

DIST. NO. 10.

1091

LEVEL BOOK

370

KEUFFEL & ESSER CO.

DRAWING MATERIALS

AND

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

Tables for Excavations and Embankments.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.

FOR SINGLE TRACK EXCAVATION.

"Copyright, 1895, by Keuffel & Esser Co."

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

Calculated by Julien A. Hall. M. Am. Soc. C. E.

Mark 1st Pole E of Hwy

2 5. of School #8

7

2

0

695
1970
2 675

Aug-3-20
COUNCIL ALBANY

MICHAEL
REGISTERED
942
PROF.

Index - Cont

Construction Figures

Main #1 - Page 96-102 + 116

" "1 BRA All Page 98

Main #2 Page 104-120 + 130

Main #2 BRA Page 106

" " BRA C " 129

" " BRA D " 122 + 128

" " BRA E 128

Tite Check

Main #1 Page 124-126 + 132-134

Main #2 Page 136-145

BRA Page 137

BRA D " 147

Index

Line	Levels	Topog	Pg.
------	--------	-------	-----

All		"	2-53
-----	--	---	------

Preliminary	"		54-85
-------------	---	--	-------

Construction Notes

Main #1			86-88
---------	--	--	-------

" #2			88-91
------	--	--	-------

B.R.A Main #1			92
---------------	--	--	----

B.R.A Main #2			92
---------------	--	--	----

B.R.C "			92
---------	--	--	----

B.R.E "			92
---------	--	--	----

B.R.D "			92-93
---------	--	--	-------

DRAIN No 10

Sta L Dist. M.B.

On 40

— 40 = W 1/4 Cor. Sec 22

B.S. 0 2650 S 88° E SW cor. Sec 22

Tie 31° 14' L — 538 3/4 E Silo

A 1 60° 19' L 680'

On 41

B.S. 40 0 685' N 67° 30' W.

Tie 135° L

A 2 139° 55' L 655' N 27° 0' W.

125° 10' R. 780

M 175° L 700

M 177° 40' L 740

142° R. 750

M 175° 20' 700

168 1/4 R 710

M 162° R. 770

L = Sec Line

F = Fence Line

NS Road E W 1/4

Silo SW.

W. Bank Creek

" " "

4 921M.

176-40 L 520'

177-20 L 420'

M 144 R 600'

Mag bearing

120 360
38 38
14 2 32

5

On A O N 1/4 Cor. Sec. 22

2675' N. SW. Cor. Sec. 22

π At. A-O

353°

N. 7° W.

263°-23'

84°

321°-46'

S 38°-00' E.

F 541

At

292°-41'

S 67°-10' E.

Lath 1980 South.

Fence East

F. West.

Silo SE.

F.S.

On 41

B 540 292°41' 700

S 67°-10' E

322°-45' 670'

S 27°-0' E.

to A 2 F.S.

H. 238° 800'

West bank Creek.

H	250°	750'
A	299°	720
H	256°	750
A	293°	730
H	264½	730
A	287°	720
H	275½	790
A	282½	800
H	298½	520
A	255½	610
H	297°	410
A	242°	570
H	281°	290
A	230°	620
H	256°	210
H	224°	190'
A	213°	730
H	175°	180

all of Creek to here

E + W ¼ line

820
160820
160
2600
2100820
160120
234234
180
54

9

360
234
221

A. 216 1/2 870

H 149 1/2 240

A 210 1/2 1100

H 121° 320

A 204 980

H 99 1/2 380

A 195° 1160

H 79° 470

A 193 1/2 1400

H 69 1/2 630

H 64 1/2 760

A 190 1/2 1780

H 60° 860

A 182° 1780

H 53° 830

A 177° 1640

H 49 1/2 770

N + S Road X

N + S Road X

A 171° 25' 1640

F.S. A3 147° 50' 1750'
1780

H. 29° 650

H 26° 730

H. 19° 840

A 171° 1040

H 7° 0' 850

A 180° 830

H 1° 30' 750

H 357° 630

A 192° 690

A 204½° 570

A 172° 690

A 162° 820

A 156° 770

A 160° 790

A 165° 920

? X over.

F.S. A #3

Tile E.M. #

Tile

Tile

Tile Outlet

Island.

A $166\frac{1}{2}^\circ$ 830A $174\frac{1}{2}$ 740A 172° 700Tie $13^\circ 02'$ Tie $327^\circ 37'$ F.S. Δ #4 A. $81^\circ 0'$ 1620' S 81° W.At Δ #2 $152^\circ 45'$ H. 57° 210'A. $324\frac{1}{2}^\circ$ 435H. $14\frac{1}{2}^\circ$ 220'A. 350° 430'H. 340° 220'A $3\frac{1}{2}^\circ$ 455'H 307° 350'

Closed.

B.S. bath

Silo SE.

T.O. Δ #4B.S. Δ #1

E. & W. F. line

Close

A 15° 460'

A. 22½° 550'

A. 28½ 830'

A. 29½ 1020'

H. 232½ 350

A. 25° 1200'

H 247° 280

H 303¼ 380

H 315½ 450'

A 31° 1320'

H 325 560'

A 35½ 1240'

H. 328 700'

Creek W. Bank

Creek W Bank ~~File~~?

