	33-90-22	SE SE	22	50.81%	1117.92	3.175%	100	\$6,349.86	\$288.63



Main Title

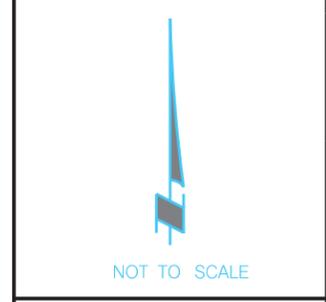
Tract	Taxing District	Parcel	Entity	Sec-Twp-Rng	Legal	Acres	% Benefit	Units Assessed	% Units Assessed	Percent of Levy	Assessment for Project (entire tract basis)	Assessment for Project (per acre basis)
F3	203 000	13-34-100-008-00	Olson, Elizabeth A	34-90-22	SW NW EXC COM NW COR, S1147.92' ALG W LN N W POB;S333.5',E426', NE333.74',W451' POB	3	77.75%	233.25	0.662%	100	\$1,324.88	\$441.63
F4	203 000	13-34-100-005-00	Mc Dowell, Rick & Sue Family Trust	34-90-22	SE NW	3	66.41%	199.23	0.566%	100	\$1,131.62	\$377.21
F5	203 000	13-34-400-001-00	Classon, Karen May - 1/2 James, L B Trust LLC - 1/2 c/o Gary Classon	34-90-22	NW SE	21	67.92%	1426.37	4.051%	100	\$8,101.87	\$385.80
F6	203 000	13-34-300-002-00	Langesen, Robert	34-90-22	W 1/2 NE SW	19.5	49.28%	960.99	2.729%	100	\$5,458.46	\$279.92
F7	203 000	13-34-300-001-00	Langesen, Robert	34-90-22	NW SW	36	88.85%	3198.57	9.084%	100	\$18,168.02	\$504.67
F8	203 000	13-34-300-003-00	Puttkamer Family Farm LLC	34-90-22	E 1/2 NE SW	19.5	98.70%	1924.74	5.466%	100	\$10,932.61	\$560.65
F9	203 000	13-34-300-004-00	Puttkamer Family Farm LLC	34-90-22	SW SW	38	100.00%	3800.00	10.792%	100	\$21,584.20	\$568.01
F10	203 000	13-34-300-007-00	Puttkamer Family Farm LLC	34-90-22	SE SW EXC COM S1/4 COR; W873.3' ALG S LN S W POB;N479',N218.67' W305.43',S696.57'E P	15.55	19.82%	308.14	0.875%	100	\$1,750.25	\$112.56
F11	203 000	13-34-400-003-00	Classon, Karen May - 1/2 James, L B Trust LLC - 1/2 c/o Gary Classon	34-90-22	SW SE	16	5.90%	94.43	0.268%	100	\$536.35	\$33.52
F12	0	00-00-000-000-01	Secondary Road	00-00-00	OAKLAND TWP ROADS	7.92	60.52%	479.57	1.362%	100	\$2,723.98	\$343.78
F13	203 000	13-34-430-006-00	Jacobs, Darin J	34-90-22	SE SW COM S1/4 COR;W873.3' ALG S LNSWPOB;N479';N218.67'W305.43';S696.57'E253'PO SURVEY #96-2786	0.95	17.96%	17.06	0.048%	100	\$96.90	\$102.00
					<b>Averages</b>			<b>1173.70</b>				<b>\$343.78</b>
					<b>Totals</b>	<b>491.99</b>			<b>100.00%</b>		<b>\$200,000.00</b>	



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<b>Averages</b>								<b>1173.70</b>				<b>\$343.78</b>
<b>Totals</b>						<b>491.99</b>			<b>100.00%</b>		<b>\$200,000.00</b>	

PROJECT NO. 018-1341	SHEET NO. C.1
Date: 4/25/2019	Drawn: RAM Checked: RAM Approved: GTS

PROJECT: COVER 2 - BUCKEYE



PRIOR TO CONSTRUCTION:

CALL 811 FOR LOCATION OF UNDERGROUND TELEPHONE, ELECTRIC, GAS MAINS, CABLE TELEVISION AND OTHER UTILITIES.

EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND DRAINAGE STRUCTURES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL CONTRACTORS TO EXACTLY LOCATE AND PROTECT EACH EXISTING UTILITY BEFORE AND DURING ACTUAL CONSTRUCTION.  
CONSTRUCTION SHALL MEET LOCAL PERMITTING JURISDICTIONS STANDARD CONSTRUCTION SPECIFICATIONS AND STANDARD PLANS.

PROJECT COORDINATION CONTACTS			
NAME	AGENCY	PHONE NUMBER	EMAIL
JEFF KLOCKO	AUREON	515-830-0445	JEFF.KLOCKO@AUREON.COM
ANGELA SILVEY	HARDIN COUNTY	641-858-3182	ASILVEY@HARDINCOUNTYIA.GOV
KEVIN SCHLESKY	IOWA DOT	515-663-6363	KEVIN.SCHLESKY@IOWADOT.US

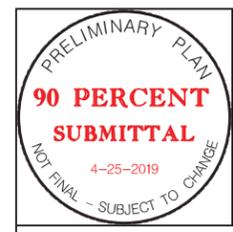
# HARDIN COUNTY, IOWA

## AUREON

### COVER 2 - BUCKEYE

PERMITS REQUIRED	
SHT. NO.	DESCRIPTION
F.1-F.14	HARDIN COUNTY
F.9, F.11	HARDIN COUNTY DRAINAGE DISTRICT
F.12	IOWA DOT UTILITY ACCOMMODATION (IA-20)

SHT. NO.	SHEET INDEX
C.1	COVER SHEET
G.1	GENERAL NOTES & SUMMARY OF QUANTITIES
D.1	DETAILS
DD.1	DRAINAGE DISTRICT NOTES
F.1-F.14	FIBER DESIGN



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Gregory T. Seib  
 Printed or Typed Name  
 23179  
 License Number  
 My license renewal date is December 31, 2020

Pages or sheets covered by this seal: C.1, G.1, D.1, DD.1, F.1-F.14

USER: rme/nls  
 DATE: 04/26/2019  
 DCN: F:\2018\1001-1500\018-1341\Highway 20 Fiber Design\WO12\40-Design\Microstation\018-1341\_Highway 20 Fiber Design\WO12\Sheets\Cover 2 - Buckeye\Cover.dgn

**COVER**

PROJECT: COVER 2 - BUCKEYE



PRIOR TO CONSTRUCTION:

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CONSTRUCTION SHALL MEET LOCAL PERMITTING JURISDICTIONS STANDARD CONSTRUCTION SPECIFICATIONS AND STANDARD PLANS.



