

U. S. No. 508

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FIELD BOOK

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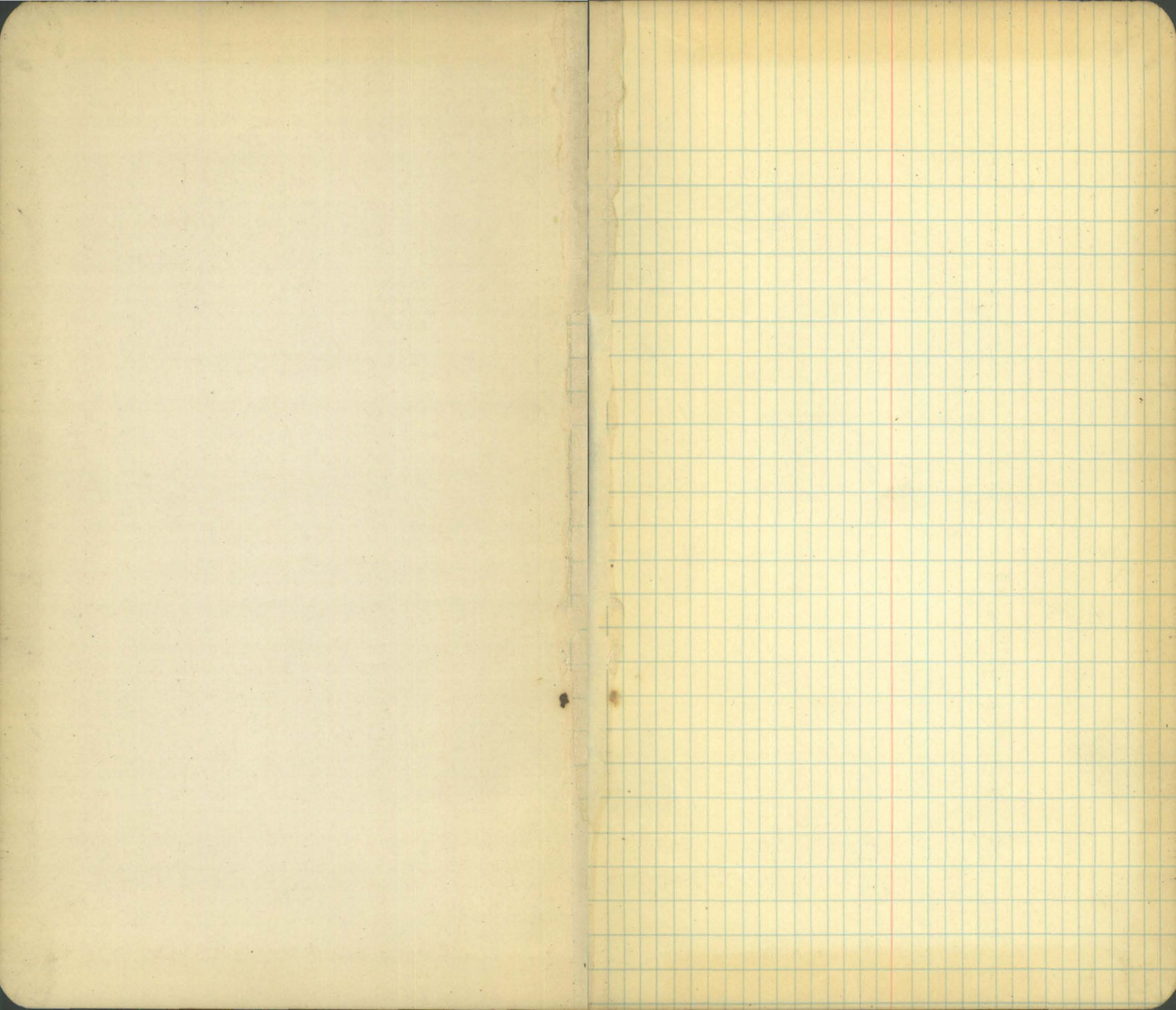
*Miscellaneous Book
For 1927*

73

Property of
Black Hawk
County

Care of
County Engr.



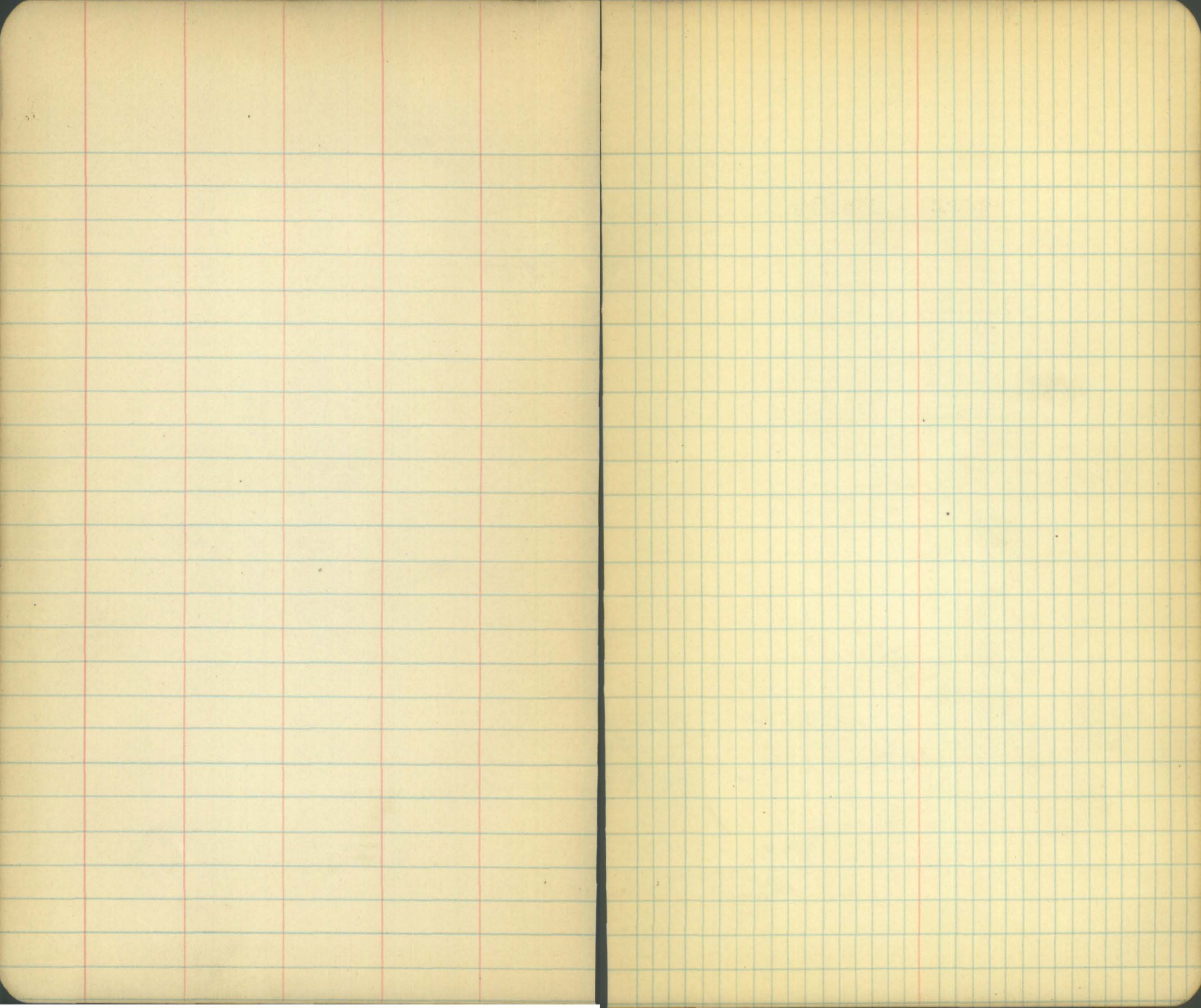


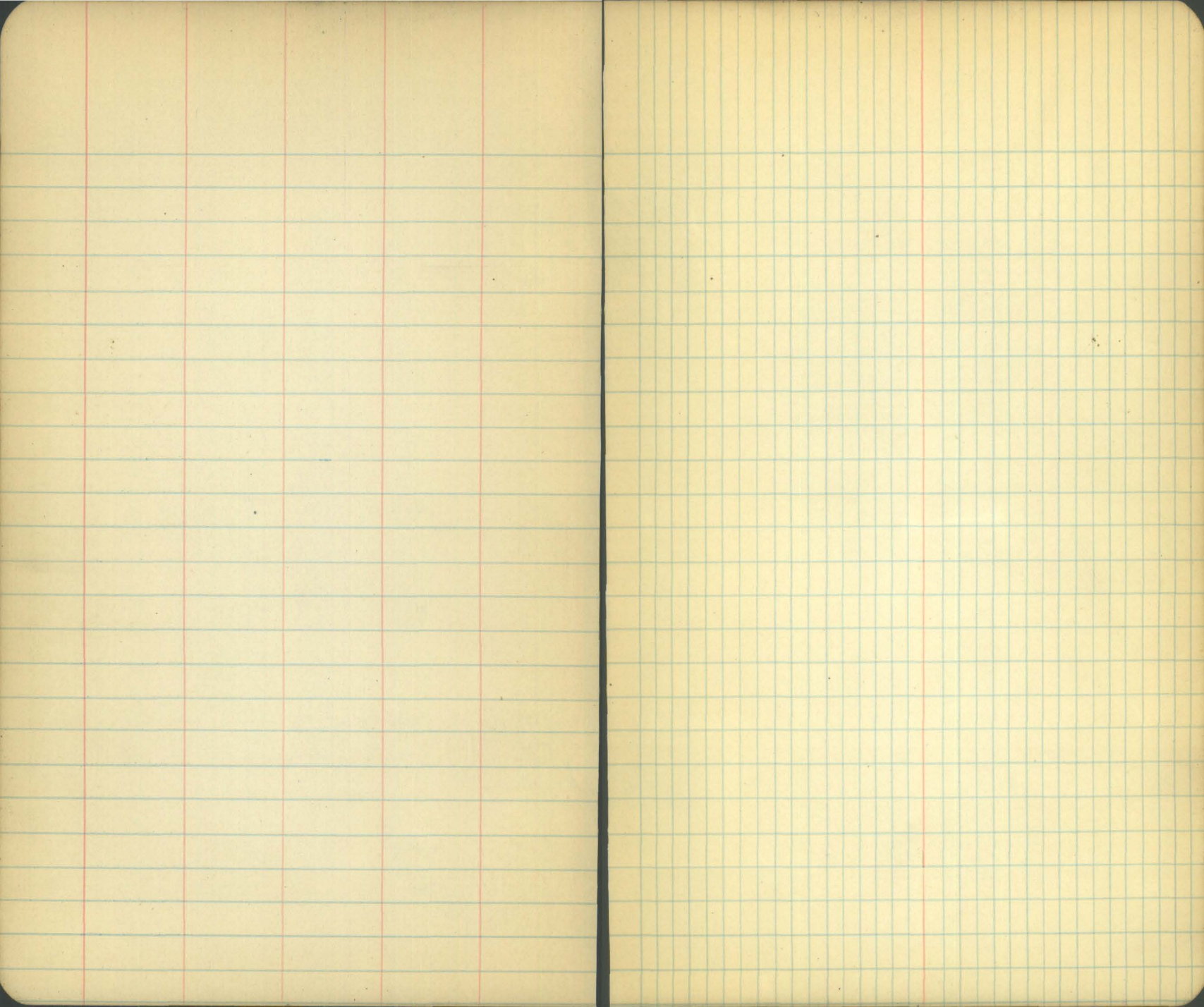
Index to Contents.

	Pages
Bridge & Culv. Surveys for Letting 3/28/27	1-6
Rounds Gravel Pit Sec. 24-89-14 Cedar Falls. Twp. Sketch of same.	7
Rounds Gravel Pit X-Sections Prelim to Stripping Levels & cuts	8-9
6" Tile at Junction Eagle Center-Vorhies Rd. and Prim. #59 Both E & W.	10-11
Engel Gravel Pit. 6" Tile Levels & cuts.	12
Rounds Gravel Pit X-Sections after Stripping	13-14
Rousselow Gravel Pit. Prelim. X-Sections to Stripping	15
Rousselow Gravel Pit. Sketch of Proposed Extn.	16
Fisher Gravel Pit at Dunkerton Prelim X-Sections for Stripping	17
" " " " " Sketch of Pit & Test Data.	18
Private Survey for Nesbit Sec. 16 Barclay Twp.	19
Rousselow Gravel Pit Stump Data	20
Barclay Twp. Between Sections 29-32 Lowered 1/2 Mile Corner Stone & referenced same.	21
Bridge & Culv. Staked Items 37-40	22
Private Survey for Anderson Sec. 19 Barclay Twp.	23
Andorf Gravel Pit - Drainage	24
Sections 15-22 & 16-21 Lester Twp. - Levels on Open Ditch S. Side Rd.	25-28
Levels on open ditch into field opposite sta. 49+42.5	29
Engel Gravel Pit - Sketch of Extension to Pit	30

Index to Contents.

	Pages
Mahood Gravel Pit - Levels on 6" Tile to drain pit	31
S. W. 100. - Cedar Falls Rd. Tile	32-43
Stadium Survey Bridge Site Item #10 Letting 4/11/27	58
Proposed Rd. Survey Between Sections 13-24 C.F. Twp. & 18-19 W. 1/2 Sec. "	60-67
Fisher-Dunkerton Gravel Pit X-Sections after stripping	68
Dewar-Raymond Rd. - 6" Tile Grades & Levels	69-72
Rousselow Gravel Pit - X-Sections after Stripping	73
Rousselow Gravel Pit - X-Sections before Stripping	59 & 57
Dewar-Raymond Rd. - 6" Tile Grades & Levels	74
Laport City Storm Sewer Void	75-76
Fisher Gravel Pit X-Sections After Stripping	48
Lester Twp. 15-22 & 16-21 Levels on open ditch N. Side Rd.	44-47
Bridge & Culv. Conc. Data	50-56
Bridge & Culv Conc. Data	20







Sta.	B.S.	I.I.	F.S.	Elev.
B.M.	1.65	101.65		100.00

Note: Drive to S. is 23' E. of W. Sec. line Sec. 19 N. 1/2 Twp.
 Located 53' E. of W. Sec. line Sec. 19 N. 1/2 Twp.

Item 9 Located approx. 450' E. of W. Sec. line Sec. 19 W/30. Twp.
Mar. 28/29
Letting 0.76 100.76 100.00 ✓
Stake = 94.67 = Inlet = 94.5 = Cut = 0' 2"
Stake = 94.58 = Outlet = 94.4 = Cut = 0' 2"

B.M.	4.80	104.80	100.00
------	------	--------	--------

Item #7. Note:- Section taken 10' N. of old Culv. and taken approx. 30
3/28/27 Inlet = 96.50 = Stake = 98.32 = Cut = 1'-10" ^{Slope}
Letting Outlet = 96.00 = Stake = 96.78 = Cut = 0'-9"

B.M.	3.48	103.48	100.00
------	------	--------	--------

B.M.	4.87	104.87	100.00
B.M.	4.79	104.79	100.00

H₂O #5
 C.F. Temp.
 3/28/27 Letting

Inlet = 5.50 = 99.29 = Grade = 98.6 = C.O. 99
 Outlet = 6.19 = 98.60 = " = 98.0 = C.O. 98

B.M.	5.72	105.72	100.00
------	------	--------	--------

C.F. Twp. Place Corr. Pipe

Spike in Evergreen Approx. 60' S. of Rd. on W. line Sec. 19 N. 1/4 T. 22 N.

945 955 963 964 951 958 965 971 974 973 961 963 973 973 976
22 62 57 53 61 59 52 41 41 57 57 44 44 41
100 50 27 17 13 11 10 8 9 85 11 12 13 24 50

 $3 \times 2 \times 24$

8.34 74294.7 84894.9 95695.9 95694.0 941.4 84894.9 944.9 941.9 955
8.3 75 70 69 71 61 58 61 77 73 68 68 73 70 67
100 50 24 15 12 11 0 8 9 12 14 24 27 50 100

 $9' \times 2 \times 24$

N.

N.W. Cor. of N. Hdwh. Old. Conc. Culv. Approx. 500' N. Prim. #57 Sec. 28-29 C.F.T.

98.6 98.1 97.9 98.6 97.2 98.5 98.0 98.6 99.3 99.5 99.4 98.2 97.7 97.0 97.0 97.6 97.1 96.3 96.4 96.5
6.2 6.7 6.9 6.2 5.6 6.3 6.8 6.2 5.5 5.3 5.4 6.6 7.1 7.8 7.8 7.2 7.7 8.5 8.4 8.9
100 50 36 31 28 19 16 11 8 0 48 12 18 20 22 23 33 35 50 100

 $6 \times 3 \times 30$

Spoke in tel. Pole on W. Side Rd. Opposite Inlet of Culver.

100!

[illegible] $2 \times 2 \times 26$

No.
↑

Spike in fence-post W. side of Rd. opposite Culm.

100.7	100.2	99.9	99.6	99.6	99.0	98.7	100.4	100.3	100.4	98.4	98.4	98.5	97.3	96.5	95.9	94.4
57.0	56.5	55.8	6.1	6.1	6.7	7.0	5.3	5.2	5.3	7.1	7.1	7.2	8.2	9.3	9.8	16.1
100	50	27	26	23	18	13	13	0	6	6	17	19	24	31	30	100

 $2 \times 2 \times 26$

Sta. B.S. H.I. F.S. Elev.
 B.M. 7.68 107.68 100.00
 Item #6
 C.F. Top
 1/28/27 B.M. = 7.50 107.50 100.00
 Letting
 N. Stake = 7.83 = 99.67 = Inlet = 98.00
 S. Stake = 10.13 = 97.37 = Outlet = 97.00

B.M. 4.65 104.65 100.00
 B.M. 4.81 104.41 100.00
 Item #3
 C.F. Top
 3/28/27 Letting
 N. Stake = 9.90 = 99.51 = Inlet = 98.80 = C. 0.71
 S. Stake = 5.62 = 98.79 = Outlet = 98.60 = C. 1.19

B.M. 7.51 107.51 100.00
 B.M. 2.97 102.97 100.00
 Item #4
 C.F. Top
 3/28/27 Letting
 N. Stake = 8.30 = 97.67 = Inlet = 96.60 = C. 1.07
 S. Stake = 6.44 = 96.03 = Outlet = 95.80 = C. 0.23

Elevations taken every 100' N. side Rd. in ditch W. from Culv.

B.M. 4.25 104.25 100.00
 Item #1 Letting 3/28/27 Inlet = 97.20 = C. 0.64
 Outlet = 96.40 = C. 1.43

B.M. 4.66 104.66 100.00
 Item #8 Letting 3/28/27 Inlet = 98.24 = Cut = 0.0'
 Outlet = 98.22 = Cut = 0.0'
 3'x2'x24'

→ N.

Spike in Hy-Line Pole S. side Rd. 1st Pole E. of Culv.
 93.9 95.2 95.7 96.9 00.1 02.4 02.4 00.9 97.5 97.9 98.1 98.5 99.4 100.0 00.5
 13.8 12.5 12.5 11.3 7.4 5.1 5.1 5.3 6.8 10.2 9.8 9.6 8.9 8.3 7.7 7.2
 100 50 33 13 13 11 0 6 10.5 10.5 18 23 27 32 46 50
 Spike in Hy-Line Pole S. side Rd. 1st Pole E. of Culv.
 Cut N. Stake = 1.67 3'x2'x24'
 Cut S. Stake = 0.37 30' (14' on N. & 16' on S.)

→ N.

Spike in Hy-Line Pole N. side Rd. opposite Culv.
 95.7 96.4 96.9 97.9 98.6 99.1 99.6 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9 99.9
 8.0 8.3 8.2 6.8 6.1 5.6 5.1 5.3 6.0 5.7 5.3 4.8 4.8
 100 50 33 26 13 9 0 9 13 21 25 30 100
 3'x2'x26'

→ N.