" " " Outlet open ditch

" " " " " "

W. Bank Creek

Hwy. ?

W. Bank Creek

R.P.

A. 32° 1320'

A 39°½ 1380'

A 46 1320

A 56½ 1300

B.S. latk on H+S. Hwy R.P.

A. $66\frac{1}{2}$ 1320

 $343^{\circ}-17'$
$$\pi A + \Delta \# 4$$

81° 0'

S 81° - W.

A	325 $\frac{3}{4}$	1240
---	-------------------	------

4	330	1320
---	-----	------

293°.19'

A	337	1220
---	-----	------

H 312 1/2 1240

A	344 1/4	1180
---	---------	------

H	217 1/2	1320
---	---------	------

H 321 1/2 1240

A	354°	900
---	------	-----

H	324 1/2	1120'
---	---------	-------

A	$3\frac{1}{2}$	980
---	----------------	-----

H	322 1/2	970
---	---------	-----

Silo SE.

B.S. Δ #

A's last pt.

510 2m

Island.

H	315°	900
A	354	760
H	306 1/4	920
H	307 1/2	1010
A	12 1/2	1060
H	311°	1140
A	13°-35'	1000
A	24°-15'	1090
A	23 1/2	850
A	21 3/4	800
A	7°	700
A	357 1/2	630
A	350	800
A	2°	770
A	8°	860
A	12°	850
A	23°	850

Center Small island 100' diam.

Close H's Island

N+S #

E+W #

island

Close A's island

X

H	306	280'
A	41½	1050
H	290°	280
A	74°	980
A	77½	930
H	171°	330
A	78½	810
H	135½	450
A	86°	910
H	118°	580
A	92°	920
A	92¾	780
H	104½	770
H	97½	940
H	102	980
H	117°	840
A	91½	630
A	99½	630

Island

H	142°	760
A	104°	530
H	148½°	950
A	100°	380
H	145°	1090
A	92°	230
A	61°	180
H	129¾°	860
A	23°	175
A	39°	75'
H	110	1080
A	241°	75'
A	212½°	173'
A	306	280'
H	107°	1360
A	299½°	85'
H	123½°	1500'

755
1400

Apr. 21-1920

T Briggs
AE Mitchell
Hoff.

Cut off Topog. SE of here.

Tile

24

A $178\frac{1}{2}$ 230A 152° 210H $133\frac{1}{2}$ 1300A $135\frac{1}{2}$ 120H $148\frac{3}{4}$ 1520A 129° 120A $91\frac{1}{2}$ 230A 102° 415H 160° 1540A $132\frac{3}{4}$ 315

A 134 440

~~H $166\frac{1}{2}$ 1310~~A $132\frac{1}{2}$ 555Tie 200°-43 1900' N $21^\circ 0' E$ Δ 5 $152^\circ-41'$ (2200)? N $27^\circ W$ Tie $241^\circ-26'$ N $61^\circ 30' E$

Cut out topog N. here

N + S. #

Close A's Island

N + S, E + W #. 80 Rd S W. D O.

 Δ #3F.S. Δ #5 (Locate From Δ #3) Δ #0240 83
180
120 83

25

180
179 60
152 41
27 19

179 60

241 26

38 30

241 26

180

41 26

241 26

180

41 26

π At. Δ #3

B.S.

1780

S. 32° E

 Δ #1

Tie

346°-20' 1280'

 Δ #0

Tie

331°-52'

Silo SE

A 258° 710

A 245½ 650

A 227° 640

A 208° 710

A 200½ 700

A 195½ 750

H 320 110

Semi Wet Island

A 206¼ 1050

H 215½ 100

A 208° 1200

H 160°½ 230

A 202½ 1400

S. Right Way F. R.R.

A 199¼ 1400

R.R. E+W. E

H 161½ 300'

A 181° 1100

H 161° 530'

H 138½ 680

H 125½ 675

A 195½ 1520

H 120 490

A 192½ 1600

H 123½ 320

H 95½ 200

H 39° 120

F.S. Δ 6 176° 23' 1500

Tie 98° 12'

Note locate Δ 5 From

Δ # 3 Thus:-

T At Δ # 3

F.S. Δ 5 98° 12' 1720' N 81° 45' W.

X RR + NHS Hgwy

(fence E+W (RR)?) ⊥ E+W. Hwy.
Out.

Close H's Island

Δ # 6

Δ # 5

π At. Δ 5

BS.

1720'

S. 85° E.

 Δ #3

H 307° 800'

A 156 $\frac{1}{2}$ 1090H 304 $\frac{3}{4}$ 660A 141 $\frac{1}{2}$ 1220

A 132 1260

H 311 $\frac{1}{2}$ 460A 131 $\frac{1}{2}$ 990H 296 $\frac{1}{2}$ 350

A 122 820

H 277 470

A 94 $\frac{1}{2}$ 760H 244 $\frac{1}{2}$ 530A 74 $\frac{1}{4}$ 750

A 67° 730

A 84 120

on N. Right Way R.R. 10' N E.

H W.

H E+W.

E R.R.

