**AGENDA**
**REGULAR DRAINAGE MEETING**
**Wednesday, January 13, 2021 9:30 AM**
**Large Conference Room**
**Due to Covid-19 health concerns, this meeting is open to the public via conference call only. The meeting date and time will remain the same. You may call at that time to access the meeting by following the instructions below:**
**To access the meeting call: 1-(312)-626-6799, when prompted enter meeting ID code: 820 7567 2007**
**You can also access the meeting online at:**
**https://us02web.zoom.us/j/82075672007**

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

   Documents:

   01_04_21 - DRAINAGE MINUTES.PDF

4. Approve Claims For Payment

   Documents:

   PAYABLES-DRAINAGE PUBLICATION 01_15_21.PDF

5. Discuss W Possible Action - Aureon Drainage Utility Permits 2019-1, 2019-2 & 2019-4

   Documents:

   2019-4 AUREON AS-BUILTS - PROVIDED 10_15_20.PDF
   AUREON 2019 INS-HWY 20 ALDEN TO ACKLEY W DRAINAGE TILES, AS BUILTS (1).PDF

6. DD 14 WO 291 - Discuss W Possible Action - Investigation Summary

   Documents:

   DD 14 WO 291 INVESTIGATION AND REPAIR SUMMARY 10_07_20.PDF
   DD 14 WO 291 INVESTIGATION SUMMARY 05_11_20.PDF

7. DD 42 WO 297 - Discuss W Possible Action - Contractor Update

   Documents:

   DD 42 WO 297.PDF
   DD 42 WO 297 MAP.PDF

8. DD 20 WO 302 - Discuss W Possible Action - Investigation / Repair Summary

Documents:

DD 20 WO 302 - 6502.5 - INVESTIGATION-REPAIR SUMMARY 01_05_20.PDF

9. DD 4-53 WO 303 - Discuss W Possible Action - Investigation Summary

   Documents:

   DD 4-53 WO 303 - 6500.5 - INVESTIGATION SUMMARY 01_06_21.PDF

10. DD 4-53 WO 296 - Discuss W Possible Action - Investigation Summary

    Documents:

    DD 4-53 WO 296 - 6500.4 - INVESTIGATION SUMMARY 01_07_21.PDF

11. DD H-F 4-53 Franklin Co. WO #143 - Discuss W Possible Action - Investigation Summary
    Franklin County has submitted DD H-F 4-53 Work Order # 143 Investigation Summary for review by Hardin County Drainage Trustees.

    Documents:

    DD 4-53 FRANKLIN CO WO 143 - 6500.2 - 01_06_20.PDF
    DD 4-53 FRANKLIN CO WO 143 - 6500.2 - INVESTIGATION SUMMARY 01_06_20.PDF

12. DD 143 WO 305 - Discuss W Possible Action - Investigation Summary

    Documents:

    DD 143 WO 305 - 6771.8 - INVESTIGATION SUMMARY 01_06_21.PDF

13. DD 146 WO 228 - Discuss W Possible Action - Investigation / Repair Summary

    Documents:

    DD 146 WO 228 - 6950.1 - INVESTIGATION-REPAIR SUMMARY 01_06_21.PDF

14. DD's Big 4, 41, 77, 123 & 143 - Discuss W Possible Action - Claims For Crop Damages

    Documents:

    2021-01 - DD 41 CROP DAMAGE CLAIM FOR CHRIS BLOME WO 194 12_09_20.PDF
    DDS BIG 4 MAIN, 41, 77, 123 AND 143 -6771.2- HANDS ON COMPL LETTER W PAY ESTIMATE 6 - 12_09_20.PDF

15. DD 25 WO 209 - Discuss W Possible Action - Claim For Crop Damage 2021-2

    Documents:

    2021-02 - DD 25 CROP DAMAGE CLAIM - DAVID FINCHAM 09_18_20 W INS SCAN.PDF

16. Discuss W Possible Action - Iowa Drainage District Association Membership

    Documents:

IDDA MEMBERSHIP LETTER 06_01_2020.PDF

17. Other Business
18. Adjourn Meeting

**REGULAR DRAINAGE MEETING**
**Monday, January 4, 2020 10:30 AM**
**This meeting was held electronically and in-person due to Covid-19 concerns.**

1/4/2021 - Minutes

1. Open Meeting
   Hardin County Drainage Chairperson BJ Hoffman opened the meeting. Also present were Trustee Lance Granzow; Trustee Lance Granzow; Michael Pearce, Network Specialist; and Denise Smith, Drainage Clerk.

2. Approve Agenda
   Motion by Granzow to approve the agenda. Second by McClellan. All ayes. Motion carried.

3. Approve Minutes
   Motion by Granzow to approve the minutes of Regular Drainage Meeting dated 12-30-2020. Second by McClellan. All ayes. Motion carried.

4. Approve Claims For Payment

   Motion by Granzow to approve the claims for payment with pay date Thursday, January 7, 2020. Second by McClellan.

   In additional discussion on the motion, Smith noted all claims were from Clapsaddle-Garber Associates (CGA) on open work orders.

   All ayes. Motion carried.

| | | | |
|---|---|---|---|
| DD 1 WO 244 - Eng Svcs After 5/30/20 - 12/26/20 | Clapsaddle-Garber Assoc | $ | 1,196.40 |
| DD 42 WO 297 Eng Svcs to 12/26/20 Rep/Inv Sum | Clapsaddle-Garber Assoc | $ | 1,150.80 |
| DD 9 WO 229 Eng Svcs 11/27/20 - 12/26/20 | Clapsaddle-Garber Assoc | $ | 987.90 |
| DD 20 WO 302 Eng Svcs 11/27/20-12/26/20 | Clapsaddle-Garber Assoc | $ | 1,519.30 |
| DD 25 WO 209 Eng Svcs 11/27/20-12/26/20 | Clapsaddle-Garber Assoc | $ | 1,533.30 |
| DD 41 WO 194 Eng Svcs 5/30/20 - 12/28/20 | Clapsaddle-Garber Assoc | $ | 936.40 |
| DD 41 WO 299 Eng Svcs 8/28/20 - 12/26/20 | Clapsaddle-Garber Assoc | $ | 1,395.80 |
| DD 77 WO 193 Eng Svcs 9/14/20-12/28/20 | Clapsaddle-Garber Assoc | $ | 747.40 |
| DD 86 WO 172 Eng Svcs 3/01/19 - 12/28/20 | Clapsaddle-Garber Assoc | $ | 378.00 |
| DD 121 WO 295 Eng Svcs 7/31/20 - 12/26/20 | Clapsaddle-Garber Assoc | $ | 464.40 |
| DD 123 WO 188 Eng Svcs 4/26/19-12/28/20 | Clapsaddle-Garber Assoc | $ | 1,175.90 |
| DD 128 WO 127 Eng Svcs 11/27/20 - 12/26/20 | Clapsaddle-Garber Assoc | $ | 1,012.00 |
| DD 143 WO 241 Eng Svcs to 12/25/20 | Clapsaddle-Garber Assoc | $ | 873.80 |
| DD 146 WO 228 Eng Svcs 9/27/19 - 12/26/20 | Clapsaddle-Garber Assoc | $ | 2,585.55 |
| DD 167 WO 260 Eng Svcs 9/27/19 - 12/26/20 | Clapsaddle-Garber Assoc | $ | 4,241.65 |
| DD Big 4 Main WO 190 Eng Svcs 5/31/19-12/28/20 | Clapsaddle-Garber Assoc | $ | 776.00 |
| DD Big 4 Main WO 190 Eng Svcs 8/23/19-12/28/20 | Clapsaddle-Garber Assoc | $ | 257.50 |

5. Other Business
   DD 14 WO 291 - Smith updated the Trustees that landowner Ron Vierkandt and contractor Adam Seward have confirmed they will be present at next week's Regular Drainage Meeting. Granzow asked if there was any option of Ron Vierkandt bringing in his contractor that did the work, Smith stated she could call and ask. Hoffman stated he liked the idea of giving that contractor the opportunity to be here to represent him/herself and let us know exactly what went on, Granzow agreed. Smith stated she will reach out to Vierkandt with that request. Granzow stated that would be fair, and McClellan stated that the contractor will not hear this secondhand. Smith asked if the Trustees would like to see if Vierkandt is willing to bring in his private tile maps. Granzow stated yes, he does not have to but if he did it would be nice to have then on file. Hoffman stated any information is good information. Smith stated she will relay that to Vierkandt. .

6. Adjourn Meeting
   Motion by McClellan. Second by Granzow. All ayes. Motion carried.

# Hardin County

**Drainage Claims with Pay Date of 1/15/2021**

| | | |
|---|---|---|
| DD 42 WO 297 CCTV Tile, Truck Mileage, Telev Truck | Williams Excavation LLC | 1,283.00 |

| | |
|---|---|
| **Total Regular Payables:** | 0.00 |
| **Total Stamped Warrants:** | 1,283.00 |

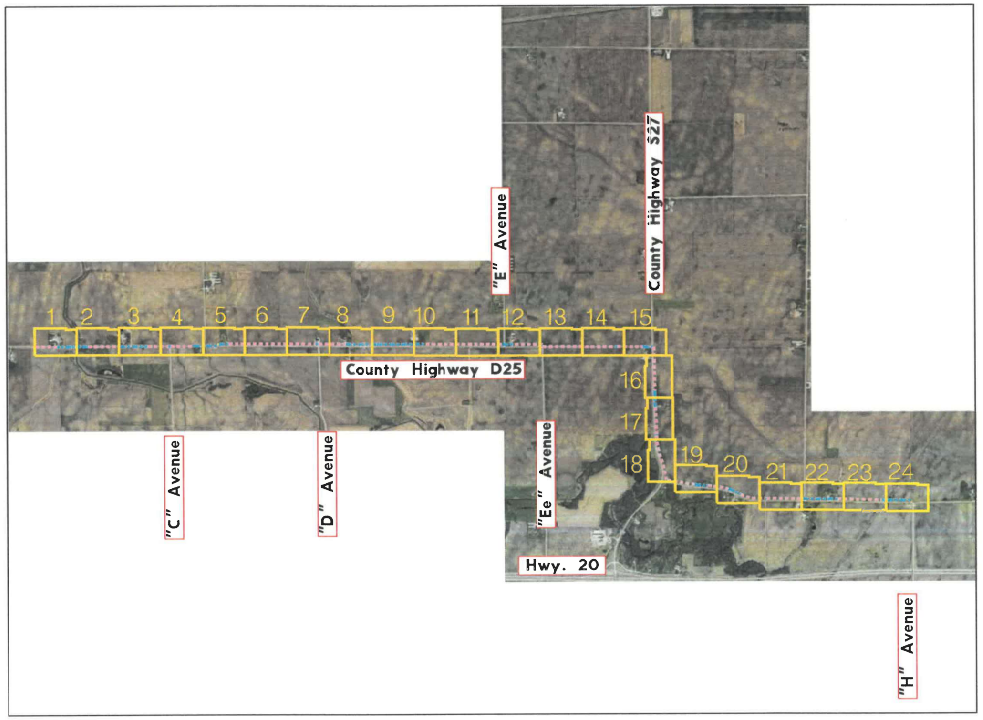
| PROJECT COORDINATION CONTACTS | | | |
|---|---|---|---|
| NAME | AGENCY | PHONE NUMBER | EMAIL |
| JEFF KLOCKO | AUREON | 515-830-0445 | JEFF.KLOCKO@AUREON.COM |
| ANGELA SILVEY | HARDIN COUNTY | 641-858-3182 | ASILVEY@HARDINCOUNTYIA.GOV |
| TINA SCHLEMME | DRAINAGE DISTRICT | 641-939-8111 | TSCHLEMME@HARDINCOUNTYIA.GOV |

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | C.1 |
| Date: 7/29/2019 | Drawn: STS<br>Checked: RAM<br>Approved: GTS |

# HARDIN COUNTY, IOWA
# AUREON
# HIGHWAY 20 - COUNTY HIGHWAY D25

NOT TO SCALE




| PERMITS REQUIRED | |
|---|---|
| SHT. NO. | DESCRIPTION |
| F.1-F.24 | HARDIN COUNTY |
| F.23-F.24 | UNION PACIFIC RAILROAD |
| F.1-F.2, F.9, F.15-F.16, F.22 | FLOODPLAIN |
| F.2A, F.8 , F.10 | HARDIN COUNTY DRAINAGE DISTRICT |

| SHT. NO. | SHEET INDEX |
|---|---|
| C.1 | COVER SHEET |
| G.1 | GENERAL NOTES & SUMMARY OF QUANTITIES |
| D.1 | DETAILS |
| DD.1 | DRAINAGE DISTRICT DETAILS |
| F.1-F.24 | FIBER DESIGN |

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com

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.

USER: tmyers
DATE: 9/5/2018

LICENSED PROFESSIONAL ENGINEER
GREGORY T. SEIB
23179
IOWA

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.

Gregory T. Seib — 7-30-2019
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, F.1-F.24

COVER

## LEGEND OF SYMBOLS

EXISTING CONDUIT
EXISTING AERIAL FIBER
BORED CONDUIT PLACEMENT
PLOWED CONDUIT PLACEMENT
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

## CABLE AND CONDUIT DESIGNATIONS

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

USER: rmehls
DATE: 9/6/2018

## PROJECT NOTES

1. 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.

2. REQUIREMENTS:

   A. DEPTH–THE UTILITY INSPECTOR SHALL MONITOR THE MINIMUM DEPTH OF COVER:

      COMMUNICATIONS.....36"
      WATER OR SEWER.....60"
      DRAINAGE TILE.....24"
      ELECTRIC.....48"
      GAS.....48"

   B. 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,

   C. FORTY–EIGHT (48) INCHES UNDER A ROADWAY MEASURED FROM THE SURFACE OF SAID ROADWAY TO THE TOP OF THE INSTALLATION,

   D. FORTY–EIGHT (48) INCHES UNDER A STORM WATER OR CREEK CHANNEL DESIGN FLOW LINE, AND

   E. MAINTAIN A MINIMUM OF 24" OF VERTICAL & HORIZONTAL SPACING FROM EXISTING UTILITIES.

   F. 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.

   G. RESIDENTS ALONG THE UTILITY ROUTE SHALL HAVE UNINTERRUPTED ACCESS TO THE PUBLIC ROADS.

   H. 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.

   I. 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.

   J. 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.

   K. 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.

   L. 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.

   M. CONSTRUCTION SIGNING SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, ALL WORK SHALL CONFROM TO THE IOWA DEPARTMENT OF TRANSPORTATION CONSTRUCTION MANUAL, STATEWIDE URBAN DESIGN STANDARDS (SUDAS), AASHTO ROADSIDE DESIGN GUIDE, AND CRITERIA SET FORTH THEREIN.

   N. ALL EQUIPMENT SHALL BE ROMOVED FROM THE RIGHT–OF–WAY BETWEEN THE HOURS OF 30 MINUTES BEFORE SUNSET TO 30 MINUTES AFTER SUNRISE.

3. ALL POTHOLES IN SIDEWALK PANELS WILL REQUIRE FULL PANEL REPLACEMENT.

4. ANY CUT OR POTHOLE IN A CONCRETE STREETS PANEL WILL REQUIRE FULL PANEL REPLACEMENT.

5. ANY CUT OR POTHOLE IN A ASPHALT STREET LANE WILL REQUIRE SEAM TO SEAM ASPHALT MILLING AND REPLACEMENT.

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018–1341 | G.1 |
| Date: 7/29/2019 | Drawn: STS<br>Checked: RAM<br>Approved: GTS |

## UTILITY CONTACTS

| NAME | AGENCY | PHONE NUMBER | EMAIL |
|---|---|---|---|
| JEFF KLOCKO | AUREON | 515–830–0445 | JEFF.KLOCKO@AUREON.COM |
| KEVIN SCHLESKY | IOWA DOT | 515–663–6363 | KEVIN.SCHLESKY@IOWADOT.US |
| ANGELA SILVEY | HARDIN COUNTY | 641–858–3182 | ASILVEY@HARDINCOUNTYIA.GOV |
| MICHAEL YOUNTS | MID–AMERICAN ENERGY | 515–979–8294 | MYOUNTS@MIDAMERICAN.COM |
| | MEDIACOM | 855–633–4226 | |
| | WINDSTREAM | 877–901–4692 | |
| | DISH NETWORK | 888–926–5457 | |
| | DIRECT TV | 866–667–9485 | |
| | ALLIANT ENERGY (NATURAL GAS) | 800–255–4268 | |

## IDOT PROJECT NOTES

NOTE 1: THIS LIST IS NOT ALL–INCLUSIVE. CONTRACTOR IS RESPONSIBLE TO REQUEST LOCATES OF ALL UTILITIES, AND COORDINATE IF NEEDED, PRIOR TO COMMENCING WORK. 72 HOUR ADVANCE NOTICE IS REQUIRED TO NOTIFY ALL UTILITY COMPANIES.

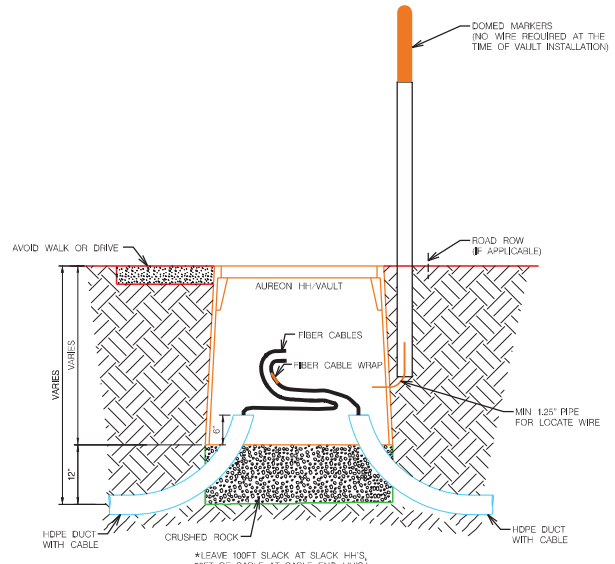
NOTE 2: EXISTING UTILITY CONFLICTS: ANY CHANGES TO THE PLANNED RUNNING LINE REQUIRE PRE–APPROVAL BY AUREON AND ROW AUTHORITY HAVING JURISDICTION. THE PLAN FOR PARALLEL UTILITIES WOULD BE TO ADJUST THE RUNNING LINE BY AN APPROPRIATE OFFSET (APPROXIMATELY 2') OR CHANGE DEPTH OF THE INSTALLATION DEPENDING ON ROW AVAILABILITY.

## SUMMARY OF QUANTITIES

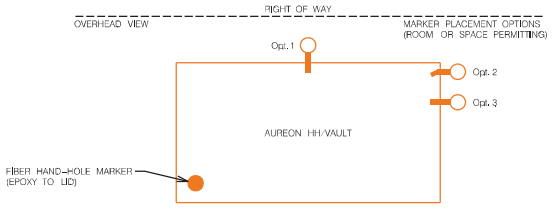
| ITEM | UNIT | QUANTITY |
|---|---|---|
| BURIED FIBER OPTIC, P | LF. | 25,949 |
| CONDUIT, 1.25" B | LF. | 11,333 |
| CONDUIT, 2" B | LF. | 194 |
| PULL BOX, 24"X36"X36" | EA. | 8 |
| FIBER, ARMORED | LF. | 37,476 |
| FIBER, ARMORED, UNDERGROUND SLACK STORAGE | LF. | 900 |

# GENERAL NOTES & SUMMARY OF QUANTITIES

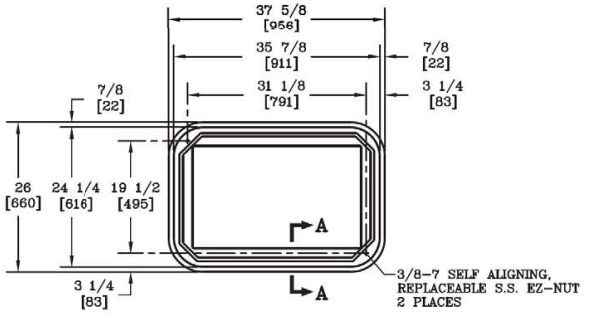
| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | D.1 |
| Date: 7/29/2019 | Drawn: STS |
| | Checked: RAW |
| | Approved: GTS |



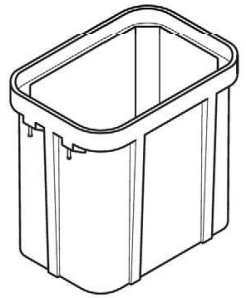

AUREON HH/VAULT PLACEMENT CABLE SLACK ONLY LOCATIONS ELEVATION VIEW




AUREON HANDHOLE INSTALLATION




AUREON QUAZITE 24X36X36 DETAIL



USER: rmorris
DATE: 9/6/2018

**DETAILS**

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018–1341 | DD.1 |
| | | Date: 7/29/2019 | Drawn: STS |
| | | | Checked: RAW |
| | | | Approved: GTS |

## 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.

USER: rmorris
DATE: 8/6/2018

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

### 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.

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

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 a 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.

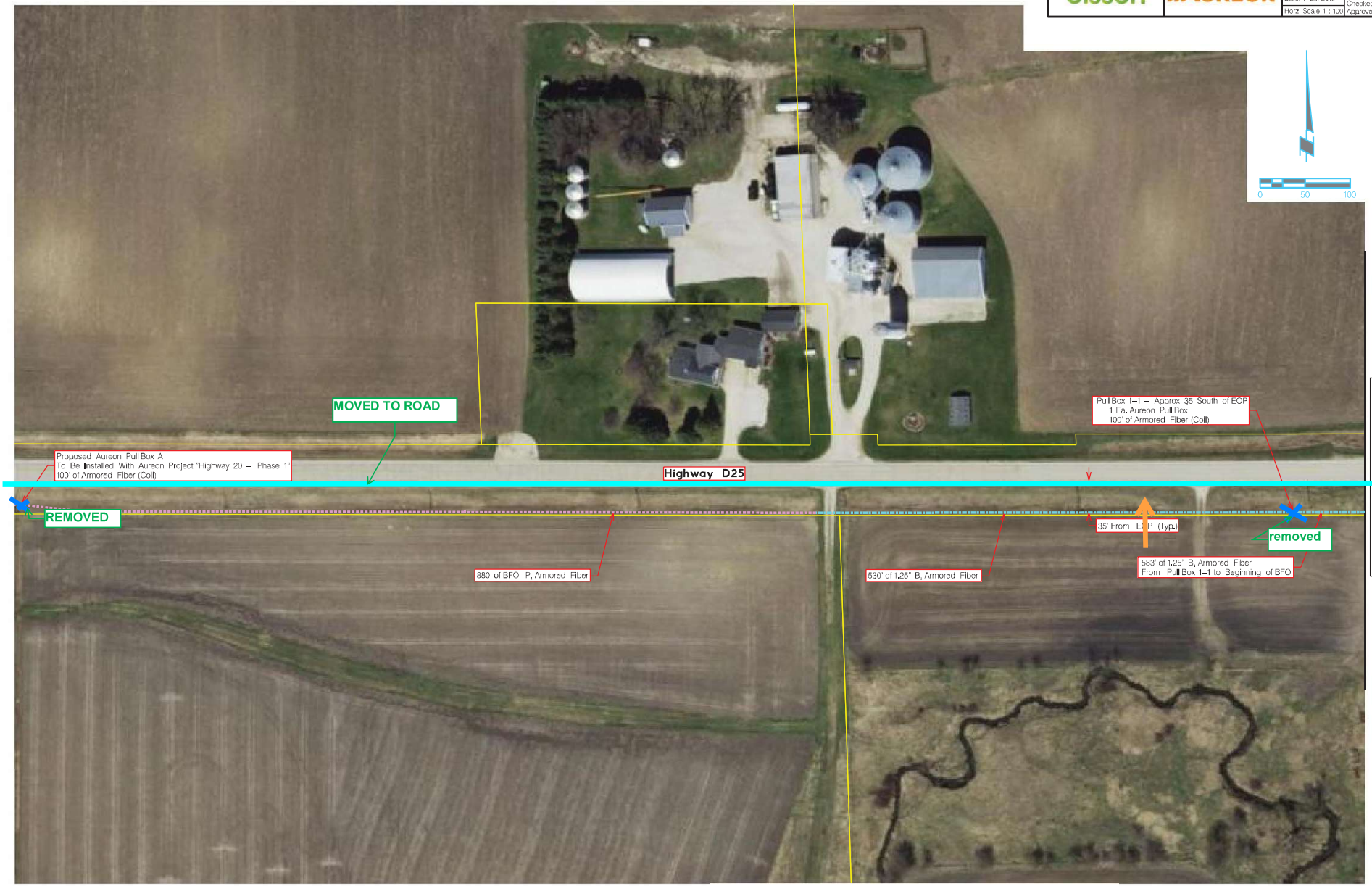
HARDIN COUNTY
1215 EDGINGTON AVE., SUITE 1
ELDORA, IA 50627
(641) 939-8108

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 DISTRICT REQUIREMENTS

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.1 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




FIBER DESIGN

USER: rmorris
DATE: 9/6/2018


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.2
Date: 7/29/2019
Drawn: STS
Horz. Scale 1 : 100
Checked: RAM
Approved: GTS
0
50
100
MATCH LINE SHEET F.1
MATCH LINE SHEET F.3
350' BORE
102' BORE
MOVED TO ROAD
See Previous Sheet
1.25" B, Armored Fiber
Highway D25
35' From EOP (Typ.)
Bore Deep Under Drainage Area
Minimum 10' Below Bottom of Flowline
Drainage District Tile
Refer to DD.1 for Installation Requirements
1,131' of BFO P, Armored Fiber
From Beginning of BFO to Beginning of Bore
South Fork Iowa River
USER: rmorris
DATE: 9/6/2018
FIBER DESIGN


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.3
Date: 7/29/2019
Horz. Scale 1 : 100
Drawn: STS
Checked: RAM
Approved: GTS
0
50
100
C Avenue
MOVED TO ROAD
PIPELINE CROSSINGS
Route Around Utilities
See Previous Sheet
BFO P, Armored Fiber
Highway D25
35' From EOP (Typ.)
997' of 1.25" B, Armored Fiber
737' of BFO P, Armored Fiber
From Beginning of BFO to Beginning of Bore
MATCH LINE SHEET F.2
MATCH LINE SHEET F.4
USER: rmorris
DATE: 9/6/2018
FIBER DESIGN


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.4
Date: 7/29/2019
Horz. Scale 1 : 100
Drawn: STS
Checked: RAM
Approved: GTS
0
50
100
MATCH LINE SHEET F.3
MATCH LINE SHEET F.5
110' BORE
210' BORE
MOVED TO ROAD
174' BORE
See Previous Sheet
BFO P, Armored Fiber
Highway D25
35' From EOP
25' From EOP
71' of 1.25" B, Armored Fiber
PLACE 24X36X30
26798 - 26898
838' of BFO P, Armored Fiber
942' of 1.25" B, Armored Fiber
From Beginning of Bore to Pull Box 5-1
C Avenue
FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.5 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.4

MATCH LINE SHEET F.6

FIBER DESIGN

USER: rmorris
DATE: 8/6/2018

olsson | AUREON

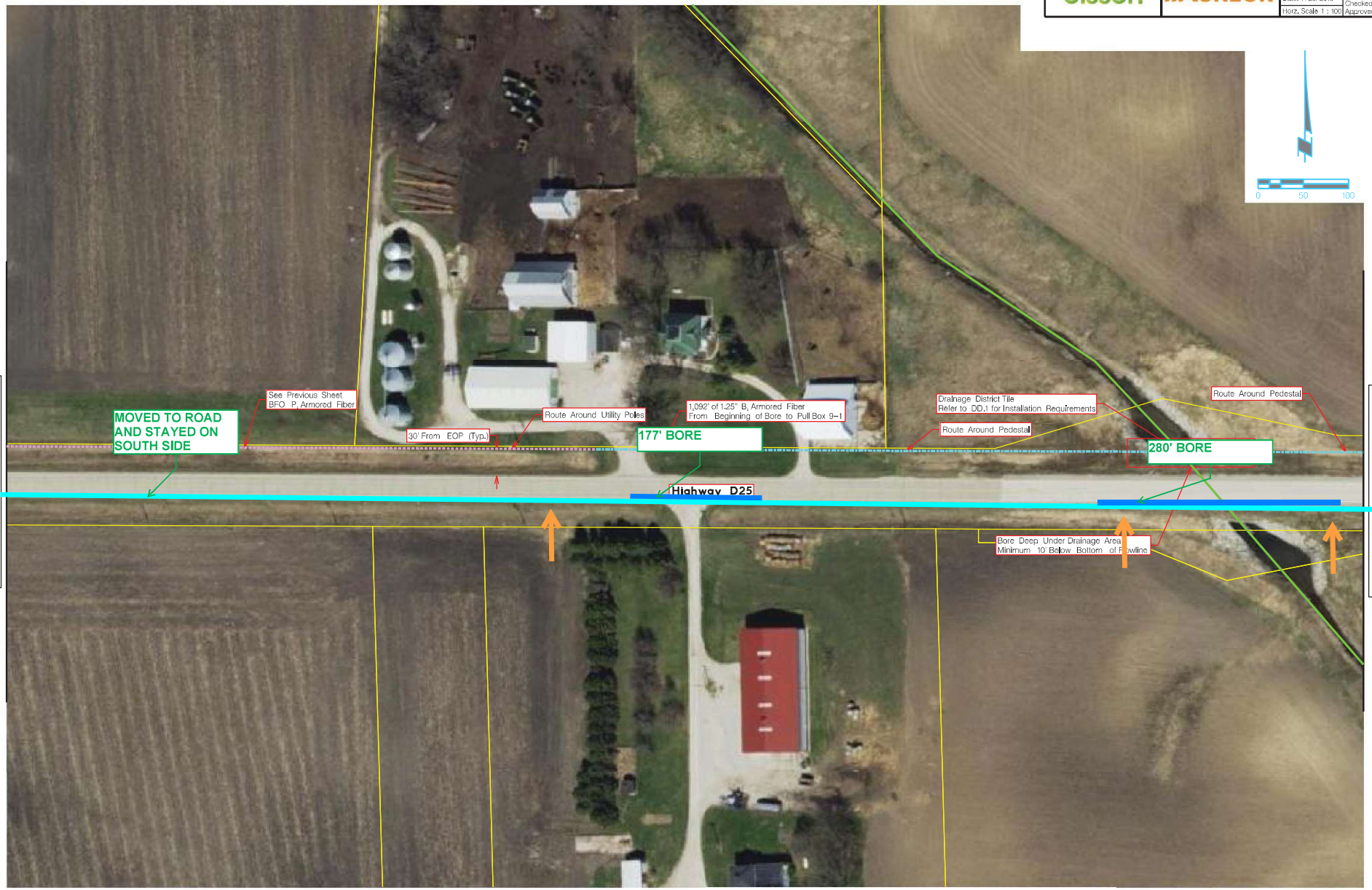
| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.6 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




FIBER DESIGN

USER: rmorris
DATE: 8/6/2018


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.7
Date: 7/29/2019
Horz. Scale 1 : 100
Drawn: STS
Checked: RAM
Approved: GTS
0
50
100
MATCH LINE SHEET F.6
MATCH LINE SHEET F.8
See Sheet F.5
BFO P, Armored Fiber
30' From EOP (Typ.)
MOVED TO ROAD AND STAYED ON SOUTH SIDE
127' BORE
PLACE 24X36X30
32398 - 32510
Highway D25
113' of 1.25" B, Armored Fiber
From Beginning of BFO to Beginning of Bore
D Avenue
FIBER DESIGN




olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.8 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

USER: rmorris
DATE: 8/6/2018

FIBER DESIGN




olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.9 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

USER: rmorris
DATE: 8/6/2018

FIBER DESIGN


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.10
Date: 7/29/2019
Horz. Scale 1 : 100
Drawn: STS
Checked: RAM
Approved: GTS
0
50
100
MATCH LINE SHEET F.9
MATCH LINE SHEET F.11
See Previous Sheet 1.25" B, Armored Fiber
Drainage District Tile Refer to DD.1 for Installation Requirements
245' BORE
Bore Deep Under Drainage Area Minimum 10' Below Bottom of Flowline
30' From EOP (Typ.)
2,732' of BFO P, Armored Fiber From Beginning of BFO to Beginning of Bore
160' BORE
MOVED TO ROAD AND STAYED ON SOUTH SIDE
Highway D25
FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.11 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

0 50 100




FIBER DESIGN

USER: rmorris
DATE: 9/6/2018


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.12
Date: 7/29/2019
Drawn: STS
Checked: RAM
Horz. Scale 1 : 100
Approved: GTS
0
50
100
E Avenue
MATCH LINE SHEET F.11
MATCH LINE SHEET F.13
See Sheet F.10
BFO P, Armored Fiber
Route Around Utility Pole
30' From EOP (Typ.)
446' of 1.25" B, Armored Fiber
1,003' of BFO P, Armored Fiber
From Beginning of BFO to Beginning of Bore
PLACE 24X36X30
39550 - 39610
20118 - 20054
MOVED TO ROAD
AND STAYED ON
SOUTH SIDE
Highway D25
Route Around Pedestal
SPLICE MARKER
FIBER DESIGN

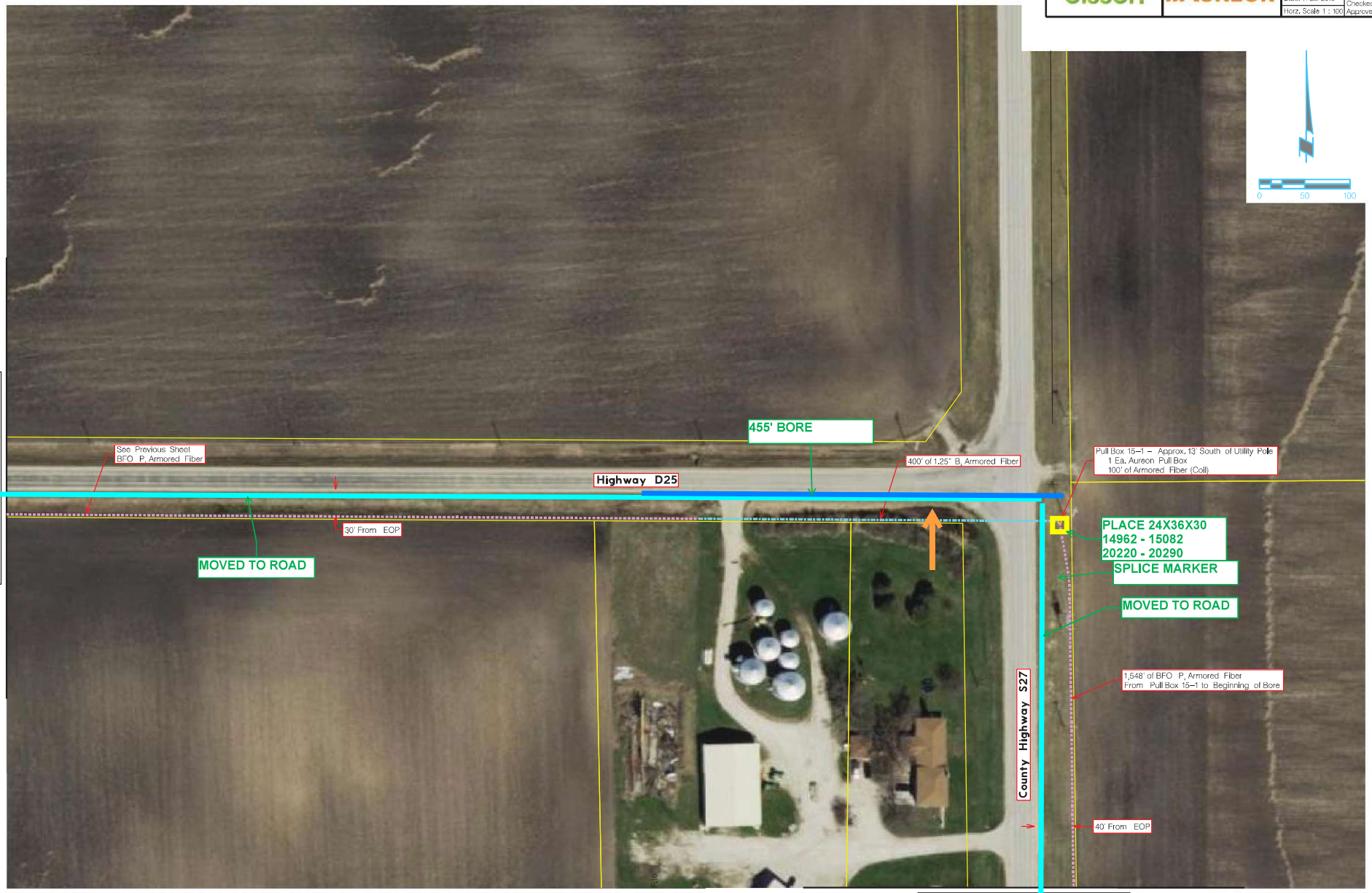

olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.13
Date: 7/29/2019
Horz. Scale 1 : 100
Drawn: STS
Checked: RAM
Approved: GTS
0
50
100
125' BORE
See Previous Sheet
BFO P, Armored Fiber
60' of 1.25" B, Armored Fiber
174' BORE
Highway D25
MOVED TO ROAD AND STAYED ON SOUTH SIDE
Pull Box 13-1 - Approx. 25' South of EOP
1 Ea. Aureon Pull Box
100' of Armored Fiber (Coil)
MOVED TO ROAD
30' From EOP
2,593' of BFO P, Armored Fiber
From Pull Box 13-1 to Beginning of Bore
Ee Avenue
MATCH LINE SHEET F.12
MATCH LINE SHEET F.14
FIBER DESIGN




USER: rmorris
DATE: 9/6/2018

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.15 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




FIBER DESIGN

USER: rmorris
DATE: 9/6/2018

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.16 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

0 50 100




FIBER DESIGN

USER: rmorris
DATE: 9/6/2018


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.17
Date: 7/29/2019
Horz. Scale 1 : 100
Drawn: STS
Checked: RAM
Approved: GTS
0
50
100
MATCH LINE SHEET F.18
MATCH LINE SHEET F.16
186' BORE
100' BORE
County Highway S27
1,617' of BFO P, Armored Fiber From Beginning of Bore to Pull Box 18-1
Route Around Utility Marker
See Previous Sheet 1.25" B, Armored Fiber
40' From EOP (Typ.)
MOVED TO ROAD
55' of 1.25" B, Armored Fiber
868' of BFO P, Armored Fiber
Route Around Utility Marker
FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.18 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

0 50 100




MATCH LINE SHEET F.17

MATCH LINE SHEET F.19

USER: rmorris
DATE: 9/6/2018

FIBER DESIGN


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.19
Date: 7/29/2019
Drawn: STS
Checked: RAM
Horz. Scale 1 : 100
Approved: GTS
0
50
100
MATCH LINE SHEET F.18
MOVED TO ROAD
See Previous Sheet
BFO P, Armored Fiber
485' of 1.25" B, Armored Fiber
3' From Gas Line (Typ.)
450' BORE
County Highway D25
30' From EOP (Typ.)
735' of BFO P, Armored Fiber
From Beginning of BFO to Beginning of Bore
Route Around Pedestal
405' BORE
MATCH LINE SHEET F.20
FIBER DESIGN

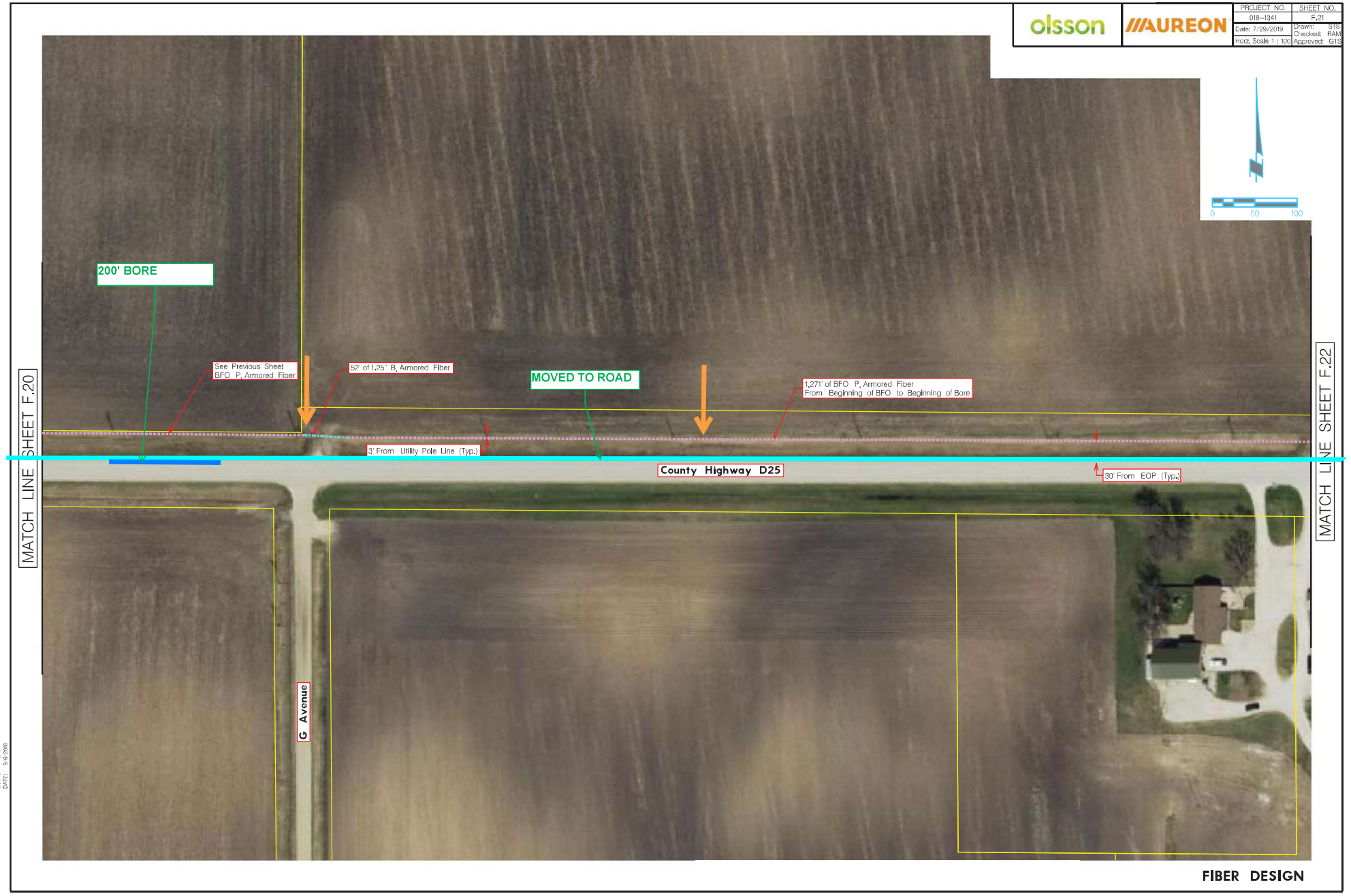
olsson | AUREON

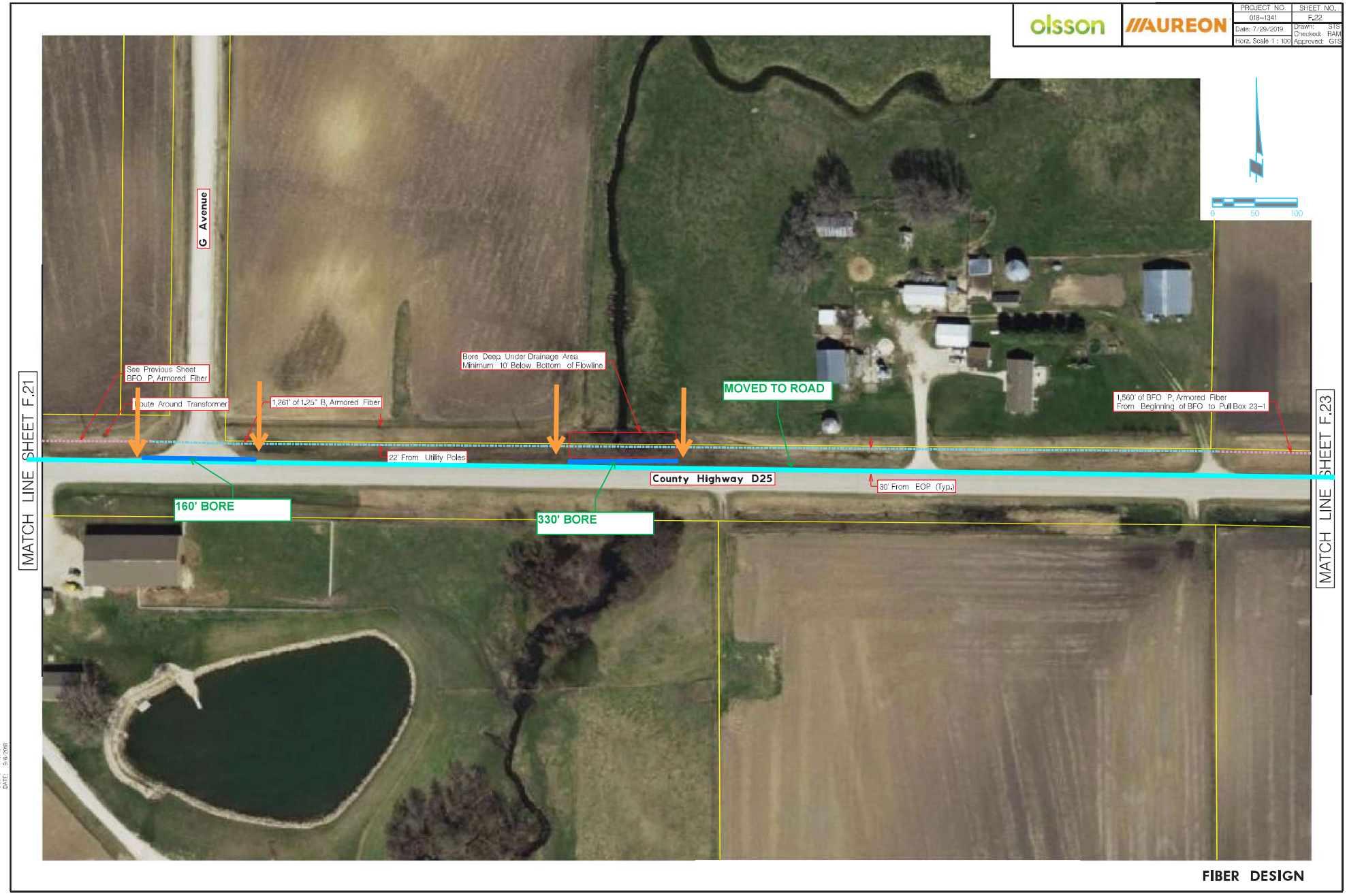
| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.20 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




FIBER DESIGN

USER: rmorris
DATE: 9/6/2018


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.21
Date: 7/29/2019
Drawn: STS
Horz. Scale 1 : 100
Checked: RAM
Approved: GTS
0
50
100
200' BORE
See Previous Sheet
BFO P, Armored Fiber
52' of 1.25" B, Armored Fiber
MOVED TO ROAD
1,271' of BFO P, Armored Fiber
From Beginning of BFO to Beginning of Bore
3' From Utility Pole Line (Typ.)
County Highway D25
30' From EOP (Typ.)
G Avenue
MATCH LINE SHEET F.20
MATCH LINE SHEET F.22
USER: rmorris
DATE: 8/6/2018
FIBER DESIGN




olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.22 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

USER: rmorris
DATE: 9/6/2018

FIBER DESIGN


olsson
AUREON
PROJECT NO. 018-1341
SHEET NO. F.23
Date: 7/29/2019
Horz. Scale 1 : 100
Drawn: STS
Checked: RAM
Approved: GTS
0
50
100
MATCH LINE SHEET F.22
MATCH LINE SHEET F.24
See Previous Sheet
BFO P, Armored Fiber
From EOP(Typ.)
MOVED TO ROAD
Pull Box 23-1 -- Approx. 30' North of EOP
1 Ea. Aureon Pull Box
100' of Armored Fiber (Coil)
Country Highway D25
187' BORE
364' BORE
Union Pacific Railroad
FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.24 |
| Date: 7/29/2019 | Drawn: STS |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |



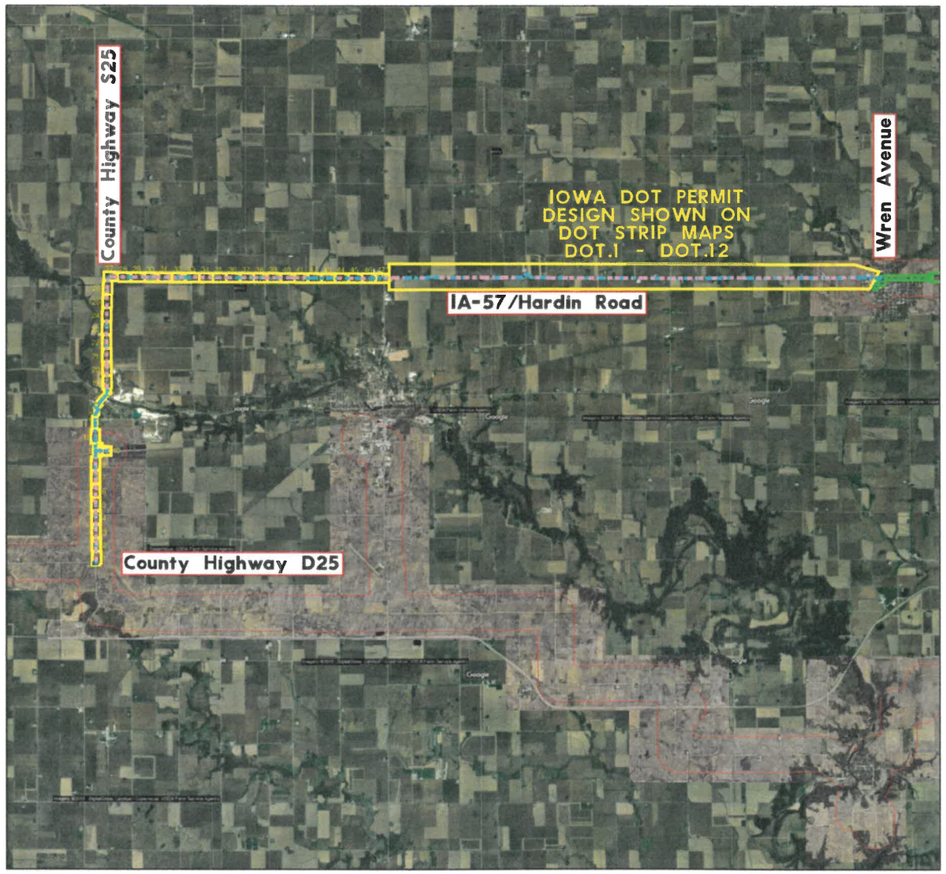

USER: rmorris
DATE: 9/6/2018

FIBER DESIGN

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | C.1 |
| Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM<br>Approved: GTS |

| 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 |
| J WADDINGHAM | FRANKLIN COUNTY | 515-689-7717 | JWADDINGHAM@CO.FRANKLIN.IA.US |
| LORRIE WATTS | CITY OF ALDEN | 515-859-3344 | CITYCLERK@CITYOFALDENIOWA.COM |
| LEE GALLENTINE | CITY OF ACKLEY | 515-689-5339 | LGALLENTINE@CGACONSULTANTS.COM |
| KEVIN SCHLESKY | IOWA DOT DISTRICT 1 | 515-663-6363 | KEVIN.SCHLESKY@IOWADOT.US |
| TINA SCHLEMME | HARDIN COUNTY DRAINAGE DISTRICT | 641-939-8111 | TSCHLEMME@HARDINCOUNTYIA.GOV |

# HARDIN COUNTY, IOWA
# AUREON
# ALDEN TO ACKLEY




NOT TO SCALE

| PERMITS REQUIRED | |
|---|---|
| SHT. NO. | DESCRIPTION |
| F.1-F.47, DOT.1-DOT.12 | HARDIN COUNTY |
| F.27-F.47, DOT.1-DOT.12 | FRANKLIN COUNTY |
| F.12-F.18 | CITY OF ALDEN |
| DOT.12 | CITY OF ACKLEY |
| F.9 | CHICAGO CENTRAL RAILROAD |
| F.18, DOT.1-DOT.2 | UNION PACIFIC RAILROAD |
| F.1-F.4, F.17, F.18, F.26-F.28, F.42, F.46, DOT.1-DOT.2, DOT.5 | FLOODPLAIN |
| DOT.1-DOT.12 | IOWA DOT |
| F.1-F.2, F.4, F.7, F.23, F.33, F.36, F.37, F.38, F.46, F.47, DOT.1-DOT.2, DOT.5 | HARDIN COUNTY DRAINAGE DISTRICT |

| SHT. NO. | SHEET INDEX |
|---|---|
| C.1 | COVER SHEET |
| G.1 | GENERAL NOTES & SUMMARY OF QUANTITIES |
| D.1 | DETAILS |
| DD.1 | DRAINAGE DISTRICT REQUIREMENTS |
| F.1-F.47, DOT.1-DOT.12 | FIBER DESIGN |

IOWA ONE CALL℠
1-800-292-8989
www.iowaonecall.com

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.

LICENSED PROFESSIONAL ENGINEER
GREGORY T. SEIB
23179
IOWA

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.

Gregory T. Seib — 4-8-2019
Signature — Date

Gregory T. Seib
Printed or Typed Name

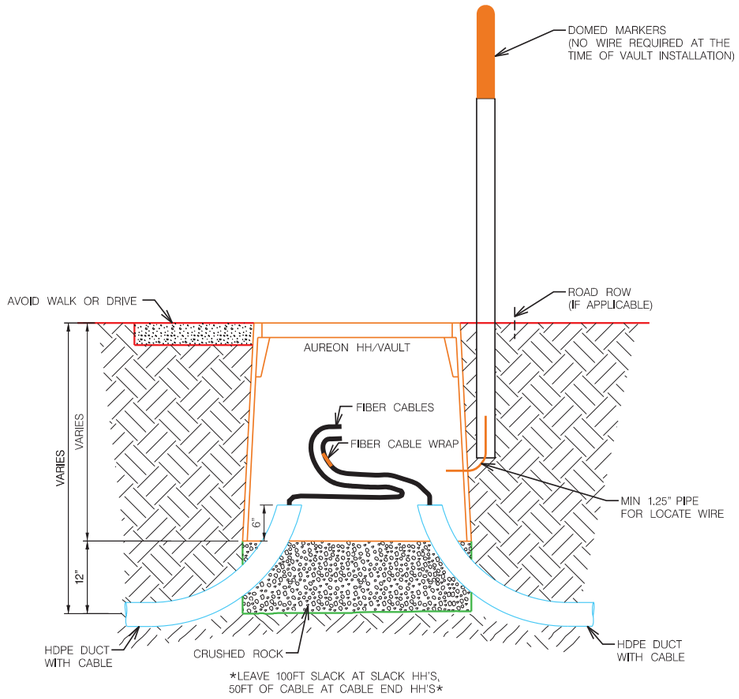
23179
License Number

My license renewal date is December 31, 2020

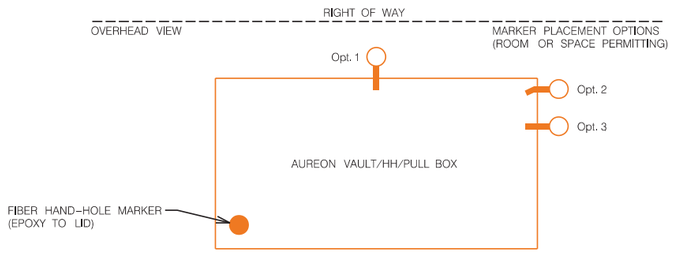
Pages or sheets covered by this seal: C.1, G.1, D.1, F.1-F.47, DOT.1-DOT.12

COVER

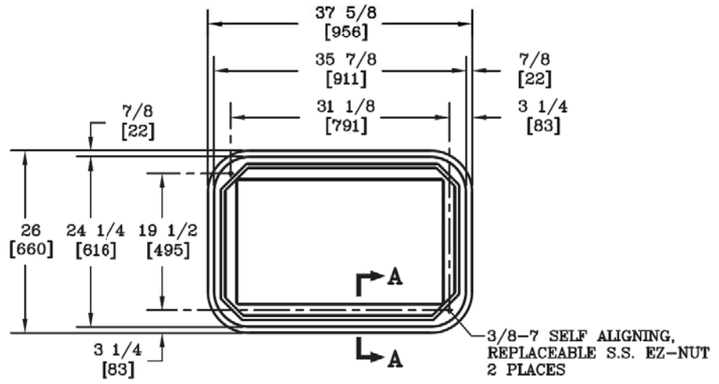
| | | | |
|---|---|---|---|
| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. D.1 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM<br>Approved: GTS |



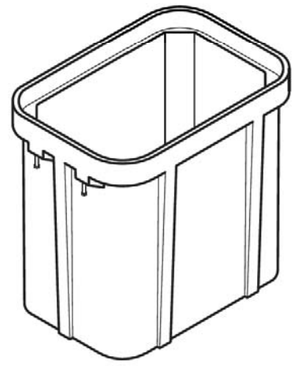

AUREON HH/VAULT/PULL BOX PLACEMENT
CABLE SLACK ONLY LOCATIONS
ELEVATION VIEW




AUREON VAULT/HH/PULL BOX INSTALLATION




AUREON QUAZITE 24X36X36 DETAIL



**DETAILS**

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. G.1 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM Checked: RAM Approved: GTS |
| | | Horz. Scale | |

## LEGEND OF SYMBOLS

- EXISTING CONDUIT
- EXISTING AERIAL FIBER
- BORED CONDUIT
- PLOWED CONDUIT
- NEW AERIAL FIBER
- NEW AERIAL FIBER, OVERLASH
- DRAINAGE DISTRICT TILE
- 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

## CABLE AND CONDUIT DESIGNATIONS

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

## PROJECT NOTES

1. 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.

2. REQUIREMENTS:

   A. DEPTH–THE UTILITY INSPECTOR SHALL MONITOR THE MINIMUM DEPTH OF COVER:

      COMMUNICATIONS.....36"
      WATER OR SEWER.....60"
      DRAINAGE TILE.....24"
      ELECTRIC.....48"
      GAS.....48"

   B. 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,

   C. FORTY–EIGHT (48) INCHES UNDER A ROADWAY MEASURED FROM THE SURFACE OF SAID ROADWAY TO THE TOP OF THE INSTALLATION,

   D. FORTY–EIGHT (48) INCHES UNDER A STORM WATER OR CREEK CHANNEL DESIGN FLOW LINE, AND

   E. MAINTAIN A MINIMUM OF 24" OF VERTICAL & HORIZONTAL SPACING FROM EXISTING UTILITIES.

   F. 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.

   G. RESIDENTS ALONG THE UTILITY ROUTE SHALL HAVE UNINTERRUPTED ACCESS TO THE PUBLIC ROADS.

   H. 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.

   I. 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.

   J. 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.

   K. 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.

   L. 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.

   M. CONSTRUCTION SIGNING SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL WORK SHALL CONFROM TO THE IOWA DEPARTMENT OF TRANSPORTATION CONSTRUCTION MANUAL, STATEWIDE URBAN DESIGN STANDARDS (SUDAS), AASHTO ROADSIDE DESIGN GUIDE, AND CRITERIA SET FORTH THEREIN.

   N. ALL EQUIPMENT SHALL BE ROMOVED FROM THE RIGHT–OF–WAY BETWEEN THE HOURS OF 30 MINUTES BEFORE SUNSET TO 30 MINUTES AFTER SUNRISE.

3. ALL POTHOLES IN SIDEWALK PANELS WILL REQUIRE FULL PANEL REPLACEMENT.

4. ANY CUT OR POTHOLE IN A CONCRETE STREETS PANEL WILL REQUIRE FULL PANEL REPLACEMENT.

5. ANY CUT OR POTHOLE IN A ASPHALT STREET LANE WILL REQUIRE SEAM TO SEAM ASPHALT MILLING AND REPLACEMENT.

## UTILITY CONTACTS

| NAME | AGENCY | PHONE NUMBER | EMAIL |
|---|---|---|---|
| JEFF KLOCKO | AUREON | 515-830-0445 | JEFF.KLOCKO@AUREON.COM |
| KEVIN SCHLESKY | IOWA DOT | 515-663-6363 | KEVIN.SCHLESKY@IOWADOT.US |
| ANGELA SILVEY | HARDIN COUNTY | 641-858-3182 | ASILVEY@HARDINCOUNTYIA.GOV |
| MICHAEL YOUNTS | MID-AMERICAN ENERGY | 515-979-8294 | MYOUNTS@MIDAMERICAN.COM |
| | MEDIACOM | 855-633-4226 | |
| | WINDSTREAM | 877-901-4692 | |
| | DISH NETWORK | 888-926-5457 | |
| | DIRECT TV | 866-667-9485 | |
| | ALLIANT ENERGY (NATURAL GAS) | 800-255-4268 | |

## IDOT PROJECT NOTES

NOTE 1: THIS LIST IS NOT ALL-INCLUSIVE. CONTRACTOR IS RESPONSIBLE TO REQUEST LOCATES OF ALL UTILITIES, AND COORDINATE IF NEEDED, PRIOR TO COMMENCING WORK. 72 HOUR ADVANCE NOTICE IS REQUIRED TO NOTIFY ALL UTILITY COMPANIES.

NOTE 2: EXISTING UTILITY CONFLICTS: ANY CHANGES TO THE PLANNED RUNNING LINE REQUIRE PRE-APPROVAL BY AUREON AND ROW AUTHORITY HAVING JURISDICTION. THE PLAN FOR PARALLEL UTILITIES WOULD BE TO ADJUST THE RUNNING LINE BY AN APPROPRIATE OFFSET (APPROXIMATELY 2') OR CHANGE DEPTH OF THE INSTALLATION DEPENDING ON ROW AVAILABILITY.

NOTE 3: CONTRACTOR WILL SCHEDULE A SITE WALKTHROUGH UPON COMPLETION OF LOCATES TO DETERMINE ANY CHANGES IN THE RUNNING LINE DUE TO EXISTING UTILITIES. ANY CHANGES REQUIRE IOWA DOT APPROVAL PRIOR TO CONSTRUCTION ON SEGMENTS INVOLVED.

## SUMMARY OF QUANTITIES

| ITEM | UNIT | QUANTITY |
|---|---|---|
| CONDUIT, 1.25" P | LF. | 68,375 |
| CONDUIT, 1.25" B | LF. | 47,250 |
| CONDUIT, 2" B | LF. | 7,606 |
| PULL BOX, 24"X36"X36" | EA. | 35 |
| ARMORED FIBER CABLE, 24 SM | LF. | 168 |
| ARMORED FIBER, 24 SM (COIL) | LF. | 300 |
| ARMORED FIBER CABLE | LF. | 123,063 |
| ARMORED FIBER CABLE, UNDERGROUND SLACK STORAGE | LF. | 3,900 |

**GENERAL NOTES & SUMMARY OF QUANTITIES**

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | DD.1 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM<br>Approved: GTS |

## 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

### 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 jurisdicton 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.

HARDIN COUNTY
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ELDORA, IA 50627
(641) 939-8108

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 a 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.

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(641) 939-8108

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.

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.1 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.2

FIBER DESIGN

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.2 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

0 50 100

MATCH LINE SHEET F.1

MATCH LINE SHEET F.3

Drainage District Tile
Refer to DD.1 for Installation Requirements

211' BORE

Install Next to Edge of Shoulder (Typ.)

County Highway S27

82' of 1.25" B, Armored Fiber

See Previous Sheet
1.25" P, Armored Fiber

400' of 1.25" P, Armored Fiber

Bore Deep Under Drainage Area
Minimum 10' Below Bottom of Flowline

213' of 1.25" B, Armored Fiber

624' of 1.25" P, Armored Fiber

50' of 1.25" B, Armored Fiber

1318' of 1.25" P, Armored Fiber
From Beginning of Plow to Beginning of Bore

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.3 |
| Date: 10/10/2018 | Drawn: RAM |
| | Checked: RAM |
| Horz. Scale 1 : 100 | Approved: GTS |



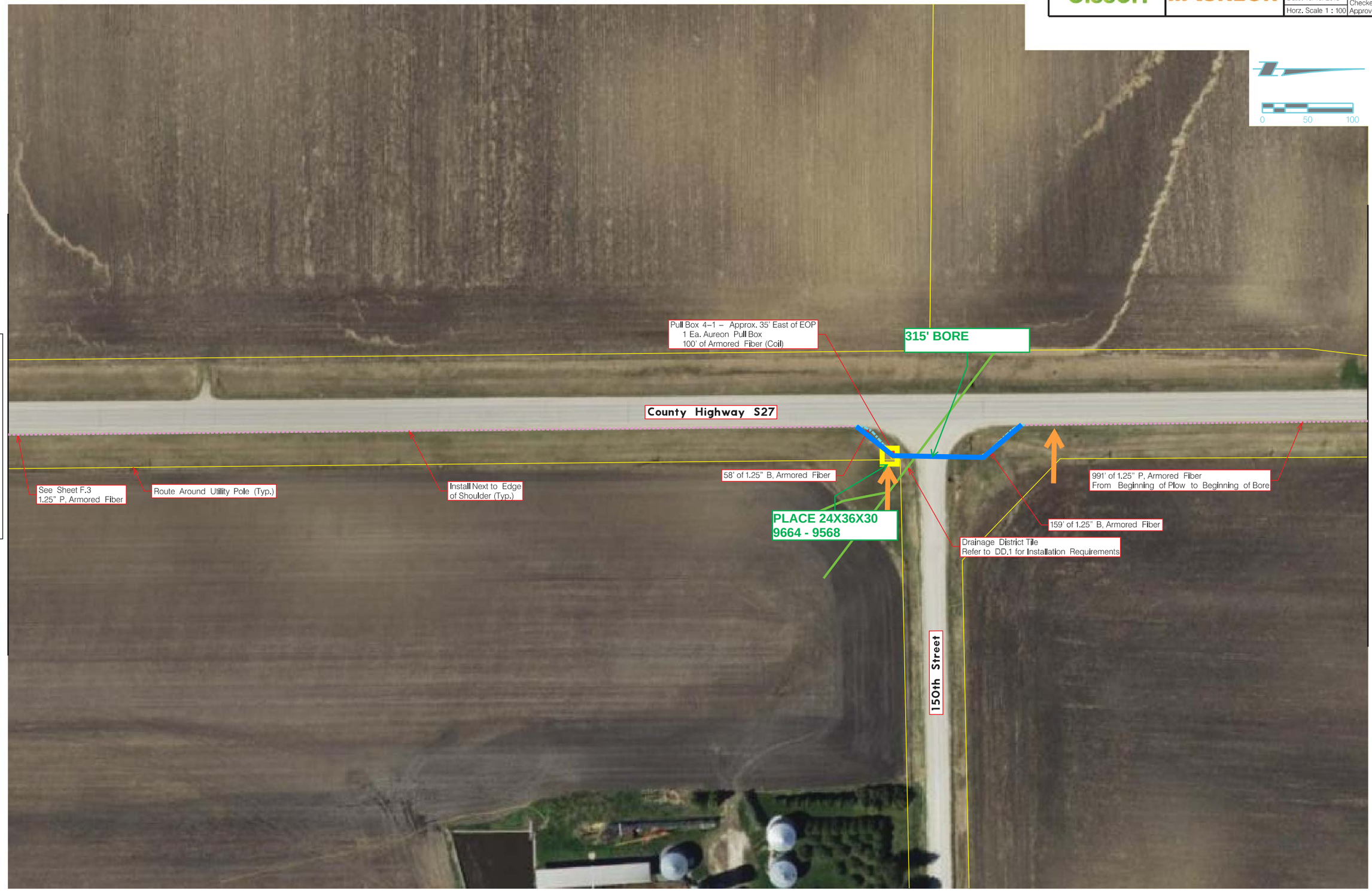

MATCH LINE SHEET F.2

MATCH LINE SHEET F.4

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.4 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.3

MATCH LINE SHEET F.5

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.5 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |

MATCH LINE SHEET F.4

MATCH LINE SHEET F.6

0 50 100

106' BORE

County Highway S27

See Previous Sheet
1.25" P, Armored Fiber

108' of 1.25" B, Armored Fiber

Install Next to Edge
of Shoulder (Typ.)

3855' of 1.25" P, Armored Fiber
From Beginning of Plow to Beginning of Bore

**FIBER DESIGN**

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.6 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |

MATCH LINE SHEET F.5

MATCH LINE SHEET F.7

0 50 100

145th Street

132' BORE

County Highway S27

See Previous Sheet
1.25" P, Armored Fiber

Install Next to Edge
of Shoulder (Typ.)

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.7 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.6

MATCH LINE SHEET F.8

**FIBER DESIGN**

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.8 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

0 50 100

MATCH LINE SHEET F.7

MATCH LINE SHEET F.9

140th Street

County Highway S27

229' BORE

130' BORE

347' of 1.25" B, Armored Fiber

62' of 1.25" B, Armored Fiber

See Pervious Sheet
1.25" P, Armored Fiber

Route Around Utility Pole (Typ.)

PLACE 24X36X30
3968 - 3868

Pull Box 8-1 – Approx. 38' East of EOP
1 Ea. Aureon Pull Box
100' of Armored Fiber (Coil)

1021' of 1.25" P, Armored Fiber

Install Next to Edge
of Shoulder (Typ.)