Spike in Hy-Line Pole N. side Rd. 1st Pole W. of Culv.
 93.5 94.5 95.7 96.4 97.3 97.9 98.5 98.6 98.5 99.2 99.6
 14.0 12.8 12.3 11.9 10.2 9.6 10.0 10.9 9.9 8.6 8.2 7.9
 100 50 30 11 11 0 11 16 24 35 50 100
 3'x2'x26'
 97.6 99.5 01.6 01.8 02.3 02.7 02.7 03.1 03.3
 9.6 8.0 5.9 5.7 5.2 4.8 4.8 3.7 3.2
 100 200 275 300 400 500 575 550 600
 Prawn into field

N.

Nail in Tel. Pole #6352 1st Pole N. of Culv.
 (6.42 6.7 8.5 8.8 8.2 7.9 5.6 4.6 4.9 6.9 6.7 6.6 6.4 5.6 5.9 6.9)
 5 20 50 27 18 13 10 0 10 13 18 21.5 31 36 50 5

→ N.

Spike in root of Willow N. side Rd. Approx. 160' E. of Culv.
 5.3 5.0 5.7 5.72 6.0 6.9 5.1 5.1 5.6 5.4 6.6 6.7 5.25 6.7 6.7
 27 25 20 5 16 11 9 0 7 10 11 10 5 32 50
 7.5 100

3/10/27 A.M. Cloudy-Madeira

U.S. Butterfield,
E. Matthews.
C. J. Cavanaugh.

3

N. ←

Sta. B.S. H.L. F.S. Elev
B.M. 3.71 103.71 100.00

Item #13 3/28/27 Letting
Dist #4.
Sec. 2-11 Orange Twp. 8'x9'x28' 5' New.

B.M. 1.24 101.24 100.00
7/29/27 A.M.

Inlet = 95.3 - Stake = 5.30 = 95.94 = C. 0' 8"

Outlet 95.1 - Stake = 5.59 = 95.65 = C. 0' 7"

B.M. 6.16 106.16 100.00

Item #15 3/28/27 Letting Placing Corr. Pipe
8'x12'
Sec. 13-24 Orange Twp.

B.M. 5.52 105.52 100.00

Item #14 3/28/27 Letting
8'x13'x26'
Sec. 13-24 Orange Twp.
Inlet = 92.0 - Stake = 5.87 = 98.61 = C. 1' 6 1/2"
Outlet = 96.6 - Stake = 6.93 = 97.55 = C. 0' 11"

B.M. 4.48 104.48 100.00
8/3/27

B.M. 5.30 105.30 100.00
Inlet = 98.7 - Stake = 4.60 = 100.76 = C. 2' 1"
Outlet = 98.1 - Stake = 5.81 = 99.55 = C. 1' 5 1/2"

Item #15 3/28/27 Letting
8'x12'x26'
Between Sec. 25 Orange & 30 Cedar Twp's. Near N. end Mile.
B.M. 5.36 105.36 100.00
8/3/27

B.M. 1.11 101.11 100.00
Inlet = 92.5 Stake = 5.54 = 98.30 = C. 2' 4"
Outlet = 91.9 Stake = 6.86 = 93.48 = C. 1' 7"

Item #16 3/28/27 Letting
2'x12'x24'
Near Center of Mi. between Sec. 25 Orange & 30 Cedar Twp's.
B.M. 0.34 100.34 100.00
8/3/27

→ Spike in Willow Approx. 100' E. of Intersection S. side Rd.

03.1 100.0 96.9 96.3 95.8 95.8 96.2 95.7
0.6 3.7 6.8 7.4 7.8 7.9 8.0 8.0
25.4 W. 20 W. 10 W. 5 32 E. 100 E. 200 E. 300 E.
Intersection
Old Cul. Skew
93.9 93.9 95.6 95.6 96.1 95.1 96.3 96.9 95.9 95.9 96.3 96.4 95.9 95.9 95.9 95.9
10.5 9.8 8.1 8.3 9.0 8.0 7.4 7.7 8.2 7.8 2.4 7.3 8.2 8.4 8.3 7.9 7.8
200 100 20 20 19 16 0 7 12 14 21 22 33 35 100 200 300
94.0 93.9 94.6 94.6 93.4 94.3
9.7 10.4 9.1 9.8 10.3 9.4
Fl. Fl. Fl. Fl. Fl. Fl.
Fence N. side N. End N. End S. End S. End at Fence S. side

40' Road

Spike in Cor-post N. side Rd. Approx. 80' W. of Cul. location

95.9 92.5 96.7 96.6 100.0 100.0 100.0 97.6 97.6 97.6 100.4 101.2
10.8 8.7 2.5 7.6 6.2 5.8 6.2 8.4 7.8 7.3 5.8 5.2
30 21 13 12 7 0 8 7 13 16 5.2
Fence Follows S. ditch Enters field

N. ←

Spike in Cor-post S. side Rd. 1/2 Mi. Sec. line

94.9 95.1 96.5 96.2 99.9 99.9 99.9 97.1 97.5 97.7
10.9 9.8 9.1 9.3 6.5 6.1 6.0 8.6 8.4 8.0 7.8
100 50 19 11 8 0 10 12 18 50 100

Nail in Tel. Pole Approx. 75' S. of proposed Cul. site W. side Rd.

10.1 100.6 100.2 99.9 99.9 99.9 99.9 97.4 96.8 96.6 95.9
6.2 4.7 5.1 5.9 5.4 5.4 5.6 7.0 7.1 8.5 8.7 9.4
50 29 16 13 9 0 10 28 30.5 36 50 100
N.
N.

Top Conc. Cor-post W. side Rd. Approx. 20' S. of Cul. location.

18.1 20.2 9.2 9.2 94.7 94.9 94.9 92.8 93.4 94.0 94.5 94.9
13.0 10.9 9.9 8.9 6.4 6.2 6.2 6.3 7.7 7.1 6.0 6.2
100 50 32 11 7 0 14 15 25 36 50 100
N.
N.

Sta. B.S. H.L. F.S. Elev.

B.M. 374 103.74 100.00

Item #17 3/28/27 Letting Inlet = 96.2 Stake = 5.47 = 99.41 = C. 2'-3"
Outlet = 95.6 Stake = 8.42 = 95.46 = F. 0'-2"
Between Sec. 25 Orange & 30 Cedar Near S. end of Mile.

3/3/27 B.M. 388 103.88 100.00

B.M. 7.65 107.65 100.00

Item #11 Profile & Rd. N.E. ly.

Const. 36'x20' I-Beam Sec. 33 Black Hawk Twp.

(3/28/27 Letting) Profile & Rd. S.W. ly.

Wing Elevations

B.M. 4.55 104.55 100.0

Proposed Struct. 36'x20' I-Beam Conc. Floor and Rails.

Proposed Rd. Grade = 103.8

Bottom Footing = 89.8

Height About = 14.0

7/21/27 A.M.

B.M. 275 107.75 100.00

Nail in Tel. Pole N. Side Rd. Approx. 45' N. of Culv. location.

923	947	948	951	990	989	984	961	968	976	991	997
11.8	7.0	8.7	8.4	7.7	7.9	5.3	2.6	6.8	6.1	4.5	4.0
100	50	32	8	7	0	12	13	24	36	50	100

↓
N.

Nail Tel. Pole #625

02.5	023	027	031	03.2
5.2	5.7	5.0	4.0	7.5
0	100	200	300	400

02.5	02.4	02.0	01.3	01.3	03.0
5.2	5.3	5.7	6.7	6.7	2.7
0	50	100	200	300	400

S. End Br.

95.3	102.4
12.86	5.11
B.N.W.	Top N.W.

102.4	93.8
5.28	18.9
Top N.E.	B.N.E.

93.5	102.4
14.2	5.13
B.S.W.	Top S.W.

102.4	94.5
5.27	13.20
Top S.E.	B.S.E.

93.6	93.8	02.5	02.5	02.5	93.9	94.2	94.4
14.1	13.9	5.2	5.2	5.2	13.8	13.5	13.3
39	8	8	0	8	8	50	150

Nail Tel. Pole #625

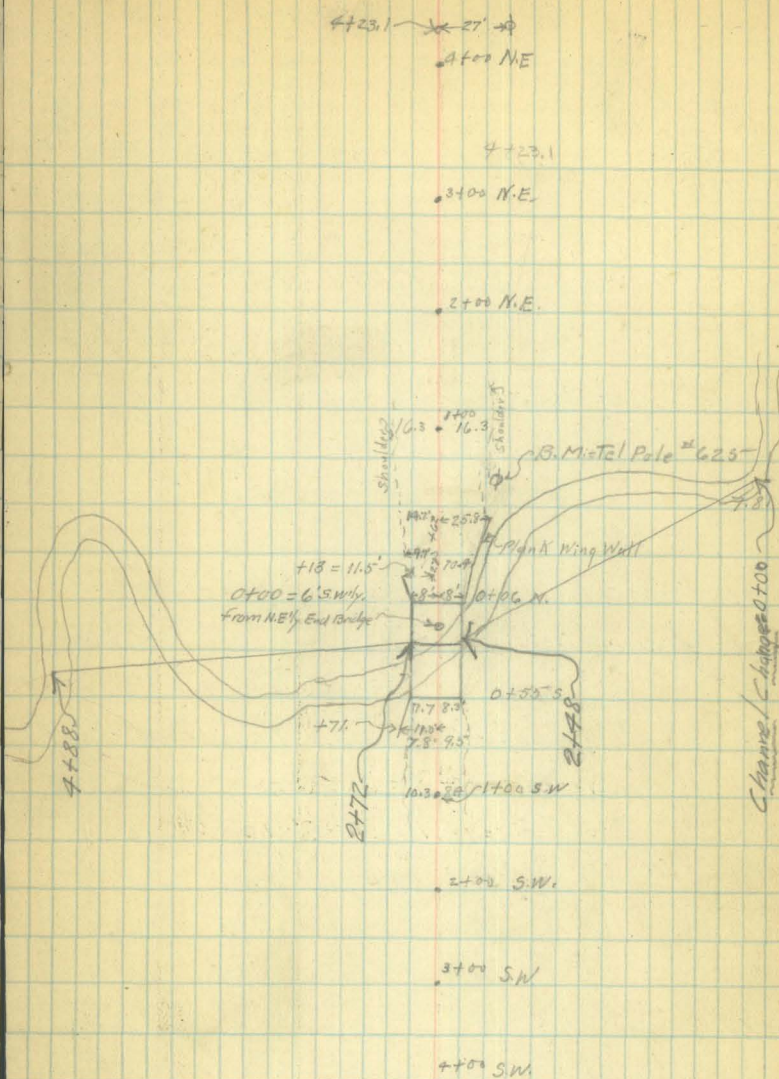
93.1	93.7
11.5	10.9
200	100

Nail Tel. Pole #625

Note: - I-Beam Staked 6' S.W. ly. from N.E. ly. end of old bridge.

Stadia Survey of Creek Channel on Rd.
S.W. of Hudson Sec. 33 Black Hawk Twp.
Item #11 Letting 3/28/27.

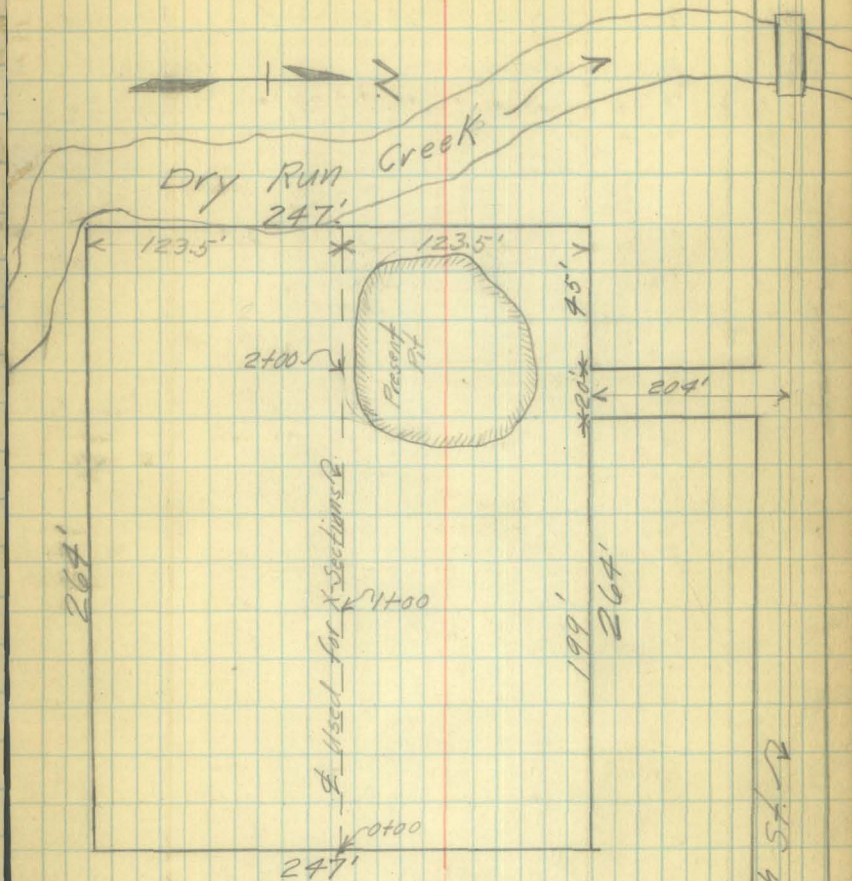
Sta.	Δ Rk.	Δ Lk.	Top X-Hair	Bottom X-Hair	Distance
1.	23°-45'		13.00	12.34	66'
2.	28°-45'		13.00	12.35	65'
3.	32°-49'		11.00	9.96	104'
4.	43°-55'		9.00	7.34	166'
5.	55°-39'		8.00	6.02	198'
6.	65°-30'		9.00	6.84	216'
7.	67°-53'		8.00	5.55	245'
8.	65°-04'		8.00	5.12	288'
9.	56°-27'		7.00	3.55	345'
1.		170°-23'	13.00	12.56	44'
2.		128°-07'	12.00	11.07	93'
3.		125°-55'	12.00	10.75	125'
4.		108°-57'	11.00	9.26	174'
5.		92°-38'	10.00	7.94	206'
6.		76°-59'	9.00	6.47	253'
7.		79°-34'	8.00	5.41	299'
8.		82°-03'	8.00	4.80	320'
9.		87°-30'	8.00	4.56	344'
10.		97°-11'	9.00	5.63	337'
11.		104°-00'	9.00	5.73	327'
12.		107°-57'	9.00	5.56	344'
13.		109°-58'	8.00	3.98	402'
14.		118°-49'	9.00	4.13	487'



3/30/27 P.M.

Rownds Gravel Pit.

Rounds Gravel Pit.
sketched by D. S. Butterfield.



Sec. 24-89-14

Cedar Falls Twp.

27th St. ↘

3/30/27

P.M.

D. S. Butterfield.
E. M. Mathews
C. J. Cavanaugh.

8

Rounds Gravel Pit.

X-sections for stripping.

Sta.	B.S.	H.I.	F.S.	Elev.
B.M.	4.90	104.90		100.00

0+00

0+50

1+00

1+50

1+69

1+70

1+73

1+76

1+80

1+82

1+88

1+94

Nail in Cornerpost N.E. Cor. of Rounds Gravel Pit.

01.6	01.1	00.2	99.6	99.1	99.3	99.1	99.3
3.3	3.8	4.7	5.3	5.5	5.6	5.8	5.6 ✓
124	100	50	0	21	50	100	124

01.5	01.2	00.2	99.4	99.1	98.8	98.7
3.4	3.7	4.7	5.3	5.8	6.1	6.2 ✓
124	100	50	0	50	100	124

01.8	01.4	00.7	100.0	99.7	98.8	98.6
3.1	3.5	4.2	4.9	5.7	6.1	6.3 ✓
124	100	50	0	50	100	124

2.1	1.6	01.1	00.3	99.6	98.9	98.0
2.8	3.3	3.8	4.6	5.3	6.0	6.2 ✓
124	100	50	0	50	100	124

1.8	1.8	1.1	8.4	99.8	98.6	92.8
3.1	3.1	3.8	4.5	5.1	6.3	7.1 ✓
124	100	50	0	50	100	124

1.8	1.8	0.8	0.3	0.1	99.6	99.5	98.4	97.8
3.1	3.1	4.1	4.6	4.8	5.6	5.4	6.4	7.1 ✓
124	100	54	52	0	50	57	100	124

2.2	1.9	0.8	99.9	99.4	99.0	99.5	98.7	97.9
2.7	3.0	4.1	5.0	5.5	5.9	5.8	6.2	7.0 ✓
124	100	56	0	51	68	75	100	124

2.2	1.9	0.8	0.2	99.9	99.3	99.2	93.5	92.9	93.2	93.3	92.5	92.9	92.8
2.7	3.0	4.1	4.7	5.1	5.6	5.4	11.4	12.0	11.7	11.5	6.2	5.6	6.5
124	100	56	0	11	14	24	38	55	64	67	74	84	100

2.4	2.1	1.8	1.1	0.5	99.5	99.2	99.1	93.5	92.9	93.2	93.5	98.5	99.3	96.7	92.4
2.5	2.8	3.1	3.8	4.4	5.4	5.7	5.8	11.4	12.0	11.7	11.5	6.2	5.6	6.5	7.1 ✓
124	100	86	61	45	41	0	29	38	55	64	69	74	84	100	124

2.9	2.3	1.9	1.3	0.6	99.1	99.4	99.4	93.3	93.3	93.2	99.1	98.4	97.9
2.0	2.6	3.0	3.6	4.1	5.2	5.5	5.5	11.6	11.6	6.7	5.8	6.3	7.0
122	118	94	77	58	48	0	24	34	38	55	64	74	84

2.3	2.1	2.0	1.4	99.1	98.8	98.8	93.7	92.5	91.7	99.1	97.8
2.6	2.3	2.9	3.6	5.2	6.1	6.1	11.2	12.4	7.2	6.8	7.1
117	113	83	70	54	0	8	12	21	34	42	124

1.9	2.1	2.3	2.0	0.4	99.4	98.5	98.9	92.3	92.3	91.4	98.5	97.9
3.1	2.2	2.6	2.4	4.5	5.5	6.4	11.0	12.6	7.3	6.4	7.0	
116	107	100	82	66	52	0	7	28	38	50	100	124

Sta.	B.S.	H.I.	I.S.	Elev.
		104.90		

2400

1.8	2.1	2.3	2.0	0.4	99.8	98.5	93.9	92.3	92.2	97.6	96.5	97.9
3.1	2.2	2.6	2.9	4.5	5.5	6.4	11.0	12.6	12.6	7.3	6.4	7.0
116	107	100	82	60	52	5	7	28	75	60	100	124

2 + 14

[illegible]

2 + 31

[illegible]

2440

[illegible]

7 + 45

97.1	92.1	91.8	91.6	93.5	92.1	91.0	93.9	91.3	94.1	97.0	97.1	96.0	95.1	96.3	96.0	
122	122	131	133	162	128	75	76	65	66	68	79	78	84	93	86	89
124	106	95	88	100	58	30	15	7	0	26	38	57	72	100	110	124

2750

q_2^1	q_2^1	q_2^5	q_1^7	q_0^0	q_2^3	q_8^3	q_0^0	q_9^3	q_8^7	q_5^8
12.2	10.2	12.2	13.7	17.0	12.6	6.1	7.9	5.1	6.2	9.1
12.2	10.5	10.0	8.8	7.9	5.9	1.7	0	1.8	7.9	12.4

2 + 63

90.2	90.3	89.7	89.7	90.5	92.5	98.5	96.5	95.9
$\frac{14.7}{124}$	$\frac{14.6}{100}$	$\frac{15.2}{84}$	$\frac{15.2}{34}$	$\frac{14.7}{30}$	$\frac{12.4}{0}$	$\frac{6.4}{50}$	$\frac{8.4}{100}$	$\frac{9.0}{124}$

B. M.

490

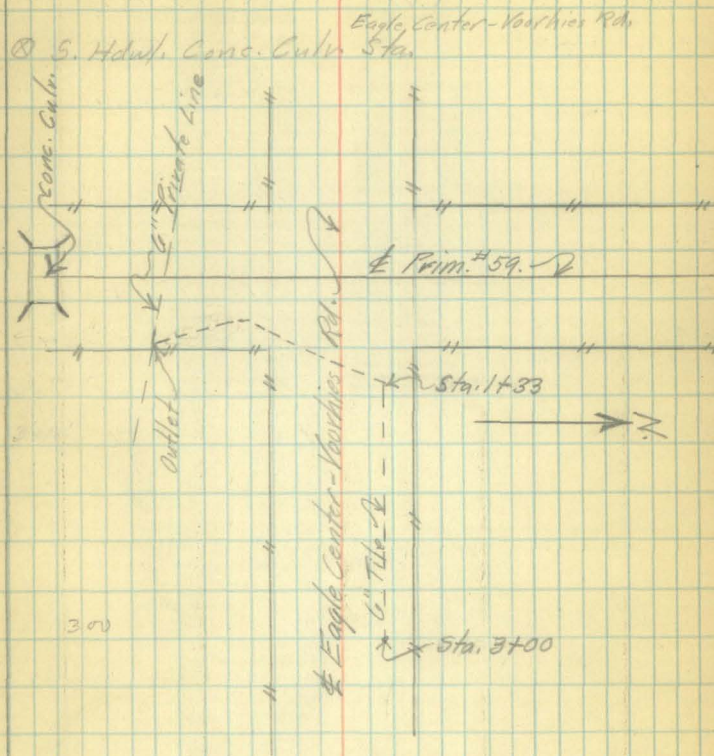
Nail in Corner-post N.E. Cor. of Round Gravel Pit.