N. RR Right Way E.

" " "

A 122° 190'

H 207° 400

A 142 $\frac{1}{4}$ 335

H 183 500

A 134 400

A 140° 490

A 148 $\frac{1}{2}$ 575

R.R. 243°-30'

A 161° 530

A 171° 430'

H 195° 750

H 203° 710

H 200 $\frac{1}{4}$ 610

H 190° 640

A 167 $\frac{1}{2}$ 1240

A 168° 1480

Bearing E. of R.R. + West

Close. X

island

Close Island

A $168\frac{1}{4}$ 1600A $171\frac{1}{4}$ 1680

Tie

 $232^{\circ}-49'$ A $177\frac{1}{4}$ 1600A $184\frac{1}{4}$ 1600A 182° 1760A 180° 1800A 179° 1940A 183° 2000A 187° 1960

Tie

 $303^{\circ}-27'$ π A+ Δ #6

B.S.

1500

Hwy.

 $83^{\circ}-50'$

Tie

 $339^{\circ}-51'$ H 101° 120'A $245\frac{1}{2}$ 95 Δ #6

X A+S #

 $(\Delta \#1?)$ Δ #9

Same Silo SE

Tile

3x2 Conc Box

A 155 1/2 65'

H 86 700'

A 262° 400'

H 84° 1220'

A 234° 560'

A 223° 760'

H 122 1/2 1600'

A 194° 950'

H 126° 1540'

H 127 1/2 1420'

A 177 1/2 1220'

H 132° 1400'

A 176 1/2 1100'

H 132 1/2 1600'

H 135° 1420'

A 182 1/4 250'

H 141° 1520'

H 137° 1050'

Sec. CoR.

Tile outlet

E Hwy.

1/4 CoR.

E N+S. Hwy.

Tile outlet W. Side Hwy.

NE CoR School lot.

A 160° 250'

H 145° 920'

A 120 ³/₄ 75'H 152 ³/₄ 1120'

H 155° 1020'

H 159 ¹/₂ 740'

A-O 304°-50' 1210'

R.R. 278°-02' 680'

on 50 Shed Line

A#6-50 304°-50'

T At S-O.

BS. 1215

N 55° W Δ #6

Tie 351°-24'

same Silo 5.

Tie 49°-06' 1200

Δ #3

O to -1 336°-53' 1120'

to -1

NW. Cor. School lot.

SW. Cor. School lot.

SSE. A for W. Shed.

E R.R. Tie.

π At S -1

B.S.

g	348° 30'	1040
+	347°	850
b	349°	680
c	344	520
d	321 $\frac{1}{2}$	355
e	314 $\frac{3}{4}$	170
π F	on shed	
g	170°	170
h	172 $\frac{1}{2}$	290
i	171°	475
j	161 $\frac{1}{2}$	750
k	158°	990'

Tie 46° - 58'

Tie 11° - 25'

H. A

S-O.

5.6	6.6	
5.1	6.0	E+W π
5.0	5.5	
5.1	5.3	
x 5.0	5.0	
x 5.0		
5.3	5.5	
5.7	5.3	
5.9	5.3	
6.2	5.1	
	6.1	
	6.5	

A O.

(B.S. laty on shed) ?

π At J-0

BS. 1120

a 154° 130

b 166½ 470

c 162° 680

d 162½ 820

e 160½ 1040

J-1 165°-15' 1300

N 14°-30' W

 π At J-1

BS. 1300

a 91½ 40

b 152½ 300

c 151½ 475'

d 150° 730'

e 145° 910'

f 137½ 1060'

g 140½ 1150'

S -1.

E R.R.

N. Right Way. F R.R.

J-0.

N+5. ~~1/2~~ Hwy Not S.N+5 ~~1/2~~ Hwy.

h $132\frac{1}{2}$ 1320'

in barn yard.

S1-S2 $122^{\circ}-24'$ 1580' N $57^{\circ}-30'W$ To S2.

T at 5-2.

✓ g $108\frac{1}{2}$ 170'✓ h 116° 340'✓ c 111° 640'✓ d $88\frac{3}{4}$ 680'✓ e 79° 750'

N + S. H

2-3 $68^{\circ}-50'$ 920' $569^{\circ}-W$ To 3-3

T at 3-3

B.S 910'

2-2

g $62\frac{3}{4}$ 240h $65\frac{1}{2}$ 430c $53\frac{1}{2}$ 720d $46\frac{1}{2}$ 880e 49° 940f $40\frac{1}{2}$ 1150

in Barn yard

3-4 $28^{\circ}-10'$ 1470' $228^{\circ}-15'W$

To S.4

S.4 Not on Shed line

π at S-4

BS

1490 S 28'W

a 136° 320

b 114½° 370

c 82° 370

d 64° 440

e 35° 520

f 14½° 700

FL. 82 400'

g 3½° 1180

82½° 650'

A-5 2°-21' 1310' S 2°-21'W

 π at S-5

BS

1320'

a 329½° 250'

b 323° 400

S-3

FL. coming N.