LEGEND OF SYMBOLS

EXISTING CONDUIT	
EXISTING AERIAL FIBER	
BORED CONDUIT	
PLOWED CONDUIT	
NEW AERIAL FIBER	
NEW AERIAL FIBER, OVERLASH	
MESSENGER CABLE	
NO CITY RECIPIENT FIBER	
EXISTING CONDUIT	
EXISTING SIGNAL CONDUIT	
ROW	
NEW PULL BOX	
NEW PEDESTAL	
NEW POLE	
NEW DOWN GUY	
NEW RISER	
NEW SLACK SPAN	
NEW SLACK LOOP	
EXISTING PULL BOX	
EXISTING PEDESTAL	
EXISTING UTILITY POLE	
EXISTING SLACK LOOP	
EXISTING SPLICE CASE	
EXISTING MANHOLE	
SIGN	
BARRICADE	
DRUM	
BORE PIT	
ARROW PANEL	
UTILITY EASEMENT	

PROJECT NOTES

- THE LOCATIONS OF ALL AERIAL AND UNDERGROUND UTILITY FACILITIES MAY NOT BE INDICATED ON THESE PLANS. UNDERGROUND UTILITIES, WHETHER SHOWN OR NOT, WILL BE LOCATED AND FLAGGED BY THE UTILITIES UPON THE REQUEST OF THE CONTRACTOR. NO EXCAVATION WILL BE PERMITTED IN THE AREA OF THE UNDERGROUND UTILITIES UNTIL ALL SUCH FACILITIES HAVE BEEN LOCATED AND IDENTIFIED TO THE SATISFACTION OF ALL PARTIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL UNDERGROUND AND AERIAL UTILITIES AND CONSTRUCTIONS.
- REQUIREMENTS:
  - DEPTH-THE UTILITY INSPECTOR SHALL MONITOR THE MINIMUM DEPTH OF COVER:

COMMUNICATIONS.....36"	ELECTRIC.....48"
WATER OR SEWER.....60"	GAS.....48"
DRAINAGE TILE.....24"	
  - FORTY-TWO (42) INCHES BELOW A PROJECTED SLOPE FROM THE FLOW LINE OF A DITCH AT A THREE (3) HORIZONTAL AND ONE (1) VERTICAL SLOPE,
  - FORTY-EIGHT (48) INCHES UNDER A ROADWAY MEASURED FROM THE SURFACE OF SAID ROADWAY TO THE TOP OF THE INSTALLATION,
  - FORTY-EIGHT (48) INCHES UNDER A STORM WATER OR CREEK CHANNEL DESIGN FLOW LINE, AND
  - MAINTAIN A MINIMUM OF 24" OF VERTICAL & HORIZONTAL SPACING FROM EXISTING UTILITIES.
  - THE APPLICANT SHALL USE REFERENCE MARKERS WITHIN THE RIGHT-OF-WAY TO LOCATE LINE AND CHANGES IN ALIGNMENT, AS WELL AS TILE LINE LOCATIONS. A PERMANENT WARNING TAPE SHALL BE PLACED ONE (1) FOOT ABOVE ALL UNDERGROUND UTILITY LINES.
  - RESIDENTS ALONG THE UTILITY ROUTE SHALL HAVE UNINTERRUPTED ACCESS TO THE PUBLIC ROADS.
  - THE APPLICANT AND ROAD DEPARTMENT REPRESENTATIVE SHALL MAKE A JOINT ASSESSMENT OF THE ROAD SURFACING BEFORE AND AFTER CONSTRUCTION. THE APPLICANT SHALL APPLY GRANULAR SURFACING TO RESTORE THE ROAD TO ORIGINAL CONDITION. ANY DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL CONDITION. RE-CONSTRUCTION WORK THAT IS PERFORMED BY THE COUNTY WILL BE ASSESSED TO THE APPLICANT.
  - UTILITY LINES HAVING AN INSIDE DIAMETER OF MORE THAN 2" WHICH CROSS BENEATH A PAVED ROADWAY SHALL BE PLACED WITHIN APPROVED CASINGS. CABLE CASINGS MAY BE PLACED THROUGH THE SUB-GRADE BY DIRECTIONAL BORING OR OTHER APPROVED METHODS. THE CASINGS SHALL EXTEND TO THE TOE OF THE FORE SLOPE ON EACH SIDE OF THE ROADWAY.
  - PLOWING MAY BE ALLOWED ON UNPAVED ROADS. WHERE AN OPEN TRENCH IS REQUESTED OR REQUIRED, BACKFILLING SHALL BE COMPACTED IN LAYERS OF 6" OR LESS TO AVOID SETTLEMENT. PLOWING WILL BE ALLOWED FROM SHOULDER-LINE TO SHOULDER-LINE ONLY. ALL LINES PLACED BETWEEN SHOULDER-LINE AND RIGHT-OF-WAY LINE SHALL BE TRENCHED.
  - ANY EXCAVATION, TRENCHING, OR PLOWING WITHIN THE RIGHT-OF-WAY FROM NOVEMBER 15-MARCH 15 MAY CAUSE EXCESSIVE DISTURBANCE TO THE ROADWAY AND THEREFORE WILL BE REVIEWED ON A CASE-BY-CASE BASIS. DEPENDING UPON THE WEATHER, APPROVAL MAY BE SUSPENDED.
  - OVERHEAD UTILITIES SHALL BE LOCATED TWO (2) FEET INSIDE THE R.O.W. LINE. VERTICAL CLEARANCE OVER ROADWAYS SHALL BE A MINIMUM OF EIGHTEEN (18) FEET MEASURED AT THE CENTERLINE OF THE ROADWAY. ANY OVERHANG PROBLEMS WITH CROSS-ARMS MUST BE ADDRESSED BY THE UTILITY.
  - CONSTRUCTION SIGNING SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL WORK SHALL CONFORM TO THE IOWA DEPARTMENT OF TRANSPORTATION CONSTRUCTION MANUAL, STATEWIDE URBAN DESIGN STANDARDS (SUDAS), AASHTO ROADSIDE DESIGN GUIDE, AND CRITERIA SET FORTH THEREIN.
  - ALL EQUIPMENT SHALL BE REMOVED FROM THE RIGHT-OF-WAY BETWEEN THE HOURS OF 30 MINUTES BEFORE SUNSET TO 30 MINUTES AFTER SUNRISE.
- ALL POTHOLES IN SIDEWALK PANELS WILL REQUIRE FULL PANEL REPLACEMENT.
- ANY CUT OR POTHOLE IN A CONCRETE STREETS PANEL WILL REQUIRE FULL PANEL REPLACEMENT.
- ANY CUT OR POTHOLE IN A ASPHALT STREET LANE WILL REQUIRE SEAM TO SEAM ASPHALT MILLING AND REPLACEMENT.