4/26/27 P.M.

H.M. Miller - D.S. Butterfield
E.M. Mathews - C. J. Cavanaugh.6" Tile N. Side Rd. E. of Prim. #59 on Eagle
Center-Voorhies Rd. Outlet in Private Line
6" Tile Approx. 120' S. of E. of Intersection Corner on
E. Side of Rd. Approx. 3' from E. Fence

10

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	4.77	987.69		982.92		
0+00 = Outlet = Top Tile			Outlet 12.43 11.93	975.26		
Stake at Outlet			8.84	978.85	975.26	3.59
0+50			7.94	979.75	976.11	3.64
1+00			7.73	979.96	976.95	3.01
1+08			5.60	982.09		
1+33 = Cross Rd. here			5.98	981.71	977.50	4.21
2+00			6.04	981.65	977.91	3.74
3+00 = End 6" Tile N. side			5.36	982.33	978.50	3.83

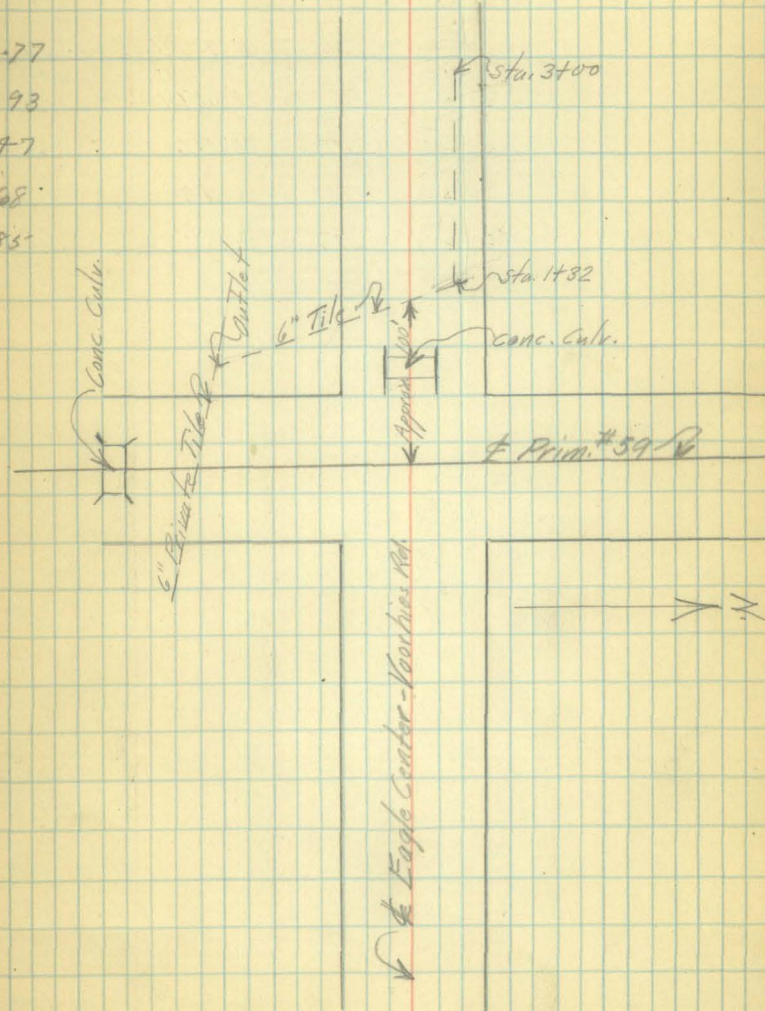


4/26/27 P.M.

6" Tile N. Side Eagle Center-Voorhies Rd. and W. of
Intersection corner with Prim. #59. Outlet into 6"
Private Tile Line in field approx. 40' W. of W. Fence

11

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	4.49	987.41		982.92		
0+00			Outlet → 11.74			
Outlet Stake			Top Tile → 11.24	975.67		
1+00			8.14	979.27	975.50	3.77
1+32			6.15	981.26	976.33	4.93
2+00			6.34	981.07	976.60	4.47
3+00			5.57	981.84	977.16	4.68
			5.56	981.85	978.00	3.85



4/26/27 P.M.

H.W. Miller - D.S. Butterfield.
E.M. Mathews - C.J. Cavanaugh.

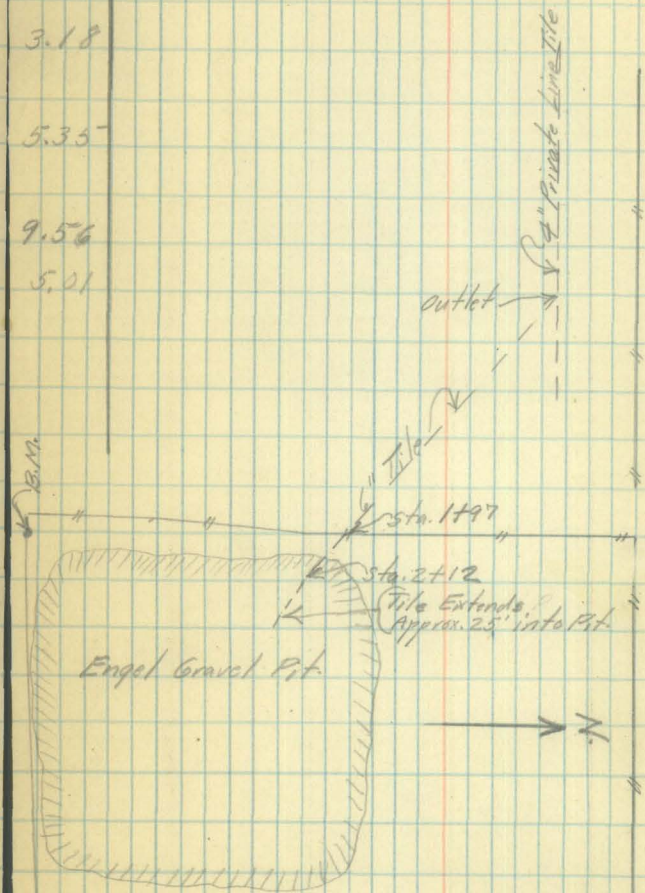
6" Tile Drains N.W. 1/4. Engel Gravel Pit.

12

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	1.14	101.14		100.00		
0	5.36	93.47	12.93	88.21		
0+00			7.65	85.82	82.64	3.18
Top Tile at Outlet			Outlet →	82.64		
			10.50	82.97		
1+00			3.19	90.28	84.93	5.35
0	11.61	101.89	3.19	90.28		
1+97 = Cross	W. Fence		5.17	96.72	87.16	9.56
2+12 = End			9.38	92.51	87.50	5.01
B.M.			1.90	99.99	100.00	

Spike in Corner-post S.W. Cor. of Pit

Engel Gravel Pit



Sec. 18-88-14

7/30/27 AM.

L.S.B.
C.J.C.

13

Rounds Gravel Pit.

X-Sections after Stripping

Sta. B.S. H.I. F.S. Elev.
 B.M. 5.85 105.85 100.00
 1+05 = Beginning of stripping

1+05 =

1+50

1+69

1+73

1+80

1+82

1+88

1+94

2+00

2+14

Nail in Cor-post N.E. Cor. of Rounds Gravel Pit.

029 0.8 28 03 00 99.7 99.4 99.2
 3.9 5.1 5.1 5.6 5.9 6.2 6.5 6.7
 124 70 53 23 8 17 48 70

20 99.9 99.1 98.7 97.5 97.5 96.8 96.9 97.0 96.7 97.3 98.5 99.2
 3.9 6.0 6.8 7.2 8.4 8.4 9.1 9.0 8.9 9.2 8.6 7.6 6.7
 124 118 100 83 58 39 20 0 16 41 59 66 70

12 99.8 99.1 99.0 97.9 96.9 96.2 97.0 97.1 97.0 96.8 96.5 96.8 99.4
 4.7 6.1 6.8 6.9 8.5 8.5 9.7 8.9 8.8 8.9 9.1 9.4 9.1 7.3 6.5
 124 121 100 87 62 38 28 14 0 16 30 48 69 70 75

1.5 99.8 99.1 97.9 96.9 95.9 96.7 96.9 97.4 97.5 97.5 97.9 97.0 97.4 99.4
 4.1 6.1 6.8 8.0 9.1 10.0 8.2 8.0 8.5 8.1 8.4 8.5 8.4 8.5 6.5
 124 121 100 77 52 73 28 12 0 9 23 40 53 69 70

1.5 99.8 99.1 97.9 96.9 95.9 96.7 96.9 97.4 97.5 97.5 97.9 97.0 97.4 99.4
 4.1 6.1 6.8 8.0 9.1 10.0 8.2 8.0 8.5 8.1 8.4 8.5 8.4 8.5 6.5
 121 100 84 62 45 39 19 8 0 13 27 47 64 79 70

1.5 99.7 99.1 97.9 96.9 95.9 96.7 96.9 97.4 97.5 97.5 97.9 97.0 97.4 99.4
 4.1 6.1 6.8 8.0 9.1 10.0 8.2 8.0 8.5 8.1 8.4 8.5 8.4 8.5 6.5
 124 121 100 83 57 56 31 12 0 7 18 32 48 64 71

1.5 99.7 99.1 97.9 96.9 95.9 96.7 96.9 97.4 97.5 97.5 97.9 97.0 97.4 99.4
 4.1 6.1 6.8 8.0 9.1 10.0 8.2 8.0 8.5 8.1 8.4 8.5 8.4 8.5 6.5
 124 121 100 85 67 57 30 18 8 0 12 23 33 42 35 65 69 70

1.3 99.4 98.9 97.0 96.5 96.5 96.5 96.5 96.5 98.1 98.2 98.1 95.3 93.7
 4.6 6.3 7.0 8.9 9.5 9.8 9.6 9.3 8.3 7.8 7.7 7.8 12.6 12.7
 124 121 70 65 58 42 28 12 7 0 8 24 36 43

1.1 99.9 98.5 97.0 96.1 96.2 95.6 96.2 97.5 97.9 97.9 94.0 93.5
 6.5 7.4 7.6 8.7 9.8 9.7 10.3 9.6 8.7 8.0 8.0 11.9 12.7
 121 100 88 71 62 52 39 26 11 0 3 14 27

20 99.8 98.4 97.5 96.5 95.8 95.9 96.0 97.1 97.5 97.5 93.3 93.5
 4.1 7.5 8.4 9.1 10.1 10.0 9.9 8.8 8.1 8.4 12.4 12.4
 121 100 85 70 63 47 31 15 3 0 13 20

96.1 96.6 96.9 96.0 95.9 96.5 96.5 97.0 97.1 97.6 93.7 93.4
 9.8 9.3 9.0 9.9 10.0 9.3 9.7 9.5 8.9 8.3 8.3 12.2 12.5
 124 100 83 75 57 48 34 22 11 4 0 13 18

Sta. B.S. H.I. F.S. Elev.
103.85

2+31

2+40

2+45 = End of Stripping

B.M. 5.85 100.00

6/17/27 AM. D.S.B.-B.I.G.-C.J.C.

B.M. 4.41 104.41 100.00

① 3.75 104.19 3.97 100.44

0+78 = Top of Cut

0+78 = Bottom of Cut

1+00

97.4 97.9 97.2 96.9 96.1 95.7 95.5 94.0 97.7 94.2 93.3
8.5 8.0 8.7 10.0 9.8 8.2 9.4 7.9 8.2 11.7 12.4
60 57 54 43 30 16 7 2 0 6 15
100.8 98.1 96.1 94.1 97.7 97.8 98.8 97.1 94.7
5.1 7.8 9.2 8.8 8.2 8.1 7.1 8.2 11.2
30 25 17 5 0 2 9 11 20
100.4 98.4 98.3 98.2 97.8
5.5 7.5 7.6 7.7 8.1
17 13 0 13 26

Spike in Cor. Post S.W. Cor. of Pt.

X-Sections after Stripping (Round Pt.)

0.6 0.6 0.6 97.7 97.0 97.3 97.8 97.8 97.9 97.3 97.2
2.4 3.1 3.4 4.5 5.2 5.9 5.9 5.7 5.3 4.9 5.0
113 100 78 57 25 17 0 22 36 39 66

0.6 99.9 97.2 96.3 96.0 96.5 96.4 96.9 97.8 99.2
2.6 4.8 7.0 7.9 8.2 7.7 7.8 7.3 6.7 5.0
113 100 68 42 23 0 26 52 60 66

0.4 0.2 98.7 97.7 96.3 95.9 96.2 96.5 96.5 96.1 96.8 99.3
2.8 4.0 5.5 6.5 7.9 8.3 8.0 7.7 7.7 8.1 7.7 4.9
125 115 100 79 64 40 18 0 22 45 58 71

5/4/29 A.M.

D.S.B.
E.M.M.
C.J.C.Rausselew Gravel Pit
Prelim. X-sections for Stripping

15

Sta. B.S. H.I. F.S. Elev.
 B.M. 4.45 104.45 100.00
 0+00 = S.E. Corner of New Pit
 Note: - Used S. Line of New Pit for Base-Line.

0+25 Hole at 100 to 120 10' wide

0+50

1+00

1+41

1+50

B.M. 5.32 105.32 4.45 100.00

2+00

2+30

2+50

2+86

B.M. 5.32 100.00

Spills in Root 4' Elm 25' South of Sta 2+00
 96.9 96.8 97.4 98.9 99.1 97.9 96.3 95.3
 7.6 7.7 2.1 5.6 5.4 6.6 2.7 9.2
 0 25 50 75 100 120

96.5 96.5 96.8 97.2 96.9 94.4 92.9
 8.0 8.0 2.7 2.3 2.6 10.1 11.6
 0 25 53 75 100 110 120

96.5 96.7 96.8 96.9 97.2 97.6 92.7
 8.0 7.8 2.7 2.6 2.3 6.9 11.8
 0 25 50 75 100 122 127

96.7 96.9 97.4 97.7 97.9 98.1 93.8 89.1
 7.8 7.6 2.1 6.8 6.6 6.4 10.7 15.4
 0 26 50 75 100 120 121 126

97.8 98.5 98.8 98.9 99.0 99.1 98.6 98.8 99.0 99.9 94.1 96.2
 6.7 6.0 5.7 5.6 5.5 5.4 5.9 5.7 7.5 9.6 10.4 8.3
 96.2 97.0 6.6 100 156 159 191 200 234 262 267 287
 8.3 2.1
 100 316
 98.0 98.5 98.9 99.2 99.2 99.2 98.9 98.9 98.2 96.6 95.7 96.7 94.7 95.7 93.1 99.3
 6.8 6.0 5.6 5.3 5.3 5.6 5.6 6.3 7.9 8.8 7.8 9.8 8.8 6.4 5.2
 0 27 54 89 100 130 156 200 225 241 254 262 270 291 300 313

99.8 99.5 99.0 99.6 100.3 99.8 99.3 98.9 96.4 95.3 94.2
 5.5 5.8 5.3 5.7 5.4 5.5 6.0 6.2 8.9 10.0 11.1
 0 30 61 85 103 144 183 20 237 256 283
 99.8 99.9 00.1 00.0 00.0 99.6 99.1 97.9 95.2 84.9
 5.5 5.4 5.2 5.3 5.3 5.7 6.2 7.4 11.1 15.4
 0 34 76 100 146 179 200 229 244 262
 99.1 98.9 99.1 99.3 99.6 99.3 98.9 97.6 94.8 91.1
 6.2 6.4 6.2 6.0 5.7 6.4 6.4 7.7 11.5 14.7
 0 36 70 100 149 191 216 239 253 260

99.8 99.9 00.1 00.0 00.0 99.6 99.1 97.9 95.2 84.9
 5.5 5.4 5.2 5.3 5.3 5.7 6.2 7.4 11.1 15.4
 0 34 76 100 146 179 200 229 244 262

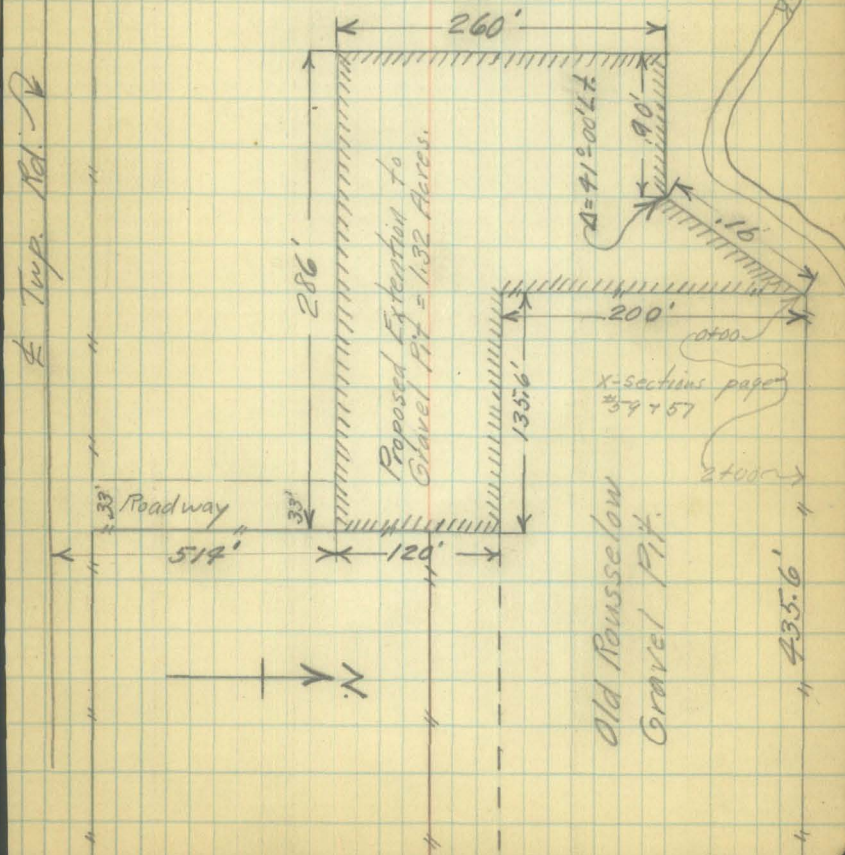
99.1 98.9 99.1 99.3 99.6 99.3 98.9 97.6 94.8 91.1
 6.2 6.4 6.2 6.0 5.7 6.4 6.4 7.7 11.5 14.7
 0 36 70 100 149 191 216 239 253 260

95.8 95.3 95.6 96.0 97.3 97.7 97.7 97.5 96.3
 9.4 10.0 9.7 9.3 8.0 7.6 7.6 7.8 9.0
 0 39 74 100 159 188 200 230 260

Sketch of Proposed Extension
of Russell Gravel Pit.