Where file BR. System # 5 X
E+W Highway.

to S-5

S-4

C $329\frac{1}{4}$ 490'd $340\frac{3}{4}$ 660'e $346\frac{3}{4}$ 820'F $351\frac{1}{2}$ 1045'g $350\frac{1}{2}$ 1160'5-6 $342^{\circ}-53'$ 1400'S. $14^{\circ}-30'E$ π at 5-6

B.S. 1400'

Tie $83^{\circ}-40'$ a $271\frac{1}{2}$ 220b $290\frac{1}{2}$ 300'C $304\frac{1}{4}$ 470'd 317° 460'e $317\frac{3}{4}$ 520'F 327° 6706-7 $319^{\circ}-40'$ 1090' $540^{\circ}-15'E$.35960
31948
4020

83-40'

A. H.

4.8 8.3

4.5 8.0

4.4 7.3

4.6 6.6

5-6 on S. line. 4.3 6.0

4.8 5.7

4.8 5.1

2-5

• Smoko stack single one, West.

E+W $\frac{1}{4}$ $\neq$

5-7 not on shed

π at S-7

B.S.

1100'

a $90\frac{1}{2}$ 340

b $41\frac{1}{2}$ 450

c $17\frac{1}{2}$ 535

Tie

$228^{\circ}45'$ 800'

d 4° 770'

e $357\frac{1}{2}$ 1060'

f 352° 1340'

g $340\frac{1}{2}$ 1400'

h $333\frac{1}{2}$ 1500'

T-8

$201^{\circ}40'$ 1320

$558^{\circ}15'$

π at S-8

B.S.

1340

a 23° 490

b 46° 190

3596
5915
30045

S-6

on E. + W. H.

on A #4

N. + S. H.

S-8

S-7

C = = at inst. π d 290° 110e $283\frac{1}{4}$ 280f $290\frac{1}{2}$ 450g $293\frac{1}{2}$ 570

BS lath 8-9 $290^\circ-41'$ 715 $569^\circ-E.$ To BS. lath Referred to before.

 π At 5-9 = B.S. lath

BS. 720'

 $\Delta-O.$ $173^\circ-12'$ g $227\frac{1}{2}$ 150h $234\frac{1}{2}$ 350c $244\frac{1}{2}$ 630d $243\frac{1}{4}$ 840e 216° 1280f $212^\circ-06'$ 1340g 203° 1320h 189° 1180

$\begin{array}{r} 60 \\ 50 \\ 100 \end{array}$
 $\begin{array}{r} 173.12 \\ 179.60 \\ 173.12 \\ \hline 648 \end{array}$
 $\begin{array}{r} 360 \\ 29 \\ \hline 291 \end{array}$
 $\begin{array}{r} 353 \\ 173.53 \end{array}$

5-8

on $\Delta-O$

A. H

9.6 13.0

9.5 10.5

9.5 10.1

$N+5^\circ E.$ (Shed NE for 200 from here)
 Secondary shed
 42

1 181 $\frac{1}{2}$ 1320Outlet 172 $\frac{1}{2}$ 1320

LEVELS #10

Main #1

B.M. 8.41 58.41 50.00

H²O 16.9 41.5

O-20 14.0 44.4

O 9.7 48.7

1 8.2 50.2

2 7.2 51.2

2+34

3 5.1 53.3

4 5.4 53.0

5 3.6 54.8

6 2.5 55.9

7 1.7 56.7

T.P. 7.00 63.90 1.51 56.90
6.45 63.71 0.95 57.46

7+11 L. 63.90 7.2 56.7

J.B.W.

O.K.
O.H.H.

Apr. 23-20

E+W Culvert N+S Road

Buggs
Hoff
MickelO = 36' N. of E+W FL
on Creek FL.Lat^h hub + marker at X.

E+W FL. + Creek FL.

Outlet

may want to extend O to here

H+2 Row Willow 3 50' From line.

X old ditch

= O BR.A. L. NW.

56

Br. A.

0+76 56.4 63.90 7.5 56.4

Main #1 Cont.

8 Main 5 6.2 57.7

9 5.8 58.1

10 4.7 59.2

10+76

E. ditch 63.90 5.0 58.9

11 4.1 59.8

11+12 2.9 61.0

W. ditch 0 4.7 59.2

11+56

B.M. 1.47 62.4

12 3.9 60.0

13 3.5 60.4

14 4.0 59.9

T.P. 5.67 65.20 4.37 59.53

4.86 65.18 3.58 60.32

J/BW

E+W. PL

E. # 11+5 Hwy

Edge grade

E Hwy. 305' N SWCOR N $\frac{1}{2}$ SW $\frac{1}{2}$
Sec. 22

W # Hwy.

Top extreme NE Cor. east
wing wall Conc. Culv. 9.5.67
4.86
9.875.67
4.86
9.873.37
3.37
3.373.27
3.27
3.275.67
4.86
9.875.67
4.86
9.87

58

59

15

65.19

5.9

59.3

R.P.

2.53

62.66

High Pt Rock (Hoff)

5.47
4.6665.00
64.9859.53
60.32Culvert #1 is 96'
H. of E+W FL 80 Rds
H of Highway E+W.

16

64.99

5.60

59.39

17 L

5.5

59.5

L SW.

18

5.0

60.0

19

4.8

60.2

20

4.0

61.0

D X

4.4

60.6

21

3.6

61.4

22

2.6

62.4

T.P.