279' of 1.25" B, Armored Fiber
From Beginning of Bore to Pull Box 9-1

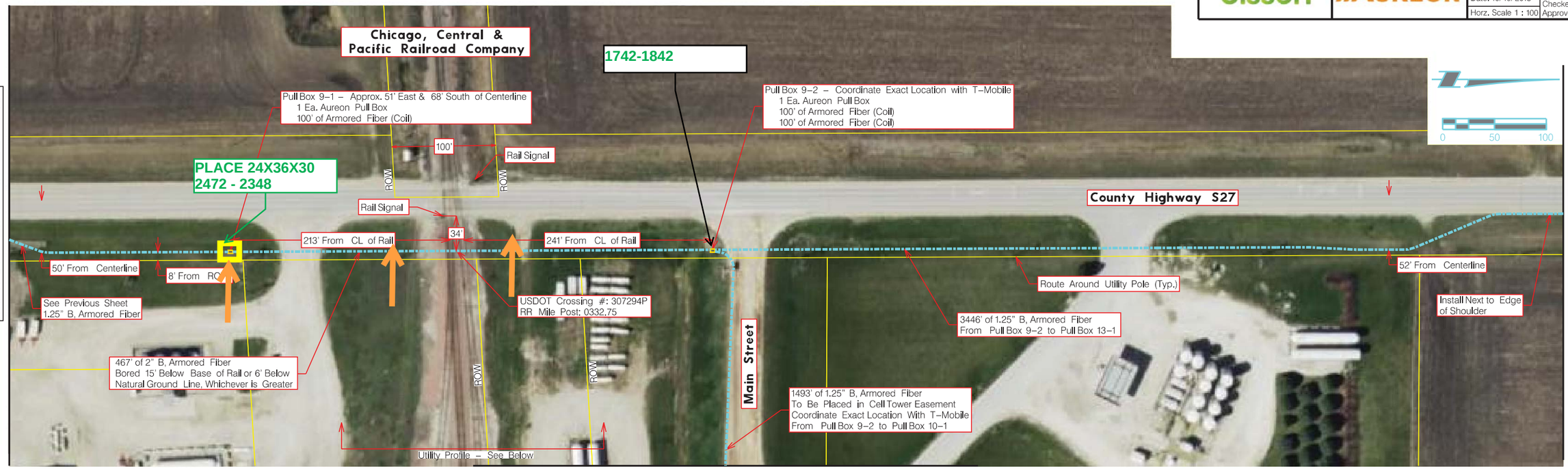
FIBER DESIGN

olsson | AUREON

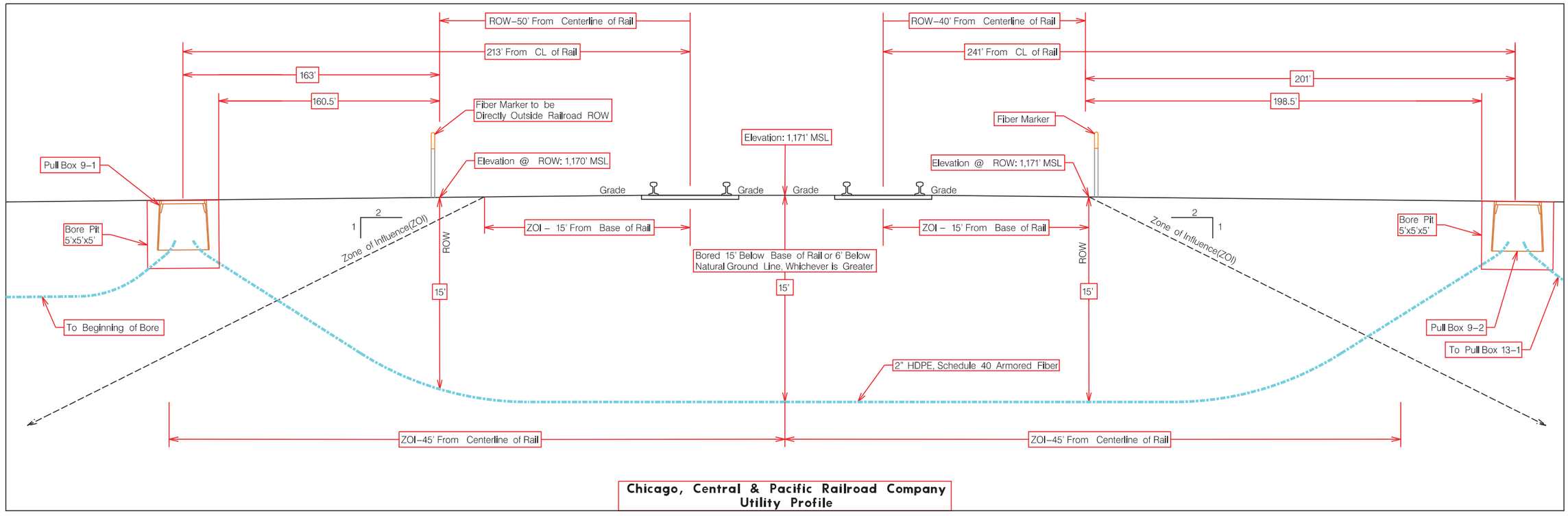
| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.9 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

MATCH LINE SHEET F.8

MATCH LINE SHEET F.11




MATCH LINE SHEET F.10




Chicago, Central & Pacific Railroad Company
Utility Profile

**FIBER DESIGN**

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.10 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |

MATCH LINE SHEET F.9




FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.11 |
| Date: 10/10/2018 | Drawn: RAM |
| | Checked: RAM |
| Horz. Scale 1 : 100 | Approved: GTS |

0 50 100

MATCH LINE SHEET F.9

MATCH LINE SHEET F.12




FIBER DESIGN

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.12 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 50 | Approved: GTS |




FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.13 |
| | | Date: 10/10/2018 | Drawn: RAM |
| | | Horz. Scale 1 : 100 | Checked: RAM |
| | | | Approved: GTS |

0 25 50

MATCH LINE SHEET F.12

MATCH LINE SHEET F.14

County Highway S27

Grand Avenue

Washington Street

See Sheet F.9
1.25" B, Armored Fiber

Install Next to Edge of Shoulder

Pull Box 13-1 – Approx. 58' East & 41' South of Centerline
1 Ea. Aureon Pull Box
100' of Armored Fiber (Coil)

3' From ROW

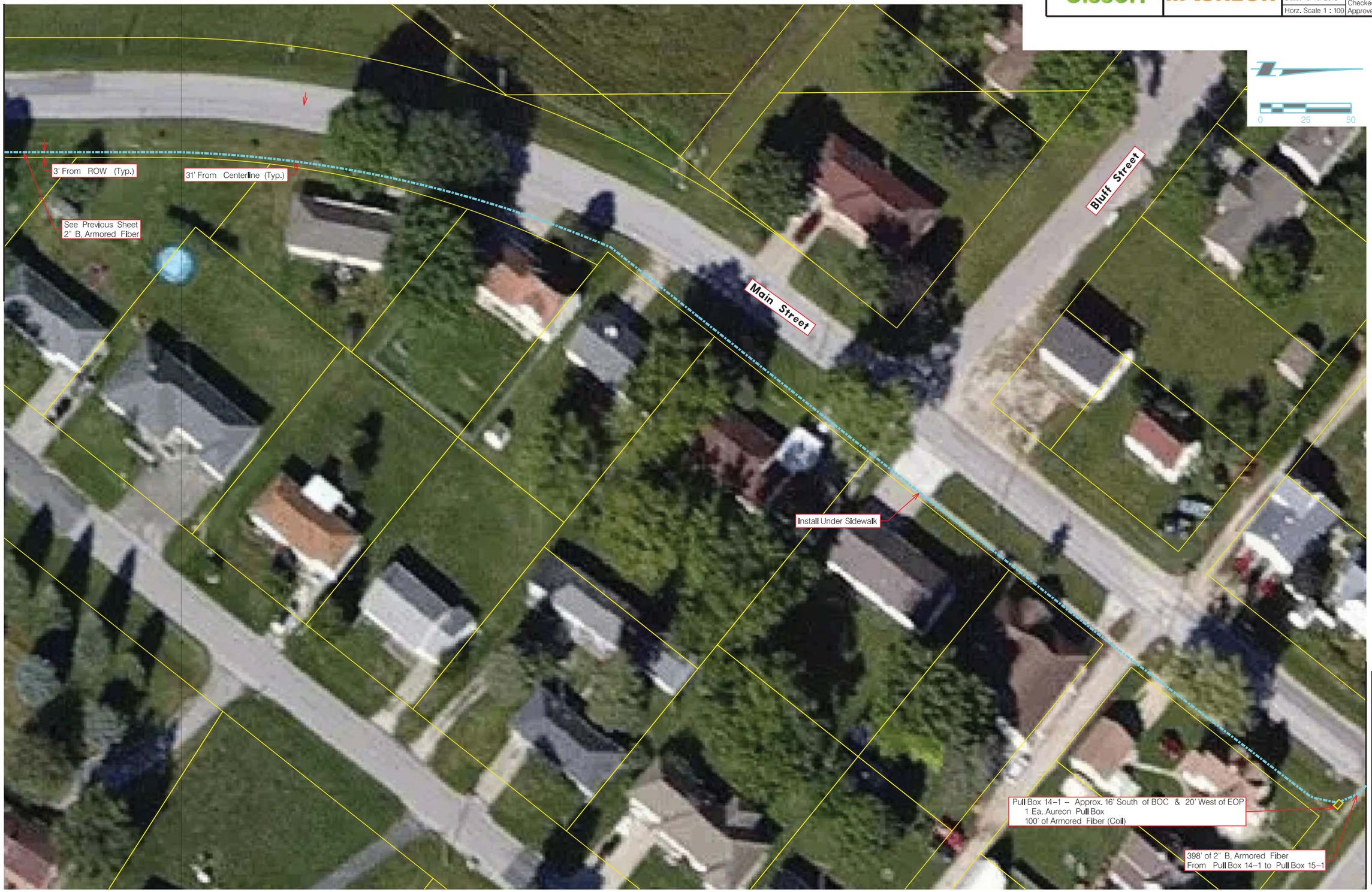
31' From Centerline

1273' of 2" B, Armored Fiber
From Pull Box 13-1 to Pull Box 14-1

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.14 |
| | | Date: 10/10/2018 | Drawn: RAM |
| | | Horz. Scale 1 : 100 | Checked: RAM |
| | | | Approved: GTS |

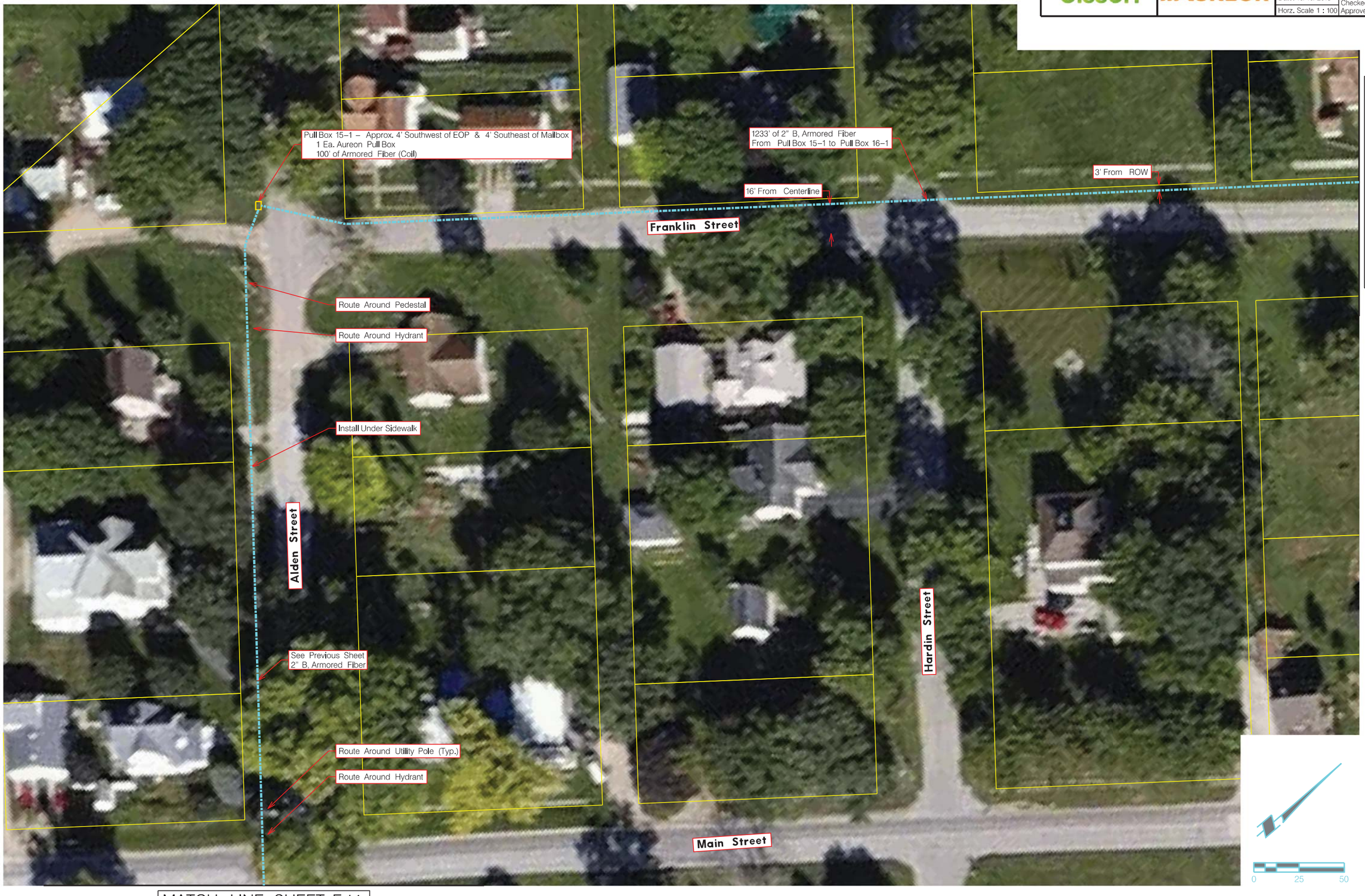
MATCH LINE SHEET F.13




MATCH LINE SHEET F.15

**FIBER DESIGN**

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.15 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |

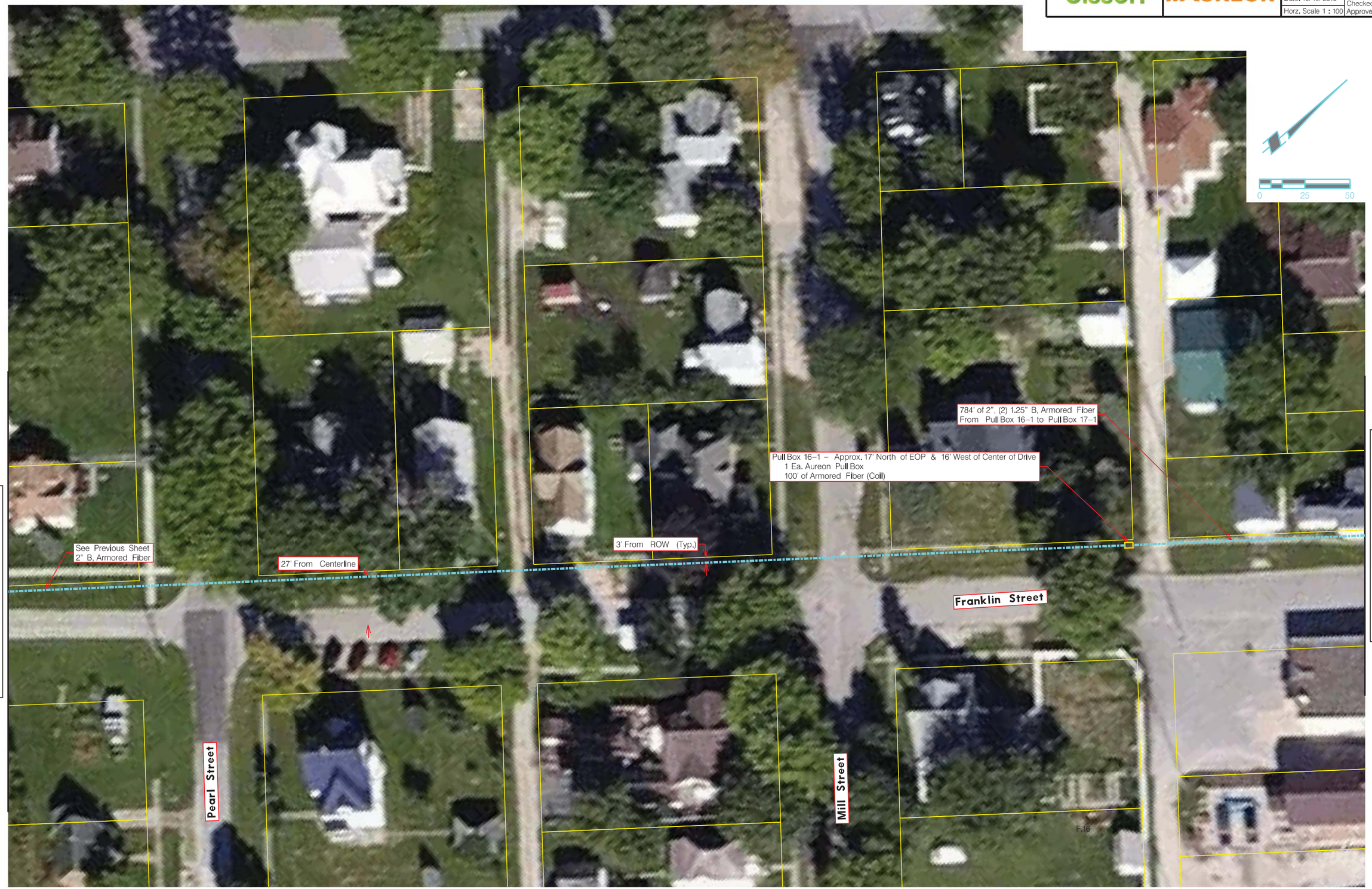



MATCH LINE SHEET F.16

MATCH LINE SHEET F.14

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.16 |
| | | Date: 10/10/2018 | Drawn: RAM |
| | | Horz. Scale 1 : 100 | Checked: RAM |
| | | | Approved: GTS |



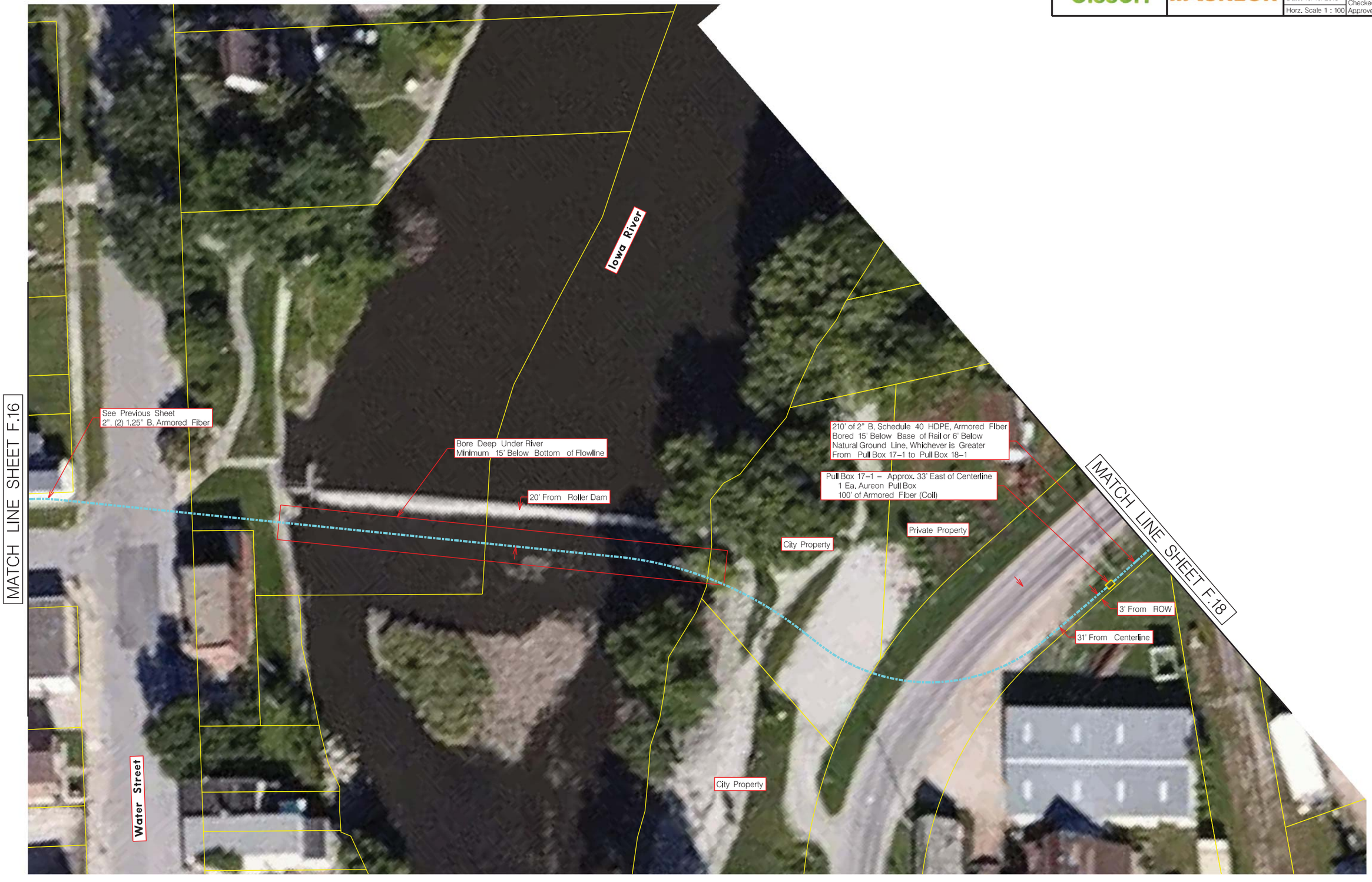

MATCH LINE SHEET F.15

MATCH LINE SHEET F.17

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.17 |
| Date: 10/10/2018 | Drawn: RAM |
| | Checked: RAM |
| Horz. Scale 1 : 100 | Approved: GTS |

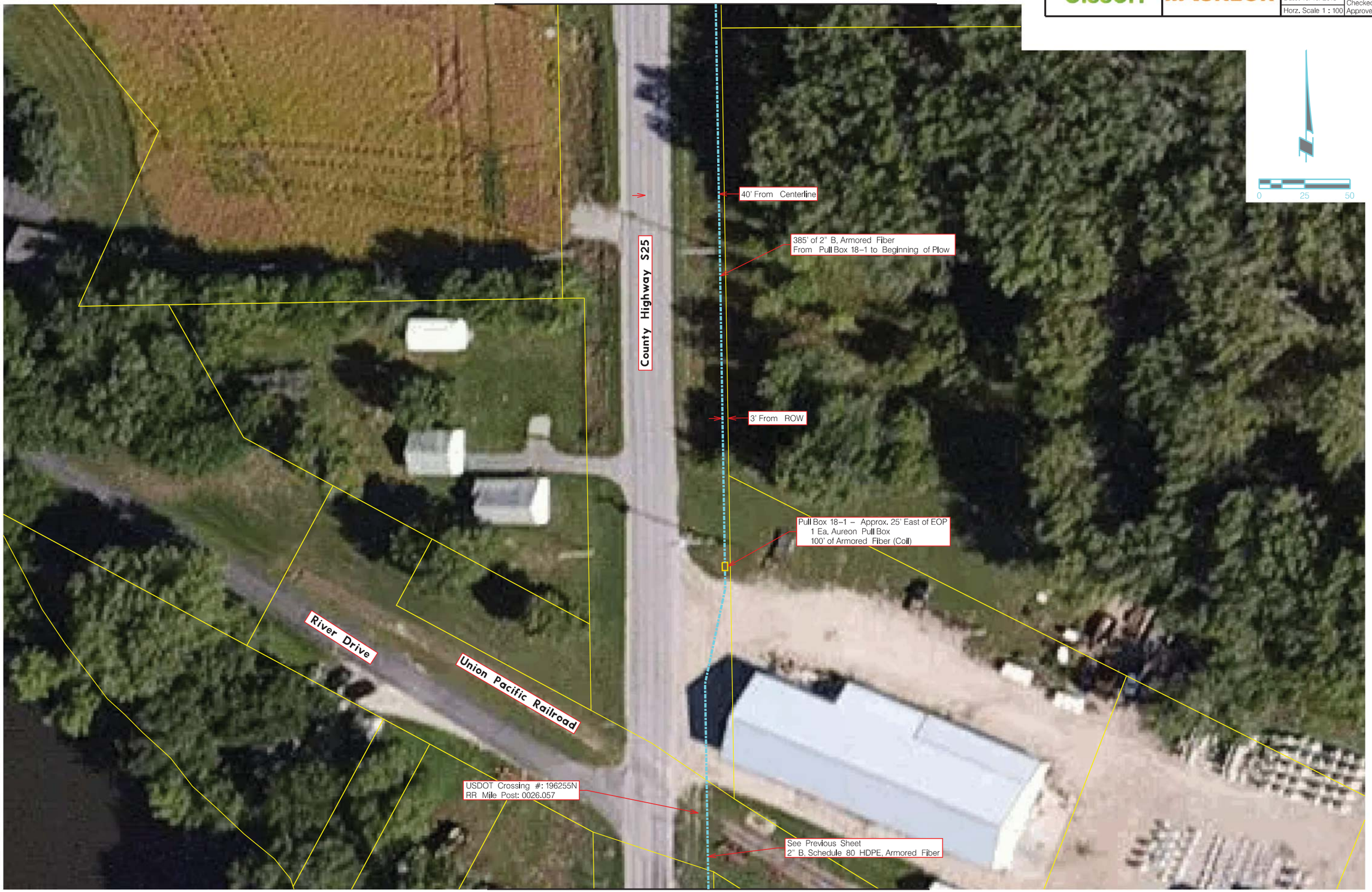



FIBER DESIGN

MATCH LINE SHEET F.19

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.18 |
| Date: 10/10/2018 | Drawn: RAM |
| | Checked: RAM |
| Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.17

FIBER DESIGN

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.19 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

MATCH LINE SHEET F.18

MATCH LINE SHEET F.20

0 50 100

County Highway S25

See Previous Sheet
2" B, Armored Fiber

Install Next to Edge
of Shoulder (Typ.)

853' of 1.25" P, Armored Fiber

84' of 1.25" B, Armored Fiber

1712' of 1.25" P, Armored Fiber
From Beginning of Plow to Pull Box 20-1

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.20 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |




**FIBER DESIGN**

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.21 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM<br>Approved: GTS |
| | | Horz. Scale 1 : 100 | |




MATCH LINE SHEET F.20

MATCH LINE SHEET F.22

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.22 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM<br>Approved: GTS |
| | | Horz. Scale 1 : 100 | |




MATCH LINE SHEET F.21

MATCH LINE SHEET F.23

**FIBER DESIGN**

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.23 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

MATCH LINE SHEET F.22

MATCH LINE SHEET F.24

0 50 100

1716' of 1.25" P, Armored Fiber
From Pull Box 23-1 to Beginning of Bore

472' of 1.25" B, Armored Fiber

County Highway S25

See Previous Sheet
1.25" P, Armored Fiber

Install Next to Edge
of Shoulder (Typ.)

Drainage District Tile
Refer to DD.1 for Installation Requirements

23' of 1.25" P, Armored Fiber

Pull Box 23-1 – Approx. 29' East of EOP
1 Ea. Aureon Pull Box
100' of Armored Fiber (Coil)

110th Street

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.24 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.23

MATCH LINE SHEET F.25

FIBER DESIGN

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.25 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |



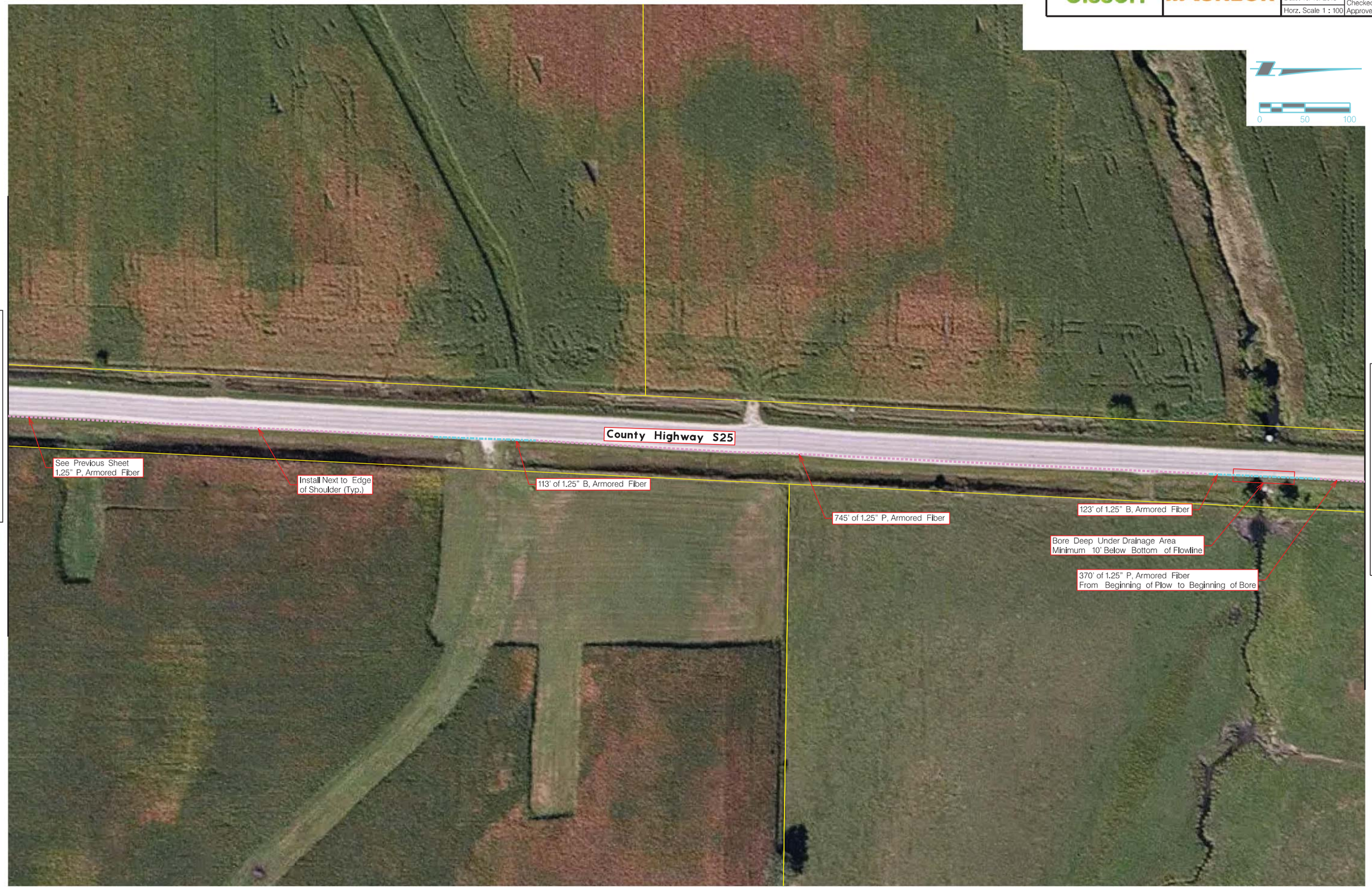

MATCH LINE SHEET F.24

MATCH LINE SHEET F.26

**FIBER DESIGN**

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.26 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |



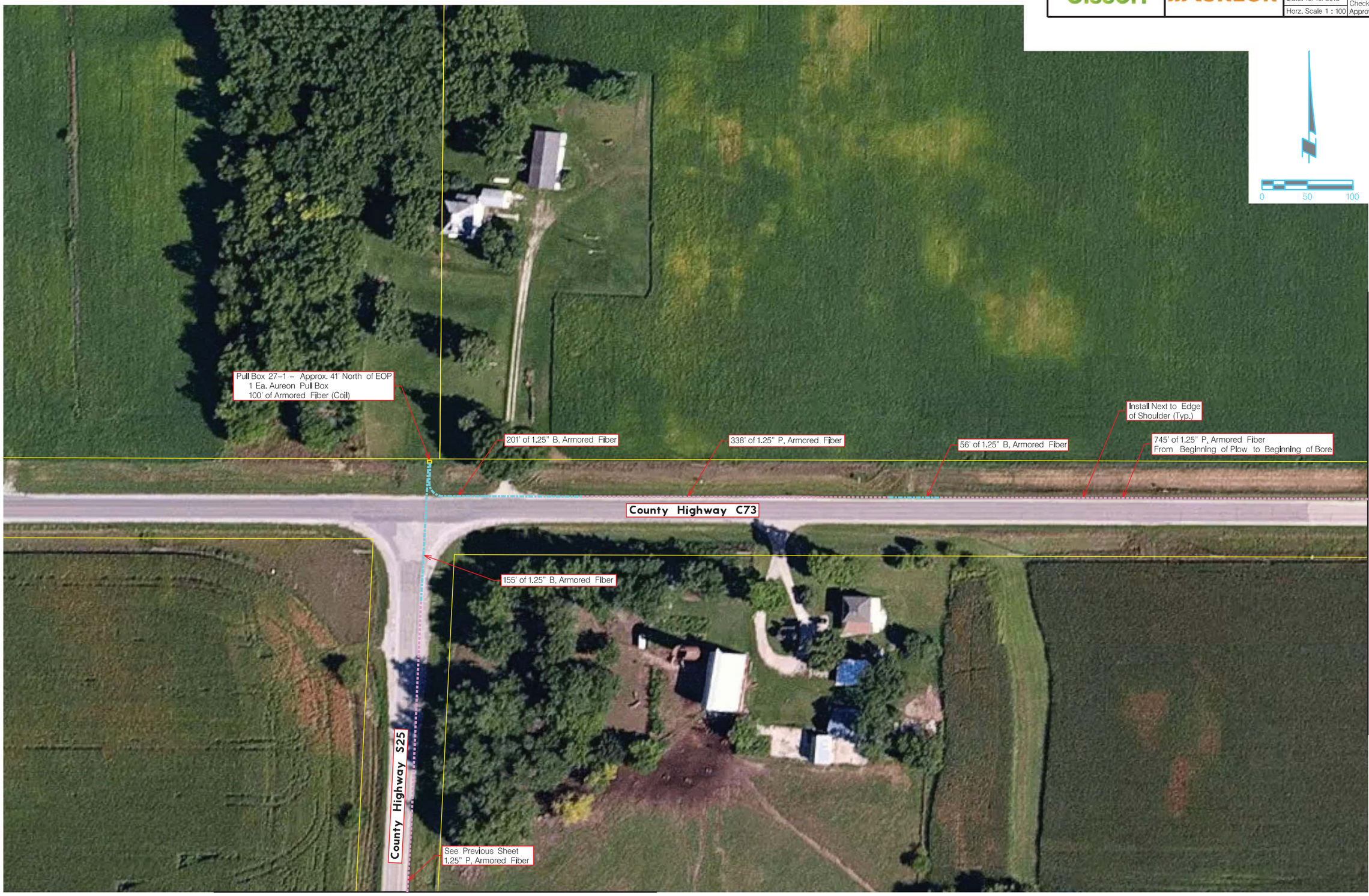

MATCH LINE SHEET F.25

MATCH LINE SHEET F.27

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.27 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |

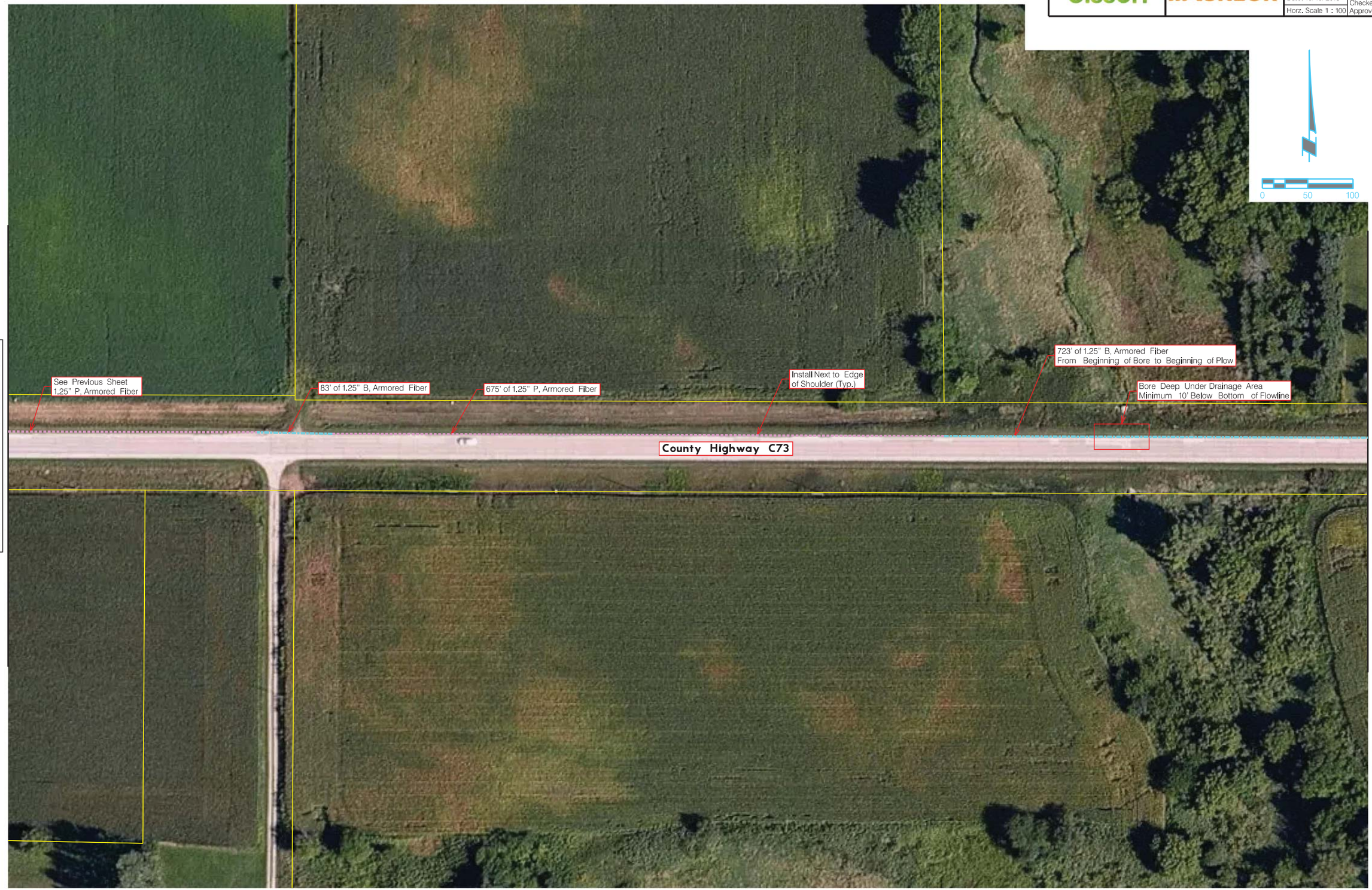



MATCH LINE SHEET F.28

MATCH LINE SHEET F.26

FIBER DESIGN

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.28 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.27

MATCH LINE SHEET F.29

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.29 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |



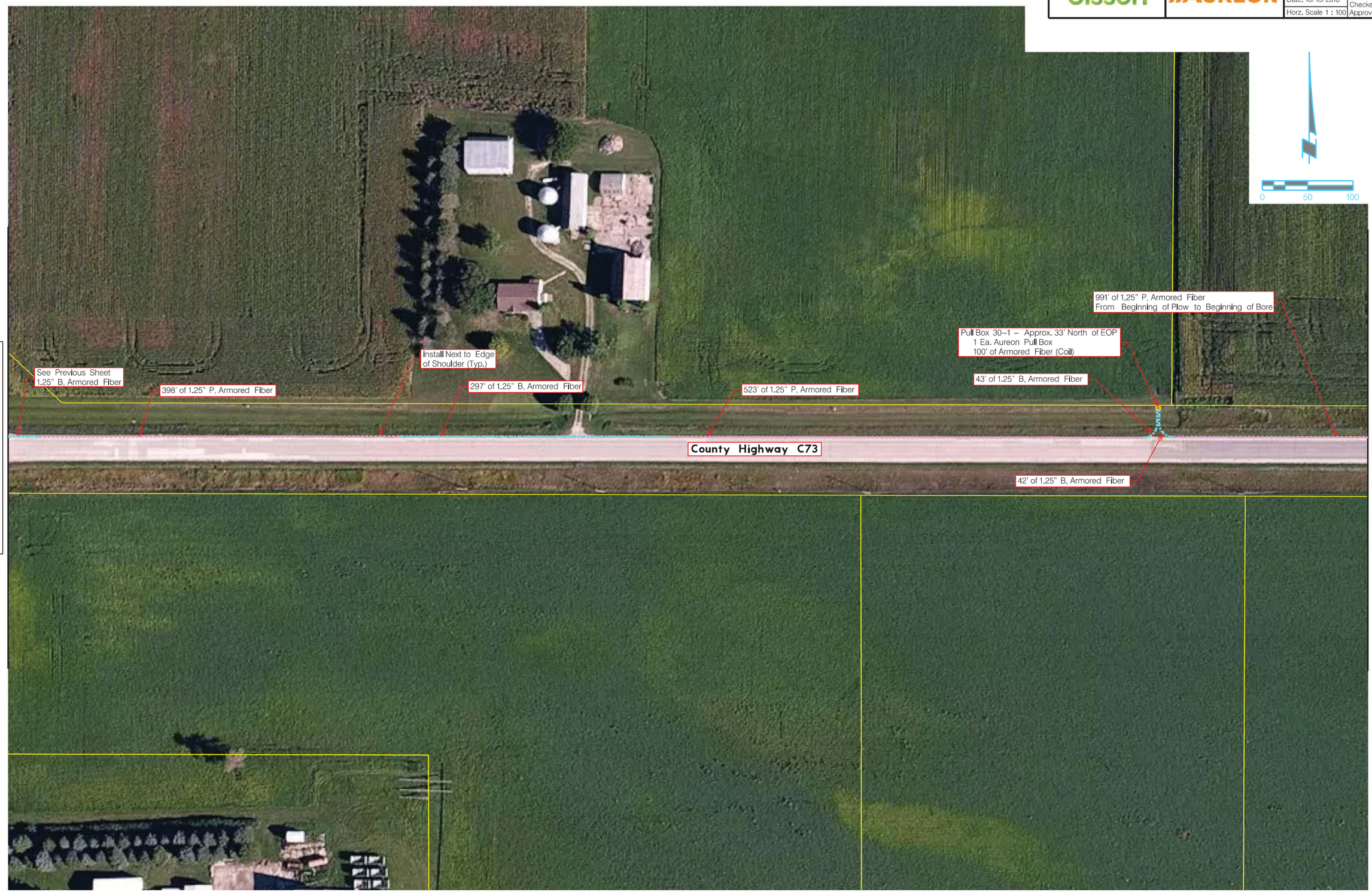

MATCH LINE SHEET F.28

MATCH LINE SHEET F.30

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.30 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.29

MATCH LINE SHEET F.31

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.31 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.30

MATCH LINE SHEET F.32

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.32 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.31

MATCH LINE SHEET F.33

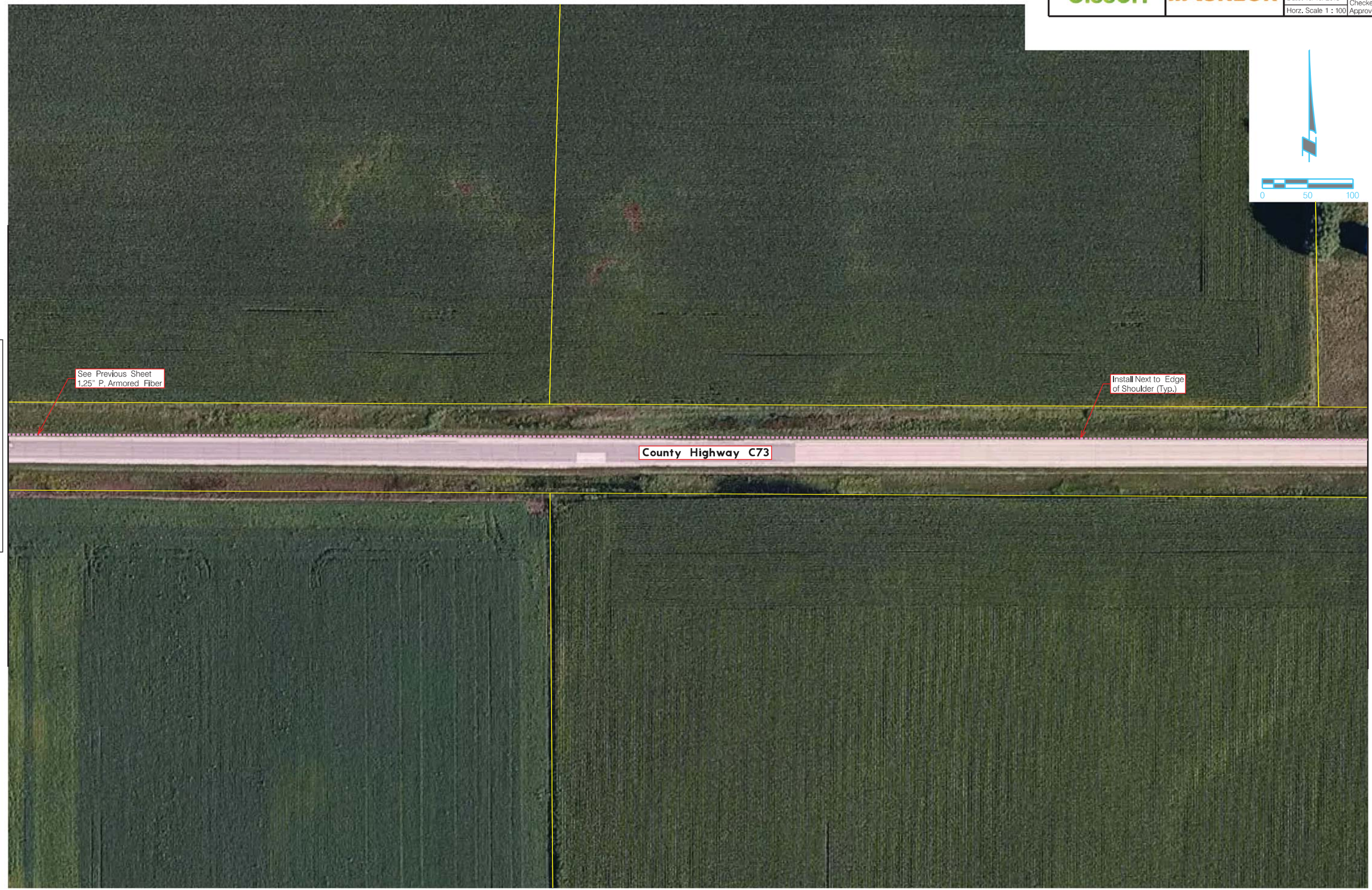
olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.33 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




FIBER DESIGN

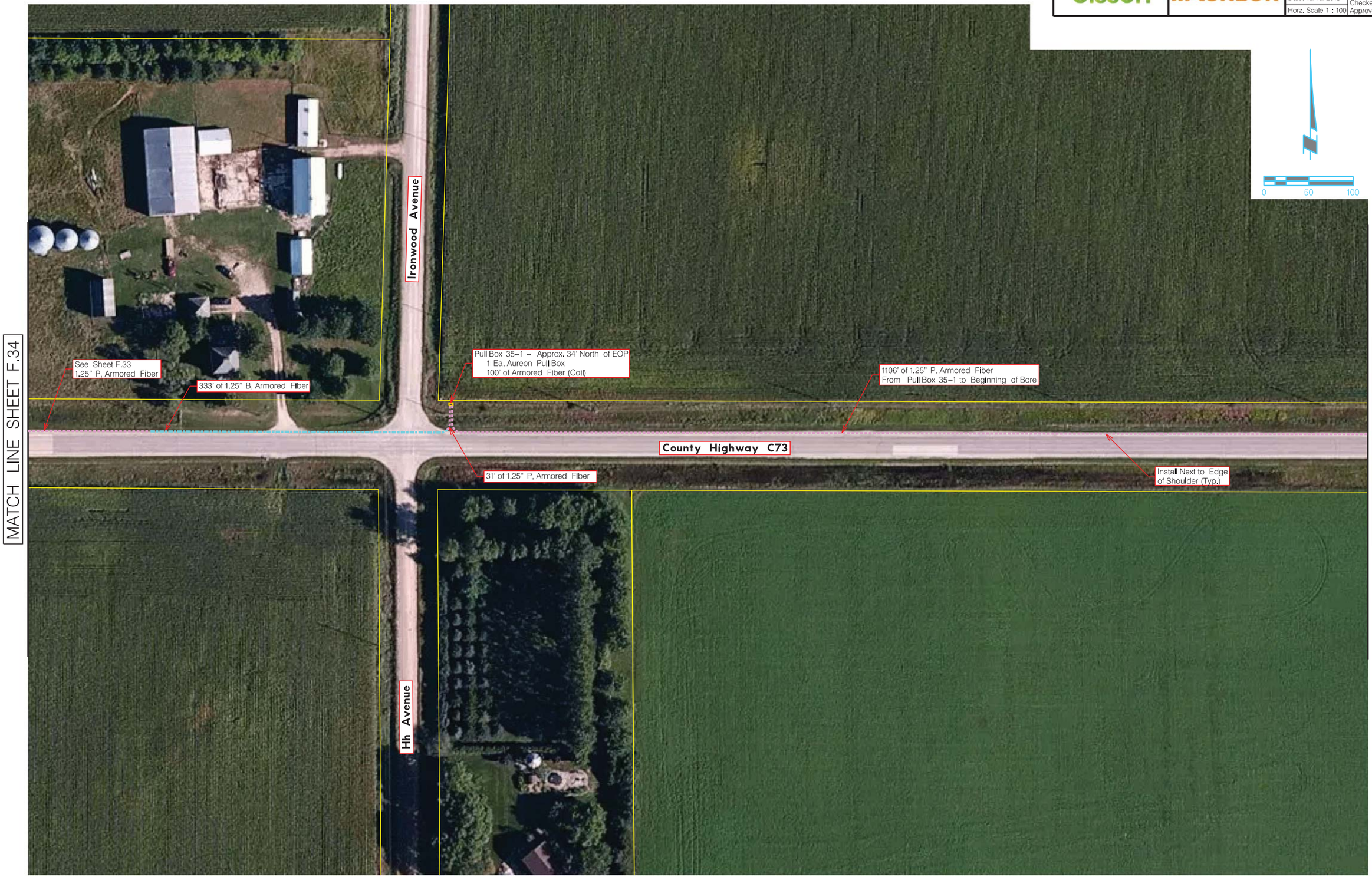
| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.34 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.33

MATCH LINE SHEET F.35

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.35 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.34

MATCH LINE SHEET F.36

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.36 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.35

MATCH LINE SHEET F.37

FIBER DESIGN

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.37 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.36

MATCH LINE SHEET F.38

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.38 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.37

MATCH LINE SHEET F.39

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.39 |
| Date: 10/10/2018 | Drawn: RAM |
| | Checked: RAM |
| Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.38

MATCH LINE SHEET F.40

FIBER DESIGN

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.40 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |

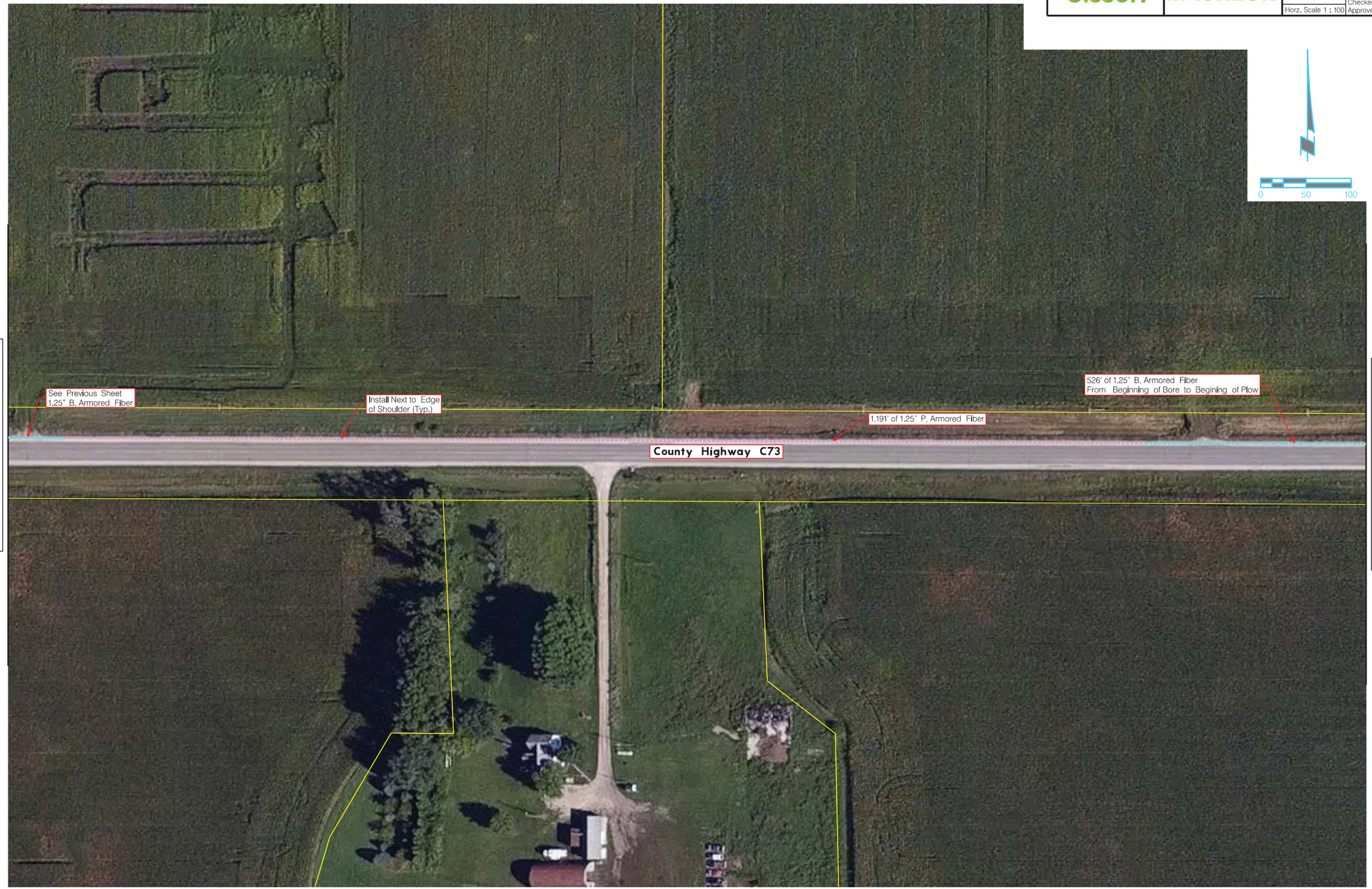



MATCH LINE SHEET F.39

MATCH LINE SHEET F.41

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.41 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.40

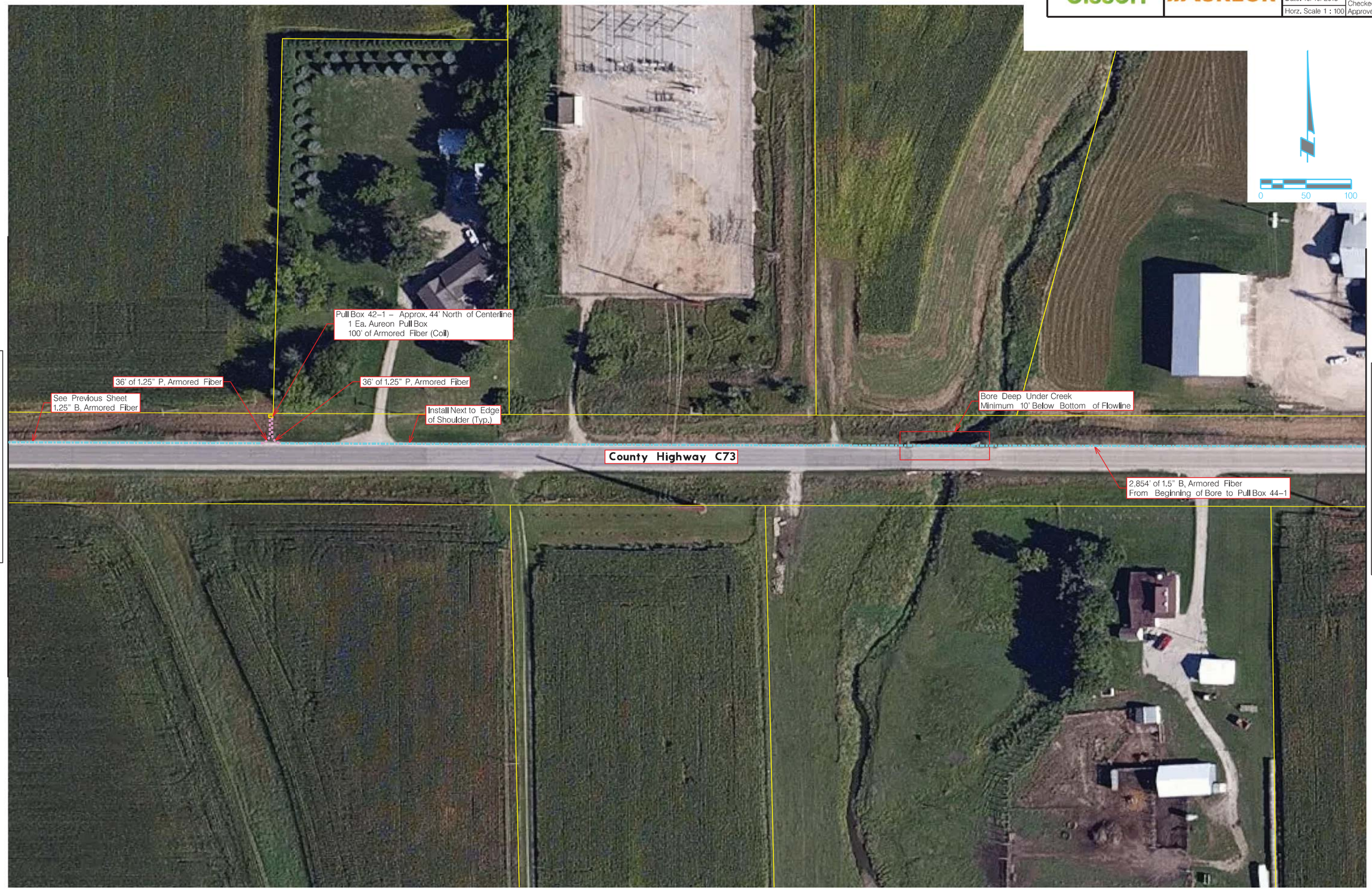
MATCH LINE SHEET F.42

FIBER DESIGN

F.41

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.42 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.41

MATCH LINE SHEET F.43

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.43 |
| | | Date: 10/10/2018 | Drawn: RAM |
| | | Horz. Scale 1 : 100 | Checked: RAM |
| | | | Approved: GTS |




MATCH LINE SHEET F.42

MATCH LINE SHEET F.44

FIBER DESIGN

olsson | AUREON

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.44 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 100 | Checked: RAM |
| | Approved: GTS |




MATCH LINE SHEET F.43

MATCH LINE SHEET F.45

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F45 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |




MATCH LINE SHEET F.44

MATCH LINE SHEET F.46

FIBER DESIGN

| olsson | AUREON | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | | 018-1341 | F.46 |
| | | Date: 10/10/2018 | Drawn: RAM<br>Checked: RAM |
| | | Horz. Scale 1 : 100 | Approved: GTS |

MATCH LINE SHEET F.45

MATCH LINE SHEET F.47




**FIBER DESIGN**

| olsson | AUREON | PROJECT NO. 018-1341 | SHEET NO. F.47 |
|---|---|---|---|
| | | Date: 10/10/2018 | Drawn: RAM |
| | | Horz. Scale 1 : 100 | Checked: RAM |
| | | | Approved: GTS |







Refer to sheets DOT.1-DOT.12 for design located within Iowa DOT ROW

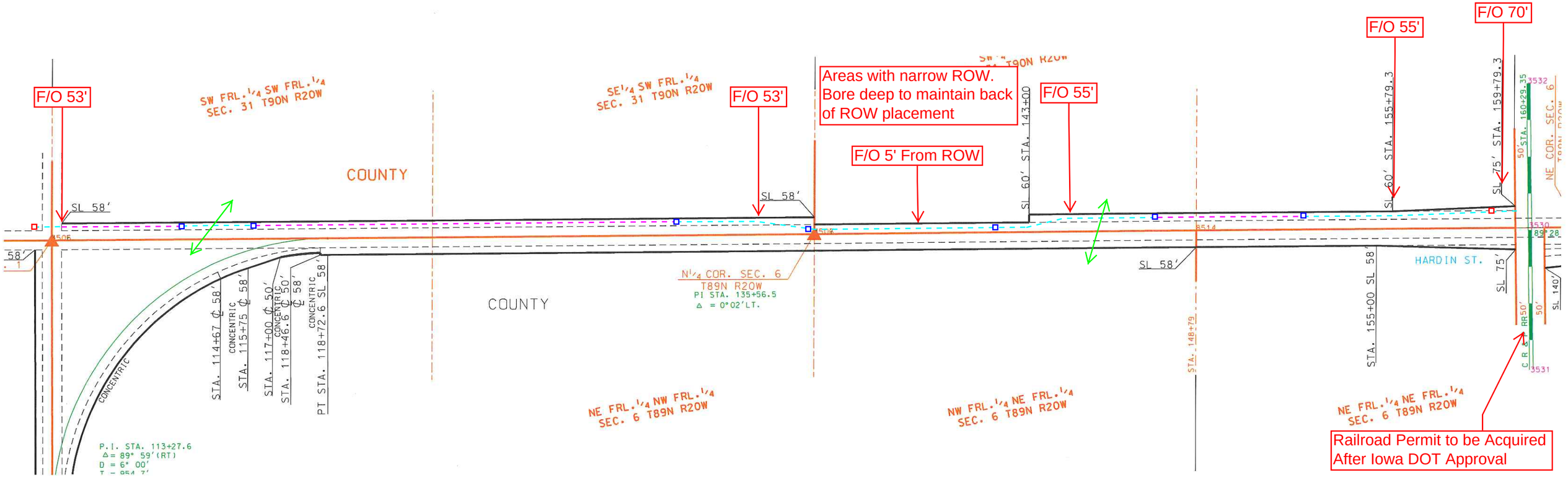



MATCH LINE SHEET F.46

FIBER DESIGN

DOT.1

US 65




Legend of Symbols (DOT Specific Sheets)

- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

Drainage District(DD) Project Notes:

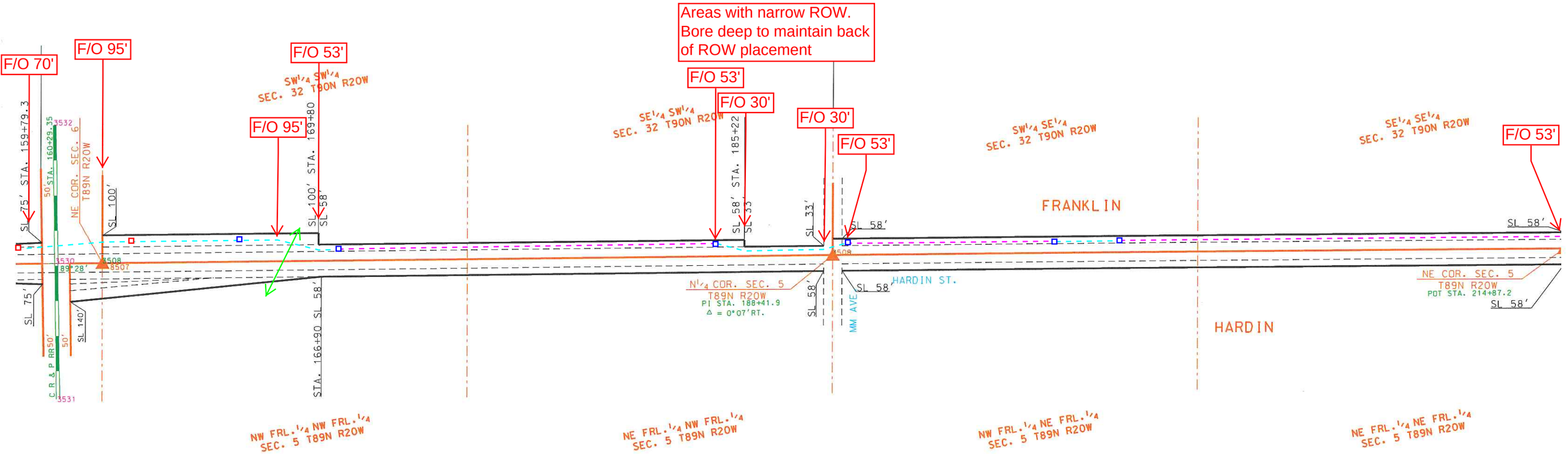
1. The DD tiles shown on these plans are only shown as an approx. location and should be field located with the help of the Hardin County DD representative.
2. Any potholed tile left unattended is to be covered up until it is backfilled.
3. Refer to Hardin County DD office for any related questions.

General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

DOT.2

US 65




Legend of Symbols (DOT Specific Sheets)

- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

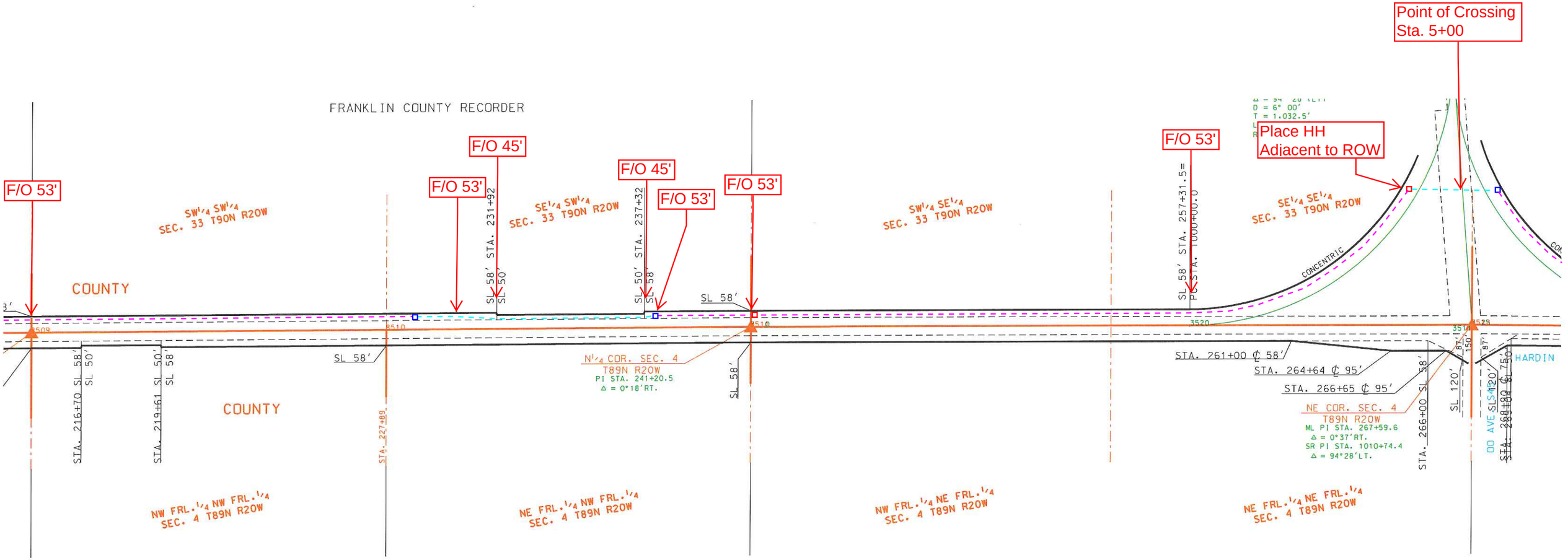
Drainage District(DD) Project Notes:

1. DD tiles are shown as a green arrow.
2. The drainage tiles shown on these plans are only shown as an approx. location and should be field located with the help of the Hardin County DD representative.
3. Any pothole left unattended is to be covered up until it is backfilled.
4. Refer to Hardin County DD office for any related questions.

General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

DOT.3




US 65

Legend of Symbols (DOT Specific Sheets)

- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

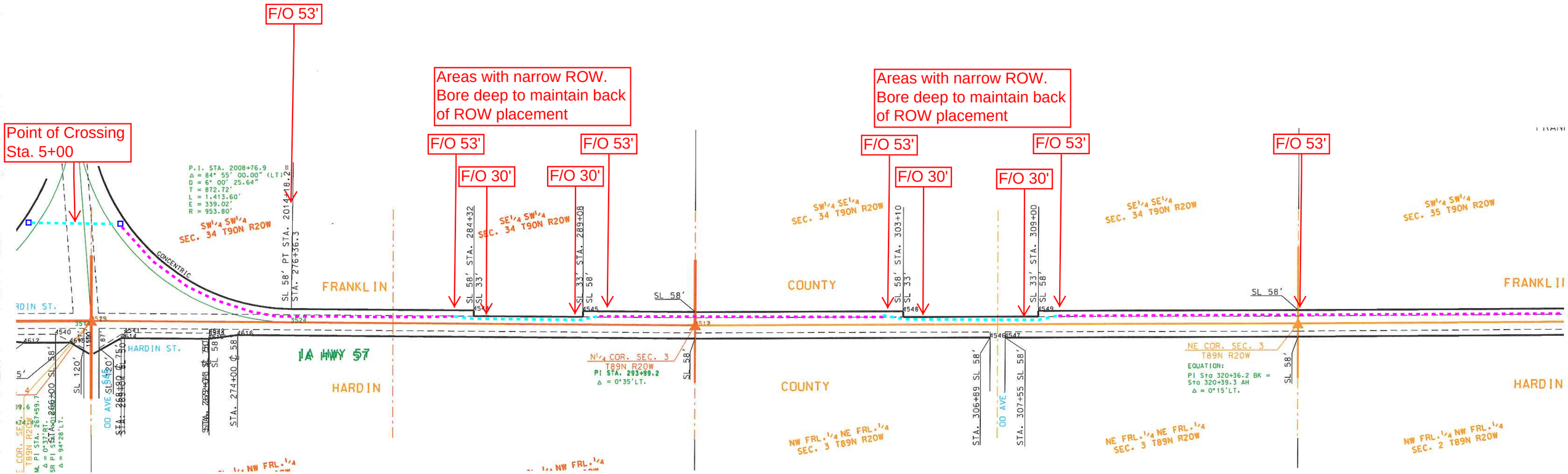
General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

DOT.4

N

IA 57




Legend of Symbols (DOT Specific Sheets)

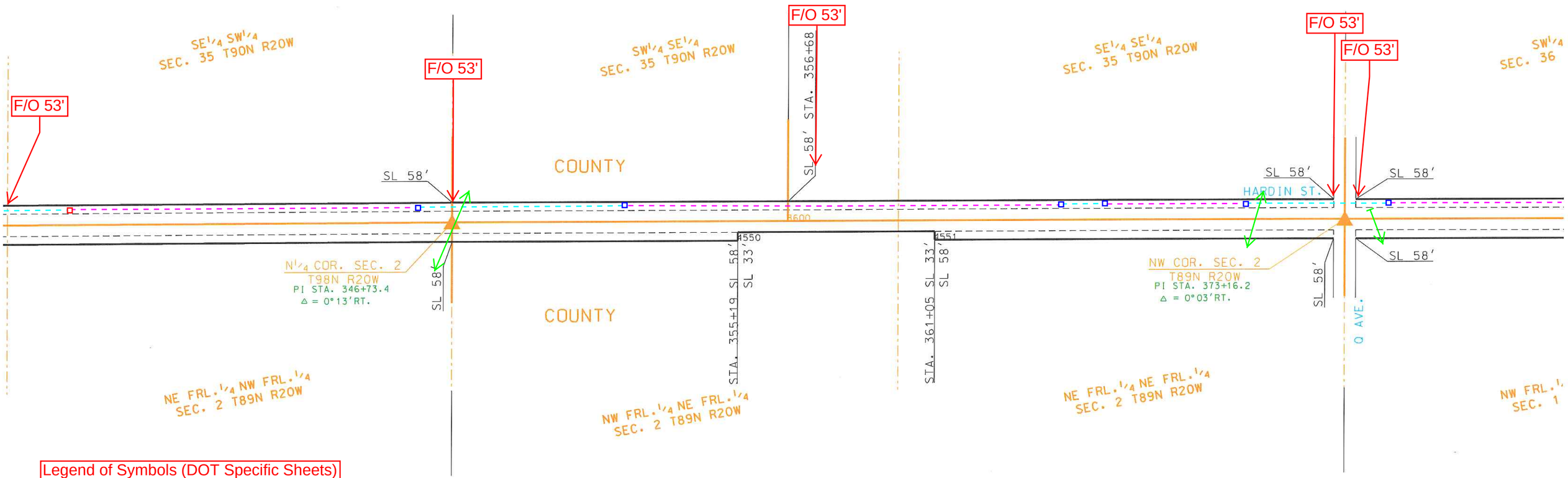
- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

DOT.5

IA 57




Legend of Symbols (DOT Specific Sheets)

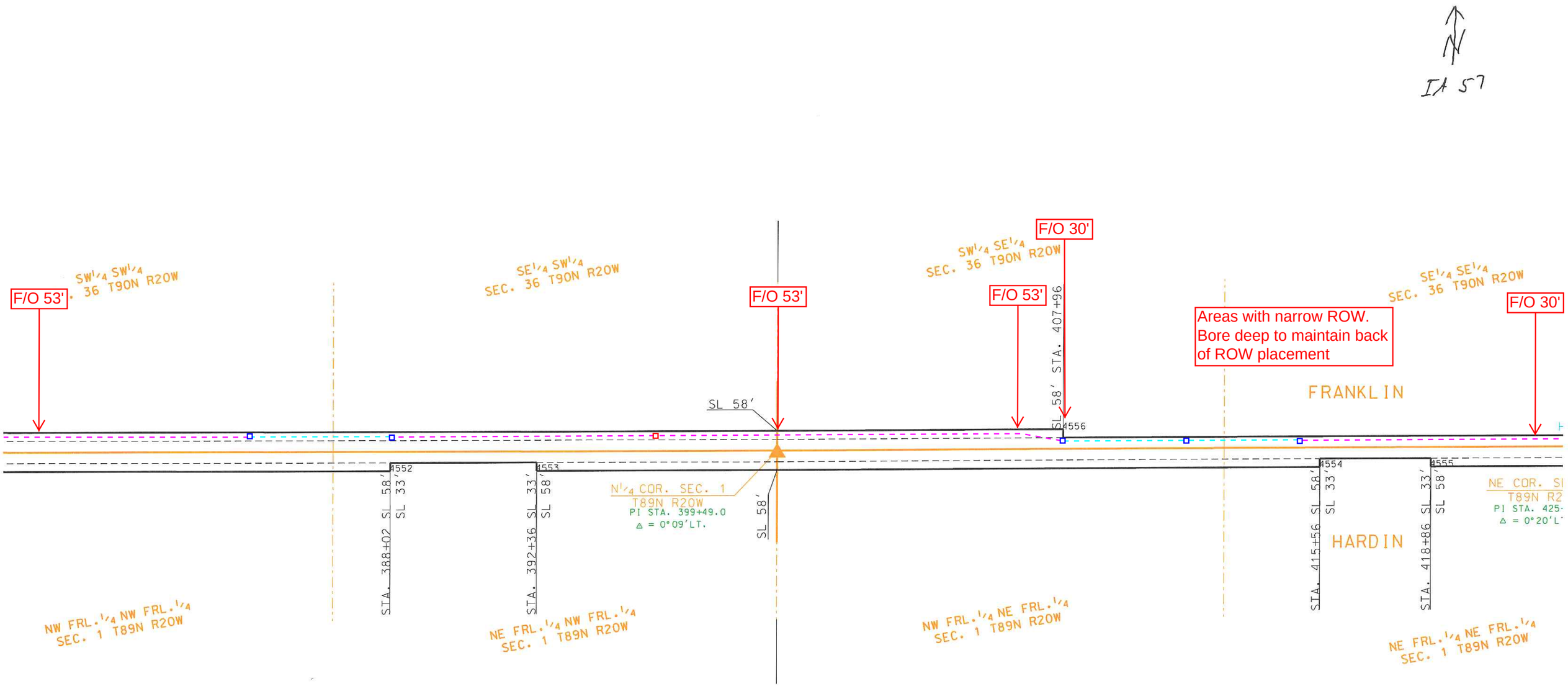
- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

Drainage District(DD) Project Notes:

1. DD tiles are shown as a green arrow.
2. The drainage tiles shown on these plans are only shown as an approx. location and should be field located with the help of the Hardin County DD representative.
3. Any pothole left unattended is to be covered up until it is backfilled.
4. Refer to Hardin County DD office for any related questions.

General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

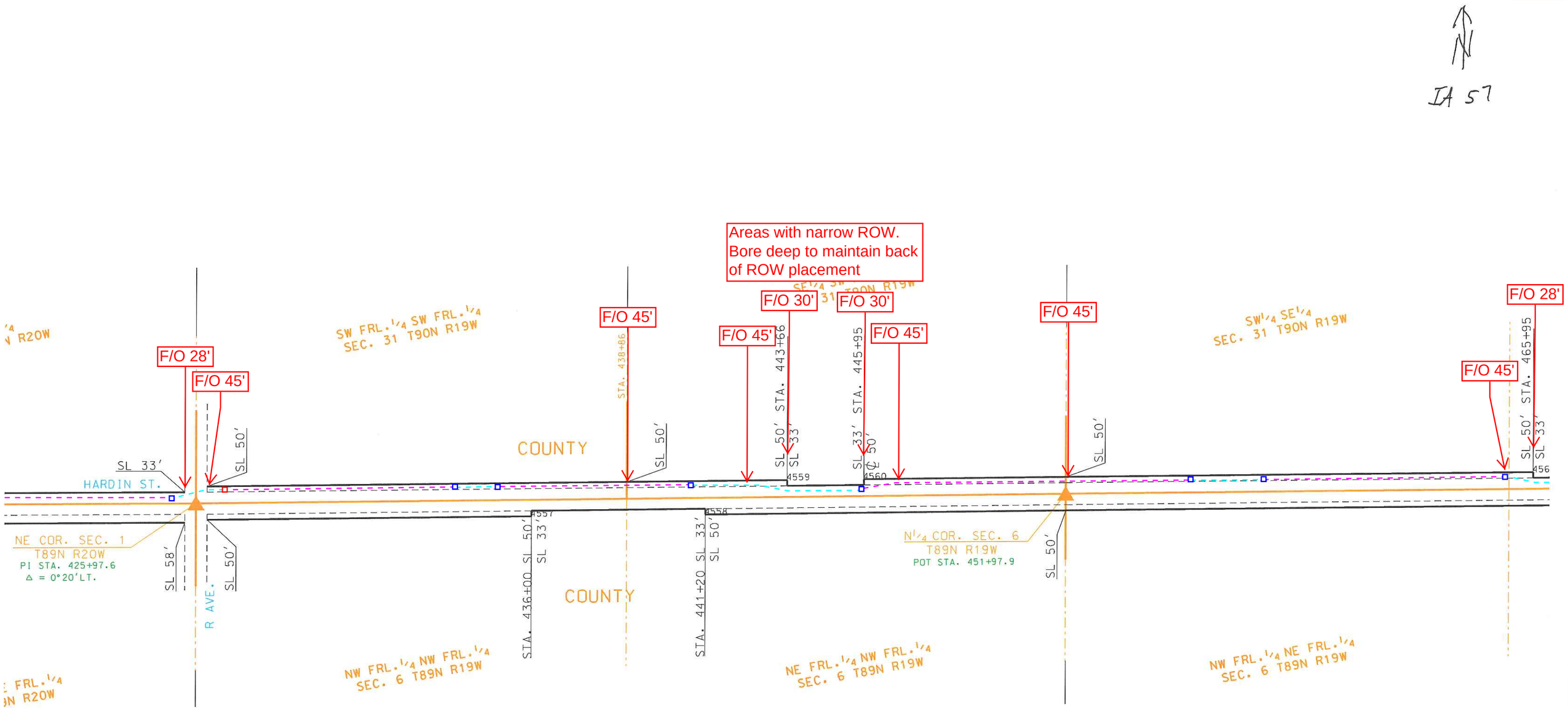



Legend of Symbols (DOT Specific Sheets)

- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.




Legend of Symbols (DOT Specific Sheets)

- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

General Iowa DOT Project Notes:

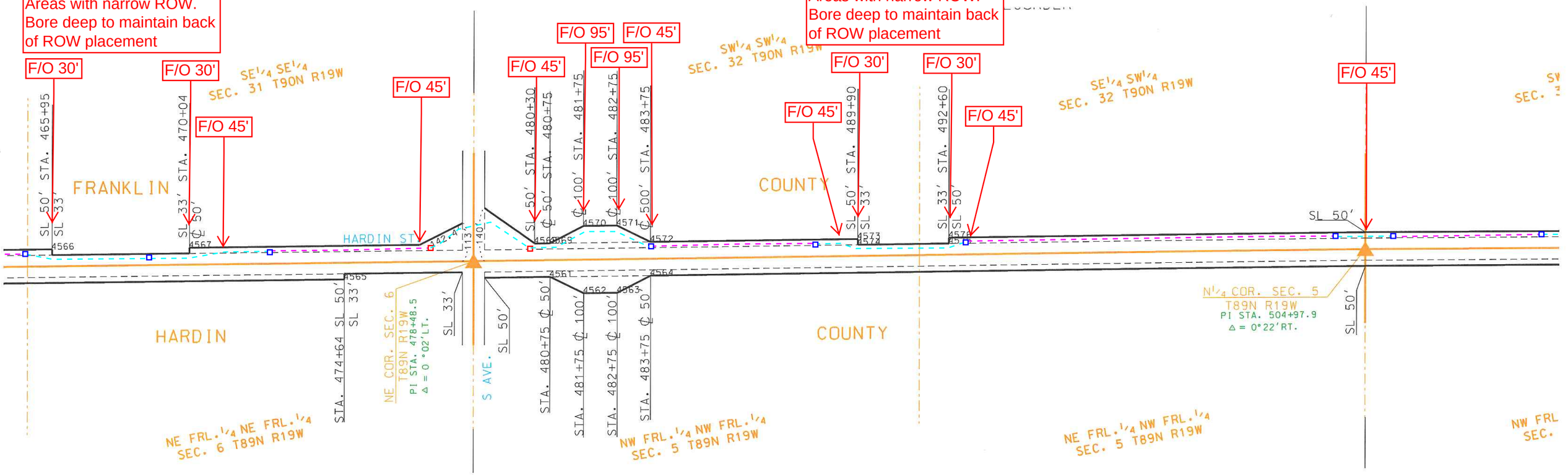
1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

DOT.8

IA 57

Areas with narrow ROW.
Bore deep to maintain back
of ROW placement

Areas with narrow ROW.
Bore deep to maintain back
of ROW placement



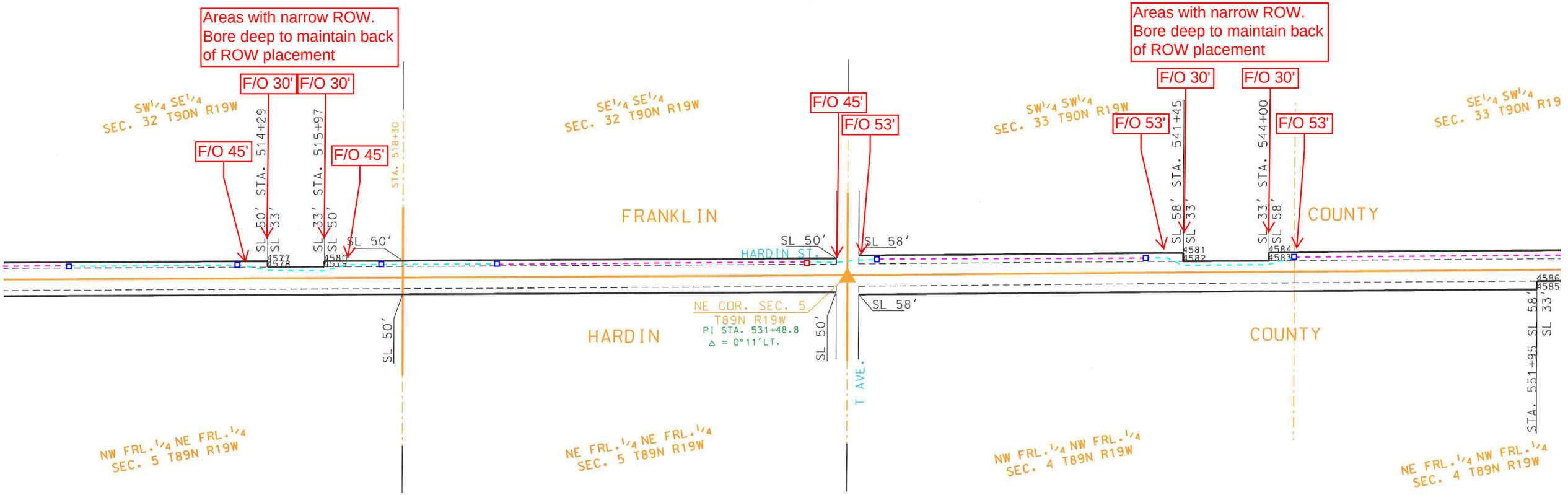

Legend of Symbols (DOT Specific Sheets)

- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

DOT.9




Legend of Symbols (DOT Specific Sheets)

- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

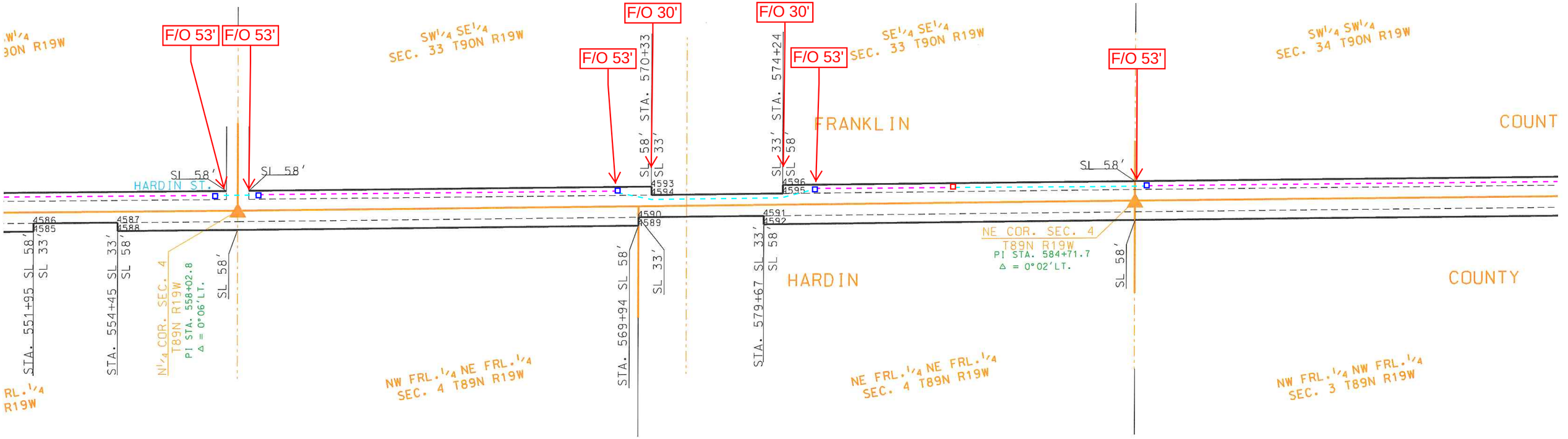
General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

DOT.10

IA 57

Areas with narrow ROW.
Bore deep to maintain back of ROW placement

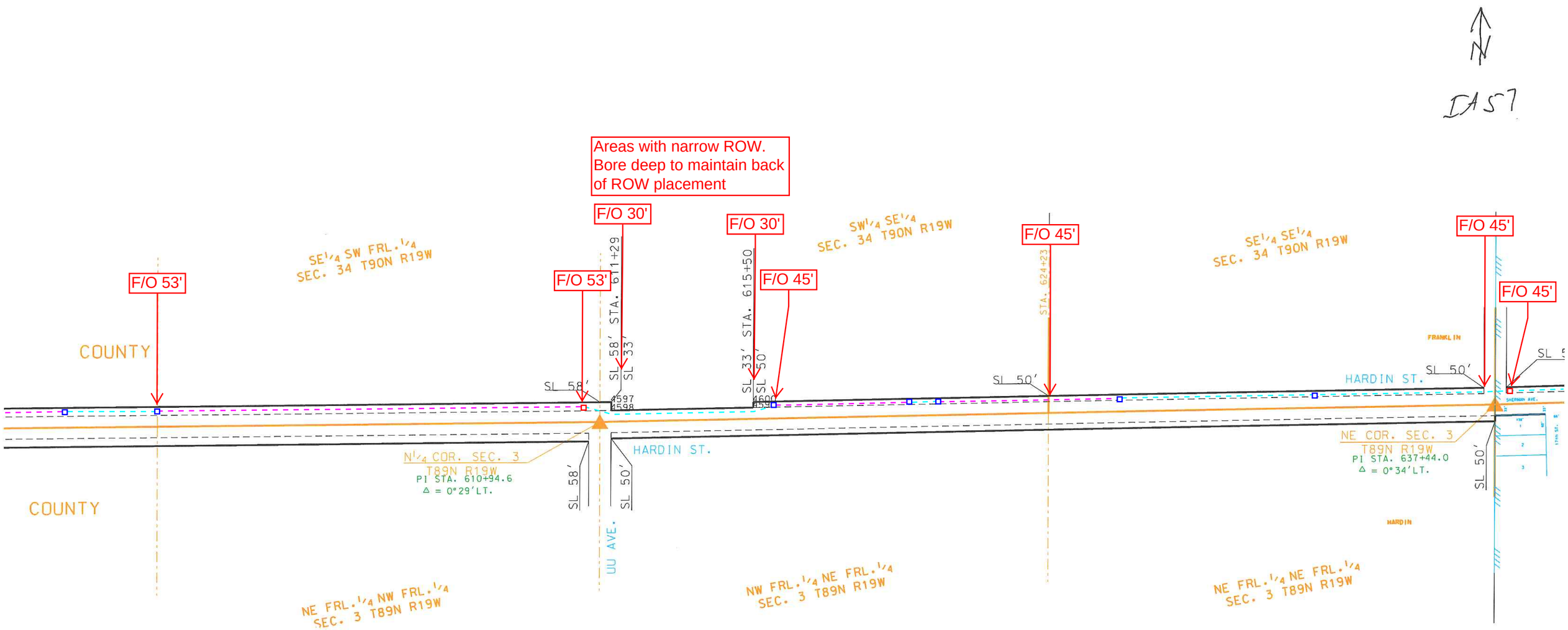



Legend of Symbols (DOT Specific Sheets)

- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.