Staked 5/4/27 By. D. S. Butterfield.
E. M. Mathews.
C. J. Cavanaugh.

Section 29 Lincoln Twp.
Black Hawk County.



5/6/27 P.M. D.S.B.
C.N.C.

Fisher Gravel Pit.
at Dunbarton
Prelim. X-Sections for Stripping.

17

Sta. B.S. H.I. F.S. Elev
B.M. 3.34 103.34 100.00
0+00 = S.E. Cor. of Proposed Addition

0+50

1+00

+07 = End Stripping in Old Pit.

1+50

2+00

2+50

3+00

3+50

3+92.8 = Section taken partell fence

B.M. 3.34 100.00

Spike in Oak Approx. 235' W. of Sta. 0+00

99.0	98.9	99.2	99.2	99.3	99.1	99.0	98.5	98.5	98.5	
4.3	4.4	4.1	4.1	4.0	4.2	4.3	4.8	4.8	4.8	✓
0	23	45	68	100	125	150	175	200	210	
98.8	98.6	99.2	98.9	98.8	98.9	98.8	98.4	97.4	97.5	97.7
4.5	4.7	4.1	4.2	4.5	4.4	4.5	4.7	5.9	5.8	5.6
0	24	52	75	100	125	150	165	171	190	206
98.5	98.5	98.8	98.7	98.8	98.8	98.1	98.4	98.8	98.7	98.4
4.8	4.8	4.5	4.6	4.5	4.5	5.2	4.9	4.5	4.6	4.7
0	25	50	75	100	104	105	145	196	175	200
98.6	98.5	98.9	98.8	98.6	97.4					
4.7	4.8	4.7	4.5	4.7	5.9	✓				
0	25	50	75	100	102					
98.3	98.5	98.9	98.7	98.5	97.3					
5.0	4.8	4.4	4.6	4.8	6.0	✓				
0	25	50	75	100	102					
98.1	98.4	98.8	98.7	98.3	97.2					
5.2	4.9	4.5	4.6	5.0	6.1	✓				
0	25	50	75	100	102					
98.1	97.5	97.9	97.7	97.6	96.3					
6.2	5.8	5.4	5.6	5.7	7.0	✓				
0	26	50	75	100	102					
95.7	96.0	96.5	96.3	96.5	95.7					
7.6	7.3	6.8	7.0	6.8	7.6	✓				
0	25	50	75	100	103					
95.2	95.7	95.7	96.1	95.7	96.8	95.6				
8.1	7.6	7.6	7.2	7.4	6.5	7.7				
0	25	50	75	100	105	108				

Spike in Oak Approx. 235' W. of Sta. 0+00

5/6/27

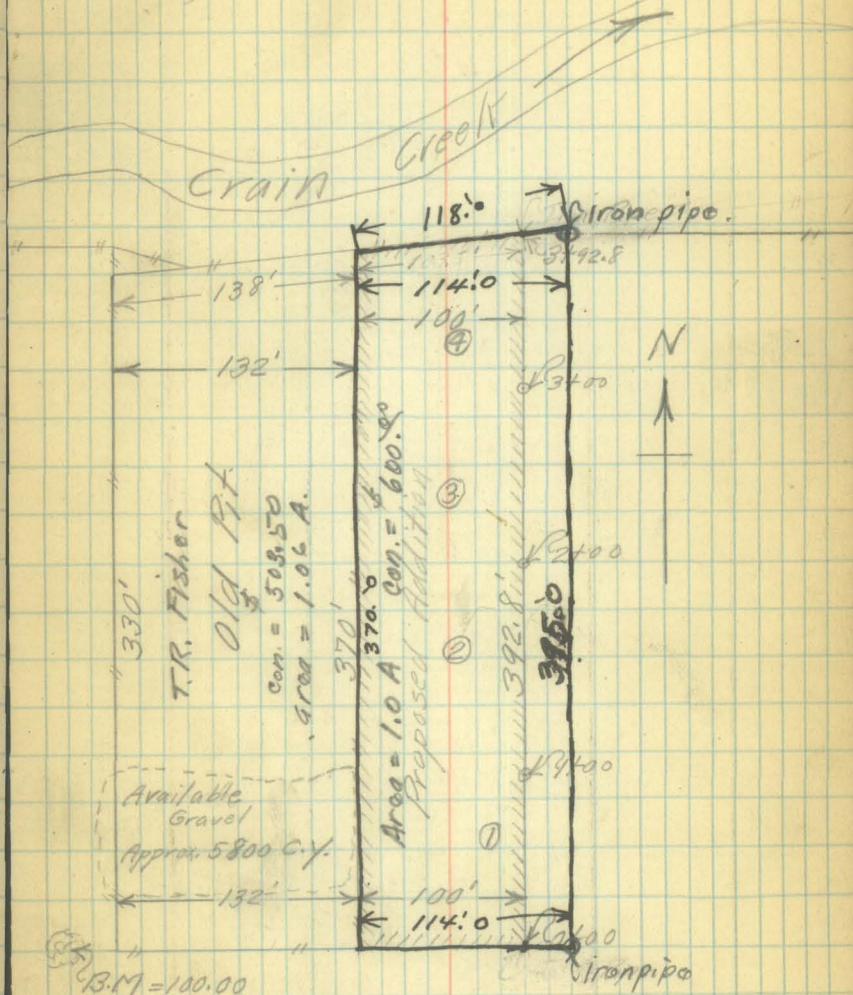
18

Fisher Gravel Pit
at Dunkerton
Tested by D.S. Butterfield - C.V. Cavanaugh.

Hole No.	Depth of Stripping	Depth of Gravel
1.	3'-6"	2'-4" <i>Note: - Pretty sandy</i>
2.	3'-0"	4'-6" <i>Some oversize</i>
3.	2'-9"	4'-3"
4.	2'-9"	5'-6"

Addition - to T.R. Fisher Gravel Pit - Purchased -
7-13-27.

Sketched by D.S. Butterfield 5/6/27



6/1/27

D.S. Butterfield
C. S. Cavanaugh

Private Survey for Nesbit

19

Section 16 Barclay Twp. Levels on
Basement Drain Tile From House.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade
B.M.	5.03	105.03		100.00	
			Stake	Top of Tile	
0+00 = Outlet			97.58	97.58	
			7.45	10.00	94.53
0+75			97.72	95.26	
			7.31	9.27	94.74
1+00			97.88	95.38	
			7.15	9.15	94.72
2+00			98.94	95.80	
			6.09	8.73	95.00
3+00			99.93	96.35	
			5.10	8.18	95.30
4+00			100.04	96.55	
			4.99	7.98	95.58
5+00			99.93	96.70	
			5.10	7.83	95.87
5+50			100.41	96.82	
			4.62	7.71	96.01
0	4.17	104.58	4.62	100.41	
5+70 = Enters Basement to House			101.42	7.26	96.18
				8.85	

Spike in root of Chataughy Tree in front yard

Cut

C. = 3.01

C. = 2.98

C. = 3.16

C. = 3.94

C. = 4.63

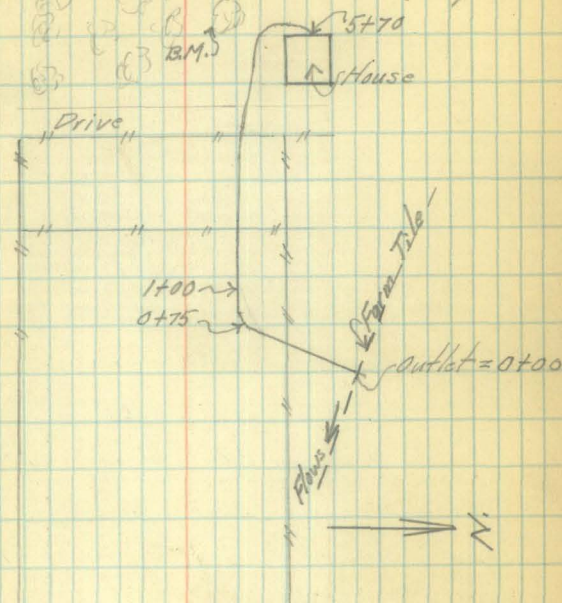
C. = 4.46

C. = 4.66

C. = 4.40

C. = 5.24

Twp. Rd. E. & W. D



Rousselow Gravel Pit.
Stump Data

Sta B.S. H.I. F.S. Elev. Grade

(Clearing & Grubbing)

(Grubbing only)

8" Stumps - 11 ✓
10" " - 11 } 24
12" " - 11, 11, 11, 11, 11 }
14" " - 11, 11, 11, 11, 11 } 19
15" " - 11, 11, 11 }
16" " - 11 } 8
18" " - 11, 11, 11 }
28" " - 1
26" " - 11

20" Stump - 1
12" " - 1
16" " - 1
22" " - 1

8/19/27 AM

B.M. 3.17 103.17 100.00

Item #33 Inlet = 86.40 Stake = 12.18 = 90.99 = C. = 4'-7"

① 4.24 95.25 12.18 90.99

① 4.09 91.01 8.33 86.92

Outlet = 86.00 Stake = 5.48 = 80.53 = F = 0'-6"

86.0 97.6 97.1 97.4 86.4
172 5.6 5.5 5.8 16.8
10 10 8 8

86.8 87.8 88.4
8.5 7.5 6.7
16 35 25

522 832 834
8.8 2.8 7.6
70 33 20

8/19/27

D.S.B.
J.B.G.
C.M.C.
B.M.

B.M. 4.64 104.64 100.00

Item #35 5'x3'x28

Inlet = 95.70 Stake = 8.99 = 95.68 C. = 0'-6 1/2"

Outlet = 94.70 Stake = 7.94 = 96.73 C. = 2'-0"

N.
↑

Spike in brace-post W. side rd. Approx. 75' S. of Culv.

114 107 108 7.94 8.4 8.9 8.3 5.3 5.2 5.3 8.7 8.5 8.99 9.1 8.8
100 50 34 5 20 12 12 4 0 8 16 31 5 30 100
4 35 94.4 95.1
6

1/2 Twp. Road 2

Date 6/6/27 A.M.
P.S. Butterfield.
C.J. Cavanaugh.

Sec. 32

1/2 Twp. Road 2

Sec. 29



Nail in Cor. Post.

325'

Nail in Cor. Post

1/2 Mile Corner Stone

Lowered Corner Stone 1.1'
below surface.

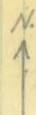
Barclay Twp.
Black Hawk County

Barclay Twp.

1/2 Twp. Road 2

6/7/27 A.M.
D. S. Butterfield
C. J. Cavanaugh.

22



B.M. 5.14 105.14 100.00
Item #40
Inlet = ^{94.2}~~94.7~~ = Cut 4'-7 1/4"
Or Outlet = 93.9 = Cut 2'-5"

B.M. 5.09 105.09 100.00

B.M. 5.38 105.38 100.00
Item #37
Inlet = 98.2 = Cut = 0'-3"
Outlet = 98.2 = Cut = 0'-8"

① Conc. base of Steel Gate-post Approx. 54' N. of New Culm on W. Side Rd.

6.1	6.34	6.6	7.9	7.8	5.5	5.1	5.2	5.8	8.6	9.0	8.84	9.1	7.5	8.8	11.2
81	5	23	21	19	14	13	0	9	18	24	5	26	31	34	39

93.9	11.2	3.0	2.2	5.5	5.3
Inlet Old Bridge	100 S of New Culm.	100 S.	100' N.	206' N.	
	± Old Br.	± Rd.	± Rd.	± Rd.	

Nail in Tel. Pole Approx. 31' W. of ± Culm. on S. Side Rd.

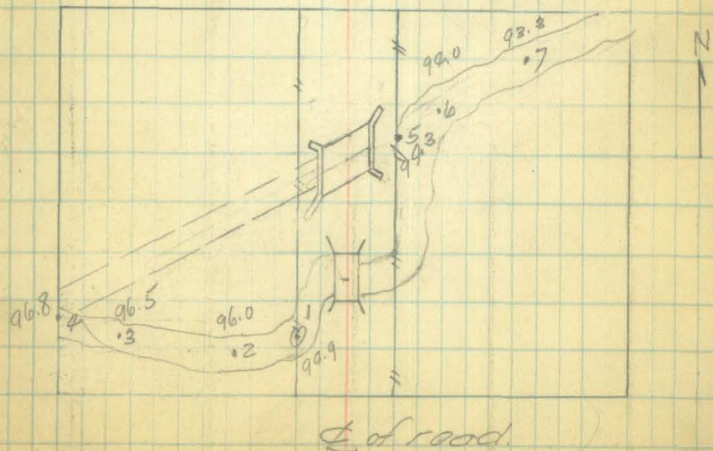
7.2	6.8	6.99	6.8	7.9	4.5	7.5	4.7	8.7	8.6	7.2	6.89	5.5
59	29	5	16	11	7	0	11	12	18	21	5	28

→ N.

B.M. 7.73 107.73 100.00
6.73 101.00
4.34 105.34 4.34 100.00

① Conc. base of steel Gate-post Approx. 54' N. of new Culm on W. side of road.

96.8	96.8	96.5	96.0	94.9
6.53	10.9	11.2	11.7	12.8
N. stake	2.50	2.00	1.00	3.5
	①	③	②	①
	94.3	94.0	93.3	9.08
	11.0	11.3	12.0	E. stake
	38	47	100	
	⑤	⑥	⑦	

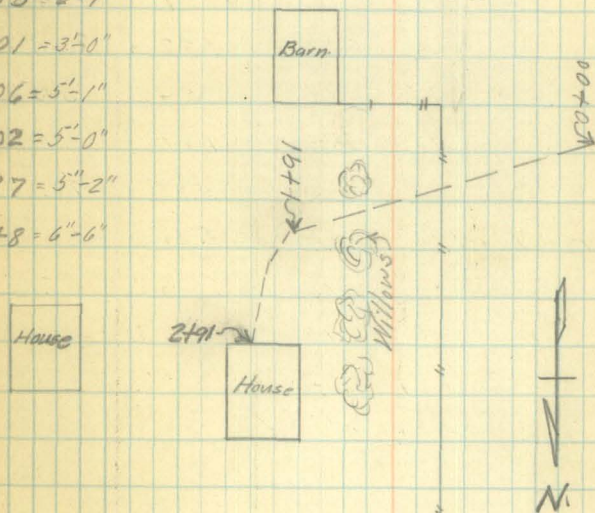


6/8/27 A.M.

D.S. Butterfield.
C. J. CavanaughPrivate Survey for Anderson.
for Drain from Basement of New House.
Section 19 Barclay Twp.

23

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	6.87	106.87		100.00		
Top of Tile = 0+17			12.55			
Bottom of ditch			12.65			
0+00			12.15	94.72	94.22	0.50 = 0'-6"
0+50			9.90	97.37	94.82	2.55 = 2'-7"
1+00			8.45	98.42	95.41	3.01 = 3'-0"
Top of Tile			9.81	97.06		
1+91			5.31	101.56	96.50	5.06 = 5'-1"
2+00			5.20	101.67	96.65	5.02 = 5'-0"
2+54			4.12	102.75	97.58	5.17 = 5'-2"
2+91 = Enters Basement			2.17	104.70	98.22	6.48 = 6'-6"



6/9/27 A.M.

D.S. Butterfield
C. J. Cavanaugh

Andorf Gravel Pit.

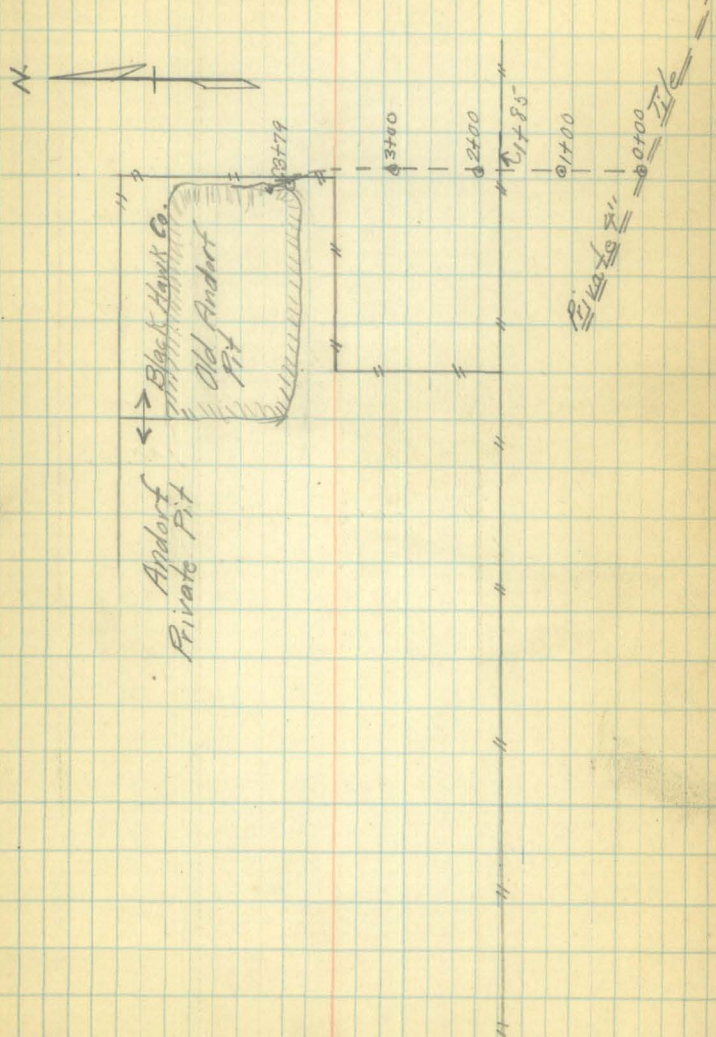
24

4"x6" Tile Grades to Drain Pit.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut.
B.M.	0.70	100.70		100.00		
①	1.74	91.38	11.06	89.64		
Top of Tile = 4" Private Line			13.82	77.56		
0+00 = Outlet			11.17	80.21	77.18	3.03
1+00			8.20	83.18	80.00	3.18
2+00			1.74	89.64	85.50	4.14
①	12.63	102.27	1.74	89.64		
3+00			6.29	95.98	92.00	3.98
①	7.84	106.19	3.92	98.35		
3+79			7.76	98.43	95.50	2.93
B.M.			6.19	100.00		

Note: - Tile runs into Pit 21' - making
a total of 400' of Tile

Nail in Post S.E. Cor. of Andorf Gravel Pit. ↑



6/24/27 A.M.

D.S. Butterfield.
J.B. Good.
C.H. Cavanaugh.

Clear - Cool.

Levels on Open Ditch
South Side Rd. Between Sections 15-22 & 16-21
Lester Twp.

25

Sta.	B.S.	H.I.	F.S.	Elev.	Grade
0	5.22	108.35 ✓	5.53	103.13 ✓	
13+00			9.6	99.10	
B.M.			5.09	103.57	
12+00			10.1	98.60	
200' S. of & Rd. E. & W. Sta. 11+35			5.3	103.40	
100' S. of & Rd. E. & W. Sta. 11+35			5.3	103.40	
8.5' X 21.5' Wood Plc Bridge - 9' Plank N. Side for Approach.					
Top of Bridge 29' S. of & Rd. E. & W.			5.4 8' "	103.30 "	
11+35 = & Rd. E. & W.			5.0	103.70	
11+00			10.1	98.60	
10+00			9.8	98.90	
9+00			10.0	98.70	
0	5.34	108.66 ✓	2.74	103.32 ✓	
8+00			7.7	98.90	
7+00			7.9	98.20	
6+00			7.9	98.20	
5+00			8.0	98.10	
4+00			8.3	97.80	
0	5.99	106.06 ✓	7.71	100.07 ✓	
3+00			6.9	97.9	
2+00			6.8	98.00	
1+00			7.8	97.00	
0+00 = Ditch at S.W. Cor.			7.3	97.50	
Wood Plc Bridge 16' X 16'					
B.M.	4.78	104.78 ✓		100.00 ✓	
West end of Bridge			3.20		

Nail in Corn Post S.W. Cor. Rd. T. Sta. 11+63

Sta. 11+63 = W. Fence to Rd. S.