5.72

68.55

2.16

62.83

4.76

68.50

1.25

62.74

68.52

B.M

3.03

65.49

High Pt. Largest Rock
400' S. of sta. 22

23

5.6

62.9

24

5.8

62.7

25

5.6

62.9

J.B.W.

0.1
0.1

Low O	68.52	7.9	60.60
26		5.1	63.4
27		4.5	64.0
27+20 L		4.3	64.2
28		3.5	65.0
29		2.4	66.1
30		1.1	67.4
T.P	7.95	74.53	1.94 66.58
	7.55	74.51	1.56 66.96
31	74.52	5.7	68.8
32		4.3	70.2
32+73		1.2	73.2
B.M		0.63	73.89
B.M.	3.76	69.25	65.49
O #1		8.1	61.1
O #2		8.9	60.3
J.B.W.		0.5	0.4

Controlling pt. For grade

 Apr. 28
 Briggs
 Hoff
 Whalen

L. South.

 End Main #1 on E+W E
 141' W. of NE. COR SW $\frac{1}{4}$ SE. Sec. 21

 Nail Root large Cottonwood
 100' E. line.

large Rock

pond

pond

62 Levels Ponds For Main #1

548

Apr. 28 - 1920 63
 B. H. Hoff
 Joe Whelan

T.P. 69.25 6.20 63.05

6.06 69.11

O #3 8.4 (60.7)

O #4 9.1 60.0

pt Low 9.1 60.6

BM #1 to O Main #2

B.M. 5.48 55.48 50.00

T.P. 6.67 50.44 11.71 43.77

5.04 50.47 10.05 45.43

50.45

T.P. 7.06 53.16 4.25 46.10

6.52 53.17 3.80 46.65

B.M. #5 6.64 46.53

Lath + Marker 80' S
 along Creek From
 Sta O Main #2

J.B.W.

OK
 O.H.

Pond See 'N. 27 Main
 700 N " " "
 Pond 300 W Pond #3

pt. 700 E of N. Pond.
 approx 80 Rds W. of
 N + S. Hwy.

MAIN #2

L

BM #5 6.64 53.17

46.53

H²⁰ 11.40 41.77

outlet Main #2

0 7.1 46.1

1 6.8 46.4

2 5.4 47.8

3 2.9 50.3

4 3.9 49.3

4+21 6.6 46.6

DX

5 3.8 49.4

5+43 E+W 1/4 line.

6 2.9 50.3

975' E. of 1/4 Cor.

T.P. 10.35 60.75 2.77 50.40

9.95 60.73 2.39 50.78

7 60.74 8.0 52.7

8 7.6 55.1

8+10 L 7.5 53.2

L West

9 5.9 54.8

10 4.6 56.1

J.B.W.

OK
O.H.

B.M. #6

60.74

3.56

57.18

High Pt. Black Rock 150'
S. Sta. 10 + 30' N. E+W 1/4 line

11

4.2 56.5

12

4.4 56.3

13

3.5 57.2

14

3.2 57.5

T.P.

5.36

64.17

1.93

58.81

5.54

64.16

2.12

58.62

15

6.3 57.8

16

6.1 58.0

1/4 Cor to Culv. 39'

16+05

E. Road Fence

E. Ditch ☉

7.4 56.7

E. Hwy.

4.5 59.6

16+35

W. R. Ditch ☉

7.5 56.6

16+67

5.5 58.7

At SE. Cor. NE 1/4 Sec. 21

Note: E+W line Willows on

W. Road E 10' S. line.

B.M. #7

2.65

61.51

Extreme NE Cor. E Wingwall
Conc. Culv.

J.B.W.

OK

O.H.H.

BR. A. Main #2

60.74

0 = 13 Main

3.5 57.2

L. SW.

1

3.7 57.0

1+20

3.7 57.0

End = E+W. 1/4 line 240'
E. of 1/4 Co R.

BR. C. 45° NE.

73.22

0 = 39+70 Main

7.5 65.7

39+70 Main #2 = 0 BR "C"

± HWY

5.9 67.3

E. ditch @

7.4 65.8

0+61

6.5 66.7

End W. line HWY

BR. E.

0 = 13+47 Main

73.22

4.5 68.7

± HWY

3.5 69.7

0+52 @

4.9 68.5

End E. HWY #

AK
OH.

Main #2 Cont.

Note:- Use 45° S.P.

Connection coming in at
16 + 44 running then N. on
W. side Hwy in W Road ditch

B.M. #7 2.97 64.48 61.51

17 6.4 58.0

18 5.6 58.8

19 5.6 58.8

20 5.9 58.5

21 5.8 58.6

22 5.9 58.5

23 6.2 58.2

24 6.1 58.3

add .10 to Elev.

T.P. 7.10 66.70 4.88 59.60

6.42 66.67 4.21 60.27

25 7.3 59.4

26 6.8 59.9

27 6.3 60.4

28 5.6 61.1

29 5.2 61.5

30 5.5 61.2

J.B.H.

OK
O.H.H.