Legend of Symbols (DOT Specific Sheets)
- Bore Pit
- Proposed Handhole
- Conduit - Bore
- Conduit - Plow
- Drainage District Tile

General Iowa DOT Project Notes:
1. No cable shall be placed in the bottom of the ditch or in the fore slope.
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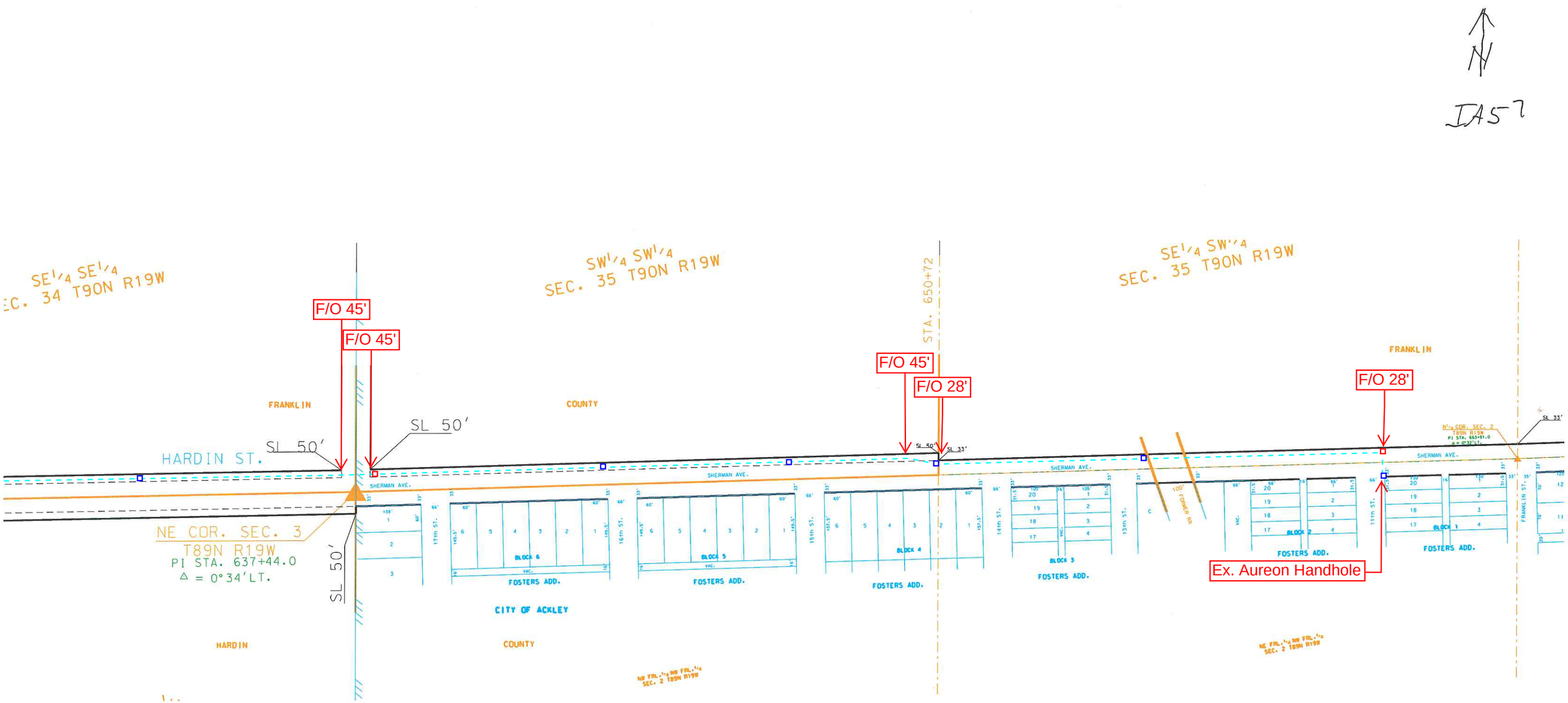
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.




Legend of Symbols (DOT Specific Sheets)

- Bore Pit
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General Iowa DOT Project Notes:

1. No cable shall be placed in the bottom of the ditch or in the fore slope.
2. All waterways and culverts shall be bored at a minimum of 10' below flow line or structure
3. If cable cannot be installed as shown, the Contractor is to contact the Iowa DOT to get the changes approved prior to installation.

| PROJECT NO. | SHEET NO. |
|---|---|
| 018-1341 | F.87 |
| Date: 10/10/2018 | Drawn: RAM |
| Horz. Scale 1 : 50 | Checked: RAM |
| | Approved: GTS |




**FIBER DESIGN**

# Drainage Work Order Request For Repair
## Hardin County

**Date:** 4/15/2020

**Work Order #:** WO00000291

**Drainage District:** DDs\DD 14 (51027)

**Sec-Twp-Rge:** 34-88-22 **Qtr Sec:** E1/2 NE NE

**Location/GIS:** 88-22-34-200-003

**Requested By:** James Sweeney/Cynthia Ioger/Jim & Ron Vierkandt

**Contact Phone:** (641) 847-3273

**Contact Email:** jsweeney@cgaconsultants.com

**Landowner** (if different): Ron/Jim Vierkandt/Cynthia Ioger 641-323-4051 RON

**Description:** DD 14- Sweeney reports plugged main tile in Jim & Ron's parcels, Sheldahl called in to pothole/explore tile on S side of D41, likely main tile. Intake further E of D41 & S27 intersection where tile goes under road needs repair. See Add'l Req in docs- lack of drg downstream of intersection of Lat 2/main tile. Last 3 years, Lat 2 has lacked enough drg to effectively farm area it should drain. Potholes dug by landowners in Sects 34/35 do not drain. Also, broken intake @ Lat 2 intersection w D41 in Sect. 35.

**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:** _____

# Drainage Work Order Request For Repair
## Hardin County

Date 4/20/2020 Work Order #

District # #14 Lateral Lat 2 & Main Fund #

Township Section 27, 34, 35 Twp 88 Rge 22 Qtr Sec

Repair Requested By Cynthia Ioerger, Ronald Vierkandt, James Vierkandt

Address 15898 Co Hwy D41 Phone

Landowner Same

Address Same Phone

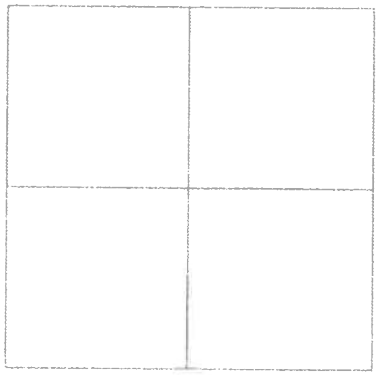
Request Taken By

Available for Repair Now? ☑ Yes Date Available

Problem Description

There is a lack of drainage somewhere downstream of the intersection of Lateral 2 and the main tile. Last three or so years the Lateral 2 tile has lacked enough drainage effectively farm the area it is supposed to drain. Pot-holes were dug by the landowners in sections 34 and 35, and water just sits in said holes without draining.

Also, there is a broken intake where Lateral 2 intersects D41 in section 35



Repair labor, materials and equipment

Potential Wetlands? ☐ Yes-Repair existing tile only ☐ No-Repair and maintain tile

Repaired By:

Date:

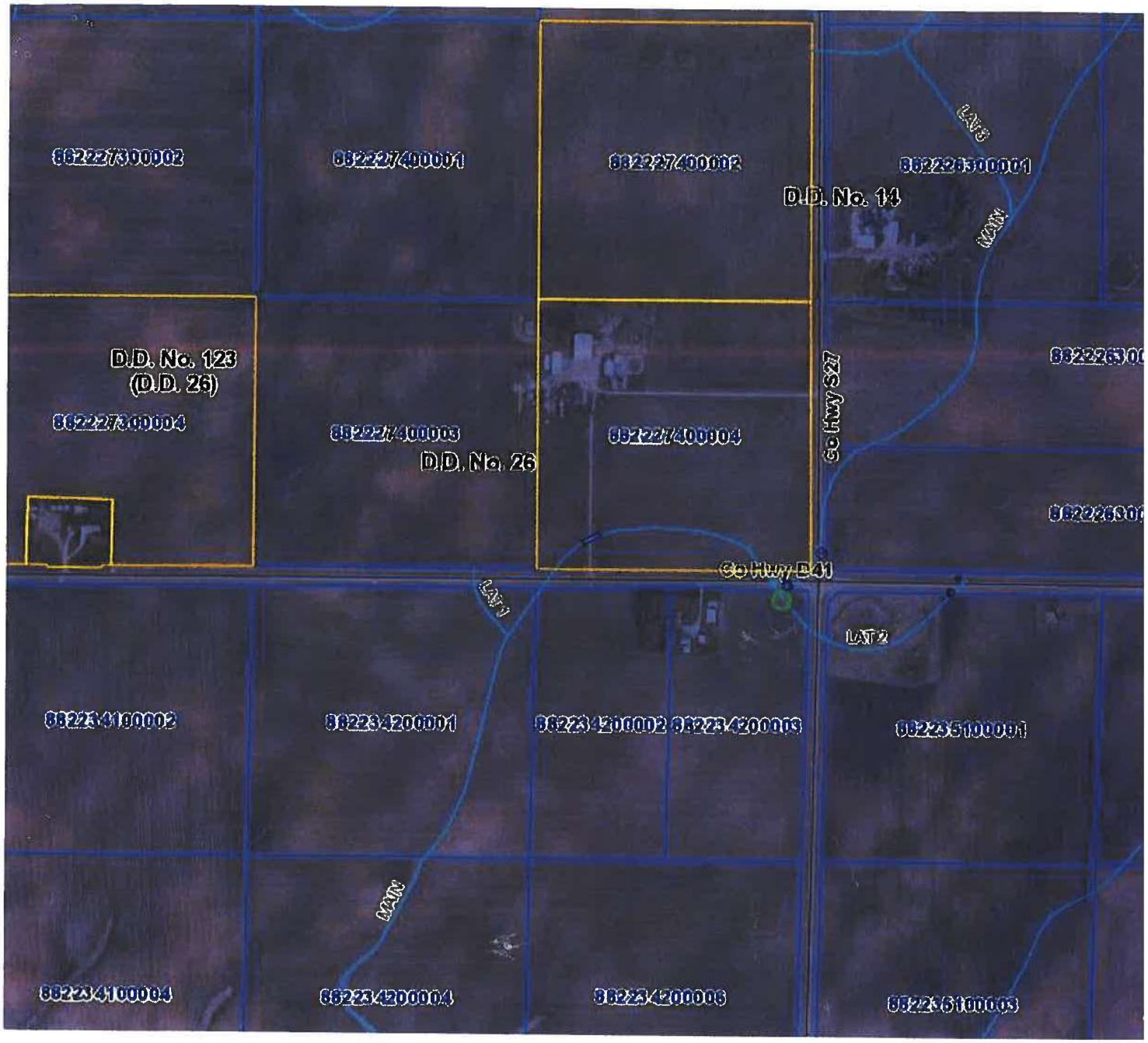
Please send statement for services to:

Hardin County Auditor's Office
Attn: Tina Schlemme
1215 Edgington Ave, Suite 1
Eldora, IA 50627

Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

*Approved:* *Date:*



882227300002
882227400001
882227400002
882226300001
D.D. No. 14
LAT 3
MAIN
D.D. No. 123
(D.D. 26)
882227300004
882227400003
882227400004
D.D. No. 26
Co Hwy S27
Co Hwy D41
LAT 1
LAT 2
882234100002
882234200001
882234200002
882234200003
882235100001
MAIN
882234100004
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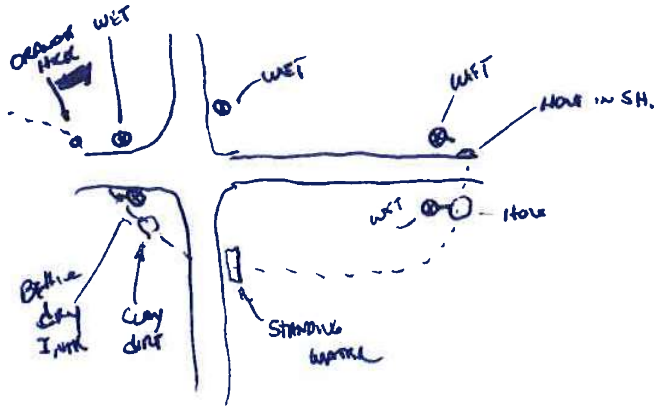
882234200006
882235100003

WET
WET
WET
HOLE IN SH.
WET
HOLE
STANDING WATER


D. No. 42

## Drainage District:

#14 Main and Lateral 2

## Investigation and Repair Summary:

- Per the earlier recommendations and authorization of the previous Investigation Summary, inspected the Main Tile and Lateral 2 Tile in the NE¼ of Section 34 and NW¼ of Section 35, Township 88 North, Range 22 West.
- Used beehive intake located approximately 300 ft west of County Highway S27 and in the south ditch of County Highway D41, inserted tile locator and hit obstruction approximately 180 ft downstream from said intake. Excavated hole at said obstruction and found nothing, water was flowing good. Drainage problem is farther upstream from beehive intake.
- Excavated on Lateral 2 Tile where the Iowa Rural Water Associations (IRWA) watermain crosses drainage district tile approximately 400 ft west of County Highway S27 on the north side of County Highway D41. Found 14" VCP flowing with no obstructions. However, watermain only clears the Lateral 2 Tile by approximately 1/4 feet. Repaired tile with 15" DW HDPE and concrete collars. Drainage problem is farther upstream.
- Visually observed standing water on the east side County Highway S27 approximately 330 ft south of County Highway D41. Excavated a hole on west side of County Highway S27, found Lateral 2 Tile – 4" SW HDPE tile to inspect condition of tile and water started surcharging into hole. Problem is farther downstream. Repaired tile with 2 HDPE couplers.
- Found Lateral 2 Tile on the south side of County Highway D41 at approximately 32 ft from the centerline of said County Highway D41. Removed section of 8" VCP Lateral 2 tile, used push tile locator to locate tile. Hit obstruction approximately 21 ft upstream from inspection hole. CCTV upstream from inspection hole and found two 5" HDPE private laterals directly across from each other protruding into Lateral 2 Tile 19 ft from said inspection hole. The private laterals are completely blocking the flow in the Lateral 2 Tile. Permanently repaired private tile connections to Lateral 2 tile with two 5"x8"x8" HDPE tees, one 4"x5"x5" HDPE tee, 3 HDPE couplers of varies sizes, 4" SW HDPE, 5" SW HDPE, and 8" DW HDPE. Rock bedding was used and concrete collars at all connections.
- Also, CCTV downstream from inspection hole on south side of County Highway D41 for approximately 70 ft to the Lateral 2 Tile connection with the Main Tile. Lateral 2 Tile appears to be in adequate physical condition.
- Inspected beehive intake approximately 540 ft east of County Highways S27 and on the south side of County Highway D41. Intake appears to be near the end of Lateral 2 Tile and has a sinkhole on the east side between intake and Lateral 2 tile. Excavated at sinkhole and found 6" VCP tile from intake to 6" HDPE tee on Lateral 2 tile. VCP tile connection with Lateral 2 Tile appears to be damaged. Replaced damaged VCP tile connection tile with 6" SW HDPE tile and concrete collars at both ends.
- There also appears to be another sinkhole by County Highway D41, but it appears to be caused by the 18" RCP culvert under the road.
- Also, the hickenbottom intake on the north side of County Highway D41 at approximately 375 ft from County Highway S27 appears to be full of dirt/debris and was not repaired at this time.
- After all repairs where done, the water on the east side of County Highway S27 appears to have down gone now that the restriction has been removed.

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

See attached Tabulated Contractor Time and Materials sheet.

## Additional Actions Recommended:

1. Verify that contractor performed fine grading and seeding of the south and north ditch of County Highway D41, the west ditch of County Highway S27, and wetland area that was disturbed by theses repairs.
2. Inform Secondary Roads that the hickenbottom intake on the north side of County Highway D47 may need to be repaired as it currently has dirt/ debris in it.
3. Inform Secondary Roads that the sink hole over the 18" Culver needs repaired.
4. If desired by the District Trustees, inform IRUA that their watermain appears not to meet the original permit requirements.
5. As noted on the Tabulated Contractor Time and Materials, Crop damage was incurred. It is recommended that the District Trustees pay any damage claim brought forth.

# Tabulated Contractor Time and Materials

| Date | Totals | 7/7/2020 | 7/8/2020 | 7/9/2020 | 7/13/2020 |
|---|---|---|---|---|---|
| Workman (hrs) | 82 2/3 | 20 | 21 3/4 | 36 1/4 | 4 2/3 |
| Mini Excavator (hrs) | 25 1/3 | 6 1/3 | 7 | 9 | 3 |
| Skidloader (hrs) | 26 | 6 1/3 | 7 3/4 | 9 | 3 |
| CCTV inpection (ft.) | 90 | | 90 | | |
| 4" Single Wall HDPE Tile (ft.) | 16 2/5 | | | 16 2/5 | |
| 5" Single Wall HDPE Tile (ft.) | 8 2/3 | | | 8 2/3 | |
| 6" Single Wall HDPE Tile (ft.) | 2 2/5 | | | | 2 2/5 |
| 8" Dual Wall HDPE Tile (ft.) | 7 1/2 | | | 7 1/2 | |
| 15" Dual Wall HDPE Tile (ft.) | 2 3/5 | | | 2 3/5 | |
| 4"x5"x5" HDPE Tee (ea.) | 1 | | | 1 | |
| 5"X8"x8" HDPE Tee (ea.) | 2 | | | 2 | |
| 4" Coupler (ea.) | 3 | | | 3 | |
| 5" Coupler (ea.) | 2 | | | 2 | |
| 6" Coupler (ea.) | 1 | | | | 1 |
| Rock Bedding | Yes | | | | |
| Concrete Collars | Yes | | | | |
| Rock Bedding | Yes | | | | |
| Crop Damage (ac.) | 1/2 | | | 1/2 | |

# Tabulated Defects

| | Total | GPS #254 UPSTREAM | GPS #255 DOWNSTREAM | GPS #255 UPSTREAM |
|---|---|---|---|---|
| Total Length Televised (ft) | 69.9 | 18.5 | 9.5 | 41.9 |
| Date: | | 7/8/2020 | 7/8/2020 | 7/8/2020 |
| Top crack (ft) | 2.1 | 0.8 | 0 | 1.3 |
| Side crack (ft) | 0 | 0 | 0 | 0 |
| Bottom crack (ft) | 0 | 0 | 0 | 0 |
| Partial or imminent collapse (#) | 0 | 0 | 0 | 0 |
| Full collapse (#) | 0 | 0 | 0 | 0 |
| Debris (ft) | 5 | 4 | 0 | 1 |
| Offset Joint (#) | 21 | 7 | 3 | 11 |
| Soil/voids visible in offset joint (#) | 9 | 7 | 2 | 0 |
| Single Wall HDPE (non-deformed) (ft) | 1.5 | 1.5 | 0 | 0 |
| Dual Wall HDPE (ft) | 0 | 0 | 0 | 0 |
| CMP (rusty) (ft) | 0 | 0 | 0 | 0 |
| Holes (non-fixed) (#) | 0 | 0 | 0 | 0 |
| Holes (fixed) (#) | 0 | 0 | 0 | 0 |
| Alligator Cracks (ft) | 0 | 0 | 0 | 0 |
| Radial Cracks (# of tile) | 0 | 0 | 0 | 0 |

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 07/07/2020

PROJECT NUMBER: HARDIN DD WO # 292 6844.5 / DD#14

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

LOCATION: SE¼ SE¼ 27-88-22 NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD 14 MAIN OR LAT 2

DAYS OF WEEK: S M Φ W T F S

SHEET NO. 1 OF 4

LOW 70'S TO LOW 90'S SUNNY WITH LIGHT WINDS

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION JOB # 6844 DD14, SURVEY

2:40 P.M OBSERVER AND CREW ARRIVED ON SITE. CREW STARTED UNLOADING EQUIPMENT WITH ADAM, PERRY, & DYLAN ON SITE AND KOLBELCO SK85CS MINI EXCAVATOR & CASE TR 340 TRACKED SKIDLOADER FOR EQUIPMENT. OBSERVER SET GPS BASE ON GPS #23 ¾"Φ IRON REROD 0.2'± DEEP SW CORNER OF FIELD DRIVE IN SE QUADRANT OF CO HWY D-41 & CO HWY S-27.

3:00 P.M. GPS BASE WAS SET UP WITH OBSERVER LOOKING OVER INFORMATION FOR A GOOD PLACE TO START CHECKING. CREW WAS NOW @ INTERSECTION OF CO HWY D41 & CO HWY S27 WITH EQUIPMENT. OBSERVER TOLD CREW TO CHECK INTAKES TO SEE IF THEY ARE DRY OR WET & THEN START RUNNING LOCATOR CABLE THROUGH INTAKES TO FIND OBSTRUCTION.

3:10 P.M. RON VIERKANDT STOPPED AND CHECKED HOW INVESTIGATION WAS GOING, OBSERVER TOLD RON THAT WE JUST ARRIVED ON SITE AND WERE CHECKING WHICH INTAKES ARE STILL WET THEN TRY RUNNING LOCATE CABLE DOWN INTAKES TO FIND POSSIBLE OBSTRUCTION.

3:20 P.M. FOUND BEE HIVE INTAKE IN SOUTH DITCH OF CO HWY D-41 297'± WEST OF ℄ CO HWY S-27 WITH 6" CLAY TILE OUTLET TO WEST WAS DRY. CREW WILL TRY RUNNING LOCATE CABLE INTO TILE FROM THIS LOCATION.

3:30 P.M. OBSERVER CHECKED GPS INTO GPS # 21 SURVEY MARK NAIL FLUSH IN ACC IN CO HWY S-27 ABOUT 2632'± SOUTH OF ℄ CO HWY D41 WITH both HORIZONTAL AND VERTICAL. POSITION CHECKING GOOD.

3:35 P.M. OBSERVER NOTICED A HOLE STILL OPEN ON EAST SIDE OF EAST ROW FENCE FOR CO HWY S-27 322'± SOUTH OF CO HWY D-41. EXCAVATED

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/07/2020

Reviewed by: _____ ☐ Engineer

Date Reviewed _____

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/07/2020

PROJECT NUMBER: HARDIN DD WO# 292 6844.5 / DD#14

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD 14 MAIN OR LAT 2

DAYS OF WEEK: S M T W T F S

SHEET NO. 2 OF 4

LOW 70'S TO LOW 90'S SUNNY WITH LIGHT WINDS

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

JOB# 6844 DD14. SURVEY HOLE HAS 2.0' TO 2.5' OF WATER SITING IN HOLE. OBSERVER ALSO NOTICED THAT FL OF DITCH ON BOTH EAST & WEST SIDES OF CO HWY S 27 IN SAME AREA WAS SATURATED BUT NO WATER STANDING IN DITCH. OBSERVER CALLED ADAM. THAT HOLE THAT SOMEONE PREVIOUSLY EXCAVATED HAS WATER SITING IN IT AND BOTH DITCHES ARE SATURATED SO I WOULD SAY TILE IS PLUGGED DOWN STREAM.

3:44 P.M. PICTURE #404B SEE PICTURE FOR DETAILS.

3:50 P.M. OBSERVER AND CREW STARTED PUSHING LOCATE CABLE THROUGH BEEHIVE INTAKE. LOCATE CABLE HIT A SPOT WHILE PUSHING WITH SOME RESISTENCE BUT PUSHED THROUGH THIS AREA (GPS# 235 @ 65.7') (OFFSET JOINT ?). OBSERVER LOCATED THIS SPOT FOR DOCUMENTATION, OBSERVER CONTINUED TO PUSH LOCATE CABLE UNTIL IT HIT SOMETHING HARD. THIS TIME CABLE COULD NOT PUSH ANY FURTHER DOWNSTREAM.

5:20 P.M. OBSERVER HAD LOCATING DEVICE HOOKED UP AGAIN AND STARTED TO LOCATE TILE IN FIELD AND SHOOTING WITH GPS. SINCE LOCATING END WAS NOT CABLE OBSERVER GUESSED WHERE HEAD WAS LOCATED BY SIGNAL STRENGTH. OBSERVER TAPED CABLE AT INSIDE EDGE OF INTAKE ABOVE TOP OF 6" CLAY TILE OUTLET AND PULLED CABLE OUT OF TILE. OBSERVER LAYED CABLE ALONG GRAVEL SHOULDER AND SHOT LENGTH WITH GPS FROM TAPE TO END OF CABLE. OBSERVER CREATED A POINT ON POLYLINE AT THIS FOOTAGE.

6:00 P.M. CREW ASKED OBSERVER WHICH WAY WAS SHORTER TO GET OUT IN FIELD TO EXCAVATE AT OBSTRUCTION. OBSERVER SAID ALONG LOCATES FROM N ROW OF CO HWY D-41. OBSERVER

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/07/2020

Reviewed by: ☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 07/02/2020

PROJECT NUMBER: HARDIN DD WO# 292
6844.5 / DD#14

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD 14 MAIN OR LAT 2

DAYS OF WEEK: S M T W T F S

SHEET NO. 3 OF 4

LOW 70'S TO LOW 90'S SUNNY WITH LIGHT WINDS

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

JOB# 6844 DD14. SURVEY HELD UP POLE ABOVE CORN FOR THEM TO SEE WHERE CABLE LOCATE ENDED. RON VIERKANDT ALREADY TOLD CONTRACTOR HE COULD MAKE A PATH IN CORN TO FIX TILE SINCE IT NEEDS TO BE FIXED. CREW CAME THROUGH FROM JIM VIERKANDT DRIVE OFF CO HWY D-41. OBSERVER ASKED THE REASON FOR THIS WAY (DAMAGED ALOT MORE CROPS) WAS IT WOULD BE BETTER TO GET ROCK OUT TO REPAIR.

6:30 P.M. CREW STARTED EXCAVATING TO EXPOSE TILE @ OBSTRUCTION (GPS#246). 159.1' INTO FIELD.

7:10 P.M. CREW HAD TILE EXPOSED AT POSSIBLE OBSTRUCTION. TILE LOOKED GOOD UPSTREAM AND DOWNSTREAM WITH 3" OF GOOD FLOW. TILE LOCATE CABLE MUST HAVE HIT AN OFFSET JOINT.

7:15 P.M. PICTURE # 4049 & PICTURE # 4050 SEE PICTURE FOR DETAIL

7:30 P.M. FINISHED REELING LOCATE CABLE BACK ONTO REEL.

8:00 P.M PERRY AND DYLAN LEFT SITE FOR DAY.

8:15 P.M. OBSERVER & ADAM PUSHED LOCATE CABLE 100' DOWNSTREAM FROM GPS #247 & 100' UPSTREAM FROM GPS# 248 WITH NO OBSTRUCTIONS SINCE TILE IS FLOWING GOOD THEN OBSTRUCTION MUST BE FURTHER UPSTREAM.

8:20 P.M. ADAM STARTED EXCAVATING IN NORTH DITCH OF CO HWY D-41 TO FIND TILE AND EXCAVATED AROUND 6" HICKEN BOTTOM. ADAM FOUND 6" CLAY TILE OUTLET WAS BROKEN & COMPLETELY FULL OF SOIL (BOTTOM OF HICKENBOTTO WAS COMPLETELY FULL OF SOIL TOO.

9:50 P.M. ADAM STARTED EXCAVATING FOR TILE NEAR WM/TILE CROSSING BUT IRUA WILL NOT BE ON SITE UNTIL TOMORROW @ 8:00AM. TO CHECK IF WATER MAIN IS CAUSING AN ISSUE. PROBED DOWN TO TILE BY WATER MAIN AND TILE IS IN GOOD SHAPE.

9:00 P.M OBSERVER AND ADAM LEFT SITE.

QUANTITIES

ADAM 2:40 - 9 6⅓ HOURS
PERRY 2:40 - 8 5⅓ HOURS
DYLAN 2:40 - 8 5⅓ HOURS

KOLBELCO SK85 CS MINI EXCAVATOR 6⅓ HOURS
CASE TR340 TRACKED SKIDLOADER 6⅓ HOURS

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/07/2020

Reviewed by: _____ ☐ Engineer

Date Reviewed _____

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 07/07/2020

PROJECT NUMBER: HARDIN DD WO# 292
6844.5 / DD#14

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

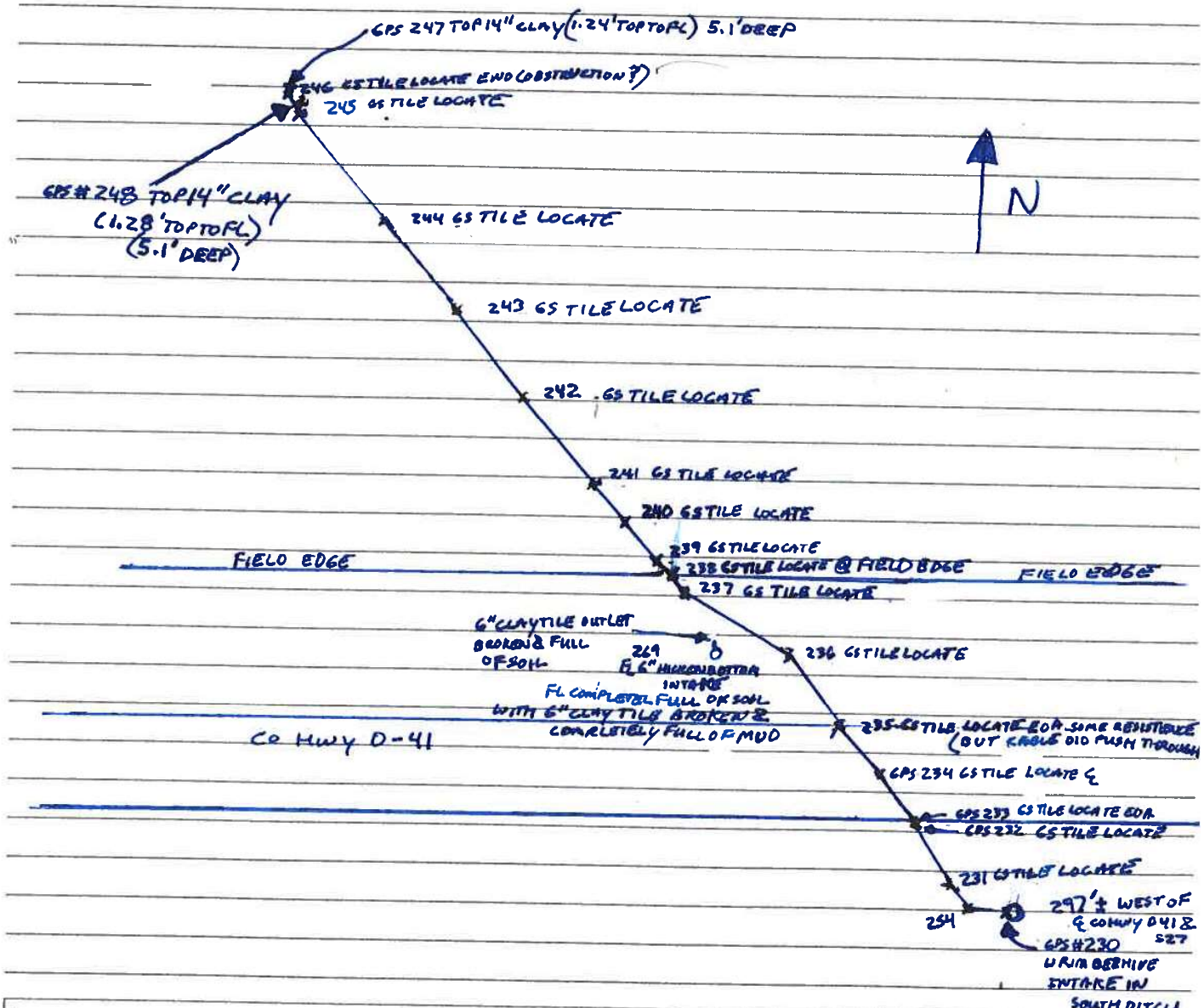
SHEET NO. 4 OF 4

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22. INVESTIGATE FOR PLUGGED TILE DD 14 MAIN OR LAT 2

LOW 70's TO LOW 90's SUNNY WITH LIGHT WINDS

JOB # 6844 DD14. SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION




I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/07/2020

Reviewed by: ☐ Engineer

Date Reviewed

PICTURE # 4048 IS LOOKING NORTH ALONG EAST ROW FENCE 322'± SOUTH OF CO HWY D-41 SHOWING WATER SITING IN HOLE







N

PICTURE # 4049 IS LOOKING NW UPSTREAM INSIDE 14" CLAY TILE (GPS # 248 1.28' TOP TO FL (5.1' DEEP)). TILE IS IN GOOD SHAPE WITH 3" FLOW

PICTURE # 4050 IS LOOKING NW DOWNSTREAM INSIDE 14" CLAY TILE (GPS# 247 1.24' TOP TO FL) (5.1'± DEEP) TILE IN GOOD SHAPE WITH 3" FLOW TILE HAS A LONGITUDINAL CRACK @ 12 O'CLOCK BUT NOT CAVING DOWN




N

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/08/2020

PROJECT NUMBER: HARDIN DD WO# 292 6844.5 / DD#14

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD 14 MAIN OR LAT 2

DAYS OF WEEK: S M T W T F S

SHEET NO. 1 OF 5

LOW 70'S TO MID 90'S SUNNY WITH LIGHT WINDS

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION JOB# 6844 DD14. SURVEY

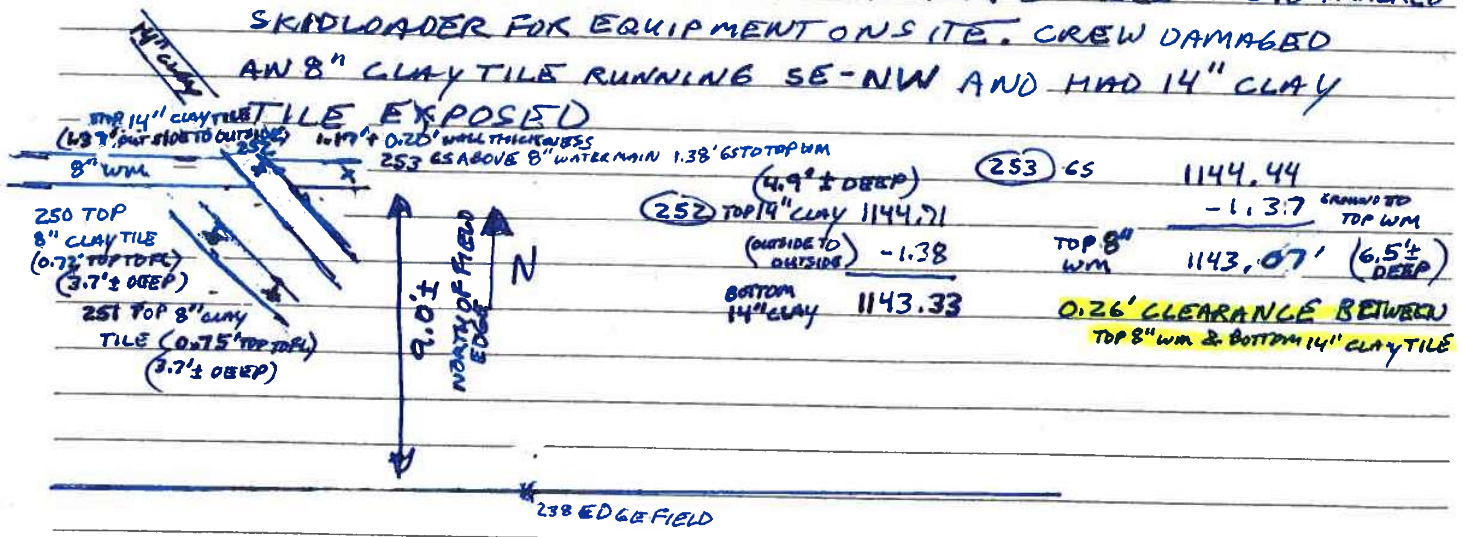
7:35 A.M. OBSERVER LEFT OFFICE FOR JOBSITE.

8:05 A.M. ADAM CALLED THAT JASON WITH IOWA RURAL UTILITIES ASSOCIATION WAS ON SITE AND WANTED TO START DIGGING FOR TILE. OBSERVER SAID GO AHEAD SINCE I AM ABOUT 7 MINUTES AWAY FROM SITE.

8:12 A.M. OBSERVER ARRIVED ON SITE AND SET GPS BASE ON GPS#23 ¾" Ø IRON REBAR 0.2'± DEEP SW CORNER FIELD DRIVE IN SE QUADRANT OF CO HWY D-41 & CO HWY S-27.

8:30 A.M. OBSERVER HAD GPS BASE SET UP AND CHECKED INTO GPS#21 SURVEY MARK NAIL FLUSH IN ACC IN CO HWY S-27 ABOUT 2682'± SOUTH OF & CO HWY D-41 WITH BOTH HORIZONTAL AND VERTICAL POSITION CHECKING GOOD

8:35 A.M. OBSERVER ARRIVED AT WATERMAIN/TILE CROSSING WITH RON VERKAMP, JASON WITH IRUA, ADAM, DYLAN, PERRY ON SITE AND KOLBELCO SK 85 CS MINIEXCAVATOR & CASE TR340 TRACKED SKIDLOADER FOR EQUIPMENT ONSITE. CREW DAMAGED AN 8" CLAY TILE RUNNING SE-NW AND HAD 14" CLAY TILE EXPOSED




I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/08/2020

Reviewed by: ☐ Engineer Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 07/08/2020

PROJECT NUMBER: HARDIN DD WO # 252 6844.5 / DD#14

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

SHEET NO. 2 OF 5

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22 & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

LOW 70's TO MID 90's SUNNY WITH LIGHT WINDS

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

JOB# 6844 DD14. SURVEY

8:51 A.M. PICTURE # 4051, 8:52 A.M. PICTURE # 4052 & PICTURE # 4053 SEE PICTURES FOR DETAILS.

9:00 AM. OBSERVER THOUGHTS ARE HOLE SHOULD HAVE FILLED UP WITH WATER IF TILE WAS PLUGGED DOWNSTREAM FURTHER & NW HOLE WHERE TILE EXPOSED FLOW IS GOOD. OBSERVER WILL CHECK BEEHIVE INTAKE IN DITCH NORTH OF HWY D-41 & WEST OF S-27. THIS BEEHIVE INTAKE OUTLET TILE TO SOUTH WAS DRY. OBSERVER WILL HAVE CREW EXCAVATE & EXPOSE TILE WEST OF BEEHIVE INTAKE SO LOCATE CABLE CAN BE RAN UPSTREAM IN TILE TO SEE TO CHECK IF PLUGGED

9:56 A.M. PICTURE # 4054 SEE PICTURE FOR DETAILS.

10:15 A.M. LATERAL # 2 8" CLAY TILE WAS EXPOSED NW OF BEEHIVE INTAKE WITH A SECTION OF 8" TILE REMOVED.

10:16 A.M. PICTURE # 4055 & PICTURE # 4056 SEE PICTURE FOR DETAILS.

10:25 A.M. CREW RAN LOCATE CABLE UPSTREAM INSIDE 8" CLAY TILE FROM EPS # 254 UNTIL IT HIT SOMETHING IN TILE @ 21.3'± CABLE IS UNABLE TO PUSH THROUGH THIS LOCATION.

10:35 A.M. CREW WAS HEADING TO WEST DITCH OF CO HWY 527 330'± SOUTH OF & CO HWY D41 TO CHECK CONDITION & FLOW IN TILE BEFORE EXCAVATING IN FIELD IN CASE JUST A JOINT OFFSET.

10:40 A.M. MID COUNTRY EQUIPMENT ON SITE & OBSERVER TRYING TO RUN LOCATOR CABLE THROUGH INTAKE TO FIND OBSTRUCTION IN LATERAL #2. OBSERVER IS UNABLE TO MAKE BEND WITH LOCATE CABLE INTO LATERAL #2. CREW WILL EXCAVATE TO FIND LATERAL #2 TO RUN LOCATE CABLE DOWNSTREAM TO PLUG. ADAM

11:03 A.M. PICTURE # 4058 SEE PICTURE FOR DETAILS.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 7/08/2020

Reviewed by: _____ ☐ Engineer

Date Reviewed _____

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/08/2020

PROJECT NUMBER: HARDIN DD WO # 252 6844.5 / DD#14

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

SHEET NO. 3 OF 5

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22 & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

LOW 70's TO MID 90's SUNNY WITH LIGHT WINDS

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

JOB # 6844 DD14. SURVEY

11:15 A.M. BEFORE CREW COULD GET DOWN TO TILE WATER WAS SQUIRTING OUT OF CRACK IN SOIL & FILLING HOLE UP. CREW DECIDED TO CHECK TILE ON WEST SIDE OF WATERMAIN/ TILE CROSSING.

11:26 A.M PICTURE # 4059 SEE PICTURE FOR DETAILS.

11:35 A.M. CREW CUT A 4" HOPE SW PERF TILE RUNNING N-S IN FIELD. BEFORE CREW REACHED TILE, WATER WAS ... SQUIRTING OUT OF GROUND.

11:45 A.M DUE TO WATER PRESSURE AT THIS LOCATION, RESTRICTION IS FURTHER DOWNSTREAM AND CREW WILL EXCAVATE AT LOCATION WHERE CABLE COULD NOT PUSH THROUGH 21.3' ± SE OF BEEHIVE INTAKE IN SOUTH DITCH OF CO HWY D-41. ADAM HAD PAUL SCHEDULED TO COME TELEVISE TILE TO PIN POINT ISSUE AT 1:00 P.M. SINCE NO ISSUE FOUND YET.

11:50 P.M. OBSERVER MARKED OUT EXACT LOCATION OF POSSIBLE OBSTRUCTION IN TILE. ROW LEFT SITE AND ASKED TO LET HIM KNOW WHEN PAUL WAS ON SITE TO TELEVISE TILE.

12:05 P.M. CREW ROLLED ONE OF TRACKS OFF MINI EXCAVATOR HEADING BACK TO EXCAVATE AT POSSIBLE OBSTRUCTION.

12:15 P.M. ADAM LEFT SITE TO TO GET A BAR TO HELP PUT TRACK BACK ON. PERRY AND DYLAN LEFT FOR LUNCH. OBSERVER SHOT LOCATION OF POSSIBLE OBSTRUCTION.

12:45 P.M. DYLAN AND PERRY BACK ON SITE FROM LUNCH

12:50 P.M. PAUL ON SITE WITH CAMERA EQUIPMENT TO TELEVISE UPSTREAM AND DOWNSTREAM FROM GPS #254 & #255 WEST OF BEEHIVE INTAKE IN SOUTH DITCH OF CO HWY D41. CREW WAS UNABLE TO GET POSSIBLE OBSTRUCTION EXCAVATED & EXPOSED BEFORE PAUL ARRIVED DUE TO EQUIPMENT ISSUES. OBSERVER NOTIFIED RON PAUL WAS ON SITE

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Perry Date Prepared: 7/08/2020

Reviewed by: _____ ☐ Engineer

Date Reviewed _____

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/08/2020

PROJECT NUMBER: HARDIN DD WO # 292 6844.5 / DD#14

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S27 & CO HWY D41

SHEET NO. 4 OF 5

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

LOW 70's TO MID 90's SUNNY WITH LIGHT WINDS

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION JOB# 6844 DD14. SURVEY

1:13 P.M. PAUL HAD GENERATOR STARTED TO START TELEVISING TILE UPSTREAM.

1:15 P.M. ADAM BACK ON SITE PUTTING TRACK BACK ON MINI EXCAVATOR

1:20 P.M. PAUL TELEVISING UPSTREAM FROM GPS # 254. (FIELD OBSERVATION)

1.0' CAMERA BACK TIRE @ END OF 8" CLAY TILE

19.0 END TELEVISE 5" HOPE SW PERF TILE FROM WEST & FROM EAST THAT TIE IN AT SAME LOCATION WITH CLAY TILE SIDES CRACKED & TOP APPEARS TO BE CAVING DOWN. TILE PLUGGED & ALMOST NO FLOW FROM UPSTREAM

1:33 P.M. PICTURE # 4060 SEE PICTURE FOR DETAILS.

1:45 P.M. CREW HAD TRACKS BACK ON MINI EXCAVATOR

1:55 P.M. PAUL HAD CAMERA TRACTOR BACK OUT OF TILE.

1:55 P.M. CREW WAS STARTING TO EXCAVATE TO REMOVE OBSTRUCTION

2:00 P.M. PAUL TELEVISING DOWNSTREAM FROM GPS # 255 (FIELD OBSERVATION)

1.0' CAMERA BACK OF TIRE @ END OF 8" CLAY TILE

10.1' LATERAL LEFT

LATERAL RIGHT @ 2 O'CLOCK

64.1' CHUNK OF TILE IN FL

2:16 P.M. 69.8' TEE. END CAMERA. PAUL ENDED CAMERA THINKING IF HE WENT ANY FURTHER CAMERA WOULD GET STUCK IN CONNECTION 8" TO 14" CONNECTION IN GOOD CONDITION WITH GOOD FLOW IN MAIN. PAUL AND OBSERVER LOCATED APPROXIMATE LOCATION OF MAIN / LAT 2 CONNECTION AND SHOT WITH GPS.

2:20 P.M. PAUL WAS BACKING CAMERA OUT AND PUTTING AWAY EQUIPMENT

2:39 P.M. PICTURE # 4061, PICTURE # 4062 & 2:41 P.M. PICTURE # 4064 SEE PICTURE FOR DETAILS

3:01 P.M. PICTURE # 4065 SEE PICTURE FOR DETAILS.

3:10 P.M. PAUL WAS WONDERING IF ANYTHING ELSE NEEDS TELEVISED. LEE SAID SINCE WE HAVE BLOCKAGE ISSUE RESOLVED THERE IS NO REASON TO TELEVISE ANYTHING MORE. PAUL LEFT SITE FOR DAY. PAUL WILL DROP OFF TELEVISED VIDEO AT OUR OFFICE.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Drew Penny Date Prepared: 7/08/2020

Reviewed by: _____ ☐ Engineer

Date Reviewed _____

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 07/08/2020

PROJECT NUMBER: HARDIN DD WO # 292

COUNTY, ROUTE, ROAD: 6844.5 / DOH #14 INTERSECTION OF CO HWY S-27 & CO HWY D41

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22 & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

DAYS OF WEEK: S M T W T F S

SHEET NO. 5 OF 5

LOW 70'S TO MID 90'S SUNNY WITH WINDS

JOB # 6844 DOH SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

3:25 P.M RON & JIM VIERKANOT LEFT SITE.
3:45 P.M. PICTURE # 4066 & 3:46 P.M. PICTURE # 4067 SEE PICTURE FOR DETAILS.
3:45 P.M. CREW WAS GETTING 5" HDPE SW PERF TILE AREA PREPPED FOR MAKING CONNECTIONS
4:15 P.M. PERRY AND DYLAN LEFT SITE
4:30 P.M. ADAM LEFT SITE. CREW NEED TO GET SUPPLIES FOR 5" HDPE SW PERF TILE CONNECTIONS TO 8" CLAY TILE.
5:00 P.M. OBSERVER LEFT SITE AFTER SHOOTING EXISTING 4" & 5" HDPE SW PERF TILE FOR NEW TIE IN CONNECTION TO 8" CLAY TILE LAT 2 CONNECTION.

QUANTITIES

ADAM 8-12:15 1:45-4:30 7 HOURS 12:15-1:15 1 HOUR GETTING BAR TO PUT ON TRACS
1:15-1:45 ½ HOUR GETTING TRACK BACK ON MINI EXCAVATOR
PERRY 8-12:15, 12:45-4:15 7¾ HOUR
12:15-12:45 ½ LUNCH
DYLAN 8-12:15, 12:45-4:15 7¾ HOUR
12:15-12:45 ½ HOUR

PAUL WITH CAMERA EQUIPMENT 2 ⅓ HOURS
KOLBELCO SK 85 CS MINI EXCAVATOR 7 HOURS
CASE TR 340 TRACKED SKIDLOADER 7¾ HOURS

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/08/2020

Reviewed by: _____ ☐ Engineer

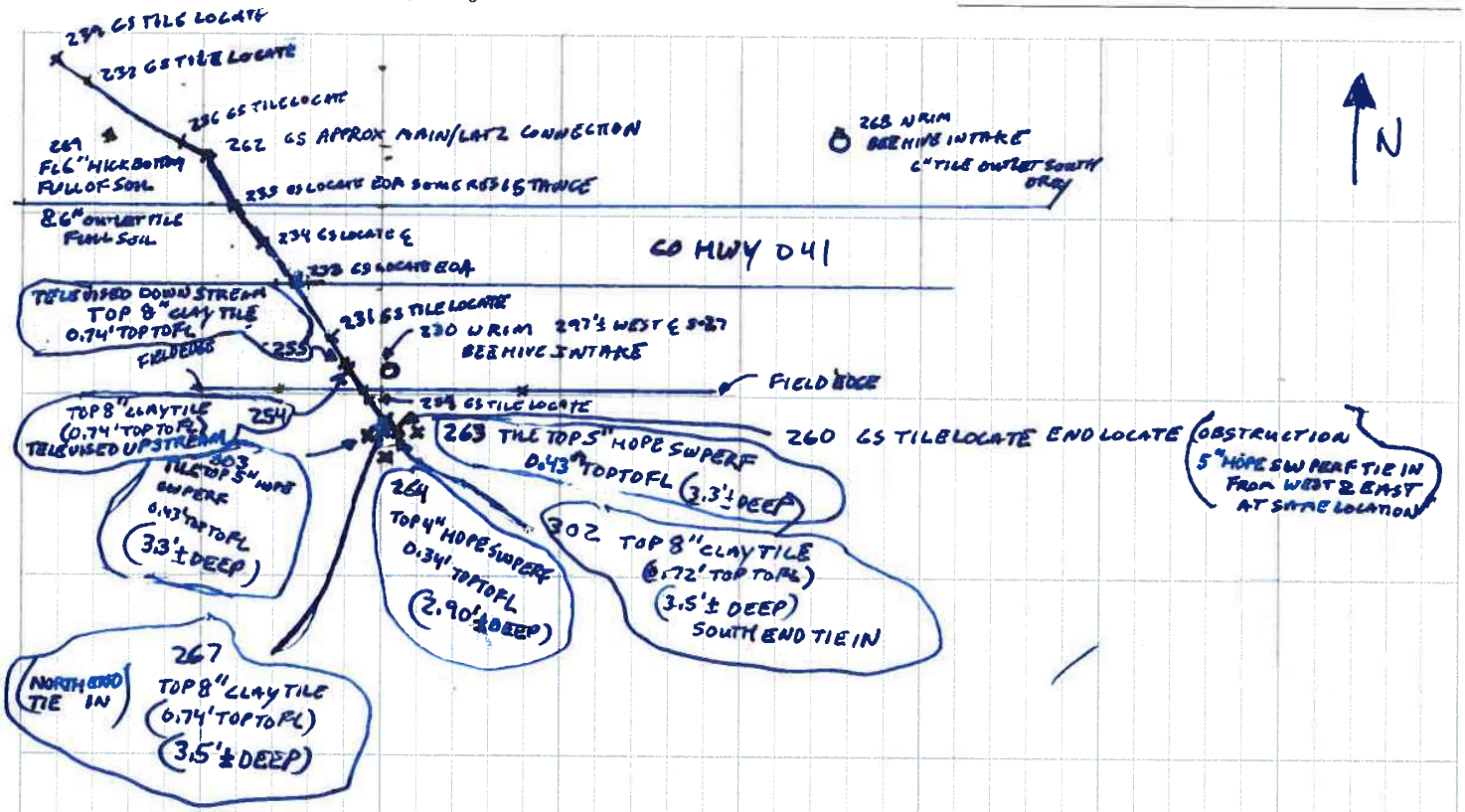
Date Reviewed _____

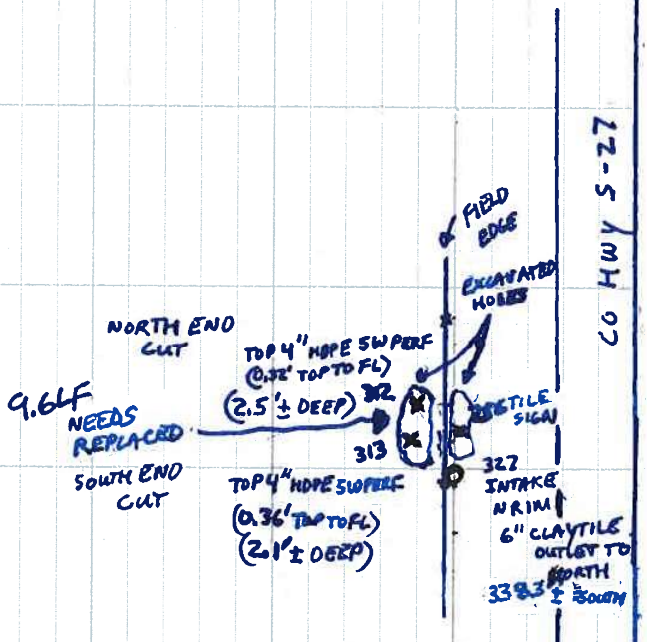
365.6
300.65'

6844.5/00#14
07/08/2020
D.A.A.


**Clapsaddle-Garber Associates, Inc.**
16 East Main Street, Marshalltown, Iowa 50158, ph 641-752-6701
1523 South Bell Avenue, Suite 101, Ames, Iowa 50010, ph 515-232-1784
5106 Nordic Drive, Cedar Falls, Iowa 50613, ph 319-266-0258
739 Park Avenue, Ackley, Iowa 50601, ph 641-847-3273
511 Bank Street, Webster City, Iowa 50595, ph 515-832-1876
800-542-7981, www.cgaconsultants.com


PN _____
Computed By _____ Date _____
Checked By _____ Date _____
Subject _____




Sheet No. ____ of ____

PICTURE #4051 IS LOOKING SW SHOWING 8" CLAY TILE THAT WAS DAMAGED WHILE EXCAVATING TO EXPOSE 14" CLAY @ LOCATION WHERE WATER MAIN GOES UNDER TILE

GPS #250 TOP 8" CLAY TILE (0.72' TO TOP) (3.7'± DEEP)

N

GPS #251 TOP 8" CLAY TILE (6.75' TO TOP) 3.7'± DEEP




GPS #252 TOP 14" CLAY TILE (4.9'± DEEP)




N

PICTURE #4052 IS LOOKING NW UPSTREAM INSIDE 8" CLAY TILE WITH 2"± OF MUD IN FLOWLINE FROM GPS #250. TILE IS IN GOOD SHAPE WITH FEW FINE ROOTS AND A FEW OFFSET JOINTS

PICTURE # 4053 IS LOOKING SE DOWNSTREAM INSIDE 8" CLAY TILE WITH 2" ± OF MUD IN FLOWLINE FROM GPS # 251. TILE HAS A LITTLE POPOUT AT NEXT JOINT AND IS IN GOOD SHAPE WITH 2" MUD IN FLOWLINE AND COMPLETELY FULL DOWNSTREAM. RON THINKS THIS TILE IS ABANDONED.




N

PICTURE #4054 IS LOOKING EAST IN SOUTH DITCH CO HWY 04/ 297'± WEST OF ℄ CO HWY S-27 SHOWING CREW EXPOSING LAT 2 TILE WEST OF BEEHIVE INTAKE SO CREW CAN RUN LOCATE CABLE UPSTREAM TO CHECK FOR PLUGGED TILE.




N




N

PICTURE # 4055 IS LOOKING NW DOWNSTREAM INSIDE 8" CLAY TILE FROM GPS # 255' SHOWING TILE IN GOOD CONDITION WITH 3/4" OF WATER AND NOT MUCH FLOW. TILE IS 3.1'± DEEP.

PICTURE #4056 IS LOOKING SE UPSTREAM INSIDE 8" CLAY TILE SHOWING TILE IN GOOD CONDITION WITH 3/4" WATER IN FL & NOT MUCH FLOW. TILE IS 3.1'± DEEP.

↑ 6" CLAY TILE INLET FROM BEEHIVE INTAKE.




N




N

PICTURE # 4057 IS LOOKING NW SHOWING SECTION OF 8" CLAY TILE ROLLED OUT IN SOUTH DITCH OF CO HWY 041 NW OF BEEHIVE INTAKE FOR CREW TO RUN LOCATOR CABLE UPSTREAM TO FIND PLUG IN TILE.

PICTURE #4058 IS LOOKING NORTH, SHOWING CREW EXCAVATING ALONG FIELD EDGE IN WEST DITCH OF COHWY S-27 TO EXPOSE TILE TO CHECK CONDITION, FLOW AND RUN LOCATE CABLE THROUGH IT.




N




N

WATER FILLING UP IN HOLE, EXCAVATED ON EAST SIDE OF WATER MAIN

PICTURE #4059 IS LOOKING NORTH SHOWING CREW NOW EXCAVATING ON WEST SIDE OF WATER MAIN TO CHECK IF WATER MAIN IS THE CAUSE.

PICTURE #4060 IS LOOKING UPSTREAM INSIDE 8" CLAY TILE @ 213'± UPSTREAM FROM BEEHIVE INTAKE SHOWING 5" PERF SW HOPE TILE FROM EAST & FROM WEST CONNECTING AT SAME LOCATION WITH SIDES CRACKED AND TOP CAVING DOWN WITH TILE PLUGGED UPSTREAM WITH SOIL & ROOTS







N

PICTURE #4061 IS LOOKING SW AT EXPOSED LOCATION WHERE 5" HOPE SW PERF TILE FROM EAST & FROM WEST TIE INTO 8" CLAY TILE LATERAL 2

PICTURE # 4062 IS LOOKING SE AT TOP VIEW OF 5" HDPE SW PERF TILE FROM WEST & EAST TIEING INTO SAME LOCATION INTO BROKEN 8" CLAY TILE AND PLUGGED LINE







PICTURE # 4064 IS LOOKING SW SHOWING WATER GUSHING FROM UPSTREAM END OF 8" CLAY TILE AT 5" HDPE TILE CONNECTIONS AFTER BLOCKAGE REMOVED

PICTURE # 4065 IS LOOKING SOUTH SHOWING 5" HOPE TILE CONNECTION WITH 5" HOPE TILE FROM WEST HAVING A SAG OR HUMPE UP IN A SPOT.




N




N

PICTURE # 4066 IS LOOKING NORTH SHOWING WATER GONE NOW IN EXCAVATED HOLE IN WEST DITCH OF CO HWY 527 ALONG FIELD EDGE EAST OF WATER MAIN N-S

PICTURE #4067 IS LOOKING NORTH SHOWING PREVIOUSLY EXCAVATED HOLE EAST OF EAST ROW FENCE FOR CO. HWY 527 & SOUTH OF CO HWY 041







N

GPS #255
TOP 8" CLAY TILE

GPS #254
TOP 8" CLAY TILE

PICTURE # 4068 IS LOOKING NW SHOWING TILE FLOWING IN SOUTH DITCH OF CO HWY 041

PICTURE #4069 IS LOOKING EAST SHOWING 5" HOPE SW PERF TILE CONNECTION AREA. 8" CLAY TILE STILL FLOWING GOOD.




N

5" HOPE SW PERF TILE




N

6" HICKENBOTTOM R/L FULL OF SOIL & 6" CLAY TILE OUTLET BROKEN & FULL OF SOIL

PICTURE #4070 IS LOOKING NW FROM COHWY 041 SHOWING AREA IN NORTH DITCH EXCAVATED AND HOLE EXCAVATED IN FIELD AT TILE/WATERMAIN CROSSING.

PICTURE #4071 IS LOOKING SE TOWARDS CO HWY 041 SHOWING 14" CLAY TILE FLOW ING GOOD




GPS#248 TOP 14" CLAY (1.28' TOP TO FL)

N

GPS#247 TOP 14" CLAY 1.24' TOP TO FL




268 NRIM BEEHIVE INTAKE

N

PICTURE #4072 IS LOOKING WEST SHOWING BEEHIVE INTAKE IN NORTH DITCH OF COHWY 041 170.8'± WEST OF ℄ CO HWY S-27

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/09/2020

PROJECT NUMBER: HARDIN DO WO# 292 6844.5/DD#14

DAYS OF WEEK: S M T W Th F S

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

SHEET NO. 1 OF 6

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

MID 60's TO LOW 80's CLOUDY MID MORNING & MID AFTERNOON RAIN/SHOWER WITH SUNSHINE BY LATE AFTERNOON & LIGHT WIND JOB # 6844 DD14 SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

7:40 A.M. OBSERVER LEFT OFFICE FOR JOBSITE

8:20 A.M. OBSERVER ARRIVED ON SITE AND SET GPS BASE ON GPS #23 3/4" Ø IRON REROD 0.2'± DEEP SW CORNER FIELD DRIVE IN SE QUADRANT OF CO HWY D41 & CO HWY S27.

8:40 A.M. ADAM ON SITE AND DROPPED OFF CONCRETE MIXER

8:45 A.M. OBSERVER HAD GPS BASE SET UP AND CHECKED INTO GPS #21 SURVEY MARK NAIL FLUSH IN ACC IN CO HWY S-27 ABOUT 2632'± SOUTH OF ℄ CO HWY D-41 WITH BOTH HORIZONTAL AND VERTICAL POSITION CHECKING GOOD.

8:58 A.M. PICTURE #4088, 9:08 A.M. PICTURE # 4089, & 9:18 A.M. PICTURE # 4090 SEE PICTURE FOR DETAILS.

9:30 A.M. OBSERVER STARTED SHOOTING CORN DAMAGE ON NORTH SIDE OF CO HWY D41. ADAM LEFT SITE TO GET ANOTHER LOAD OF 1" CLEAN ROCK WITH TRUCK AND DUMP TRAILER.

9:30 A.M. PICTURE #4091, 9:38 A.M. PICTURE # 4092 SEE PICTURES FOR DETAILS

9:40 A.M. RON VIERKANDT STOPPED ON SITE AND OBSERVER INFORMED RON THAT CREW WILL BE WORKING ON MAKING TILE TODAY

9:45 A.M. PERRY AND DYLAN ARRIVED ON SITE WITH TILE FOR REPAIR

10:00 A.M. OBSERVER FINISHED SHOOTING CORN DAMAGE #1 SHOTS GPS # 270 TO GPS # 300 0.371 ACRES. ALSO ADAM WAS BACK WITH LOAD OF 1" CLEAN ROCK. SITE WAS ALSO RECEIVING RAIN. (RADAR SHOWED IT WOULD NOT LAST LONG)

(SEE SHEET FOR LOCATION OF CORN DAMAGE #1)

10:20 A.M. RAIN WAS DONE AT SITE

10:55 A.M. PICTURE # 4093 AND PICTURE # 4094 SEE PICTURE FOR DETAILS

10:30 A.M. CREW WAS PREPPING 14" CLAY TILE REPAIR 168'± NORTH OF ℄ OF CO HWY D41 IN FIELD.

11:56 A.M. PICTURE # 4095, 12:02 PICTURE # 4096, & 12:03 PICTURE # 4097 SEE PICTURE FOR DETAILS

11:00 A.M. CARSON ARRIVED ON SITE

12:34 PM PICTURE # 4098 & 12:43 PICTURE # 4099 SEE PICTURE FOR DETAILS.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/09/2020

Reviewed by: ☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/09/2020

PROJECT NUMBER: HARDIN DO WO# 292 6844.5/00#14

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

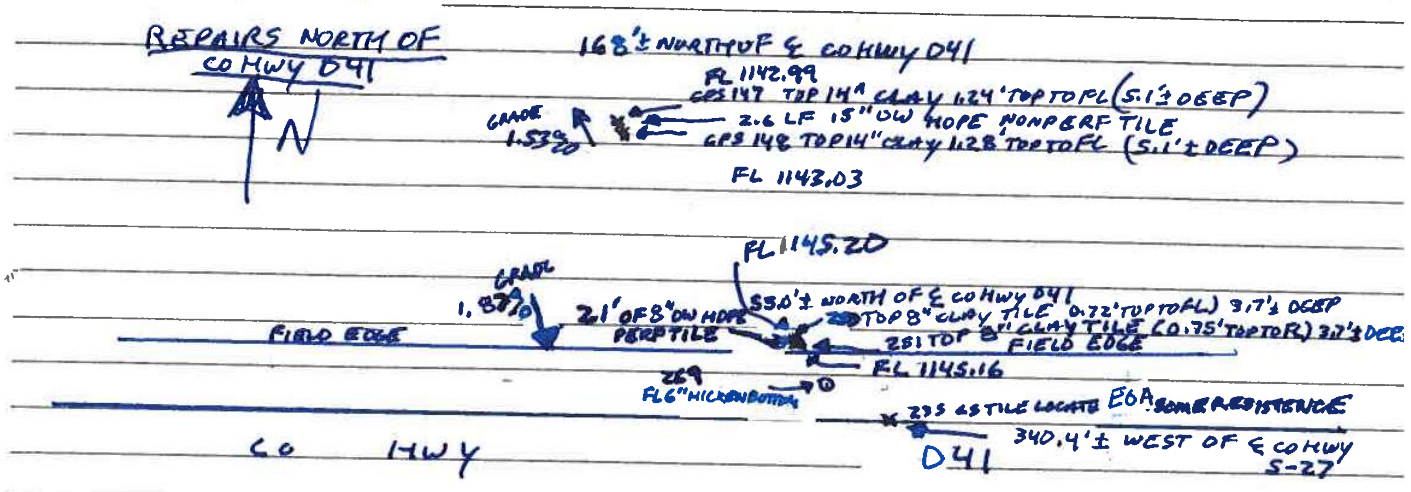
LOCATION: SE¼ SE¼ 27-88-22 NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

DAYS OF WEEK: S M T W Th F S

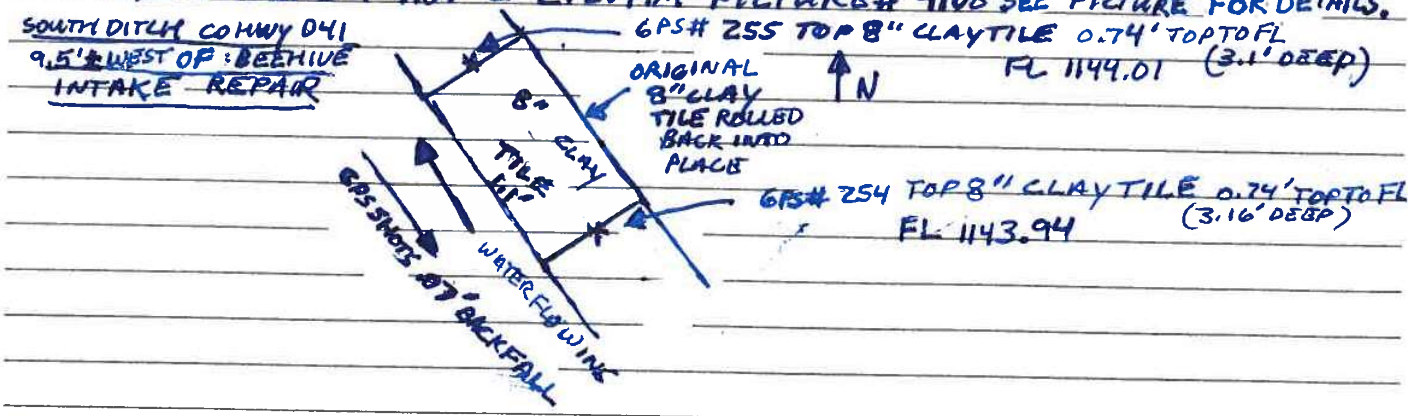
SHEET NO. 2 OF 6

MID 60'S TO LOW 80'S CLOUDY MID MORNING & MID AFTERNOON RAIN/SHOWER WITH SUNSHINE BY LATE AFTERNOON & LIGHT WIND JOB# 6844 DD14 SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION 12:52 P.M. PICTURE# 4100 & 12:56 P.M. PICTURE# 4101 SEE PICTURE FOR DETAILS.




1:00 P.M. CREW STARTED FIXING TILE ON SOUTH SIDE OF CO HWY D41 1:20 P.M. PICTURE #4102, 1:27 PICTURE# 4103 SEE PICTURE FOR DETAILS 1:58 P.M PICTURE# 4104 & 2:02 PICTURE# 4105 & PICTURE# 4106 SEE PICTURE FOR DETAILS 2:08 P.M PICTURE# 4107 & 2:21 P.M PICTURE# 4108 SEE PICTURE FOR DETAILS.




3:03 P.M. PICTURE# 4109 3:07 P.M PICTURE# 4110, 3:20 P.M PICTURE# 4111, PICTURE# 4112, & PICTURE# 4113 SEE PICTURE FOR DETAILS.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/09/2020

Reviewed by: ☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/09/2020

PROJECT NUMBER: HARDIN DD WO# 292 6844.5/DD#14

DAYS OF WEEK: S M T W Th F S

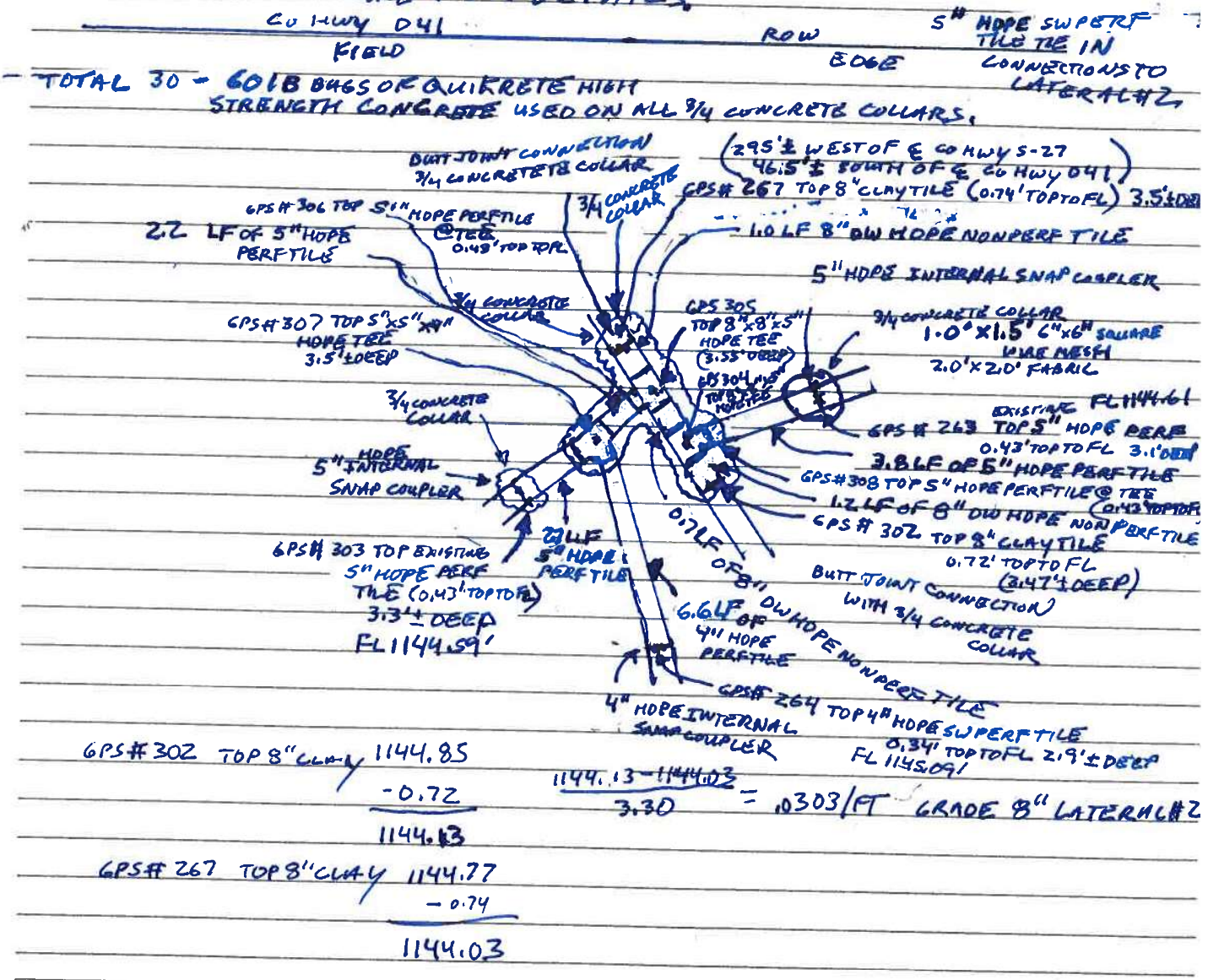
COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

SHEET NO. 3 OF 6

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

MID 60'S TO LOW 80'S CLOUDY MID MORNING & MID AFTERNOON RAIN/SHOWER WITH SUNSHINE BY LATE AFTERNOON & LIGHT WIND JOB # 6844 DD14.SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION 3:26 P.M PICTURE # 4114 & 3:46 P.M PICTURE # 4115 SEE PICTURE FOR DETAILS.




GPS# 302 TOP 8" CLAY 1144.85
-0.72
1144.13

GPS# 267 TOP 8" CLAY 1144.77
-0.74
1144.03

1144.13 - 1144.03 = .0303/FT GRADE 8" LATERAL #2
3.30

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/09/2020

Reviewed by: ☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/09/2020

PROJECT NUMBER: HARDIN DO WO# 292 6844.5/DD#14

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

LOCATION: SE¼ SE¼ 27-88-22 NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

DAYS OF WEEK: S M T W Th F S

SHEET NO. 4 OF 6

MID 60'S TO LOW 80'S CLOUDY MID MORNING & MID AFTERNOON RAIN/SHOWER WITH SUNSHINE BY LATE AFTERNOON & LIGHT WIND JOB # 6844 DD14.SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

3:48 P.M. CREW DONE POURING ¾" CONCRETE COLLARS FOR 5" HDPE PERF TILE TIE IN CONNECTION AND START WORKING ON TILE REPAIRS ON EAST & WEST SIDE OF CO HWY S-27.

3:51 P.M. PICTURE # 4116 SEE PICTURE FOR DETAILS

4:00 P.M PICTURE # 4117 & 4:01 P.M. PICTURE # 4119 SEE PICTURES FOR DETAILS.

4:03 P.M. PICTURE # 4120 & 4:06 P.M PICTURE # 4121 SEE PICTURE FOR DETAILS.

4:58 P.M. PICTURE # 4122 SEE PICTURE FOR DETAILS.

5:26 P.M. PICTURE # 4123 & 5:36 P.M. PICTURE # 4124 SEE PICTURE FOR DETAILS.

5:56 P.M. PICTURE # 4125 & PICTURE # 4126 SEE PICTURE FOR DETAILS.

6:11 P.M. PICTURE # 4127 & 6:15 PICTURE # 4128 SEE PICTURE FOR DETAILS.

7:40 P.M. PICTURE # 4129, 7:41 P.M. PICTURE # 4130 SEE PICTURE FOR DETAILS

7:42 P.M. PICTURE # 4131 & PICTURE # 1 SEE PICTURE FOR DETAILS.

7:00 P.M CREW LEFT SITE. CREW WILL FINISH BACKFILLING TRENCHES TOMORROW.

QUANTITIES

ADAM 8:40 - 9:30, 10 TO 7 9¾ HOURS GETTING LOAD OF 1" CLEAN ROCK WITH DUMP TRAILER ½ HR

DYLAN 9:45 TO 7 9¼ HOURS PERRY 9:45 TO 7 9¼ HOURS

CARSON 11 TO 7 8 HOURS

KOLBELCO SK 85 CS MINI EXCAVATOR 10 TO 7 9 HOURS

CASE TR 340 TRACKED SKIDLOADER 10 TO 7 9 HOURS

CONCRETE MIXER ON SKIDLOADER 14" CLAY REPAIR N OF D41 ½ HOUR

8" CLAY REPAIR N OF D41 ½ HOUR

8" CLAY REPAIR S DITCH D41 ½ HOUR

REST OF CONCRETE COLLARS. 1 HOUR

REPAIRS

(1) 14" CLAY TILE REPAIR (NORTH OF D41) 2.6 LF 15" Ø DW HDPE NON PERF TILE

2 - 2.0 X 3.5' ENGINEERING FABRIC

1.0' x 4.0' & 1.5' x 4.0' 6" x 6" SQUARE WIRE MESH

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/09/2020

Reviewed by: _____ ☐ Engineer

Date Reviewed _____

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/09/2020

PROJECT NUMBER: HARDIN DO WO# 292 6844.5/DD#14

DAYS OF WEEK: S M T W Th F S

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

SHEET NO. 5 OF 6

LOCATION: SE¼ SE¼ 27-88-22, NE¼ NE¼ 34-88-22, & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DD14 MAIN OR LAT 2

MID 60'S TO LOW 80'S CLOUDY MID MORNING & MID AFTERNOON RAIN/SHOWER WITH SUNSHINE BY LATE AFTERNOON & LIGHT WIND JOB # 6844 DD14.SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

18 - 60LB BAGS OF QUIKRETE HIGH STRENGTH CONCRETE

(2) 8" CLAY TILE REPAIR (NORTH OF D41)
2.0' X 3.0' ENGINEER FABRIC
1.5' X 2.0' 6"x6" SQUARE WIREMESH
2.1 LF 8" DW HDPE NONPERF TILE
8 - 60LB BAGS OF QUIKRETE HIGH STRENGTH CONCRETE

(3) 8" CLAY ROLL BACK IN REPAIR (SOUTH DITCH OF D41) 1.5' X 2.0' 6"x6" SQUARE WIRE MESH
2.0' X 2.0' ENGINEERING FABRIC
5 - 60LB BAGS QUIKRETE HIGH STRENGTH CONCRETE

(4) 5" HDPE PERF TILE TIE IN REPAIR

(4A) 8" MAIN (TOTAL 5.35 LF) 1.2 LF 8" Ø DW NON PERF TILE, HDPE 8"x8"x5" TEE, 0.7 LF 8" Ø DW NON PERF TILE, HDPE 8"x8"x5" TEE, & 1.0 LF 8" Ø DW NON PERF TILE

(4B) EAST 5" PERF TILE TIE IN
5" HDPE INTERNAL SNAP COUPLER
3.8 LF OF 5" HDPE PERF TILE

(4C) WEST 5" PERF TILE TIE IN
2.2 LF OF 5" Ø HDPE SW PERF TILE, 5"x5"x4" HDPE TEE, 2.7 LF OF 5" Ø HDPE SW PERF TILE, 5" Ø HDPE INTERNAL SNAP COUPLER, 6.6 LF OF 4" HDPE PERF TILE, & 4" HDPE INTERNAL SNAP COUPLER.

(4D) ¾ CONCRETE COLLARS
8" CLAY TO 8" HDPE NON PERF NORTH END 1.5' X 1.5 6"x6" WIRE MESH 2.0' X 2.0' ENGINEER FABRIC
SOUTH END 1.5' X 1.5 6"x6" WIRE MESH 2.0' X 2.0' ENGINEER FABRIC

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 07/09/2020

Reviewed by: ☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 07/09/2020

PROJECT NUMBER: MARION DD WO # 292
6844.5/00#14

COUNTY, ROUTE, ROAD: INTERSECTION OF CO HWY S-27 & CO HWY D41

LOCATION: SE¼ SE¼ 27-88-22 NE¼ NE¼ 34-88-22 & NW¼ NW¼ 35-88-22 INVESTIGATE FOR PLUGGED TILE DDH MAINLATZ

DAYS OF WEEK: S M T W T F S

SHEET NO. 6 OF 6

MID 60'S TO LOW 80'S CLOUDY MID MORNING & MID AFTERNOON RAIN SHOWER WITH SUNSHINE BY LATE AFTERNOON

JOB #6844.00#14 SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

- 1.5 X 2.0' ENGINEERING FABRIC OVER BOTH 8"x8"x 15" HOPE TEE TO 5" HOPE SW PERF TILE SLIP IN CONNECTIONS
- 1.5 X 2.0' ENGINEER FABRIC OVER BOTH 5" HOPE TO 5" HOPE INTERNAL COUPLER CONNECTIONS.
- 1.5' x 2.0' ENGINEERING FABRIC OVER 4" HOPE TO 4" HOPE INTERNAL COUPLER CONNECTION, 4" HOPE SLIP IN CONNECTION ON 5"x5"x4" HOPE TEE, & AROUND 5"x5"x4" TEE CONNECTIONS
- 26 - 60 LB BAGS OF QUIKRETE HIGH STRENGTH CONCRETE.