Sta. 11+35 = & Present Traveled Rd. S.

Sta. 11+28 Line Fence N. Side Rd.

Sta. 11+25 E. Fence to Rd. S.

5.5' to Water level below Bridge Floor. Water 3.6' deep.

Nail in End of Cap S.W. Cor. Wood Bridge

Note: - 0+00 = Begins Approx. 400' W. of P.R. X-ing.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade
30+00			8.3	105.50	
B.M.			4.53	109.24	109.44? Nail not very solid
29+00			8.2	105.60	
○	3.70	113.77✓	4.92	110.07✓	
28+00			9.9	105.10	
27+00			10.2	104.80	
26+00			10.6	104.40	
25+00			10.8	104.20	
24+00			11.1	103.90	
○	4.88	114.99✓	2.27	110.11✓	
23+00			9.2	103.20	
22+00			9.5	102.90	
21+00			10.0	102.40	
Flow Line at outlet 12" tile					
20+25 S. Side Rd. in ditch			11.5	100.90	
20+00			10.4	102.00	
○	9.10	112.38✓	5.07	103.28✓	
19+00			6.4	102.00	
18+00			7.3	101.10	
17+00			7.6	100.80	
16+00			8.1	100.30	
15+56.5 = W. End Bridge 12'x15' I-Beam					
15+44.5 = E. End Bridge Steel Handrails					
15+00			9.1	99.30	
14+00			9.2	99.20	
108.35					

Sta. 29+47 = Fence Line W. Side Rd. to Farm Drive N.
Nail in Cor. Post to Farm Drive E Side Rd. Sta. 28+95

Sta. 24+55 Fence Line N. Beginning Red Fence on N. Side Rd.

Top Bridge Floor = 9.4
Bottom of Str. = 10.3 Water level = 9.4

Sta.	B.S.	H.I.	F.S.	Elev.	Grade
49+42.5 = $\frac{1}{2}$ Wood Bridge 5 Planks 20' Wide			7.3	108.50	
49+00			7.2	108.60	
48+00			7.6	108.20	
○	5.54	115.80 ✓	7.8	110.26 ✓	
47+00			7.2	107.80	
46+00			7.5	107.50	
45+00			8.0	107.00	
44+00			7.6	107.40	
43+00			7.6	107.40	
○	4.50	115.04 ✓	7.13	110.54 ✓	
42+00			7.5	107.20	
41+00			7.7	107.00	
40+00			8.3	106.40	
39+00			8.0	106.70	
38+00			7.8	106.90	
○	3.75	114.67 ✓	2.18	110.92 ✓	
37+00			6.4	106.70	
36+00			6.5	106.60	
35+00			6.5	106.60	
34+00			8.1	105.00	
33+00			7.4	105.70	
○	4.74	113.10 ✓	5.71	108.36 ✓	
32+00			8.2	105.60	
31+00			7.8	106.00	

113.77

Top Bridge Floor = 7.6 Sta. 49+42.5

Note: - Ditch Filled in 17" at Outlet of Little Bridge

Sta.	B.S.	H.I.	F.S.	Elev	Grade
------	------	------	------	------	-------

54+68 = E. Side of School House

54+00			2.0	109.30	
53+00			8.2	109.10	
B.M.	5.19	117.26 ✓	3.73	112.07 ✓	
52+00			6.7	109.10	
51+00			7.1	108.70	
50+00			7.2	108.60	

115.80

Nail in Tel. Pole N. Side Rd. Sta. 50+65

6/24/27 AM.

D.S. Butterfield - Notes.
 J.B. Good. - T
 C.J. Cavanaugh - P
 N. Northey.

Levels on Open Ditch into
 Field Approx.

29

Sta.	B.S.	H.I.	F.S.	Elev.	Grade
B.M. 0+00 ~	2.98	115.05 ✓		112.07	
Junction with ditch			6.6	108.50	
S. Side Rd. Sta. 49+42.5					
		In hole =	7.7	107.40	
0+40			6.9	108.20	
1+00			7.5	107.60	
2+00			7.4	107.50	
3+00			7.6	107.50	
4+00			7.4	107.50	
0	5.39	114.47 ✓	5.97	109.08 ✓	
5+00			6.9	107.60	
6+00			7.1	107.40	
7+00			7.1	107.40	
8+00			7.1	107.40	
0	5.27	114.82 ✓	4.92	109.55 ✓	
Elev. Low Ground.			5.90	108.92	

Nail in Tel. Pole on N. Side Rd. Sta. 50+65

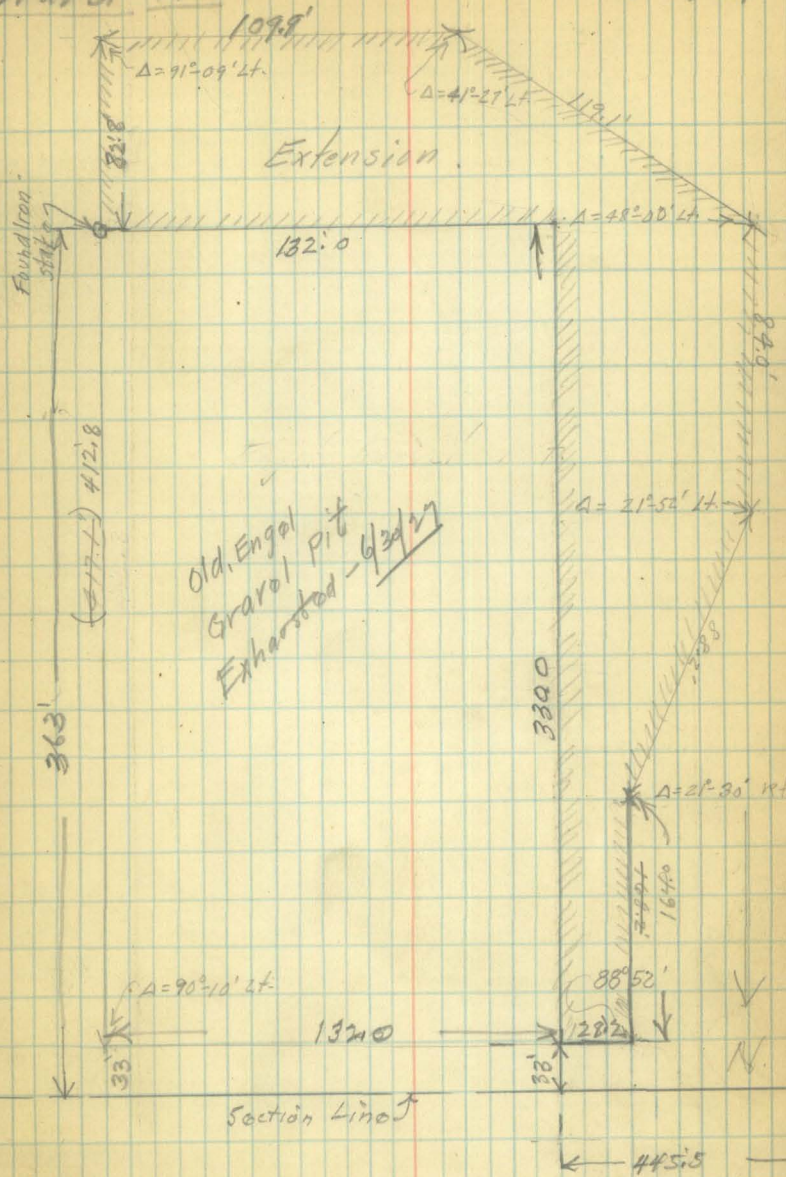
640 A
 120
 500 Ac.

Extension to "Engel

Gravel Pit"

6-28-27

30



7/7/27

A.M.

D.S. Butterfield
J.B. Good
C.J. Cavanaugh
T.D. Teeter

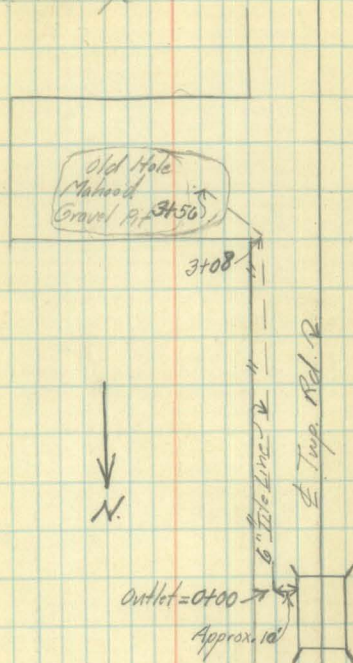
Levels on 6" Tile Line
Section 15 Cedar Twp.
To drain Mahood Gravel Pit.

31

Sta	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	8.35	108.35		100.00		
Top of Water			13.70	94.65		
2+00 = 5' N. of S. End of Wood Bridge Approx. 308' N. of N.W. Cor. Mahood Gravel Pit Outlet into Creek.			10.02	98.33	95.00	3.33 3'-4"
1+00			9.15	99.20	95.25	3.95 3'-11½"
2+00			8.09	100.26	95.50	4.76 4'-9"
3+00			6.06	102.29	95.75	6.54 6'-6½"
3+08			5.76	102.59	95.77	6.82 6'-10"
3+56			8.40	99.95	95.89	4.06 4'-1"

Nail in root Honey-locust W. Side Rd. Approx. 150' S. of

S. end Wood Bridge



B.M.

Honey-locust

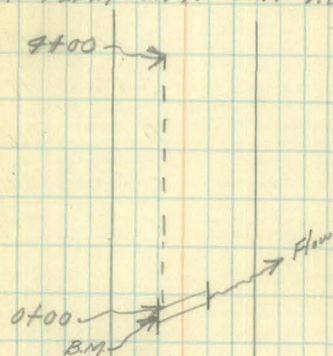
7/9/27 A.M.

D.S.B.
J.B.G.
C.J.C.S.W. 100. - Cedar Falls Rd.
6" Tile Levels & Grades E. from Conc.
Culv. on N. Side Rd.

32

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	7.21	107.21		100.00		
Outlet			11.25	95.96		
0+00			7.67	99.54	95.96	3.58
1+00			8.61	98.60	96.18	2.42
2+00			8.32	98.89	96.40	2.49
3+00			7.39	99.91	97.95	2.46
4+00 = End 6" Tile			5.64	101.51	98.50	3.01

⊗ on N. Hdwl. Conc. Culv. just E. of Kilmarnock Farm
 0+00 = Outlet into Conc. Culv. Approx. 580' East of
 Kilmarnock Farm on N. Side Rd.



← Z

7/9/27 A.M.

D.S.B.
J.B.G.
C.J.C.

S.W. 100. - Cedar Falls Rd.

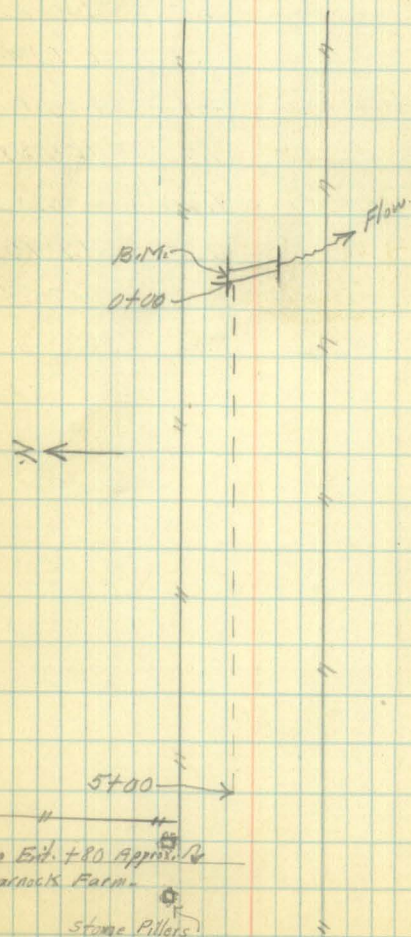
33

6" Tile Levels & Grades N. from Conc.
Culv. on N. Side Rd.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	7.21	107.21		100.00		
Outlet			11.22	95.99		
0+00			7.91	99.30	95.99	3.31
1+00			6.24	100.97	97.99	2.98
2+00			3.87	103.34	100.00	3.34
3+00			0.91	106.30	103.33	2.97
①	11.19	117.49	0.91	106.30		
4+00			7.22	110.27	106.66	3.61
5+00			4.09	113.40	110.00	3.40
B.M.			0.25	117.24		

① on N. Hdwl. Conc. Culv. Approx. 580' East of
Kilmarnock Farm.

0+00 = Outlet into Conc. Culv. N. Side Rd.



7/9/27 AM.

S. Willow - Cedar Falls Rd.

34

6" Tile Levels & Grades. S. Side Rd. E. from
Outlet

Sta.	B.S.	I.L.	F.S.	Elev.	Grade	Cut
B.M.	7.62	107.62		100.00		
0+00 = Outlet S. Side Rd.			10.88	94.74	94.00	2.74
0+50 =			8.00	99.62	96.00	3.62
1+00			7.57	100.05	96.64	3.41
2+00			6.44	101.18	98.00	3.18
3+00			4.18	103.44	100.25	3.19
4+00			1.75	105.88	102.50	3.37
0	7.07	113.09	1.60	106.02		
5+00			6.14	106.95	102.80	4.15
6+00			5.86	107.23	103.10	4.13
7+00			5.48	107.41	103.40	4.21
8+00			5.35	107.74	103.70	4.04
9+00 = End 6" Tile S. Side Rd.			5.79	108.30	104.00	3.30

Nail in Tel. Pole #93 Approx. 215' E. of Geo. Call Farm Res.
E. Side of House — on N. Side Rd.

7/9/27 A.M.

S. W/oo. - Cedar Falls Rd.
6" Tile Levels & Grades N. Side Rd E.
from Outlet

35

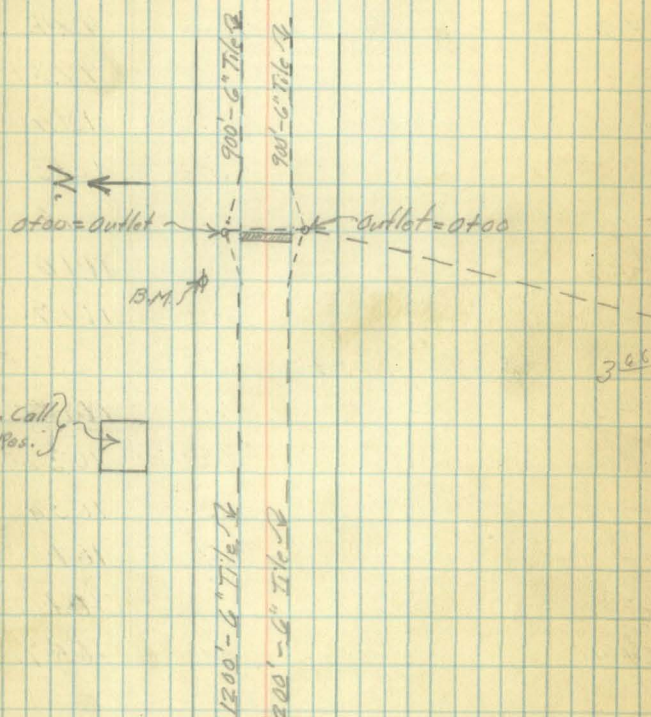
Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut	
B.M.	7.62	107.62		100.00			Nail in Tel. Pole #93 Approx. 215' E. of Geo. Call Farm
0+00 = Outlet N. Side Rd.			10.41	97.27	94.80	2.47	Res. E. Side House on N. Side Rd.
0+50			7.66	99.96	96.50	3.46	
1+00			7.32	100.30	97.00	3.30	
2+00			6.18	101.44	98.00	3.44	
3+00			4.13	103.49	100.25	3.24	
4+00			1.60	106.02	102.50	3.52	
0	7.07	113.09	1.60	106.02			
5+00			6.04	107.05	103.50	3.55	
6+00			5.59	107.50	103.75	3.75	
7+00			5.10	107.99	104.00	3.99	
8+00			5.05	108.04	104.25	3.79	
9+00 = End 6" Tile N. Side Rd.			5.71	107.38	104.50	2.88	

7/11/27 PM

D.S.B.
J.B.G.
C.J.C.S. W/50. - Cedar Falls Rd.
6" Tile Levels & Grades N. Side of Rd.
W. from Outlet.

36

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	6.78	106.78		100.00		
0+00 = Outlet			9.51	97.27	94.80	2.47
0+50			6.75	100.03	96.50	3.53
1+00			6.57	100.21	96.80	3.41
2+00			5.82	100.96	97.40	3.56
3+00			4.90	101.88	98.00	3.88
4+00			5.10	101.68	98.20	3.48
5+00			4.80	101.98	98.40	3.58
6+00			4.77	102.07	98.60	3.47
7+00	8.37	109.93	5.22	101.56		
8+00			7.63	102.30	98.80	3.50
9+00			7.37	102.56	99.00	3.56
10+00			6.47	103.46	99.50	3.96
11+00			5.82	104.11	100.00	4.11
12+00			5.22	104.71	100.50	4.21
			5.11	104.82	101.00	3.82
B.M.			3.60	106.33		

Nail in Tel. Pole #93 Approx. 215' E. of E. Side Geo.
Call Farm Res. on N. Side Rd.

Nail in Hard Maple S. Side Rd. Sta. 12+00

7/11/27 R.M.

D.S.B.
J.B.G.
C.V.C.S. W/oo, - Cedar Falls Rd.
6" Tile Level & Grades S. Side of Rd.
W. from Outlet.

37

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	6.78	106.78		100.00		Nail in Tel. Pole #93 Approx. 215' E. of E. Side Geo.
0+00 = Outlet			10.04	96.74	94.00	2.74 Call Farm Res. - on N. Side Rd.
0+50			7.35	99.43	96.00	2.43
1+00			6.94	99.84	96.40	3.44
2+00			6.38	100.40	97.20	3.20
3+00			5.94	101.34	98.00	3.34
4+00			5.33	101.45	98.20	3.25
5+00			5.16	101.62	98.40	3.22
6+00			5.22	101.56	98.60	2.96
0	8.37	109.93	5.22	101.56		
7+00			7.98	101.95	98.80	3.15
8+00			7.27	102.66	99.00	3.66
9+00			6.49	103.44	99.63	3.81
10+00			5.89	104.04	100.25	3.79
11+00			5.25	104.68	100.88	3.80
12+00			5.02	104.91	101.50	3.41
B.M.			3.60	106.33		Nail in Hard Maple S. Side Rd. Sta. 12+00

7/11/27 A.M.

D.S.B.
J.B.G.
C.J.G.

S.W'loo. - Cedar Falls Rd.

38

6" Tile Levels & Grades E. from Conc. Culv.
on N. Side Rd.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	5.18	105.18		100.00		
Outlet = Inlet of Culv.			9.70	95.48		
0+00			6.72	98.46	95.48	2.98
1+00			6.90	98.28	95.74	2.54
2+00			6.15	99.03	96.00	3.03
3+00			4.71	100.47	97.66	2.81
4+00			2.80	102.38	99.32	3.06
5+00 = End 6" Tile			0.60	104.58	101.00	3.58

① on N. Hdwl. Conc. Culv. Approx. 500' E. of Rounds
Farm Res.

Note: - Outlet into Conc. Culv. N. Side Rd.