CABLE AND CONDUIT DESIGNATIONS

B is Conduit Bored (ie..3" B)	LC is Lead-In Cable
C is conductor (ie.. 3/C)	M is Conduit Mounted (ie..2" M)
CC is Coaxial Cable	MB is Main Line Conduit Group Bored (6) 1 1/4"
CCC is Camera Control Cable	MM is Multi Mode Fiber Cable
CDC is Camera Detector Cable	MT is Main Line Conduit Group Trenched (6) 1 1/4"
CG is Circuit Ground	NO is Number
CPC is Camera Power Cable	OH is Over Head
DB is Direct Buried	PR is Pair of Communication (ie.. 6 PR)
DMSC is Dynamic Message Sign Cable	REL is Relocate
EDC is Emergency Detector Cable	REM is Remove
ETW is Electric Tracer Wire	RGS is Rigid Galvanized Steel
EX is Existing	SC is Service Cable
FI is Fabric Interduct	SL is Street Light
FLC is Fiber Locate Cable	SM is Single Mode Fiber Cable
FTW is Fiber Tracer Wire	T is Conduit Trenched (ie..3" T)
INS is Install	TW is Tracer Wire (black or green)
INT is Intraduct	

SUMMARY OF QUANTITIES		
ITEM	UNIT	QUANTITY
CONDUIT, 1.25" P	LF.	15,329
CONDUIT, 1.25" B	LF.	2,041
PULL BOX, 24"X36"X36"	EA.	2
FIBER, ARMORED	LF.	17,370
FIBER, ARMORED, UNDERGROUND SLACK STORAGE	LF.	500

GENERAL NOTES & SUMMARY OF QUANTITIES

USER: rnehls DATE: 04/26/2019  
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PROJECT NO.	SHEET NO.
018-1341	D.1
Date: 4/25/2019	Drawn: RAM Checked: RAM Approved: GTS

PROJECT: COVER 2 - BUCKEYE

**olsson**

**AUREON**



PRIOR TO CONSTRUCTION:

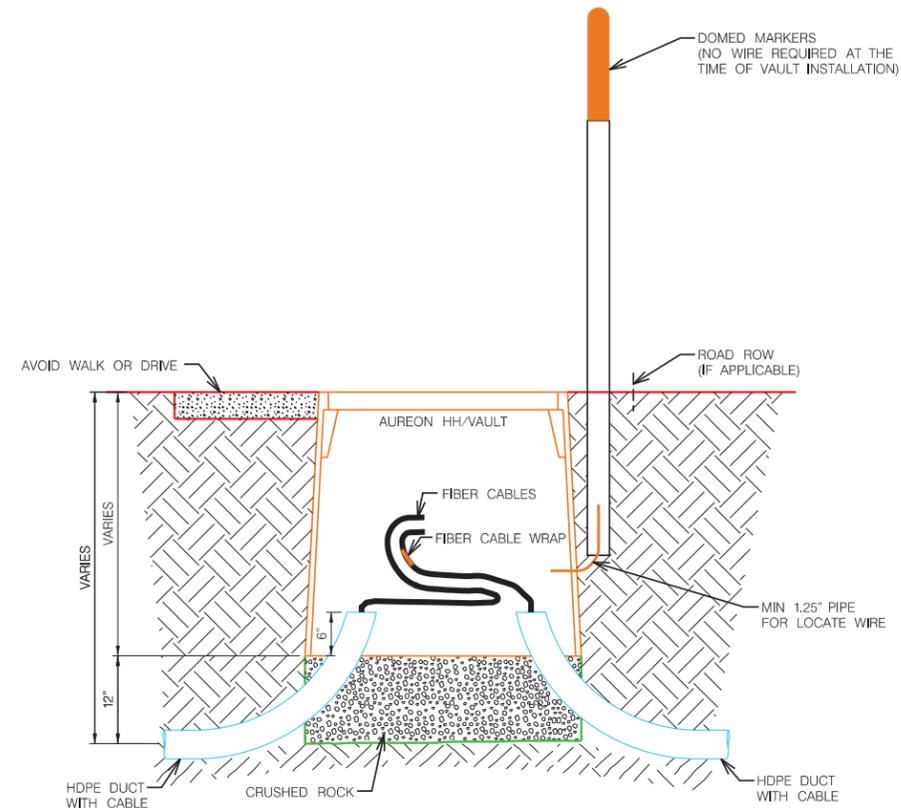
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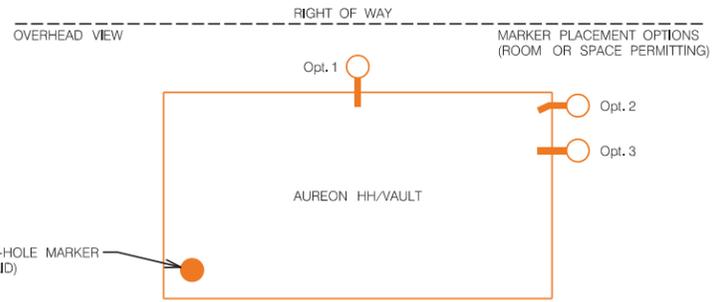
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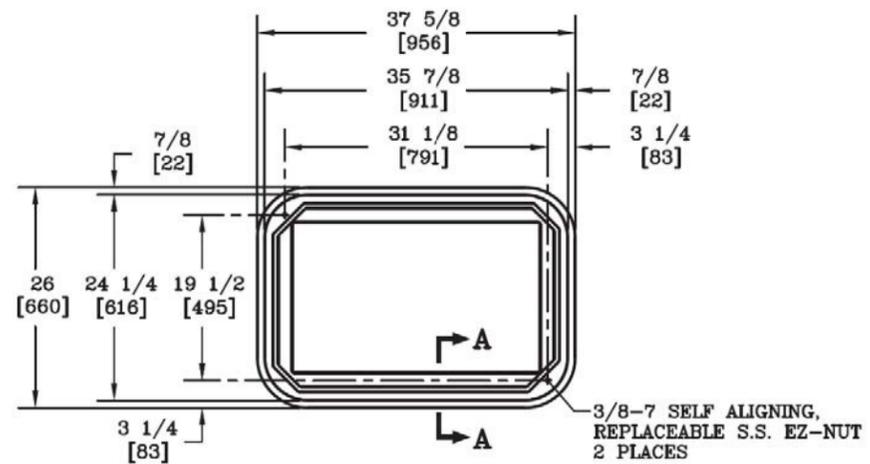
**DETAILS**



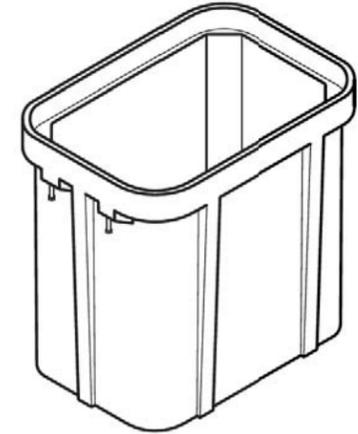
**AUREON HH/VAULT PLACEMENT CABLE SLACK ONLY LOCATIONS ELEVATION VIEW**



**AUREON HANDHOLE INSTALLATION**



**AUREON QUAZITE 24X36X36 DETAIL**



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DRAINAGE DISTRICT PROJECT NOTES

1. THE DRAINAGE TILES SHOWN WITHIN THESE PLANS ARE ONLY AN APPROX. LOCATION AND SHOULD BE FIELD LOCATED WITH THE HELP OF THE HARDIN COUNTY DRAINAGE DISTRICT REPRESENTATIVE.
2. REFER TO HARDIN COUNTY DRAINAGE DISTRICT OFFICE FOR ANY RELATED QUESTIONS.