31 66.69 5.7 61.0

32 5.7 61.0

T.P. 6.64 69.14 4.19 62.50

6.35 69.15 3.89 62.80

33 69.15 8.2 61.9

34 6.7 62.7

35 6.9 62.2

36 6.7 62.4

37 6.1 63.0

38 5.4 63.7

T.P. 8.47 73.23 4.29 64.76

6.54 73.22 2.47 66.68

39 8.3 64.9

N. Rail 3.88 69.34

39+15

Top Iron
Pipe N. end 7.06 66.16
W. Pipe

BM #8 7.50 65.72

J.B.W.

O.K.
C.H.H.

(33+30 bushy Willow
 34 small "
 Would pay to destroy.

Top. N. rail Great Western
 R.R.
 E R.R.

Marker Phone Pole

2
6
7
2
0

Top N. end C.I. Pipe east
 Side Hwy thru R.R.

39+70 73.22 7.5 65.7

= 0 BRC

40 7.8 65.4

41 7.2 64.0

42 6.4 66.8

43 1.7 68.3

± Hwy 2.3 69.9

43+06 ± Hwy.

B.M. #9 1.44 71.78

Extreme NE. Cor N. Wing Wall
Corr. C. Culv.

44 4.5 68.7

43+47 4.5 68.7

= 0 BR. E.

45 3.1 70.1

46 2.0 71.2

47 1.4 71.8

T.P. 9.50 80.98 1.74 71.48

8.87 80.97 1.12 72.10

48 8.1 72.7

49 7.4 73.6

50 5.8 75.2

51 4.2 76.8

J.B.W.

OK
QH.

52 80.97 2.0 74.0

T.P 6.10 85.84 1.23 79.74

5.78 85.86 0.89 80.08

53 85.85 4.5 81.4

53+50 2.5 82.1

End straight line

53+67 2.6 83.3

At Farm tile outlet.

Invert 4" tile 3.72 82.12

J.B.W

OK
O.H.

BR. "D"

BM. #9 3.55 75.33

71.78

Culvert.

0 7.0 68.3

43+26 Main 2

1 6.9 68.4

1+70 Tile outlet.

2 6.4 68.9

Big Cottonwood Stg 2
40' H.

3 6.1 69.2

4 5.8 69.5

5 5.5 69.8

6 5.5 69.8

7 5.2 70.1

Farm tile outlet 7+15

T.P. 5.05 76.72 3.66 71.67

4.67 76.70 3.30 72.03

8 76.71 6.7 70.0

9 6.2 70.5

10 5.9 70.8

11 5.6 71.1

12 6.4 70.3

12+75 6.0 70.7

live maple 12+70 20' H.

J.B.M.

OK
OK

Apr. 29-20
Briggs
Hoff
Whalen

76.71

13+09

4.6 72.1

End. BR D.

SW. Cor. SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 6

B.M. 10

3.26

73.45

Nail root. lone maple
tree 12+75

Note :-

300' S.P. West

240 " N. from
School House Cor.

A trees as against
S.P.

J.B.W.

OK
O.H.

Supplemental Main

Apr-30-20

B.M. #6

57.18

Hq. Pt. Rock

Briggs

Hoff

Whelan

2.54 59.72

7+74 Main #2

6.7

53.0

59.0

= 7+74 Supplemental line

8

6.7

53.0

9

5.1

54.6

53.6

10

4.7

55.0

11

4.4

55.3

12

3.9

55.8

Dx

5.7

54.0

13

2.9

56.8

13+43 Pasture Fence

14

2.9

56.8

T.P.

5.29

63.50

1.51

58.21

5.55

63.49

1.78

57.94

15

6.7

56.8

16

5.4

58.1

17

5.3

58.2

18

4.9

58.6

J.B.W.

19		63.49	4.4	59.1
20			3.6	59.9
21			3.2	60.3
T.P.	6.14	66.71	2.92	60.57
	5.55	66.70	2.34	61.15
22			5.8	60.9
23			5.2	61.5
24			4.8	61.9
25			4.3	62.4
E. ditch ①			5.0	61.7
⊥ Road			2.4	64.3
26+56 ①?			5.1	61.6
26			3.8	62.9
Chk			4.20	62.50
			3.91	62.77

Note

(Supp. Main is
only 63' shorter
Main #2

= 34+93 Main #2 in West
Hwy. ditch

T.P. Sta. 32 Main #2

J.B. N.