A.M.
7/12/27

B.M.	6.79	106.79		100.00		
Outlet = Inlet of Culv.			10.70	96.09		
0+00			8.24	98.55	96.09	2.46
1+00			8.52	98.27	96.20	2.07
2+00			7.62	99.17	96.40	2.77
3+00			6.30	100.49	97.93	2.56
4+00			4.50	102.29	99.46	2.83
5+00 = End 6" Tile			2.14	104.63	101.00	3.63

S.W'loo. - Cedar Falls Rd. 6" Tile Levels & Grades E.
from Conc. Culv. on S. Side Rd.① on N. Hdwl. Conc. Culv. Approx. 500' E. of
Rounds Farm Res.

7/11/27 A.M.

D.S.B.
J.B.G.
C.J.C.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	3.27	103.27		100.00		
Outlet = Outlet of Culv.			7.80	95.47		
0+00			4.87	98.40	95.47	2.93
1+00			5.74	97.53	95.80	1.73
2+00			4.87	98.40	96.50	2.40
3+00			4.14	99.13	96.20	2.93
4+00 = End 6" Tile			3.84	99.43	96.40	3.03

S.W/100. - Cedar Falls Rd.
6" Tile Levels & Grades W. from Conc.
Culv. on N. Side Rd.

39

⊗ on Hdwl. Conc. Culv. Approx. 500' E. of Rounds
Farm Res.Note: - Outlet in Conc. Culv. Approx. 500' E.
of Rounds Farm Res. Tile placed on
shoulder line of present road.

7/12/27 A.M.

D.S.B.
J.B.G.
C.J.C.

B.M.	4.29	104.29		100.00		
Outlet = Outlet of Culv.			8.20	96.09		
0+00			5.72	98.57	96.00	2.57
1+00			7.11	97.18	96.00	1.18
2+00			6.17	98.12	96.20	1.90
3+00			5.14	99.15	96.40	2.65
4+00 = End 6" Tile			5.21	99.08	96.60	2.48

S.W/100. - Cedar Falls Rd. 6" Tile Levels & Grades
W. from Conc. Culv. on S. side Rd.⊗ on Hdwl. Conc. Culv. Approx. 500' E. of Rounds
Farm Res.Note: - Outlet in Conc. Culv. Approx. 500' E. of Rounds
Farm Res.

7/11/27

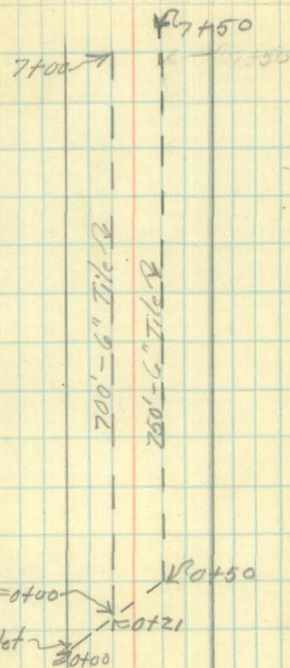
AM.

D. S. B.
J. B. G.
C. J. C.S. W. 100, - Cedar Falls Rd.
6" Tile Levels & Grades - W. of Rounds
Farm Res. on N. Side Rd.

40

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	5.35	105.35		100.00		
0+00=Outlet			9.51	95.84	92.22	3.62
1+00			8.16	97.19	93.61	3.58
2+00			6.53	98.82	95.00	3.82
3+00			4.38	100.97	97.65	3.32
4+00			1.60	103.75	100.30	3.45
5	10.26	114.01	1.60	103.75		
5+00			7.28	106.73	102.95	3.78
6+00			4.82	109.19	105.50	3.69
7+00=End 6" Tile			3.07	110.94	107.50	3.44

Nail in Boxelder on S. Side Rd. Sta. 1+20


Rounds Farm Res


7/11/27 A.M.
D.S.B.
J.B.G.
C.J.C.

S.W. 100. - Cedar Falls Rd.
6" Tile Levels & Grades - W. of Rounds
Farm Res. Crosses Rd. from Outlet to S. Side
Note: - Sketch on page 40.

41

Sta	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	5.35	105.35		100.00		
Outlet			13.70	91.65		
0+00			12.44	92.91	91.65	1.26
0+21 = N. Shoulder & Outlet for 6" Tile N. Side Rd.			9.51	95.84	92.22	3.62
0+50 = S. Shoulder			8.73	96.62	93.00	3.62
1+00			8.44	96.91	93.67	3.24
2+00			7.00	98.35	95.00	3.35
3+00			5.06	100.29	97.33	2.96
4+00			2.57	102.72	99.66	3.12
0	10.24	114.01	1.60	103.75		
5+00			8.41	105.60	102.00	3.60
6+00			5.83	108.18	104.50	3.68
7+00			3.57	110.44	107.00	3.44
7+50 = End 6" Tile			2.97	111.04	108.00	3.04

Nail in Box-elder S. Side Rd. Sta 1+20

7/18/27 A.M.
D.S.B.
J.B.G.
C.J.C.

S. W/oo - Cedar Falls Rd. 6" Tile Levels & Grades
N. Side Rd. E. from Shaules Farm.

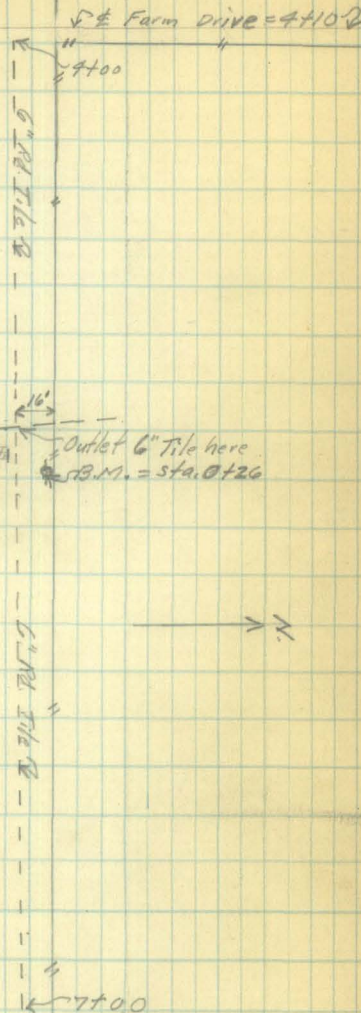
4

Shaules
Farm Res.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	4.83	104.83		100.00		
Top 4" Tile			9.09	95.74		
0+00 = Outlet			5.66	99.17	95.30	3.87
1+00 =			5.52	99.31	96.15	3.16
2+00			4.76	100.07	97.00	3.07
3+00			3.82	101.51	98.75	2.76
4+00 = End 6" Tile W.			0.83	104.00	100.50	3.50
B.M.	4.83	104.83		100.00		
Top 4" Tile			9.09	95.74		
0+00 = Outlet			5.66	99.17	95.30	3.87
1+00			5.46	99.37	95.90	3.47
2+00			5.00	99.83	96.50	3.33
3+00			3.99	100.84	97.50	3.34
④	7.73	108.57	3.99	100.84		
4+00			6.66	101.91	98.50	3.41
5+00			5.24	103.33	100.33	3.00
6+00			3.40	105.17	102.16	3.01
7+00 = End 6" Tile E.			1.30	107.27	104.00	3.27

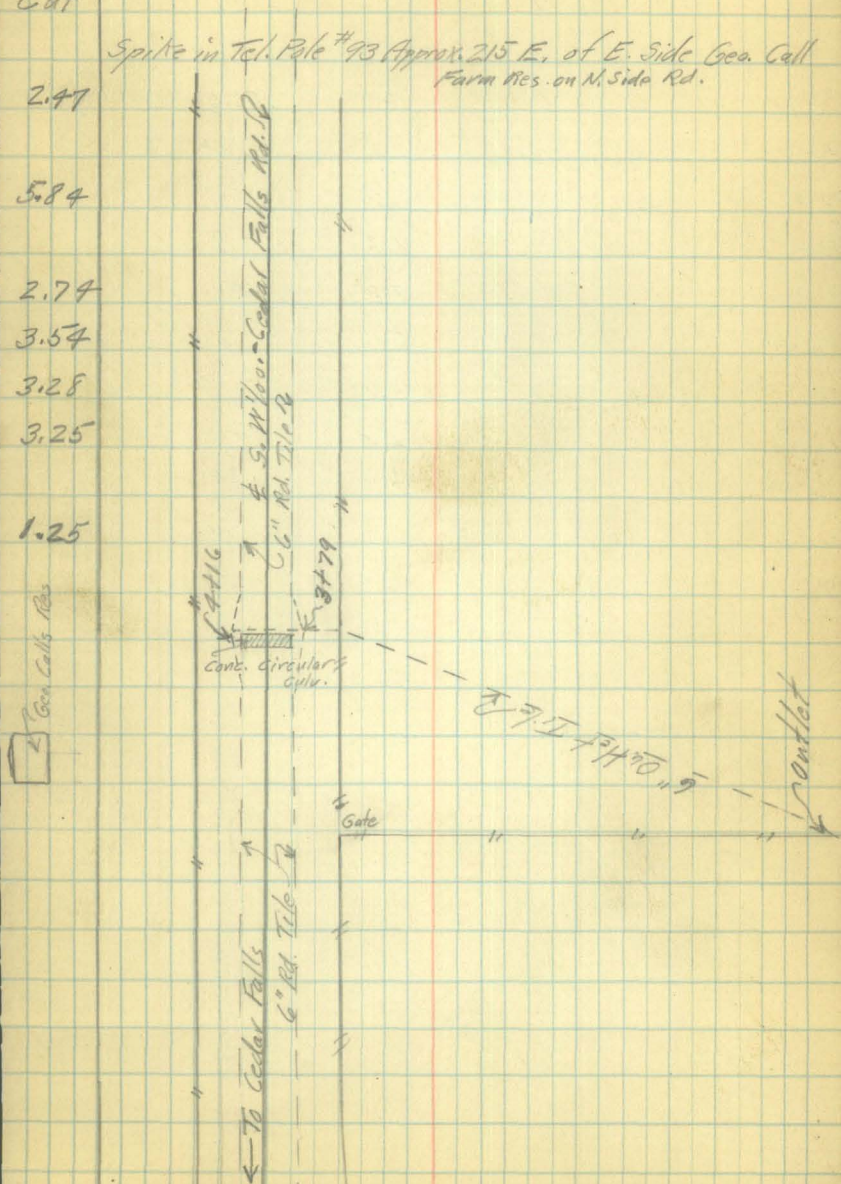
Spike in Tel. Pole N. Side Rd.
Sta. 0+26 E. of Outlet.

Flows ← Private 4" Tile Ry
2 Conc. Circular pipes
Sta. Culm. = 0+10



43

Spike in Tel. Pole #93 Approx. 215 E. of E. Side Geo. Coll
Farm Res. on N. Side Rd.



8/5/37 A.M.

W.D.J.
E.M.M.Levels on open ditch North Side
of road. Between Secs. 15-22 + 16-21
of Lester Twp.

44

Sta.	B.S.	H.I.	F.S.	Elev.
B.M.	5.21	105.21		100.00
0+00			7.4	97.8
1+00			7.8	97.4
2+00			8.2	97.0
3+00			7.3	97.9
4+00			7.3	97.9
5+00			7.00	98.2
6+00			6.10	99.1
T.P.	8.94	108.06	6.09	99.12
7+00			8.1	100.0
8+00			7.8	100.3
9+00			8.4	99.7
10+00			7.9	100.2
11+00			6.9	101.2
11+30			4.9	103.2
12+00			7.3	100.8
B.M.	4.52	108.09	4.21	103.65 <u>103.57</u>
13+00			8.1	100.0
14+00			8.7	99.4
15+00			8.6	99.5
15+50			9.0	99.1
B.M.			3.74	104.35
16+00			8.8	99.3
17+00			8.0	100.1

Nail in End of cap S.W. cor. wood bridge

Exactly 66' between fences

Fence to the north

Nail in cor post S.W. cor. Trcl. Sta 11+63. ^{Fences 67 ft apart -}

Center of 12'x15' T Beam

Center of north curbing

Sta.	B.S.	H.I	F.S.	Elev.
		108.09		
18+00			7.2	100.9
T.P.	10.26	111.16	7.19	100.90
19+00			10.4	100.8
20+00			10.5	100.7
21+00			8.00	103.2
22+00			3.4	107.8
23+00			2.8	108.4
24+00			2.9	108.3
T.P.	7.19	115.44	2.91	108.25
24+56				
25+00			7.0	108.4
26+00			6.8	108.6
27+00			6.1	109.3
28+00			6.5	108.9
29+00			8.3	107.1
B. M.	4.22	113.46	6.11	109.33 <u>109.24</u>
30+00			7.2	106.3
31+00			7.2	106.3
32+00			8.0	107.5
33+00			9.0	106.5
34+00			7.6	106.9
35+00			6.3	107.2
T.P.	8.60	115.77	6.29	107.17

Fence on north leading north, beginning of red fence
61' between fences.

62' between fences Northey farm ant.
Nail in cor post to Farm Drive E side Rd. Sta. 28+95.

Sta.	B.S.	H.I.	F.S.	Elev.
		115.77		
36+00			5.9	109.8
37+00			5.8	110.0
38+00			6.9	108.9
39+00			8.0	107.8
40+00			9.0	106.8
41+00			8.8	107.0
T.P.	8.49	115.49	8.78	106.99
42+00			8.2	107.3
43+00			7.8	107.7
44+00			8.4	107.1
45+00			8.3	107.2
46+00			8.4	107.1
47+00			8.1	107.4
T.P.	8.28	115.67	8.10	107.39
48+00			8.5	107.2
49+00			8.0	107.7
49+42			7.9	107.8
50+00			7.3	108.4
B.M.			3.55	112.12 <u>112.07</u>

69' between fences

Center of 5' wood bridge

70' between fences

Nail in tel. pole N. side Rd Sta 50+65

8/5/27. A.M.

W.D.J.
E.M.M.Levels S.W. stry from 4'x4' R.C.B.
Sec. 21 Lester Twp.

47

Sta	B.S.	H.I.	F.S.	Elev.
B.M	0.63	120.58		119.95
0+00			7.5	113.1
1+00			6.3	114.3
2+00			5.7	114.9
3+00			5.4	115.2
4+00			5.2	115.4
5+00			5.1	115.5
6+00			4.5	116.1
7+00			4.0	116.6
T.P	5.59	122.19	3.98	116.60
8+00			5.3	116.9
9+00			5.2	117.0
9+50			5.2	117.0
9+60			7.0	115.2

Center of South Headwall of culvert. Sta. 86+16
South Rd. ditch

Bank

Center of ditch

Ditch to east approx 12' wide at top
and 2' deep.

9/10/27

AM

D.S.B.

J.B.G.

C.J.G.

Fisher Gravel Pit

Dunkerton

13

X-sections after stripping.

Sta.	B.S.	H.I.	F.S.	Elev.
B.M.	4.26	104.26		100.00

1+00 Stripping begins.

98.6	97.2	96.5	96.9	97.1	96.7	96.6	96.5	96.8	96.0	96.3	96.3	95.4
5.7	7.1	7.8	7.4	7.2	7.6	7.7	7.8	7.5	8.3	8.0	9.0	8.9
56	61	72	81	97	108	118	131	142	156	169	172	177

1+50

98.7	97.2	96.8	96.9	96.1	96.2	97.0	96.9	96.8	96.9	96.5	96.2
5.6	7.1	7.5	7.4	8.2	8.1	7.3	7.4	7.5	7.4	7.8	8.1
57	60	71	80	89	97	103	114	124	130	135	140

1+80 Stripping ends.

Sta.	B.S.	H.I.	E.S.	Elev.	Grade	Dist.
B.M.	425	10425		10100		100
1000			927	9498		
1100			517	9807	9478	3.29
1200			517	9808	9509	3.31
1300			364	10061	9646	4.15
1400			344	10131	9649	4.72
1500			344	10131	9682	5.15
1600	421	10318	344	10131		
1700			372	10146	9700	4.12
1800			511	10207	9700	3.97
1900			455	10053	9700	3.53
2000			458	10060	9700	2.81
2100			245	10123	9700	3.77
2200	616	10209	375	10123		
2300			524	10215	9840	3.25
2400			455	10254	9840	3.84
2500			532	10207	9940	3.32
2600			432	10307	10000	2.93

1000
 1100
 1200
 1300
 1400
 1500
 1600
 1700
 1800
 1900
 2000
 2100
 2200
 2300
 2400
 2500
 2600

Bridges and Culverts.

April 25. Started pouring about 3 P.M. Poured the footing for the 7' extension south, of item #27. Used 13 sacks cement.

April 26 Poured 5' extension footing on the north + barrel on the 7' extension. Used 27 sacks. item #27

April 27 Poured the barrel on 5' extension. item #27. Used 12 sacks

April 28 Poured the footings on the extension item #28. Used 16 sacks in each footing 32 sacks used in all.

April 29. Poured both barrels on item #28. Used 17 sacks in the south barrel and 18 in the north one.

May 2, Poured the north ext. barrel on item #30. Used 17 sacks.

on Letting April 11, 1927

May 3 Poured both footings on item #31. Used 13 sacks in south ext, and 10 sacks in north ext.

May 3. Poured footing on item #32. Used 74 sacks.

May 4. Poured barrel on item #32. Used 34 sacks.

Poured barrel ext's on item #31. Used 17 sacks in north ext and 15 sacks in south ext.

May 7 Poured footing on item #29. Used 62 sacks.

May 6 Poured footing on item #1. Used 48 sacks.

May 9. Poured barrel on item #1. Used 56 sacks.

Poured footing item #25. Used 10 sacks. Poured May 11/1927

May 11, 1927. Poured both barrel ext. on item #26. Used 16 sacks in south barrel + 18 sacks in north barrel

May 9, 1927. Poured footing
ext for item #26, north
ext. Used 21 sacks.

May 10, 1927. Poured south
ext. footing. Used 16 sacks.

May 12. Poured footing on item
#2. Used 42 sacks.

May 13, 1927. Poured barrel on
item #29. Used 88 sacks cement.

May 14, 1927. Poured barrel on
item #25. Used 15 sacks
cement.

May 16, 1927. Poured footing on item
#3. Used 44 sacks cement.

May 13, 1927. Poured barrel on item
#2. Used 45 sacks cement.

May 16, 1927. Poured footing on
item #24. Used 91 sacks cement.

May 17, 1927. Poured barrel on
item #3. Used 46 sacks cement.

Poured footing on item #4. Used
39 sacks cement.

May 18, 1927. Poured barrel on item
#24. Used 83 sacks cement.

May 19, 1927. Poured footing on
item #23. Used 40 sacks of
cement. Also poured footing
on item #22. Used 22 sacks
cement.

May 19, 1927. Poured barrel on
item #4. Used 44 sacks of
cement.

May 20, 1927. Poured barrel on
item #23. Used 48 sacks of
cement.

May 21, 1927. Poured barrel on
item #22. Used 31 sacks of
cement.

May 21, 1927. Poured footing on
item #5. Used 37 sacks of
cement.

May 24, 1927. Poured barrel on
item #5. Used 46 sacks of
cement.

May 30, 1927. Poured footing on item #6. Used 43 sacks of cement.

May 31, 1927. Poured barrel on item #6. Used 41 sacks of cement.

June 2, 1927. Poured footing on item #7. Used 81 sacks of cement.

June 4, 1927. Poured barrel on item #7. Used 84 sacks of cement.

June 6, 1927. Poured footing on item #8. Used 42 sacks of cement.

June 7, 1927. Poured barrel on item #8. Used 43 sacks of cement.

June 8, 1927. Poured footing on item #9. Used 53 sacks of cement.

June 9, 1927. Poured barrel on item #9. Used 46 sacks of cement.

June 15, 1927. Poured west abut. footing on item #18. Used 105 sacks of cement.

June 18, 1927. Poured wing footings on item #40. Used 66 sacks of cement.

June 24, 1927. Poured footing on item #40. Used 149 sacks of cement.

June 17, 1927. Poured footing on item #21. Used 45 sacks of cement.

June 20, 1927. Poured barrel on item #21. Used 57 sacks of cement.