**HARDIN COUNTY**

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



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**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 base 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.

PROJECT NO.	SHEET NO.
018-1341	DD.1
Date: 4/25/2019	Drawn: RAM Checked: RAM Approved: GTS

PROJECT: COVER 2 - BUCKEYE



PRIOR TO CONSTRUCTION:

CALL 811 FOR LOCATION OF UNDERGROUND TELEPHONE, ELECTRIC, GAS MAINS, CABLE TELEVISION AND OTHER UTILITIES.

EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND DRAINAGE STRUCTURES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL CONTRACTORS TO EXACTLY LOCATE AND PROTECT EACH EXISTING UTILITY BEFORE AND DURING ACTUAL CONSTRUCTION.

CONSTRUCTION SHALL MEET LOCAL PERMITTING JURISDICTIONS STANDARD CONSTRUCTION SPECIFICATIONS AND STANDARD PLANS.



**DRAINAGE DISTRICT REQUIREMENTS**

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MATCH LINE SHEET F.11

PROJECT NO.	SHEET NO.
018-1341	F.1
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE

olsson

AUREON



PRIOR TO CONSTRUCTION:

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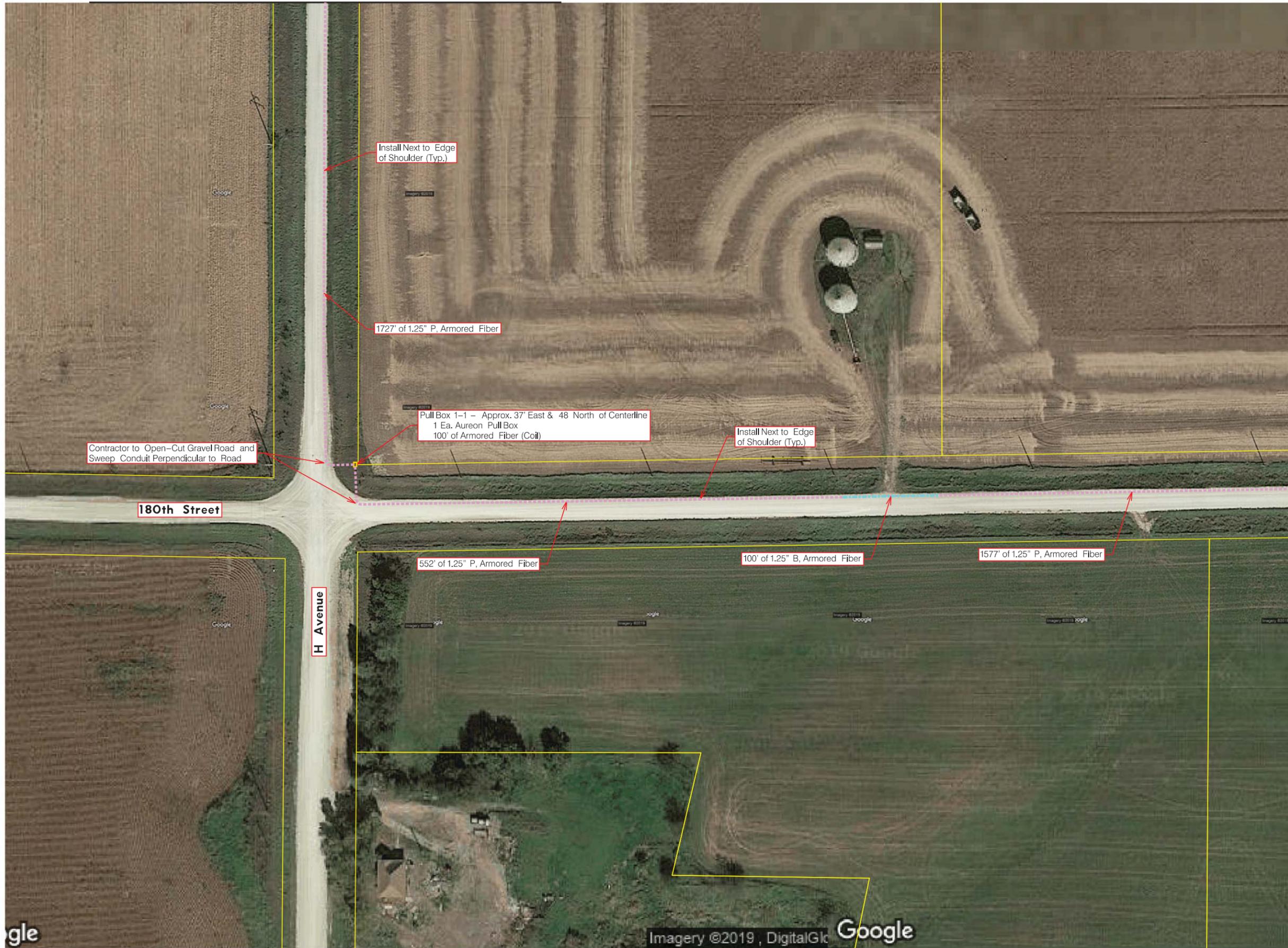
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MATCH LINE SHEET F.2



FIBER DESIGN



Contractor to Open-Cut Gravel Road and Sweep Conduit Perpendicular to Road

Install Next to Edge of Shoulder (Typ.)

1727' of 1.25" P, Armored Fiber

Pull Box 1-1 - Approx. 37' East & 48' North of Centerline  
1 Ea. Aureon Pull Box  
100' of Armored Fiber (Coil)

Install Next to Edge of Shoulder (Typ.)