(5) HOLE IN 8" HOPE NONPERF TILE REPAIR
2.0 X 2.0 ENGINEER FABRIC
1.0 X 2.0' 6" x 6" SQUARE WIRE MESH
4 - 60 LB BAGS OF QUIKRETE HIGH STRENGTH CONCRETE.

(6) 4" HOPE PERF TILE REPAIR
9.8 LF 4" HOPE PERF TILE WITH 2 4" INTERNAL SNAP COUPLERS
LOAD #1 MARTIN MARIETTA TICKET # 302243 1" CLEAN ROCK 7.58 TONS
LOAD # 2 MARTIN MARIETTA TICKET # 1" CLEAN ROCK TONS
CORN DAMAGE #1 0.37 AC CORN DAMAGE #2 0.043 AC; CORN DAMAGE #3 0.051 AC
ADDITIONAL ACTIONS - FINE GRADE & SEED; SOUTH DITCH CO HWY D41, NORTH DITCH CO HWY D41, & WEST DITCH CO HWY S27 WET LAND AREA DISTURBED BY REPAIR
- 14" CLAY TILE REPAIR (N OF D41) SOIL WAS MIXED WITH CORN STALKS NOW EXTRA SOIL BUT WILL SETTLE DUE TO STALKS MIXED WITH SOIL.
- 8" CLAY TILE AT GPS# 250 TO GPS# 251 (FIELD (ABOVE MAIN TILE) W/M CROSSING NORTH D41 APPEARS TO BE ABANDONED
- 6" HILLREN BOTTOM FULL OF SOIL ALONG WITH OUTLET TILE BEING CRACKED AND FULL OF SOIL (MAY NEED REPLACED SOMETIME) (GPS# 269) STILL HAVE BEE HIVE INTAKE TO EAST IN NORTH DITCH OF CO HWY D41 (171' ± WEST OF CO HWY S27)

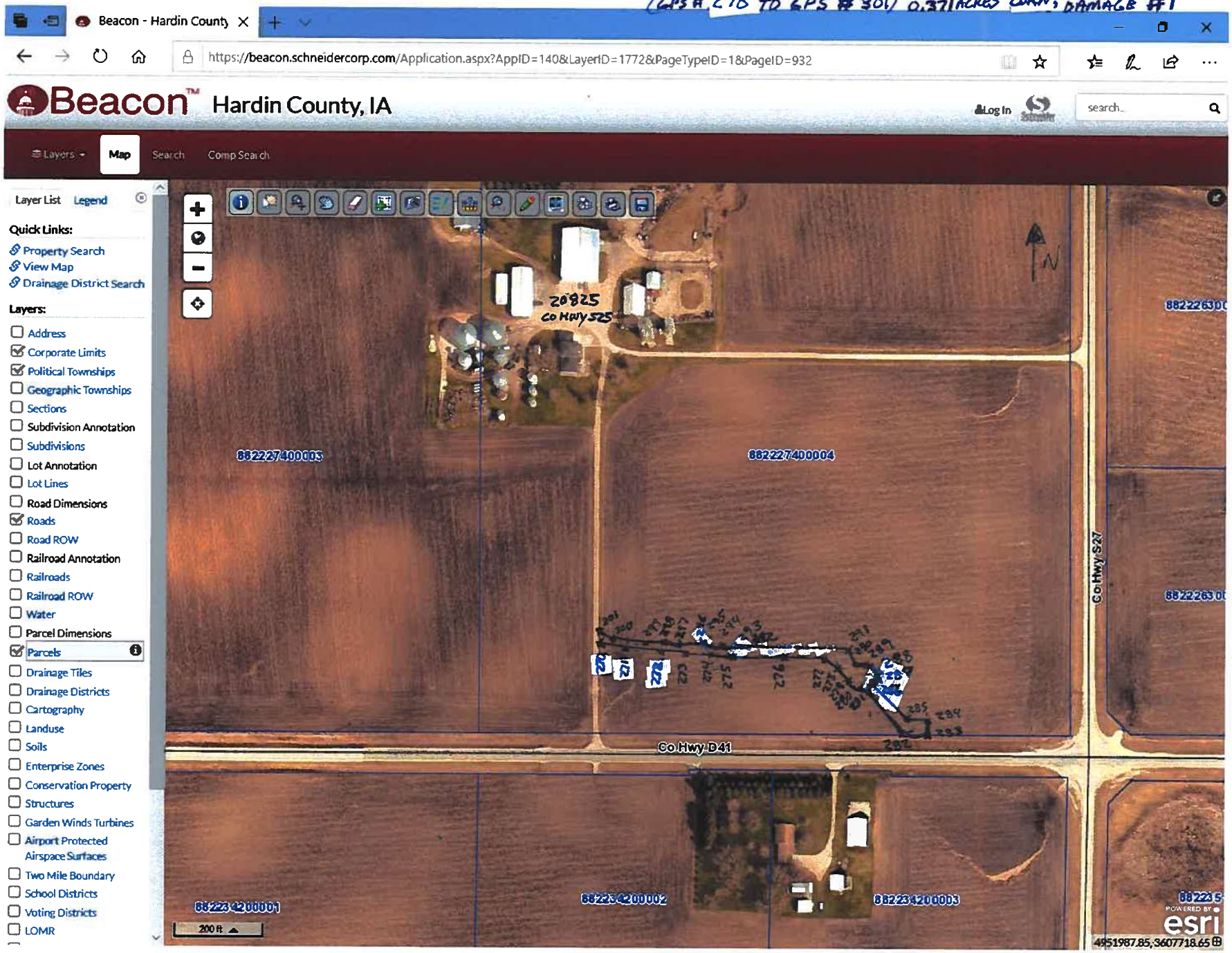
I Certify that the work [illegible] in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penny Date Prepared: 07/09/2020

Reviewed by: ☐ Engineer

Date Reviewed

68445/00#14 07/09/2020
(GPS # 270 TO GPS # 301) 0.37 ACRES CORN, DAMAGE #1




N

6844.5/DO#14 07/09/2020 CORN DAMAGE #2 (GPS# 320 TO GPS# 324). 0.093 ACRES
CORN DAMAGE #3 (GPS# 331 TO GPS# 336) 0.051 ACRES

Beacon - Hardin County

https://beacon.schneidercorp.com/Application.aspx?AppID=140&LayerID=1772&PageTypeID=1&PageID=932

# Beacon™ Hardin County, IA

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- [ ] Airport Protected Airspace Surfaces
- [ ] Two Mile Boundary
- [ ] School Districts
- [ ] Voting Districts
- [ ] LOMR




**Results:**

Parcel ID - 882234200003
Alt Id - 2840100000
Address - 15898 CO HWY D41
Owner - Vierkandt, Ronald R - Trust Vierkandt, Carol Jean - Trust (Deed)
Acres - 18.69
View: Report | Pictometry Imagery

| | | | | | |
|---|---|---|---|---|---|
| Parcel ID | 882234200003 | Alternate ID | 2840100000 | Owner Address | Vierkandt, Ronald R - Trust Vierkandt, Carol Jean - Trust |
| Sec/Twp/Rng | 34-88-22 | Class | AD | | 15898 Highway D41 |
| Property Address | 15898 CO HWY D41 HARDIN | Acreage | 18.69 | | Alden IA 50006-9141 |
| District | 13000 | | | | |
| Brief Tax Description | E1/2 NE NE SEC34-T88N-R22W (Note: Not to be used on legal documents) | | | | |

PICTURE # 4088 SHOWING PILE OF DEBRIS PULLED OUT OF TILE (WHERE 8" CLAY TILE SECTION WAS ROLLED OUT IN SOUTH DITCH OF CO HWY 041) BEFORE IT WENT DOWNSTREAM AFTER PLUGGED TILE WAS OPENED




N




PICTURE #4089 IS LOOKING NE INSIDE TILE WYE GPS# 88 ACCESS LID ON SOUTH SIDE OF CO HWY 041 1195.6' ± WEST OF ℄ CO HWY S27 SHOWING TILE IS STILL FLOWING GOOD AT THIS LOCATION

PICTURE# 4090 (GPS#269) SHOWING 6" HICKEN BOTTOM WITH TOP COMPLETELY BROKE OFF AND FL COMPLETELY FULL OF SOIL WITH 6" CLAY TILE OUTLET BROKE AND COMPLETELY FULL OF SOIL. PICTURE IS LOOKING WEST IN NORTH DITCH OF CO HWY 041




N




N

PICTURE#4091 IS LOOKING EAST FROM GRAVEL DRIVE FOR 20825 CO HWY 527 OFF OF CO HWY 041 SHOWING CORN DAMAGE 1 OUT TO TILE REPAIR.

PICTURE # 4092 IS LOOKING NW FROM SOUTH DITCH OF CO HWY 041 SHOWING CORN DAMAGE OUT TO TILE REPAIR.




N




N

PICTURE # 4093 IS LOOKING WEST SHOWING CORN DAMAGE TO TILE REPAIR. LOOKING TOWARDS 20825 CO HWY 027 GRAVEL DRIVE OFF CO HWY 041.

PICTURE # 4094 IS LOOKING SE TOWARDS COHWY041 @ CORN DAMAGE/ TO TILE REPAIR




N

GPS# 248 TOP 14" CLAY TILE (1.28' TOP TO FL) 5.1'± DEEP




N

GPS# 247 TOP 14" CLAY TILE (1.24' TOP TO FL) (5.1'± DEEP)

PICTURE # 4095 IS LOOKING SE SHOWING 2.6 LF: PIECE OF 15"ØDW HDPE NONPERF TILE IN PLACE FOR REPAIR WITH BEDDING ROCK UNDER TILE

PICTURE# 4096 IS LOOKING NW SHOWING FABRIC & MESH OVER NORTH & SOUTH TIE IN JOINTS FOR 14" CLAY TILE REPAIR NORTH OF COMWY D41




GPS # 247 2.0'x3.5' FABRIC WITH 1.0' X 4.0' WIRE MESH OVER JOINT BEFORE COLLARS POURED

N

GPS # 248 2.0'x3.5' FABRIC & 1.5'x4.0' WIRE MESH OVER JOINT BEFORE COLLARS POURED




N

PICTURE# 4097 IS LOOK NW SHOWING CREW POURING 3/4 CONCRETE COLLARS FOR 14" CLAY TILE REPAIR FROM QUIKRETE BAGS MIXED IN A CONCRETE MIXER THAT ATTACHES TO A SKIDLOADER.

PICTURE #4098 IS LOOKING SE DOWNSTREAM FROM GPS #251
TOP 8" CLAY TILE (0.75' TOP TO FL) AFTER ANOTHER DAMAGED
40' SECTION OF TILE WAS REMOVED. 2" MUD IN FL TO COMPETELY
FULL OF MUD. RON SAYS TILE HAS BEEN ABANDONED BUT




WILL CONNECT TOGETHER IN CASE ANY TILE UPSTREAM IS CONNECTED YET

N




GPS # 251
TILE TOP 8" CLAY
0.75' TOP TO FL
2" MUD IN FL
(3.7' ± DEEP)

N

GPS #250
TILE TOP 8"
CLAY
(0.75' TOP TO FL)
2" MUD IN FL
3.7' ± DEEP

PICTURE #4099 IS LOOKING SE SHOWING 2.1LF 8" DW HOPE PERF TILE
IN PLACE WITH 2.0'X3.0' FABRIC & 1.5'X2.0' 6"X6" WIRE MESH
OVER JOINTS BEFORE 3/4 CONCRETE COLLAR POURED

PICTURE # 4100 IS LOOKING SW AT FINISHED 3/4 CONCRETE COLLAR FOR 8" CLAY TILE REPAIR 55'± NORTH OF ℄ COHWY 041. CREW USED 8-60lB QUIKRETE HIGH STRENGTH CONCRETE BAGS.







PICTURE #4101 IS LOOKING NW AT FINISHED 3/4 CONCRETE COLLAR FOR 14" CLAY TILE REPAIR 168'± NORTH OF ℄ COHWY 041. CREW USED 18-60lB QUIKRETE HIGH STRENGTH CONCRETE BAGS FOR CONCRETE COLLARS.

PICTURE #4102 IS LOOKING NW IN SOUTH DITCH OF CO HWY 041 9.5'± WEST OF WEST RIM OF BEEHIVE INTAKE SHOWING 8" CLAY TILE SECTION ROLLED BACK IN PLACE.




GPS #255
TOP 8" CLAY TILE (0.74' TOP TO FL)
3.1'± DEEP

N

GPS #254
TOP 8" CLAY TILE (0.74' TOP TO FL)




PICTURE # 4103 IS LOOKING UPSTREAM INSIDE 8" CLAY TILE WITH ABOUT 1" FLOW AT GPS #302 (TOP 8" CLAY TILE)(0.72' TOP TO FL)

PICTURE #4104 IS LOOKING NW SHOWING 2.0'X2.0' ENGINEERING FABRIC & 1.5'X 2.0' 6"X6" SQUARE WIRE MESH OVER JOINT FOR 8" CLAY TILE SECTION ROLLED BACK INTO PLACE BEFORE 3/4 CONCRETE COLLAR POURED.




N




PICTURE #4105 IS LOOKING DOWN.STREAM INSIDE 8" CLAY TILE WITH ABOUT 2" ± OF SLOW WATER FLOW.

PICTURE # 4106 IS LOOKING NORTH SHOWING 3/4" CONCRETE COLLAR POURED FOR 8" CLAY TILE SECTION ROLLED BACK INTO PLACE 9'5" WEST OF BEHIND ENTRANCE. CREW USED 5-60LB BAGS OF QUIKRETE HIGH STRENGTH CONCRETE







PICTURE # 4107 IS LOOKING NORTH SHOWING BEDDING ROCK BACKFILLED AROUND 3/4 CONCRETE COLLAR IN SOUTH DITCH OF CO HWY 641 FOR 8" CLAY TILE SECTION ROLLED BACK INTO PLACE.

PICTURE # 4108 IS LOOKING SW SHOWING 8" CLAY TILE REMOVED WITH BEDDING ROCK IN PLACE TO TIE IN 5" SW HDPE PERF TILE LINES INTO 8" CLAY TILE LATERAL 2




GPS #303 TOP 5" HDPE PERF TILE 0.43' TOP TO FL (3.7'± DEEP)

GPS # 267 TOP 8" CLAY TILE 0.74' TOP TO FL (3.55'± DEEP)

GPS #302 TOP 8" CLAY TILE 0.72' TOP TO FL (3.47'± DEEP)

N




GPS # 307 TOP HDPE TEE 8"x8"x4" 3.51'± DEEP

GPS # 306 TOP 5" HDPE PERF TILE @ TEE 0.43' TOP TO FL 3.67' DEEP

GPS # 267 TOP 8" CLAY TILE 0.74' TOP TO FL (3.55'± DEEP)

N

2.2 LF OF 5" HDPE PERF TILE

1.0 LF 8"ϕ DW HDPE NONPERF TILE

GPS # 302 TOP 8" CLAY TILE 0.72' TOP TO FL (3.47'± DEEP)

GPS # 305 TOP HDPE TEE 8"x8"x5" (3.55'± DEEP)

0.7 LF 8"ϕ DW HDPE NONPERF TILE

1.2 LF 8"ϕ DW HDPE

GPS # 304 TOP HDPE TEE 8"x8"x5" (3.52'± DEEP)

PICTURE # 4109 IS LOOKING WEST AT 8" DW HDPE NONPERF TILE INSTALLED WITH A 8"x8"x5" HDPE TEE @ EAST & WEST & 5" HDPE PERF TILE INSTALLED INTO ~~TEE~~ WITH 5"x5"x4" HDPE TEE INSTALLED ON IT WITH BEDDING ROCK UNDER CONNECTION.

PICTURE #4110 IS LOOKING WEST AT NORTH & SOUTH TIE IN CONNECTIONS ON 8" LAT 2 BEFORE 3/4 CONCRETE COLLARS POURED




GPS#: 307 TOP HOPE 5"x5"x4" HOPE TEE

GPS#267 TOP 8" CLAY 0.24' TOP TO FL

1.5' x 1.5' 6" x 6" WIRE MESH 2.0' x 2.0' FABRIC OVER JOINT BEFORE 3/4 CONCRETE COLLAR POURED

GPS#305 TOP HOPE 8"x8"xS" TEE

N

GPS#304 TOP HOPE 8"x8"x5" TEE

GPS #302 TOP 8" CLAY 0.28' TOP TO FL

1.5' x 1.5' 6" x 6" WIRE MESH & 2.0' x 2.0' FABRIC OVER JOINT BEFORE 3/4 CONCRETE COLLAR POURED




N

GPS#263 TOP 5" HOPE PERF TILE 0.43' TOP TO FL

302

PICTURE #4111 IS LOOKING NW SHOWING 3/4 CONCRETE COLLARS POURED AT CONNECTIONS FOR 5" HOPE SW PERF TILE TIE INS. CREW USED 17-60 LB BAGS OF QUIKRETE HIGH STRENGTH

PICTURE #4112 IS LOOKING EAST SHOWING 3/4 CONCRETE COLLARS POURED (USED 17 QUIKRETE HIGH STRENGTH CONCRETE BAGS




N

GPS# 264 TOP 4" HDPE PERF 0.34' TOP TO FL (2.9'± DEEP)

GPS# 303 TOP 5" HDPE PERF TILE 0.43' TOP TO FL

4" HDPE INTERNAL SNAP COUPLER

GPS# 264 TOP 4" HDPE PERF 0.34' TOP TO FL (2.9'± DEEP)




N

6.6 LF OF 4" HDPE SW PERF TILE

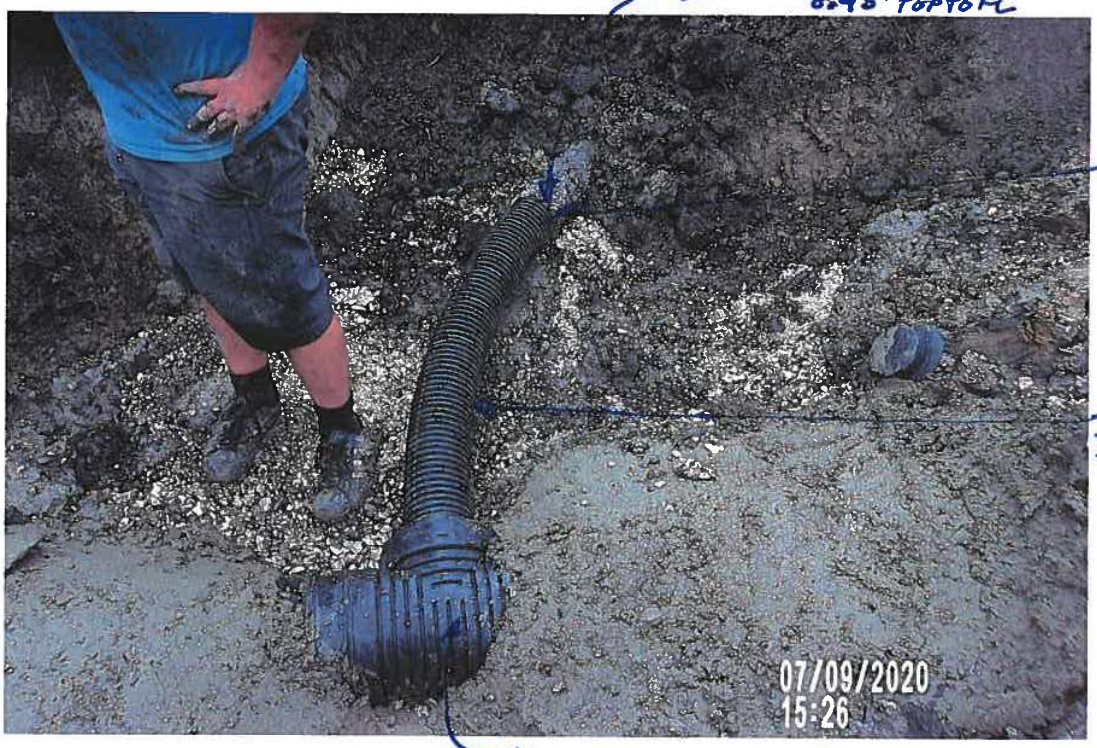
GPS# 303 TOP 5" HDPE PERF TILE 0.43' TOP TO FL

GPS# 302 TOP OF 5"x5"x4" HDPE TEE

27 LF OF 5" HDPE PERF TILE

PICTURE # 4113 IS LOOKING SE SHOWING 4" HDPE PERF TILE TIED INTO 5" HDPE PERF TILE TIED INTO 8" HDPE NON PERF LAT 2 WITH 3/4 CONCRETE COLLARS (USED 17 QUIKRETE CONCRETE)

PICTURE #4114 IS LOOKING NE SHOWING 5" HDPE SW PERF TILE TIE IN CONNCTION INTO 8" HDPE LATERAL #2.







PICTURE # 4115 IS LOOKING SE AT 5" HDPE SW PERF TILE TIE IN CONNECTIONS 3/4 CONCRETE COLLARS. I USED 9-60lb BAGS OF QUIKRETE HIGH STRENGTH CONCRETE.

PICTURE # 4116 IS LOOKING EAST SHOWING HOLE IN TOP OF 8" HOPE NONPERF TILE EXCAVATED BY ANOTHER CONTRACTOR AND LEFT OPEN 322'± SOUTH OF CO HWY 041 & 9.6'± EAST OF EAST ROW FENCE CO HWY S-27 IN WETLAND AREA




N

GPS #311 TOP 8" HOPE NONPERF




PICTURE# 4117 IS LOOKING DOWNSTREAM (FROM GPS #311) INSIDE 8" TILE SHOWING CHANGE OF MATERIAL. TILE LOOKS GOOD SHAPE WITH WATER LEVEL AT 4" (SLOW FLOW). ALSO FLOWLINE HAS SOFT MUCK BUT SHOULD FLUSH OUT NOW TILE OPEN.

PICTURE #4119 IS LOOKING UPSTREAM (FROM CPS #311). INSIDE 8" TILE SHOWING TILE IN GOOD SHAPE BUT CHANGED TO CLAY WITH WATERLEVEL AT 4" (SLOW FLOW). ALSO FLOWLINE HAS SOFT MUCK BUT SHOULD FLUSH OUT NOW THAT IT IS OPEN.







CPS #311

N

PICTURE #4120 IS LOOKING EAST SHOWING FABRIC & 1.0'X 1.5' WIRE MESH OVER HOLE BEFORE 3/4 CONCRETE COLLAR POURED OVER HOLE IN TILE.

PICTURE #4121 IS LOOKING AT FINISHED 3/4 CONCRETE COLLAR OVER HOLE IN 8" DW HOPE NON PERF TILE. CREW USED 4 - 60 LB BAGS OF QUIKRETE HIGH STRENGTH CONCRETE ON COLLAR



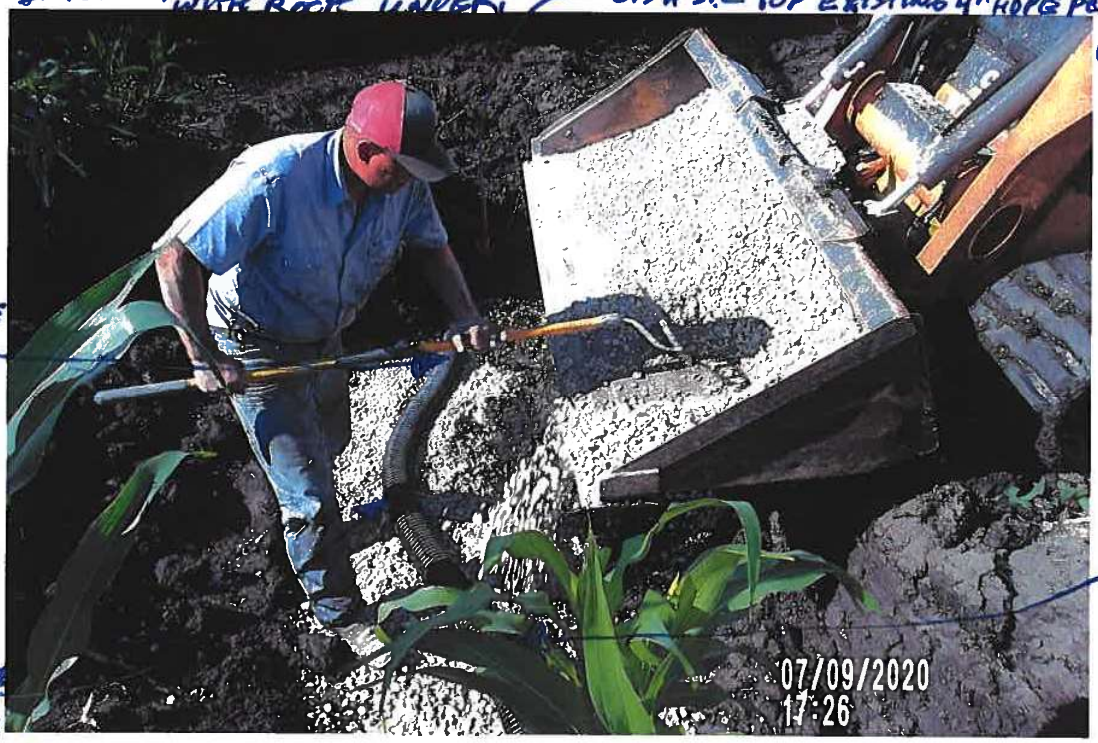

N




N

PICTURE # 4122 IS LOOKING NW SHOWING 4" SW HOPE PERF TILE THAT NEEDS REPLACED AFTER CUTTING TILE WHILE EXCAVATING TO CHECK LAT #2 TILE FLOW STATUS ON EAST SIDE OF CO HWY S-27.

PICTURE # 4123 IS LOOKING NORTH SHOWING 9.8 LF OF 4" HDPE SW PERF TILE INSTALLED WITH 4" HDPE INTERNAL COUPLERS AND OFF TO SIDE SOME FOR FIRMER GROUND & BEDDED WITH ROCK UNDER.




GPS #312 TOP EXISTING 4" HDPE PERF TILE (0.32' TOP TO FL

GRADE ON TILE 2.02%

GPS #318 TOP 4" HDPE PERF TILE 0.38' TOP TO FL

N

GPS #317 TOP 4" HDPE PERF TILE 0.38' TOP TO FL

GPS #316 TOP 4" HDPE PERF TILE 0.38' TOP TO FL

GPS #313 TOP EXISTING 4" HDPE PERF TILE 0.36' TOP TO FL




PICTURE # 4124 IS LOOKING NORTH WEST SIDE OF CO HWY 327 SHOWING 4" HDPE PERF TILE REPAIR BEDDED WITH ROCK.

PICTURE #4125 IS LOOKING NORTH SHOWING DITCH WEST SIDE CO HWY S-27 BACKFILLED & GRADED.

GPS # 256 TILE WARNING SIGN SET BACK IN PLACE







N

PICTURE #4126 IS LOOKING WEST FROM CO HWY S27 ABOUT 330'± SOUTH ℄ CO HWY D41 SHOWING 4" HOPE SW PERF TILE REPAIR BACKFILLED & GRADED. ALSO SHOWS 0.043 AC CORN DAMAGE. (GPS # 320 - #324) DURING REPAIR.

PICTURE # 4127 IS LOOKING EAST SOUTH OF SOUTH ROW OF COHWY 041 SHOWING 5" HDPE PERF TILE TILE INS BEDDED WITH ROCK TO TOP OF TILE







N

PICTURE # 4128 IS LOOKING NW SHOWING NORTH 14" CLAY TILE EXPOSED TRENCH WITH TILE BEDDED WITH ROCK TO TOP OF TILE

PICTURE #4129 IS LOOKING EAST IN NORTH DITCH OF CO HWY 041 SHOWING DITCH STILL NEEDS GRADED.




N



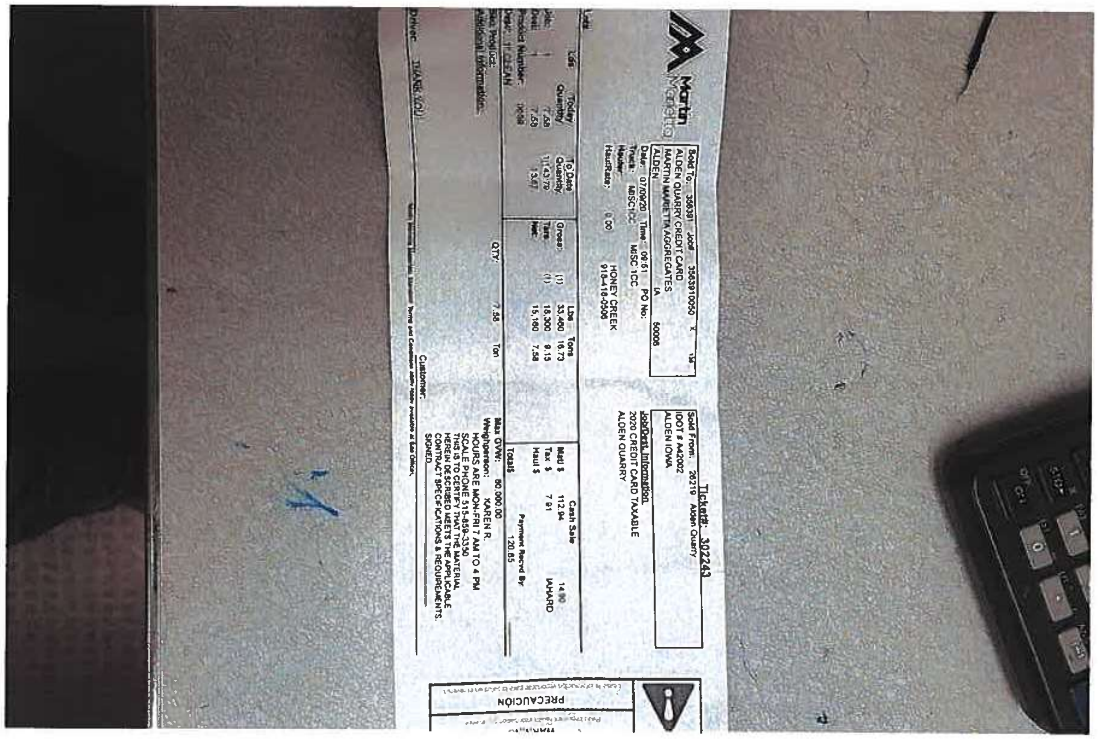

PICTURE #4130 IS LOOKING EAST SHOWING PILE OF EXTRA SOIL THAT WAS USED TO BACKFILL (14" CLAY TILE NORTH OF CO HWY 041.) TILE TRENCH. CORN STALKS WERE MIXED WITH SOIL CREATING VOIDS AND EXTRA SOIL. AREA WILL SETTLE DUE TO THIS.

PICTURE #4131 IS LOOKING SE SHOWING 5" HOPE TIE IN TRENCH THAT NEEDS BACKFILLED YET. PICTURE SHOWS 0.051 ACRES CORN DAMAGE DURING REPAIR (GPS#331 TO GPS#330)




N

07/09/2020
PICTURE # 1 LOAD # 1 1" CLEAN ROCK USED TO BED TILE IN REPAIRS.



CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 07/13/2020

PROJECT NUMBER: HARDIN DD WO# 292 6844.5 DD#14

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: 538.5'± EAST OF CO HWY 527 & 42' ± SO UTH OF ℄ CO HWY D41

SHEET NO. 1 OF 2

LOCATION: 35-88-22. NW¼ NW¼ INVESTIGATE BLOWOUT SOUTH DITCH EAST OF 18" BEEHIVE INTAKE

UPPER 50'S TO MID 80'S SUNNY & BREEZY

JOB# 6844 DD14, SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION 07/10/2020 PERRY AND TR340 TRACKED SKIDLOADER FINISHED BACKFILLING REST OF HOLES LEFT OPEN" 2 HOURS

7:15 A.M. ADAM CALLED OBSERVER THAT HE WILL BE ON SITE AROUND 10:00 A.M. TO REPAIR BLOWOUT IN SOUTH DITCH OF D41 EAST OF BEEHIVE INTAKE

7:20 A.M. OBSERVER NOTIFIED LEE THAT ADAMS CREW WOULD BE WORKING TODAY

8:40 A.M. OBSERVER LEFT OFFICE FOR JOB SITE

9:10 A.M. OBSERVER ARRIVED ON SITE AND SET GPS BASE ON GPS #23 3/4" ⌀ IRON REBOD 0.2'± DEEP SW CORNER OF FIELD DRIVE IN SE QUADRANT OF CO HWY D-41 & CO HWY S-27.

9:40 A.M. OBSERVER HAD GPS BASE SET UP AND CHECKED INTO GPS #21 SURVEY MARK NAIL FLUSH IN ACC IN CO HWY S-27 ABOUT 2632'± SOUTH OF ℄ CO HWY D41 WITH BOTH HORIZONTAL AND VERTICAL POSITIONS CHECKING GOOD

9:45 A.M. OBSERVER STARTED TO LOOK FOR REPAIR AREA.

9:50 A.M. PERRY ARRIVED ON SITE.

10:00 A.M. ADAM ARRIVED ON SITE WITH KOLBELCO SK85 CS MINI EXCAVATOR & CASE TR340 TRACKED SKIDLOADER FOR EQUIPMENT. PERRY WENT TO HELP ADAM UNLOAD EQUIPMENT.

10:01 A.M. PICTURE #4138 & 10:02 A.M. PICTURE #4139: SEE PICTURE FOR DETAILS

10:17 A.M. PICTURE #4140 SEE PICTURE FOR DETAILS.

10:20 A.M. OBSERVER SHOT CULVERT, BEEHIVE INTAKE IN NORTH AND SOUTH DITCH OF CO HWY D41 & SINK HOLE IN NORTH SHOULDER OF CO HWY D41.

10:25 A.M. UPON FURTHER INVESTIGATION SINK HOLE IN NORTH SHOULDER IS DIRECTLY ABOVE 18" RCP ABOUT 11.7'± SOUTH OF NORTH END OF RCP SO SINK HOLE IS A CULVERT ISSUE ℄ COUNTY ROAD DEPARTMENT)

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Pennings Date Prepared: 07/13/2020

Reviewed by: ☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 07/13/2020

PROJECT NUMBER: HARDIN DD WO #292 6844.5 DD#14

COUNTY, ROUTE, ROAD: 538.5'± EAST OF CO HWY 527 & 42'± SOUTH OF ℄ CO HWY 041

LOCATION: 35-88-22 NW1/4 NW1/4 INVESTIGATE BLOWOUT SOUTH DITCH EAST OF 18" BEEHIVE INTAKE

DAYS OF WEEK: S M T W T F S

SHEET NO. 2 OF 2

UPPER 50'S TO MID 80'S SUNNY & BREEZY

JOB# 6844 DD 14. SURVE

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

11:06 A.M. PICTURE #4141 & 11:08 A.M. PICTURE # 4142. SEE PICTURE FOR DETAILS.

11:30 A.M. CREW LEFT SITE TO GET SUPPLIES FOR REPAIR.

11:32 A.M. PICTURE #4144, 11:45 A.M. PICTURE #4145, 11:46 A.M. PICTURE # 4147 SEE PICTURE FOR DETAILS.

1:10 P.M. CREW BACK ON SITE WITH SUPPLIES

1:46 P.M. PICTURE #4148, 1:56 PICTURE #4149, 1:59 PICTURE #4150 SEE PICTURE FOR DETAILS.

2:15 P.M. PICTURE #4151 & 2:35 PICTURE #4152 SEE PICTURE FOR DETAILS.

2:30 P.M. OBSERVER AND CREW LEFT SITE.

QUANTITIES

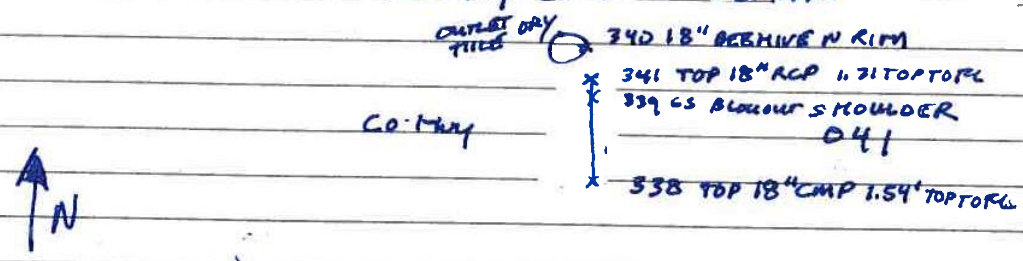
PERRY, ADAM 9:50 - 11:30 1:10 - 2:30 3 HOURS
11:30 - 1:10 1 2/3 HOURS GETTING SUPPLIES

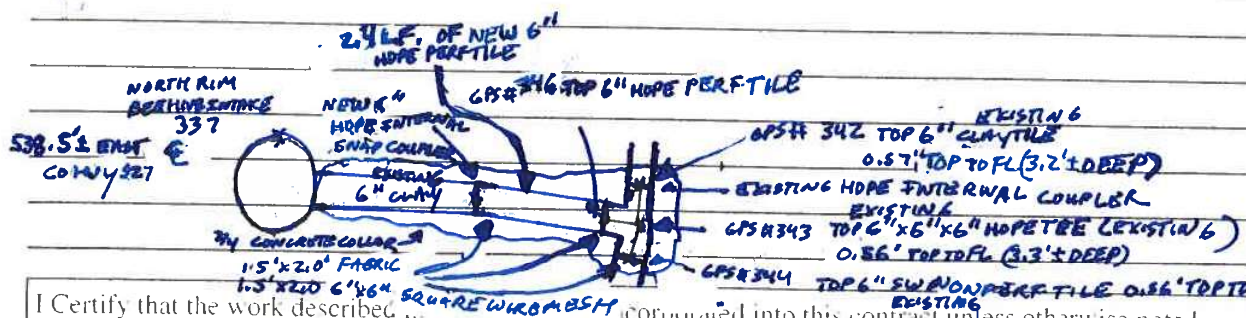
KOLBELCO SK 85 CS MINI EXCAVATOR 3 HOURS

CASE TR 340 TRACKED SKID LOADER 3 HOURS

2.4 LF OF 6" HDPE SW PERF TILE, 6" HDPE INTERNNAL SNAP COUPLER

3 - 1.5' x 2.0' ENGINEER FABRIC & 3 - 2.0' x 1.5' 6" x 6" SQUARE WIRE MESH, & 5 - 60 lb BAGS QUIKRETE HIGH STRENGTH CONCRETE MIX




I Certify that the work described ... incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning

Date Prepared: 07/13/2020

Reviewed by:

☐ Engineer

Date Reviewed

Users\Ryken Standard Forms and Procedures\Company Forms\Construction Engineering Observation Report (1)

PICTURE# 4138 IS LOOKING EAST SHOWING SMALL SINKHOLE ON EAST SIDE OF BEEHIVE INTAKE PER RANDYS REPORT AREA LOOKED LIKE IT HAD BEEN EXCAVATED AT ONETIME




GPS# 337
18" BEEHIVE INTAKE
N RIM




N

DIP IN GRAVEL SHOULDER WITH FRESH ROCK

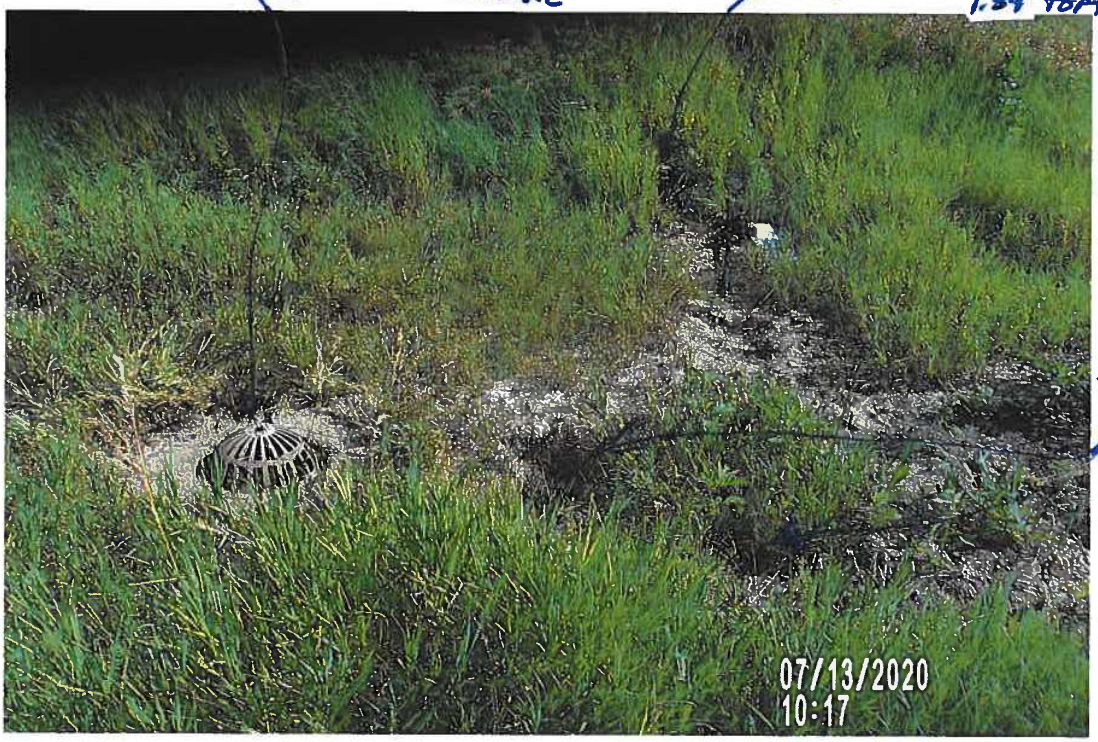
PICTURE#4139 IS LOOKING WEST ON NORTH SHOULDER OF CO HWY D41 SHOWING SINK HOLE PER RANDY'S REPORT WITH A LITTLE DIP IN ACL & GRAVEL AND APPEARS SOMEONE HAS PUT FRESH ROCK IN SUCK HOLE.

PICTURE#4140 IS LOOKING NORTH TOWARDS CO HWY D41 SHOWING 18" CMP OUTLET FOR CULVERT UNDER CO HWY D41 & 18" BEEHIVE INTAKE IN SOUTH DITCH OF CO HWY D41 WITH SINKHOLE TO EAST.

GPS#337 NRIM BEEHIVE INTAKE

GPS#338 TOP 18" CMP 1.54' TOP TO FL

N




SINKHOLE EAST OF BEEHIVE INTAKE

N




PICTURE#4141 IS LOOKING EAST ON EAST SIDE OF BEEHIVE INTAKE SHOWING 6" HDPE PERF TILE CONNECTION TO 6" CLAY TILE OUTLET EAST FROM BEEHIVE INTAKE.

PICTURE# 4142 IS LOOKING SE SHOWING 6" HDPE PERF TILE CONNECTION TO 6" CLAY TILE EAST OF BEEHIVE INTAKE. PICTURE SHOWS CREW EXCAVATING TO CHECK ON TIE CONNECTION. 6" HDPE / 6" CLAY TILE CONNECTION CLAY TILE BROKE & WILL NEED REPLACED.

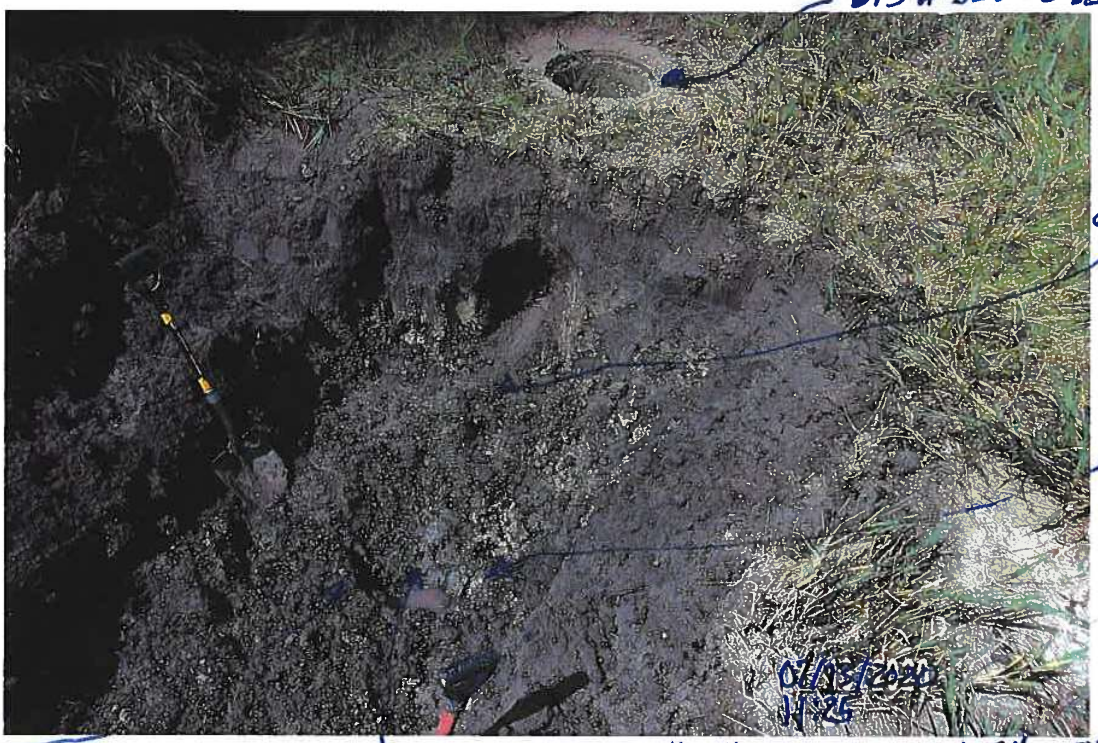



N

GPS # 337 18" BEE HIVE INTAKE N RIM

GPS# 345 TOP 6" CLAY TILE (0.57' TOP TO FL) 2.65' DEEP

GPS# 342 TOP 6" CLAY TILE (0.57' TOP TO FL) 3.2'± DEEP




GPS# 344 TOP 6" SW HDPE NONPERF TILE (0.56' TOP TO FL) (3.3'± DEEP)

GPS # 343 TOP 6"x6"x6" HDPE TEE (0.56' TOP TO FL) (3.3'± DEEP)

PICTURE# 4143 IS LOOKING AT 6"x6"x6" HDPE TEE CONNECTION WITH 6" HDPE / 6" CLAY CONNECTION DAMAGE AND NEEDS REPLACED

PICTURE # 4144 IS LOOKING WEST SHOWING 6"x6"x6" HOPE TEE CONNECTION & 6" HOPE PERF TILE / 6" CLAY TILE WITH ISSUE BETWEEN PLASTIC & CLAY TILE




GPS # 344 TOP 6" SW HOPE PERF TILE

GPS # 343 TOP 6"x6"x6" HOPE (0.56' TOP TO FL)

GPS # 342 TOP 6" CLAY (0.57' TOP TO FL)




PICTURE # 4145 IS LOOKING SW ON SOUTH SIDE OF COHWY 041 SHOWING DITCH GRADED TO INTAKE & TRENCH BACKFILL & GRADED. EXTRA SOIL PILED UP. BLEND EXTRA SOIL AROUND

PICTURE #4147 IS LOOKING WEST SHOWING NORTH DITCH GRADED ABOVE TRENCH







NW

GPS# 345
TOP 6" CLAY TILE
(0.57' TOP TO FL.)

GPS# 346
TOP 6" HDPE PERF TILE

6" HDPE INTERNAL COUPLER

2.4 LF OF 6" SW PERF TILE

PICTURE# 4148 IS LOOKING NE SHOWING 6" HDPE SW PERF TILE SLIDE INTO TEE & TIED UPSTREAM INTO 6" CLAY TILE WITH 6" HDPE INTERNAL COUPLER.

PICTURE# 4149 IS LOOKING SW SHOWING ¾ CONCRETE COLLAR POURED ON BEEHIVE INTAKE TILE OUTLET TIE IN WITH 3 - 20 X 15' 6"x6" WIRE MESHES OVER JOINTS & & 3 - 1.5 X 20' ENGINEER FABRIC OVER JOINTS WITH 5-60 LB BAGS OF HIGH STRENGTH CONCRETE




277 NRMS BEEHIVE INTAKE

N




N

PICTURE# 4150 IS LOOKING SE SHOWING ¾ CONCRETE COLLAR POURED OVER BEEHIVE OUT LET TILE TIE IN CONNECTION.

PICTURE # 4151 IS LOOKING WEST SHOWING DITCH GRADED TO BEEHIVE INTAKE




N




N

PICTURE # 4152 IS LOOKING NORTH SHOWING TRENCH BACKFILLED EAST OF EAST ROW COHWY 27 & SOUTH OF IN WETLAND DUG BY PREVIOUS CONTRACTOR

PEARPOINT

WRc MSCC Third Edition

# Inspection Report

Produced on behalf of – HARDIN CO

Site location – ,

Survey reference –

Date – 080720

WILLIAMS UNDERGROUND SVCS.

102 INDUSTRIAL DRIVVE, ACKLEY, IOWA

50601,

641-485-3925

PEARPOINT

# Contents


**1 Drain / Sewer Survey** ..... Error! Bookmark not defined.

*1.1 Site information* ..... ***Error! Bookmark not defined.***

*1.2 Drain / Sewer Details* ..... ***Error! Bookmark not defined.***

*1.3 Survey Details* ..... ***Error! Bookmark not defined.***

*1.4 Drain / Sewer Diagram* ..... ***Error! Bookmark not defined.***

*1.5 Observations* ..... ***Error! Bookmark not defined.***

*1.6 Photographs* ..... ***Error! Bookmark not defined.***

**2 Drain / Sewer Survey** ..... Error! Bookmark not defined.

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*2.5 Observations* ..... ***Error! Bookmark not defined.***

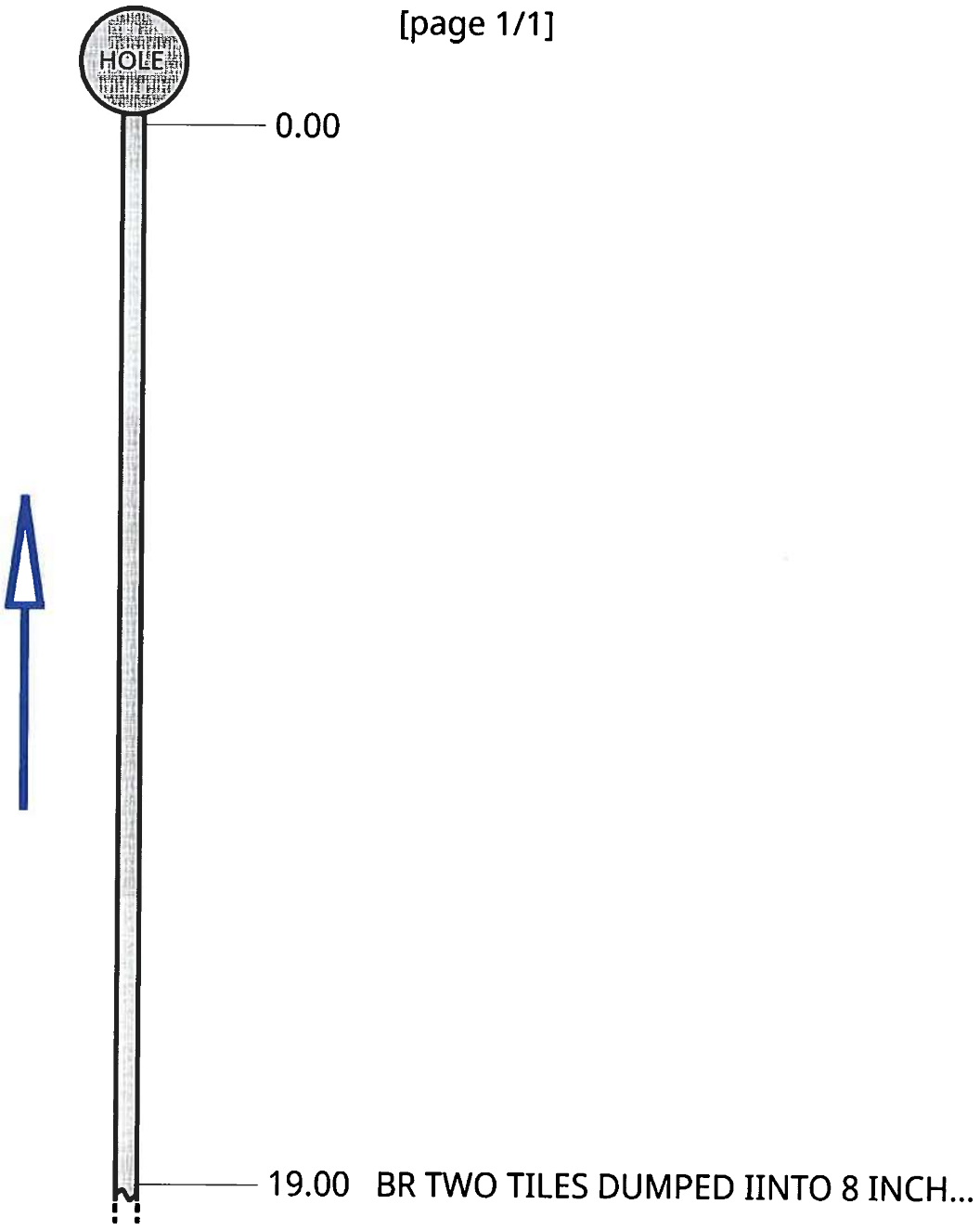
*2.6 Photographs* ..... ***Error! Bookmark not defined.***

# 1 Drain / Sewer Survey

## 1.1 Survey Header

| | | |
|---|---|---|
| 1.1.1 | Surveyed by (Operator) | PAUL |
| 1.1.2 | Contract no. | |
| 1.1.3 | Job no. | |
| 1.1.4 | Catchment (Drainage area) | DD14 |
| 1.1.5 | Division | LAT 2 |
| 1.1.6 | District | |
| 1.1.7 | Pipeline length ref | 1000 |
| 1.1.8 | Date | 080720 |
| 1.1.9 | Time | 13:16 |
| 1.1.10 | Location | |
| 1.1.11 | Start manhole no. | HOLE #254 |
| 1.1.12 | Start depth | m |
| 1.1.13 | Start cover level | |
| 1.1.14 | Start invert level | |
| 1.1.15 | Finish manhole no. | |
| 1.1.16 | Finish depth | m |
| 1.1.17 | Finish cover level | |
| 1.1.18 | Finish invert level | |
| 1.1.19 | Use of Drain | |
| 1.1.20 | Direction | U |
| 1.1.21 | Size 1 (diameter/height) | 8mm |
| 1.1.22 | Size 2 (width) | mm |
| 1.1.23 | Shape | C |
| 1.1.24 | Material | VC |
| 1.1.25 | Lining | |
| 1.1.26 | Pipe length | m |
| 1.1.27 | Total length | |
| 1.1.28 | Year laid | |
| 1.1.29 | Video cassette number | |
| 1.1.30 | Comments: General | |
| 1.1.31 | Purpose | |
| 1.1.32 | Sewer category | |
| 1.1.33 | Pre-cleaning | |
| 1.1.34 | Weather | |
| 1.1.35 | Location code | |
| 1.1.36 | Further location details | |

## 1.2 Diagram



## 1.3 Observations

| Video Ref | Dist (ft) | Cont Defect | Code | Photo Ref | Diameter/ Dimension | Clock | | Intrusion | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | At | To | % | mm | |
| 0:00:00 | 19.0 | | BR | 2020_07_08-13_30_01_583.jpg  | 4 | 09 | 03 | | | TWO TILES DUMPED IINTO 8 INCH CLAY TILE |

## 1.4 Photographs

BR 2020_07_08-13_30_01_583.jpg



PEARPOINT

WRc MSCC Third Edition

# Inspection Report

Produced on behalf of – HARDIN CO

Site location – ,

Survey reference – W/O 292

Date – 080720

WILLIAMS UNDERGROUND SVCS.

102 INDUSTRIAL DRIVVE, ACKLEY, IOWA

50601,

641-485-3925

PEARPOINT

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*2.6 Photographs* ..... ***Error! Bookmark not defined.***

# 1 Drain / Sewer Survey

## 1.1 Survey Header

| | | |
|---|---|---|
| 1.1.1 | Surveyed by (Operator) | PAUL |
| 1.1.2 | Contract no. | 6844.5 |
| 1.1.3 | Job no. | W/O 292 |
| 1.1.4 | Catchment (Drainage area) | DD14 |
| 1.1.5 | Division | |
| 1.1.6 | District | LAT 2 |
| 1.1.7 | Pipeline length ref | 1000 |
| 1.1.8 | Date | 080720 |
| 1.1.9 | Time | 13:39 |
| 1.1.10 | Location | |
| 1.1.11 | Start manhole no. | |
| 1.1.12 | Start depth | m |
| 1.1.13 | Start cover level | |
| 1.1.14 | Start invert level | |
| 1.1.15 | Finish manhole no. | |
| 1.1.16 | Finish depth | m |
| 1.1.17 | Finish cover level | |
| 1.1.18 | Finish invert level | |
| 1.1.19 | Use of Drain | |
| 1.1.20 | Direction | D |
| 1.1.21 | Size 1 (diameter/height) | 8mm |
| 1.1.22 | Size 2 (width) | mm |
| 1.1.23 | Shape | C |
| 1.1.24 | Material | VC |
| 1.1.25 | Lining | |
| 1.1.26 | Pipe length | m |
| 1.1.27 | Total length | |
| 1.1.28 | Year laid | |
| 1.1.29 | Video cassette number | |
| 1.1.30 | Comments: General | |
| 1.1.31 | Purpose | |
| 1.1.32 | Sewer category | |
| 1.1.33 | Pre-cleaning | |
| 1.1.34 | Weather | |
| 1.1.35 | Location code | |
| 1.1.36 | Further location details | |

## 1.2 Observations

| Video Ref | Dist (ft) | Cont Defect | Code | Photo Ref | Diameter/ Dimension | Clock | | Intrusion | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | At | To | % | mm | |

PEARPOINT

WRc MSCC Third Edition

# Inspection Report

Produced on behalf of – HARDIN CO

Site location – ,

Survey reference – W/O 292

Date – 080720

WILLIAMS UNDERGROUND SVCS.

102 INDUSTRIAL DRIVVE, ACKLEY, IOWA

50601,

641-485-3925

PEARPOINT

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*2.3 Survey Details* ..... ***Error! Bookmark not defined.***

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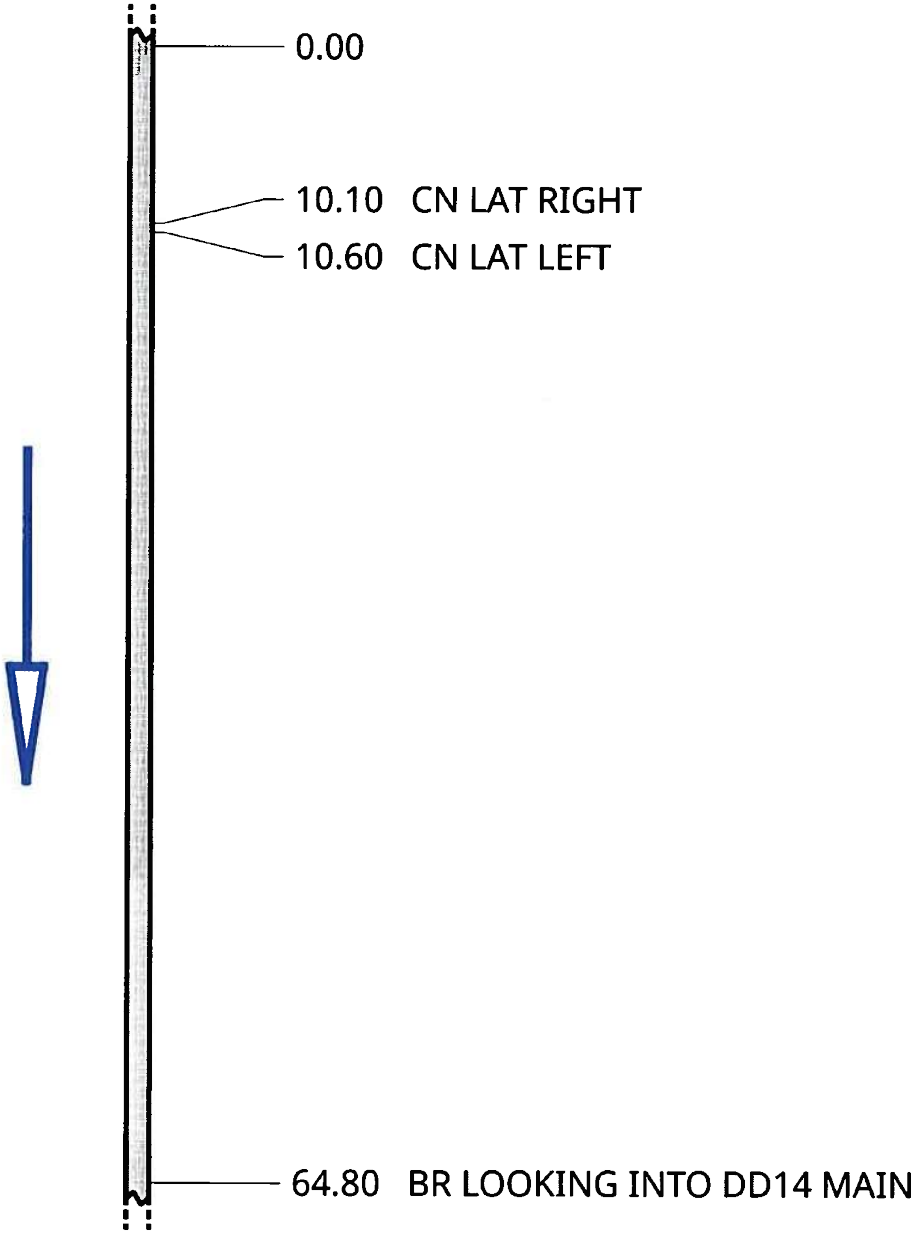
# 1 Drain / Sewer Survey

## 1.1 Survey Header

| | | |
|---|---|---|
| 1.1.1 | Surveyed by (Operator) | PAUL |
| 1.1.2 | Contract no. | 66844.5 |
| 1.1.3 | Job no. | W/O 292 |
| 1.1.4 | Catchment (Drainage area) | DD 14 |
| 1.1.5 | Division | LAT 2 |
| 1.1.6 | District | |
| 1.1.7 | Pipeline length ref | 1000 |
| 1.1.8 | Date | 080720 |
| 1.1.9 | Time | 14:00 |
| 1.1.10 | Location | HOLE 255 |
| 1.1.11 | Start manhole no. | |
| 1.1.12 | Start depth | m |
| 1.1.13 | Start cover level | |
| 1.1.14 | Start invert level | |
| 1.1.15 | Finish manhole no. | |
| 1.1.16 | Finish depth | m |
| 1.1.17 | Finish cover level | |
| 1.1.18 | Finish invert level | |
| 1.1.19 | Use of Drain | |
| 1.1.20 | Direction | D |
| 1.1.21 | Size 1 (diameter/height) | 8mm |
| 1.1.22 | Size 2 (width) | mm |
| 1.1.23 | Shape | C |
| 1.1.24 | Material | VC |
| 1.1.25 | Lining | |
| 1.1.26 | Pipe length | m |
| 1.1.27 | Total length | |
| 1.1.28 | Year laid | |
| 1.1.29 | Video cassette number | |
| 1.1.30 | Comments: General | |
| 1.1.31 | Purpose | |
| 1.1.32 | Sewer category | |
| 1.1.33 | Pre-cleaning | |
| 1.1.34 | Weather | |
| 1.1.35 | Location code | |
| 1.1.36 | Further location details | |

## 1.2 Diagram

[page 1/1]



## 1.3 Observations

| Video Ref | Dist (ft) | Cont Defect | Code | Photo Ref | Diameter/ Dimension | Clock | | Intrusion | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | At | To | % | mm | |
| 0:00:00 | 10.1 | | CN | 2020_07_08-14_04_12_399.jpg  | 4 | 02 | | | | LAT RIGHT |
| 0:00:00 | 10.6 | | CN | 2020_07_08-14_07_01_027.jpg  | 4 | 08 | | | | LAT LEFT |
| 0:03:32 | 64.8 | | BR | 2020_07_08-14_13_23_027.jpg  | ? | | | | | LOOKING INTO DD14 MAIN |

## 1.4 Photographs

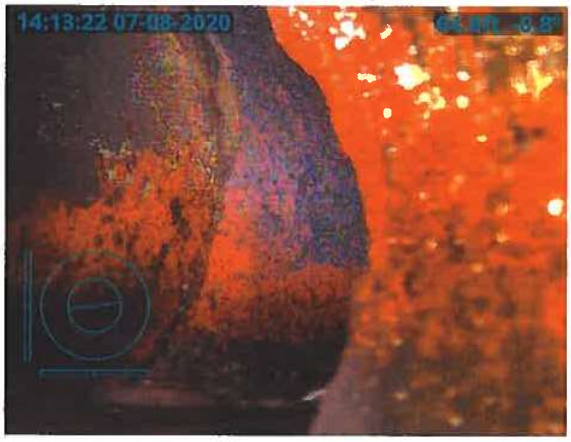
CN 2020_07_08-14_04_12_399.jpg



CN 2020_07_08-14_07_01_027.jpg



BR 2020_07_08-14_13_23_027.jpg



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1,3603240.750,4962602.710,1176.370,HC GPSMON 8026
2,3603240.750,4962602.710,1176.370,Autonomous Setup
3,3618688.957,4946916.051,1169.764,HC GPS 8016
4,3605705.123,4952677.153,1135.516,TOP 12"VCP JOINT 1.06'TOP TO FL
5,3606415.768,4950139.889,1135.574,GS TILE BLOWOUT N SIDE
6,3606436.207,4950151.534,1135.854,GS TILE BLOWOUT N SIDE
7,3606433.594,4950154.282,1135.676,GS TILE BLOWOUT N SIDE
8,3606806.866,4950366.902,1140.171,FENCE E-W
9,3606807.989,4950160.633,1143.206,FENCE E-W
10,3606808.684,4950069.741,1147.297,FENCE E-W
11,3606418.172,4950139.776,1130.823,TOP 15" VCP TILE JOINT (1.35'TOPTO FL)
12,3606416.527,4950138.554,1130.832,TOP 15" TILE (1.35' TOP TO FL
13,3606433.374,4950151.026,1130.931,TOP 15" TILE (1.30' TOP TO FL
14,3606431.767,4950149.817,1130.912,TOP 15" TILE (1.35' TOP TO FL
15,3606430.189,4950148.568,1130.898,TOP 15" TILE (1.33' TOP TO FL
16,3605706.138,4952688.229,1139.481,GS
17,3605704.925,4952670.361,1139.347,GS
18,3605480.270,4952811.838,1148.799,FENCE E-W
19,3605485.212,4952217.754,1137.030,FENCE E-W
20,3608115.762,4952199.343,1155.903,MAG NAIL
21,3605484.284,4952146.915,1142.370,SURVEY MARK NAIL
22,3606802.079,4952129.144,1147.964,FENCE S&W
23,3608053.507,4952267.497,1152.132,CPT 34 IR 0.2'D
24,3607989.169,4950926.173,1140.628,TOP EXISTING 15"CMP
25,3608049.542,4950961.076,1141.017,TOP 14" VCP (1.17'TOPTOFL)
26,3608053.288,4950963.091,1140.699,TOP 14" VCP (0.96'TOPTOFL)
27,3607983.653,4950923.063,1140.661,TOP 14" VCP (1.21'TOPTOFL)
28,3608080.752,4950995.945,1141.522,TOP EXISTING 15" SW HDPE TILE
29,3608083.253,4950994.402,1141.500,TOP 6"SW CPP (0.49'TOPTOFL)
30,3608092.799,4951005.494,1141.648,TOP 15" CMP (1.23' TOP TO FL)
31,3608077.605,4950993.300,1145.298,GS
32,3608060.368,4950969.312,1145.175,GS
33,3608037.548,4950953.803,1145.213,GS
34,3608015.699,4950941.810,1145.088,GS
35,3607980.101,4950921.322,1144.873,GS
36,3608000.481,4950932.767,1140.940,TOP 15" HDPE PERFTILE (0.67'NTOBELL)(1.35'TOPTO
FL)
37,3608084.607,4950949.402,1145.388,GS FIELD/DITCH
38,3608084.599,4950983.584,1145.143,GS FIELD/DITCH
39,3608082.212,4951024.307,1146.627,GS FIELD/DITCH
40,3608100.133,4950999.532,1145.416,FL 4'*2'TALL CONC BOX
41,3608089.162,4950987.889,1148.373,TOP 6" HICKENBOTTOM INTAKE (6.31' TOP TO FL)
42,3608017.662,4950942.112,1141.078,T0P 15" HDPE PERF TILE (1.35'TOPTO FL)
43,3608034.233,4950952.510,1141.216,T0P 15" HDPE PERF TILE (1.35'TOP TO FL)
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47,3608034.608,4950940.382,1140.602,T0P 6" PERF TILE (0.51'TOPTO FL)
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51,3608128.896,4949539.459,1151.696,MAG NAIL
52,3608060.852,4950968.394,1141.418,TOP 15" HDPE TILE 22.5BEND (1.35'TOPTO FL)
53,3608066.056,4950977.043,1141.487,TOP 15" DW HDPE TILE (1.35'TOPTOFL)
54,3608077.936,4950992.725,1141.629,TOP 15" DW HDPE TILE (1.35'TOPTOFL)
55,3608086.285,4951003.294,1141.742,TOP 15" DW HDPE TILE 22.5 BEND (1.35'TOPTOFL)
56,3608091.951,4951005.247,1141.780,TOP 15"*15"*15" HDPE WYE
57,3608081.157,4950995.861,1141.444,TOP 6" HDPE SADDLE TAP
58,3608081.696,4950995.452,1141.576,TOP 6" HDPE EXTERNAL COUPLER
59,3608085.434,4951011.982,1145.974,GS
60,3608089.265,4950998.392,1145.365,GS
61,3608034.172,4950949.577,1140.537,T0P 6" PERF TILE (0.51'TOPTO FL)
62,3608033.230,4950951.027,1140.591,T0P 6" DW TILE (0.55'TOPTO FL)
63,3608079.348,4951335.208,1151.564,GS BEAN DAMAGE
64,3608033.743,4951335.117,1150.834,GS BEAN DAMAGE
65,3608046.530,4951310.109,1150.762,GS BEAN DAMAGE
66,3608057.991,4951262.988,1149.769,GS BEAN DAMAGE
67,3608057.119,4951206.321,1148.555,GS BEAN DAMAGE
68,3608053.376,4951189.795,1148.130,GS BEAN DAMAGE
69,3608051.635,4951142.339,1147.931,GS BEAN DAMAGE
70,3608031.595,4951129.695,1147.612,GS BEAN DAMAGE
71,3608031.998,4951105.324,1147.754,GS BEAN DAMAGE
72,3608050.176,4951073.771,1147.711,GS BEAN DAMAGE
73,3608049.722,4951053.602,1147.324,GS BEAN DAMAGE
74,3608036.030,4951011.428,1146.382,GS BEAN DAMAGE
75,3608019.553,4951003.326,1146.204,GS BEAN DAMAGE
76,3608020.181,4950994.983,1146.039,GS BEAN DAMAGE
77,3607959.756,4950955.599,1145.266,GS BEAN DAMAGE
78,3607940.555,4950929.442,1144.729,GS BEAN DAMAGE
79,3607940.652,4950910.000,1144.641,GS BEAN DAMAGE
80,3607979.594,4950877.412,1144.902,GS BEAN DAMAGE
81,3608039.390,4950886.414,1145.489,GS BEAN DAMAGE
82,3608085.975,4950915.943,1145.790,GS BEAN DAMAGE/DITCH
83,3608081.452,4951072.899,1147.693,GS BEAN DAMAGE/DITCH
84,3608081.095,4951139.433,1148.235,GS BEAN DAMAGE/DITCH
85,3608081.027,4951239.536,1149.007,GS BEAN DAMAGE/DITCH
86,3608079.743,4951304.686,1150.586,GS BEAN DAMAGE/DITCH
88,3608087.940,4951003.741,1145.460,CENTER ACCESS CASTING
89,3608176.604,4951135.886,1148.318,gs wl locate 93"d
90,3608176.050,4951076.885,1146.497,gs wl locate 112"d
91,3608175.129,4951061.949,1146.637,gs wl locate 108"d
92,3608173.187,4951047.397,1146.547,gs wl locate 105"d
93,3608172.919,4951040.333,1146.503,gs wl locate 101"d (15" tile)
94,3608172.828,4951032.374,1146.529,gs wl locate 108"d
95,3608160.046,4951031.601,1145.991,wws ciwa stamp 13N (TILE LINE BELOW)
96,3608176.411,4951123.190,1149.042,GS CL 20825 CO HWY S27 GRAVEL DRIVE ABOVE WL
100,3608173.775,4951794.097,1142.090,TOP WATERMAIN
101,3608172.970,4951806.421,1144.607,TOP 14"CLAY

102,3606801.876,4950336.843,1134.500,TOP 15" CLAY 1.38' TOPTOFL
103,3606776.447,4950322.423,1139.240,GS ABOVE TILE
104,3606801.246,4950330.369,1139.443,GS
105,3606785.751,4950322.663,1139.572,GS
106,3606781.230,4950330.843,1139.443,GS
107,3606800.988,4950343.062,1139.717,GS
108,3606806.097,4950348.422,1140.101,FENCE E-W
109,3606806.277,4950329.481,1140.050,FENCE E-W
110,3606812.666,4950342.795,1139.661,GS
111,3606808.337,4950339.736,1138.919,GS
112,3606784.008,4950326.675,1134.306,TOP 15" CLAY 1.31' TOPTOFL
113,3606784.164,4950326.703,1134.338,TOP 15" HDPE PERF TILE
114,3606798.454,4950335.076,1134.431,TOP 15" HDPE PERF TILE
115,3606801.757,4950336.845,1134.463,TOP 15" HDPE PERF TILE
116,3605345.937,4950152.361,1122.926,GS ABOVE TILE
117,3605340.655,4950146.152,1122.854,GS ABOVE TILE
118,3605342.974,4950149.013,1120.006,TILE T0P 14.25*17.25" SQUAT CLAY (1.25'TOP TO FL)
119,3605344.620,4950151.047,1120.026,TILE T0P 14*17" SQUAT CLAY (1.22'TOP TO FL)
120,3605385.960,4950177.421,1123.131,GS ABOVE TILE
121,3605379.508,4950173.853,1123.177,GS ABOVE TILE
122,3605414.981,4950167.886,1124.101,GS WATERWAY
123,3605371.837,4950148.276,1123.621,GS WATERWAY
124,3605332.279,4950112.525,1122.863,GS WATERWAY
125,3605309.994,4950133.091,1122.804,GS WATERWAY
126,3605355.127,4950171.596,1123.269,GS WATERWAY
127,3605414.606,4950191.842,1123.890,GS WATERWAY
128,3605452.781,4950199.659,1124.464,GS TILE LOCATE
129,3605507.884,4950208.120,1125.500,GS TILE LOCATE
130,3605566.488,4950211.914,1125.840,GS TILE LOCATE
131,3605624.107,4950214.918,1126.524,GS TILE LOCATE
133,3605683.158,4950217.229,1126.920,GS TILE LOCATE
134,3605750.126,4950216.561,1127.637,GS TILE LOCATE
135,3605805.896,4950206.324,1128.247,GS TILE LOCATE
136,3605869.322,4950185.200,1128.558,GS TILE LOCATE
137,3605907.201,4950164.902,1128.683,GS TILE LOCATE END CAMERA
138,3605951.503,4950135.957,1125.608,TILE T0P 12*19" SQUAT CLAY (1.09'TOP TO FL) REMOVED
139,3605948.015,4950138.425,1125.762,TILE T0P 13*18 SQUAT "CLAY (1.21'TOP TO FL) REMOVED
140,3606002.087,4950097.117,1129.897,GS TILE LOCATE
141,3606047.969,4950060.252,1130.485,GS TILE LOCATE
142,3606093.946,4950024.079,1131.195,GS TILE LOCATE
143,3606148.452,4949995.916,1131.594,GS TILE LOCATE
144,3606194.832,4949987.959,1131.959,GS TILE LOCATE
145,3606198.408,4949987.796,1132.012,GS TILE LOCATE END LOCATE
146,3605911.704,4950162.539,1125.405,TILE TOP 15*17 " CLAY 1.32'TOPTOFL
147,3605913.527,4950161.426,1125.261,TILE TOP 12*19" SQUAT CLAY 1.05'TOPTOFL REMOVED
148,3605905.139,4950166.616,1128.680,GS ABOVE TILE

149,3605914.838,4950160.561,1128.801,GS ABOVE TILE
150,3605945.044,4950140.580,1129.365,GS ABOVE TILE
151,3605953.724,4950134.445,1129.394,GS ABOVE TILE
152,3605917.145,4950159.407,1125.461,TILE TOP 15.25*16" CLAY 1.34TOPTOFL
153,3605957.056,4950121.773,1129.527,GS WATERWAY
154,3605918.162,4950152.972,1128.826,GS WATERWAY
155,3605846.419,4950191.394,1128.563,GS WATERWAY
156,3605692.445,4950210.179,1127.221,GS WATERWAY
157,3605572.291,4950198.841,1126.518,GS WATERWAY
158,3605481.505,4950182.506,1125.016,GS WATERWAY
159,3605480.915,4950202.881,1124.880,GS WATERWAY
160,3605493.194,4950208.150,1125.264,GS WATERWAY
161,3605492.050,4950234.982,1126.183,GS WATERWAY
162,3605516.988,4950233.467,1126.920,GS WATERWAY
163,3605521.214,4950215.654,1126.130,GS WATERWAY
164,3605535.721,4950214.240,1126.077,GS WATERWAY
165,3605627.973,4950230.113,1126.487,GS WATERWAY
166,3605650.168,4950236.977,1126.710,GS WATERWAY
167,3605705.205,4950290.733,1127.666,GS WATERWAY
168,3605742.239,4950280.558,1127.890,GS WATERWAY
169,3605735.245,4950245.369,1127.709,GS WATERWAY
170,3605735.412,4950240.914,1127.535,GS WATERWAY
171,3605823.622,4950228.426,1127.666,GS WATERWAY
172,3605893.923,4950204.258,1128.704,GS WATERWAY
173,3605948.734,4950172.433,1129.588,GS WATERWAY
174,3606004.304,4950123.863,1130.051,GS WATERWAY
175,3605946.237,4950139.603,1125.854,TILE TOP 15*15.75" CLAY 1.36'TOPTOFL
176,3605953.253,4950134.826,1125.849,TILE TOP 15.75*16" CLAY 1.39'TOPTOFL
177,3605384.208,4950176.364,1120.543,TILE TOP 15*16.25" squat CLAY 1.35'TOPTOFL
178,3605382.068,4950175.088,1120.425,TILE TOP 14*17" squat CLAY 1.24'TOPTOFL
179,3605308.552,4950098.525,1122.265,GS TILE LOCATE
180,3605283.080,4950047.286,1121.952,GS TILE LOCATE
181,3605264.542,4949992.162,1121.779,GS TILE LOCATE
182,3605246.456,4949937.507,1121.209,GS TILE LOCATE
183,3605227.996,4949883.706,1120.689,GS TILE LOCATE
184,3605208.491,4949829.163,1120.112,GS TILE LOCATE
185,3605187.171,4949775.725,1119.631,GS TILE LOCATE
186,3605162.969,4949720.465,1119.157,GS TILE LOCATE
187,3605138.529,4949666.755,1118.794,GS TILE LOCATE
188,3605115.421,4949616.282,1118.212,GS TILE LOCATE
189,3605091.558,4949566.464,1118.417,GS TILE LOCATE
190,3605060.423,4949517.341,1118.346,GS TILE LOCATE
191,3605044.705,4949495.848,1118.377,GS TILE LOCATE
192,3605007.736,4949448.293,1116.480,GS TILE LOCATE
193,3604971.956,4949403.645,1115.997,GS TILE LOCATE
194,3604933.158,4949356.696,1115.465,GS TILE LOCATE
195,3604902.280,4949319.604,1115.271,GS TILE LOCATE END
196,3605007.109,4949493.659,1118.634,FNL N-S
197,3605066.434,4949494.540,1117.773,FNL N-S