June 23, 1927. Poured barrel on item #40. Used 254 sack of cement.

June 27, 1927. Poured east abut. on item #18. Used 200 sacks of cement.

June 28, 1927. Poured west handrail on item #40. Used 11 sacks of cement.

June 28, 1927. Poured east handrail on item #40. Used 11 sacks of cement.

June 27, 1927. Poured footing on item #37. Used 53 sacks of cement.

June 28, 1927. Poured barrel of item #37. Used 61 sacks of cement.

July 1, 1927. Poured west abut. of item #18. Used 188 sacks of cement.

July 7, 1927. Poured north apron wall on item #39. Used 25 sacks of cement.

July 8, 1927. Poured south apron wall & 2 in on footing of item #39. Used 49 sacks of cement.

July 9, 1927 Poured remainder of the footing on item #39. Used 197 sacks of cement. Total no. of sacks of cement in entire footing is 271 sacks.

July 11, 1927. Poured footing on item #9. Used 158 sacks of cement.

July 12, 1927. Poured floor on I-Beam job no 18. Used 185 sacks of cement.

July 13, 1927. Poured barrel on item #39. Used 305 sacks of cement.

July 15, 1927. Poured barrel on item #9. Used 197 sacks of cement.

July 18, 1927. Poured footing on item #20. Used 113 sacks of cement.

July 20, 1927 Poured footing on item #38. Used 144 sacks of cement.

July 23, 1927 Poured barrel on item #38. Used 152 sacks of cement.

July 23, 1927. Poured footing on item #10. Used 220 sacks of cement.

July 29, 1927 Poured barrel on item #10. Used 260 sacks of cement.

Aug. 2, 1927. Poured footing on item #13. Used 110 sacks of cement.

Aug. 1, 1927. Poured South handrail of item #10. Used $10\frac{1}{2}$ sacks of cement.

Aug 2, 1927. Poured N handrail of item #10. Used 12 sacks of cement.

Taken by E. M. M.
Aug. 3, 1927.

54

Paint for the I-Beam Job S.E.
of La. Porto. Paint to be used by
W. A. Burton. Paint bought from the
Cook Paint and Varnish Co.

First Field Coat Red Lead.

	Wt	Pig	Liquid
Pigment	75½%		
Red Lead		100%	
Lamp black to shade vehicle	24½%		
Pure raw Linseed oil			97%
Turp & Japan drier			3%
	100%	100%	100%
Red Lead	98%		
	2%		
	100%		

Second Field Coat Black Graphite

	Wt.	Pig	Liquid
Pigment	40%		
Graphite		82%	
Silica & silicates		18%	
Vehicle	60%		
Pure boiled linseed oil			100%
	100%	100%	100%

Graphite 65%
35%
100%
Graphite carbon
ash.

Aug 4, 1927. Poured east abut.
footing on item #11. Used 82
sacks of cement.

Aug 5, 1927. Poured barrel on item #13
Used 127 sacks of cement.

Aug 6, 1927. Poured footing on item #14.
Used 59 sacks of cement.

Aug 8, 1927 Poured 5 west abut on
item #11. Used 134 sacks of
cement.

Aug 8, 1927 Poured footing on item
#36. Used 59 sacks of cement.

Aug 11, 1927. Poured footing on item
#15. Used 31 sacks of cement.

Aug 12, 1927. Poured barrel on item #15
Used 42 sacks of cement.

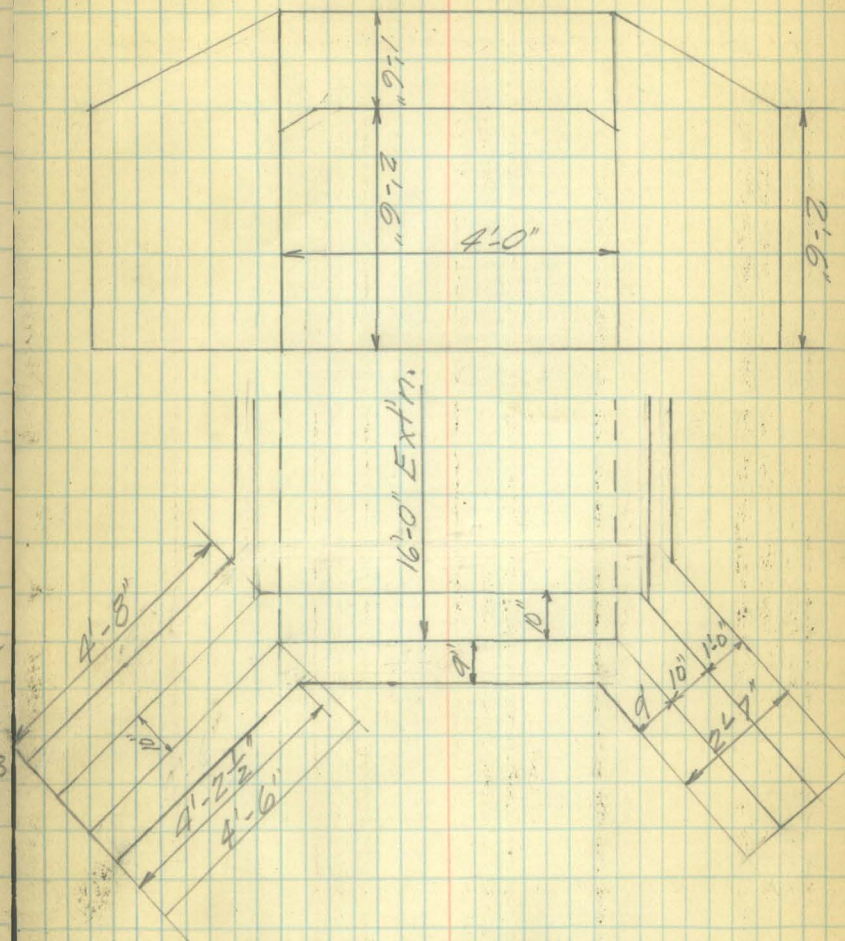
Aug 13, 1927. Poured footing on item #33
Used 116 sacks of cement.

Aug 10, 1927. Poured barrel on item #36.
Used 42 sacks of cement.

Aug 12 1927. Poured footing on item
#16. Used 26.5 sacks of cement.

Aug 20, 1927. Poured N. east abut on
item #11. Used 120 sacks of cement.

Aug 17, 1927. Poured barrel on item #33.
Used 98 sacks of cement.



4'x2.5'-16' Ext'n.
Extra. job on La Porta-Brandon
road. 7.9 c.y. of concrete.

Aug 25, 1927. Poured floor on item #11.
Used 198 sacks of cement.

Rousselon Gravel Pit.

Prelim. X-Sections for Stripping

Note: - Continued from page #59

Sta. B.S. H.I. F.S. Elev.

100.02

1+85

92.9 92.6 89.4.
21 24 10.6
0 4 5

2+00

94.9 93.7 93.0 88.6.
5.6 6.3 7.0 11.4
0 2 4 11

7/14/27 P.M.

D.S. Butterfield.
J.B. Good.
C.J. Cavanaugh.
F.T. Bentley.
W.D. Johnston.

Sta.	Δ Rt.	Δ Lt.	Top X-hair	Bottom X-hair	Distance
1.	109°-00'		10.09	10.00	9'
2.	85°-30'		7.34	7.00	34'
3.	88°-00'		6.00	5.76	24'
4.	75°-00'		1.43	1.00	43'
5.	60°-00'		4.12	3.00	112'
6.	63°-30'		3.75	2.00	175'
7.	60°-00'		4.13	2.00	213'
8.	53°-00'		4.22	2.00	222'
9.		122°-00'	11.00	10.92	8'
10.		76°-30'	5.36	5.00	36'
11.		50°-00'	5.61	5.00	61'
12.		44°-30'	2.11	1.00	111'
13.		62°-30'	12.36	10.00	236'

B.M. 5.26 105.26 100.00

Item #10

Inlet = 95.4 = C. 2.23

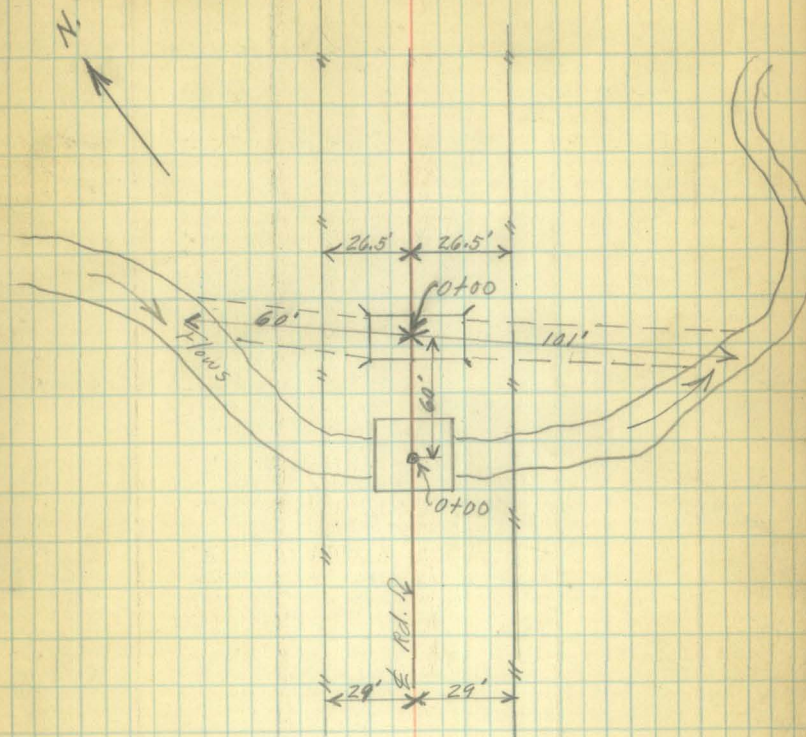
Outlet = 93.2 = C. 3.28

Note: - New Structure located 60' N.E. of
E Old Wood Bridge

Stadia taken from E Old Bridge with
outlet side = Right & Inlet = Left.
X-sections taken likewise.

Stadia Survey of old
Bridge Site & Stream at location Item #10
Section 32 N.W. 100. Twp.

38



Spike in Tel. pole N.W. Side of Rd. Approx. 80' N.E. of
Old Wood Bridge

96.4 98.2 98.5 97.3 96.2 98.6 98.1 99.0 99.6 99.9 99.7 99.0 97.2 96.8 97.4 97.3 97.5 97.3 96.7
89.7 91.6 91.6 91.7 91.5 91.2 91.2 91.2 91.2 91.2 91.2 91.2 91.2 91.2 91.2 91.2 91.2 91.2 91.2
60 54.6 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9
160 110 110 110 110 110 110 110 110 110 110 110 110 110 110 110 110 110 110
97.3 95.0 101.3 101.3 101.3 95.3 95.3
10.0 10.3 4.0 4.0 4.0 10.2 10.2
28 8 8 8 8 8 8

X-Section Proposed Location

X-Section Old Br. 97.3 95.0 101.3 101.3 101.3 95.3 95.3
10.0 10.3 4.0 4.0 4.0 10.2 10.2
28 8 8 8 8 8 8

9/2/27 A.M.

D.S.B.
J.B.G.
C.V.C.Rousselow Gravel Pit
Prelim. X-Sections for stripping.

39

Sta	B.S.	H.I.	F.S.	Elev.
B.M.	4.48	104.48		100.00
0	2.70	100.02	7.16	97.32

0+00=

0+16

0+38

0+50

0+67

0+82

1+00

1+23

1+35

1+50

1+55

Spike in root 4' Elm along S. Side of Pit Approx 25'
S. of Sta 2+00

97.0	96.0	95.9	96.2	94.9	94.3	95.2	95.3	95.1	94.1
3.0	4.0	4.1	3.8	5.1	5.7	4.8	4.7	4.9	5.9
0	10	23	30	40	52	60	67	76	84

97.4	97.1	93.7	92.8	92.8	93.3	94.1	95.4	94.7	99.1
2.6	2.9	6.3	7.2	7.2	6.7	5.9	4.6	5.3	10.9
0	3	7	16	26	31	34	43	50	60

95.8	95.6	95.2	94.3	93.5	93.0	89.4
4.2	4.4	4.8	5.7	6.5	7.0	10.6
0	10	17	24	32	38	43

94.7	95.4	94.6	94.8	93.4	89.5
3.3	4.6	5.4	5.2	6.6	10.5
0	7	16	22	26	37

98.0	97.4	96.1	95.8	94.2	89.2
2.0	2.6	3.9	4.2	5.8	10.8
0	3	7	11	16	30

95.6	95.3	95.0	88.6
4.4	4.7	5.6	11.4
0	7	10	23

97.1	96.6	94.7	88.8	87.9
2.9	3.4	6.3	11.2	12.1
0	7	10	19	23

94.9	94.6	93.9	89.9	88.8
5.1	5.4	6.1	10.6	11.2
0	7	11	18	20

96.1	95.7	94.6	94.6	88.5
3.9	4.3	5.4	5.4	11.5
0	4	9	11	18

94.1	94.5	94.4	91.2	88.6
5.3	5.5	5.6	8.8	11.4
0	4	8	9	16

94.9	95.0	94.1	88.4
5.1	5.0	5.9	11.6
0	2	5	12

Note: - X-Sections continued page #57

7/14/27 P.M.

W.D. Johnston.
D.S. Butterfield.
J.B. Good.
C.J. Cavanaugh.

Topog. Survey for
Proposed Rd. Between
Sections 13-24 C. & E. Twp. &
18-19 Waterloo Twp.

30

5+00

4+00

3+00

2+60 = Top E. Bank

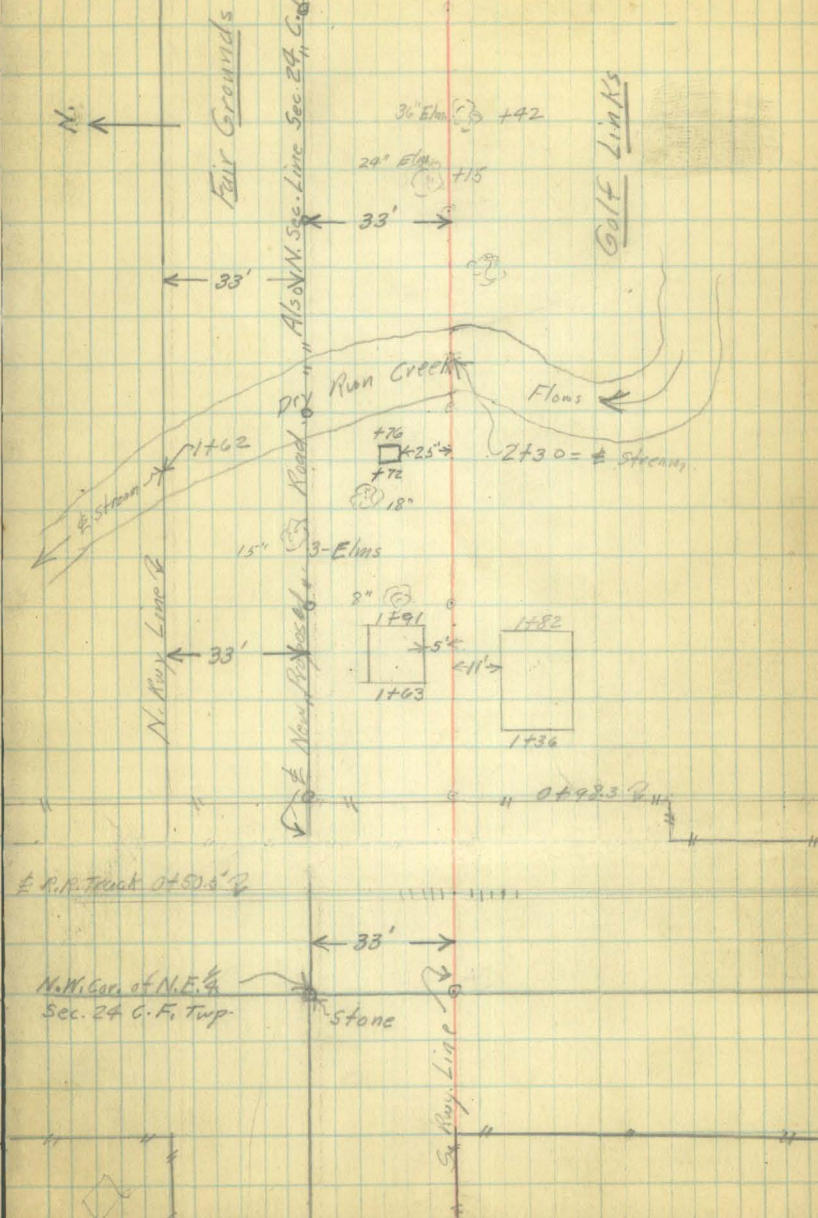
2+30 = E. Stream

2+10 = Top W. Bank

2+00

1+00

0+00 = Corner stone.



12+00 = P.I. = A =

Note: - $\pm$ New Proposed road angles
S. at Sta. 10+37.15 to Sta. 12+00 which
is 33' S. of Sec. Line thence E.
parallel Sec. Line to $\pm$ S.W. 100.-Cedar
Falls Rd.

10+37.15 = P.I. = A = $0^{\circ}05' \text{ L}$

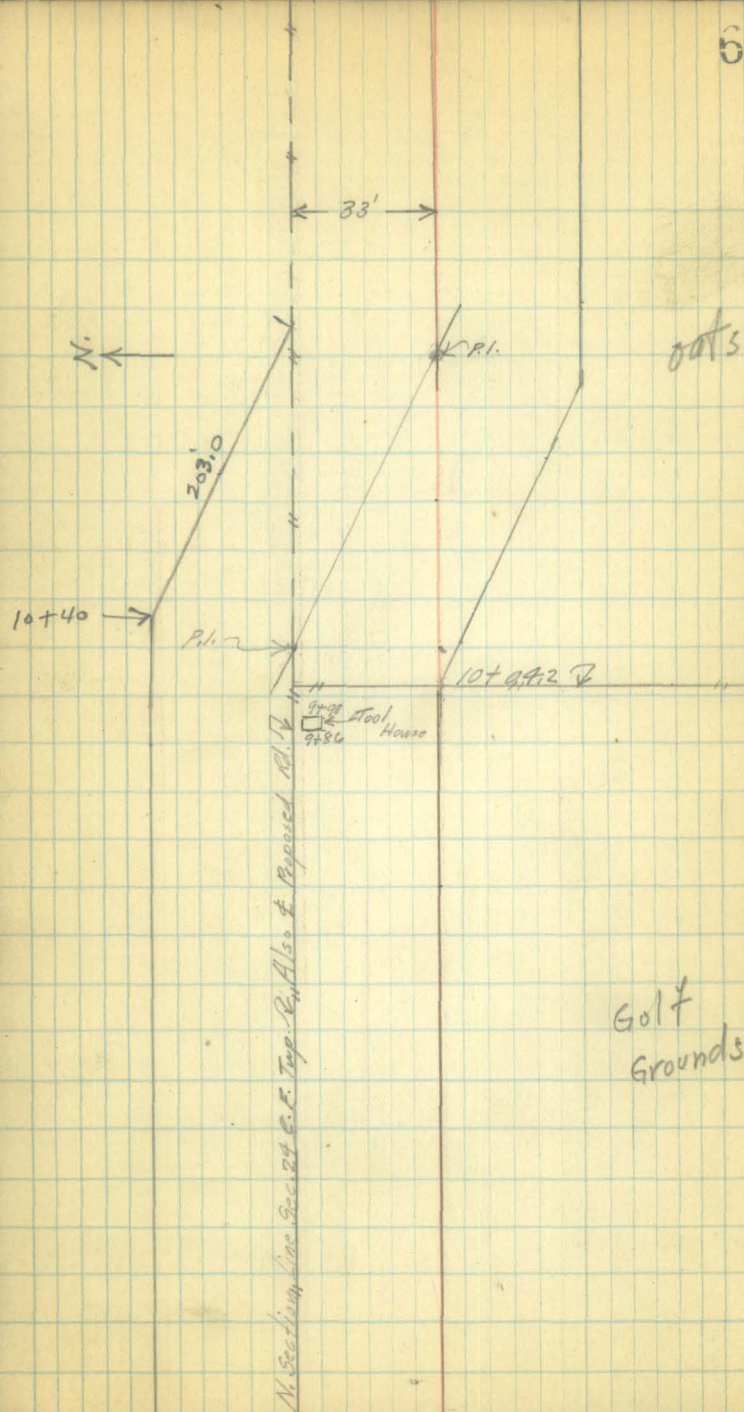
10+00

9+00

8+00

7+00

6+00



20+00

19+00

18+00

17+00

16+00

15+00

14+00

13+00

N.
←

33'

Sea. Line R

33'

New Proposed Rd. R

28+00

27+00

26+00

25+00

+ 92.3 = Fence

24+91.9 = A =

24+00

23+00

22+00

21+00

N. ←

33'

+ 92.3

33'

Sec. Line

New Proposed Rd. 2

36+00

35+00

34+00

33+00

32+00

31+00

30+00

29+00

N.
↑

Sec. Line

33'

33'

New Proposed Rd

44+00

1340.8

43+00

42+00

41+00

40+40.4 = Punct

40+38.8 = P.I. = Δ = 0°-20' RT.