180th Street

H Avenue

552' of 1.25" P, Armored Fiber

100' of 1.25" B, Armored Fiber

1577' of 1.25" P, Armored Fiber

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MATCH LINE SHEET F.1



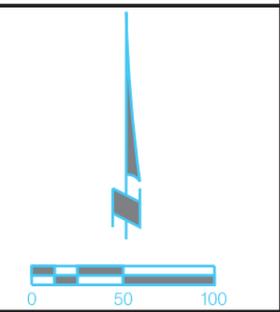
MATCH LINE SHEET F.3

PROJECT NO.	SHEET NO.
018-1341	F.2
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE

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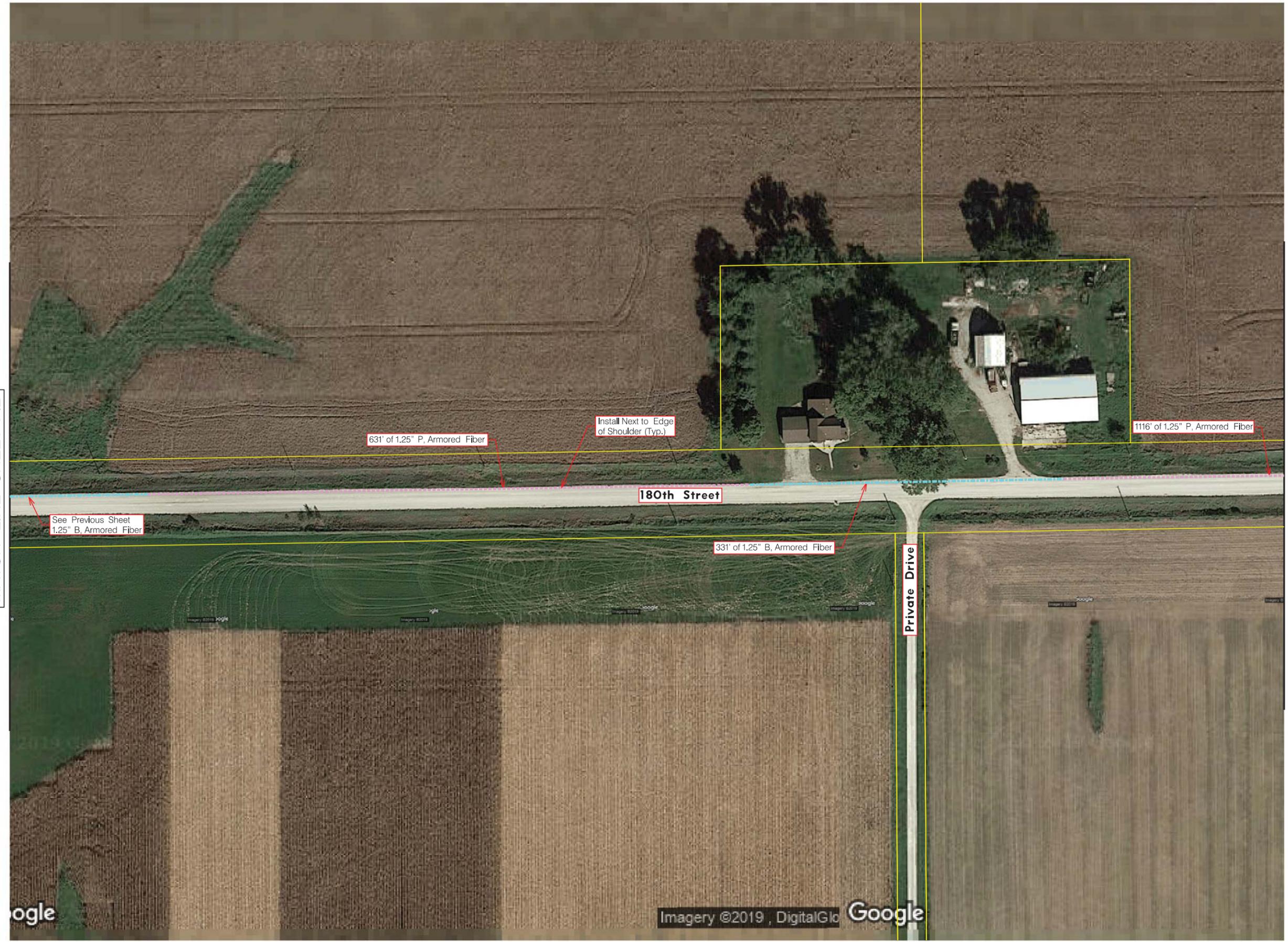
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MATCH LINE SHEET F.2



MATCH LINE SHEET F.4

PROJECT NO.	SHEET NO.
018-1341	F.3
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE



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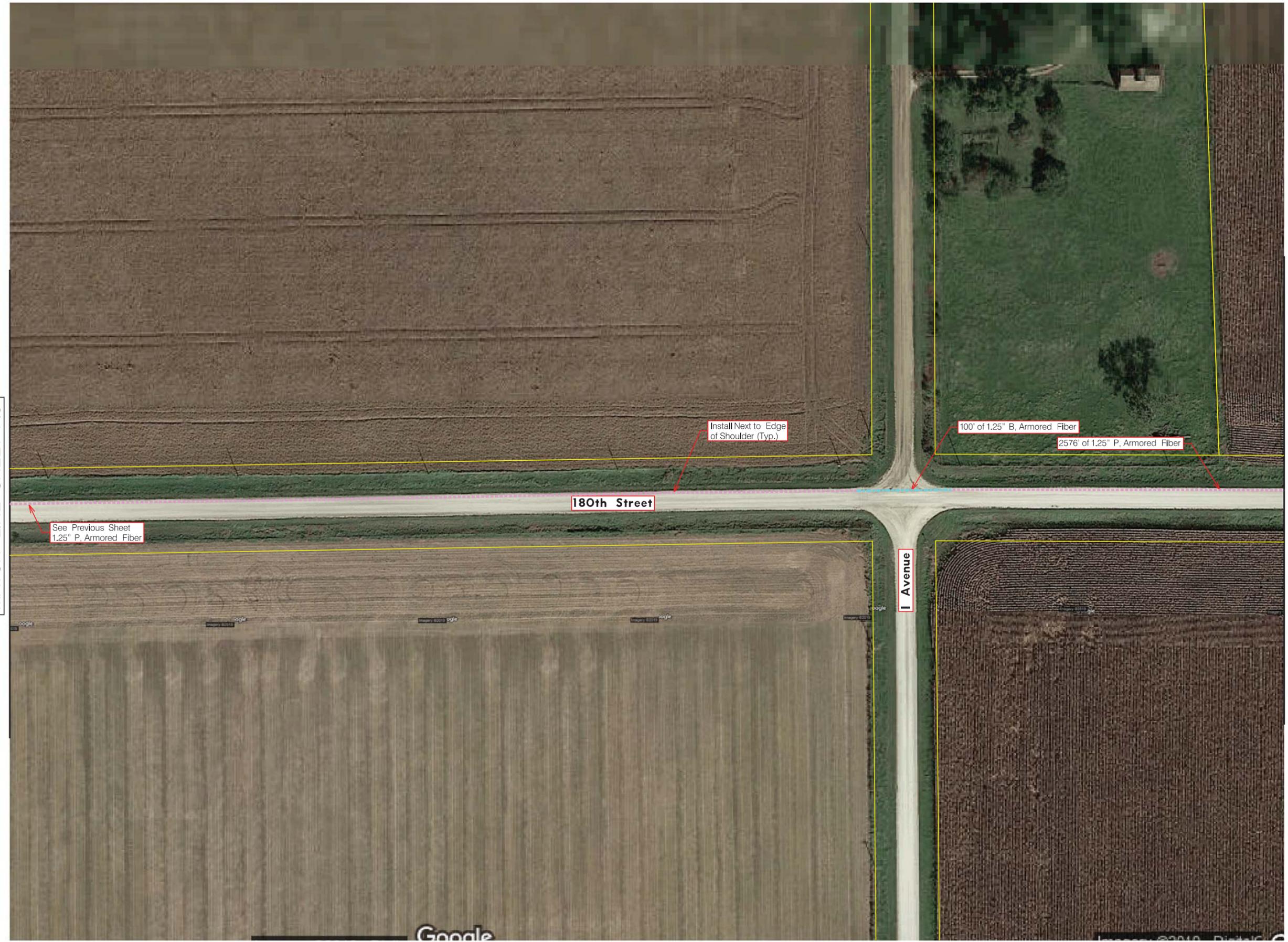
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MATCH LINE SHEET F.3