198,3606042.834,4950084.321,1130.491,GS WATERWAY
199,3606092.572,4950032.226,1130.980,GS WATERWAY
200,3606145.664,4950000.670,1131.473,GS WATERWAY
201,3606210.807,4949998.901,1132.203,GS WATERWAY
202,3606214.261,4949964.616,1132.458,GS WATERWAY
203,3606132.656,4949976.520,1131.497,GS WATERWAY
204,3606052.849,4950031.398,1130.741,GS WATERWAY
205,3605988.156,4950092.948,1129.841,GS WATERWAY
206,3605267.201,4950069.065,1122.129,GS WATERWAY
207,3605228.432,4949964.232,1121.465,GS WATERWAY
208,3605197.938,4949866.193,1120.875,GS WATERWAY
209,3605163.386,4949760.174,1119.578,GS WATERWAY
210,3605125.162,4949640.384,1118.926,GS WATERWAY
211,3605110.716,4949585.173,1118.333,GS WATERWAY
212,3605100.210,4949499.905,1117.402,GS WATERWAY
213,3605122.963,4949510.205,1118.127,GS WATERWAY
214,3605495.092,4949501.521,1129.346,FNL N-S&W
215,3605133.332,4949555.621,1118.404,GS WATERWAY
216,3605178.871,4949717.223,1119.920,GS WATERWAY
217,3605241.192,4949906.375,1121.016,GS WATERWAY
218,3605271.139,4950005.075,1121.944,GS WATERWAY
219,3605312.635,4950088.007,1122.763,GS WATERWAY
220,3605504.519,4950234.224,1126.183,Cogo
230,3608084.124,4951902.308,1147.445,W RIM BEEHIVE
231,3608089.801,4951888.318,1147.847,GS TILE LOCATE
232,3608104.983,4951879.465,1154.112,GS TILE LOCATE
233,3608106.624,4951878.417,1154.184,GS TILE LOCATE EOA
234,3608117.917,4951869.070,1154.547,GS TILE LOCATE CL
235,3608129.210,4951858.971,1154.234,GS TILE LOCATE EOA SOME RESISTENCE
236,3608146.621,4951845.243,1148.110,GS TILE LOCATE
237,3608161.933,4951817.422,1149.628,GS TILE LOCATE
238,3608165.220,4951813.473,1149.904,GS TILE LOCATE FIELD EDGE
239,3608168.579,4951809.460,1149.604,GS TILE LOCATE
240,3608178.369,4951801.269,1149.377,GS TILE LOCATE
241,3608188.241,4951791.528,1149.576,GS TILE LOCATE
242,3608209.740,4951773.387,1149.698,GS TILE LOCATE
243,3608231.610,4951755.411,1149.682,GS TILE LOCATE
244,3608253.737,4951735.679,1149.571,GS TILE LOCATE
245,3608280.557,4951712.028,1149.410,GS TILE LOCATE
246,3608284.668,4951708.431,1149.364,GS TILE LOCATE END OBSTRUCTION?
247,3608285.090,4951708.634,1144.232,TILE TO 14"CLAY 1.24'TOPTOFL
248,3608283.091,4951710.319,1144.305,TILE TO 14"CLAY 1.28'TOPTOFL
249,3608289.834,4951703.250,1149.599,GS
250,3608172.054,4951804.330,1145.918,TILE TOP 8" CLAY 0.72'TOPTOFL
251,3608170.627,4951805.930,1145.912,TILE TOP 8"CLAY 0.75'TOPTOFL
252,3608173.804,4951805.527,1144.706,TILE TOP 14" CLAY 1.38'TOPTOFL
253,3608174.204,4951808.223,1144.440,WM 1.38'GSTOTOP WM
254,3608084.572,4951892.856,1144.681,TILE TOP 8"CLAY 0.74'TOPTOFL
255,3608085.478,4951892.193,1144.745,TILE TOP 8"CLAY 0.74'TOPTOFL

256,3607786.141,4952154.305,1148.855,GS SIGN TILE LINE
259,3608076.855,4951898.654,1148.210,GS TILE LOCATE
260,3608067.662,4951905.816,1148.319,GS TILE LOCATE OBSTRUCTION?
261,3608079.284,4951896.646,1149.016,GS EDGE FIELD
262,3608143.074,4951852.200,1148.498,GS APPROX TILE MAIN LAT 2 CONNECTION
263,3608067.743,4951910.457,1145.035,TILE TOP 5" HDPE PERF 0.43'TOPTOFL
264,3608059.621,4951902.767,1145.428,TILE TOP 4" HDPE PERF 0.34'TOPTOFL
267,3608069.254,4951904.084,1144.770,TILE TOP 8"CLAY 0.74'TOPTOFL
268,3608151.043,4952028.550,1147.989,INTAKE BEEEHIVE N RIM
269,3608148.458,4951824.752,1145.486,FL 6" HICKENBOTTOM INTAKE
270,3608356.513,4951135.356,1147.339,GS CORN DAMAGE 1
271,3608349.998,4951198.416,1147.156,GS CORN DAMAGE 1
272,3608342.105,4951272.849,1147.785,GS CORN DAMAGE 1
273,3608337.421,4951324.659,1148.118,GS CORN DAMAGE 1
274,3608335.119,4951375.990,1148.173,GS CORN DAMAGE 1
275,3608331.695,4951427.177,1148.383,GS CORN DAMAGE 1
276,3608329.218,4951534.790,1148.667,GS CORN DAMAGE 1
277,3608326.276,4951625.404,1149.140,GS CORN DAMAGE 1
278,3608306.692,4951650.463,1149.366,GS CORN DAMAGE 1
279,3608279.429,4951677.110,1149.468,GS CORN DAMAGE 1
280,3608259.987,4951696.313,1149.684,GS CORN DAMAGE 1
281,3608260.177,4951716.006,1149.489,GS CORN DAMAGE 1
282,3608166.019,4951798.622,1149.708,GS CORN DAMAGE 1
283,3608163.719,4951845.257,1149.910,GS CORN DAMAGE 1
284,3608193.655,4951845.248,1149.929,GS CORN DAMAGE 1
285,3608195.478,4951803.739,1149.599,GS CORN DAMAGE 1
286,3608270.710,4951727.264,1149.451,GS CORN DAMAGE 1
287,3608280.575,4951736.489,1149.435,GS CORN DAMAGE 1
288,3608292.462,4951732.982,1149.389,GS CORN DAMAGE 1
289,3608311.870,4951716.945,1149.271,GS CORN DAMAGE 1
290,3608312.299,4951692.591,1149.298,GS CORN DAMAGE 1
291,3608344.022,4951684.697,1149.142,GS CORN DAMAGE 1
292,3608344.617,4951440.966,1148.243,GS CORN DAMAGE 1
293,3608347.083,4951432.959,1148.166,GS CORN DAMAGE 1
294,3608349.318,4951400.370,1148.110,GS CORN DAMAGE 1
295,3608349.618,4951364.090,1148.024,GS CORN DAMAGE 1
296,3608352.051,4951359.720,1148.086,GS CORN DAMAGE 1
297,3608352.082,4951310.589,1148.041,GS CORN DAMAGE 1
298,3608357.674,4951281.382,1147.847,GS CORN DAMAGE 1
299,3608361.609,4951234.904,1147.412,GS CORN DAMAGE 1
300,3608368.174,4951167.004,1147.332,GS CORN DAMAGE 1
301,3608385.227,4951136.275,1147.398,GS CORN DAMAGE 1
302,3608064.858,4951907.140,1144.848,TILE TOP 8"CLAY 0.72'TOPTOFL
303,3608065.976,4951899.316,1145.016,TILE TOP 5" HDPE PERF 0.43'TOPTOFL
304,3608066.325,4951906.090,1144.804,TILE TOP 8"*8"*5" HDPE TEE
305,3608067.955,4951905.120,1144.767,TILE TOP HDPE 8"*8"*5" TEE
306,3608067.368,4951904.522,1144.650,TILE TOP 5" HDPE PERF @ TEE 0.43'TOPTOFL
307,3608066.483,4951902.291,1144.813,TILE TOP 5"*5"*4" HDPE TEE
308,3608066.794,4951906.637,1144.618,TILE TOP 5" HDPE PERF @ TEE 0.43'TOPTOFL

309,3607822.096,4952238.535,1149.727,FNL N-S
310,3607798.155,4952237.894,1149.855,FNL N-S
311,3607793.814,4952247.403,1145.203,TILE TOP 8" HDPE NONPERF (HOLE)
312,3607794.478,4952141.899,1147.273,TILE TOP 4" HDPE PERF 0.32'TOPTOFL
313,3607784.928,4952141.448,1147.506,TILE TOP 4" HDPE PERF 0.36'TOPTOFL
316,3607789.071,4952140.770,1147.444,TILE TOP 4" HDPE PERF 0.38'TOPTOFL
317,3607786.252,4952141.423,1147.519,TILE TOP 4" HDPE PERF 0.38'TOPTOFL
318,3607792.952,4952141.702,1147.384,TILE TOP 4" HDPE PERF 0.38'TOPTOFL
320,3607772.108,4952149.515,1149.663,GS CORN DAMAGE 2
321,3607765.439,4952132.040,1149.471,GS CORN DAMAGE 2
322,3607766.323,4952110.312,1149.537,GS CORN DAMAGE 2
323,3607811.039,4952111.921,1149.513,GS CORN DAMAGE 2
324,3607818.925,4952152.088,1149.858,GS CORN DAMAGE 2
325,3607810.601,4952181.593,1154.265,EOA
326,3607748.957,4952180.166,1154.283,EOA
327,3607777.446,4952152.857,1148.859,INTAKE BEEHIVE N RIM
328,3607772.871,4952153.571,1149.545,GS SIGN TILE LINE
329,3607759.653,4952202.415,1154.498,EOA
330,3607835.381,4952204.204,1154.372,EOA
331,3608080.006,4951941.286,1148.184,GS CORN DAMAGE 3
332,3608057.015,4951932.847,1148.177,GS CORN DAMAGE 3
333,3608039.389,4951920.646,1148.462,GS CORN DAMAGE 3
334,3608040.271,4951891.508,1148.649,GS CORN DAMAGE 3
335,3608056.992,4951872.352,1148.722,GS CORN DAMAGE 3
336,3608078.679,4951872.507,1148.701,GS CORN DAMAGE 3
337,3608073.676,4952737.840,1148.917,INTAKE 18" BEEHIVE N RIM
338,3608084.796,4952746.455,1150.538,CMP TOP 18" 1.54'TOPTOFL
339,3608124.706,4952745.934,1155.472,GS BLOWOUT SHOULDER
340,3608147.597,4952746.884,1149.178,INTAKE 18" BEEHIVE N RIM
341,3608136.448,4952746.150,1151.386,RCP TOP 18" 1.71'TOPTOFL
342,3608073.094,4952744.578,1145.664,CLAY TOP 6" 0.57'TOPTOFL
343,3608072.372,4952744.584,1145.604,TEE TOP HDPE 6"*6"*4" 0.56'TOPTOFL
344,3608071.838,4952744.372,1145.598,TILE TOP 6" SW HDPE NONPERF 0.56'TOPTOFL
345,3608072.542,4952741.735,1146.267,TILE TOP 6" CLAY 0.57'TOPTOFL
346,3608072.419,4952743.936,1145.716,TILE TOP 4" CLAY 0.38'TOPTOFL

## Drainage District:

#14 Main and Lateral 2

## Investigation/Repair Summary:

- Landowners and tenants in the NE¼ of Section 34 and NW¼ of Section 35, Township 88 North, Range 22 West reported restricted drainage at intersection of County Highways D41 and S27 along the assumed Main and Lateral 2 tile routes.
- Visual observation found all intakes on assumed Main tile and Lateral 2 tile routes in all 4 quadrants of the intersection to have standing water, but intakes on assumed Main tile route downstream of the road intersection appeared to be dry and functioning.

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

None recorded as only visual observation was done.

## Additional Actions Recommended:

Something at the road intersection is restricting drainage in at least the Main tile and possibly the Lateral 2 tile also. However, it is not clear how many restrictions there are or what constitutes those restrictions without excavation. It is recommended that excavations at the road intersection be performed using available contractors from the lottery system. It should also be noted that this area has had several utilities (i.e. rural water and others) installed in recent years which may or may not be contributing to the restricted drainage.

# Drainage Work Order Request For Repair
## Hardin County

**Date:** 4/15/2020

**Work Order #:** WO00000291

**Drainage District:** DDs\DD 14 (51027)

**Sec-Twp-Rge:** 34-88-22 **Qtr Sec:** E1/2 NE NE

**Location/GIS:** 88-22-34-200-003

**Requested By:** James Sweeney/Cynthia Ioger/Jim & Ron Vierkandt

**Contact Phone:** (641) 847-3273

**Contact Email:** jsweeney@cgaconsultants.com

**Landowner** (if different): Ron/Jim Vierkandt/Cynthia Ioger

**Description:** DD 14- Sweeney reports plugged main tile in Jim & Ron's parcels, Sheldahl called in to pothole/explore tile on S side of D41, likely main tile. Intake further E of D41 & S27 intersection where tile goes under road needs repair. See Add'l Req in docs- lack of drg downstream of intersection of Lat 2/main tile. Last 3 years, Lat 2 has lacked enough drg to effectively farm area it should drain. Potholes dug by landowners in Sects 34/35 do not drain. Also, broken intake @ Lat 2 intersection w D41 in Sect. 35.

**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:** _____

# Drainage Work Order Request For Repair
## Hardin County

Date 4/20/2020 Work Order # ____

District # #14 Lateral Lat 2 & Main Fund # ____

Township ____ Section 27, 34, 35 Twp 88 Rge 22 Qtr Sec ____

Repair Requested By Cynthia Ioerger, Ronald Vierkandt, James Vierkandt

Address 15898 Co Hwy D41 Phone ____

Landowner Same

Address Same Phone ____

Request Taken By ____

Available for Repair Now? ☑ Yes Date Available ____

Problem Description

There is a lack of drainage somewhere downstream of the intersection of Lateral 2 and the main tile. Last three or so years the Lateral 2 tile has lacked enough drainage effectively farm the area it is supposed to drain. Pot-holes were dug by the landowners in sections 34 and 35, and water just sits in said holes without draining.

Also, there is a broken intake where Lateral 2 intersects D41 in section 35

Repair labor, materials and equipment ____

Potential Wetlands? ☐ Yes-Repair existing tile only ☐ No-Repair and maintain tile

Repaired By: ____

Date: ____

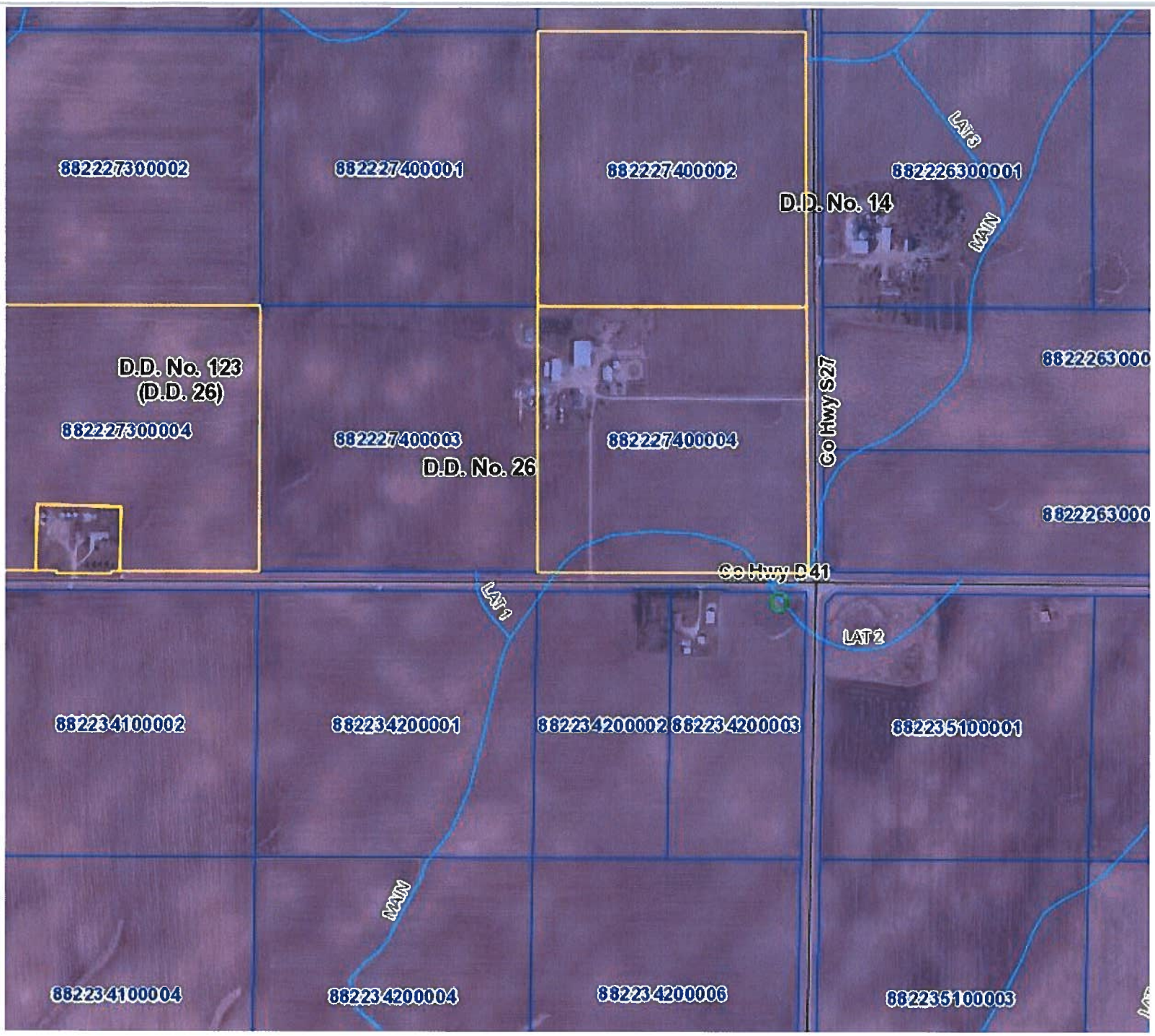
Please send statement for services to:

Hardin County Auditor's Office
Attn: Tina Schlemme
1215 Edgington Ave, Suite 1
Eldora, IA 50627

Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

*Approved:* ____ *Date:* ____

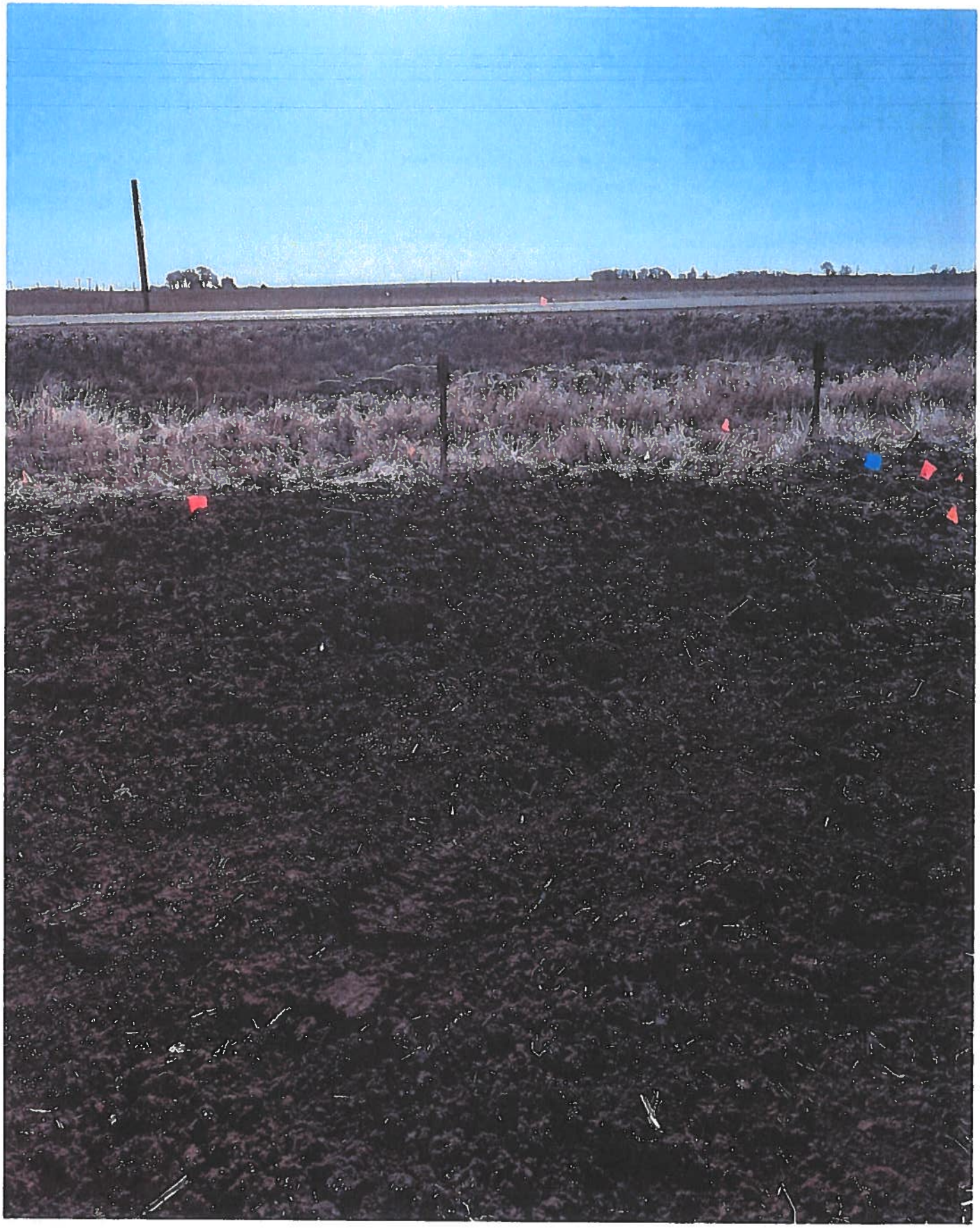

8822273000002
8822274000001
8822274000002
8822263000001
LAT 3
D.D. No. 14
MAIN
D.D. No. 123
(D.D. 26)
8822273000004
8822274000003
D.D. No. 26
8822274000004
Co Hwy S27
8822263000
8822263000
Co Hwy D41
LAT 1
LAT 2
8822341000002
8822342000001
8822342000002
8822342000003
8822351000001
MAIN
8822341000004
8822342000004
8822342000006
8822351000003














JCT
94





CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 4/29/20

PROJECT NUMBER: 6844.5 WO 291

COUNTY, ROUTE, ROAD: DD 14 MAIN + LAT 2

LOCATION: S27 AND D41 INTERSECTION

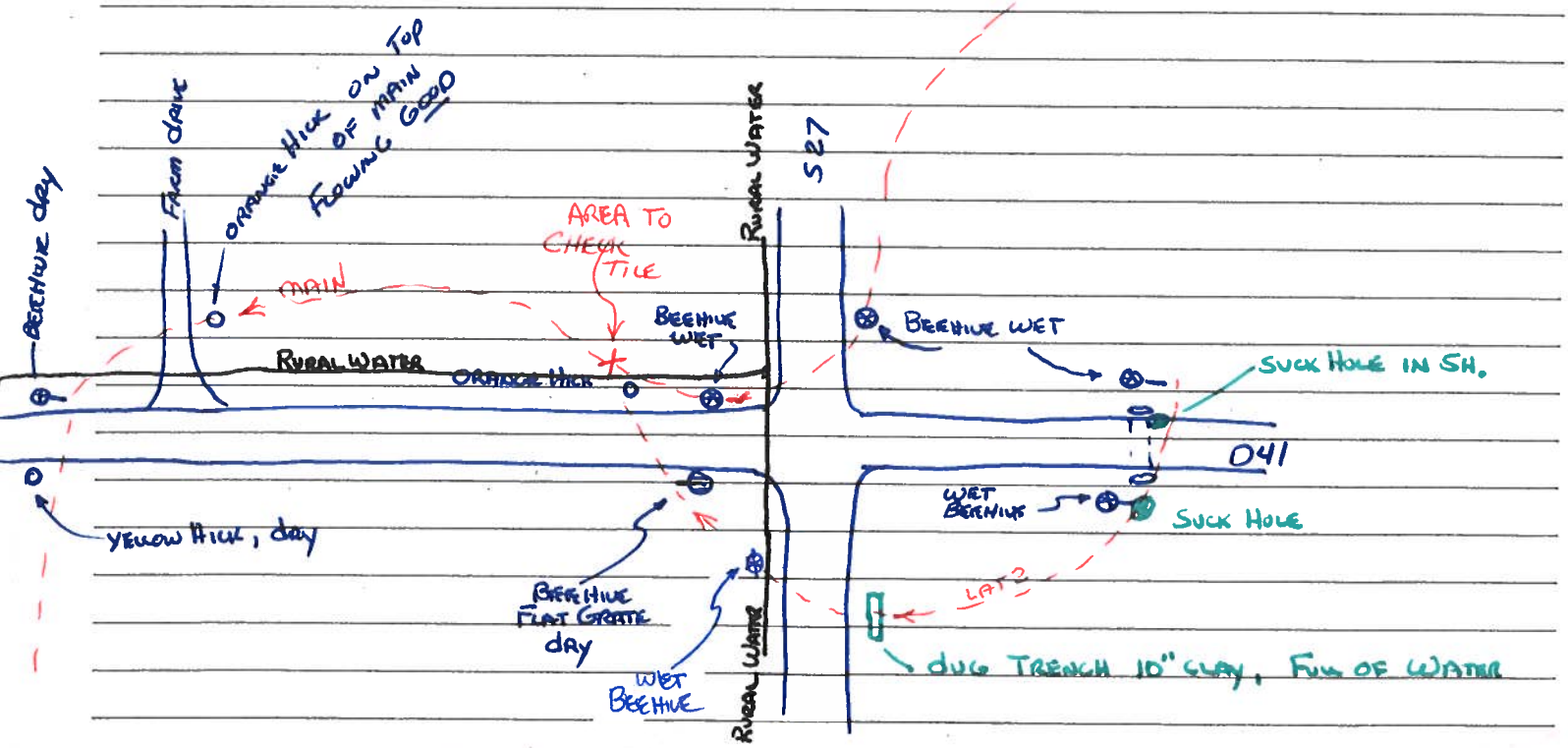
DAYS OF WEEK: S M T (W) T F S

SHEET NO. 1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

LAT 2 HAS RESTRICTION @ D41 (N. OR S. SIDE?). NEED TO DIG ON NORTH SIDE 1ST, TRY AND FIND LAT 2 CONNECTION TO MAIN. INTAKES ON MAIN @ FARM DRIVE LOOK GOOD WITH FLOWING WATER IN MAIN

TALKED TO RON VISSCHAMP (80 YRS OLD) HE AGREED WITH ME THAT THE LAT 2 CONNECTION SHOULD BE CHECKED, BUT HE HAD NO IDEA WHERE IT WAS AT.




I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [signature] Date Prepared: 4/29/20

Reviewed by: _____ ☐ Engineer

Date Reviewed _____

LOOKING WEST OVER S27 ON LAT2



LOOKING E. @ 10" CLAY ON LAT 2, E. OF S27



TRENCH ON LAT 2, E SIDE S27



LOOKING EAST @ BEEHIVE WITH HOLE ON LAT 2, S. SIDE 041 BY CRP



S. SIDE D41, HOLE ON LAT 2, LOOKING N.



LOOKING WEST ON S. DITCH D41



SURF. DRAIN RCP WITH SUCK HOLE OVER TOP RCP AND LAT 2



LOOKING S. ON LAT 2 ROUTE, FLAG ON SUCK HOLE ON NSH. D41



INTAKE ON N. SIDE D41 ON LAT 2, FULL OF WATER



LOOKING E @ S27, BEEHIVE IN N DITCH D41



LOOKING UPSTREAM ON MAIN, S. OF D41, TBT SET ON MAIN BY REPAIR

Looking W. on N R/W D41, just W. of S27

ORANGE HICK ON LAT 2? ON N DITCH D41



DRY INTAKE ON LAT 2, S. DITCH 041 (NW. OF S27)



LAT 2, WET BEEHIVE, W. SIDE S27



# Drainage Work Order Request For Repair

## Hardin County

**Date:** 6/15/2020

**Work Order #:** WO00000297

**Drainage District:** DDs\DD 42 (51067)

**Sec-Twp-Rge:** 35-88-22 **Qtr Sec:** 88223510003

**Location/GIS:** 88-22-35-100-003

**Requested By:** David Sweeney / James Sweeney

**Contact Phone:** (641) 373-3131

**Contact Email:**

**Landowner** (if different): Cynthia Iorger

**Description:** DD 42 - David Sweeney reports a 3' diameter blowout/sinkhole over main tile approximately 50 yards upstream from where the Main tile crosses the south property line.

**Repair labor, materials and equipment:** _____

_____

_____

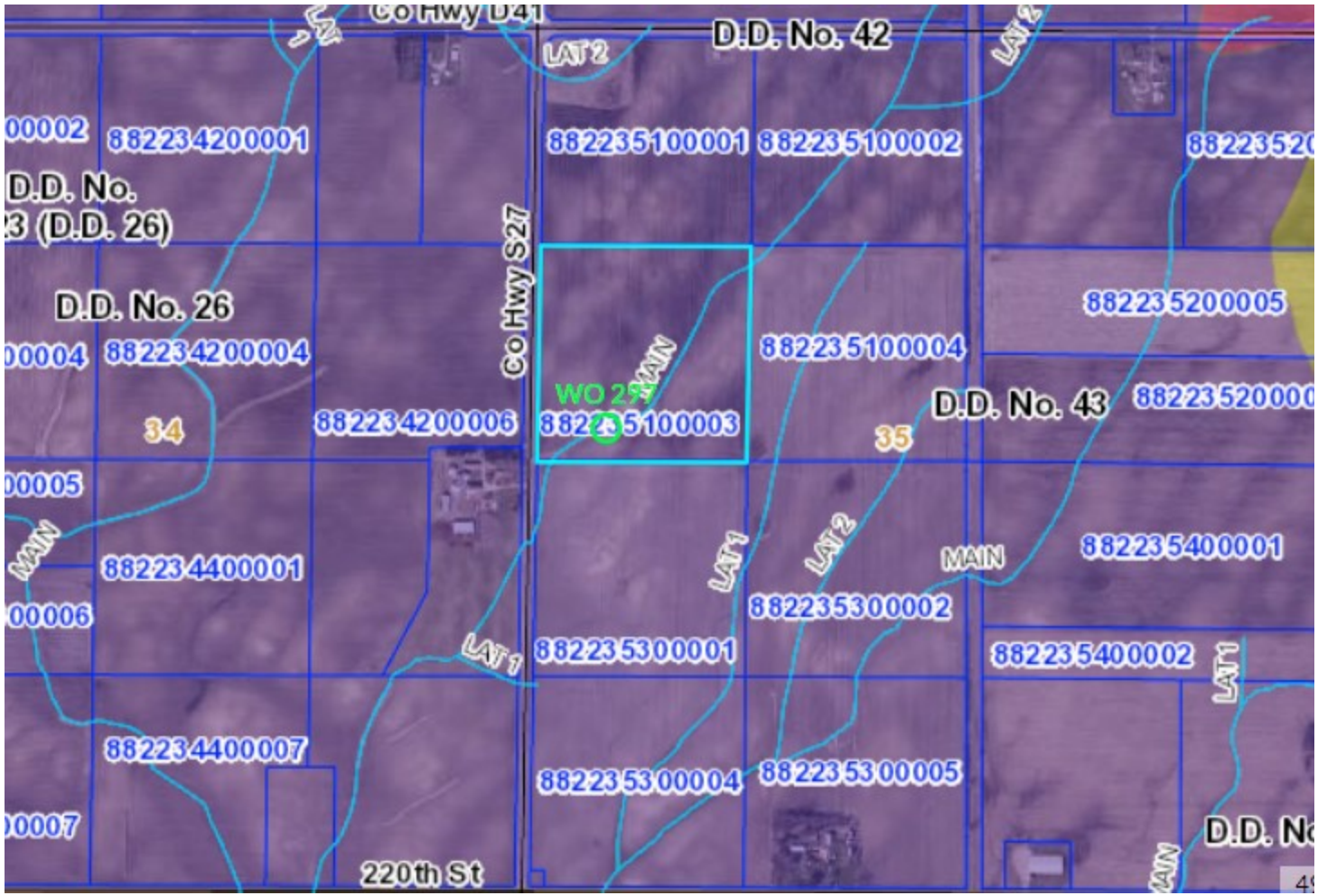
**Repaired By:** _____ **Date:** _____

**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:** _____


Co Hwy D41
D.D. No. 42
LAT 2
882234200001
882235100001
882235100002
D.D. No.
3 (D.D. 26)
D.D. No. 26
Co Hwy S27
882235200005
882234200004
MAIN
882235100004
WO 297
D.D. No. 43
882234200006
882235100003
34
35
MAIN
882234400001
LAT 1
LAT 2
MAIN
882235400001
882235300002
882235300001
882235400002
LAT 1
882234400007
882235300004
882235300005
220th St
D.D. No

## Drainage District:

#20

## Investigation/Repair Summary:

- Landowner in the NE¼ NE¼ Section 32, Township 88 North, Range 22 West reported a 4-feet wide by 5-feet deep blowout/sinkhole above the assumed original Main tile route on the west side of the parcel.
- Visual observation found the blowout/sinkhole as described with the tile not visible.
- Excavation found a section of 30-inch or 32-inch VCP tile that had settled differentially compared to the tiles on each side, which allowed soil to enter through the resulting wide joint gap. Upon removal for the repair, said tile was found to be cracked and approximately 1/3$^{rd}$ full of sediment.
- Repaired the tile with rock bedding and backfill, 30-inch dual wall HDPE and 3/4 concrete collars at each end of the repair. Excavation was filled with on-site soil.

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

See attached Tabulated Contractor Time and Materials Sheet.

## Additional Actions Recommended:

The original main tile upstream and downstream of this repair is composed of VCP that is crushed and approximately 1/3$^{rd}$ full of sediment. This is just downstream of where the supplemental tile diverts all the flow to Main Open Ditch of DD 26. So, it is not clear how significantly this impacts the drainage capacity relative to the drainage need.

# Tabulated Contractor Time and Materials

| Date | Totals | 12/9/2020 |
|---|---|---|
| Workman (hrs) | 15 3/4 | 15 3/4 |
| Backhoe (hrs) | 5 1/4 | 5 1/4 |
| 30" Dual Wall HDPE Tile (ft.) | 8 | 8 |
| 1" Clean Bedding Rock | Yes | |
| Concrete Collars | Yes | |

# Drainage Work Order Request For Repair
## Hardin County

**Date:** 10/15/2020

**Work Order #:** WO00000302

**Drainage District:** DDs\DD 20 (51043)

**Sec-Twp-Rge:** 32-88-22 **Qtr Sec:** _____

**Location/GIS:** 88-22-32-200-004

**Requested By:** Jim Kielsmeier

**Contact Phone:** (641) 373-0935

**Contact Email:** _____

**Landowner** (if different): _____

**Description:** DD 20 - Jim Kielsmeier reports 4' wide x 5' deep blowout in parcel #882232200004 on DD tile, blowout is straight across from the fence on west side of parcel. Crops are out, enter off D Ave.

**Repair labor, materials and equipment:** _____

_____

_____

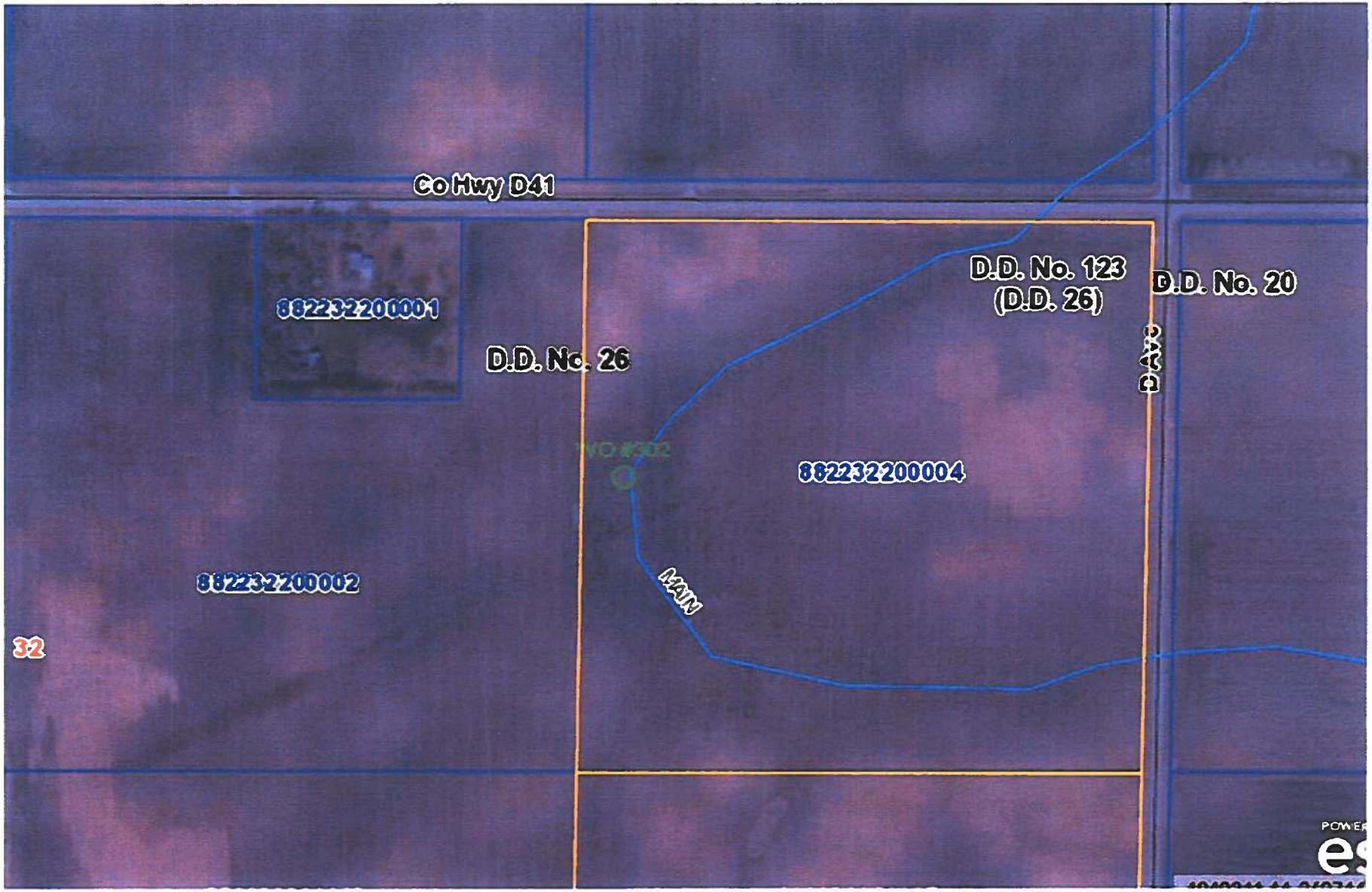
**Repaired By:** _____ **Date:** _____

**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:** _____


Co Hwy D41
882232200001
D.D. No. 26
D.D. No. 123
(D.D. 26)
D.D. No. 20
882232200004
882232200002
MAIN
32



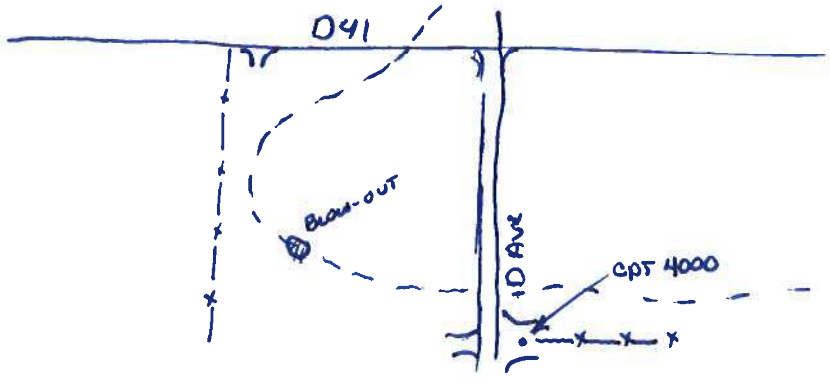


# Inspector's Project Diary

| | | | |
|---|---|---|---|
| **Project:** DD #20 Hardin Co. | | | |
| **CGA PN:** 6502.5 | **Days Charged:** | **Report No.** 1 | **Proj. Mgr.** √ |
| **Contractor:** Fri | | **Date:** 10/23/20 | LEE GALINTINE |
| **Superintendent:** | **Weather Conditions:** Cold, Windy, damp, | **Precip.:** 2" Yesterday | **Temp. Hi:** 37 ° / **Temp. Low:** 25 ° |
| INSPECTOR: Time Arrived: | Time Left: | Contractor: Time Arrived: | Time Left: |

1. General Remarks and Work Accomplished:

CALLED AND TALKED TO JIM KIELSMIER, ABOUT LOCATION OF BLOW-OUT. SET ± ON 4000 IN JOB 6502. 5/8" IR 2'-3'± WEST OF COR. POST FENCE TO EAST. ON E. SIDE D. AVE IN DOUBLE DRIVE. DROVE 4x4 TO BLOW-OUT, SHOT GS ON N. SIDE 5'Ø HOLE 5' DEEP. #77




Fix ASAP
ACCESS FROM D41 OR DAVE

2. Changes or Extra Work Ordered:

3. Test Samples Taken:

4. Visitors to Site:

5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:

6. Attachments (total sheets attached 0 ):

By: _____ Inspector

Distribution: Project Mgr. (Original), Inspector (Copy)
Form 9753

Clapsaddle-Garber Associates, Inc.
Consulting Engineers
P.O. Box 754
Marshalltown, IA 50158

LOOKING WEST @ BLOW-OUT, NEW FENCE 200' WEST IN BACKGROUND



# Project Diary

| | | | |
|---|---|---|---|
| Project: Hardin County DD # 20 | | | |
| CGA PN: 6502.5 | Days Charged: | Report No. 1 | Proj. Mgr. √ Lee G. |
| Contractor: Honey Creek Land Improvement | | Date: 12-9-20 | |
| Superintendent: Adam Seward | Weather Conditions: Sunny | Precip.: " | Temp. Hi: ° Temp. Low: 43 ° |
| INSPECTOR: Time Arrived: 8:48 a.m. Time Left: 2:38 p.m. | | Contractor: Time Arrived: 9:00 a.m. Time Left: | |

1. General Remarks and Work Accomplished:

8:48 a.m = Set up GPS on CPT # 4000 and checked into # 54 Horizontal good vertical was off 0.18'.
9:24 a.m = Returned to job site. Contractor was on-site beginning to expose repair. Crew exposed a 30" VCP tile at sink hole caused by mis aligned joints. # 77 is a ground shot by tile repair. Tile is cracked top and bottom. Removed 1 section of tile and took pictures upstream and downstream. 30" VCP is ⅓ +/- full of silt from sink hole, 10' +/- of tile will need to be removed. Remaining tile is ⅓ full of silt due to Flat grade.
9:55 a.m. = Contacted P.M. and reported tile condition to him. He would like 10' to 20' repaired if possible. If more than 20' needs to be replaced due to tile condition we will need to contact him.
Existing remaining pipe is oval shaped, no V shaped tile, but it does have silt ⅓ full in it.

2. Changes or Extra Work Ordered:

3. Test Samples Taken:

4. Visitors to Site:

5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:

6. Attachments (total sheets attached 0 ):

Clapsaddle-Garber Associates Inc
Consulting Engineers
P O Box 754
Marshalltown IA 50158

By James Van Hove
Inspector

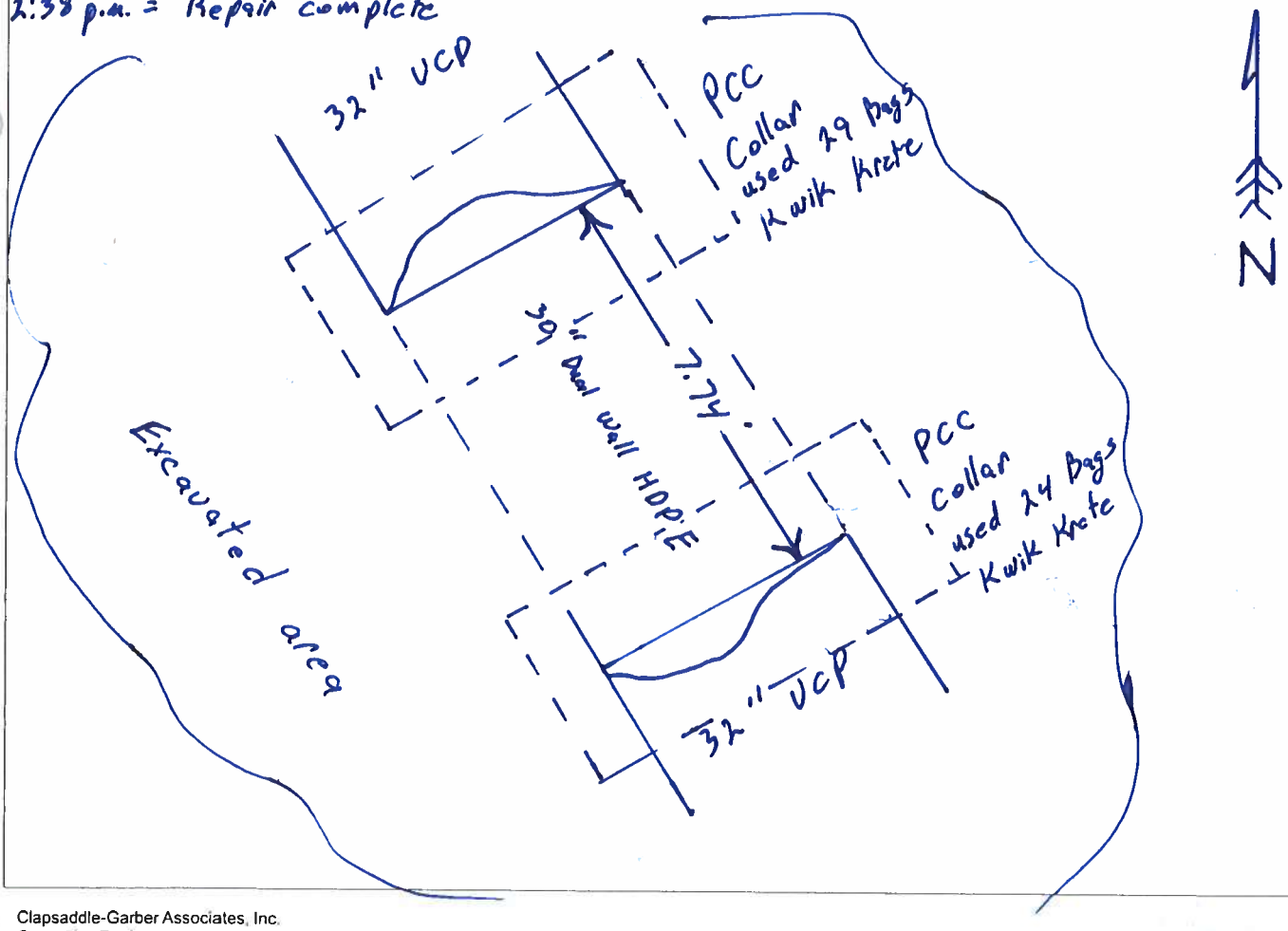
Distribution: Project Mgr. (Original), Inspector (Copy)
Form 9753

# Inspector's Project Diary (continued)

**CGA PN:** 6502.5 **Report No.** 1 **Date:** 12-9-20

1. General Remarks and Work Accomplished (Continued):

Shot top of pipe where contractor found good pipe.
# 78 = South End of repair, top 32" UCP. Elevation = 1124.60
# 79 = North End of repair. top 32" UCP. Elevation = 1124.62
Length of repair = 7.74'
# 80 = ground shot
Crew will use 30" Dual wall HDPE non perforated for repair.
12:10 p.m. = 1 load of 1" clean rock arrived on-site.
12:50 p.m = Bedding rock for repair was in place.
1:00 p.m. = Pipe for repair arrived on-site.
1:20 p.m. = Crew placing fabric at joints after placing 30" Dual wall HDPE in repair.
2:06 p.m. = Concrete collars completed.
2:38 p.m. = Repair complete




Clapsaddle-Garber Associates, Inc.
Consulting Engineers
P.O. Box 754
Marshalltown, IA 50158


Excavating spot repair
2020/12/09
10:35


Excavating spot repair
open joint after removeing batting
2020/12/09
10:41

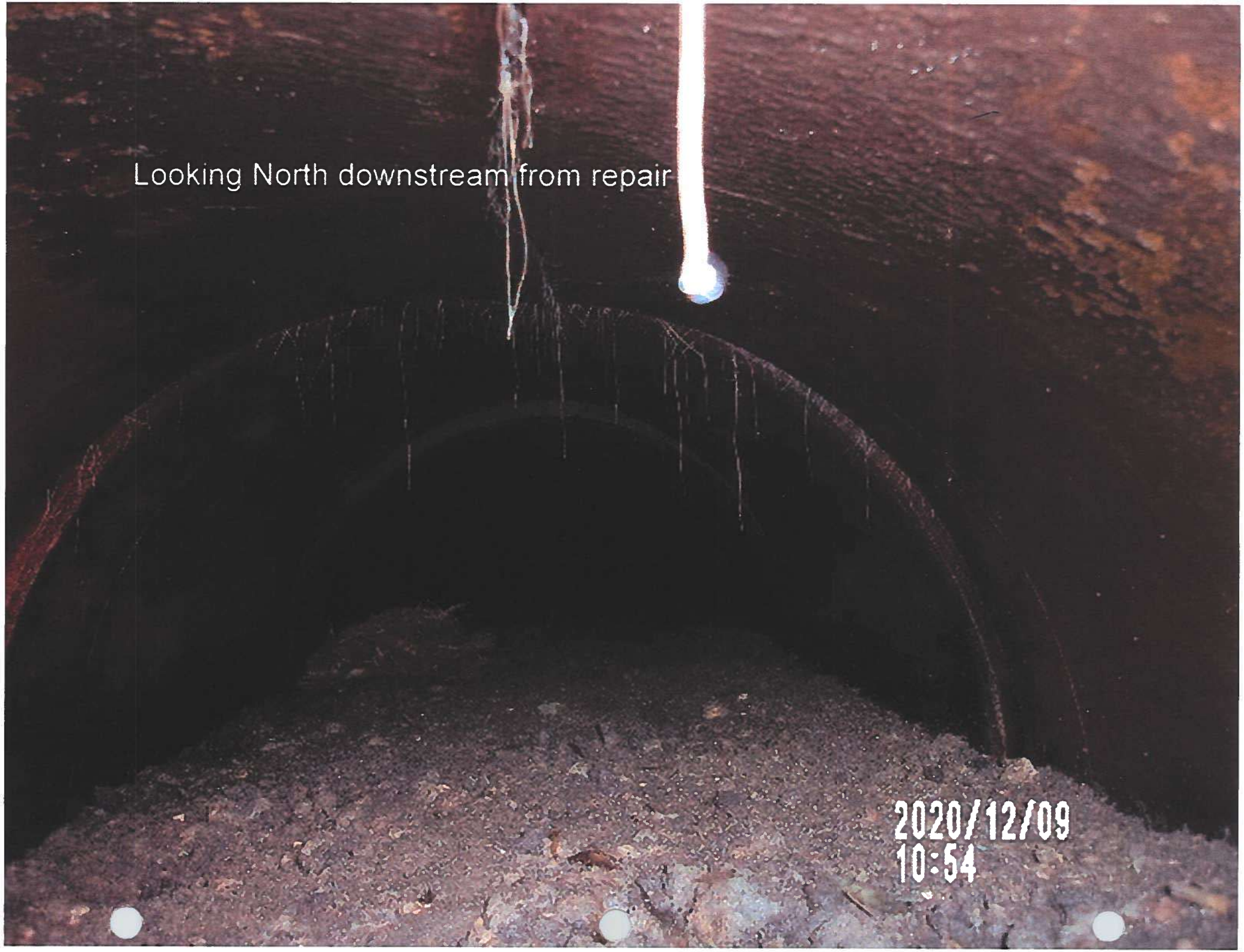

Looking South upstream from repair
2020/12/09
10:53


Looking South from repair
2020/12/09
10:53


Looking South from repair
2020/12/09
10:53


Looking North downstream from repair


Looking North downstream
2020/12/09
10:53

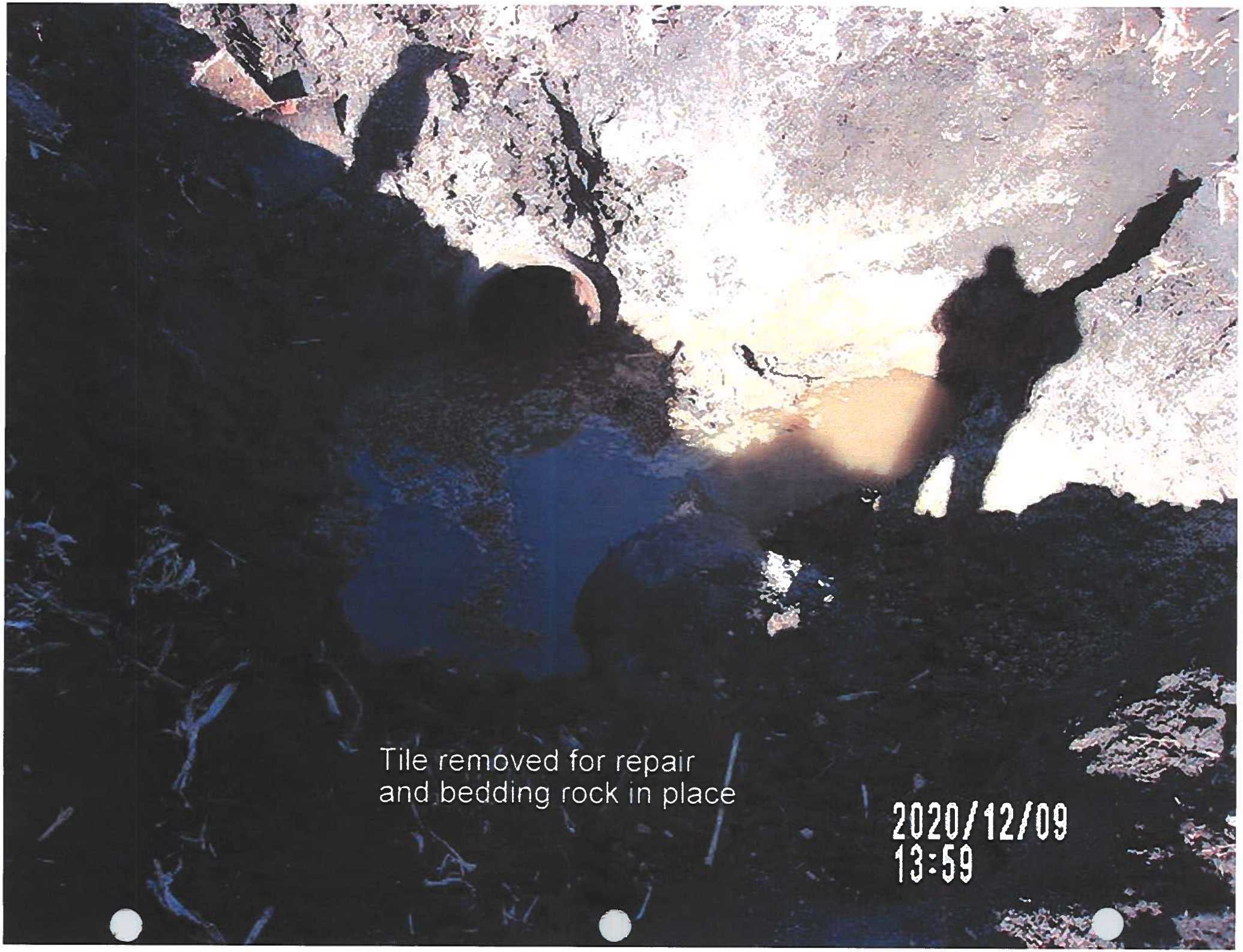

Looking North downstream from repair
2020/12/09
10:54


Looking North from repair
2020/12/09


1 Section of tile removed to take pictures
2020/12/09
10:58


1 section of tile removed
to inspect tile
2020/12/09
10:58


32" vcp removed for repair
2020/12/0
11:38


Tile removed for repair
and bedding rock in place
2020/12/09
13:59


Bedding rock in place
2020/12/09
13:59


Placing 30" dual wall
HDPE in place for repair
2020/12/09


Placing rock over pipe
2020/12/09
14:27


Placing fabric over joints
for concrete collars
2020/12/09
14:29

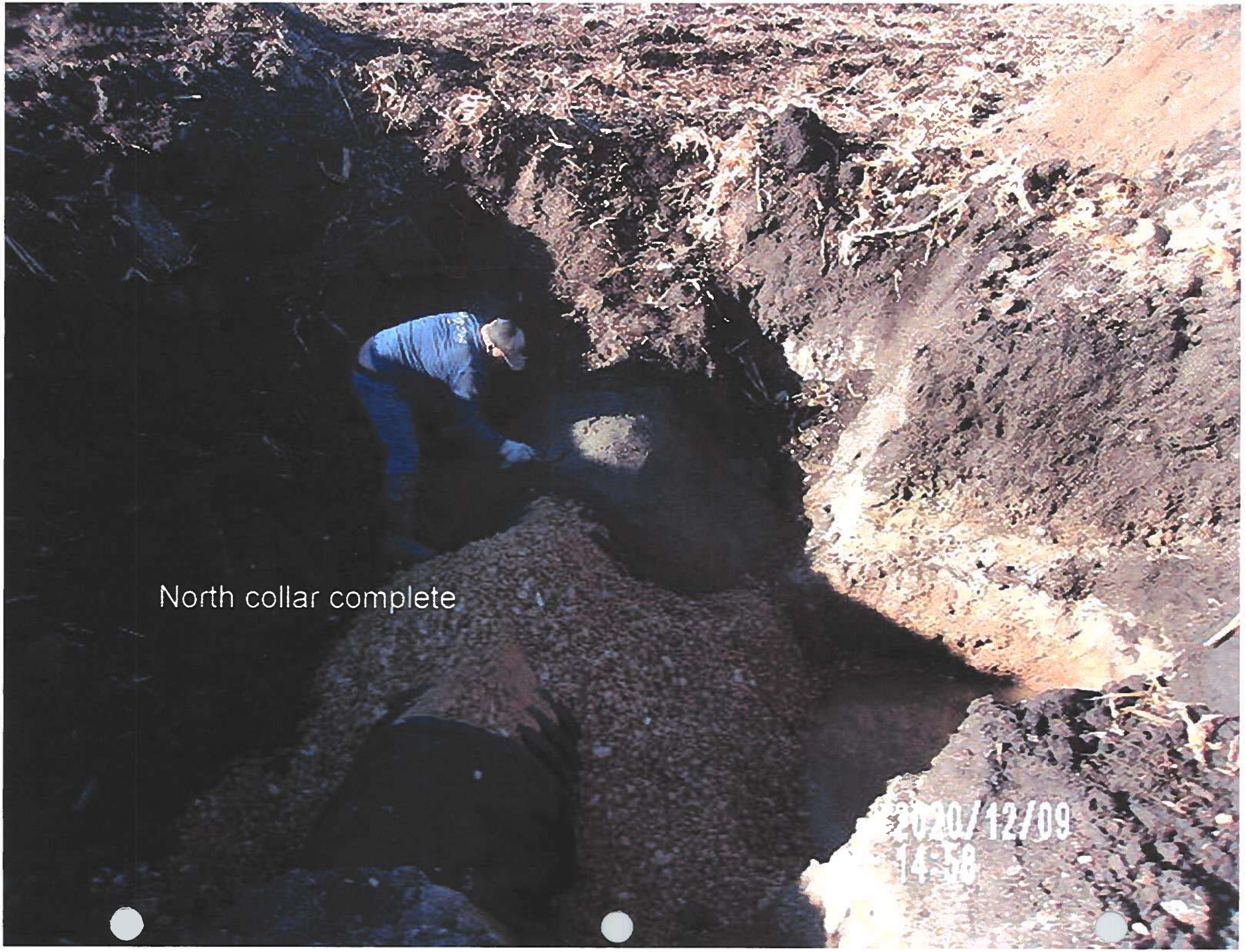

Rock being placed over pipe
2020/12/09
14:34


Installing wire for concrete collars


Beginning to pour North concrete collar
12/09


Pouring collar


Troweling collar


North collar complete
2020/12/09


Beginning to pour South concrete collar
2020/12/09
15:07


South concrete collar complete
2020/12/08
15:14


Both concrete collars complete
2020/12/09
15:17


Placing remaining rock over top of spot repair
2020/12/09
15:45

1,3602878.030,4947844.310,1135.050,HCGPS 8015
2,3586774.843,4946810.299,1151.546,HCGPS 8014
7034,3603592.812,4942418.115,1116.784,TOP CMP 24"
7400,3616689.561,4947340.971,1152.892,top 8" hdpe start
7401,3616912.692,4947466.145,1153.502,top 8" hdpe wye
7402,3616929.064,4947475.736,1153.416,top 8" hdpe start
7403,3616876.413,4947444.983,1153.206,top 8" hdpe start
7404,3616936.843,4947478.140,1153.883,top 6" cpp
7405,3616913.674,4947466.753,1153.407,top 8" hdpe
7406,3616930.850,4947455.303,1157.062,top 8" intake
7407,3617310.702,4947769.718,1154.240,top 8" vcp end
7408,3616963.831,4947497.486,1153.473,top 8" vcp
7409,3616981.278,4947508.218,1152.603,top rock
7410,3616980.864,4947507.952,1153.538,top 8" hdpe
7411,3616980.844,4947507.957,1153.483,top 8" hdpe
7412,3617014.925,4947529.884,1153.549,6" cpp wye
7413,3617014.240,4947529.414,1153.585,top 8" hdpe
7414,3617047.988,4947553.164,1153.656,top 8" hdpe
7415,3617080.721,4947576.248,1153.607,top 8" hdpe
7416,3617096.673,4947588.187,1153.697,top 8" hdpe
7417,3617142.179,4947627.554,1153.823,top 8" hdpe

## Drainage District:

#4-53, Lat 4A

## Investigation/Repair Summary:

- Landowner in the NW¼ NE½ Section 4, Township 89 North, Range 21 West reported a blowout on the east side of HH avenue, south of the building site over the assumed route of the Main tile.
- Visual observation of the area described did not find any signs of a blowout/sinkhole over the Main tile but did find excess water/moisture in the area where the blowout was reported to be. Further observation of the parcel found a blowout/sinkhole over the connection between a private tile and the assumed Lateral 4A tile south of Highway C73.
- Upon excavation, the two upstream tiles were found to be 10-inch VCP tiles, with the west tile being approximately 60% full of sediment and no flowing water, while the east tile was found to be generally clear of significant debris and freely flowing water. The downstream 10-inch VCP was found to be collapsed and was excavated until cracked, but round, VCP tile was found. Downstream from this excavation, the tile was found to have a small amount of sediment in the base, with freely flowing water above. Upon running a locating cable up the east tile, found that it went diagonally (northeast) towards an intake located on the other side of Hardin Road (Highway C73).
- Repaired the connection with a 10-inch dual wall HDPE, 10-inch HDPE tee, and 10-inch HDPE 45° elbow. Repaired the surrounding tiles with rock bedding and backfill, 10-inch dual wall HDPE, and ¾ concrete collars at each connection to the original VCP tiles.

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

See attached Tabulated Contractor Time and Materials Sheet.

## Additional Actions Recommended:

While the tiles repaired are near the Lateral 4A historical location, the 10-inch VCP tile that was found does not match the historical 14-inch diameter which is associated with the Lateral 4A in this location. Due to the topography, it appears that the west tile in this repair would be the likely Lateral 4A tile (if the Lateral 4A was one of the two). Given that this tile is over half filled with sediment, CGA recommends the following actions:

- Further investigation be conducted to determine if any of the tiles repaired is actually the Lateral 4A tile.
- If said west tile is confirmed to be Lateral 4A, determine the extent of the filling of the Lateral 4A with sediment and why the tile was installed as a 10-inch VCP instead of the record 14-inch VCP.
- If all the repaired tiles are determined to be private, the landowner should be made aware and the Trustees may determine how the repair should be billed.

# Tabulated Contractor Time and Materials

| Date | Totals | 11/30/2020 | 12/7/2020 |
|---|---|---|---|
| Workman (hrs) | 11 1/2 | 6 | 5 1/2 |
| Backhoe (hrs) | 5 3/4 | 3 | 2 3/4 |
| 10" Dual Wall HDPE (ft) | 30 | | 30 |
| 1" Clean Bedding Rock | Yes | | |
| Concrete Collars | Yes | | |
| 10"x10"x10" Dual Wall HDPE Tee (ea) | 1 | | 1 |
| 10"x45° Dual Wall HDPE Elbow( ea) | 1 | | 1 |

# Drainage Work Order Request For Repair
## Hardin County

**Date:** 10/20/2020

**Work Order #:** WO00000303

**Drainage District:** DDs\DD F-H 4-53 (51213)

**Sec-Twp-Rge:** 04-89-21 **Qtr Sec:**

**Location/GIS:** 89-21-04-200-002

**Requested By:** Jim Zeisman

**Contact Phone:** (641) 648-4933

**Contact Email:**

**Landowner** (if different):

**Description:** DD F-H 4-53 - Landowner Jim Zeisman reports blowout in field just east of HH Ave, not too far in field from the Rd and south of building site. Location is flagged, crops harvested. In same parcel as WO 296.

**Repair labor, materials and equipment:**

**Repaired By:** **Date:**

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

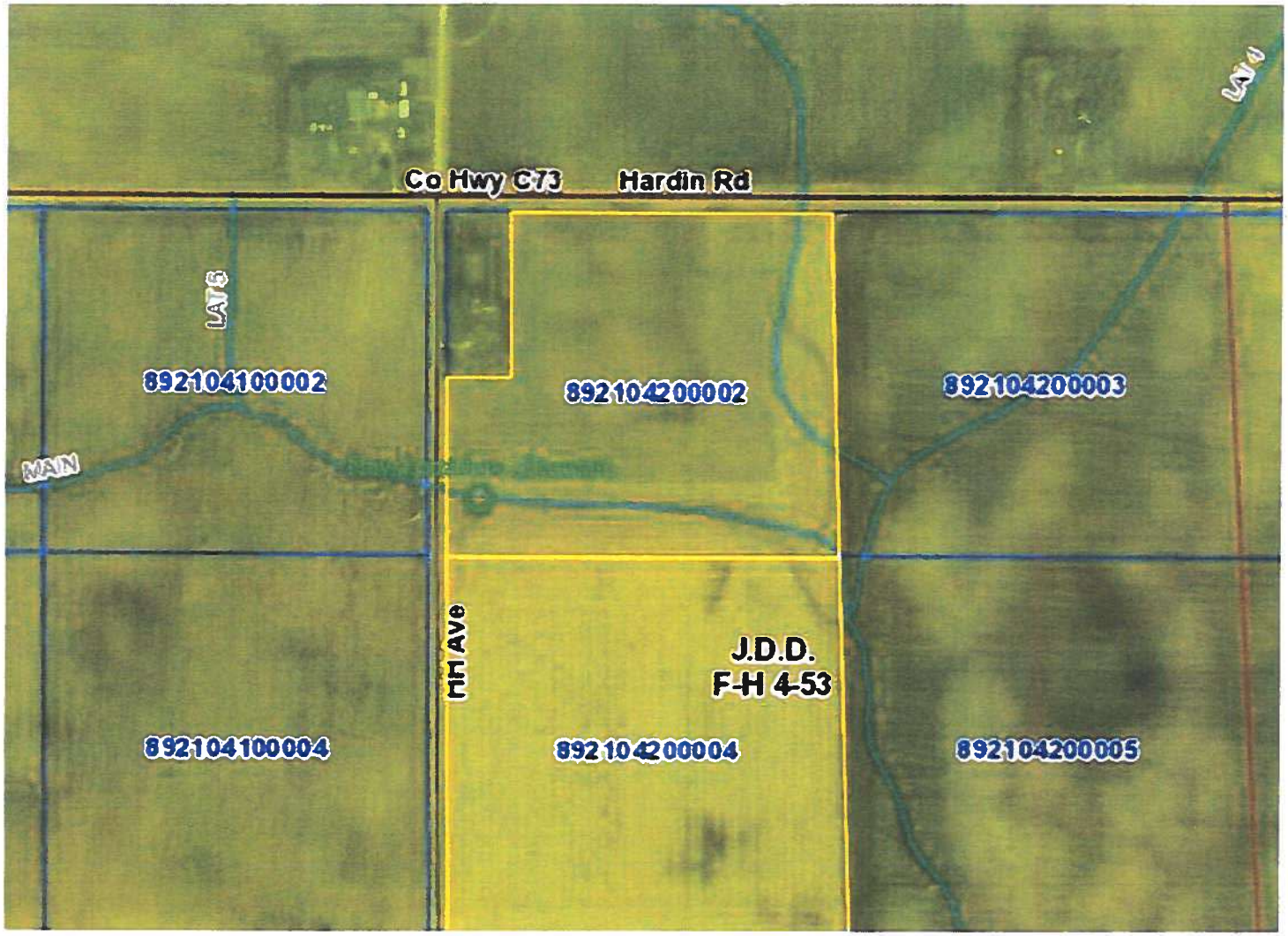
Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

**Approved:** **Date:**

6500.5


Co Hwy G73
Hardin Rd
LAT5
892104100002
892104200002
892104200003
MAIN
HH Ave
892104200004
892104100004
J.D.D.
F-H 4-53
892104200005


Co Hwy C73
Hardin Rd
LAT 6
LAT 6
892104100002
892104200002
892104200003
MAIN
HH Ave
J.D.D.
F-H 4-53
892104100004
892104200004
892104200005

# Inspector's Project Diary

| | | | |
|---|---|---|---|
| **Project:** OD F-H 4-53 | | | |
| **CGA PN:** 6500.5 | **Days Charged:** | **Report No.** | **Proj. Mgr.** √ |
| **Contractor:** FR; | | **Date:** 10/23/20 | LEE GRUNTORK |
| **Superintendent:** | **Weather Conditions:** Windy, Cold, damp | **Precip.:** 1½" RAIN YESTERDAY | **Temp. Hi:** 38 ° **Temp. Low:** 25 ° |
| INSPECTOR: Time Arrived: Time Left: | | Contractor: Time Arrived: Time Left: | |

1. General Remarks and Work Accomplished:

CALLED JIM ZIESMAN TWICE, NO ANSWER. DROVE OUT WITH 4x4 TO FIND 2ND BLOW-OUT IN FIELD, SHOT BLOW-OUT FROM THIS SPRING #49, DROVE TO DISCRIPTION IN FILE, (E. OF HH AVE, AND S. OF ACREAGE) FOUND WET AREA #50. JIMS SON ARRIVED, TALKED TO HIM, HE CALLED HIS DAD, JIM, HE ARRIVED AND TOLD ME THERE WAS JUST THE 1 BLOW-OUT FROM THIS SPRING, HE CALLED IN TO DRAINAGE CLERK, TOLD THEM CROPS WHERE OUT, THEY DIDNT KNOW ANYTHING ABOUT IT. MADE OUT NEW REPORT.

2. Changes or Extra Work Ordered:

3. Test Samples Taken:

4. Visitors to Site:

5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:

6. Attachments (total sheets attached 0 ):

By: _____
Inspector

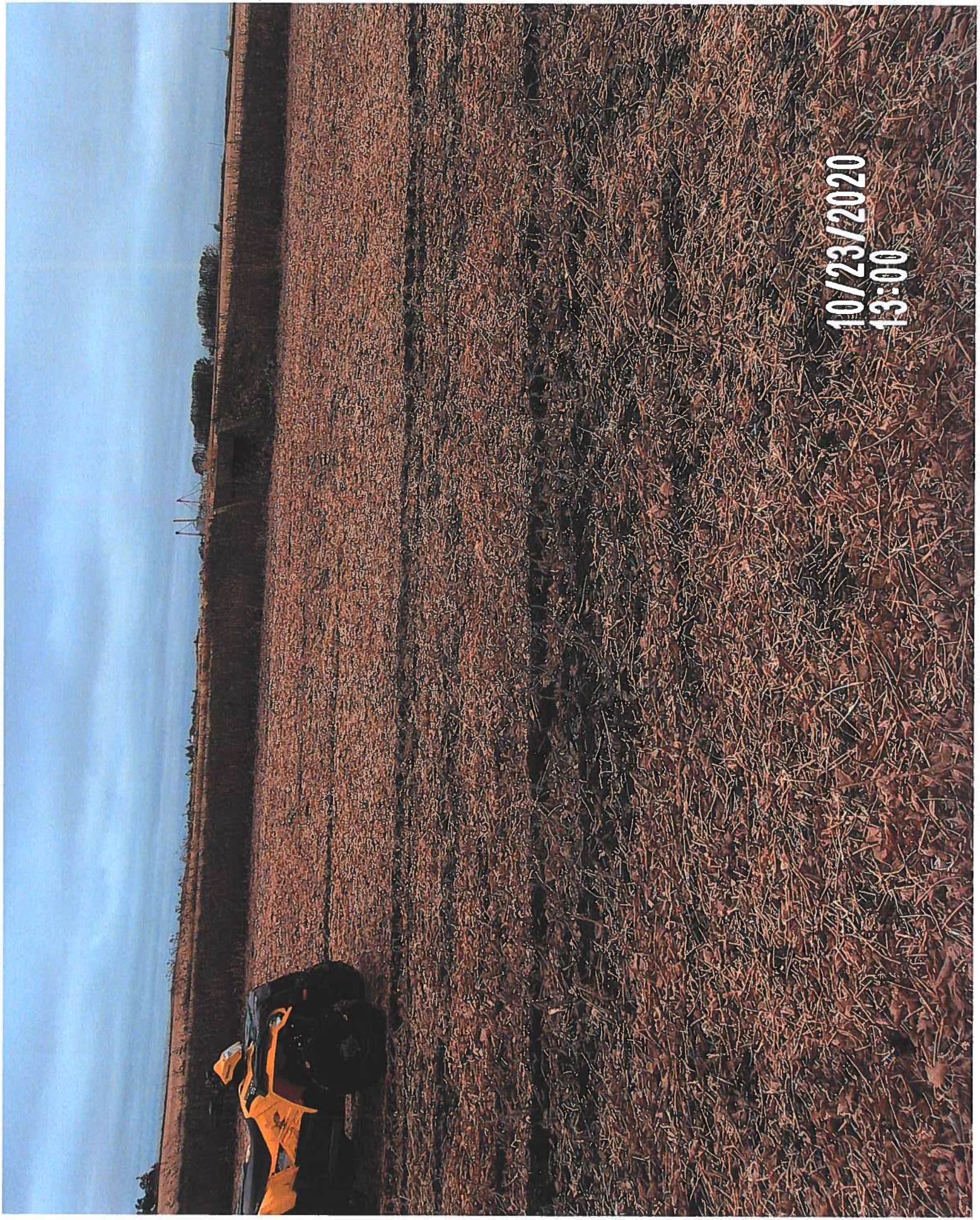
Distribution: Project Mgr. (Original), Inspector (Copy)
Form 9753

Clapsaddle-Garber Associates, Inc.
Consulting Engineers
P.O. Box 754
Marshalltown, IA 50158




ORIGINAL SPRING 2020 BLOW-OUT #49

WET SPOT E. OF HH AVE, S. OF ACKRACK, NO BLOW-OUT



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 11-30-20

PROJECT NUMBER: 6500.4 + 5

DAYS OF WEEK: S M T W T F S

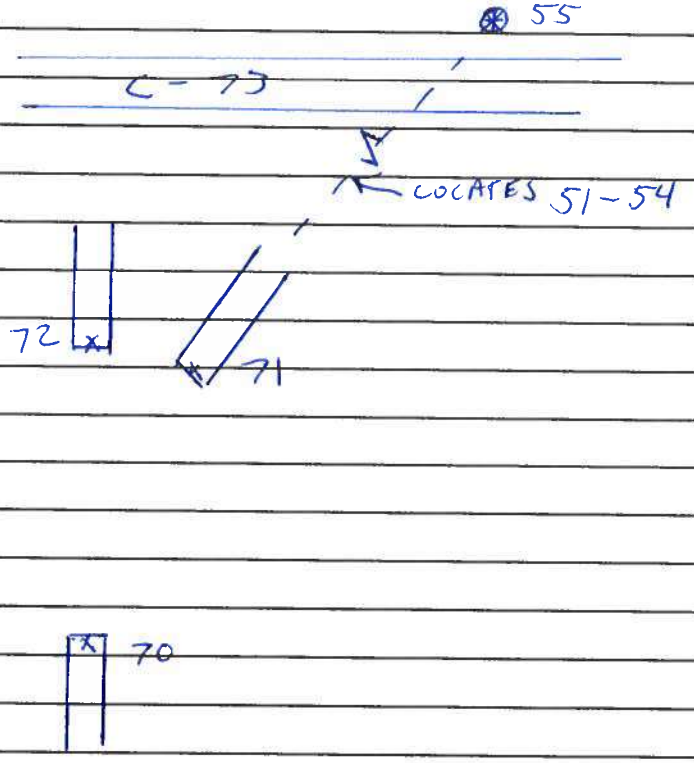
COUNTY, ROUTE, ROAD: ~~C-73~~ DO F.H. 4-53

SHEET NO. 1 OF

LOCATION: LAT 4A S. OF C-73 & E. HH

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

8:20 ARRIVED ON SITE SET UP BASE @ 2 (BUZZ)
8:30 TALKED TO CREW (RUSS ~~&~~ FRANK) SAID THAT WE ARE GOING TO START END OF PROJECT 1ST
9:00 STARTED EXCAVATING @ SINK HOLE @ 49
9:30 EXPOSED THE 'Y' @ THE BLOWOUT TILE IS SITTING 60% FULL RAN THE LOCATOR DOWN THE TILE & HIT A PLUG 6' 1 DOWN THE TILE
11:50 CREW LEFT SITE TO GET MATERIALS
1:00 CREW CALLED & SAID THAT THEY NEED TO GET SUPPLIES AND WILL NOT BE ABLE TO FINNISH THE REPAIR UNTIL TOMORROW.




I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [signature] Date Prepared: 12-1-20

Reviewed by: ☐ Engineer

Date Reviewed

START OF DAY







LOOKING S. DOWN TO

@ 70 LOOKING @ 71 + 72







LOOKING N. DOWN ~~70~~ 71

LOOKING N. @ 72







LOOKING N. @ 72

@ 72 LOOKING S. TO 70







LOOKING NW @ 71+72

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 12-7-20

PROJECT NUMBER: 6500.5

COUNTY, ROUTE, ROAD: DD F.H. 4-53

LOCATION: LAT 4A S. OF C-73 E. OF H.H.