Construction Notes

Main #1

Sta. Elev. Grade Cut

0 48.7 42.90 5.8

1 50.2 44.00 6.2

2 51.2 45.10 6.1

3 53.3 46.20 7.1

4 53.0 47.30 5.7

5 54.8 48.40 6.4

6 55.9 49.50 6.4

7 56.7 50.60 6.1

8 57.7 51.70 6.0

9 58.1 52.80 5.3

10 59.2 53.00 6.2

11 59.8 53.20 6.6

12 60.0 53.40 6.6

13 60.4 53.60 6.8

14 59.9 53.80 6.1

Sta Elev Grade Cut

15 59.3 54.10 6.3

16 59.39 54.20 6.2

17 59.5 54.90 6.1

18 60.0 54.60 5.4

19 60.2 54.80 5.4

20 61.0 55.00 6.0

21 61.4 55.20 6.2

22 62.4 55.90 6.0

23 62.9 55.60 7.3

24 62.7 55.80 6.9

25 62.9 56.00 6.9

26 63.4 57.40 6.0

27 64.0 58.80 5.2

28 65.0 60.20 4.8

29 66.1 61.60 4.5

30 67.4 63.00 4.4

31 68.8 64.40 4.4

32 70.2 65.80 4.4

55.50
1.20
56.70
67.20

Max Cut. 7.30

Min " 5.30

AV " 6.24

MAX Cut 6.4

Min " 4.4

AV " 5.1

32+73 73.2 66.82 6.4

Main #2

Sta Elev Grade Cut

0 46.1 41.80 4.3

1 46.4 42.0 4.4

2 47.8 42.20 $\frac{1}{2}\%$ 5.6

3 50.3 42.40 7.9

4 47.3 42.60 x 6.7

5 49.4 43.83 5.6

6 50.3 45.06 5.2

7 52.7 46.29 6.4

8 53.1 47.52 $\frac{1}{2}\%$ 5.6

9 54.8 48.75 6.0

10 56.1 50.00 x 6.1

11 56.5 50.20 6.3

12 56.3 50.40 5.9

13 57.2 50.60 $\frac{1}{2}\%$ 6.3

14 57.5 50.80 6.7

Sta Elev Grade Cut

15 57.8 51.00 6.8

16 58.0 51.20 6.8

17 58.0 51.40 6.6

18 58.8 51.60 7.2

19 58.8 51.80 7.0

20 58.5 52.00 $\frac{1}{2}\%$ 6.521 58.6 52.20 $\frac{1}{2}\%$ 6.4

22 58.5 52.40 6.1

23 58.2 52.60 5.6

24 58.3 52.80 5.5

25 59.4 53.00 x 6.4

26 59.9 53.35 6.6

27 60.4 53.70 6.7

28 61.1 54.05 $\frac{1}{2}\%$ 7.029 61.5 54.40 $\frac{1}{2}\%$ 7.1

30 61.2 54.75 6.5

31 61.0 55.10 5.9

Sta	Elev	Grade	Cut
32	610	55.45	5.6
33	60.9	55.86	5.1
34	62.4	56.16	6.2
35	62.2	56.50	5.7
36	62.4	56.85	x 5.5
37	63.0	57.70	5.3
38	63.9	58.55	5.2
39	64.9	59.40	5.5
40	65.4	60.25	5.2
41	66.0	61.10	5.9
42	66.8	61.95	4.9
43	68.3	62.80	5.5
44	68.7	63.65	x 5.1
45	70.1	64.82	5.3
46	71.2	65.99	5.2
47	71.8	67.16	4.6
48	72.9	68.33	4.6

Sta	Elev	Grade	Cut
49	73.6	69.50	4.1
50	75.2	70.67	4.5
51	76.8	71.85	5.0
52	79.0	74.35	4.6
53	81.4	76.85	4.6
53+50	82.4	79.35	3.0
53+67	83.3	78.53	4.9

$$\begin{array}{r}
 63.65 \\
 12.80 \\
 \hline
 76.45
 \end{array}$$

Sta Elev Grade Cut
Br. A Main #1

0+7+11
in Main 56.7 50.40 ^{1.00} 6.30

0+76 56.4 51.92 ^{1.00} 4.48

Br. A Main #2

0+13 Main 57.2 51.10 ^{1.00} 6.10

1 57.0 52.30 ^{1.00} 4.70

1+20 57.0 52.54 ^{1.00} 4.46

Br. C Main #2

0+39+70 65.7 60.25 ^{1.00} 5.45

0+61 66.7 62.08 ^{1.00} 4.62

Br. E Main #2

0+43+97 68.7 63.45 ^{1.00} 5.25

0+52 68.3 63.97 ^{1.00} 4.33

Br. D Main #2

0+43+26 68.3 63.20 ^{1.00} 5.1

1 68.4 63.45 ^{1.00} 5.0

2 68.9 63.70 ^{1.00} 5.2

Sta Elev Grade Cut

3 69.2 63.95 ^{1.00} 5.3

4 69.5 64.20 ^{1.00} 5.3

5 69.8 64.45 ^{1.00} 5.3

6 69.8 64.70 ^{1.00} 5.2

7 70.1 64.95 ^{1.00} 5.2

8 70.0 65.20 ^{1.00} 4.8

9 70.5 65.45 ^{1.00} 5.0

10 70.8 65.70 ^{1.00} 5.1

11 71.1 65.95 ^{1.00} 5.2

12 70.3 66.20 ^{1.00} 4.1

12+75 70.7 66.39 ^{1.00} 4.3

13+09 72.1 66.47 ^{1.00} 5.6

Hubs DR #10

Main #1

June 7-21

Hoff
Hill
Simpson

Sta B.S. H.I. - S Elev Gr Cut. -

Culv. S. Sta 12

BM^{#2} 0.61 63.02 62.41

Top extreme N.E. Cor. East Wing wall Gong

Sta 4-T.P. 4.44 57.92 7.57 53.48

BM^{#1} 7.75 50.17

Lath Hub at F.Xing S of Sta 1 Main #1

T.P. 7.09 52.62 12.39 45.53

BM^{#1} 6.55 56.72 50.17Gr Sta 0 - 8 1.28 %
" " 8 - 9 1.25 %
" Sta 9 - 25 2.0 %

Creek Bed 16.75 39.97

Water level 16.10 40.62

0 14.21 42.51 41.30 1.21

0+36 10.86 45.86 41.76 4.10

1 8.45 48.27 42.58 5.69

2 5.93 50.79 43.86 6.93

3 3.86 52.86 45.14 7.72

4 3.19 53.53 46.42 7.11

5 9.36 63.58 2.50 57.22 47.70 8.52

6 8.36 55.22 48.99 6.24

Elev Gr New
Cut. 7/14/21
at Sta 5.