MATCH LINE SHEET F.5

PROJECT NO.	SHEET NO.
018-1341	F.4
Date: 4/25/2019	Drawn: RAM
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MATCH LINE SHEET F.4



MATCH LINE SHEET F.6

PROJECT NO.	SHEET NO.
018-1341	F.5
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE

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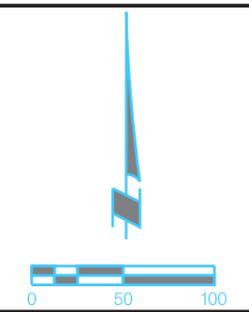
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FIBER DESIGN

PROJECT NO.	SHEET NO.
018-1341	F.6
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PRIOR TO CONSTRUCTION:

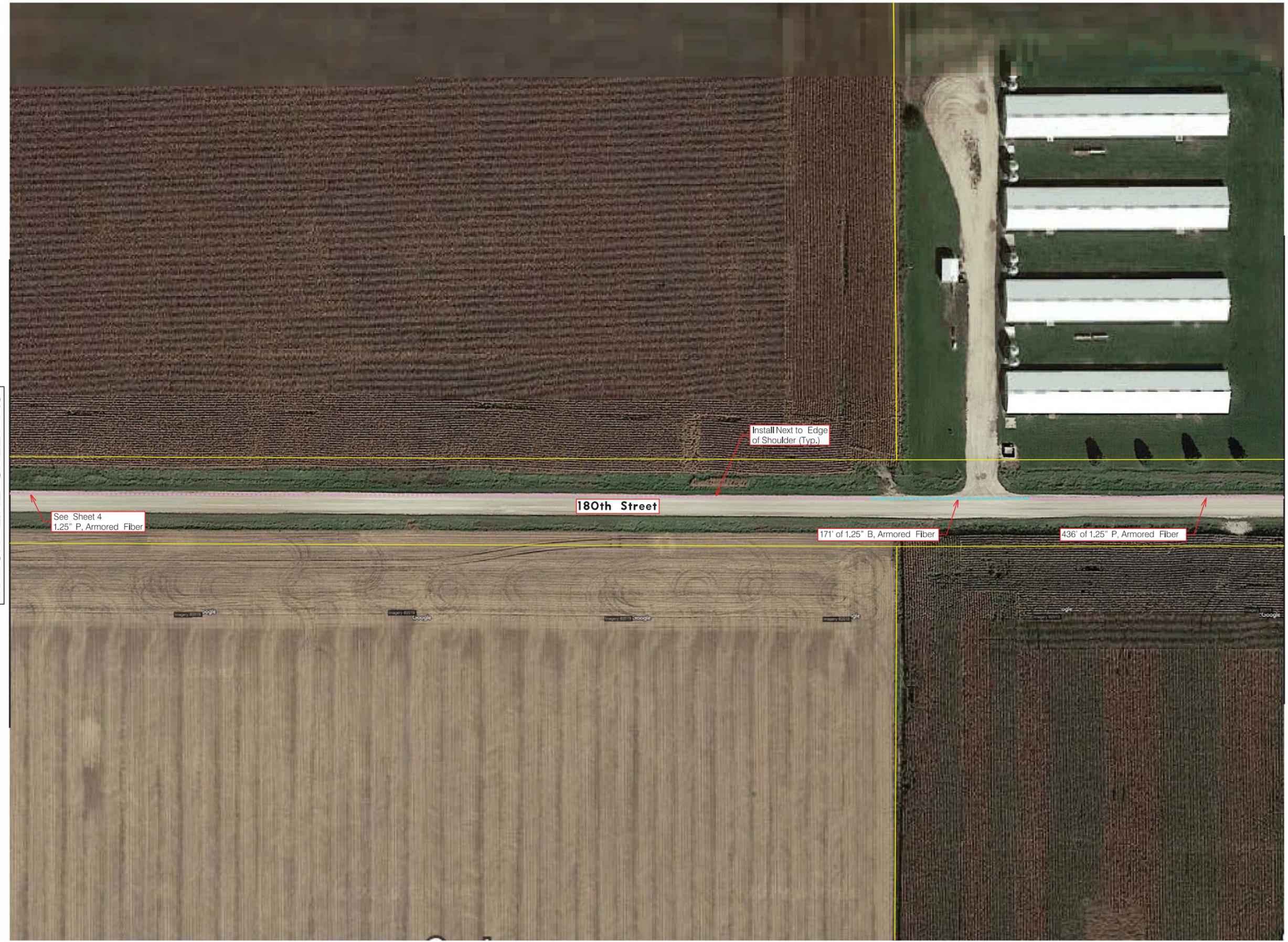
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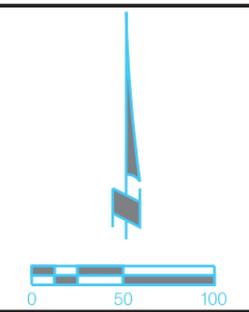
MATCH LINE SHEET F.5

MATCH LINE SHEET F.7

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PROJECT NO.	SHEET NO.
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PROJECT: COVER 2 - BUCKEYE



PRIOR TO CONSTRUCTION:

CALL 811 FOR LOCATION OF UNDERGROUND TELEPHONE, ELECTRIC, GAS MAINS, CABLE TELEVISION AND OTHER UTILITIES.

EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND DRAINAGE STRUCTURES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL CONTRACTORS TO EXACTLY LOCATE AND PROTECT EACH EXISTING UTILITY BEFORE AND DURING ACTUAL CONSTRUCTION.

CONSTRUCTION SHALL MEET LOCAL PERMITTING JURISDICTIONS STANDARD CONSTRUCTION SPECIFICATIONS AND STANDARD PLANS.



FIBER DESIGN



MATCH LINE SHEET F.6

MATCH LINE SHEET F.8

USER: rmehts DATE: 04/26/2019 DGN: F:\2018\001-1500\018-1341\Highway 20 Fiber Design\Microstation\_018-1341\_Highway 20 Fiber Design\_W012\Sheets\Cover 2 Buckeye F.7.dgn

Google

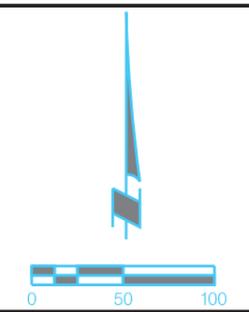
Google

PROJECT NO.	SHEET NO.
018-1341	F.8
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE

**olsson**

**AUREON**



PRIOR TO CONSTRUCTION:

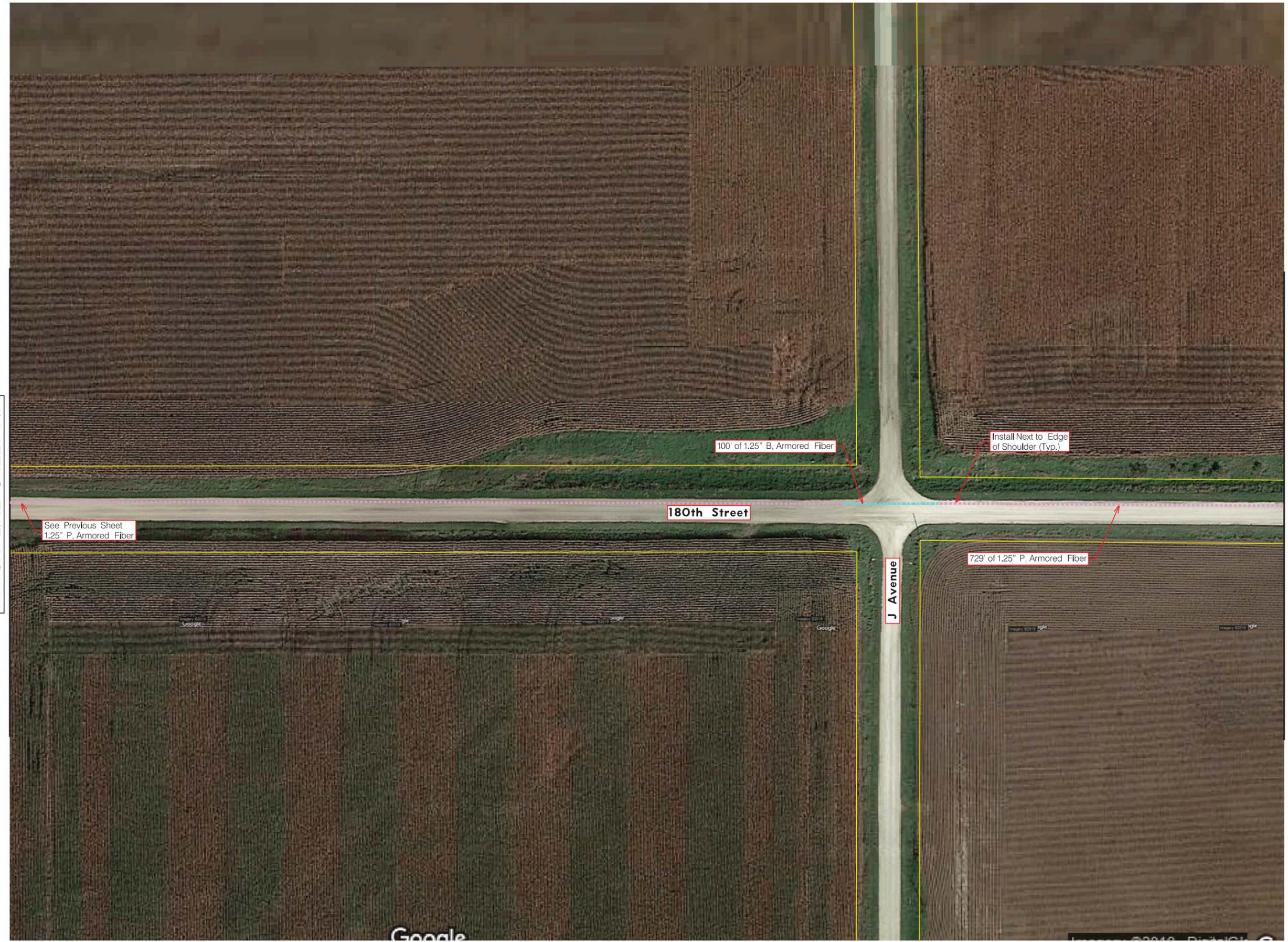
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**FIBER DESIGN**



MATCH LINE SHEET F.7

MATCH LINE SHEET F.9

USER: rmehts  
 DATE: 04/26/2019  
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USER: rmehts  
 DATE: 04/26/2019  
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MATCH LINE SHEET F.8



MATCH LINE SHEET F.10

PROJECT NO.	SHEET NO.
018-1341	F.9
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE



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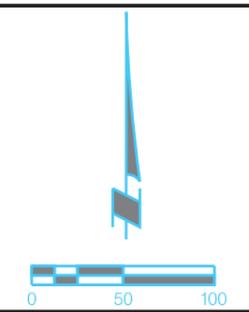
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FIBER DESIGN

PROJECT NO.	SHEET NO.
018-1341	F.10
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE



PRIOR TO CONSTRUCTION:

CALL 811 FOR LOCATION OF UNDERGROUND TELEPHONE, ELECTRIC, GAS MAINS, CABLE TELEVISION AND OTHER UTILITIES.