DAYS OF WEEK: S M T W T F S

SHEET NO. 1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

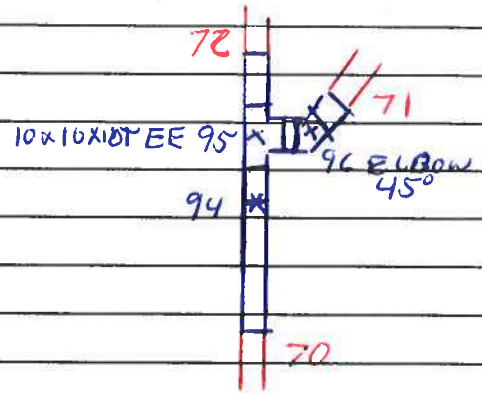
1200 STARTED REARING TILE PLACED A 10X10X10 TEE @ 95 + A 45° ELBOW @ 96

2:15 POURED 3 COLLARS @ 70, 71, + 72

2:45 PICKED UP THE BASE ~~OF~~ AND LEFT THE SITE CREW WAS GOING TO ANOTHER JOB WILE THE PCC CURES AND WILL COME BACK TO FILL IT IN.

CREW PLACED 1.5'± OF ROCK ABOVE TILE

CLEW POURED 1 CU YRD OF PCC




I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Chris K Date Prepared: 12-7-20

Reviewed by: ☐ Engineer

Date Reviewed

START OF DAY







PIPE DRY FIT

DRY FIT TILE



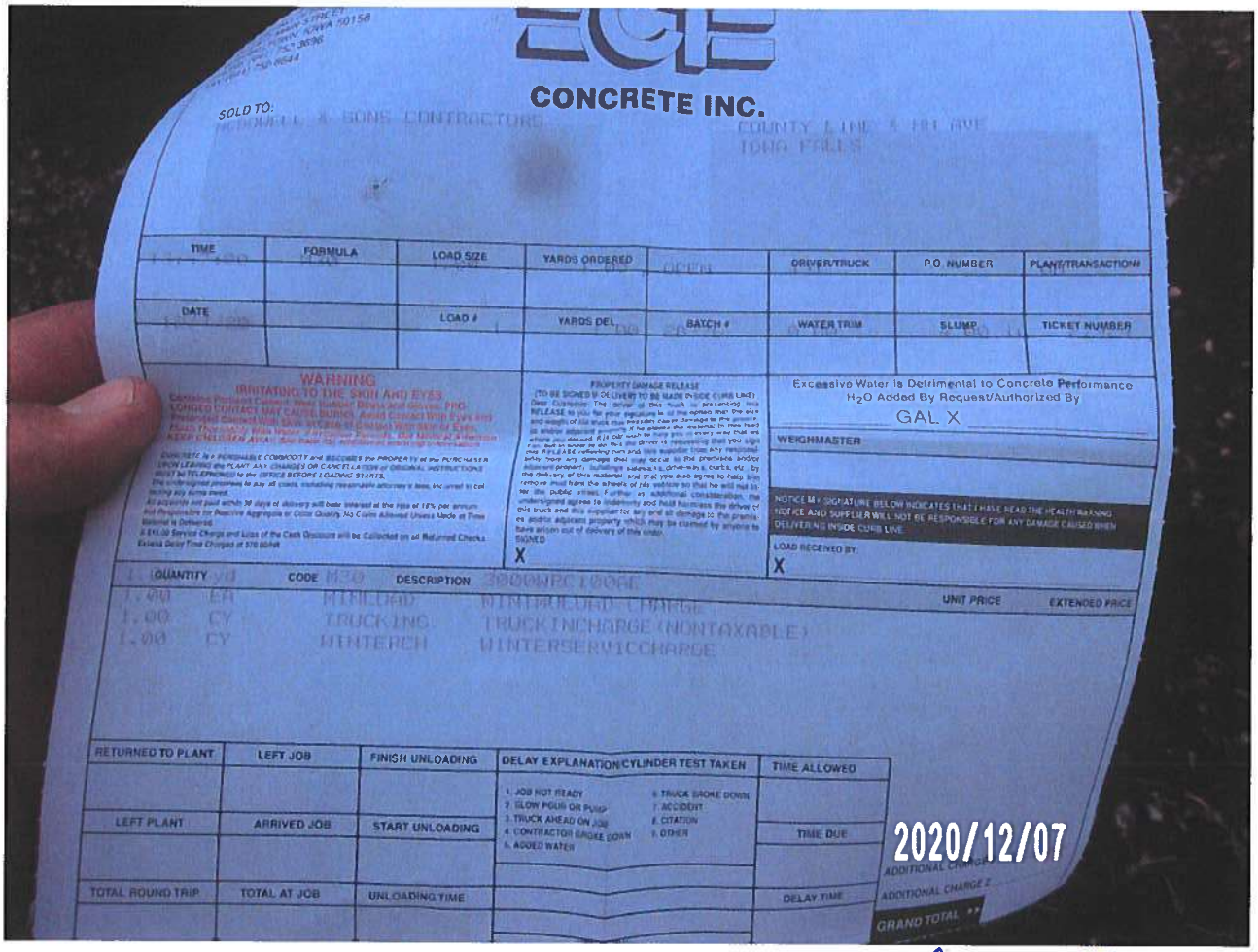




S: COLLAR

N. 2 COLLARS




PCC TICKET

S. COLLAR







N. 2 COLLARS

6500 2020-12-07 cs

1,3666160.310,4968629.670,1166.150,gps 8022
2,3666160.310,4968629.670,1166.150,Autonomous Setup
3,3665601.308,4985365.258,1153.705,gps 8039
4,3662686.568,4971781.373,1146.882,2.5' dia sinkhole
5,3662687.541,4971779.329,1143.094,top existing 32" vcp 2.77'to fl
6,3662685.287,4971776.399,1147.833,gs above tile
7,3662691.009,4971783.732,1148.264,gs above tile
8,3663330.530,4968801.041,1150.586,4.5'n-s*5.5'e-w
9,3663332.192,4968805.303,1150.554,top 10" vcp 0.88'to fl
10,3663284.607,4968738.850,1153.044,2.5' dia sinkhole
11,3663286.605,4968735.137,1153.508,8" dia sinkhole
12,3663327.463,4968798.394,1150.579,top 10" vcp 0.88'to fl
13,3663335.000,4968803.834,1152.886,top 5" vcp full dirt
14,3663330.888,4968795.343,1152.932,top 5" vcp full dirt
15,3663696.190,4968805.479,1162.175,fence e-w
16,3663695.365,4968720.301,1159.861,fence e-w
17,3663333.674,4968808.383,1154.979,gs above existing tile
18,3663325.979,4968795.250,1155.014,gs above existing tile
19,3663287.204,4968739.933,1151.305,top existing 10" vcp 0.88' to fl
20,3663284.675,4968736.599,1151.305,top existing 10" vcp 0.88' to fl
21,3663281.406,4968733.016,1155.472,gs above existing tile
22,3663298.207,4968754.179,1155.152,gs above existing tile
23,3665601.320,4985365.261,1153.716,gps 8039
24,3663440.572,4972146.722,1152.562,cpt 34 ir
25,3663121.599,4972576.733,1144.300,gs above existing tile
26,3662854.138,4972856.960,1140.237,top 36" cmp outlet 3.01' to  fl
27,3663115.447,4972584.564,1144.271,gs above existing tile
28,3663118.687,4972580.097,1140.912,top 34" vcp  2.78' to fl
29,3663300.267,4968762.985,1153.228,BLOWOUT
30,3663300.214,4968758.654,1151.097,TOP 10"CLAY CLEAN
31,3663305.081,4968765.715,1150.771,TOP 10"CLAY CLEAN
32,3671144.512,4972728.155,1195.694,top tile -4.05
33,3671061.498,4972739.434,1196.657,top tile -4.05
34,3670738.067,4972767.542,1195.245,crop dmg 2020-6-8
35,3670771.277,4972767.593,1195.233,crop dmg 2020-6-8
36,3670770.462,4972641.626,1193.078,crop dmg 2020-6-8
37,3670736.726,4972636.791,1192.239,crop dmg 2020-6-8
38,3671512.707,4972786.250,1189.171,top 5" hdpe single wall
39,3671509.830,4972785.764,1192.291,gs
40,3671509.599,4972799.553,1192.261,crop dmg 2020-6-8
41,3671539.260,4972801.985,1192.368,crop dmg 2020-6-8
42,3671540.052,4972739.157,1192.600,crop dmg 2020-6-8
43,3671507.872,4972743.015,1192.506,crop dmg 2020-6-8
44,3671474.166,4972743.142,1195.877,tree os 33'+-s
45,3671475.598,4972729.307,1195.925,tree os 33'+-s
46,3671475.813,4972719.495,1196.002,tree os 33'+-s
47,3671455.090,4972744.540,1192.909,top cmp 18"
48,3671493.900,4972744.641,1193.147,top cmp 18"
49,3666044.827,4967907.559,1156.912,TOP CLAYTILE @BLOWOUT

6500 2020-12-07 cs

50,3665195.129,4966858.093,1156.976,LOW WET AREA
51,3666091.534,4967940.481,1159.703,gs tile locate
52,3666120.642,4967976.600,1159.936,gs tile locate
53,3666156.036,4968022.468,1159.921,gs tile locate
54,3666176.084,4968044.347,1160.241,gs tile locate
55,3666247.982,4968121.293,1157.127,int 8" cmp fl
56,3667364.250,4969908.144,1156.485,int 10" hick fl
57,3667362.860,4969874.822,1158.138,top pcc 6" nw-se
58,3667352.683,4969905.385,1157.781,top 15" vcp n-s
59,3667205.816,4969877.603,1161.446,gs tile locate
60,3667135.035,4969857.761,1161.397,gs tile locate
61,3667087.745,4969834.074,1161.682,gs tile locate
62,3667434.389,4969795.562,1158.315,top 6x6x4 tee
63,3667435.049,4969796.055,1158.332,top hdpe 4" n
64,3667485.773,4969737.456,1161.183,int 8" hick
65,3666779.953,4970174.911,1163.503,int 6" hick
66,3667299.828,4969895.147,1157.625,top 15" vcp  1.28' to fl
67,3667076.270,4969827.174,1158.243,top 20" vcp
68,3667104.562,4969844.067,1158.202,top 20" vcp
69,3667150.913,4969862.605,1157.434,top 16" 18" vcp
70,3666021.796,4967902.974,1157.055,top 10" clay 0.95 to fl
71,3666048.785,4967909.858,1156.979,top 10" clay 0.90 to fl
72,3666051.869,4967907.293,1157.120,top 10" clay 0.90 to fl
73,3666267.996,4969388.082,1156.906,top 22" clay
74,3666293.230,4969401.072,1163.438,gs tile locate
75,3666326.644,4969410.758,1163.661,gs tile locate
76,3666361.776,4969420.926,1163.792,gs tile locate
77,3666742.611,4970176.033,1163.597,gs tile locate
78,3666699.571,4970182.051,1163.554,gs tile locate
79,3666802.245,4970171.072,1159.947,top 5 clay
80,3666681.406,4970183.461,1160.163,top 5 clay
81,3666832.370,4970167.948,1164.081,gs tile locate
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89,3666932.784,4970109.017,1158.626,top 18 vcp
90,3666489.494,4971867.481,1162.503,int 8" hick fl
91,3666811.651,4972398.548,1165.263,962 10 n-s
92,3666813.848,4972384.939,1162.370,962 15 n-s
93,3666502.204,4972037.848,1162.566,952 -3.4 to fl
94,3666041.730,4967906.459,1153.072,421 10
95,3666047.861,4967907.178,1153.058,421 10 tee
96,3666047.852,4967909.056,1152.927,421 10 45elbow

## Drainage District:

#4-53

## Investigation Summary:

- Landowner in the NW¼ NE¼ Section 4, Township 89 North, Range 21 West reported a blowout/sinkhole with standing water in the field over the assumed Lateral 4A tile route, just south of where it crosses Hardin Road (Highway C73).
- This reported issue was the same as Work Order #303.

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

None recorded, as work was completed under a separate Work Order.

## Additional Actions Recommended:

See the summary provided with Work Order #303 for actions taken and recommended.

# Drainage Work Order Request For Repair
## Hardin County

**Date:** 6/9/2020

**Work Order #:** WO00000296

**Drainage District:** DDs\DD F-H 4-53 (51213)

**Sec-Twp-Rge:** 04-89-21 **Qtr Sec:** N1/2 SE1/4

**Location/GIS:** 89-21-04-200-002

**Requested By:** Jim Ziesman

**Contact Phone:** (641) 648-4933

**Contact Email:** Cell - 641-640-0419

**Landowner** (If different):

**Description:** DD F-H 4-53 - Landowner Jim Ziesman reports blowout with standing water in field on district tile in parcel #892104200002, located near where tile enters field in grassy waterway.

**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:**


Co Hwy C73
Hardin Rd
LAT J
LAT J
892104100002
892104200002
892104200003
MAIN
HH Ave
892104200004
892104100004
J.D.D.
F-H 4-53
892104200005

6500 2020-12-07 cs

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87,3666989.862,4969991.061,1163.530,gs tile locate
88,3667021.781,4969918.846,1162.411,gs tile locate
89,3666932.784,4970109.017,1158.626,top 18 vcp
90,3666489.494,4971867.481,1162.503,int 8" hick fl
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95,3666047.861,4967907.178,1153.058,421 10 tee
96,3666047.852,4967909.056,1152.927,421 10 45elbow

file

Warrant #

# DRAINAGE WORK ORDER
# REQUEST FOR REPAIRS
FRANKLIN COUNTY, IOWA

Work Order #: 143
Fund #: 51162

Laterals not divided out for releases.

District # F-H 4-53 Lateral 4B1, 4B2, +4B3 Date 9/6/19

Township Lee Section 34 SE 1/2 Twp 90 Rge 21

Repair requested by Mike Nissley, Farm Manager

Address PO Box 606, Iowa Falls, IA Phone 641-648-4285

Landowner Corabel & Jerry Mark

Address PO Box 606, Iowa Falls, IA Phone 641-648-4285

Site available for repair now? ☐YES ☒NO Date available After harvest

Identification of repair: Broken or plugged tile

Request taken by Julie Pralle

Original cost of the district $ F=$24,540.31 (60%) Hardin=$16,429.50 (40%)

Potential wetlands?
☐YES--Repair existing tile only
☒NO--Repair and maintain tile

Repair assigned to _____ Date _____

"ATTENTION: Engineer & Contractor – PLEASE contact the person requesting this repair BEFORE beginning ANY work at this location."

Please send statement for services to:
FRANKLIN COUNTY AUDITOR
ATTN: DRAINAGE
PO Box 26
Hampton, IA 50441

auditor@co.franklin.ia.us
Phone: (641) 456-5622
Fax: (641) 456-6001

Please include the GPS coordinates of the location of the repair on your bill to Franklin County
(For example, 93°18'39.67 W 42°39'31.7 N)
Thank you!!

Latitude: _____

Longitude: _____

# RESOLUTION 2016-18

## FRANKLIN COUNTY
## INVESTIGATION OF DRAINAGE DISTRICTS PER REQUESTS

**NOW,** on this 31st day of May, 2016, the following resolution was presented to the Board of Supervisors acting as Drainage District Trustees:

**WHEREAS,** said Trustees believe that it is in the best interests of drainage districts that individuals, landowners, or entities making requests for district investigation of repairs be responsible for the costs of those investigations in the event that the source of the need for repairs would be privately owned tile and not part of the drainage district facilities or no problem is found and the drainage district facility is anything other than open ditch.

**BE IT RESOLVED** that in the event any individual or entity makes a request to the drainage district to investigate proposed repairs which require the district to expend funds to determine the location of needed repairs, feasibility of repairs, or any other costs incurred in connection with investigating the request and that in the event in the course of investigation it is discovered that the drainage tile or related structures needing repair are not under the drainage district's control, then the individual, landowner, or entity requesting the investigation shall be responsible for payment of any expenses incurred by the district. If said investigation results in no problem discovered, said requestor is responsible for payment of any expenses incurred by the district. This does not apply to drainage district facilities that are open ditches. If the investigation in the district finds a problem with district facilities, then said district will be responsible for payment of any expenses incurred by the district as allowed by Iowa Code.

The Board of Supervisors acting as Drainage District Trustees authorize the Franklin County Auditor to prepare the necessary form for the individual, landowner, or entity to execute prior to any investigation (except open ditches) in a form necessary to carry out the intent of this resolution.

**BE IT DULY ADOPTED** this 31st day of May, 2016, with the vote thereon being as follows:

AYES: Eberling, McVicker, Nolte
NAYS:
ABSENT/NOT VOTING:

FRANKLIN COUNTY BOARD OF SUPERVISORS

Corey Eberling
Corey Eberling, Chairman

Gary McVicker
Gary McVicker

Michael Nolte
Michael Nolte

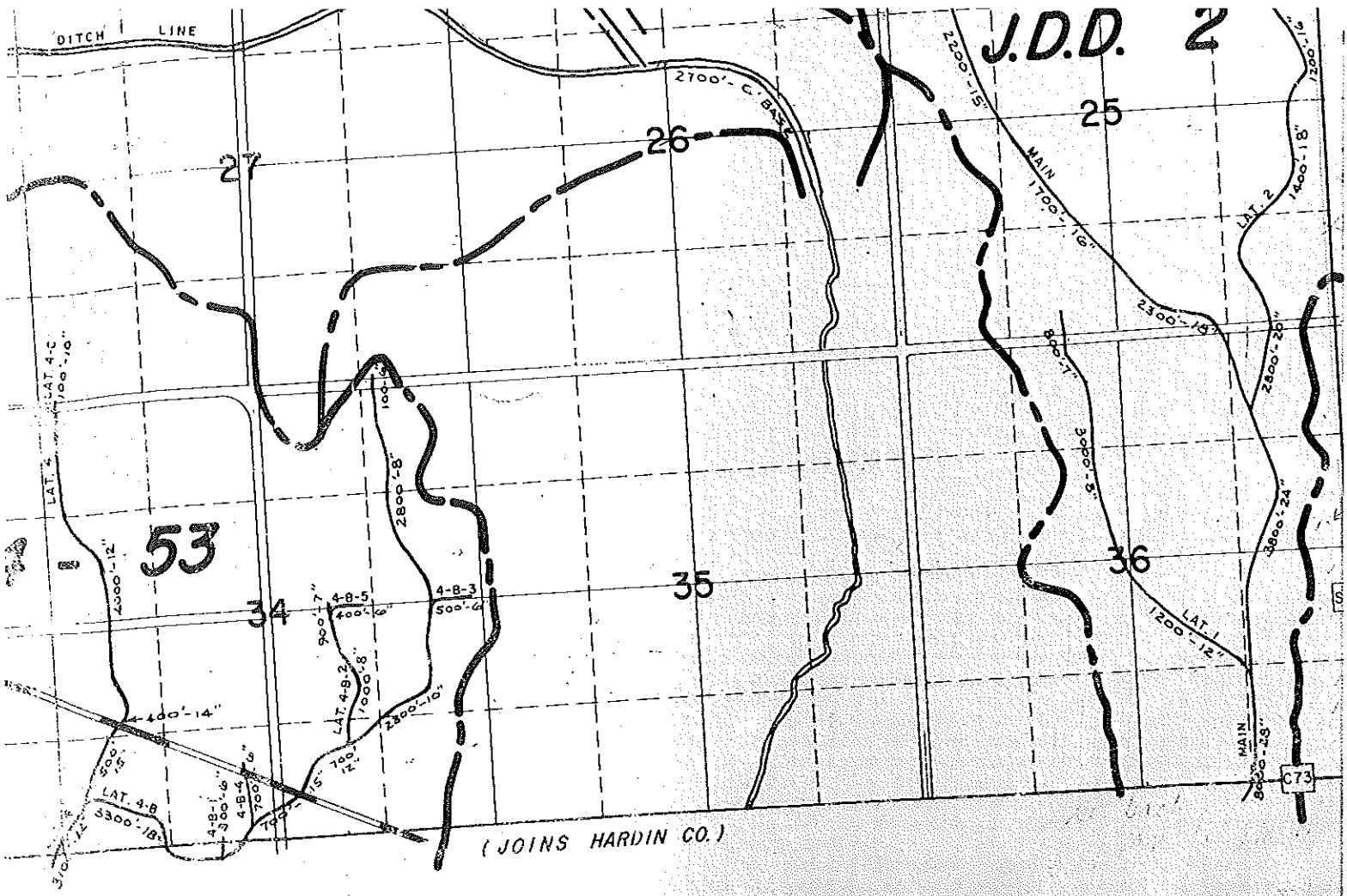
**I have read and agree to the terms of this Resolution:**

Cordell Mark & Jerry Mark
By Michael J. Kirby Speed
Requestor

9/6/19
Date

F-H-4-53
Drainage District

ATTEST:
Michelle S. Giddings
Michelle S. Giddings, Auditor & Clerk to Board




PREPARED BY:

McCLURE ENGINEERING CO

FORT DODGE, IOWA

McCLURE ENGINEERING CO

IOWA, IOWA

# Franklin County Parcel Map

0 0.04 0.08 0.16 0.24 0.32 Miles

N

THIS MAP DOES NOT REPRESENT A SURVEY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA DELINEATED HEREIN, EITHER EXPRESSED OR IMPLIED BY FRANKLIN COUNTY OR ITS EMPLOYEES. THIS MAP IS COMPILED FROM OFFICIAL RECORDS, INCLUDING PLATS, SURVEYS, RECORDED DEEDS, AND CONTRACTS, AND ONLY CONTAINS INFORMATION REQUIRED FOR COUNTY PURPOSES. SEE THE RECORDED DOCUMENTS FOR MORE DETAILED LEGAL INFORMATION. DIGITAL AERIAL PHOTOGRAPHY WAS FLOWN IN SPRING 2012.

MAP PREPARED BY THE FRANKLIN COUNTY AUDITOR'S OFFICE. CONTACT THEM AT 641.456.5622.



## Drainage District:

#4-53; Lat 4 & 4B

## Investigation Summary:

- Farm manager and tenant in the SE¼ Section 34, Township 90 North, Range 21 West reported a lack of drainage from the Laterals 4B1, 4B2, and 4B3.
- Visual observation found multiple areas of excess moisture and issues within the south half of said Section 34 and the NE¼ of Section 4, Township 89 North, Range 21 West as follows:
  - Lateral 4:
    - Ponding upstream and downstream of the Lateral 4 & Hardin Road (Highway C73) intersection.
    - Excessive Ponding near the Lateral 4 & 4B connection.
    - Excessive ponding upstream and downstream of the Lateral 4 & 30th Street intersection.
  - Lateral 4B:
    - Multiple wet areas found upstream of the 4 & 4B connection on both sides of Hardin Road (Highway C73).
    - A collapsed intake on the south side of Hardin Road (Highway C73).
    - Excess moisture near the connection of 4B & 4B4.
    - Ponding and pieces of broken tile near the intersection of Lateral 4B & the abandoned railroad.
    - Excess moisture near the connection of Lateral 4B & 4B2.
  - Lateral 4A:
    - A missing VCP wye at the connection with a private tile that is pulling soil into the Lateral tile (repaired under Hardin County Work Order 303).
    - A large amount of tile shards at the intersection of 4A and the east fenceline in the NW¼ of Section 4.
- Excavated the 15-inch VCP Lateral 4 tile upstream of its connection with the Lateral 4B tile, then moved intermittently further downstream to where it was found to be 15-inches, then 18-inches, then 20-inches in diameter. In said excavations found a large amount of debris in the tile taking up approximately 1/4 to 1/3 of the flowline. Above said debris was approximately 3-inches of water flowing slowly
- Excavated Lateral 4 again on the north side of Hardin Road (Highway C73) and found the tile to be relatively free of debris, and again, water flowing slowly at approximately 3-inches deep. At said excavation, also found a 4-inch HDPE private tile protruding approximately 2-3-inches into Lateral 4.
- Excavated the 18-inch VCP Lateral 4B tile approximately 300-feet upstream of its connection with the Lateral 4 tile and found it to have approximately 3-inches of slow-moving water in the flowline. Then excavated at the location where Lateral 4B intersects with the abandoned railroad East of Juniper Ave. and found the 15-inch VCP tile to have approximately 1 to 2-inches of debris in the flowline, with approximately 1 to 2-inches of slow flowing water above.
- All tiles broken in the process of investigation were temporarily repaired with dual wall HDPE tile of matching size and temporary fabric wrap at joints, then backfilled with on-site soil. All tiles that had an exploratory hole cut in the side were patched with engineering fabric and an HDPE tile cover, then backfilled with on-site soil.

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

See attached Tabulated Contractor Time and Materials Sheet.

## Additional Actions Recommended:

From the observations made, it is difficult to find a definitive cause for the reported lack of drainage. However, the following items are apparent:

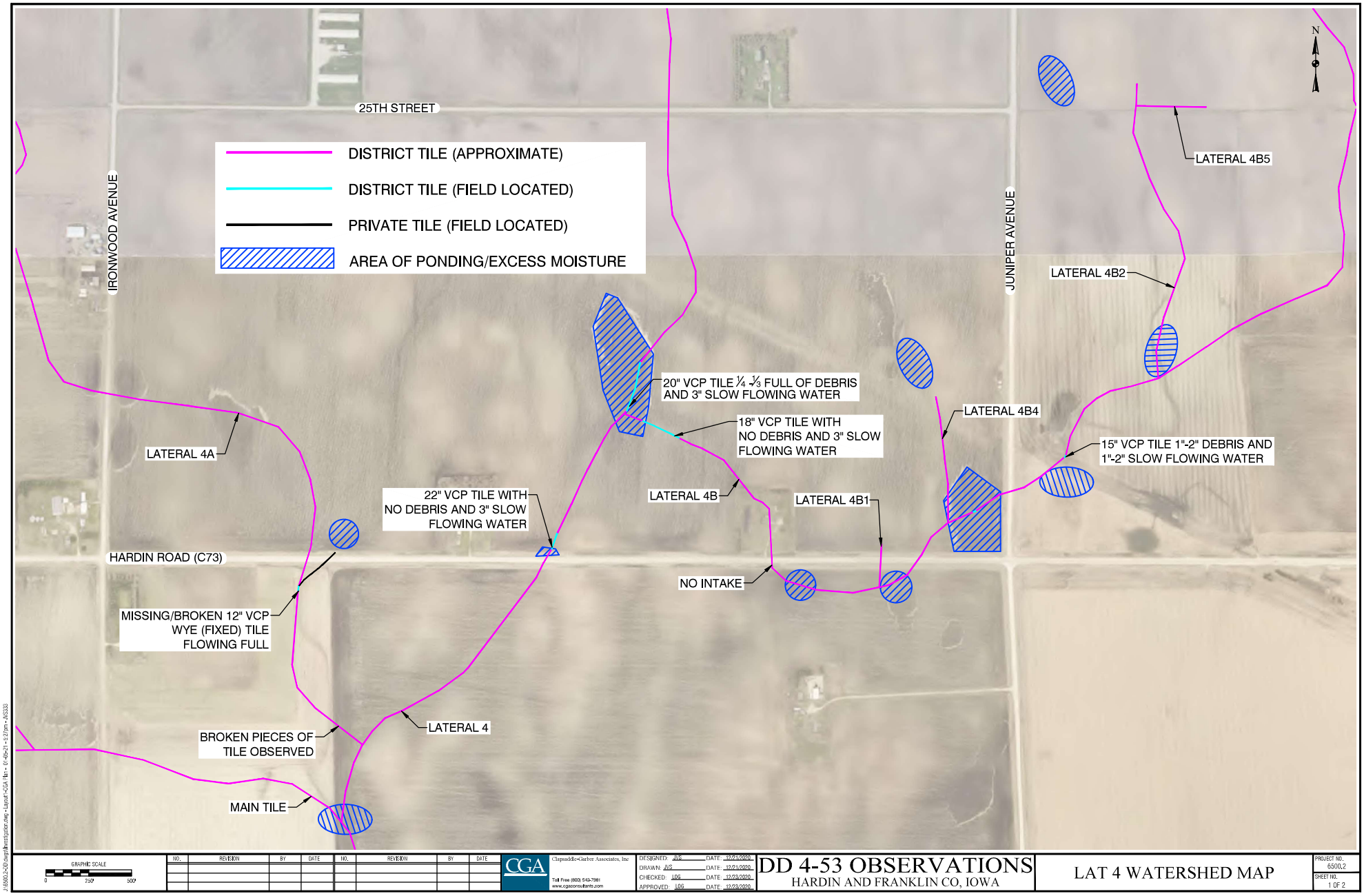
- There is silt/debris in the flowline of both the Lateral 4 and Lateral 4B tiles.
- There is a hump in the Lateral 4 tile, wherein the downstream limits of the exploratory excavation were found to be higher in elevation than the upstream excavations and there is very little fall in the Lateral 4 tile north of Hardin Road.

Neither of these observations by themselves are likely significant enough to be the cause of the reported problems, and current conditions make it difficult to pin down an exact location or cause. The District Trustees may consider one of the following recommended actions:

- Order CCTV inspections to be conducted at broad intervals to determine the overall condition of the tiles at issue and potentially find the cause. This may, however, be hindered by the amount of silt in the tiles at issue.
- Order more exploratory excavations at 100 to 200-feet intervals to potentially find differentials in flow, elevations, or silt that might indicate the location of problems.
- Wait until the issue becomes more pronounced so that a more definite location of the cause might be more easily found using the above-mentioned methods.

# Tabulated Contractor Time and Materials

| Date | Totals | 11/30/2020 | 12/1/2020 | 12/7/2020 |
|---|---|---|---|---|
| Workman (hrs) | 28 1/2 | 5 | 17 | 6 1/2 |
| Backhoe (hrs) | 14 1/4 | 2 1/2 | 8 1/2 | 3 1/4 |




GRAPHIC SCALE
0 250' 500'

| NO. | REVISION | BY | DATE | NO. | REVISION | BY | DATE |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

CGA
Clapsaddle-Garber Associates, Inc
Toll Free (800) 543-7981
www.cgaconsultants.com

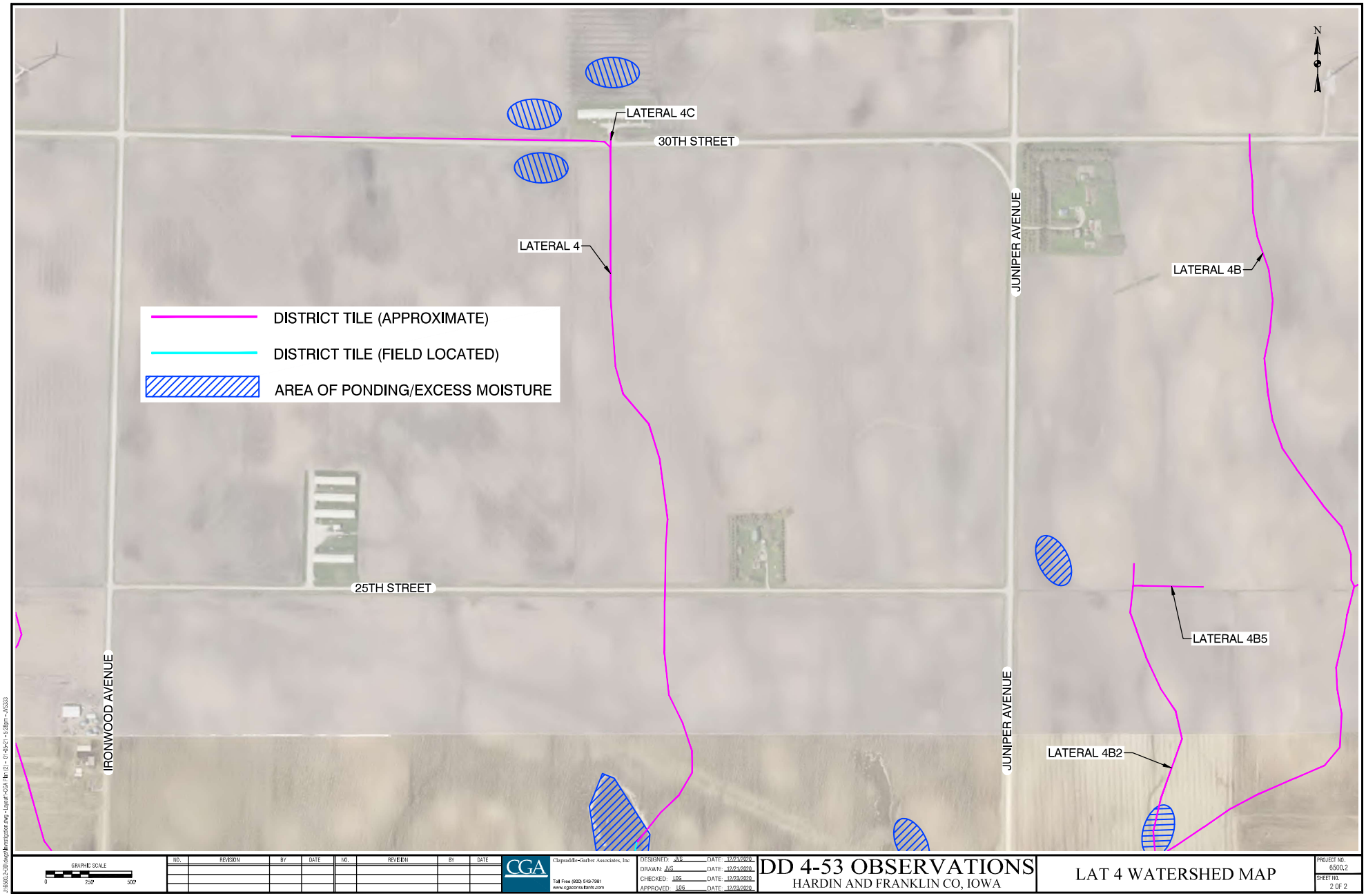
DESIGNED: JVS DATE: 12/21/2020
DRAWN: JVS DATE: 12/21/2020
CHECKED: LDG DATE: 12/23/2020
APPROVED: LDG DATE: 12/23/2020

# DD 4-53 OBSERVATIONS
HARDIN AND FRANKLIN CO, IOWA

## LAT 4 WATERSHED MAP

PROJECT NO. 6500.2
SHEET NO. 1 OF 2

J:\6500.2-DD\dwgs\Investigation.dwg - Layout1-CGA Plan - 01-05-21 - 5:27pm - JVS333




GRAPHIC SCALE
0 250 500

| NO. | REVISION | BY | DATE | NO. | REVISION | BY | DATE |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

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

DESIGNED: JVS DATE: 12/21/2020
DRAWN: JVS DATE: 12/21/2020
CHECKED: LOG DATE: 12/23/2020
APPROVED: LOG DATE: 12/23/2020

# DD 4-53 OBSERVATIONS
HARDIN AND FRANKLIN CO, IOWA

## LAT 4 WATERSHED MAP

PROJECT NO. 6500.2
SHEET NO. 2 OF 2

Warrant #

# DRAINAGE WORK ORDER
# REQUEST FOR REPAIRS
FRANKLIN COUNTY, IOWA

Work Order #: 143
Fund #: 51162

laterals not divided out for releases

District # F-H 4-53 Lateral 4B1, 4B2, + 4B3 Date 9/6/19

Township Lee Section 34 SE½ Twp 90 Rge 21

Repair requested by Mike Nissley, Farm Manager

Address PO Box 606, Sioux Falls, IA Phone 641-648-4285

Landowner Corabel + Jerry Mack

Address PO Box 606, Sioux Falls, IA Phone 641-648-4285

Site available for repair now? ☐YES ☒NO Date available After harvest

Identification of repair: Broken or plugged tile

Request taken by Julie Pralle

Original cost of the district $ F = $24,540.31 (60%) Hardin = $16,429.50 (40%)

Potential wetlands?
☐YES--Repair existing tile only
☒NO--Repair and maintain tile

Repair assigned to _____ Date _____

"ATTENTION: Engineer & Contractor – PLEASE contact the person requesting this repair BEFORE beginning ANY work at this location."

Please send statement for services to:
FRANKLIN COUNTY AUDITOR
ATTN: DRAINAGE
PO Box 26
Hampton, IA 50441

auditor@co.franklin.ia.us
Phone: (641) 456-5622
Fax: (641) 456-6001

Please include the GPS coordinates of the location of the repair on your bill to Franklin County
(For example, 93°18'39.67 W 42°39'31.7 N)
Thank you!!

Latitude: _____

Longitude: _____

# RESOLUTION 2016-18

## FRANKLIN COUNTY
## INVESTIGATION OF DRAINAGE DISTRICTS PER REQUESTS

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**BE IT DULY ADOPTED** this 31st day of May, 2016, with the vote thereon being as follows:

AYES: Eberling, McVicker, Nolte
NAYS:
ABSENT/NOT VOTING:

FRANKLIN COUNTY BOARD OF SUPERVISORS

Corey Eberling, Chairman

Gary McVicker

Michael Nolte

**I have read and agree to the terms of this Resolution:**

Carol Mark & Terry Mark

Requestor

9/6/19

Date

F-H-4-53

Drainage District

ATTEST:

Michelle S. Giddings, Auditor & Clerk to Board

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 04/14/2020

PROJECT NUMBER: DD WO # 143 & 500.2/DD # F-H4-53

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: SOUTH OF 25th ST TO WEST EAST OF JUNIPER AVE

SHEET NO. 1 OF 1

LOCATION: JDD F-H4-53 LAT 4-B-2 W½ SW¼ 34-90-21 FRANKLIN

MID 20's TO MID 30's CLOUDY & WINDY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

8:44 A.M. OBSERVER CALLED MIKE NISSELY ABOUT BROKEN OR PLUGGED TILE AND LEFT A MESSAGE.

9:47 A.M. MIKE CALLED BACK AND LEFT MESSAGE WITH TENANTS NUMBER LANDON ALDINGER 515-689-1842.

10:50 A.M. OBSERVER CALLED LANDON AND HE WOULD STOP BY TOO LOOK AT THINGS WITH ME.

11:10 A.M. LANDON ON SITE. LANDON SAID IN 2018 IT WAS WET BUT COULD STILL FARM PLACES. 2019 IT WAS WET ENOUGH THAT SOME SPOTS NOT PLANTED OR HARVESTED. LANDON SHOWED OBSERVER WATER STANDING IN FIELD EAST SIDE OF ACREAGE SOUTH OF 30TH STREET 532.8'± EAST OF EAST ROW JUNIPER AVENUE WITH COUNTY BEEHIVE UNDER WATER WITH 85'± NE-SW X 270'± NW-SE AREA OF FIELD WITH STANDING WATER. COUNTY MAP SHOWS JDD F-H4-53 LAT 4B RUNS EAST OF ¼ MILE LINE & WET AREA IS BETWEEN 532.8' 700'. LANDON ALSO NOTED THAT WHEN CREW WAS PUTTING ON ANHYDROUS THEY DID NOT SEE ANY AREAS THAT WERE BLOWN OUT OR WATER VISIBLE, OBSERVER RODE OUT WITH FOUR WHEELER AND ONLY FOUND AREA THAT WAS DARK WITH NO CROP & REWORKED. SEE ATTACHED SHEET 1 AND AREA NORTH OF ABANDONED RAILROAD TRACKS SEE ATTACHED SHEET 2. LAT 4-B2 OR LAT 4B ARE NOT NEAR THESE LOCATIONS

11:40 A.M. LANDON LEFT SITE. 12:13 P.M. PICTURE # 3347B

12:21 P.M. PICTURE # 3348 SEE PICTURE FOR DETAILS.

12:30 P.M. DONE WITH THIS SITE.

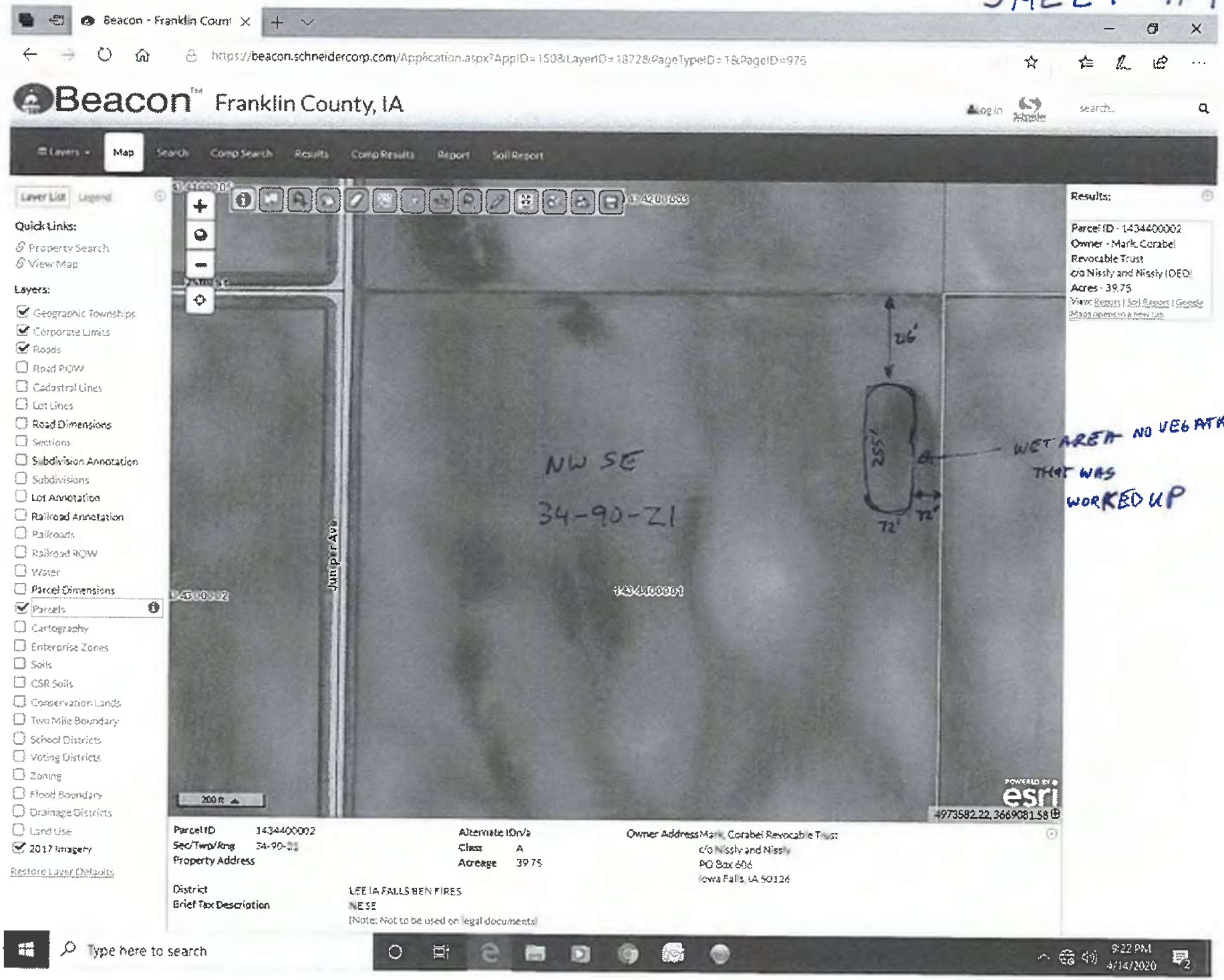
I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Jean Beaning Date Prepared: 04/14/2020

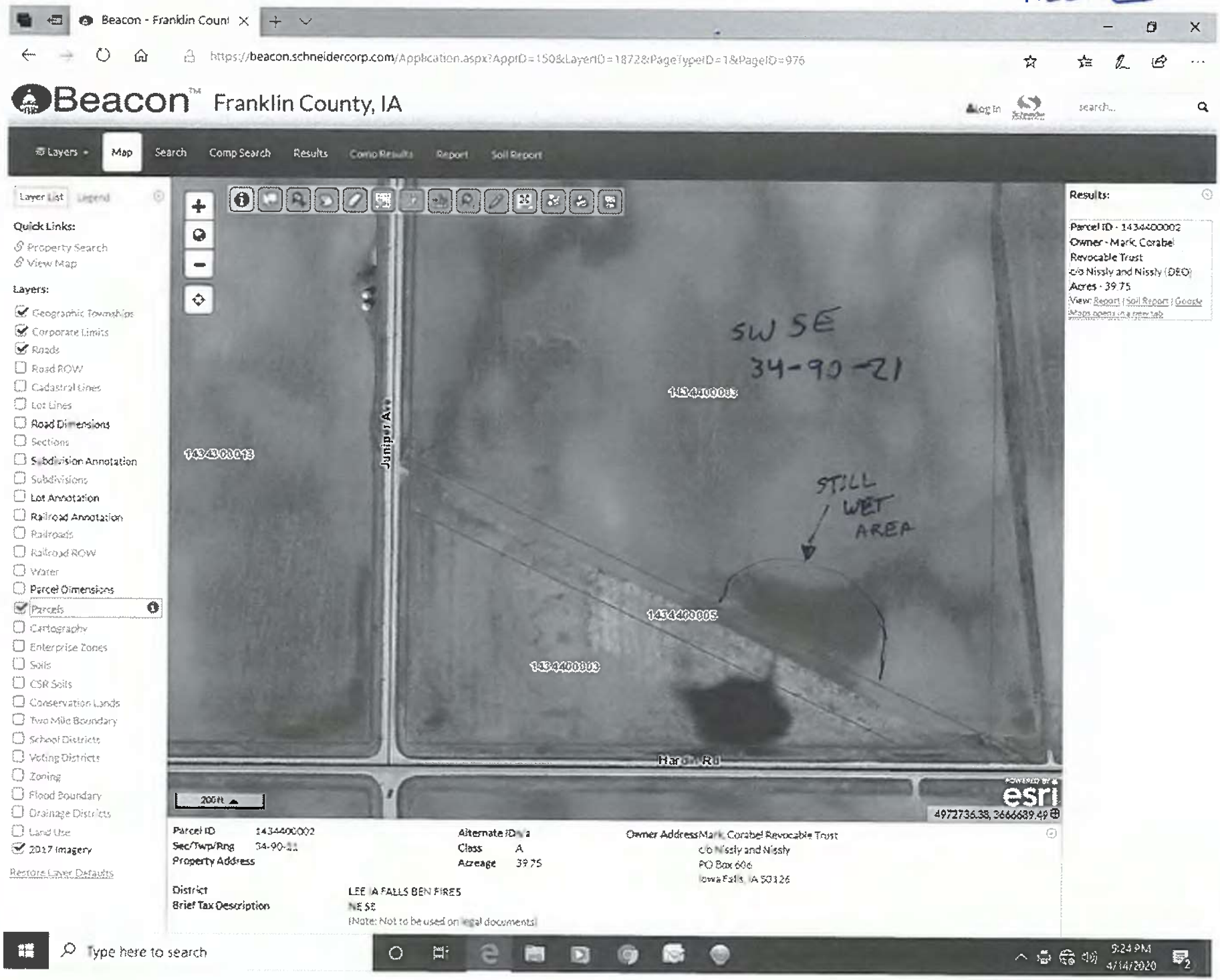
Reviewed by: _____ ☐ Engineer

Date Reviewed _____

SHEET #1


Beacon - Franklin Count
https://beacon.schneidercorp.com/Application.aspx?AppID=150&LayerID=1872&PageTypeID=1&PageID=975
Beacon™ Franklin County, IA
Log In
search...
Layers
Map
Search
Comp Search
Results
Comp Results
Report
Soil Report
Layer List
Legend
Quick Links:
Property Search
View Map
Layers:
Geographic Townships
Corporate Limits
Roads
Road ROW
Cadastral Lines
Lot Lines
Road Dimensions
Sections
Subdivision Annotation
Subdivisions
Lot Annotation
Railroad Annotation
Railroads
Railroad ROW
Water
Parcel Dimensions
Parcels
Cartography
Enterprise Zones
Soils
CSR Soils
Conservation Lands
Two Mile Boundary
School Districts
Voting Districts
Zoning
Flood Boundary
Drainage Districts
Land Use
2017 Imagery
Restore Layer Defaults
NW SE
34-90-21
1434400001
Juniper Ave
26'
25'
72'
72'
WET AREA NO VEGETATION THAT WAS WORKED UP
Results:
Parcel ID - 1434400002
Owner - Mark Corabel Revocable Trust
c/o Nissly and Nissly (DED)
Acres - 39.75
View: Report | Soil Report | Google Maps opens in a new tab
200 ft
esri
4973582.22, 3669081.58
Parcel ID 1434400002
Sec/Twp/Rng 34-90-21
Property Address
District LEE IA FALLS BEN FIRES
Brief Tax Description NESE
(Note: Not to be used on legal documents)
Alternate ID n/a
Class A
Acreage 39.75
Owner Address Mark Corabel Revocable Trust
c/o Nissly and Nissly
PO Box 606
Iowa Falls, IA 50126
Type here to search
9:22 PM
4/14/2020

SHEET 2


Beacon - Franklin Count
https://beacon.schneidercorp.com/Application.aspx?AppID=150&LayerID=1872&PageTypeID=1&PageID=976
Beacon™ Franklin County, IA
Log In
search...
Layers
Map
Search
Comp Search
Results
Comp Results
Report
Soil Report
Layer List
Legend
Quick Links:
Property Search
View Map
Layers:
Geographic Townships
Corporate Limits
Roads
Road ROW
Cadastral Lines
Lot Lines
Road Dimensions
Sections
Subdivision Annotation
Subdivisions
Lot Annotation
Railroad Annotation
Railroads
Railroad ROW
Water
Parcel Dimensions
Parcels
Cartography
Enterprise Zones
Soils
CSR Soils
Conservation Lands
Two Mile Boundary
School Districts
Voting Districts
Zoning
Flood Boundary
Drainage Districts
Land Use
2017 Imagery
Restore Layer Defaults
SW SE
34-90-21
1434400003
1434400013
Juniper Ave
STILL WET AREA
1434400005
1434400803
Harold Rd
200ft
esri
4972736.38, 3666639.49
Results:
Parcel ID - 1434400002
Owner - Mark Corabel Revocable Trust
c/o Nissly and Nissly (DEO)
Acres - 39.75
View: Report | Soil Report | Google Maps opens in a new tab
Parcel ID 1434400002
Sec/Twp/Rng 34-90-21
Property Address
Alternate ID n/a
Class A
Acreage 39.75
Owner Address Mark Corabel Revocable Trust
c/o Nissly and Nissly
PO Box 606
Iowa Falls, IA 50126
District LEE IA FALLS BEN FIRES
Brief Tax Description NE SE
(Note: Not to be used on legal documents)
Type here to search
9:24 PM
4/14/2020




N

SEE SHEET #2

PICTURE # 3347 IS LOOKING SOUTH AT 255' N-S X 72' E-W WET AREA THAT WAS REWORKED & WET AT ONE TIME. LAT 4-B2 OR LAT 4-B NOT NEAR THIS AREA ACCORDING TO MAP

PICTURE # 3348 IS LOOKING NORTH AT 72' E-W x 255' N-S AREA THAT WAS WET AND HAS BEEN REWORKED. LAT 4B-2 OR LAT 4B NOT IN THIS AREA




N

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 6/1/20

PROJECT NUMBER: 6500.2
6500.3

COUNTY, ROUTE, ROAD: JUNIPER

LOCATION: DD. OD 4-53 FRANKLIN/HARDIN

DAYS OF WEEK: S M T W T F S

SHEET NO. 1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

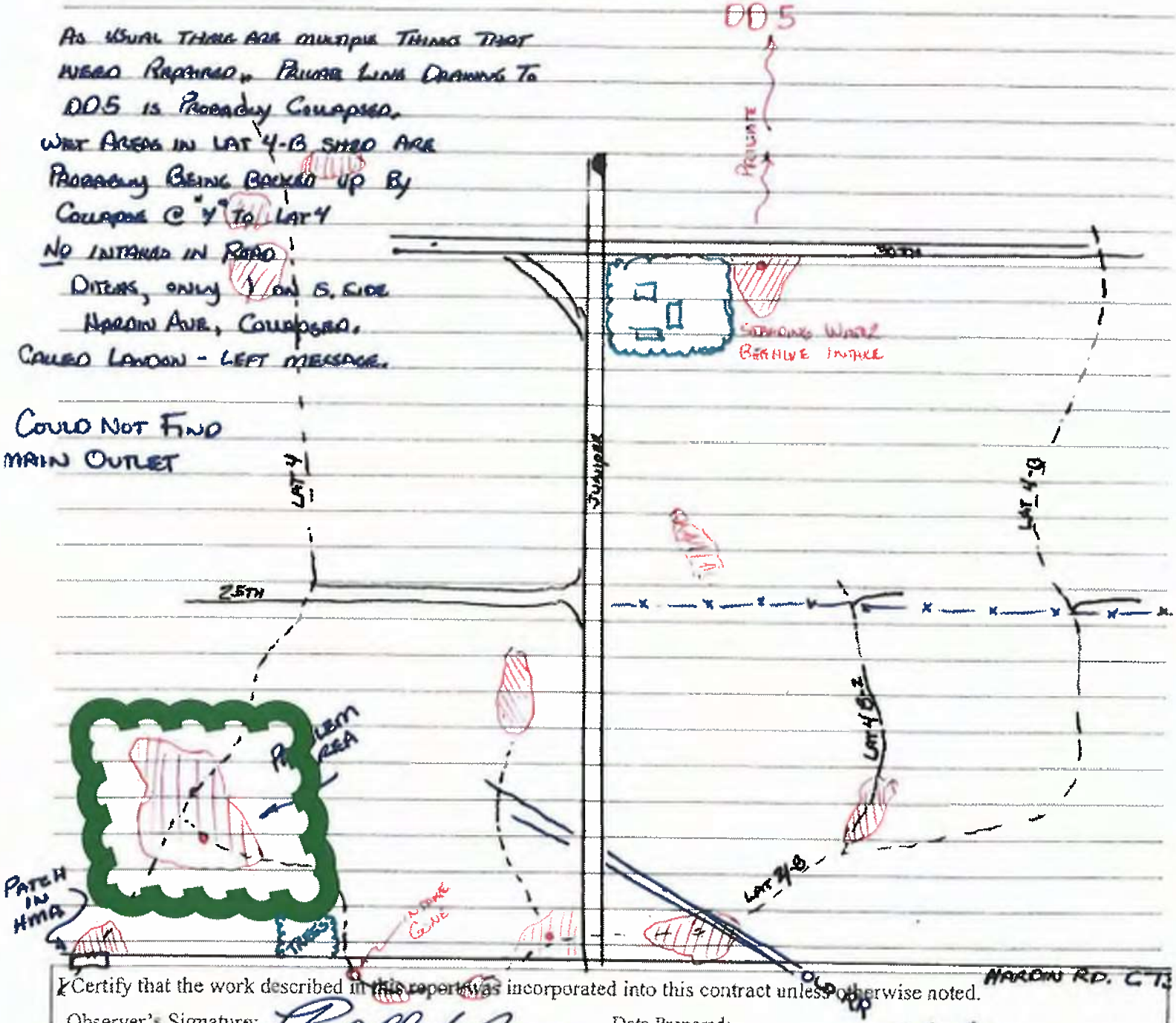
As usual there are multiple things that need repaired. Please look drawing to DD5 is probably collapsed.

Wet areas in Lat 4-B shed are probably being backed up by collapse @ "Y" to Lat 4

No intakes in road ditches, only 1 on S. side Hardin Ave, collapsed.

Called London - left message.

Could not find main outlet




I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [signature] Date Prepared: 6/1/20

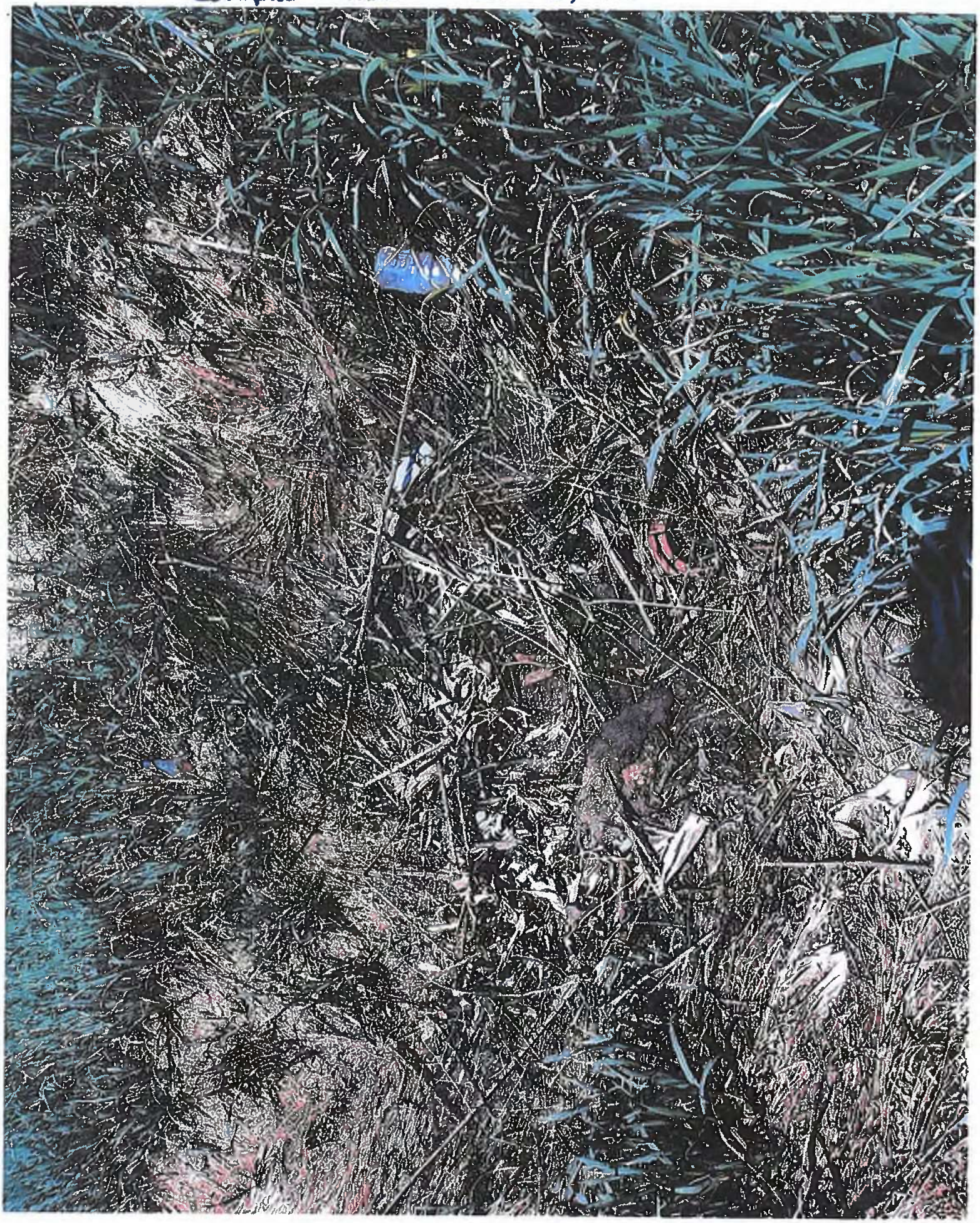
Reviewed by: ☐ Engineer

Date Reviewed

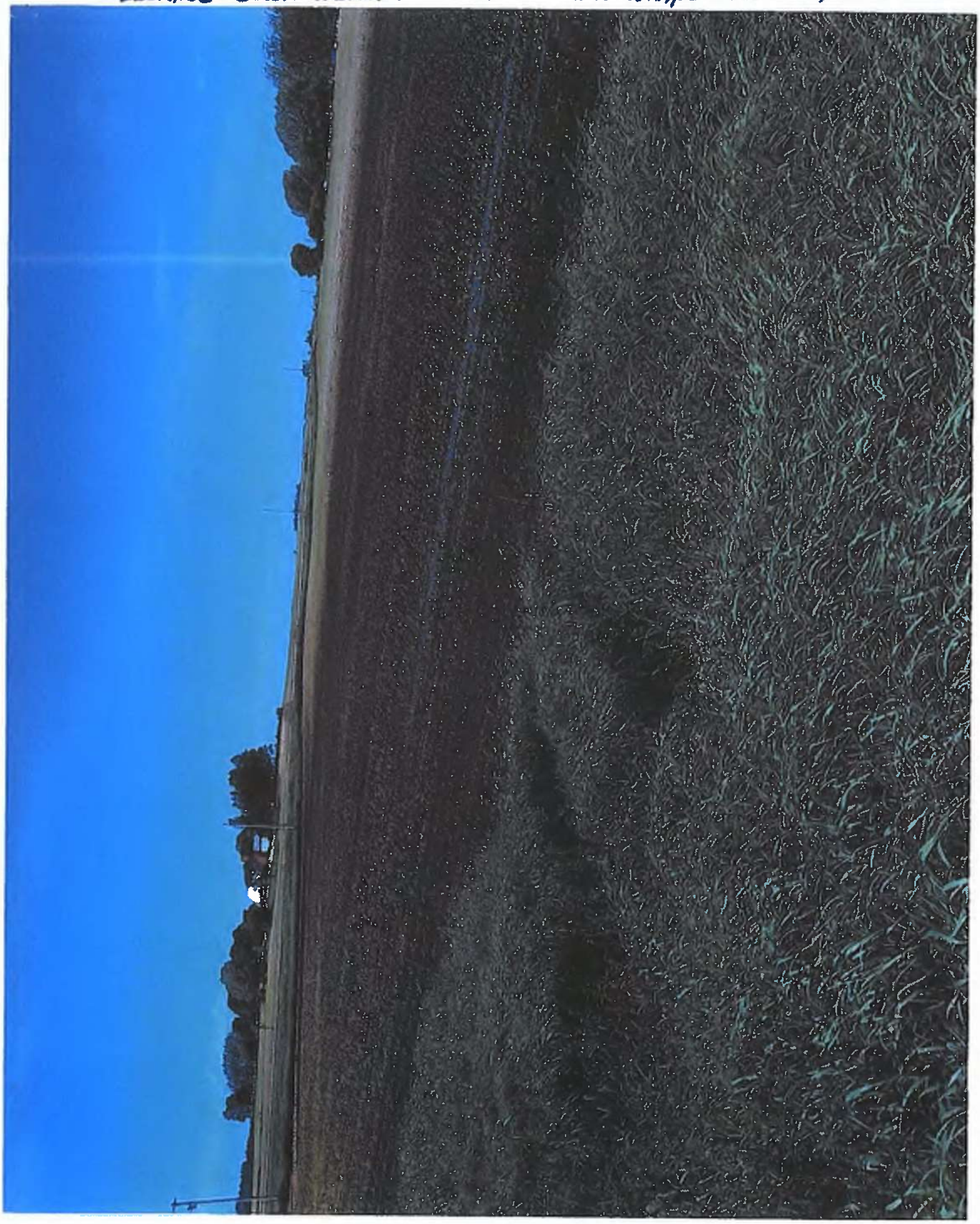
PROBLEM AREA @ LAT 4 / LAT 4B CONNECTION

LOOKING DOWNSTREAM ON LAT 4B PASS AUSTRESS + COTTONWOOD

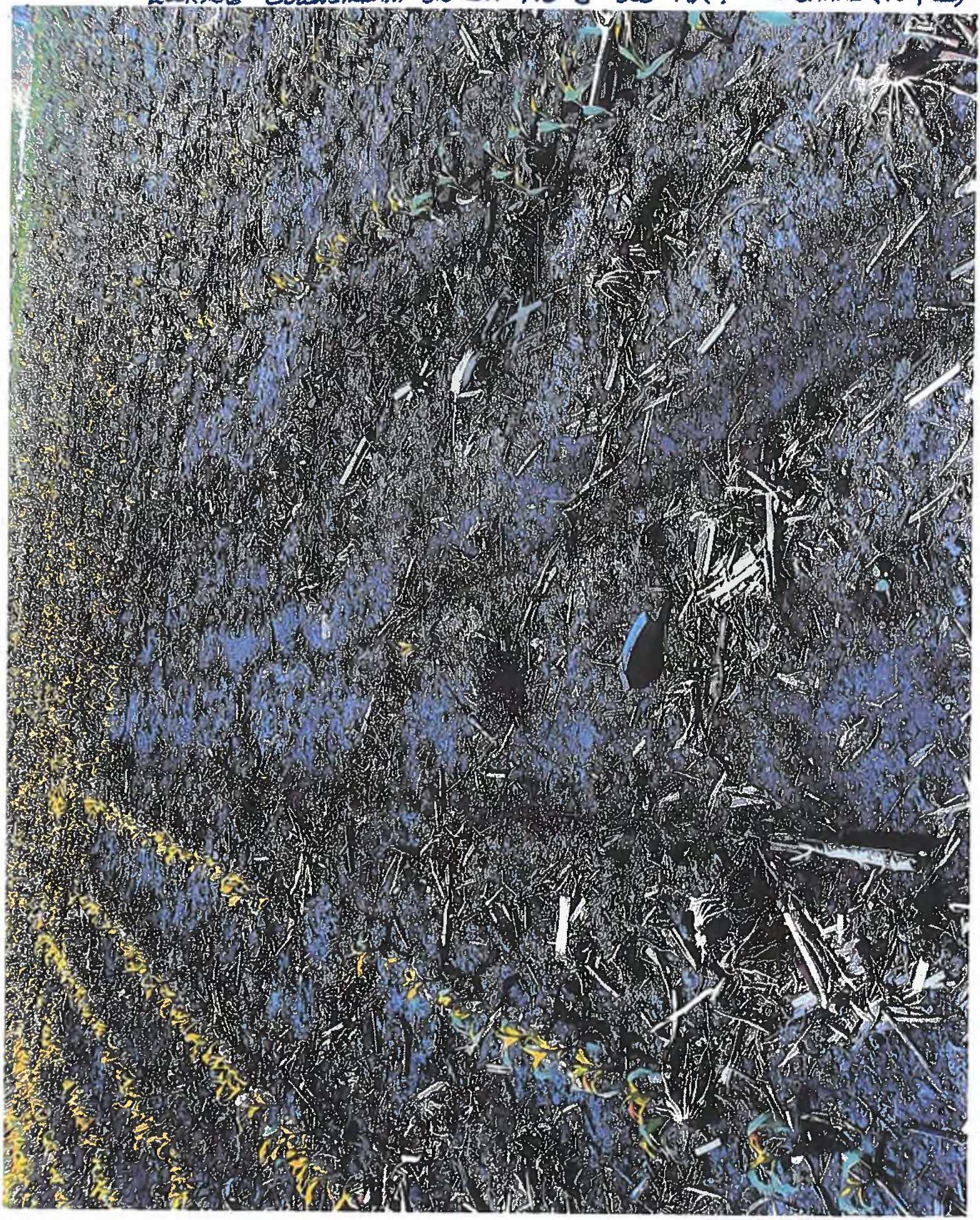
COLLAPSED INTAKE ON LAT 48, S. SIDE HARDIN ROAD (HMA) C73



LOOKING DOWNSTREAM ON LAT 4/B FROM JUNIPER ST. (N-S)



LOOKING DOWNSTREAM ON LOT 4B @ OLD RR. TEA CHARD (PURPLE)



LOOKING UPSTREAM ON LAT413 @ OLD RR

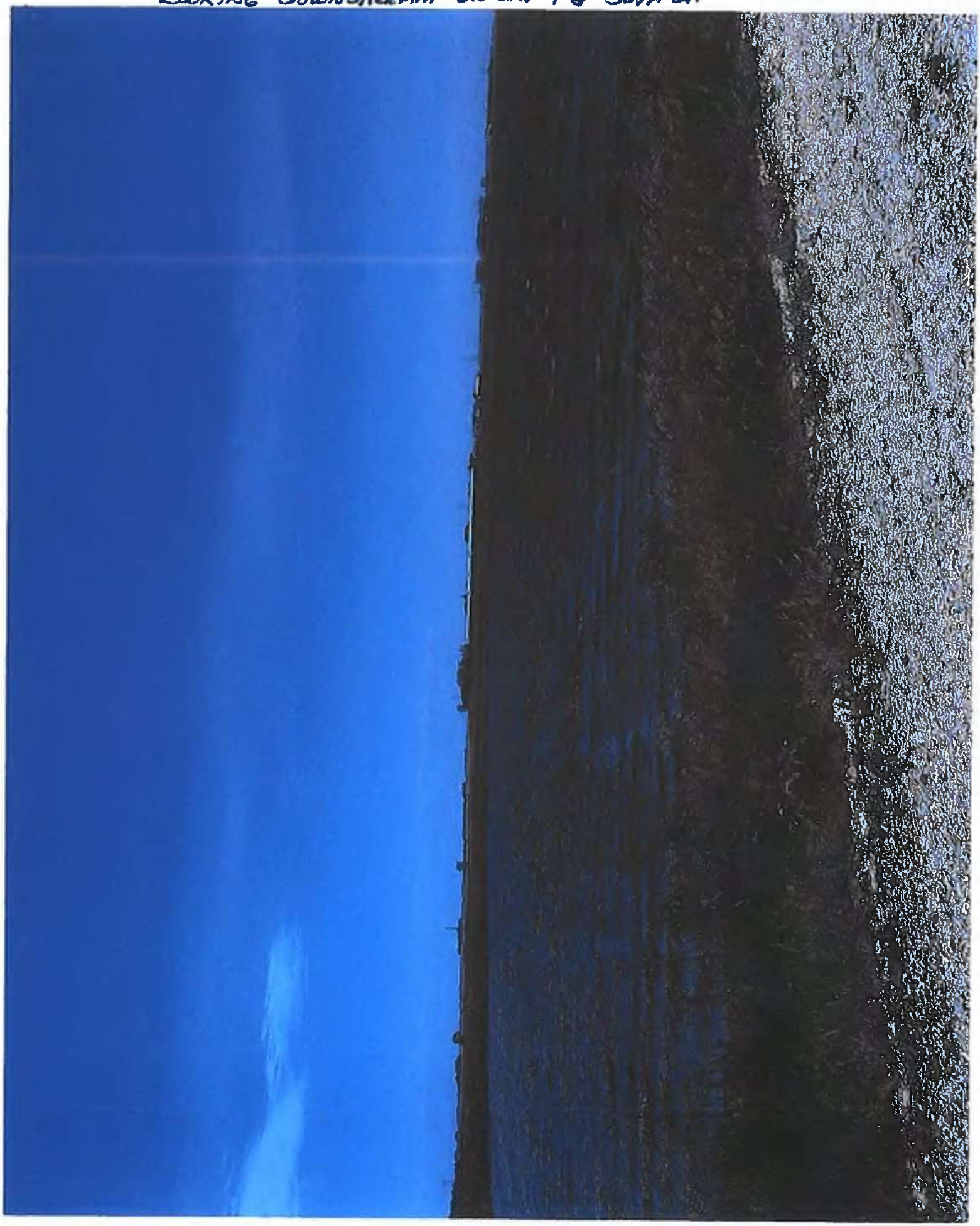


LOOKING UPSTREAM ON PRIVATE LINE IN DD5 @ 30TH ST.



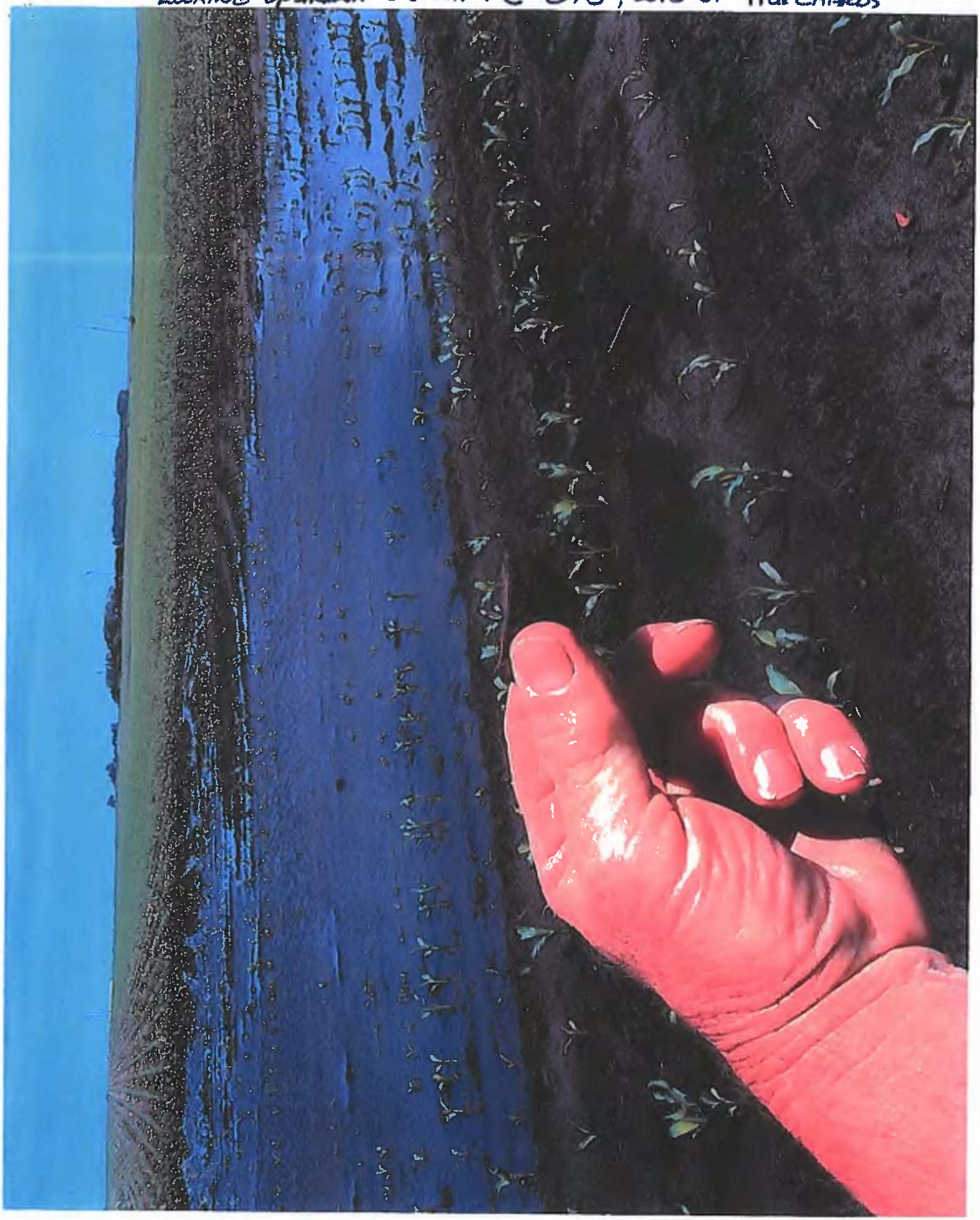
LOOKING UPSTREAM ON LAT 4 @ 30TH ST.

LOOKING DOWNSTREAM ON LAT 4 @ 30TH ST.

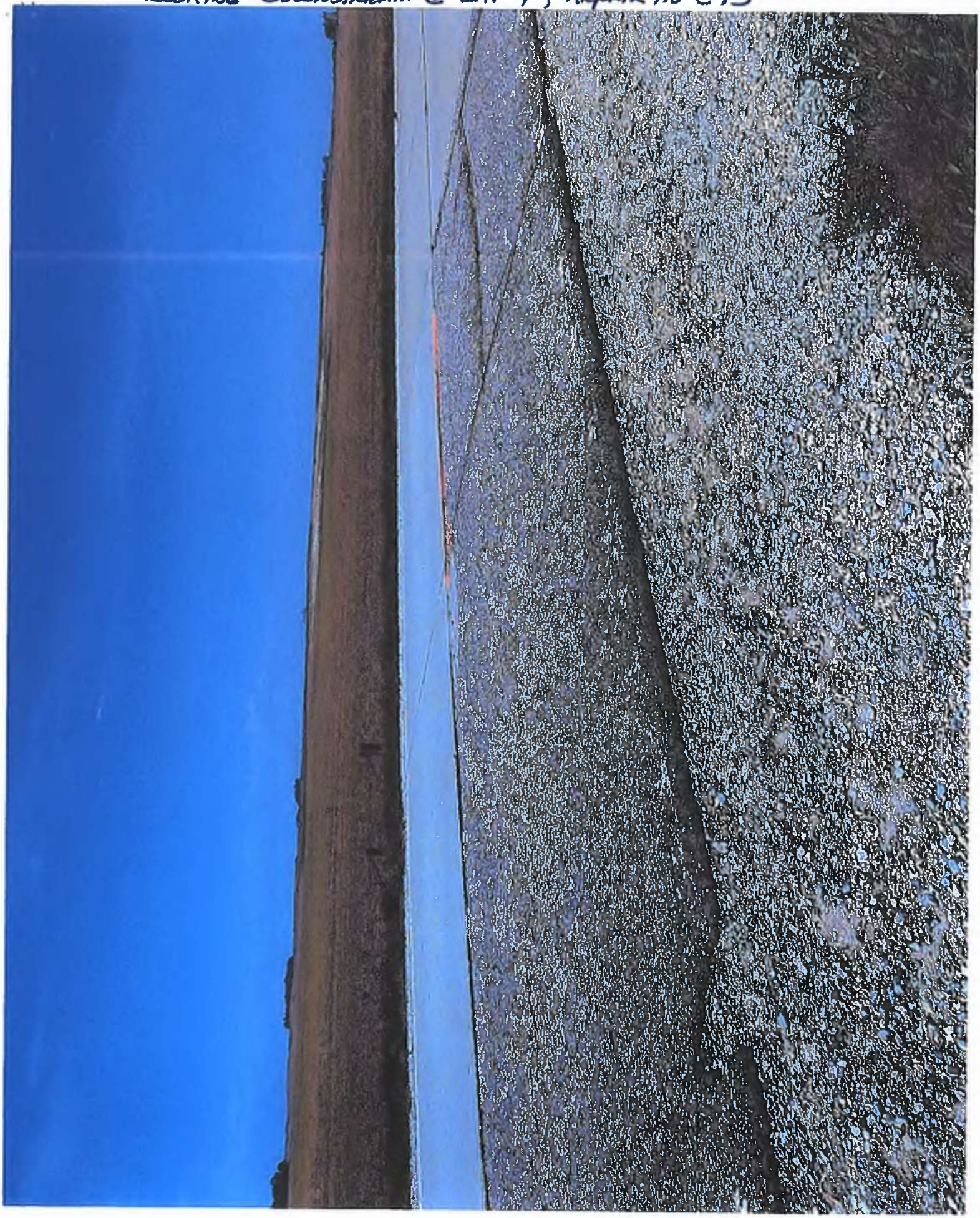


LOOKING UPSTREAM ON LAT 4 @ C73

LOOKING UPSTREAM ON LAT 4 @ C73, LOTS OF TILE CITARDS



LOOKING DOWNSTREAM @ LAT 4, REPAIR IN C73




OUTLET AREA FOR JDD 4-53, CAN'T FIND EASILY, CAN'T HEAR WA

CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 6/12/20

PROJECT NUMBER: 6500.2

COUNTY, ROUTE, ROAD: DD F.H 4-93

LOCATION: HARDIN ROAD SOUTH

DAYS OF WEEK: S M T W T F S

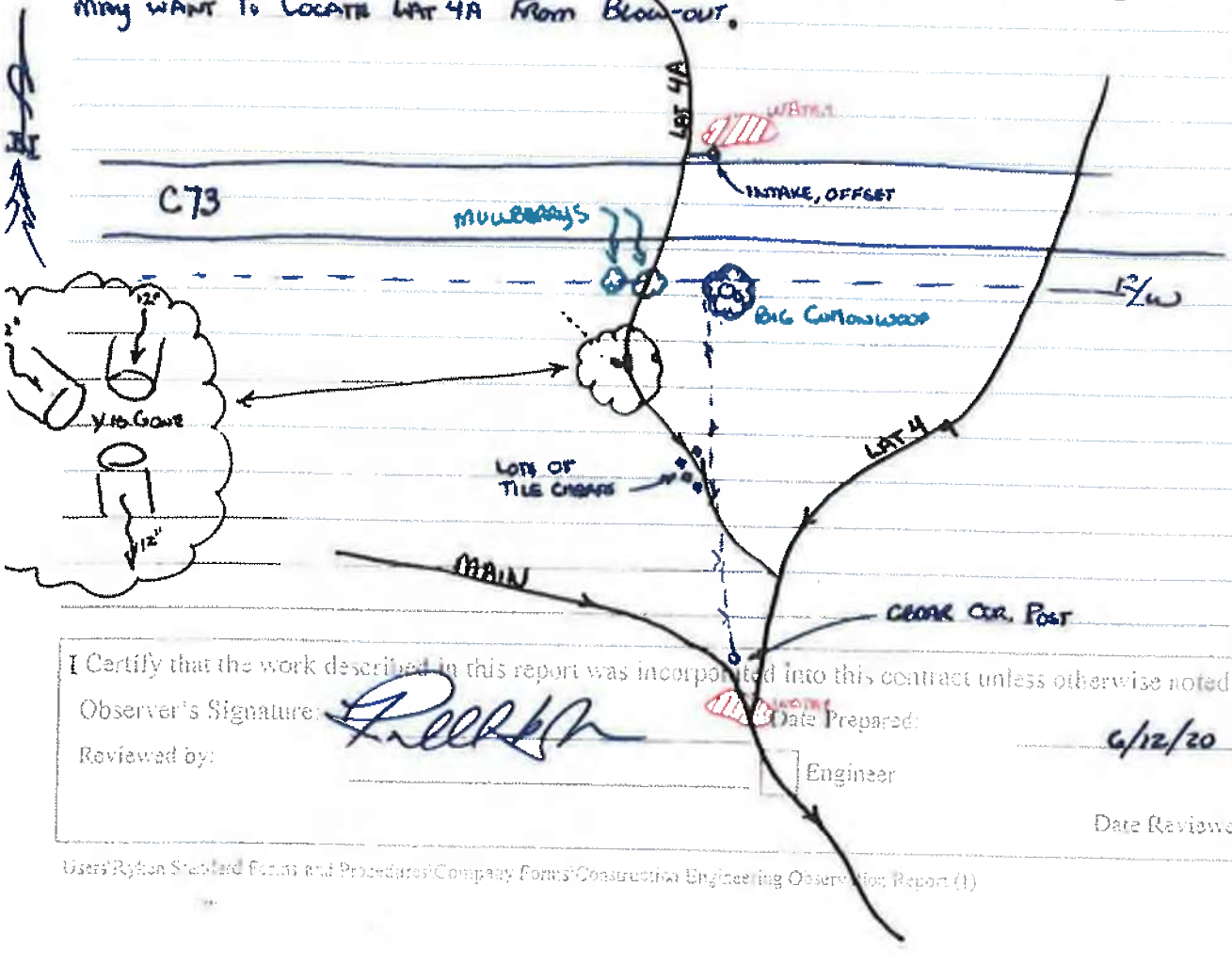
SHEET NO. 1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR SUB NAME, ITEM NO. AND LOCATION

SUNNY, 70°, CALM, DRYING DAY

PARKED ON S. SIDE HARDIN RD. (C73), WALKED TO BLOW-OUT IN FIELD FOUND 12" x 12" X 12" CLAY "Y" GONE. LOOKS LIKE FARMER WAS DIGGING HOLE AND EXPOSED TILE. LAT 4A IS VISIBLY FLOWING, PRIV. LAT TO NW, NOT SO MUCH. TILE IS FULL 1" ABOVE TILE TOP. WALKED DOWNSTREAM TO LAT 4A - LAT 4 CONNECTION. LOTS OF TILE CHARDS ON SURFACE, NO WATER STANDING. WALKED DOWNSTREAM TO LAT 4 - MAIN CONNECTION, SOME WATER STANDING, NO BLOW-OUTS. WALKED BACK TO C73, LINED UP 12" CLAY LAT 4A TO NE TO MULBERRY TREE @ R/W, COTTONWOOD TREE TO EAST MAY BE @ 100'±. WALKED NORTH ACROSS C73, FOUND WET SPOT / TILE CHARDS / AND 6" STEEL INTAKE IN N DITCH OF C73 (E-W) ACROSS FROM COTTONWOOD TREE (THAT HAS BICYCLE IN CROTCH)

REPAIR BLOW-OUT WITH MAN. HOPE "Y", PLUMB UP WITH SHORT STICKS OF HOPE/CONC. COLLARS, ROCK. TILE IS 3' DEEP±. REMOVE @ LEAST THE MULBERRY ON R/W MAY WANT TO LOCATE LAT 4A FROM BLOW-OUT.