40+00

39+00

38+38.7 = P.O.T.

38+00

37+00

N. ↑

Corn.

Line R

Proposed Rd. R

Pasture

33'

Sec.

E. Now

+40.4

33'

Hay & Corn

Corn

51+00

50+00

49+00

48+16.2 = Fence
48+15.8 = P.O.T.

48+00

47+72 = E. side barn

47+42 = W. side barn

47+12.0 = E. side shed

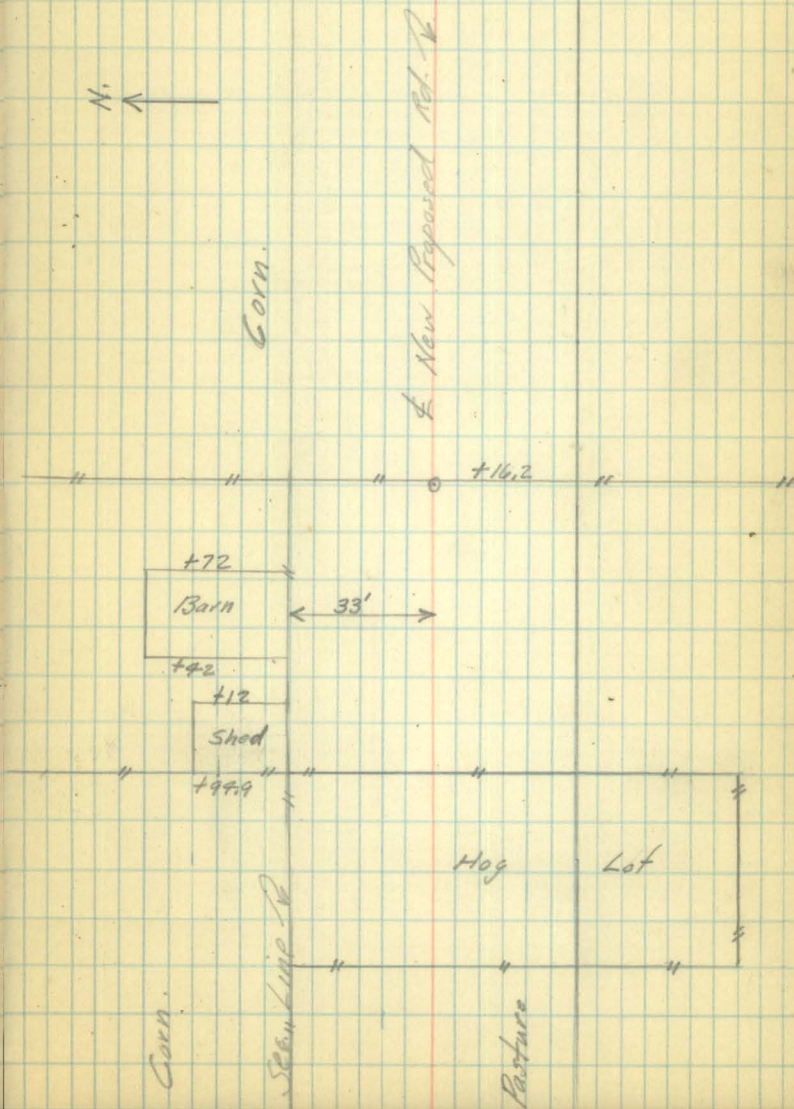
47+00

46+94.9 = Fence also W. side shed

46+00

45+50.3 = Fence

45+00



2716.1
1358.05

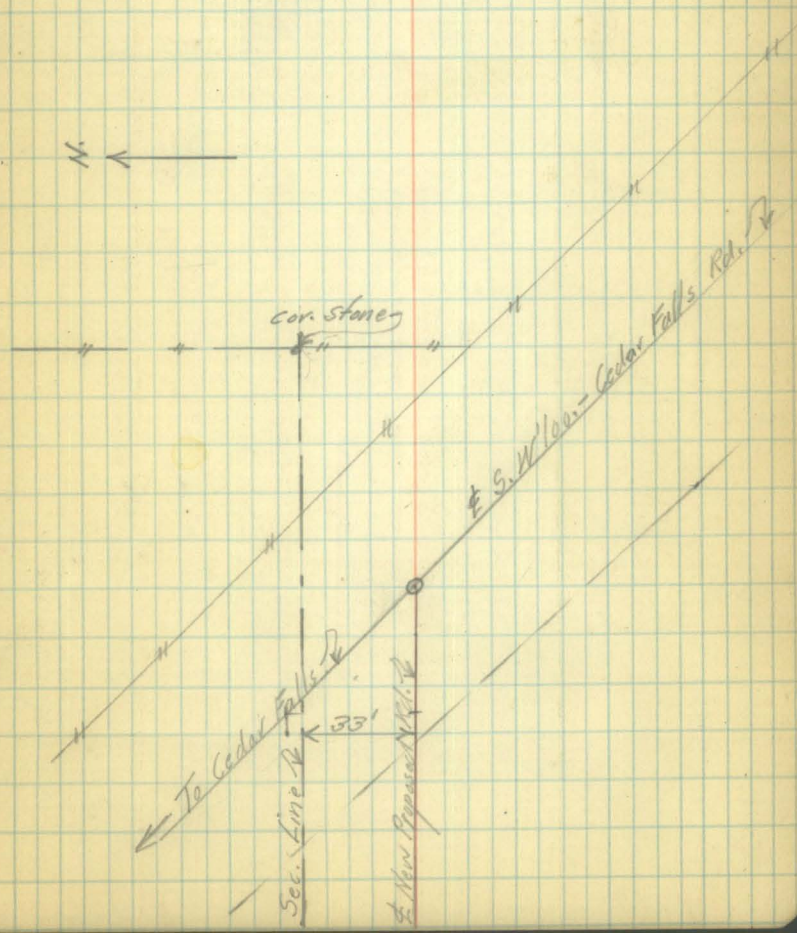
58.0
13 40.8
17.2

57

20.8

P.I. =
52+66.0 = ± Old S.W. 100. - C.F. Rd.

52+00



8/9/27 A.M.

D.S.B.
J.B.G.
C.J.C.Fisher-Dunkerton Gravel Pit
X-Sections after stripping that
Mr. Hayes did.

58

Sta. B.S. H.I. F.S. Elev. Grade

B.M. 2.23 102.23 100.00

0+02 =

0+50

1+00 Top of original ground.

1+00 bottom of stripping

1+18 = End of stripping

B.M. 2.23 100.00

Spike in Oak Approx. 235' W. of Sta. 0+00

99.1	97.7	97.4	96.9	96.0	94.7
3.1	4.5	4.8	5.3	5.2	3.5
152	158	179	200	224	239

98.8	97.5	96.9	96.7	96.8	97.1	95.4
3.4	4.7	5.3	5.5	5.4	5.1	6.8
153	156	179	200	230	236	240

99.0	97.2	97.0	97.1
3.2	5.0	5.2	5.1
151	160	236	246

98.7	98.9	97.5	97.1	97.0	97.1
3.5	4.3	4.2	5.1	5.2	5.1
103	105	130	156	236	246

69

Sta.	B.S.	I.I.	F.S.	Elev.	Grade	Cut
B.M.	9.20	109.20		100.00		
Outlet = Inlet Curb.			12.06	97.14		
0+00			10.98	98.22	97.10	1.12
0+25			8.70	100.50	97.34	3.16
1+00			8.34	100.86	98.05	2.81
2+00			6.53	102.67	99.00	3.67
3+00			3.75	105.45	102.25	3.20
4+00			0.28	108.92	106.50	3.42

B.M.	9.09	109.09	100.00		Cut
Outlet		11.92	97.17		
0+00		9.90	99.19	97.10	2.09
0+25		8.79	100.41	97.34	3.07
1+00		8.68	100.52	98.05	2.47
2+00		7.05	102.15	99.00	3.15
3+00		4.44	104.76	101.50	3.26
4+00		1.68	107.52	104.00	3.52

Spike in Hy Line Pole Approx. 8' N. of Culv.

£ Twp. Rd -

See Notes next page

Dr. Dewar-Raymond Rd. 2

8/24/27 A.M. D.S.B. - Notes
J.B.G. - T
C.J.C. - f

Dewar-Raymond Rd.

6" Tile Grades & Levels on W. side of
Rd. at S. end of mile between Sections
13 & 14 Royner Twp.

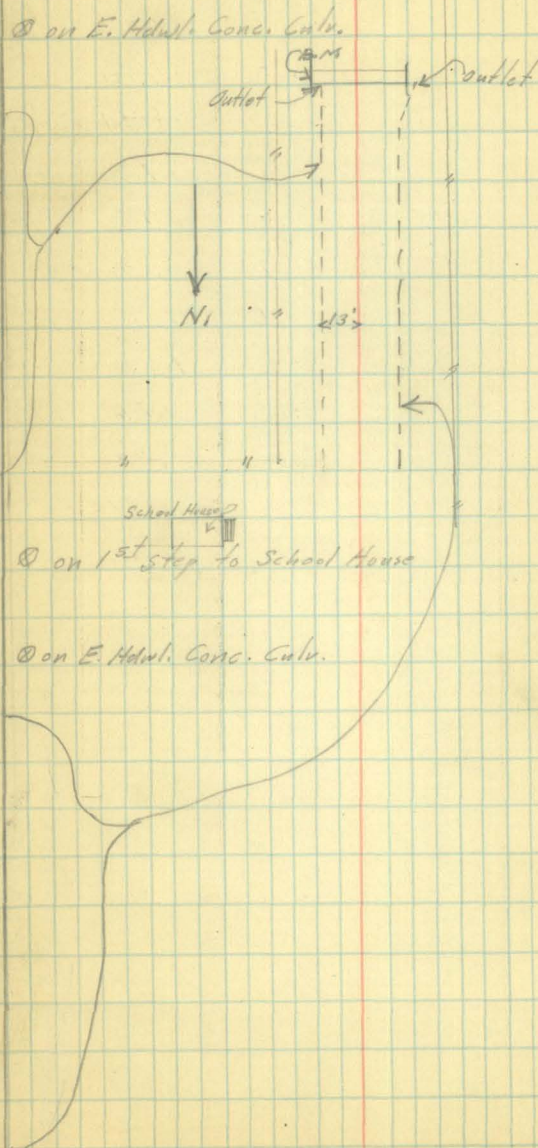
Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut.
B.M.	9.20	109.20		100.00		
Outlet = Bottom ditch at outlet culv.			12.12	97.08		
0+00			11.15	98.05	97.10	0.95
0+25			8.96	100.24	97.28	2.96
1+00			8.51	100.69	97.80	2.89
2+00			6.50	102.70	99.90	2.80
3+00			3.77	105.43	102.00	3.43
4+00			0.27	108.93	105.50	3.43

8/24/27 A.M.
D.S.B. - Note
J.B.G. - T
C.J.C. - P

Dewar-Raymond Rd.
6" Tile Grades & Levels between Sections
13 & 14 Poyner near center of mile.
E. side of Rd.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	8.41	108.41		100.00		
Outlet = F.L. Inlet Cule.			13.63	99.78		
0+00 = Outlet into Cule.			9.35	99.06	99.90	4.16
1+00			9.98	98.43	95.46	2.98
2+00			8.92	99.49	96.00	3.49
3+00			6.48	101.93	99.00	2.93
4+00			3.39	105.02	102.00	3.02
①	10.24	118.55	0.10	108.31		
5+00			9.80	108.75	105.00	3.75
6+00			6.21	112.34	109.00	3.34

B.M.			2.44	116.11		
8/26/27 A.M.						
		D.S.B. J.B.G. C.J.C.				
B.M.	5.20	105.20		100.00		
Outlet = F.L. in ditch			10.30	99.90		
0+00 = Outlet into ditch			8.85	96.35	99.90	1.45
0+15			7.43	97.77	94.98	2.79
1+00			7.18	98.02	95.45	2.57
2+00			6.01	99.19	96.00	3.19
3+00			3.56	101.64	98.50	3.14
4+00			0.37	104.83	101.00	3.83
①	10.32	115.15	0.37	104.83		
5+00			6.68	108.47	105.00	3.47
6+00			2.92	112.23	109.00	3.23



8/24/27 A.M.
D.S. Butterfield.
J.B. Good.
C.J. Cavanaugh.

Dewar-Raymond Rd.
6" Tile Grades & Levels on E. side of
Rd. just S. of Dewar between
Sections 13 & 14 Payner Twp.

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	10.64	110.64		100.00		
Outlet into ditch			13.50	97.14		
0+00			12.30	98.34	97.20	1.14
0+25			10.66	99.98	97.45	2.53
1+00			8.14	102.50	99.00	3.50
2+00			4.27	106.37	103.10	3.27
0	11.86	122.39	0.11	110.53		
3+00			11.43	110.96	107.20	3.76
4+00			6.33	116.06	112.60	3.46
5+00			0.52	121.87	118.00	3.87
0	11.79	133.66	0.52	121.87		
6+00			7.36	126.30	123.00	3.30
7+00			4.24	129.42	126.00	3.42
8+00			1.45	132.21	129.00	3.21
B.M.	7.90	104.90		100.00		
0-23			6.22	98.68	96.45	2.23
0-30 = Outlet in ditch			7.71	97.19	96.30	0.89
Outlet in bottom			8.61	96.29		

Spike Elec. Pole E. Side Rd.

0+00 E. Side Rd. =
0+00 for W. Side
Rd.

House

Outlet

0+00

B.M.

N.

Dewar-Raymond Rd.

8/25/27

D.S. Butterfield
J.B. Good
C.V. CavanaughRoussellou Gravel Pit
X-sections after stripping.

3

Sta.	B.S.	H.I.	F.S.	Elev.
B.M.	1.73	101.73		100.00
①	4.84	101.20	5.37	96.36

0+07 = Stripping begins abrupt bank.

0+25-

0+50

1+00

1+41

1+50

2+00

2+30

2+50

2+80 Stripping ends abrupt bank.

Spike in road 4' Elm 25' S. of Sta. 2+00

96.5 96.5 96.2 94.9 92.4 91.2 90.7 91.3 91.3 91.7 92.0 92.1 92.4 93.0
 4.7 5.0 6.3 8.8 10.0 10.5 9.9 9.9 9.5 9.2 9.1 8.8 8.2
 0 39 43 45 48 52 58 66 73 86 100 107 116 119 ✓

96.6 96.6 96.3 92.2 91.4 90.9 91.9 92.4 92.0 91.7 92.0 92.7 92.7
 4.6 4.6 4.9 7.0 9.8 10.3 9.8 9.8 9.2 9.5 9.2 8.5 8.5
 0 36 38 41 47 69 74 81 88 97 107 115 121 ✓

96.6 96.3 91.8 91.7 92.1 91.8 91.8 92.0 92.0 92.3 92.6 91.9 92.4 92.7 92.7
 4.6 4.9 9.4 9.5 9.1 9.4 9.4 9.2 9.2 9.9 8.6 9.3 8.8 8.5 8.5
 0 24 29 36 39 45 52 57 67 79 90 98 100 113 120 ✓

92.7 95.8 93.8 92.7 92.1 92.0 92.1 92.3 92.7 92.6 92.7 93.2 93.5
 3.5 5.9 7.4 8.5 9.1 9.2 9.1 8.9 8.5 8.6 8.5 8.0 7.7
 0 6 11 13 25 39 51 73 78 92 100 113 120 ✓

92.9 95.8 92.9 92.1 92.4 92.3 92.7 92.8 93.0 92.6 92.7
 3.3 5.4 8.3 8.1 8.8 8.9 8.9 8.5 8.4 8.2 8.6 8.5
 0 3 11 22 27 45 55 69 85 100 113 120 ✓

99.7 96.3 93.6 93.1 93.0 93.0 93.1 93.2 93.2 93.6 93.5
 1.5 4.9 7.6 8.1 8.2 8.2 8.1 8.0 8.0 7.6 7.7
 0 3 7 8 13 33 45 63 77 100 113 ✓

99.7 97.0 94.0 93.9 93.1 93.5 93.4 93.5 93.5 93.6
 1.5 4.2 7.2 7.8 8.1 7.7 7.8 7.7 7.7 7.6
 0 2 5 8 18 42 52 81 100 113 ✓

92.0 96.5 93.6 93.1 93.0 93.3 93.2 93.3 93.2 93.3 93.2
 2.2 4.7 7.6 8.1 8.2 7.9 8.0 7.9 8.0 7.9 8.0
 0 1 3 5 12 30 46 60 81 100 113 ✓

8/26/27

P.M.

D.S. Butterfield.
J.B. Good.
C.V. Cavanaugh.

Dewar-Raymond Rd.

6" Tile Grades & Levels on W. Side of
Rd. just S. of Dewar between Sections
13 & 14 Payner Twp.

64

Sta.	B.S.	H.I.	F.S.	Elev.	Grade	Cut
B.M.	11.65	111.65		100.00		
0+25=0+00=Outlet			12.53	99.12	97.20	1.92
0+24			11.99	99.64	97.40	2.26
1+00			9.52	102.13	98.50	3.63
2+00			5.79	105.86	102.50	3.36
3+00			1.58	110.07	106.50	3.57
0	12.31	123.79	0.17	111.48		
4+00			8.32	115.47	112.25	3.22
5+00			2.25	121.54	118.00	3.54
0	9.44	133.04	0.19	123.60		
6+00			7.31	125.73	122.00	3.73
7+00			4.25	128.79	125.00	3.79
8+00			1.32	131.72	128.00	3.72

Spike in Elec. Pole E. Side Rd.

Note:- See sketch on page #72

卷之五

F.A.^N 218

4 Street S. at Hotel Corner at Property-line Lapidary City
S. Rail of W.C.F. & N. in front of W.C.F. & N. Depot at Lapidary City
N. " " " " " " " " " " " "

River bottom low water

Note:- See Book #72
Page #42 for Profile used

Sta	B.S.	H.I.	F.S.	Elev.	Grade
6+00			6.0	814.91	
7+00			6.2	814.71	
7+50 = E Street N.Y.S.			6.4	814.51	
8+00			7.0	813.91	
①	4.28	818.82	6.37	814.54	
9+00			5.8	813.02	
10+00			7.1	811.82	
+53			7.4	811.42	
+64			5.3	813.52	
+80 = E Street			4.7	814.12	
+87			5.2	813.62	
+93			7.3	811.52	
11+00			7.1	811.72	
12+00			6.8	812.02	
+69			6.4	812.42	
B.M.			3.38	815.44	

Lowest Ground near pond.

In pond

" "

Spike in Hard Maple on N.W. Cor. Tourist Park.

2690.5
1345.25

1330.0

2237.5

13.30

907.5

2690.5
1330
1360.5

2690.5
1345.25

2640.0