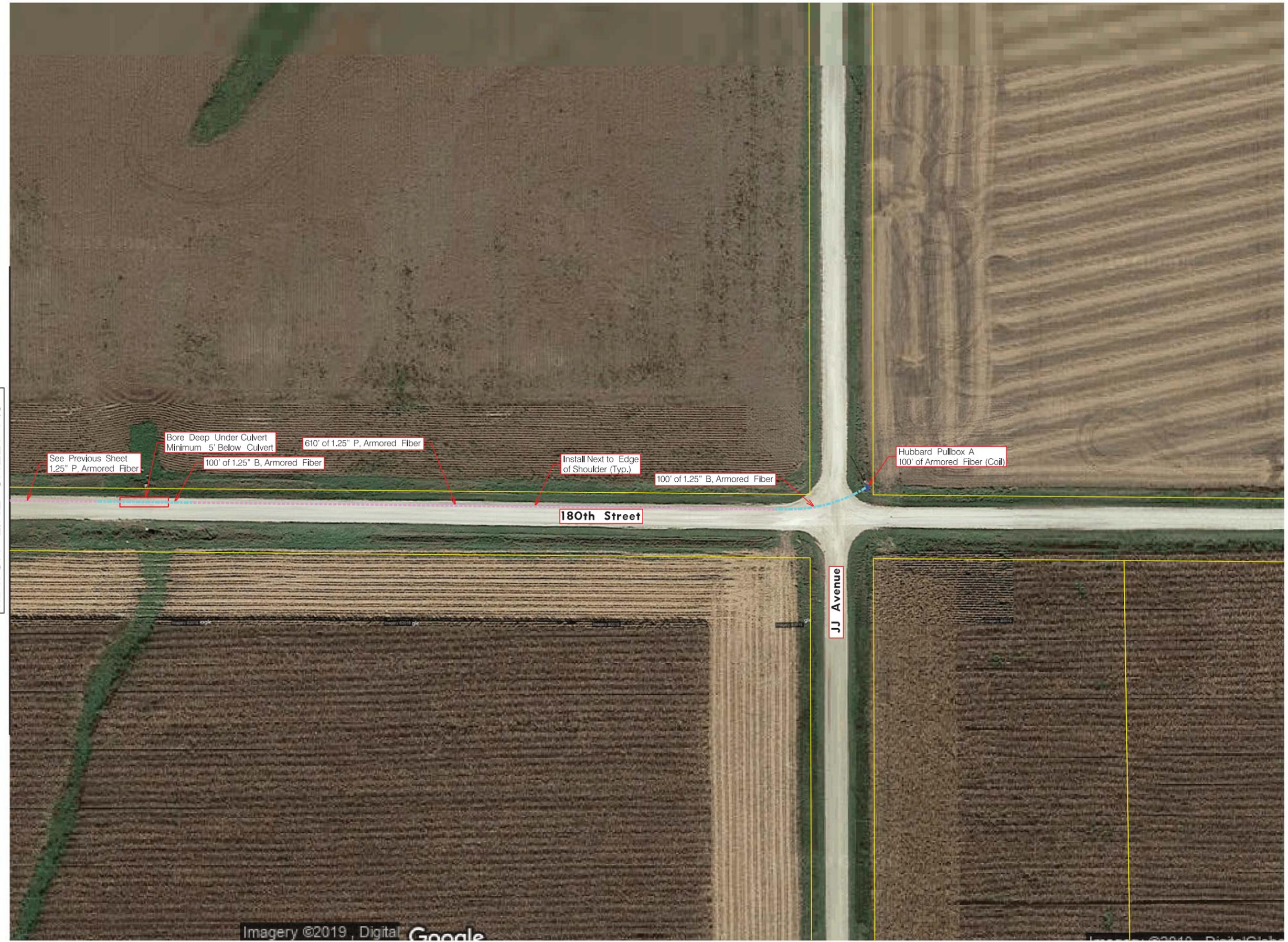
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FIBER DESIGN

MATCH LINE SHEET F.9



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PROJECT NO.	SHEET NO.
018-1341	F.11
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE



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FIBER DESIGN



MATCH LINE SHEET F.1

MATCH LINE SHEET F.12

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PROJECT NO.	SHEET NO.
018-1341	F.12
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE

**olsson**

**AUREON**



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**FIBER DESIGN**

MATCH LINE SHEET F.13

MATCH LINE SHEET F.11



USER: rmehts  
 DATE: 04/26/2019  
 DGN: F:\2018\001-1500\018-1341\Highway\_20\_Fiber\_Design\WO12\40-Design\Microstation\_018-1341\_Highway\_20\_Fiber\_Design\_WO12\Sheets\Cover\_2\_Buckeye\_F.12.dgn

PROJECT NO.	SHEET NO.
018-1341	F.13
Date: 4/25/2019	Drawn: RAM
	Checked: RAM
Horz. Scale 1 : 100	Approved: GTS

PROJECT: COVER 2 - BUCKEYE



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FIBER DESIGN

MATCH LINE SHEET F.14



MATCH LINE SHEET F.12

USER: rmehts DATE: 04/26/2019 DGN: F:\2018\001-1500\018-1341\Highway 20 Fiber Design\Microstation\_018-1341\_Highway 20 Fiber Design\WO12\Sheets\Cover 2 Buckeye Cover 2 Buckeye F.13.dgn





# HARDIN COUNTY

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

## HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

Applicant: Aureon (Iowa Network Services)  
Company Name

7760 Office Plaza Drive South  
Address

West Des Moines                      IA                      50266  
City    State    Zip

Applicant Contact: Ryan Meints (Olsson) for Jeff Klocko (Aureon) ( 515 ) 830 - 0112  
Name    Phone

rmeints@olssonassociates.com                      jeff.klocko@Aureon.com  
Email

Utility Type: Fiber optic cabling inside conduit

Drainage District(s) Crossed: DD 9, DD 41, DD 48

Facilities Crossed (specific tile, open ditch): DD 9-Main, DD 48-Open Ditch

Description of Work: \_\_\_\_\_

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

Directional bore and plow of conduit and fiber optic cable per attached plans

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

\_\_\_\_\_  
Applicant Signature

4-29-2019  
Date

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

# DRAINAGE ELECTION DRAINAGE DISTRICT 148, HARDIN COUNTY

Please return this completed form to the Auditor's office by Monday, May 6, 2019.

Election Date: June - 18 -  
(Per Code of Iowa Election Must be no less than 40 days and no more than 60 days past April 24, 2019)

Election Location: 28254 Hwy 57 Ackley - (David Kaniaga's Shop)  
(Per Code of Iowa Election must be held at some convenient place in the district. Please provide the address above.)

Election Time: 1:00 pm - 5:00 pm  
(Per Code of Iowa Election must be held from 1:00 pm - 5:00 pm on the day of the election)

Appointed Judge: Jim Bretlow

Appointed Judge: Kenny Smith

Appointed Judge: Paul Erskin

Appointed Clerk: David Kaniaga

Appointed Clerk: Bill Ibeling

Address to send the Election Packet: 10123 S Ave Ackley Iowa 50601  
(Bill Ibeling)

**FILED**

MAY - 3 2019

HARDIN COUNTY AUDITOR