I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [signature] Date Prepared: 6/12/20

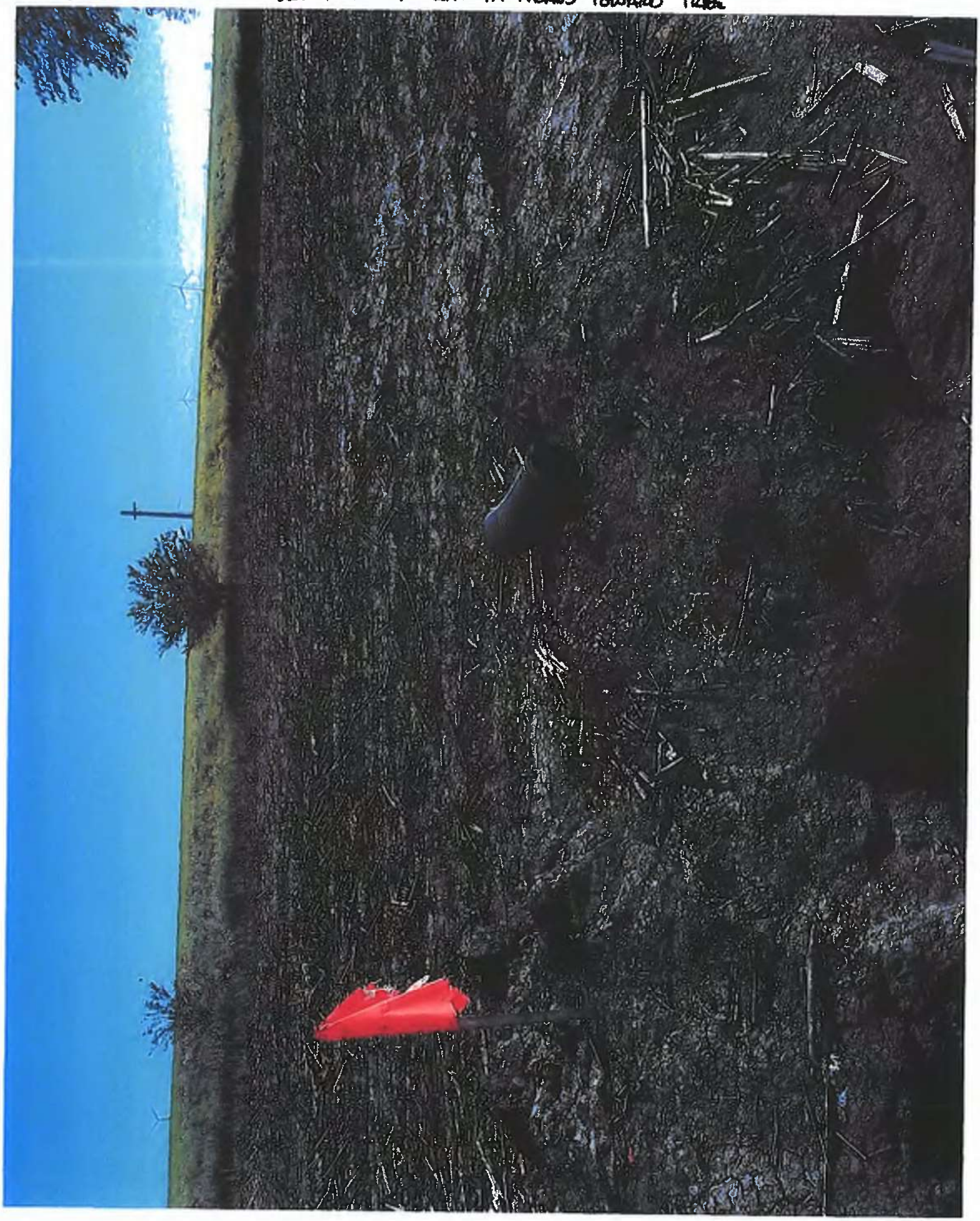
Reviewed by: _____ Engineer

Date Reviewed

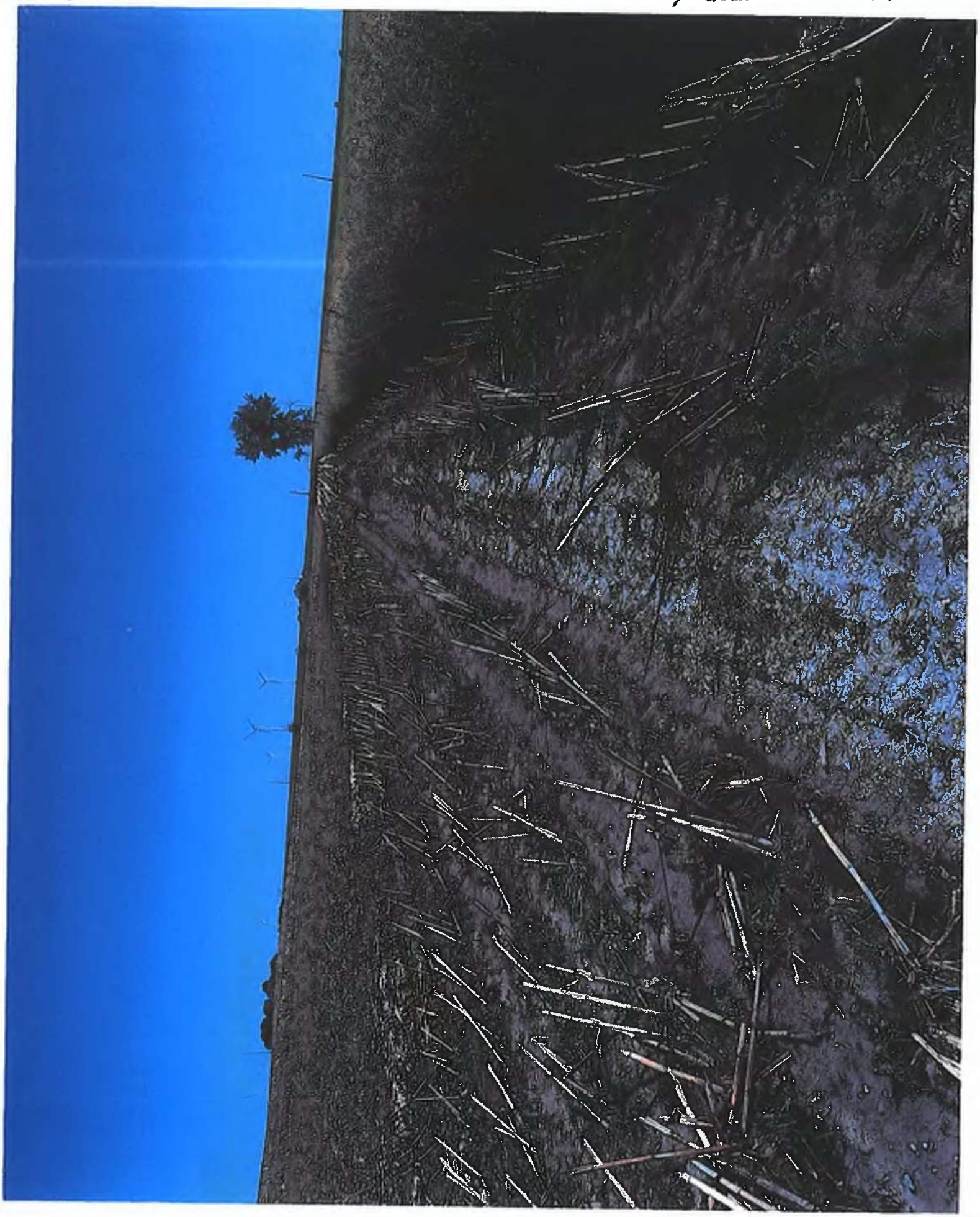
MISSING "Y"



LOOKING N. LAT 4A HEADS TOWARD TREE



LOOKING N. ALONG FENCE @ TILE/FENCE XING LATHA

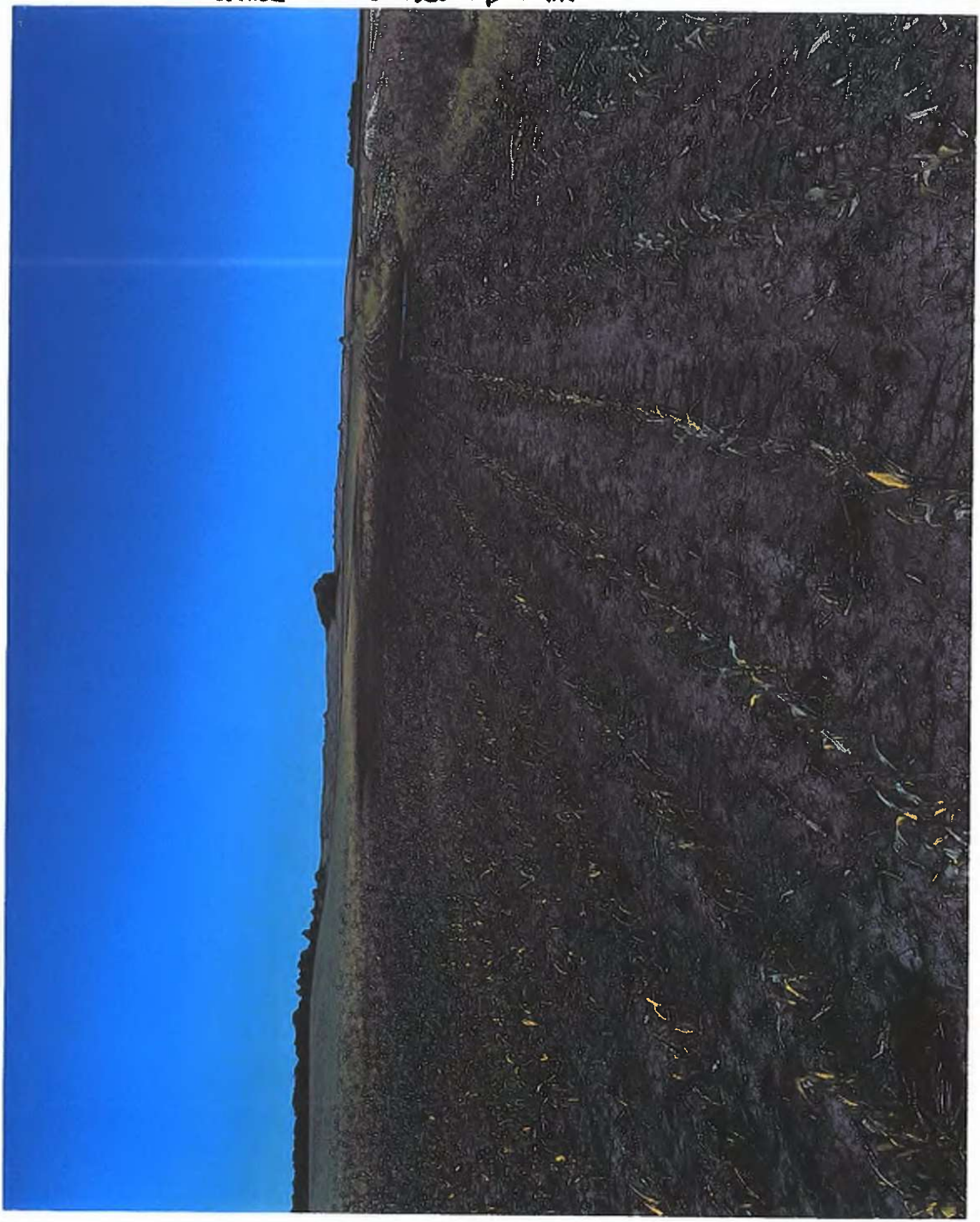


LOOKING NE ON LAT 4 ROUTE @ LAT 4A CONNECTION AREA

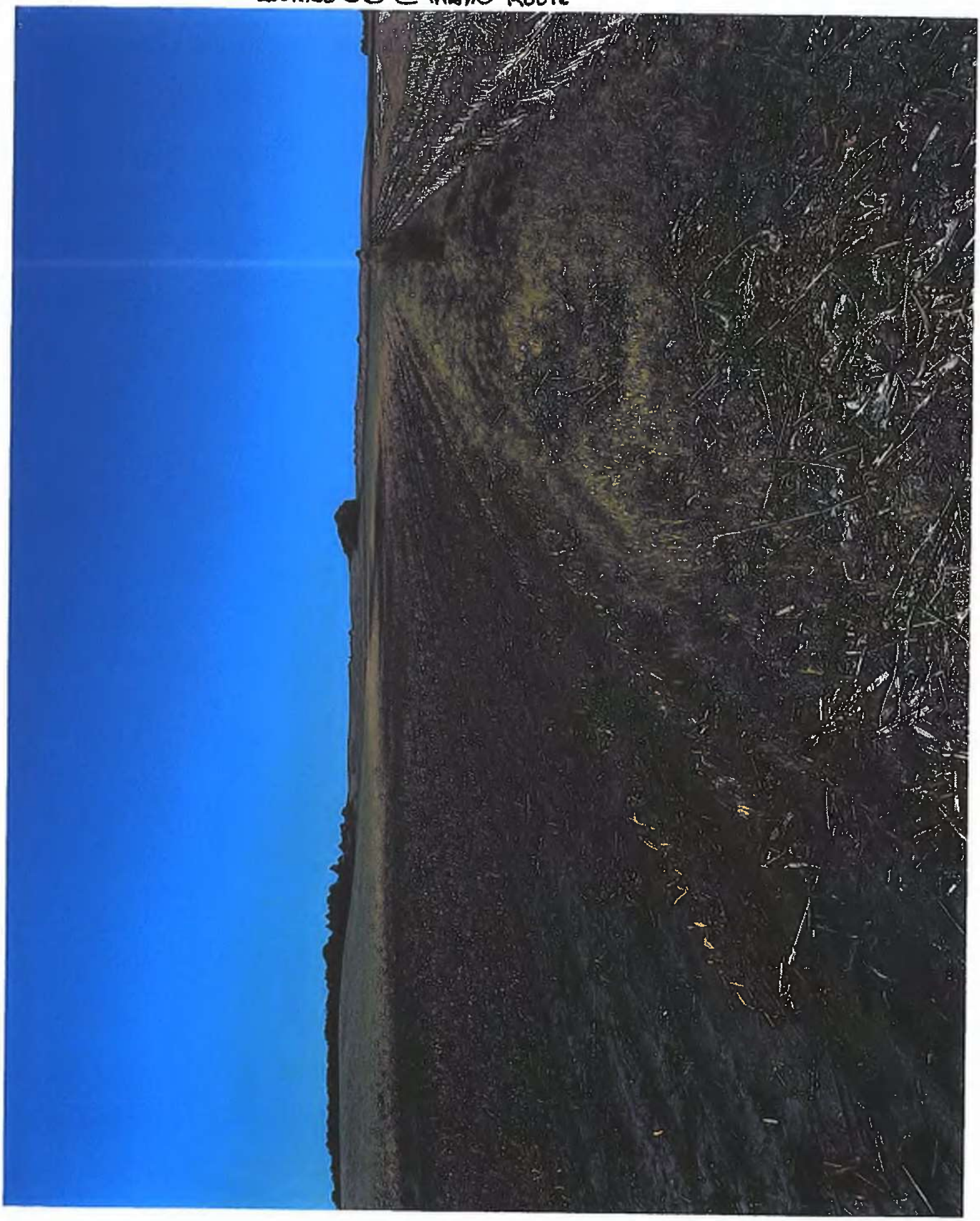
LOOKING NW @ LAT 4A ROUTE FROM LAT 4

Looking N. down Fence

Water Standing over Top main



LOOKING SE @ MAIN ROUTE



STANDING ON MAIN LOOKING N. @ FENCE

MAIN ROUTE

Cottonwood Tree E. of Lat 4A @ S. R/W Hwy



LOOKING N. ON LAT 4A

STAND PIPE ON INTAKE OFFSET NEEDS WORK



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 11-30-20

PROJECT NUMBER: 6500,2

COUNTY, ROUTE, ROAD: DD F-H 4-53

LOCATION: N OF C-73 + W OF JUNIPER

DAYS OF WEEK: S M T W T F S

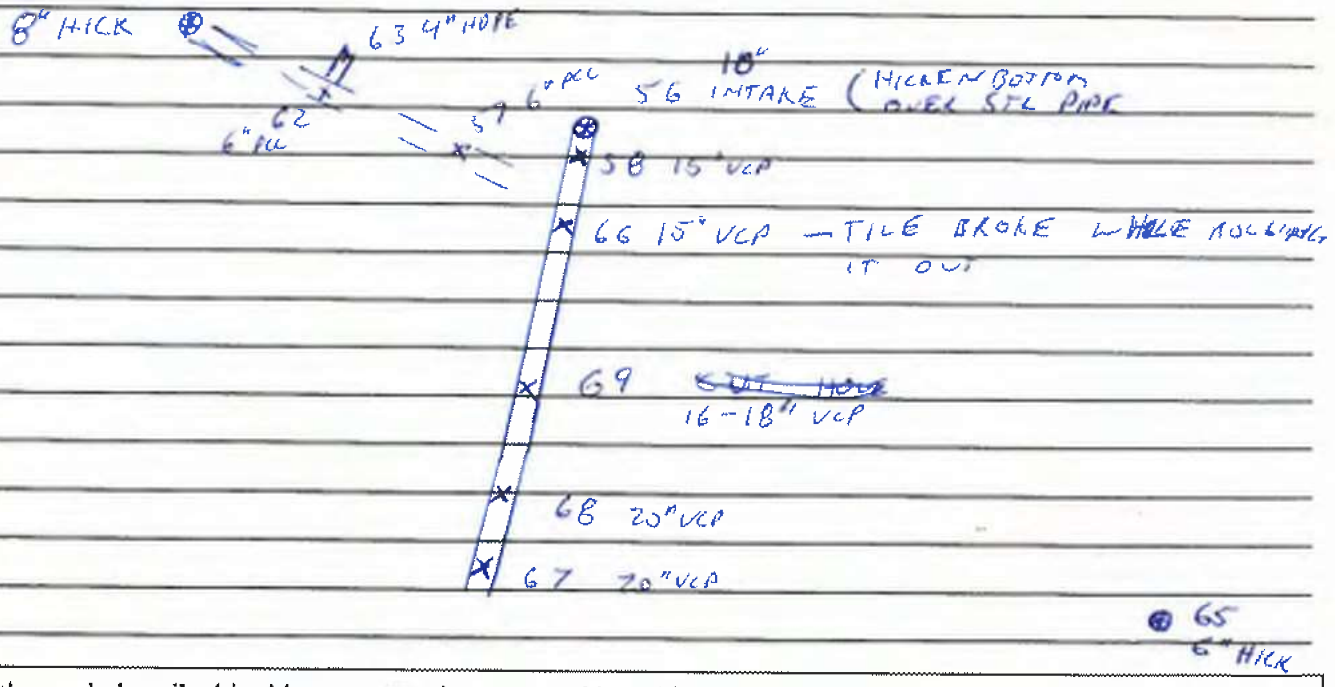
SHEET NO. 1 OF

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

1:30 STARTED EXCAVATING ON W SIDE OF INT. #56 FND 6" PCC TILE (DRY) @ #57 EXCAVATED EMORE + FND A TEE #62 OF PREVIOUS 6" PCC TILE + A 4" HDPE #63 HEADING N. PCC TILE APEARS TO BE HEADING TO 8" INTAKE @ #64

2:15 STARTED EXCAVATING ON S SIDE OF INT @ #58 FND 15" VCP TILE RUNNING N-S @ #58 + #66 LOCATED S. 10' PT #67 TILE IS TIGHT AT THIS LOCATION STUCK A TILE PROBE FLAG DOWN CRACK + IT CAME UP DRY. TILE @ 66 IS SITTING ½ FULL OF WATER NOT FLOWING

3:50 STARTED EXCAVATING @ 67 FND 20" VCP + @ 68 FND 16" OR 18" VCP @ 69




I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [signature] Date Prepared: 12-1-20

Reviewed by: ☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 12-1-20

PROJECT NUMBER: 6500,2

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: DD FH 4-53

SHEET NO. 1 OF

LOCATION: N. OF C-73 + W. OF JUNIPER

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

8:15 ARRIVED ON SITE SET UP BASE @ A2 (GPS MON 8022) CUT A HOLE IN THE TOP OF TILE @ 69 TILE # HAS ROCKS IN FLOW LINE W/ 3" OF SLOW DOWN WATER

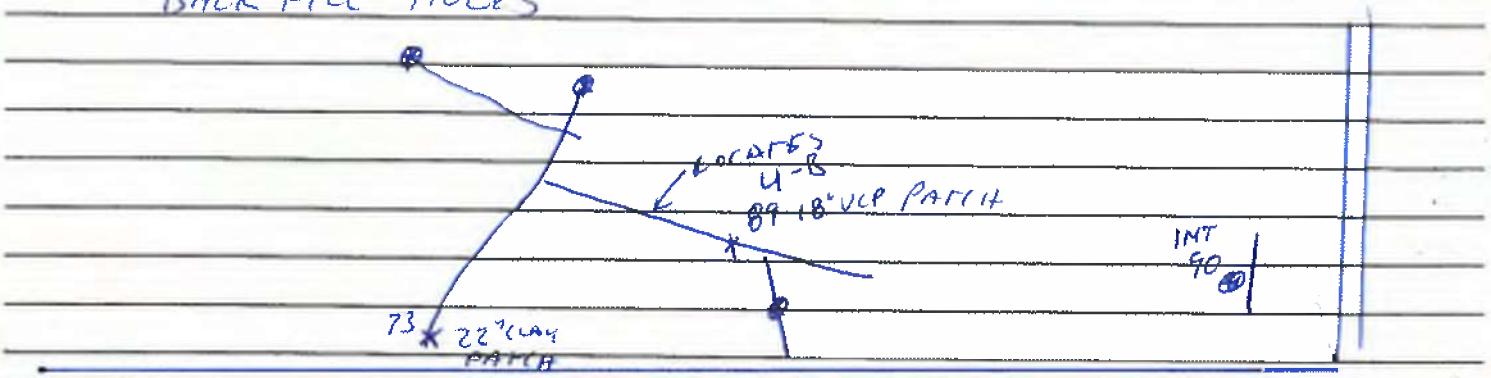
9:30 STARTED LOOKING FOR TILE @ N ROW OF C-73 FND 22" VCP @ # 73 TILE IS FLOWING SLOWLY @ 3" DEEP A 4" FIELD TILE IS STICKING INTO TILE @ 2' ± FURTHER N.

12:00 STARTED LOOKING FOR TILE @ INT #65 FND 5" CLAY TILE + SOMETIME LOCATING FND TILE @ # 79, 80, & 83 RAN LOCATOR N.

2:00 FND TILE @ # 89 CUT HOLE IN TOP TILE HAS 3" OF WATER AND IS FLOWING SLOWLY

3:00 CREW BLEW A HOSE ON THE BACKHOE AND HAD TO REPAIR IT. I SCOUTED THE NW QUAD OF THE INTERSECTION OF JUNIPER + C-73 FOUND A 8" HICKEN-BOTTOM INTAKE W/ A HDPE TILE RUNNING N-S 3' E OF INTAKE @ 90

4:45 PICKED UP BASE AND LEFT SITE CREW WAS GOING TO BACK FILL HOLES



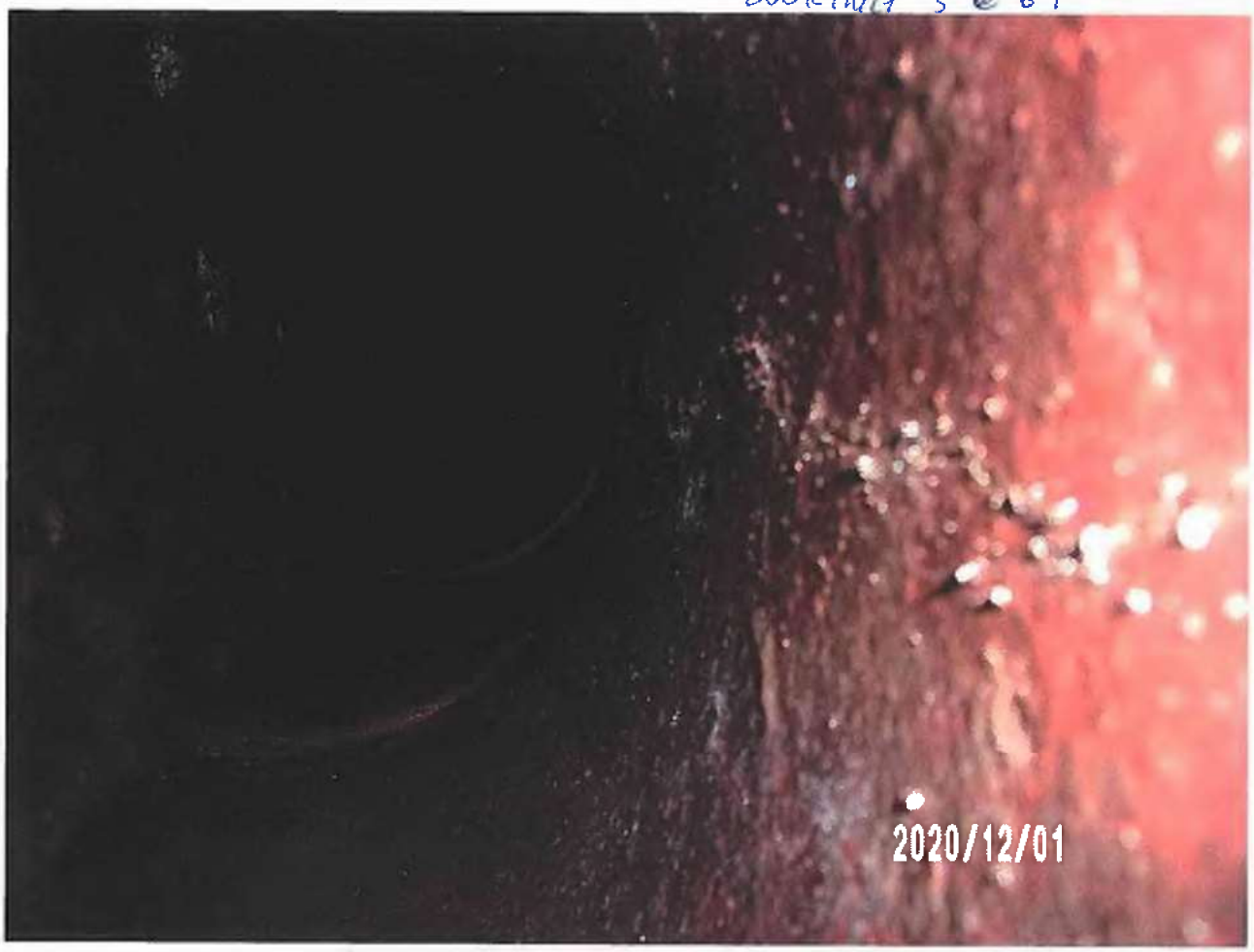

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [signature] Date Prepared: 12-1-20

Reviewed by: ☐ Engineer

Date Reviewed

LOOKING S @ 69







LOOKING N @ 69

LOOKING N @ 69







LOOKING S @ 73

Looking N @ 73







Looking N. @ 73

LOOKING N @ 73



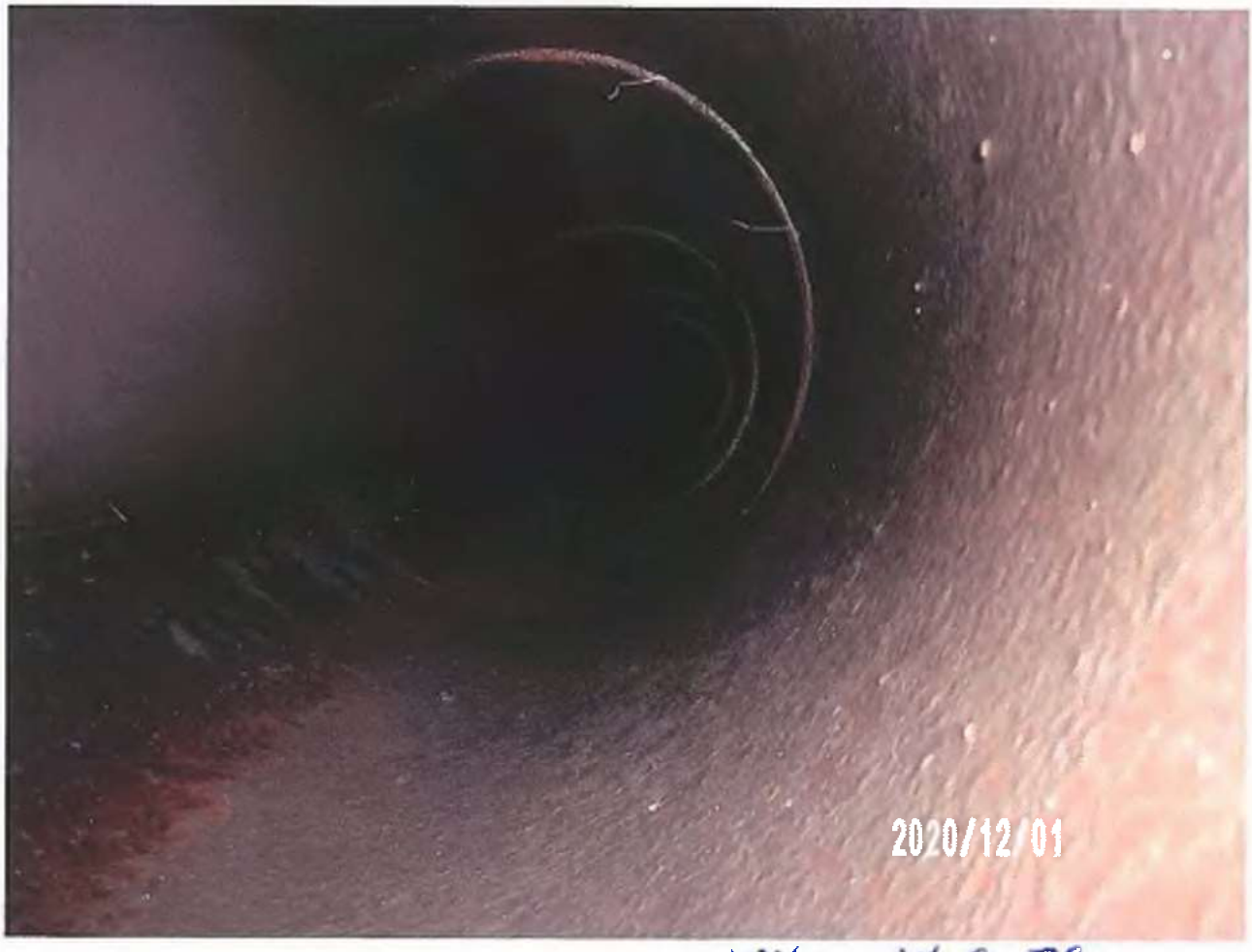




LOOKING N @ 73

TILE @ 73

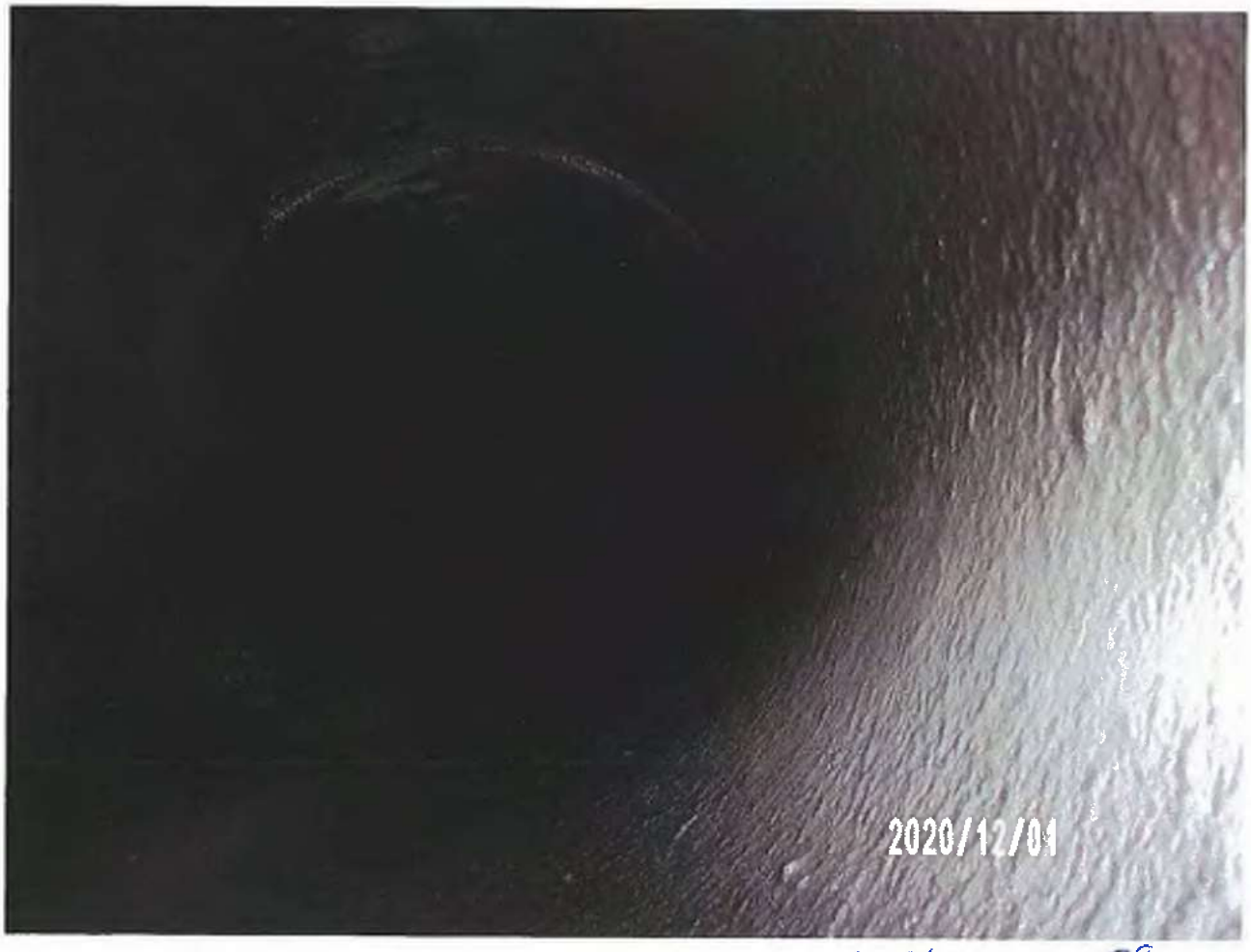



LOOKING W @ 89

Looking E @ 89




Looking E @ 89

LOOKING E @ 89







HOLE @ 89

PATCH @ 89





PATCH AT 89

LOOKING E @ 90



CONSTRUCTION ENGINEERING OBSERVATION REPORT

DATE: 12-7-20

PROJECT NUMBER: 6500,2

COUNTY, ROUTE, ROAD: NE JUNIPER / C-73

LOCATION: CAT D-4

DAYS OF WEEK: S M T W T F S

SHEET NO. 1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

8:40 ARRIVED ON SITE 2 MAN CREW (RUSS/FRANK) W/ 1 BACKHOE + 1 TRUCK CREW SAID THAT THEY HAVE DRY FIT THE PATCH IN HARDIN CO. THEY WERE WORKING ON REPAIR @ 66

9:15 CREW STARTED DIGGING @ N. OF RR + FND A 10" CLAY (#91) RUNNING N-S THIS TILE IS FULL OF DIRT FND 15" CLAY TILE RUNNING N-S OPENED TILE @ 92 TILE HAS 1'-2' OF DEBRIS + WATER IN THE BOTTOM OF TILE THE REST OF THE TILE IS IN GOOD CONDITION. CREW PATCHED TILE @ 92

CREW PATCHED TILE @ 73 & 69

CREW ~~PATCHED~~ DID REPLACED BROKEN TILE @ 66 W/ A 2' PIECE OF HOPE DUAL WALL TILE + WRAPED IT W/ FABRIC.

12:00 CREW MOVED TO OTHER JOB

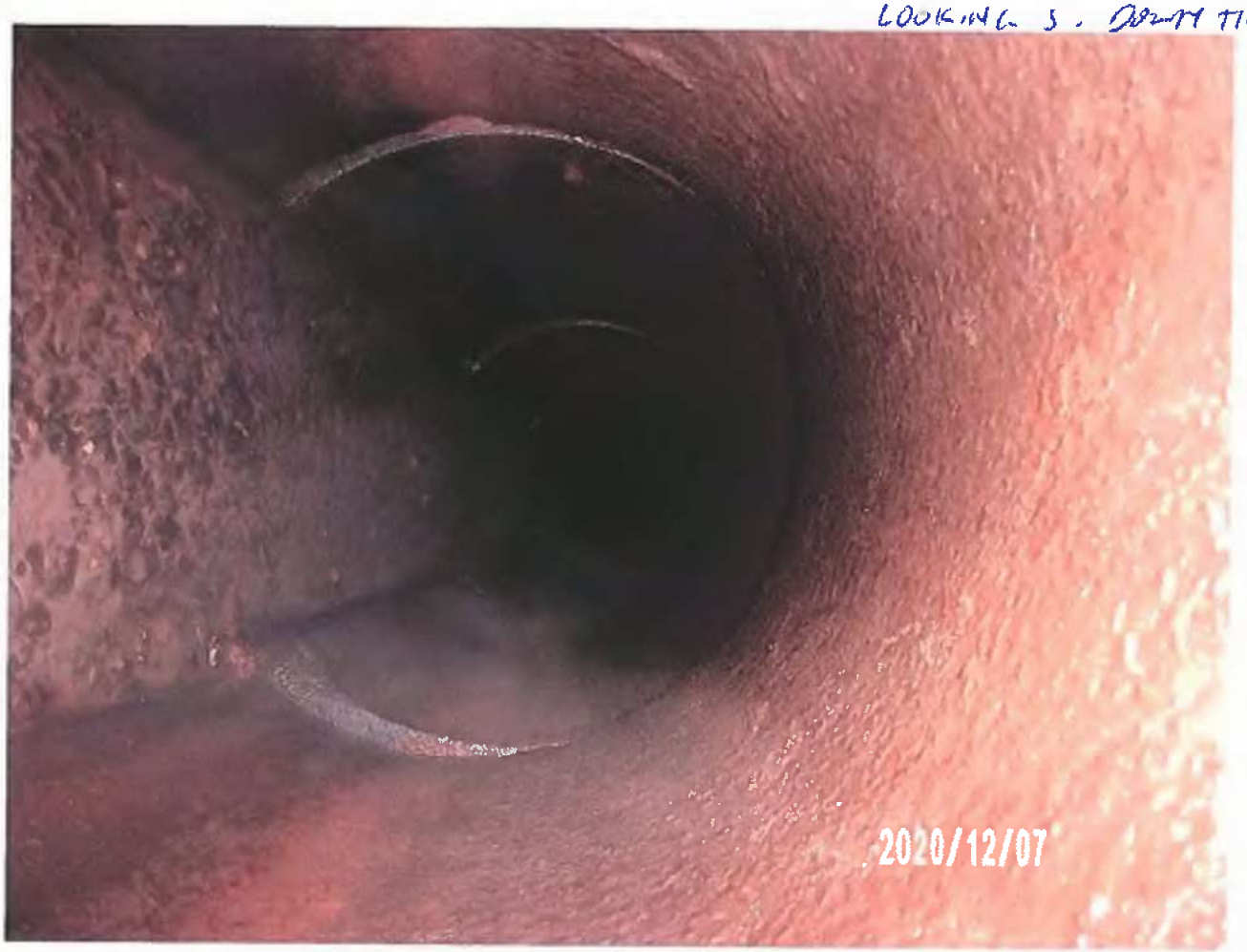
I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [signature] Date Prepared: 12-7-2020

Reviewed by: ☐ Engineer

Date Reviewed

LOOKING S. DOWN TILE @ 92







LOOKING N. UP TILE @ 92

10" TILE @ 91







CLEARING DIRT AROUND H92

PATCH @ 92







PATCH @ 92

PATCH @ 73





PATCH @ 69




PATCH @ 66

6500 2020-12-07 cs

1,3666160.310,4968629.670,1166.150,gps 8022
2,3666160.310,4968629.670,1166.150,Autonomous Setup
3,3665601.308,4985365.258,1153.705,gps 8039
4,3662686.568,4971781.373,1146.882,2.5' dia sinkhole
5,3662687.541,4971779.329,1143.094,top existing 32" vcp 2.77'to fl
6,3662685.287,4971776.399,1147.833,gs above tile
7,3662691.009,4971783.732,1148.264,gs above tile
8,3663330.530,4968801.041,1150.586,4.5'n-s*5.5'e-w
9,3663332.192,4968805.303,1150.554,top 10" vcp 0.88'to fl
10,3663284.607,4968738.850,1153.044,2.5' dia sinkhole
11,3663286.605,4968735.137,1153.508,8" dia sinkhole
12,3663327.463,4968798.394,1150.579,top 10" vcp 0.88'to fl
13,3663335.000,4968803.834,1152.886,top 5" vcp full dirt
14,3663330.888,4968795.343,1152.932,top 5" vcp full dirt
15,3663696.190,4968805.479,1162.175,fence e-w
16,3663695.365,4968720.301,1159.861,fence e-w
17,3663333.674,4968808.383,1154.979,gs above existing tile
18,3663325.979,4968795.250,1155.014,gs above existing tile
19,3663287.204,4968739.933,1151.305,top existing 10" vcp 0.88' to fl
20,3663284.675,4968736.599,1151.305,top existing 10" vcp 0.88' to fl
21,3663281.406,4968733.016,1155.472,gs above existing tile
22,3663298.207,4968754.179,1155.152,gs above existing tile
23,3665601.320,4985365.261,1153.716,gps 8039
24,3663440.572,4972146.722,1152.562,cpt 34 ir
25,3663121.599,4972576.733,1144.300,gs above existing tile
26,3662854.138,4972856.960,1140.237,top 36" cmp outlet 3.01' to  fl
27,3663115.447,4972584.564,1144.271,gs above existing tile
28,3663118.687,4972580.097,1140.912,top 34" vcp  2.78' to fl
29,3663300.267,4968762.985,1153.228,BLOWOUT
30,3663300.214,4968758.654,1151.097,TOP 10"CLAY CLEAN
31,3663305.081,4968765.715,1150.771,TOP 10"CLAY CLEAN
32,3671144.512,4972728.155,1195.694,top tile -4.05
33,3671061.498,4972739.434,1196.657,top tile -4.05
34,3670738.067,4972767.542,1195.245,crop dmg 2020-6-8
35,3670771.277,4972767.593,1195.233,crop dmg 2020-6-8
36,3670770.462,4972641.626,1193.078,crop dmg 2020-6-8
37,3670736.726,4972636.791,1192.239,crop dmg 2020-6-8
38,3671512.707,4972786.250,1189.171,top 5" hdpe single wall
39,3671509.830,4972785.764,1192.291,gs
40,3671509.599,4972799.553,1192.261,crop dmg 2020-6-8
41,3671539.260,4972801.985,1192.368,crop dmg 2020-6-8
42,3671540.052,4972739.157,1192.600,crop dmg 2020-6-8
43,3671507.872,4972743.015,1192.506,crop dmg 2020-6-8
44,3671474.166,4972743.142,1195.877,tree os 33'+-s
45,3671475.598,4972729.307,1195.925,tree os 33'+-s
46,3671475.813,4972719.495,1196.002,tree os 33'+-s
47,3671455.090,4972744.540,1192.909,top cmp 18"
48,3671493.900,4972744.641,1193.147,top cmp 18"
49,3666044.827,4967907.559,1156.912,TOP CLAYTILE @BLOWOUT

6500 2020-12-07 cs

50,3665195.129,4966858.093,1156.976,LOW WET AREA
51,3666091.534,4967940.481,1159.703,gs tile locate
52,3666120.642,4967976.600,1159.936,gs tile locate
53,3666156.036,4968022.468,1159.921,gs tile locate
54,3666176.084,4968044.347,1160.241,gs tile locate
55,3666247.982,4968121.293,1157.127,int 8" cmp fl
56,3667364.250,4969908.144,1156.485,int 10" hick fl
57,3667362.860,4969874.822,1158.138,top pcc 6" nw-se
58,3667352.683,4969905.385,1157.781,top 15" vcp n-s
59,3667205.816,4969877.603,1161.446,gs tile locate
60,3667135.035,4969857.761,1161.397,gs tile locate
61,3667087.745,4969834.074,1161.682,gs tile locate
62,3667434.389,4969795.562,1158.315,top 6x6x4 tee
63,3667435.049,4969796.055,1158.332,top hdpe 4" n
64,3667485.773,4969737.456,1161.183,int 8" hick
65,3666779.953,4970174.911,1163.503,int 6" hick
66,3667299.828,4969895.147,1157.625,top 15" vcp  1.28' to fl
67,3667076.270,4969827.174,1158.243,top 20" vcp
68,3667104.562,4969844.067,1158.202,top 20" vcp
69,3667150.913,4969862.605,1157.434,top 16" 18" vcp
70,3666021.796,4967902.974,1157.055,top 10" clay 0.95 to fl
71,3666048.785,4967909.858,1156.979,top 10" clay 0.90 to fl
72,3666051.869,4967907.293,1157.120,top 10" clay 0.90 to fl
73,3666267.996,4969388.082,1156.906,top 22" clay
74,3666293.230,4969401.072,1163.438,gs tile locate
75,3666326.644,4969410.758,1163.661,gs tile locate
76,3666361.776,4969420.926,1163.792,gs tile locate
77,3666742.611,4970176.033,1163.597,gs tile locate
78,3666699.571,4970182.051,1163.554,gs tile locate
79,3666802.245,4970171.072,1159.947,top 5 clay
80,3666681.406,4970183.461,1160.163,top 5 clay
81,3666832.370,4970167.948,1164.081,gs tile locate
82,3666884.145,4970161.938,1164.659,gs tile locate
83,3666905.915,4970159.744,1158.913,top 6 clay
84,3666918.111,4970138.911,1164.448,gs tile locate
85,3666939.141,4970096.684,1164.700,gs tile locate
86,3666962.405,4970047.413,1164.611,gs tile locate
87,3666989.862,4969991.061,1163.530,gs tile locate
88,3667021.781,4969918.846,1162.411,gs tile locate
89,3666932.784,4970109.017,1158.626,top 18 vcp
90,3666489.494,4971867.481,1162.503,int 8" hick fl
91,3666811.651,4972398.548,1165.263,962 10 n-s
92,3666813.848,4972384.939,1162.370,962 15 n-s
93,3666502.204,4972037.848,1162.566,952 -3.4 to fl
94,3666041.730,4967906.459,1153.072,421 10
95,3666047.861,4967907.178,1153.058,421 10 tee
96,3666047.852,4967909.056,1152.927,421 10 45elbow

## Drainage District:

#143

## Investigation Summary:

- Upstream landowner expressed concern for the potential proximity and effect of a pond under construction near the Main tile in the SE¼ SW¼ Section 29, Township 87 North Range 22 West.
- Conversation with the party constructing the pond indicated that the Main tile was located before constructing the pond and that it was not within the limits of the earth disturbing activities. The Main tile is reportedly not going to be used as an inlet or outlet for said pond, and they intend for evaporation to be the method of discharge. The pond is to use groundwater and surface water to obtain the water necessary to fill. When asked about the 15-inch HDPE standpipe that was observed on site, it is reportedly going to be used to pull water from a sand point to water an off-road track adjacent to said pond.
- Visual observation of the site confirmed details of the conversation as noted above and show on the attached drawing.

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

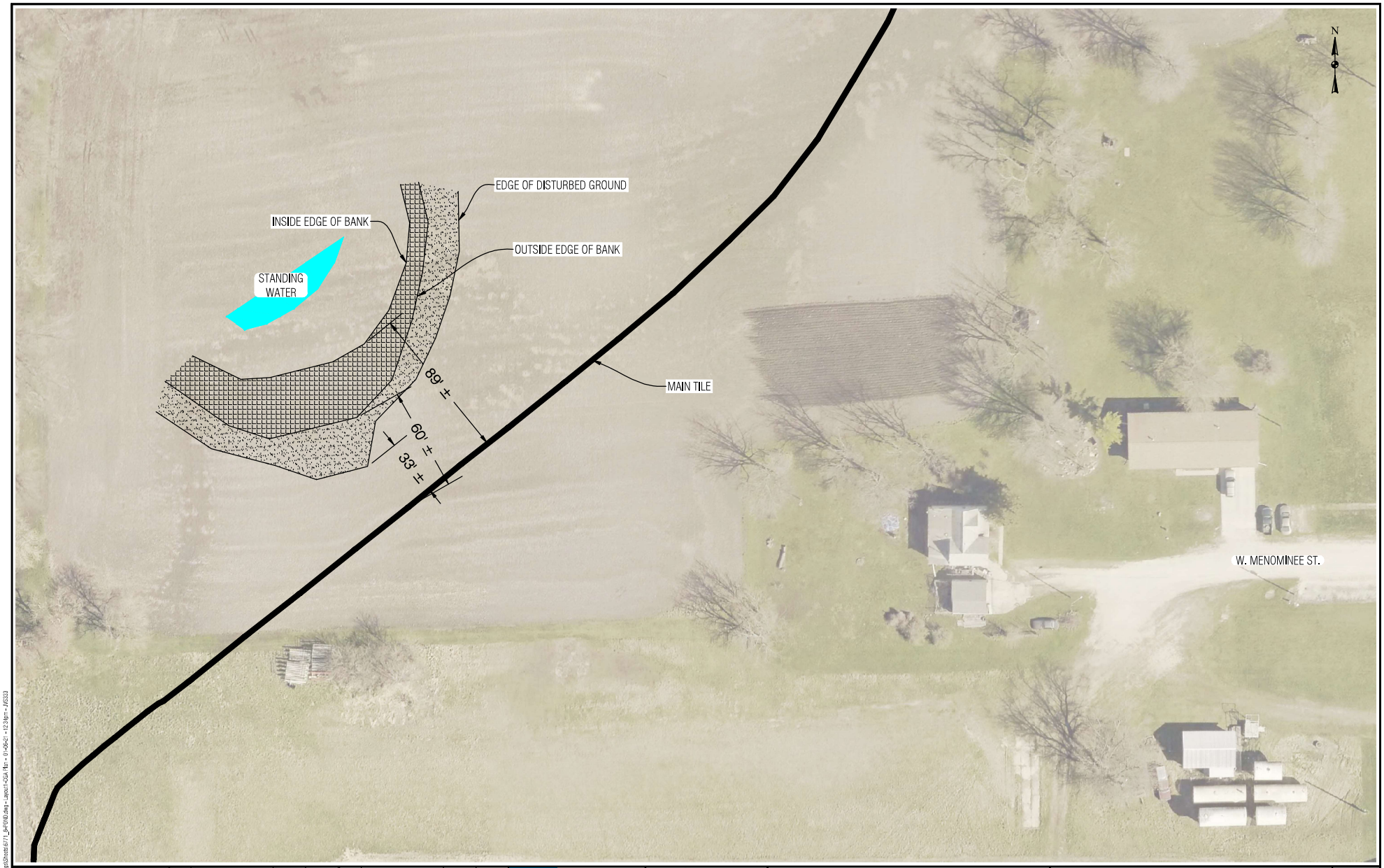
None recorded as only visual observation was conducted.

## Additional Actions Recommended:

It is the opinion of CGA that although the pond elevation is higher than the Main tile, it should not affect the district facilities because:

1. Horizontal separation appears to be reasonable enough to preclude construction damage or excess water flows between the main tile and pond.
2. The pond is not directly connected to the tile by an inlet or outlet.

If desired by the District Trustees, the operation of the Main tile relative to the pond could be evaluated after pond construction has been completed and is stabilized.




GRAPHIC SCALE
0 25' 50'

| NO. | REVISION | BY | DATE | NO. | REVISION | BY | DATE |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

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

DESIGNED: JVS DATE: 12/11/2020
DRAWN: JVS DATE: 12/11/2020
CHECKED: LDG DATE: 12/17/2020
APPROVED: LDG DATE: 12/17/2020

# POND LIMITS CHECK
RADCLIFFE, IOWA

DD 143 - AERIAL VIEW

PROJECT NO. 6771.8
SHEET NO. 1 OF 1

J:\6771.8-DD\dwgs\Sheets\6771_8-POND.dwg - Layout1-CGA Plan - 01-06-21 - 12:34pm - JVS333

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 12-8-2020

PROJECT NUMBER: 6771.8

COUNTY, ROUTE, ROAD:

LOCATION:

DAYS OF WEEK: S M T W T F S

SHEET NO. _____ OF _____

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

GPS PTS 626 - 662
OUTSIDE TOE = 33.1'
OUTSIDE TOP = 50.2'
INSIDE TOP = ~~58.6' 92.3~~ 88.8'
EDGE OF WATER = 130.1'

NE OF POND IS A 15" HDPE STAND PIPE (#651) OWNER WAS NOT SURE WHAT THIS WAS FOR BUT SAID IT WAS GOING TO BE COVERED.

(649) EDGE OF WATER ELEV = 1178.04' (THIS APEARS TO BE NEAR BOTTOM OF POND)
(4008) TOP OF CLAY TILE 210'± S. OF POND = 1181.43'
(2021) TOP OF 14" VCP NE OF POND 650' (1.27' TOF) = 1178.05'

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [signature] Date Prepared: 12-9-2020

Reviewed by: _____ ☐ Engineer

Date Reviewed _____


2020/12/08


2020/12/08


2020/12/08


2020/12/08


2020/12/08

6771 DD143 2020-12-08 cs
600,3577741.058,4941947.373,1167.109,eoc new
601,3577744.494,4941938.266,1167.163,eoc new
602,3577764.225,4941945.129,1166.471,eoc new
603,3577760.800,4941954.244,1166.486,eoc new
604,3577819.251,4941726.306,1165.864,san ser 22.5 bend top
605,3577818.221,4941725.413,1165.855,san ser 22.5 bend top
606,3577817.649,4941725.443,1165.833,san ser wye top
607,3577816.373,4941725.553,1165.812,san ser exist top
608,3577770.195,4941947.177,1166.164,eoc
609,3577809.552,4941961.271,1167.940,eoc
610,3577806.369,4941970.365,1167.890,eoc
611,3577766.851,4941956.290,1166.072,eoc
612,3577773.445,4941958.759,1166.173,eoc
613,3577776.840,4941949.619,1166.165,eoc
614,3577936.456,4941726.409,1168.772,sanitary plug approx
615,3577962.669,4939325.382,1182.474,TRD 36"BURR OAK 16' E
616,3576965.741,4937799.271,1185.834,300 CROPDAMAGE HAY
617,3576999.714,4937801.988,1184.712,300 CROPDAMAGE HAY
618,3577013.154,4937762.482,1184.244,300 CROPDAMAGE HAY
619,3576967.404,4937710.720,1185.928,300 CROPDAMAGE HAY
620,3576814.875,4937721.026,1186.542,300 CROPDAMAGE HAY
621,3576814.616,4937707.344,1186.315,300 CROPDAM CORN
622,3576893.627,4937702.631,1185.953,300 CROPDAM CORN
623,3576906.776,4937741.983,1186.454,300 CROPDAMAGE HAY
624,3576941.103,4937751.379,1186.099,300 CROPDAMAGE HAY
625,3576958.486,4937768.931,1185.740,300 CROPDAMAGE HAY
626,3577285.324,4937921.971,1184.131,3231 b
627,3577286.721,4937932.355,1184.434,3232 b
628,3577263.468,4937937.946,1184.806,3232
629,3577263.253,4937927.237,1184.713,3231
630,3577240.291,4937925.251,1185.146,3231
631,3577235.135,4937934.735,1184.954,3232
632,3577207.036,4937928.567,1185.305,3232
633,3577212.998,4937915.228,1185.195,3231
634,3577193.557,4937901.151,1185.135,3231
635,3577172.918,4937917.057,1185.377,3232
636,3577151.338,4937896.993,1185.077,3232 e
637,3577183.324,4937882.963,1184.740,3231
638,3577174.305,4937846.885,1184.717,3231
639,3577139.104,4937846.502,1185.020,3232 b
640,3577146.564,4937823.148,1184.906,3232
641,3577173.414,4937830.181,1184.860,3231
642,3577186.724,4937802.411,1184.573,3231 e
643,3577172.160,4937786.491,1184.471,3232 e
644,3577209.375,4937821.672,1178.037,5471 b
645,3577201.812,4937832.272,1178.192,5471
646,3577205.058,4937844.969,1178.194,5471
647,3577213.817,4937860.578,1178.257,5471
648,3577225.368,4937874.361,1178.176,5471

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649,3577240.423,4937883.991,1178.036,5471
650,3577255.178,4937889.184,1178.046,5471 e
651,3577327.855,4937948.244,1180.960,mh 15" top
652,3577281.521,4937955.101,1183.370,3211 b
653,3577246.878,4937955.790,1182.954,3211 b
654,3577221.108,4937950.401,1183.000,3211 b
655,3577197.002,4937942.178,1183.155,3211 b
656,3577173.218,4937930.879,1183.154,3211
657,3577149.146,4937907.673,1184.071,3211
658,3577123.142,4937903.057,1183.727,3211
659,3577115.545,4937873.690,1184.246,3211
660,3577123.733,4937849.880,1184.092,3211
661,3577133.430,4937813.092,1183.452,3211
662,3577154.624,4937781.373,1183.326,3211 e
700,3577906.339,4941693.470,1166.427,fl rcb
701,3577974.516,4940948.493,1176.114,cl hdbolt fhy
702,3577914.733,4940511.401,1174.922,cl hdbolt fhy
703,3577983.727,4940127.461,1177.383,nne bolt fhy
704,3577911.237,4939745.052,1181.528,nne bolt fhy
705,3577962.145,4939371.596,1185.015,nne bolt fhy
706,3577967.916,4939006.094,1183.773,nne bolt fhy
707,3577905.790,4938357.133,1185.872,nne bolt fhy
708,3577743.231,4938317.869,1182.015,n rim (pcc) mh 2.73 to fl pipe n
709,3577737.599,4938333.782,1180.570,n rim bint 1.44 fl ads ne 1.35 bttm
710,3577499.040,4941154.710,1174.627,nnw bolt fhy
711,3577499.066,4941154.987,1174.601,cx nne bolt fhy
1000,3576926.866,4942789.480,1163.770,TOPBOLT SE BENT
1001,3576926.653,4942778.388,1161.939,TOPBOLT SE MID BENT
2000,3577911.440,4941721.268,1163.242,FL 24" RCP @ 2.0' BEEHIVE INTAKE
2001,3577950.237,4941214.846,1173.554,GS @ DEPOSITS IN FL/DAM
2002,3577950.909,4941183.149,1173.683,SANITARY MANHOLE
2003,3577927.325,4941364.174,1165.701,GS BLOWOUT
2004,3577918.452,4941352.596,1166.185,GS BLOWOUT
2005,3577949.670,4941300.495,1172.882,CL- CL E IONIA & PARK ST
2006,3577949.205,4941000.136,1174.582,GS ABOVE VCP TILE LOCATION SIZE CHANGE
2007,3577947.053,4940916.133,1174.728,CL-CL DEWEY&E IONIA ST
2008,3577927.851,4941261.059,1165.880,GS TILE BLOWOUT
2009,3577955.130,4941670.318,1176.145,CL-CL EAST ST & E IONIA ST
2010,3577953.595,4941363.236,1172.488,GS LATERAL N
2011,3577954.077,4941383.336,1172.438,GS LATERAL N & S
2012,3577941.253,4941652.352,1175.409,GS LATERAL S
2013,3577936.832,4941683.793,1175.780,GS LATERAL N
2014,3577926.741,4941702.443,1167.685,GS TILE LOCATE
2015,3577940.150,4941670.522,1176.057,GS TILE LOCATE @ CL
2016,3577942.908,4941652.668,1175.504,GS TILE LOCATE
2017,3577952.326,4941617.524,1174.775,GS TILE LOCATE
2018,3577952.641,4941511.930,1173.183,GS TILE LOCATE
2019,3577736.545,4938333.821,1181.437,BEEHIVE INTAKE
2020,3577722.146,4938355.806,1178.040,TOP 14" VCP (1.22'TOPTO FL)

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2021,3577720.230,4938354.841,1178.045,TOP 14" VCP (1.27'TOPTO FL)
2022,3577733.697,4938361.428,1181.613,GS ABOVE TILE LOCATE LATERAL
2023,3577736.285,4938362.304,1181.754,GS TILE LOCATE
2024,3577740.887,4938364.009,1181.781,GS TILE LOCATE
2025,3577749.805,4938367.185,1182.178,GS TILE LOCATE
2026,3577758.806,4938370.901,1182.214,GS TILE LOCATE
2027,3577766.375,4938374.528,1182.444,GS TILE LOCATE
2028,3577771.502,4938378.718,1182.428,GS TILE LOCATE
2029,3577735.160,4938355.264,1181.557,GS TILE LOCATE BEEHIVE
2030,3577736.862,4938347.749,1181.408,GS TILE LOCATE BEEHIVE
2031,3577738.508,4938362.888,1181.745,GS TILE LOCATE FOC IN TILE
2032,3577732.592,4938352.842,1181.481,GS TELEPHONE LOCATE E-W
2033,3577733.333,4938365.247,1181.742,GS TELEPHONE LOCATE E-W
2034,3577733.324,4938370.125,1181.788,GS TELEPHONE LOCATE E-W
2035,3577738.652,4938369.938,1182.031,GS TELEPHONE LOCATE E-W
2036,3577738.766,4938365.007,1181.797,GS TELEPHONE LOCATE E-W
2037,3577738.884,4938351.855,1181.550,GS TELEPHONE LOCATE E-W
2038,3577680.656,4938336.903,1180.822,GS TILE LOCATE
2039,3577646.171,4938321.837,1180.998,GS TILE LOCATE
2040,3577609.554,4938305.555,1181.519,GS TILE LOCATE
2041,3577572.657,4938289.312,1181.932,GS TILE LOCATE
2042,3577532.765,4938271.764,1182.768,GS TILE LOCATE
2043,3577493.265,4938254.329,1182.984,GS TILE LOCATE
2044,3577453.719,4938236.451,1182.872,GS TILE LOCATE
2045,3577415.934,4938219.148,1182.520,GS TILE LOCATE
2046,3577378.743,4938202.276,1182.493,GS TILE LOCATE
2047,3577345.213,4938182.410,1182.459,GS TILE LOCATE
2048,3577311.356,4938161.975,1182.353,GS TILE LOCATE
2049,3577278.442,4938136.584,1182.371,GS TILE LOCATE
2050,3577252.614,4938110.497,1182.415,GS TILE LOCATE
2051,3577222.789,4938078.851,1182.524,GS TILE LOCATE
2052,3577196.784,4938047.749,1182.716,GS TILE LOCATE
2053,3577171.798,4938016.869,1183.087,GS TILE LOCATE
2054,3577145.614,4937984.173,1183.163,GS TILE LOCATE
2055,3577124.570,4937957.099,1183.637,GS TILE LOCATE
2056,3577099.771,4937926.493,1184.218,GS TILE LOCATE
2057,3577075.646,4937896.056,1184.692,GS TILE LOCATE
2058,3577050.016,4937864.012,1185.050,GS TILE LOCATE
2059,3577025.281,4937832.347,1185.002,GS TILE LOCATE
2060,3576999.439,4937800.278,1184.792,GS TILE LOCATE
2061,3576988.126,4937785.443,1185.342,GS TILE LOCATE (END CAMERA)
4000,3590461.417,4941646.179,1151.183,GS TILELOCATE
4001,3590460.954,4941639.859,1147.145,TOP CONC TILE
4002,3590457.619,4941640.360,1144.424,TOP WATERLINE
4003,3591176.870,4941637.634,1165.621,CPT PAVNAIL
4004,3577938.503,4939536.310,1182.101,END TILEREPAIR
4005,3577938.883,4939556.270,1181.760,BGN TILEREPAIR
4006,3576994.477,4937793.309,1184.880,BGN TILEREPAIR
4007,3576839.044,4937712.474,1186.401,END TILEREPAIR

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4008,3576995.058,4937794.006,1181.432,TOP CLAYTILE15" STARTREPAIR
4009,3576991.562,4937789.357,1181.495,TOP 15"RCP@JOINT
4010,3576986.824,4937782.755,1181.571,TOP 15"RCP@JOINT
4011,3576982.197,4937776.461,1181.627,TOP 15"RCP@JOINT
4012,3576977.165,4937770.102,1181.517,TOP 15"RCP@JOINT
4013,3576972.256,4937763.833,1181.574,TOP 15"RCP@JOINT
4014,3576967.168,4937757.681,1181.581,TOP 15"RCP@JOINT
4015,3576962.252,4937751.249,1181.539,TOP 15"RCP@JOINT
4016,3576956.950,4937745.135,1181.694,TOP 15"RCP@JOINT
4017,3576951.856,4937739.085,1181.627,TOP 15"RCP@JOINT
4018,3576946.457,4937733.172,1181.628,TOP 15"RCP@JOINT
4019,3576940.999,4937727.152,1181.820,TOP 15"RCP@JOINT
4020,3576938.431,4937724.619,1181.715,TOP 15"RCP@JOINT
4021,3576935.111,4937722.925,1181.745,TOP 15"RCP@JOINT
4022,3576927.647,4937720.029,1181.807,TOP 15"RCP@JOINT
4023,3576920.199,4937717.059,1181.810,TOP 15"RCP@JOINT
4024,3576912.735,4937714.100,1181.812,TOP 15"RCP@JOINT
4025,3576905.118,4937711.240,1181.761,TOP 15"RCP@JOINT
4026,3576897.007,4937710.888,1182.013,TOP 15"RCP@JOINT
4027,3576888.969,4937710.686,1181.974,TOP 15"RCP@JOINT
4028,3576880.937,4937710.766,1182.009,TOP 15"RCP@JOINT
4029,3576872.943,4937711.097,1182.100,TOP 15"RCP@JOINT
4030,3576864.884,4937711.532,1182.112,TOP 15"RCP@JOINT
4031,3576857.365,4937711.826,1181.858,TOP 15"RCP@JOINT
4032,3576848.890,4937712.237,1181.820,TOP 15"RCP@JOINT
4033,3576841.069,4937712.353,1181.767,TOP 15"RCP@JOINT
4034,3576838.986,4937712.466,1181.723,TOP 15"RCP@JOINT

## Drainage District:

#146

## Investigation/Repair Summary:

- Per the recommended actions of the previous investigation summary, the District Trustees ordered the construction of the repairs to the Main Tile outlet in the SW¼ NE¼ Section 15, Township 86 North, Range 20 West.
- Removed trees and brush over the outlet path as well as the existing rusted 18-inch CMP tile outlet up to the existing 18-inch concrete tile. Excavated and graded the trench for the new outlet tile in an upstream direction, placing the bedding rock as work progressed. Replaced the outlet with new 18-inch CMP tile, rock backfill, and a ¾ concrete collar with existing concrete tile at the upstream end of the repair. Excavation was filled with on-site soil, then reinforced with Class E revetment to prevent future erosion and rodent guard on guard on CMP to prevent animal tampering.

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

See attached Tabulated Contractor Time and Materials Sheet.

## Additional Actions Recommended:

Monitor area for beaver action, which may restrict drainage from the Main tile, and conduct trapping as necessary.

# Tabulated Contractor Time and Materials

| Date | Totals | 12/3/2020 | 12/4/2020 |
|---|---|---|---|
| Workman (hrs) | 18 | 9 1/2 | 8 1/2 |
| Mini Excavator (hrs) | 4 3/4 | 4 3/4 | |
| Skidloader (hrs) | 4 3/4 | 4 3/4 | |
| 1" Clean Bedding Rock | Yes | | |
| Concrete Collars | Yes | | |
| 18" CMP tile (ft) | 40 | | 40 |
| Class E Revetment | Yes | | |
| Band Coupler (ea) | 1 | | 1 |
| Rodent Guard (ea) | 1 | | 1 |

# Drainage Work Order Request For Repair
## Hardin County

**Date:** 10/26/2018

**Work Order #:** WO00000228

**Drainage District:** Drainage Districts \DD 146 (51158)

**Sec-Twp-Rge:** 15-86-20 **Qtr Sec:** NE

**Location/GIS:** 86-20-15-200-004

**Requested By:** Kent Reinert

**Contact Phone:** (641) 640-5431

**Contact Email:**

**Landowner** (if different):

**Description:** DD 146 - Outlet is eroded with hole about 15 feet into field. Had a beaver dam last year so not sure if caused damage. End rows are harvested so have access from south edge of field.

**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:**

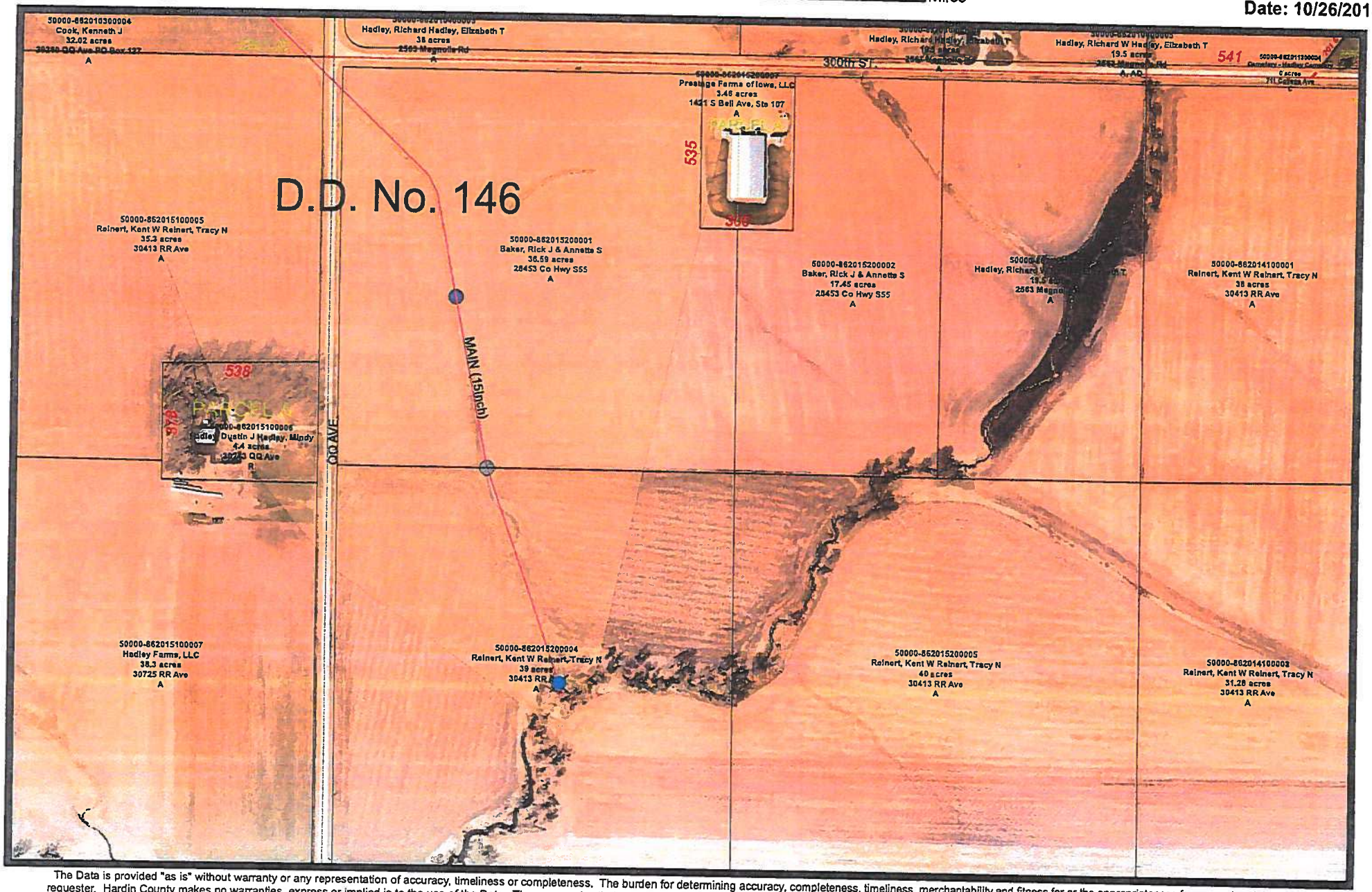


# Hardin County Auditor's Office

0 0.035 0.07 0.14 0.21 0.28 Miles

N W E S

Date: 10/26/2018




The Data is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on the requester. Hardin County makes no warranties, express or implied is to the use of the Data. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update. Cadastral Data represents land ownership, but does not define it. This Data does not replace a legal survey.

# Project Diary

| | | | |
|---|---|---|---|
| Project: OD # 146 Hardin Co. | | | |
| CGA PN: 6950.1 | Days Charged: | Report No. 1 | Proj. Mgr. √ Lee G. |
| Contractor: Honey Creek Landscaping | | Date: 12-3-20 | |
| Superintendent: Adam Seward | Weather Conditions: Clear, Sunny | Precip.: – " | Temp. Hi: ° Temp. Low: 29 ° |
| INSPECTOR: Time Arrived: 8:54 a.m. Time Left: 1:38 p.m. | | Contractor: Time Arrived: | Time Left: |

1. General Remarks and Work Accomplished:

8:54 a.m. = Arrived at job site. Contractor was clearing trees from project area.
9:18 a.m. = Contacted P.M. on what size rip rap he would like. He stated he would like 50 Tons of class D or E installed. Contractor began excavating over existing CMP and tile.
9:23 a.m. = C.O. left to set up GPS on CPT # 518 and checked into Hardin Co. GPS monument # 8050. (Good).
10:11 a.m. = Crew had existing 10' CMP removed and was removing brush and sticks. Contractor had, mini hoe and skid loader on-site for equipment and a 2 man crew.
10:30 a.m = Crew continues to excavate existing tile and place bedding rock as they excavate. Top rib of 18" RCP to FL = 1.49'
1:38 p.m. = Crew was done digging for day, will have 40' of 18" CMP in morning.

2. ~~Changes or Extra Work Ordered:~~

3. Test Samples Taken:

4. Visitors to Site:

5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:

6. Attachments (total sheets attached 0 ):

Clapsaddle-Garber Associates Inc
Consulting Engineers
P O Box 754
Marshalltown IA 50158

By James Van Hove
Inspector

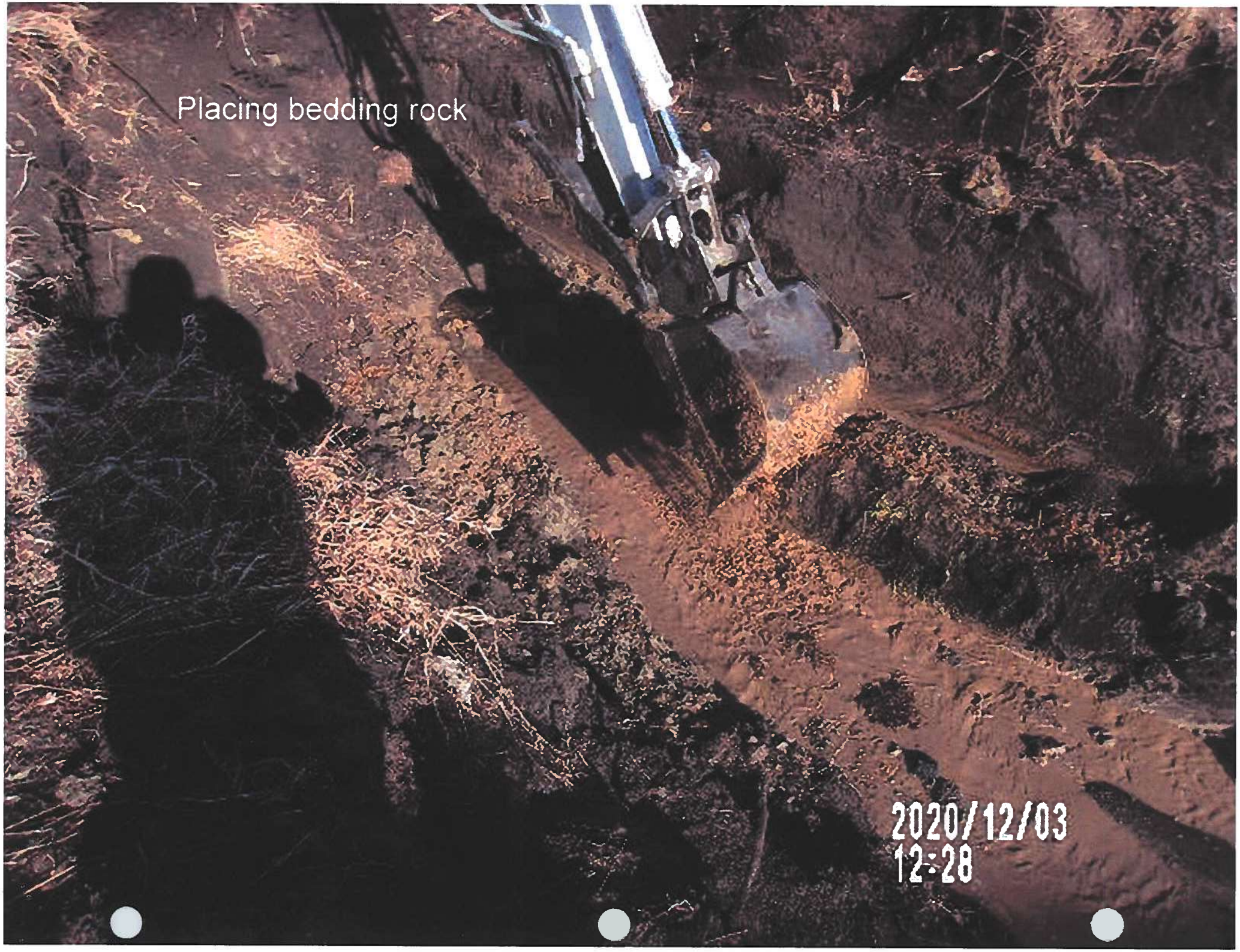
Distribution: Project Mgr. (Original), Inspector (Copy)
Form 9753


18" concrete tile visible in washout


10 CMP laying in washout
not connected to concrete pipe
12/03
12:08


CMP visible in washout
2020/12/08
10:29


Existing CMP removed and
contractor excavating existing tile
2020/12/03
12:28


Placing bedding rock
2020/12/03
12:28


Insided of 18" concrete pipe looking North upstream
2020/12/03
14:39


Inside of concrete pipe looking North
2020/12/03
14:39


Inside of 18" concrete pipe looking upstream
2020/12/03
14:40

# Project Diary

| | | | |
|---|---|---|---|
| Project: DD #146 Hardin County | | | |
| CGA PN: 6950.1 | Days Charged: | Report No. 2 | Proj. Mgr. √ Lee G. |
| Contractor: Honey Creek Land Improvement | | Date: 12-4-20 | |
| Superintendent: Adam Seward | Weather Conditions: Clear, Sunny | Precip.: – " | Temp. Hi: ° Temp. Low: 34 ° |
| INSPECTOR: Time Arrived: 8:46 a.m. Time Left: 1:07 p.m. | | Contractor: Time Arrived: | Time Left: |

1. General Remarks and Work Accomplished:

8:46 a.m. = Arrived at job site and set up GPS on CPI #518 and checked into Hardin Co. GPS monument #8050. (Good).
9:13 a.m. = Returned to job site. Crew had 1 section of 18" cmp installed in trench. Pipe had 0.7% to 0.8% slope per digital level.
10:08 a.m. = Second section of cmp in place. Installing band clamp on 18" cmp.
10:14 a.m. = 1 load class E rip rap arrived on-site.
10:30 a.m. = Shot top 18" cmp. Top cmp to FL = 1.53'
Point #15 = North end 18" cmp = 989.49 FL = 987.96
Point #16 = South end 18" cmp = 989.29 FL = 987.76
10:37 a.m. = Began mixing Kwik Krete for collar. Crew used approximately

2. ~~Changes or Extra Work Ordered:~~

20 Bags Kwik Krete for collar, (cmp to existing 18" RCP)
10:41 a.m. = PCC collar complete.
11:01 a.m. = Crew went to lunch to let PCC collar set up.
11:58 a.m = Contractor back filling over new cmp.

3. ~~Test Samples Taken:~~

12:12 p.m. = Contractor began placing class E rip rap.
1:00 p.m = Rip rap installed and shaped. Rodent guard installed on 18" cmp.
1:07 p.m. = C.O. left for day. Crew was cleaning up site.

4. Visitors to Site:

5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:

6. Attachments (total sheets attached 0 ):

Clapsaddle-Garber Associates Inc
Consulting Engineers
P O Box 754
Marshalltown IA 50158

By James Van Horn
Inspector

Distribution: Project Mgr. (Original), Inspector (Copy)
Form 9753


18" CMP in place
2020/12/04
10:30


Placing rock over 18" CMP
2020/12/04
11:20


Placing rock over 18" CMP
2020/12/04
11:26


Ready to pour concrete collar
2020/12/04
11:47

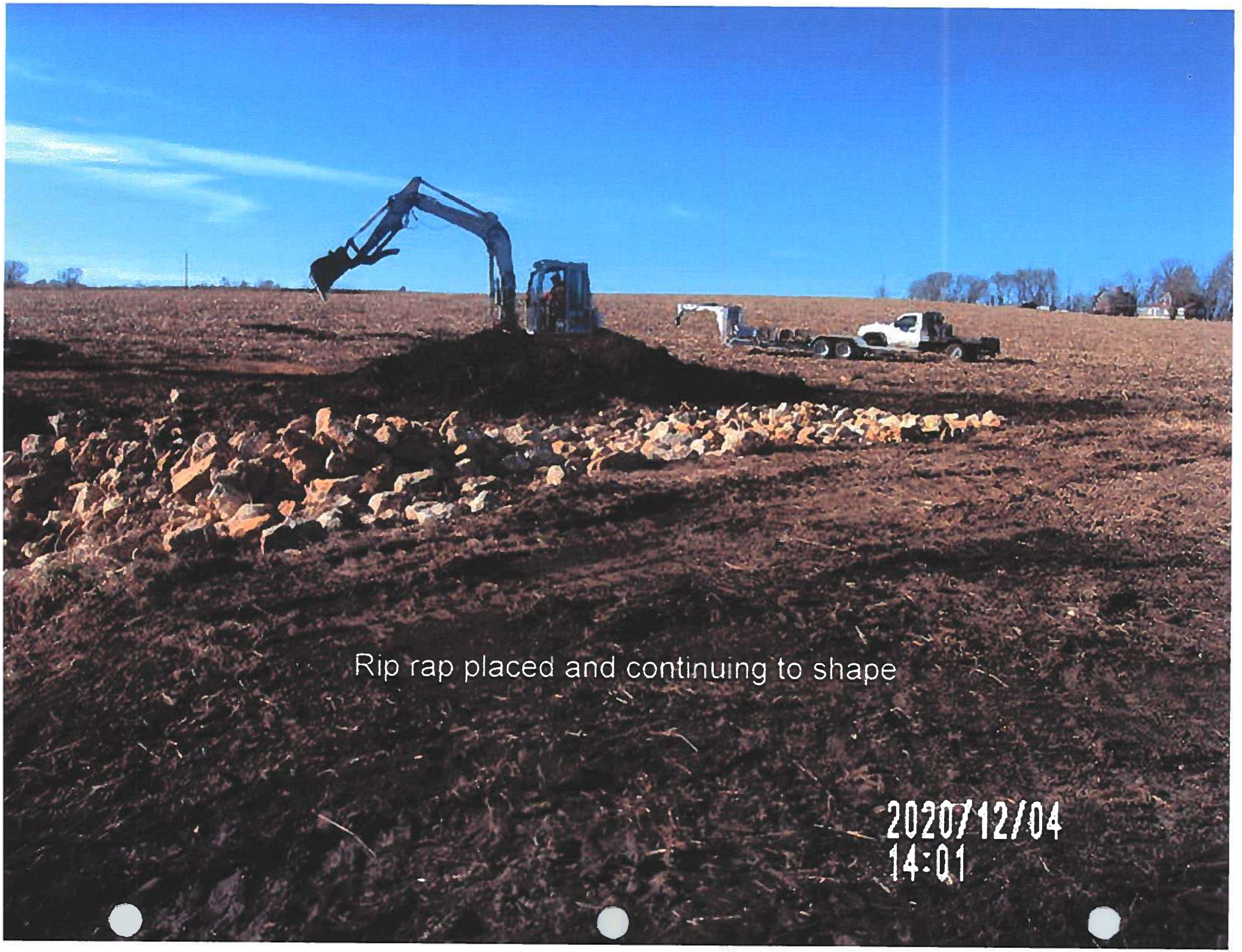

Concrete collar poured
2020/12/04
11:49


CASE
Placing Class E rip rap
2020/12/04
13:22


Continuing to place Class E rip rap
2020/12/04
13:24


Class E rip rap installed
2020/12/04
14:01


Final shaping of rip rap
2020/12/04
14:01


Rip rap placed and continuing to shape
2020/12/04
14:01


Rip-rap installation complete
2020/12/04
14:06


Rip rap installation complete
2020/12/04
14:06


Rodentr Gaurd installed in 18" CMP


Rodent Gaurd installed in 18" CMP

1,3559309.992,5011927.710,1001.864,GS EXPLORE LIMITS
2,3559318.637,5011975.916,1001.361,GS EXPLORE LIMITS
3,3559316.312,5011961.663,998.173,HOLE IN 6"PLAST TILE
4,3559304.112,5011964.750,1000.383,GS GRASS EDGE
5,3559338.588,5011961.296,1000.891,GS GRASS EDGE
6,3559345.074,5011930.808,1000.886,GS GRASS EDGE
7,3559292.141,5011938.348,1000.929,GS GRASS EDGE
8,3559128.608,5012053.965,1002.013,FNL WBP
9,3559129.957,5011920.037,1001.301,FNL WBP
10,3559132.508,5011516.949,1022.335,FNL WCP
11,3559132.469,5011484.804,1024.583,CL ROAD@FNL
12,3558429.566,5012196.270,993.826,GS
13,3558484.440,5012185.512,995.505,GS
14,3558460.464,5012174.386,989.521,TOP 18" PCC PIPE 1.49' TOP TO FL
15,3558460.275,5012174.554,989.489,TOP 18" CMP
16,3558422.120,5012187.210,989.285,TOP 18" CMP
100,3558465.016,5012327.690,989.849,513 6" spiral
101,3558462.465,5012327.827,989.704,513 6" spiral broke to s
102,3558457.952,5012327.590,988.123,513 6" spiral end
103,3558437.115,5012352.292,987.875,507 creek
104,3558438.735,5012352.771,988.229,300 toe creek
105,3558441.405,5012352.599,988.781,300
106,3558445.779,5012352.788,989.532,300
107,3558454.990,5012351.842,989.764,300
108,3558459.628,5012353.033,991.077,300
109,3558456.682,5012353.861,990.821,501 6"
110,3558469.004,5012352.782,991.727,300
111,3558479.274,5012350.280,994.410,323
112,3558507.424,5012353.912,995.352,300
113,3558542.296,5012353.107,995.634,325
114,3558587.862,5012354.654,995.493,300
115,3558629.846,5012355.655,995.706,300
116,3558629.067,5012305.143,995.686,300
117,3558585.142,5012303.938,995.814,300
118,3558546.879,5012305.677,995.719,325
119,3558555.938,5012272.005,995.511,325
120,3558576.855,5012235.423,995.124,325
121,3558590.174,5012217.243,994.782,325
122,3558590.597,5012213.528,994.188,325
123,3558590.821,5012210.719,993.958,325
124,3558591.817,5012206.735,994.388,325
125,3558591.460,5012196.572,995.214,325
126,3558570.976,5012184.639,995.367,325
127,3558539.695,5012182.965,995.377,325
128,3558492.569,5012179.310,995.443,325
129,3558460.266,5012168.990,995.429,325
130,3558421.639,5012143.427,995.326,325
131,3558394.544,5012125.084,995.597,325
132,3558384.632,5012120.294,995.131,325
133,3558377.642,5012117.865,995.856,325

134,3558366.334,5012114.985,995.587,325
135,3558520.433,5012303.597,995.129,300
136,3558463.245,5012310.141,995.528,300
137,3558473.683,5012319.553,995.269,300
138,3558483.792,5012337.349,995.259,300
139,3558472.101,5012342.843,993.517,323
140,3558465.059,5012343.393,991.208,300
141,3558459.494,5012344.190,990.214,300
142,3558453.137,5012345.524,989.748,300
143,3558447.239,5012342.021,988.888,300
144,3558448.404,5012343.694,988.926,300 toe creek
145,3558445.325,5012339.997,987.845,507 creek
146,3558454.387,5012332.609,988.592,300
147,3558462.370,5012335.030,989.104,300
148,3558466.696,5012335.786,991.299,300
149,3558469.666,5012334.494,994.583,323
150,3558469.007,5012329.705,994.750,323
151,3558472.082,5012328.048,994.940,323
152,3558470.921,5012324.858,995.180,323
153,3558466.861,5012324.952,995.085,323
154,3558464.326,5012325.857,990.494,300
155,3558458.868,5012326.559,988.644,300
156,3558458.919,5012328.759,989.379,300
157,3558464.030,5012329.319,988.769,300
158,3558468.002,5012326.208,992.673,300
159,3558466.812,5012328.308,991.892,300
160,3558469.558,5012327.045,992.253,300
161,3558455.514,5012327.874,988.779,300
162,3558455.211,5012328.004,987.988,300 toe creek
163,3558453.298,5012327.404,987.844,507 creek
164,3558451.679,5012313.741,987.809,507 creek
165,3558445.578,5012304.813,987.777,507 creek
166,3558453.337,5012312.451,987.902,300 toe creek
167,3558457.319,5012309.903,995.235,323
168,3558451.815,5012306.380,993.938,323
169,3558452.634,5012305.619,993.971,323
170,3558459.672,5012306.016,994.926,323
171,3558457.148,5012299.974,991.346,300
172,3558458.251,5012296.939,990.483,300
173,3558459.336,5012295.041,988.413,300 toe washout
174,3558460.520,5012294.262,988.235,507 washout
175,3558461.430,5012293.630,988.599,300 toe washout
176,3558454.312,5012289.016,988.494,300 toe washout
177,3558455.018,5012287.913,987.982,507 washout
178,3558455.684,5012286.369,988.343,300 toe washout
179,3558465.671,5012280.414,993.877,323 washout
180,3558456.182,5012278.939,994.832,323 washout
181,3558446.506,5012281.722,994.531,323 washout
182,3558443.473,5012283.681,993.947,323 washout
183,3558441.850,5012283.917,993.776,323 creek

184,3558433.249,5012279.714,993.435,323 creek
185,3558414.102,5012276.663,990.816,323 creek
186,3558412.937,5012278.132,988.697,300
187,3558410.950,5012280.321,987.949,300 toe creek
188,3558406.430,5012280.706,987.654,507 creek
189,3558425.557,5012285.059,991.129,323 creek
190,3558424.087,5012288.097,987.727,300 toe creek
191,3558422.267,5012290.010,987.822,507 creek
192,3558437.735,5012289.913,990.304,300
193,3558438.662,5012291.513,987.907,300 toe creek
194,3558432.539,5012294.570,987.943,507 creek
195,3558441.858,5012291.124,990.135,300 washout
196,3558445.328,5012286.383,991.030,300 washout
197,3558438.919,5012291.461,987.773,300 toe washout
198,3558440.284,5012292.202,988.058,507 washout
199,3558444.472,5012296.239,988.004,300 toe washout
200,3558447.446,5012298.450,990.558,300
201,3558454.148,5012291.419,990.391,300
202,3558451.191,5012294.422,990.614,300
203,3558447.505,5012288.351,987.894,507 washout
204,3558445.609,5012298.642,990.319,300
205,3558442.242,5012298.483,987.002,300 toe creek
206,3558447.379,5012303.332,987.911,300 toe creek
207,3558448.433,5012303.627,991.267,300
208,3558448.312,5012300.873,990.473,300
209,3558448.092,5012302.091,990.578,513 30" junk ne end
210,3558429.268,5012295.540,988.908,513 30" junk sw end
211,3558409.210,5012267.949,991.065,323
213,3558404.052,5012265.953,987.591,300 toe creek
214,3558399.392,5012267.844,987.627,507 creek
215,3558417.679,5012259.839,991.317,300
216,3558423.905,5012261.852,993.401,300
217,3558429.974,5012258.886,994.215,300
218,3558427.323,5012249.753,994.250,300
219,3558422.262,5012246.160,991.379,300
220,3558406.072,5012247.333,991.172,323 creek
221,3558403.853,5012247.958,987.688,300 toe creek
222,3558396.152,5012247.785,987.626,507 creek
223,3558404.597,5012219.700,987.624,507 creek
224,3558411.372,5012223.115,987.034,300 toe creek
225,3558413.500,5012224.326,990.101,323 creek
226,3558424.679,5012228.650,991.389,300
227,3558435.446,5012228.740,994.501,300
228,3558433.484,5012201.803,994.365,323 creek
229,3558440.105,5012207.363,994.539,323 creek
230,3558432.752,5012214.651,992.428,300
231,3558429.383,5012203.086,992.580,300
232,3558423.362,5012202.225,987.423,300 toe creek
233,3558415.626,5012201.485,987.531,507 creek
235,3558405.254,5012185.207,987.691,507 creek

236,3558414.714,5012188.066,987.074,507 creek
237,3558417.814,5012193.914,987.326,507 creek
238,3558403.912,5012177.396,987.654,300 toe creek
239,3558405.442,5012174.543,990.623,507 washout
240,3558407.825,5012173.925,991.037,300 toe washout
241,3558404.040,5012174.246,990.718,300 toe washout
242,3558400.235,5012171.419,994.202,323 creek/washout
243,3558411.075,5012170.708,994.461,323 creek/washout
244,3558406.386,5012169.748,991.026,507 washout
245,3558407.834,5012166.445,991.850,507 washout
246,3558406.277,5012159.324,994.677,323 washout
247,3558411.089,5012166.694,994.661,323 washout
248,3558402.625,5012164.640,994.674,323 washout
249,3558418.319,5012164.897,994.822,323 washout
250,3558422.879,5012168.821,994.970,323 washout
251,3558418.569,5012175.086,994.458,323 creek/washout
252,3558412.909,5012172.062,993.766,323 creek/washout
253,3558419.340,5012167.060,994.015,507 washout
254,3558415.486,5012172.091,992.844,507 washout
255,3558412.908,5012175.498,991.339,507 washout
256,3558412.886,5012179.762,987.710,300 toe creek
257,3558420.601,5012184.194,987.618,300 toe creek
258,3558421.299,5012187.738,987.405,507 creek
259,3558423.269,5012192.950,987.566,300 toe creek
260,3558423.063,5012188.511,987.825,300 toe creek
261,3558422.670,5012186.426,987.956,300 toe creek
262,3558425.496,5012185.461,987.891,300
263,3558425.965,5012186.258,990.145,300
264,3558424.187,5012189.144,988.737,300
265,3558421.422,5012187.829,989.246,513 18" cmp outlet
266,3558429.580,5012183.245,990.174,300
267,3558432.976,5012181.770,990.968,300
268,3558435.466,5012181.737,988.179,300
269,3558433.944,5012184.923,990.889,300
270,3558428.356,5012188.251,990.237,300
271,3558436.372,5012182.474,989.232,510 15"? 1.42' top to fl end
272,3558427.213,5012178.913,994.915,323 creek/washout
273,3558433.621,5012177.558,994.603,323 creek/washout
274,3558435.785,5012180.966,995.016,323 creek/washout
275,3558437.051,5012182.667,995.240,323 creek/washout
276,3558430.402,5012190.425,994.072,323 creek/washout
277,3558430.270,5012196.038,994.371,323 creek/washout
278,3558427.282,5012191.144,991.890,300
279,3558425.794,5012193.109,991.540,300
280,3558426.838,5012194.561,991.979,300
281,3558386.884,5012132.842,995.142,323 crossing
282,3558382.888,5012129.568,994.003,321 crossing
283,3558375.255,5012125.481,994.429,321 crossing
284,3558372.486,5012123.696,995.446,323 crossing
285,3558361.740,5012134.319,994.322,323 crossing

286,3558364.657,5012137.925,992.216,321 crossing
287,3558372.257,5012143.269,992.259,321 crossing
288,3558377.204,5012145.844,993.968,323 crossing
289,3558373.288,5012167.291,995.928,323 crossing/creek
290,3558386.557,5012170.248,996.223,323 creek
291,3558388.774,5012160.142,994.477,300
292,3558362.522,5012168.668,991.794,321 crossing/creek
293,3558360.437,5012171.557,990.354,300
294,3558357.409,5012171.978,990.190,300
295,3558350.454,5012172.723,988.707,300 crossing
296,3558341.450,5012172.788,988.609,300 crossing
297,3558338.720,5012170.835,990.394,300 crossing
298,3558350.265,5012154.770,991.606,300 crossing
299,3558353.468,5012154.683,990.816,300 crossing
300,3558359.119,5012138.522,993.443,300 crossing
301,3558361.227,5012141.597,991.806,300 crossing
302,3558340.658,5012174.351,987.933,300 toe creekcrossing
303,3558351.101,5012173.823,987.979,300 toe creekcrossing
304,3558339.867,5012177.538,987.582,507  creekcrossing
305,3558350.229,5012177.713,987.084,507 creekcrossing
306,3558345.931,5012177.758,987.267,507 creekcrossing
307,3558369.933,5012174.578,987.500,300 toe creek
308,3558371.420,5012180.844,986.559,507 creek
309,3558384.521,5012175.708,990.184,300 creek
310,3558384.629,5012178.098,987.536,300 toe creek
311,3558384.579,5012182.969,987.386,507 creek
312,3558380.223,5012191.723,989.542,513 18" e side junk
313,3558375.576,5012184.505,987.914,513 18" w side junk
314,3558386.836,5012074.040,996.261,300
315,3558441.984,5012074.910,997.034,300
316,3558522.260,5012075.421,997.381,300
317,3558571.913,5012076.048,996.689,300
318,3558612.680,5012075.910,996.702,300
319,3558617.384,5012129.826,996.075,300
320,3558570.746,5012127.951,996.226,300
321,3558525.979,5012126.095,996.331,300
322,3558478.612,5012125.706,995.879,300
323,3558429.622,5012128.856,995.381,300
324,3558390.567,5012136.231,995.122,300
325,3558404.218,5012150.260,994.736,300
326,3558429.729,5012165.337,995.189,300
327,3558438.675,5012176.845,995.167,300
328,3558485.898,5012176.680,995.544,300
329,3558531.798,5012175.195,995.458,300
330,3558575.252,5012174.671,995.714,300
331,3558616.809,5012172.735,995.740,300
332,3558621.633,5012247.382,995.686,300
333,3558578.447,5012252.609,995.522,300
334,3558541.797,5012259.435,994.650,300
335,3558529.903,5012264.249,994.257,300

336,3558553.001,5012241.379,994.987,300
337,3558580.894,5012221.279,995.058,300
338,3558607.506,5012222.207,994.891,300
339,3558607.742,5012211.140,994.456,300
340,3558605.923,5012197.780,995.072,300
341,3558546.645,5012194.165,994.984,300
342,3558517.089,5012207.903,994.949,300
343,3558485.722,5012205.410,994.959,300
344,3558452.042,5012215.821,994.608,300
345,3558443.179,5012234.237,994.872,300
346,3558446.775,5012245.293,994.558,300
347,3558464.502,5012260.823,994.145,300
348,3558493.301,5012249.615,994.374,300
349,3558472.036,5012289.519,992.548,323 washout
350,3558471.798,5012292.220,991.191,300
351,3558470.090,5012296.056,990.571,300
352,3558468.790,5012298.690,988.269,300 toe washout
353,3558467.962,5012300.467,988.108,507 washout
354,3558467.381,5012301.878,988.360,300 toe washout
355,3558465.519,5012307.197,994.985,323 washout
356,3558476.818,5012315.680,995.097,300
357,3558483.665,5012319.589,994.674,300
358,3558486.316,5012316.037,993.571,323 washout
359,3558482.087,5012310.230,992.947,323 washout
360,3558489.619,5012314.044,991.383,321 washout
361,3558491.811,5012312.725,991.347,321 washout
362,3558489.516,5012308.596,990.556,321 washout
363,3558487.705,5012306.165,990.337,321 washout
364,3558485.696,5012308.017,990.897,321 washout
365,3558487.347,5012307.110,990.283,507 washout
366,3558494.581,5012310.148,992.104,507 washout
367,3558499.021,5012312.406,993.446,507 washout
368,3558501.048,5012313.367,993.988,323 washout
369,3558500.489,5012310.311,994.185,323 washout
370,3558499.844,5012314.454,994.299,323 washout
371,3558497.231,5012314.222,994.060,323 washout
372,3558502.659,5012323.624,994.208,323 washout
373,3558499.519,5012326.502,994.668,323 washout
374,3558492.930,5012329.482,994.636,323 washout
375,3558490.030,5012323.155,994.179,323 washout
376,3558484.929,5012335.363,995.292,300
377,3558505.703,5012328.852,994.874,300
378,3558498.291,5012322.600,992.013,300 toe washout
379,3558493.786,5012322.554,991.882,300 toe washout
380,3558481.543,5012306.268,988.981,300 toe washout
381,3558481.437,5012303.421,988.334,507 toe washout
382,3558481.431,5012301.684,988.462,300 toe washout
383,3558480.614,5012296.076,991.755,323 washout
384,3558478.079,5012291.469,991.624,300
385,3558477.490,5012283.141,993.169,300

386,3558491.230,5012290.265,992.293,323 washout
387,3558495.807,5012292.905,988.911,300 washout
388,3558497.539,5012295.000,988.476,507 washout
389,3558500.099,5012295.942,988.665,300 toe washout
390,3558508.513,5012300.252,994.157,323 washout
391,3558512.727,5012293.400,994.282,323 washout
392,3558518.593,5012290.032,994.468,323 washout
393,3558520.599,5012282.290,994.153,323 washout
394,3558524.128,5012275.774,993.972,323 washout
395,3558520.867,5012269.262,994.050,323 washout
396,3558508.084,5012273.316,992.719,323 washout
397,3558509.064,5012265.383,992.761,323 washout
398,3558521.266,5012261.730,993.915,323 washout
399,3558517.457,5012255.805,992.038,300
400,3558507.584,5012261.601,991.137,300
401,3558518.373,5012277.585,991.321,300 toe washout
402,3558519.110,5012274.603,991.416,300 toe washout
403,3558508.846,5012278.309,990.915,300 toe washout
404,3558503.957,5012279.425,990.285,300 toe washout
405,3558504.029,5012280.964,990.239,300 toe washout
406,3558510.641,5012281.821,991.131,300 toe washout
407,3558513.574,5012280.155,990.869,300 toe washout
408,3558519.257,5012284.979,993.038,300 toe washout
409,3558517.733,5012285.768,993.018,300 toe washout
410,3558504.605,5012282.782,991.341,300
411,3558503.252,5012281.852,989.173,300 toe washout
412,3558500.064,5012282.646,988.398,507 washout
413,3558497.897,5012280.143,988.838,300 toe washout
414,3558492.987,5012274.645,993.267,323 washout
415,3558495.161,5012261.345,993.945,323 washout
416,3558499.328,5012262.493,988.948,300 toe washout
417,3558501.253,5012263.170,988.761,507 washout
418,3558503.243,5012263.482,988.925,300 toe washout
419,3558511.250,5012265.339,993.378,323 washout
420,3558524.912,5012249.522,993.731,323 washout
421,3558533.506,5012241.453,994.062,323 washout
422,3558535.070,5012233.345,993.651,323 washout
423,3558525.591,5012240.973,991.253,300
424,3558525.155,5012245.865,992.195,300
425,3558521.308,5012248.244,989.023,300 toe washout
426,3558519.429,5012246.197,988.672,507 washout
427,3558517.289,5012243.606,989.131,300 toe washout
428,3558514.985,5012238.997,993.438,323 washout
429,3558520.794,5012221.235,993.965,323 washout
430,3558526.420,5012224.467,990.350,300 toe washout
431,3558528.945,5012225.896,990.124,507 washout
432,3558577.045,5012203.583,994.784,323 washout
433,3558577.245,5012208.004,993.692,300 toe washout
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435,3558576.377,5012211.851,993.436,300 toe washout

436,3558576.296,5012215.267,994.890,323 washout
437,3558583.523,5012214.507,994.591,323 washout
438,3558584.008,5012212.710,994.181,507 washout
439,3558583.297,5012211.639,994.138,507 washout
440,3558583.341,5012209.394,994.962,323 washout
441,3558583.397,5012206.601,994.246,507 washout
442,3558579.243,5012206.731,994.338,507 washout
443,3558588.305,5012207.453,994.194,507 washout
444,3558585.458,5012208.442,994.722,300
445,3558585.038,5012203.152,994.791,300
446,3558579.945,5012203.755,994.817,300
447,3558570.373,5012204.416,994.623,323 washout
448,3558570.195,5012209.558,993.233,507 washout
449,3558570.265,5012211.701,993.118,507 washout
450,3558570.857,5012217.397,995.057,323 washout
451,3558560.816,5012213.548,994.162,323 washout
452,3558560.283,5012211.367,991.911,507 washout
453,3558560.101,5012209.050,992.094,507 washout
454,3558558.761,5012205.852,994.312,323 washout
455,3558557.088,5012198.037,994.895,300 washout
456,3558558.604,5012199.797,993.846,300 washout
457,3558561.354,5012202.225,994.013,300 washout
458,3558566.036,5012197.913,994.735,300 washout
459,3558561.829,5012204.304,995.125,300 washout
460,3558560.467,5012207.245,994.676,300 washout
461,3558547.565,5012201.868,994.873,300 washout
462,3558551.349,5012204.973,993.849,300 washout
463,3558554.411,5012215.828,994.063,300 washout
464,3558554.575,5012219.455,994.352,300 washout
465,3558546.952,5012220.407,993.653,323 washout
466,3558549.514,5012220.137,993.975,323 washout
467,3558539.064,5012228.654,993.854,323 washout
468,3558532.458,5012237.160,993.723,323 washout
469,3558544.708,5012205.089,994.620,323 washout
470,3558534.519,5012212.825,994.559,323 washout
471,3558527.099,5012216.154,994.434,323 washout
472,3558544.203,5012209.522,993.463,300 washout junk fill
473,3558546.418,5012214.881,992.905,300 washout junk fill
474,3558547.626,5012217.740,991.508,300 washout junk fill
475,3558533.700,5012217.429,992.964,300 washout junk fill
476,3558535.487,5012221.087,992.627,300 washout junk fill
477,3558539.598,5012225.649,992.574,300 washout junk fill
478,3558526.788,5012221.262,992.000,300 washout junk fill
479,3558527.368,5012226.438,989.966,300 washout junk fill
480,3558530.763,5012229.589,992.824,300 washout junk fill
481,3558531.759,5012232.019,991.991,300 washout junk fill
482,3558525.296,5012239.935,991.168,300 washout junk fill
483,3558522.030,5012236.293,989.137,300 washout junk fill
484,3558529.056,5012227.754,990.075,300 washout junk fill
485,3558520.946,5012237.198,988.763,507 washout

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486,3558474.240,5012237.408,994.718,300 rr tie pile
487,3558466.392,5012235.234,994.577,300 rr tie pile
488,3558457.687,5012238.771,994.633,300 rr tie pile
489,3558459.203,5012243.374,994.620,300 rr tie pile
490,3558474.858,5012242.215,994.420,300 rr tie pile
491,3558519.921,5012227.429,993.237,501 6" w side
492,3558519.242,5012230.117,993.854,501 16" w side
493,3558521.401,5012228.279,993.398,501 18" w side
494,3558518.365,5012251.736,991.717,501 12"
495,3558519.386,5012270.831,994.198,501 12"
496,3558502.575,5012269.177,990.058,501 8" e side
497,3558515.901,5012286.713,993.530,501 8" w side
498,3558504.977,5012295.516,992.838,501 10"
499,3558494.135,5012286.521,993.388,501 22"
500,3558494.201,5012283.540,992.330,501 8" s side
501,3558458.990,5012282.614,992.385,501 8" w side
502,3558451.040,5012283.297,991.857,501 6"
503,3558442.785,5012290.524,990.660,501 8"
504,3558445.392,5012296.794,989.522,501 8"
505,3558447.183,5012298.569,990.549,501 12"
506,3558451.344,5012304.654,993.680,501 10"
507,3558490.130,5012312.694,991.274,501 10"
508,3558491.397,5012302.804,993.505,501 28"
509,3558470.597,5012304.917,991.783,501 12"
510,3558464.837,5012332.630,992.004,501 6"
511,3558425.805,5012196.763,990.864,501 6"
512,3558439.687,5012213.446,995.090,501 24" e side
513,3558427.910,5012211.047,991.009,501 40" s side
514,3558419.554,5012248.249,993.229,501 8"
515,3558421.313,5012255.722,991.694,501 6"
516,3558425.992,5012257.411,994.067,501 12" nside
517,3558450.831,5012259.031,994.936,501 14"
518,3560484.876,5012828.221,1049.233,cpt ir 12 0.2'd
8050,3555145.290,5008787.520,1046.280,GPS8050
8050_GNSS,3555145.290,5008787.520,1046.280,Autonomous Setup
```

# Hardin County Drainage Claim for Damages

Claim # 2021-01 District # 41 Work Order # 194

Township Buckeye Section 12 Twp 88 Rge 22 Qtr Sec SE 1/4

Parcel Tax IDS 882212400002

Name Chris Blome

Address 13967 Co Hwy D25

Alden, IA 50006

Phone (641) 751-3936

Email Address

Landowner (if different) Liittschwager, John M - LE - 1/2 Lettow, Charles;Brusius, Beth;Malone, Nancy -1/218

Claim Type: ☒ Crop Damage

| | |
|---|---|
| Crop Year 2018 | Crop Year |
| Type of Crop Soybeans | Type of Crop |
| # Acres Damaged .07 As verified by CGA | # Acres Damaged |
| Yield Per Acre 59.5 | Yield Per Acre |

☐ Fence Damage

☐ Outlet Damage

☒ Other: .94 acres of waterway seeded by Blome's Contractor for a total cost of $214.00, Invoice is attached. .94 Acres of waterway was verified by CGA.

Desired Compensation – Please note if payment should be split between landlord/tenant.

☒ Monetary Payment

☒ Other: Chris Blome requests 50/50 split on soybeans only with landowners to be paid as "Homestead Partnership", seeding costs go to Chris only as he paid this expense.

CGA verified .07 acres of crop damage & .94 acres of waterway seeding needed per L. Gallentine email dated 7/30/20.

Claimant Signature - See attached signed original copy Date 09/02/20

**For Office Use Only**

Unit Value $ 9.02 /bushel Unit Value $ /bushel

Crop Damages (Verified Acres X Yield X Unit Value) $ 37.62 for Soybeans $214.00 for seeding

Total Amount Approved $ 251.62 ($18.81 to Landowners, $232.81 to Chris Blome)

Approved Signature Date

# Drainage Claim for Damages
## Hardin County

Verify if seeding was done by Blome or outside contractor/Per Lee

Claim # 17 District # 41 er # 194

Township Buckeye Section 12 Tw r Sec SE1/4

Parcel Tax IDs 882212400002

Name Chris Blome

Address 13967 Co Hwy D25

Alden, IA 50006

Phone (641) 751-3936

Email Address

Landowner (if different)

*Call Chris pletion get

2018
Soybeans
59.5 bushels/acre
USDA 2018 Price is
$9.02/bushel

Emailed to Lee on 7/30/2020 to request verified acres.

Claim Type

☑ Crop Damage

| | | | | | |
|---|---|---|---|---|---|
| Crop Year | 2018 | | | | |
| Type of Crop | Soybeans | | | | |
| # Acres Damaged | | | | | |
| Yield Per Acre | 59.5 bushels | | | | bushels |
| Unit Value | $ 0.00 /bushel | Unit Value | $ 0.00 /bushel | | |

☐ Fence Damage

Projected = 10.16

☐ Outlet Damage

☐ Other:

Seeding done by Blome's Contractor Invoice Attached Agenda – 8/12

Desired Compensation

☑ Monetary Payment

☐ Repair of Damages

☐ Other:

Total Amount Claimed

Crop Damages (Acres X Yield X Unit Value) $ $

Other Damages (Fence, Outlet, Etc) $

Claimant Signature Date

For Office Use Only

*Total Amount Approved* $

*Approval Signature* *Date*

## Tina Schlemme

**From:** chris.blome@ptprecisionag.com
**Sent:** Wednesday, January 23, 2019 10:10 AM
**To:** Tina Schlemme
**Subject:** Reimbursement for DD41 damages
**Attachments:** Scan0024.pdf

Hi Tina,

Attached are two sheets for reimbursement for the damages done in D.D. #41 last summer.

Sheet 1: Yield report for the soybean harvest
Sheet 2. Invoice for the re-seeding of the waterway

Please call with any questions or concerns

Thank you!

**Chris Blome**
**Alden, IA**
**641-751-3936**
**www.ptprecisionag.com**
PREMIER TECHNOLOGIES
ELITE. PRECISION. AGRICULTURE.

# Field Summary Report

| | |
|---|---|
| Grower : | Blome Farms |
| Farm : | Chris Blome |
| Field : | Homestead 80 |
| Year : | 2018 |
| Operation : | Grain Harvest |
| Product - Crop Type : | Soybeans |

| Dataset | Hybrid or Variety | Area ac | Average Yield (Dry Bushels) bu/ac | Total Bushels (Dry) bu | Average Moisture % |
|---|---|---|---|---|---|
| <1> | G2041X CMC | 32.67 | 62.71 | 2,048.7 | 11.53 |
| **Totals** | **G2041X CMC** | **32.67** | **62.71** | **2,048.7** | **11.53** |
| | | | Average | | Average |

*Data Altered/Created through Analysis*

# Invoice

Greenbelt Lawn Care LLC
Tim Smuck
402 Prairie Ave
Alden, IA 50006
515-689-9806

pd 9-12-18
ck 1205 Farm

Bill To:
Chris Blome
13967 Co Hwy D25
Alden, IA 50006

| Date | Invoice No. | P.O. Number | Terms | Project |
|---|---|---|---|---|
| 09/05/18 | 739 | | | |

| Item | Description | Quantity | Rate | Amount |
|---|---|---|---|---|
| Seeding | Seeded Approximately 1/4 of an Acre of a Waterway | 1 | 200.00 | 200.00 |
| | Sales Tax | | 7.00% | 14.00 |
| | | | Total | $214.00 |

**THEISEN SUPPLY, INC**
6201 CHAVENELLE ROAD
DUBUQUE, IA 52002

**THEISEN WATERWAY MIX**
VARIETIES NOT STATED
**LOT 18033**

| CONTENTS | % | GERM. | ORIGIN |
|---|---|---|---|
| TALL FESCUE | 49.71 | 85% | OR |
| TIMOTHY | 19.82 | 90% | CANADA |
| ANNUAL RYEGRASS | 19.76 | 90% | OR |
| CR. RED FESCUE | 9.68 | 85% | CANADA |

OTHER CROP .11% WEED .06% INERT .86%
TESTED JAN, 2018 NET WT. 50 LBS
NOXIOUS WEED: NONE FOUND AMS# 2352

0 00085 20155 2

December 7, 2020

Drainage District Trustees
1215 Edgington Ave, Suite 1
Eldora, IA 50627

RE: Repairs to Big 4, DD 41, DD 77, DD 123, and DD 143
Project Completion Letter

Dear Trustees:

Hand On Excavating has completed the work required by the plans and specifications of the above referenced projects including removals, replacements, and repairs as shown/included on the attached as-built plan sheets and Pay Estimate No. 6. Also attached for your file are copies of the lien waivers from suppliers and subcontractors that Hands On submitted to us.

To the best of my knowledge, Hands On has completed their work on the above referenced projects in general accordance with the plans, specifications, Change Orders, District Trustees direction, and field instructions. The majority of this is documented in the construction observation report and pictures books what we have generated (to be transmitted under a separate cover). Therefore, I recommend that the Drainage District contact landowners were the construction occurred to verify whether they have any damage claims to be filed. Barring none, I recommend that the District Trustees accept their portion of the above referenced projects as complete and authorize final payment (including release of retainage) to the Contractor in the amount of $15,266.03 per the attached final pay estimate. Also, please note that the only remaining project on the contract with Hands On is DD 128, which we are currently working on finalizing also.

If you have any questions with regards to the items in this letter, please contact me by phone at 641-847-3273 or by email at LGallentine@cgaconsultants.com.

Sincerely,

Lee Gallentine, PE & PLS
Clapsaddle-Garber Associates

PRINSCO
ENGINEERED WITH INTEGRITY

# RECEIPT AND WAIVER OF LIEN

TO WHOM IT MAY CONCERN:

This is to certify that product purchased from Prinsco, Inc, sold to Hands On Excavating been paid in full, and the material is free and clear of any liens or encumbrances by Prinsco Inc, as of April 1, 2020.

LeAnn Nord
Prinsco Inc
FPA

prinsco.com 1717 16th St. NE Willmar, MN 56201
320-222-6800 phone 800-992-1725 toll free 320-222-6820 fax

INTEGRITY HARD WORK RELATIONSHIPS

Water Management Solutions

## UNCONDITIONAL WAIVER AND RELEASE UPON PAYMENT

TO WHOM IT MAY CONERN:

Whereas the undersigned Williams Underground

has been paid and has received payment in full for labor, services, equipment and/or material furnished to Hands On Excavating LLC for the job know as Hardin County Drainage Districts Through 4/1/2020 located in the city/county of Hardin County, State of Iowa.

The undersigned does hereby release any right to lien on the above referenced job to the following extent. This release covers a complete payment for labor, services, equipment or materials furnished through the date signed below, and does not cover items furnished after this date.

Dated this 19th day of September, 2020

Company: Williams Underground

By: Paul A Wells
(Signature)

****Lien Waivers need to be returned before next payment will be processed****

**Please Return to:**
**Hands On Excavating LLC**
**3305 Ziegler Ave**
**Radcliffe, IA 50230**

**UNCONDITIONAL WAIVER AND RELEASE UPON PAYMENT**

TO WHOM IT MAY CONERN:

Whereas the undersigned Forterra Pipe & Precast

has been paid and has received payment in full for labor, services, equipment and/or material furnished to Hands On Excavating LLC for the job know as Hardin County Drainage Districts through 4/1/2020 located in the city/county of Hardin County, State of Iowa.

The undersigned does hereby release any right to lien on the above referenced job to the following extent. This release covers a complete payment for labor, services, equipment or materials furnished through the date signed below, and does not cover items furnished after this date.

Dated this 1st day of April, 2020

Company: Forterra

By: _____
(Signature)

****Lien Waivers need to be returned before next payment will be processed****

**Please Return to:**
**Hands On Excavating LLC**
**3305 Ziegler Ave**
**Radcliffe, IA 50230**

**UNCONDITIONAL WAIVER AND RELEASE UPON PAYMENT**

TO WHOM IT MAY CONERN:

Whereas the undersigned Martin Marietta

has been paid and has received payment in full for labor, services, equipment and/or material furnished to Hands On Excavating LLC for the job know as Hardin County Drainage Districts located in the city/county of Hardin-, State of Iowa.

The undersigned does hereby release any right to lien on the above referenced job to the following extent. This release covers a complete payment for labor, services, equipment or materials furnished through the date signed below, and does not cover items furnished after this date.

Dated this 6th day of October, 2020

Company: Martin Marietta

By: [signature]
(Signature)

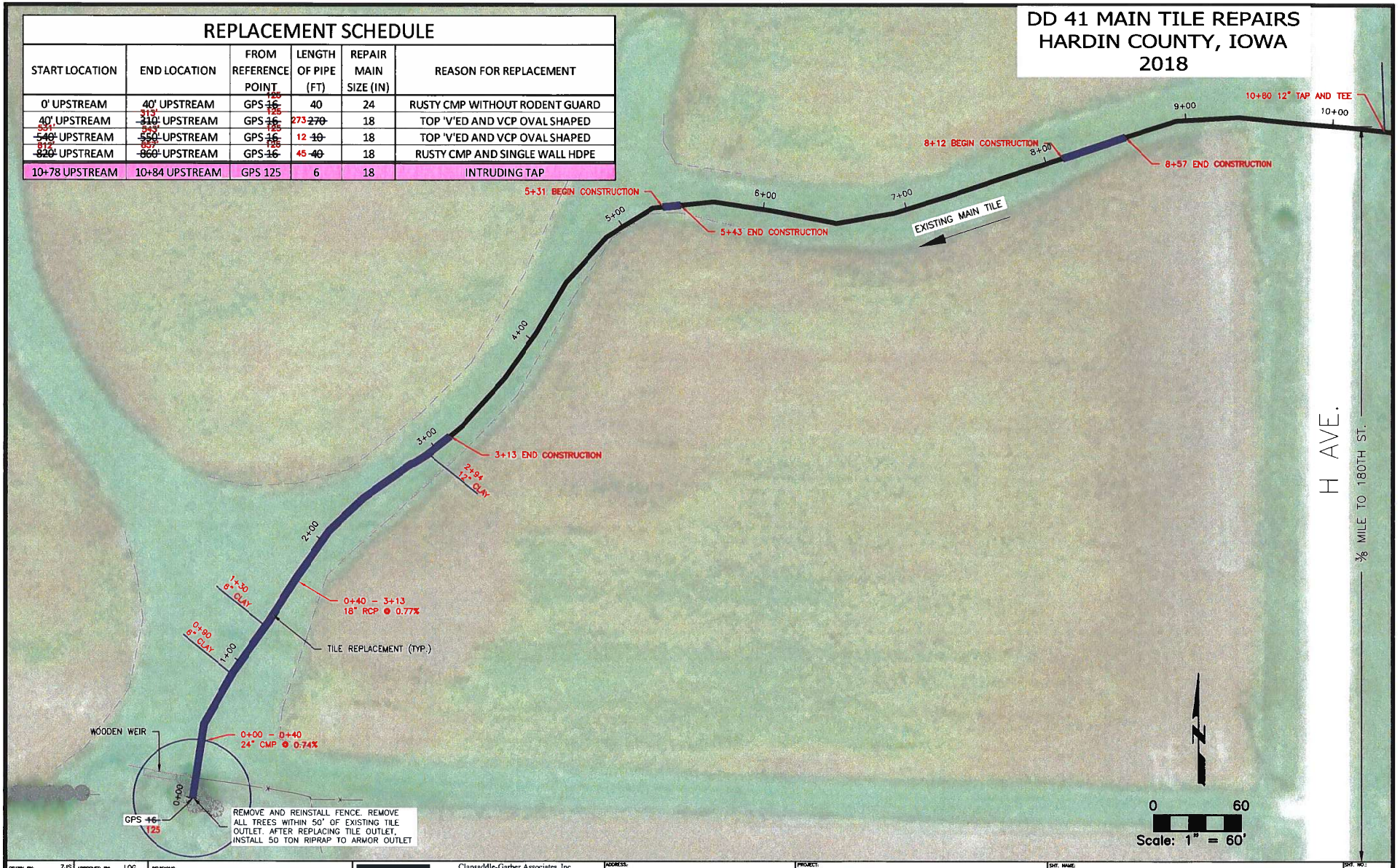
****Lien Waivers need to be returned before next payment will be processed****

**Please Return to:**
**Hands On Excavating LLC**
**3305 Ziegler Ave**
**Radcliffe, IA 50230**

# DD 41 MAIN TILE REPAIRS
# HARDIN COUNTY, IOWA
# 2018

## REPLACEMENT SCHEDULE

| START LOCATION | END LOCATION | FROM REFERENCE POINT | LENGTH OF PIPE (FT) | REPAIR MAIN SIZE (IN) | REASON FOR REPLACEMENT |
|---|---|---|---|---|---|
| 0' UPSTREAM | 40' UPSTREAM | GPS ~~16~~ 125 | 40 | 24 | RUSTY CMP WITHOUT RODENT GUARD |
| 40' UPSTREAM | ~~310'~~ 313' UPSTREAM | GPS ~~16~~ 125 | ~~270~~ 273 | 18 | TOP 'V'ED AND VCP OVAL SHAPED |
| ~~540'~~ 543' UPSTREAM | ~~550'~~ 553' UPSTREAM | GPS ~~16~~ 125 | ~~10~~ 12 | 18 | TOP 'V'ED AND VCP OVAL SHAPED |
| ~~820'~~ 812' UPSTREAM | ~~860'~~ 857' UPSTREAM | GPS ~~16~~ 125 | ~~40~~ 45 | 18 | RUSTY CMP AND SINGLE WALL HDPE |
| 10+78 UPSTREAM | 10+84 UPSTREAM | GPS 125 | 6 | 18 | INTRUDING TAP |

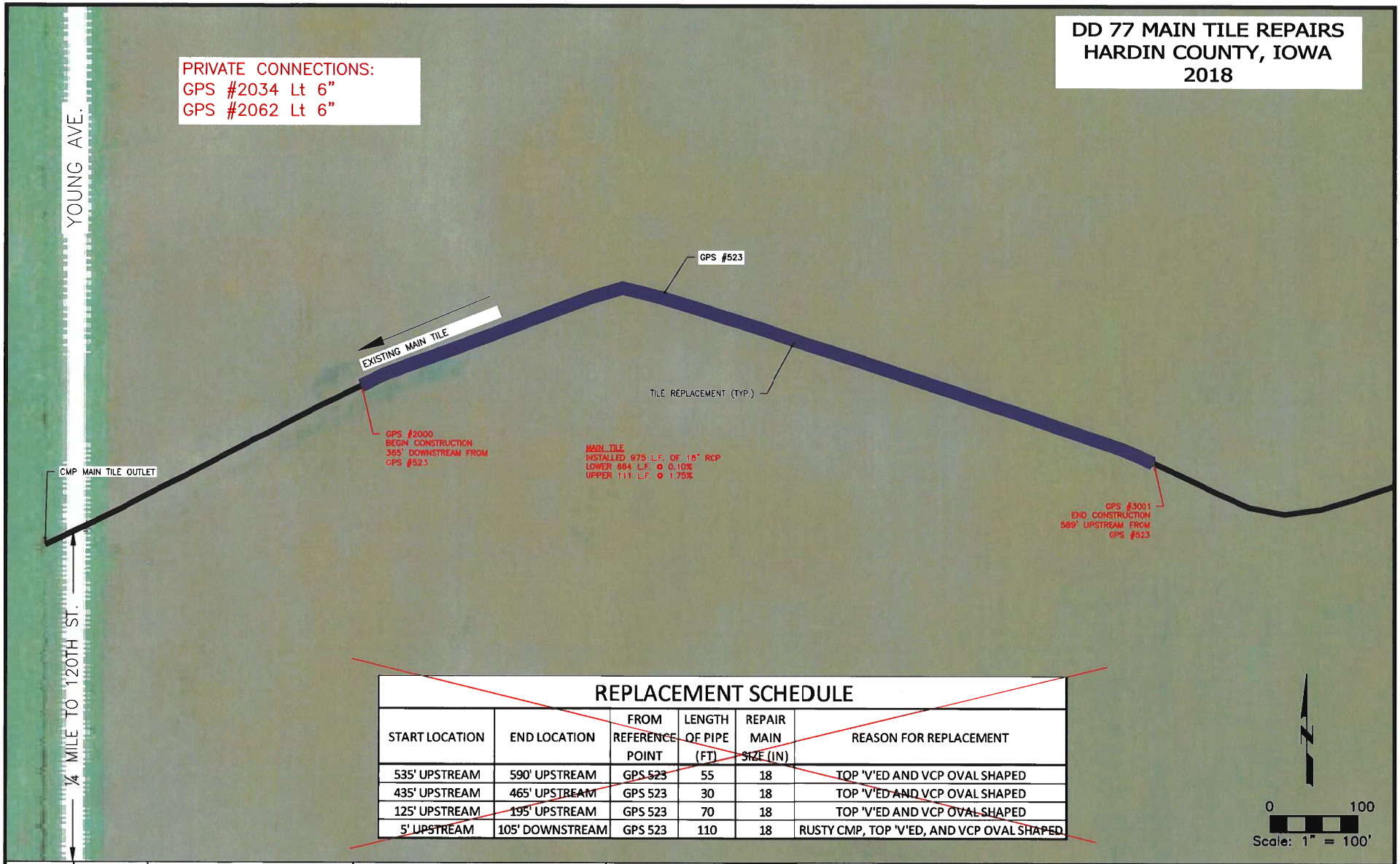



| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY: ZJS | APPROVED BY: LOG | REVISIONS: | CGA | Clapsaddle-Garber Associates, Inc<br>Main Office: 16 East Main Street<br>Marshalltown, Iowa 50158<br>Ph 641-752-6701<br>www.cgaconsultants.com | ADDRESS:<br>739 PARK AVENUE<br>ACKLEY, IOWA 50601<br>PH 641-847-3273 FAX 641-847-2303 | PROJECT:<br>HARDIN COUNTY 2018 REPAIRS<br>HARDIN COUNTY, IOWA<br>2018 | SHT. NAME:<br>DD 41 MAIN TILE REPAIRS - ALTERNATE<br>AS BUILT | SHT. NO.:<br>6 OF 9 |
| DATE: 2018-02-13 | PROJ. NO.: 6682.1 | | | | | | | |
| FIELD BK: - | | | | | | | | |

P:\6682.1\CADD\DESIGN\6682.1REPLACE_ASBUILT.DWG; 12/4/2020

# DD 77 MAIN TILE REPAIRS
# HARDIN COUNTY, IOWA
# 2018

PRIVATE CONNECTIONS:
GPS #2034 Lt 6"
GPS #2062 Lt 6"




## REPLACEMENT SCHEDULE

| START LOCATION | END LOCATION | FROM REFERENCE POINT | LENGTH OF PIPE (FT) | REPAIR MAIN SIZE (IN) | REASON FOR REPLACEMENT |
|---|---|---|---|---|---|
| 535' UPSTREAM | 590' UPSTREAM | GPS 523 | 55 | 18 | TOP 'V'ED AND VCP OVAL SHAPED |
| 435' UPSTREAM | 465' UPSTREAM | GPS 523 | 30 | 18 | TOP 'V'ED AND VCP OVAL SHAPED |
| 125' UPSTREAM | 195' UPSTREAM | GPS 523 | 70 | 18 | TOP 'V'ED AND VCP OVAL SHAPED |
| 5' UPSTREAM | 105' DOWNSTREAM | GPS 523 | 110 | 18 | RUSTY CMP, TOP 'V'ED, AND VCP OVAL SHAPED |

N

0 100
Scale: 1" = 100'

DRAWN BY: ZJS | APPROVED BY: LOG | REVISIONS:
DATE: 2018-02-13 | PROJ. NO.: 6535.1
FIELD BK: -
P:\6535.1\CADD\DESIGN\6535.1_SPOT_REPAIRS ASBUILT.DWG; 12/4/2020


CGA
Clapsaddle-Garber Associates, Inc
Main Office: 16 East Main Street
Marshalltown, Iowa 50158
Ph 641-752-6701
www.cgaconsultants.com

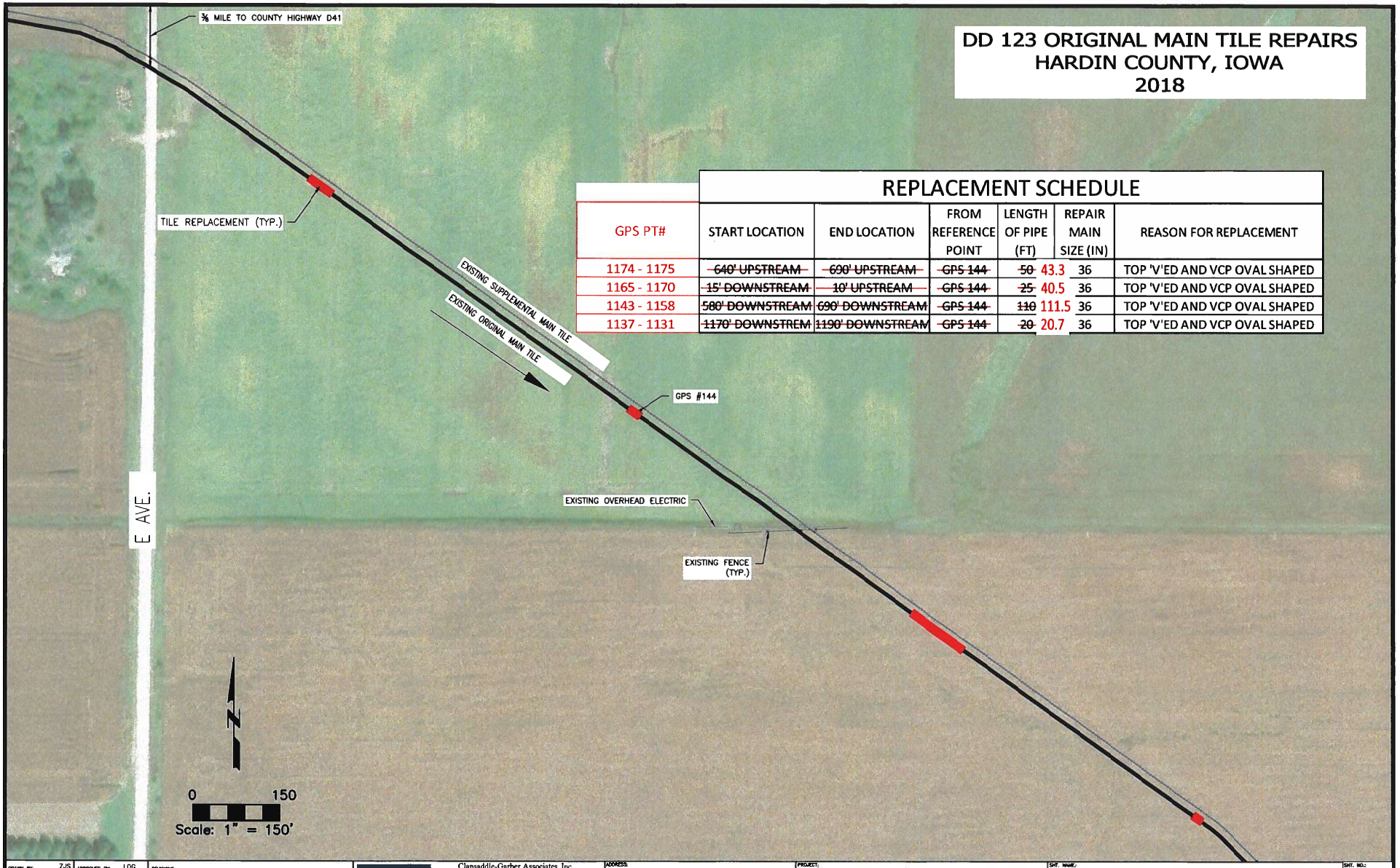
ADDRESS:
739 PARK AVENUE
ACKLEY, IOWA 50601
PH 641-847-3273 FAX 641-847-2303


PROJECT: HARDIN COUNTY 2018 REPAIRS
HARDIN COUNTY, IOWA
2018

SHT. NAME: DD 77 MAIN TILE REPAIRS
ASBUILT

SHT. NO.: 4 OF 9

# DD 123 ORIGINAL MAIN TILE REPAIRS
# HARDIN COUNTY, IOWA
# 2018




## REPLACEMENT SCHEDULE

| GPS PT# | START LOCATION | END LOCATION | FROM REFERENCE POINT | LENGTH OF PIPE (FT) | REPAIR MAIN SIZE (IN) | REASON FOR REPLACEMENT |
|---|---|---|---|---|---|---|
| 1174 - 1175 | ~~640' UPSTREAM~~ | ~~690' UPSTREAM~~ | ~~GPS 144~~ | ~~50~~ 43.3 | 36 | TOP 'V'ED AND VCP OVAL SHAPED |
| 1165 - 1170 | ~~15' DOWNSTREAM~~ | ~~10' UPSTREAM~~ | ~~GPS 144~~ | ~~25~~ 40.5 | 36 | TOP 'V'ED AND VCP OVAL SHAPED |
| 1143 - 1158 | ~~580' DOWNSTREAM~~ | ~~690' DOWNSTREAM~~ | ~~GPS 144~~ | ~~110~~ 111.5 | 36 | TOP 'V'ED AND VCP OVAL SHAPED |
| 1137 - 1131 | ~~1170' DOWNSTREM~~ | ~~1190' DOWNSTREAM~~ | ~~GPS 144~~ | ~~20~~ 20.7 | 36 | TOP 'V'ED AND VCP OVAL SHAPED |

DRAWN BY: ZJS | APPROVED BY: LOG | REVISIONS:
DATE: 2018-02-13 | PROJ. NO.: 6310.5
FIELD BK: -
P:\6310.5\CADD\DESIGN\6310.5_SPOT_REPAIRS_AS-BUILT.DWG; 12/4/2020


CGA
Clapsaddle-Garber Associates, Inc
Main Office: 16 East Main Street
Marshalltown, Iowa 50158
Ph 641-752-6701
www.cgaconsultants.com

ADDRESS:
739 PARK AVENUE
ACKLEY, IOWA 50601
PH 641-847-3273 FAX 641-847-2303


PROJECT: HARDIN COUNTY 2018 REPAIRS
HARDIN COUNTY, IOWA
2018

SHT. NAME: DD 123 ORIGINAL MAIN TILE REPAIRS
ASBUILT

SHT. NO.: 3 OF 9

# DD 143 MAIN TILE REPAIRS
# HARDIN COUNTY, IOWA
# 2018

## REPLACEMENT SCHEDULE

| START LOCATION | END LOCATION | FROM REFERENCE POINT | LENGTH OF PIPE (FT) | REPAIR MAIN SIZE (IN) | REASON FOR REPLACEMENT |
|---|---|---|---|---|---|
| 939' ~~940'~~ UPSTREAM | 1131' ~~1120'~~ UPSTREAM | GPS 2021 | 180 | 15 | SINGLE WALL HDPE IN POOR CONDITION AND COLLAPSING VCP |
| 80' ~~UPSTREAM~~ DOWNSTREAM | 100' ~~UPSTREAM~~ DOWNSTREAM | GPS 2242 | 20 | 18 | PARTIALLY COLLAPSED VCP WITH ROCK VISIBLE |

EXISTING MAIN TILE

GPS 2242

GPS 2021

EAST NEWAGO STREET

MAY STREET

ISABELLA STREET

CATHERINE STREET

EUGENE STREET

MENOMINEE STREET

CITY OF RADCLIFFE

INSTALLED 192 L.F. OF 15" RCP

BEGIN CONSTRUCTION 939' UPSTREAM FROM GPS #2021

TILE REPLACEMENT (TYP.)

END CONSTRUCTION 1131' UPSTREAM FROM GPS #2021

0 200

Scale: 1" = 200'

DRAWN BY: ZJS | APPROVED BY: LOG | REVISIONS:
DATE: 2018-02-13 | PROJ. NO.: 6771.2
FIELD BK.: -
P:\6771.2\CADD\DESIGN\6771.2 -SPOT REPAIRS ASBUILT.DWG; 12/4/2020

CGA
Clapsaddle-Garber Associates, Inc
Main Office: 16 East Main Street
Marshalltown, Iowa 50158
Ph 641-752-6701
www.cgaconsultants.com

ADDRESS:
739 PARK AVENUE
ACKLEY, IOWA 50601
PH 641-847-3273 FAX 641-847-2303

PROJECT:
HARDIN COUNTY 2018 REPAIRS
HARDIN COUNTY, IOWA
2018

SHT. NAME:
DD 143 MAIN TILE REPAIRS
AS BUILT

SHT. NO.:
7 OF 9

# PAY ESTIMATE NO. 6 (FINAL EXCEPT DD 128)

Repairs To Big 4, DD 41, 77, 123, 128, and 143

PROJECT NUMBER 6771.2

12/3/2020

| CONTRACTOR | OWNER | ENGINEER |
|---|---|---|
| Hands On Excavating, LLC | Hardin County Trustees | Clapsaddle-Garber Associates |
| 3305 Ziegler Ave. | 1215 Edgington Ave., Ste 1 | 739 Park Avenue |
| Radcliffe, Iowa 50230 | Eldora, Iowa 50627 | Ackley, Iowa 50601 |

**BIG 4 DIVISION BID ITEMS**

| Item No. | Description | Estimated Quantity | Unit | Installed Quantity | Unit Price | Extended Price |
|---|---|---|---|---|---|---|
| 1 | Main Open Ditch Slough Grading | 0.2 | AC | 0.2 | $ 6,800.00 | $ 1,360.00 |
| 2 | Main Open Ditch Bank Grading | 80 | LF | 80 | $ 19.25 | $ 1,540.00 |
| 3 | Surface Drain Cleanout | 3 | EA | 3 | $ 800.00 | $ 2,400.00 |
| 4 | Surface Drain Inlet Grading | 3 | LOC | 3 | $ 320.00 | $ 960.00 |
| 5 | Riprap | 380 | TN | 363.3 | $ 38.46 | $ 13,972.52 |
| 6 | Surface Drain (36") | 40 | LF | 80 | $ 87.50 | $ 7,000.00 |
| 7 | Surface Drain Removal | 1 | LOC | 1 | $ 850.00 | $ 850.00 |
| 8 | Permanent Seeding | 0.5 | AC | 1 | $ 2,556.00 | $ 2,556.00 |
| 9 | Seeding Warranty | 1 | LS | 2 | $ 750.00 | $ 1,500.00 |

**DD 41 DIVISION ALTERNATE BID**

| | | | | | | |
|---|---|---|---|---|---|---|
| 101AL | 24" Ø CMP Tile Outlet | 40 | LF | 40 | $ 62.75 | $ 2,510.00 |
| 102AL | 18" Ø RCP Tile | 320 | LF | 336 | $ 52.81 | $ 17,744.16 |
| 103AL | Type PC-2 Concrete Collar | 6 | EA | 8 | $ 350.00 | $ 2,800.00 |
| 104AL | Private Tile Connection | 2 | EA | 4 | $ 250.00 | $ 1,000.00 |
| 105AL | Fence Removal and Replacement | 1 | LS | 1 | $ 500.00 | $ 500.00 |
| 106AL | Tree Removal | 1 | LS | 1 | $ 300.00 | $ 300.00 |
| 107AL | Tile Removal | 360 | LF | 376 | $ 2.00 | $ 752.00 |
| 108AL | Riprap | 50 | TN | 43.52 | $ 45.11 | $ 1,963.19 |
| 109AL | Permanent Seeding | 0.3 | AC | 0.04 | $ 1,500.00 | $ 60.00 |
| 110AL | Seeding Warranty | 1 | LS | 1 | $ 500.00 | $ 500.00 |

**DD 77 DIVISION BID**

| | | | | | | |
|---|---|---|---|---|---|---|
| *201rev | 18" Ø RCP Tile | 970 | LF | 975 | $ 48.79 | $ 47,570.25 |
| *202rev | Type PC-2 Concrete Collar | 2 | EA | 2 | $ 350.00 | $ 700.00 |
| *203rev | Private Tile Connection | 4 | EA | 2 | $ 250.00 | $ 500.00 |
| *204rev | Tile Removal (Crush in-place) | 860 | LF | 860 | $ 1.00 | $ 860.00 |
| *205rev | Tile Removal (Offsite Disposal) | 110 | LF | 110 | $ 1.00 | $ 110.00 |

**DD 123 DIVISION BID**

| | | | | | | |
|---|---|---|---|---|---|---|
| 301 | 36" Ø RCP Tile | 205 | LF | 216 | $ 92.20 | $ 19,915.20 |
| 302 | Type PC-2 Concrete Collar | 8 | EA | 8 | $ 350.00 | $ 2,800.00 |
| 303 | Tile Removal | 205 | LF | 216 | $ 5.00 | $ 1,080.00 |

**DD 128 DIVISION BID**

| | | | | | | |
|---|---|---|---|---|---|---|
| **401 | 8" Ø HDPE **FLEX** Dual Wall Tile w/o Rock Bedding | 985 | LF | 852 | $ 10.01 | $ 8,528.52 |
| 402 | 8" Ø HDPE Dual Wall Wye | 1 | EA | 1 | $ 60.00 | $ 60.00 |
| 403 | 8" Ø x 22½° HDPE Dual Wall Bend | 1 | EA | | $ 40.00 | $ - |
| 404 | Type PC-2 Concrete Collar | 2 | EA | 2 | $ 350.00 | $ 700.00 |
| 405 | Private Tile Connection | 3 | EA | 3 | $ 350.00 | $ 1,050.00 |
| 406 | 15" Ø Hickenbottom Intake | 1 | EA | 1 | $ 650.00 | $ 650.00 |
| 407 | 8" Ø Hickenbottom Intake | 1 | EA | 1 | $ 150.00 | $ 150.00 |
| 408 | Top Soil Salvage, Stockpile, and Respread | 1 | LS | 0.4 | $ 3,200.00 | $ 1,280.00 |
| 409 | Channel Grading (Fill and Borrow) | 12 | STA | 6.667 | $ 450.00 | $ 3,000.00 |
| 410 | Debris, Junk, and Rubble Removal | 12 | STA | 12 | $ 200.00 | $ 2,400.00 |
| 411 | Intake Removal | 1 | EA | | $ 300.00 | $ - |
| 412 | Tile Removal | 20 | LF | 20 | $ 5.00 | $ 100.00 |
| 413 | Tree Removal | 12 | STA | 7 | $ 400.00 | $ 2,800.00 |
| 414 | Permanent Seeding | 0.9 | AC | | $ 1,500.00 | $ - |
| 415 | Seeding Warranty | 1 | LS | | $ 500.00 | $ - |

**DD 143 DIVISION BASE BID**

| | | | | | | |
|---|---|---|---|---|---|---|
| 501 | 18" Ø RCP Tile | 20 | LF | 20 | $ 56.32 | $ 1,126.40 |
| 502 | 15" Ø RCP Tile | 180 | LF | 192 | $ 33.75 | $ 6,480.00 |
| 503 | Type PC-2 Concrete Collar | 4 | EA | 4 | $ 350.00 | $ 1,400.00 |
| 504 | Private Tile Connection | 3 | EA | | $ 350.00 | $ - |
| 505 | 6" ACC Pavement | 120 | SY | 33.33 | $ 90.70 | $ 3,023.03 |
| 506 | Pavement Removal | 120 | SY | 33.33 | $ 3.84 | $ 127.99 |
| 507 | Tile Removal | 200 | LF | 212 | $ 2.00 | $ 424.00 |
| 508 | Tree Removal | 1 | LS | 1 | $ 200.00 | $ 200.00 |
| 509 | Permanent Seeding | 0.2 | AC | 0.15 | $ 1,500.00 | $ 225.00 |
| 510 | Seeding Warranty | 1 | LS | 1 | $ 1,062.50 | $ 1,062.50 |
| 511 | Traffic Control | 1 | LS | 1 | $ 200.00 | $ 200.00 |

I have reviewed the work claimed to be completed by the Contractor as reflected above and recommend payment of $ 15,266.03 to the Contractor

Lee Gallentine, Project Engineer

Jacob W. Handsaker for Hands On Excavating LLC.

Contractor

| | |
|---|---|
| TOTAL WORK COMPLETED TO DATE | $ 168,790.75 |
| 10% RETENTION | $ 2,071.85 |
| AMOUNT DUE LESS RETENTION | $ 166,718.90 |
| PREVIOUISLY PAID | $ 151,452.87 |
| AMOUNT DUE AT THIS TIME | $ 15,266.03 |

* - Approved as part of Change Order #1

** - Approved as part of Change Order #3

Note: For pay estimate #1, $25,262.41 was for DD 41, $44,996.67 was for DD 77, and $7,734.66 was for DD 143.
For pay estimate #2, $21, 678.12 was for DD 123.
For pay estimate #3, $28,924.66 was for Big 4.
For pay estimate #4, $11,824.67 was for DD 128.
For pay estimate #5, $6,822.00 was for DD 128 and $4,209.68 was for DD 143.
For pay estimate #6, $2,324.59 was for DD 143, $2,117.08 was for DD 123, $4,743.58 was for DD 77, $2,866.93 was for DD 41, and $3,213.85 was for Big 4.

CGA

# Hardin County Drainage Claim for Damages

Claim # 2021-02 District # 25 Work Order # 209

Township Concord Section 27 Twp _____ Rge _____ Qtr Sec NE

Parcel Tax IDS 862227200003 _____

_____ _____

Name David Fincham

Address 906 Yuma Ave.

Ames, IA 50014

Phone 515-292-6417

Email Address dafincham@mchsi.com

Landowner (if different) _____

Claim Type: **X** Crop Damage

| | |
|---|---|
| Crop Year 2020 | Crop Year _____ |
| Type of Crop Corn | Type of Crop _____ |
| # Acres Damaged 2.2 As verified by CGA | # Acres Damaged _____ |
| Yield Per Acre 220 | Yield Per Acre _____ |

NOTE: ½ of claim goes to David Fincham, ½ goes to Alvin Clark, 32786 Co Hwy S-27, Radcliffe, IA 50230 –

☐ Other: _____

Desired Compensation – Please note if payment should be split between landlord/tenant.

**X** Monetary Payment

☐ Repair of Damages

☐ Other: _____

CGA verified 2.2 acres of crop damage per L. Gallentine email dated 10/05/20.

Claimant Signature - See attached signed original copy Date 09/18/20

**For Office Use Only**

Unit Value $ 3.99 /bushel Unit Value $ _____ /bushel

Crop Damages (Verified Acres X Yield X Unit Value) $ 1931.16 $ _____

Total Amount Approved $ 1,931.16 (Payment split = $965.58 to Fincham, $965.58 to Clark)

Approved Signature _____ Date _____

# Hardin County Drainage Claim for Damages

Claim # 2020-10 District # 25 Work Order # 209

Township Concord Section 27 Twp _____ Rge _____ Qtr Sec _____

Parcel Tax IDS 86 22 2 7200003 _____

_____ _____

Name David Fincham

Address 906 Yuma Ave.
Ames, IA 50014

Phone 515-292-6417 & cell - 515-291-3920

Email Address dafincham@mchsi.com

Landowner (if different) _____

Claim Type: ☒ Crop Damage

| | |
|---|---|
| Crop Year 2020. | Crop Year _____ |
| Type of Crop Corn | Type of Crop _____ |
| # Acres Damaged 2.0 | # Acres Damaged _____ |
| Yield Per Acre _____ | Yield Per Acre _____ |

☐ Fence Damage

☐ Outlet Damage

☐ Other: _____

Desired Compensation – Please note if payment should be split between landlord/tenant.

☒ Monetary Payment

☐ Repair of Damages Split payment @ David's Request

☐ Other: ½ to David Fincham & ½ to Alvin Clark

Claimant Signature David A. Fincham Date 9-18-20

**For Office Use Only**

Unit Value $_____/bushel Unit Value $_____/bushel

Crop Damages (Verified Acres X Yield X Unit Value) $_____ $_____

Total Amount Approved $_____

Approved Signature _____ Date _____

RCIS

Rural Community Insurance Company

# Production Worksheet Summary

| INSURED NAME | AGENCY NAME / CODE | CROP YEAR | POLICY NUMBER |
|---|---|---|---|
| FINCHAM, DAVID | FCS OF AMERICA WEBSTER CITY FLCA 143046 | 2020 | IA-951-241566 |

**HARDIN - CORN - RP** **Unit: 0002-0001** **Location Description:** 27-086N-022W **Type of Claim:** Final

| CAUSE OF LOSS | LOSS % | DAMAGE DATE | NOTICE DATE(S) | HARVEST DATE |
|---|---|---|---|---|
| | | | 06/26/20, 06/26/20 | |
| WIND-061 | 100% | 06/20 | | |

**Acreage, Appraised Production and Adjustments**

| ACRES | SHARE | COMM TYPE | CROP PRAC | APRSD PTNL | MULTI-CROP CODE | MST % | MST FACTOR | SHELL/ QUAL FACT | UNINS CAUSE | REPLANT or OTHER | PROD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.00 | UH 0.5000 | 016 | 003 | 0.0 | NS | | | | | | 0.0 |
| 72.91 | UH 0.5000 | 016 | 003 | 0.0 | NS | | | | | | 0.0 |

TOTAL PROD:

NARRATIVE: Copied PW from Policy number: IA-951-004087, Name: ALVIN CLARK
Cause of Loss Verified By: Comparison of Surrounding Farms/Acreage; Damage is general to the area. Acres Verified By: Measurement by GPS or Satellite Imagery; GPS measurement in conjunction with aerial/satellite photo(s), If Measured would be within 5%; in conjunction with FSA certified acreage reports, aerial/satellite photo(s) and, if Measured, will be within 5% of acreage reported on the MPCI Acreage Report; Acres WOC measured via GPS, all other acres visually verified. Shares Verified By: FSA-578 / CIMS Data Crop Share; CIMS data used to verify shares. 2.0 ac destroyed by the county while working on tile main. the rest of the acres are mechanically unharvestable due to Derecho storm.

Type 016 Prac 003 Acres 2
First Crop: Corn
Appraisal Date: 9/1/2020
Type 016 Prac 003 Acres 72.91
First Crop: Corn

Similar damage in area? [X] Yes [ ] No Assignment of Indemnity exists? [ ] Yes [X] No Transfer of Rights exists? [ ] Yes [X] No

**Additional Unit Information**

| COUNTY-CROP-PLAN | ADD'L. UNITS | EST. PROD/AC | COUNTY-CROP-PLAN | ADD'L. UNITS | EST. PROD/AC | COUNTY-CROP-PLAN | ADD'L. UNITS | EST. PROD/AC | COUNTY-CROP-PLAN | ADD'L. UNITS | EST. PROD/AC |
|---|---|---|---|---|---|---|---|---|---|---|---|

Iowa Drainage District Association
PO Box 509
Humboldt, IA 50548

| Date |
| --- |
| 6/1/2020 |

FILED
JUN - 1 2020
HARDIN COUNTY AUDITOR

John Torbert (515) 221-1961

| To: |
| --- |
| Hardin County Supervisors<br>Hardin County Courthouse<br>1215 Edgington Ave<br>Eldora, IA 50627 |

Iowa Drainage District Association

| Date | Transaction | Amount |
| --- | --- | --- |
| 05/31/2020 | Balance forward | 0.00 |
| 06/01/2020 | INV #6108.<br>--- County Dues, 168,000 @ $0.03 = 5,040.00 | 5,040.00 |
| 06/01/2020 | INV #6109.<br>--- County Mutual Protect(Optional), 168,000 @ $0.0125 = 2,100.00 | 2,100.00 |

Trustees Declined Membership - 6-10-2020
in Regular Drainage Meeting

| | | |
| --- | --- | --- |
| | **Amount Due** | $7,140.00 |

Iowa Drainage District Association

**3775 EP True Parkway, #124**
**West Des Moines, Iowa 50265**
**jtorbertidda@gmail.com**
**www.iowadrainage.org**

**515/221-1961 (phone)**
**515/598-7897 (fax)**
**515/707-7451 (cell)**

June 1, 2020

Dear Hardin County Supervisors,

Enclosed is your county's dues statement for the 2020-21 fiscal year. For those that have supported us in the past with your membership, we urge you do so again. For those that have chosen not to participate, we hope you will consider doing so this year.

Membership costs only three cents/acre of land drained. This dues level is unchanged from last year. Membership in the mutual protection fund is assessed at 1 and 1/4 cent per acre drained – also unchanged.

Fighting the numerous challenges facing drainage rights requires a strong association. IDDA's strength comes from members who are willing to commit the necessary funds on an annual basis to keep the association moving forward.

Also included on your invoice is the assessment for the Mutual Protection Fund. Although it is voluntary, I strongly urge your participation. It is the mutual protection fund that gives IDDA the resources to play a role a larger role in the judicial and legislative arena and also allows the association to retain part-time legal counsel as a further service to our membership.

As I write this request, IDDA currently has a bill pending in the legislature which is set to come back into session in early June. That bill is HF 2552. It will have the impact of saving landowners in drainage districts a great deal of money. Redundant publication of classification and reclassification data will no longer be required and there will be more flexibility given to boards of supervisors and elected drainage trustees as then when an engineer has to be retained. As an indication of the strength of the association and its lobbying efforts on your behalf, that bill passed the House by a vote of 97-0. It awaits action by the Senate. We hope that we can move the bill to the Governor's desk when the legislature reconvenes.

We have also been working closely this year with Senator's Grassley's staff to see if we can find a way that the U.S. Fish and Wildlife Service would start paying drainage assessments.

IDDA continuously works on your behalf in the state and federal regulatory arena, the court system, the state legislature and Congress. Thank you for your continued support of the association.

Sincerely,

Keith Dencklau

Keith Dencklau
IDDA President
Member, Webster County Board of Supervisors