Raised tile to grade designed

57.22 48.40 5.82

55.22 49.50 5.72

Sta 0+0 H.I. -5 Elev Gr Cut
 6+75 63.58 7.76 55.82 49.94 5.88

Elev Gr New
 Cut.
~~55.82~~ 50.33
 = 0 BRA 5.49

O-BRA 63.58 7.76 55.82 ~~50.25~~ 5.57
 O+57 7.35 56.23 ~~51.93~~ 4.30
~~51.96~~ 4.27

O-BRA = 6+75 No. 1

End-BRA

Main
 7 63.58 7.27 56.31 50.27 6.04

56.31 50.60 5.71

7+25 6.86 56.72 50.59 6.13

56.72 50.88 5.84

7+50 6.73 56.85 50.91 5.94

56.85 51.15 5.70

7+75 6.26 57.32 51.20 6.09

57.32 51.43 5.89

8 6.16 57.42 51.55 5.87

57.42 51.70 5.72

9 5.35 58.23 52.80 5.43

58.23 52.80 5.43

10 4.62 59.96 53.00 6.96

53.40 6.56
 59.96 54.00 5.96

11 3.52 60.06 53.20 5.86

53.60 6.46
 60.06 54.22 5.86

12 3.36 60.22 53.40 6.82

Omrd - Use Cut Rp 100

Note: Sta 5 Raised to grade

Sta 5-9 1.10% Gr

Sta 9-10 .60% Gr

Sta 10- 1.20% "

1.10

3.32
 85

5+9 13.5 H.I. -5 Elev

BM#2 268 65.09 62.41

12 4.83 60.26 53.40 6.86

13 4.75 60.34 53.60 6.74

14 4.86 60.23 53.80 6.43

15 4.75 60.34 54.00 6.34

15+50 4.42 60.67 54.10 6.57

Note: Gave new Cuts to Hansen 7/14/21

BM#2 3.25 65.66 62.41

15+50 5.49 61.19 4.96 60.70 54.50 —

16 5.35 60.84 54.60 6.24

16+50 5.25 60.94 54.70 6.24

17 5.18 61.01 54.80 6.21

17+50 5.33 60.86 54.90 5.96

18 5.02 61.17 55.20 5.97

19 4.75 61.44 55.80 5.64

20 6.98 68.50 4.67 61.52 56.40 5.12

21 6.06 62.44 56.60 5.84

Elev 61 New
 Cut
 53.80 6.46
 60.26 54.40 5.86
 54.00 6.34
 60.34 54.60 5.44
 54.20 6.03
 60.73 54.80 5.83
 54.40 5.94
 60.34 55.00 5.34
 54.60 6.17
 60.67 55.40 5.67

-2.96

6.0

22.6

Sta.	B.S.	H.I.	-S	Elev
22		68.50	5.34	63.16 5680 6.36
23			4.56	63.94 57.00 6.94
24			4.90	63.60 57.20 6.40
25	10.20	73.96	4.74	63.76 57.40 6.36
T.P.	5.59	76.37	3.18	70.78
old Hub End Main #1			2.18	74.19
B.M.			1.52	74.85
		<u>CK T.P. 5</u>		
B.M.	1.52	76.37		74.85
25	5.15	68.90	12.62	63.75
0			7.00	
			6.90	61.90
20	4.00	65.49	7.41	61.49
15+50	5.01	65.69	4.81	60.68
B.M. #2			3.30	62.39

Spike E. of End of Main #1

Control Pt 500' NW Sta 24.

6/7/21

105
Hoff.
Mill
Simpson

Sta B.S. H.I. -5 Elev Gr Cut

BM Main 1 7.75 57.92 50.17

4) 1.23
3'

T.P. 7.09 52.62 12.89 45.53

Creek Bed 11.95 40.67

At outlet

Hub Level 11.35 41.27

Hub
0

8.68 43.94 41.80 2.14

1 6.60 46.02 42.00 4.02

2 5.21 47.41 42.20 5.21

3 2.24 50.38 42.40 7.98

4 2.91 49.71 42.60 7.11

5 3.76 48.86 43.83 5.03

6 2.29 50.32 45.06 5.27

R.P. 2.33 50.29

Hub by 4th FP Set Sta 5+40.

Same R.P. 10.20 60.49 50.29

6/24/21

6 10.17 50.32 45.06 5.26

7 7.85 52.64 46.29 6.35

7+25 7.43 53.06 46.60 6.46

7+50 7.33 53.76 46.91 6.25

Sta B.S H.I - S Elev

7+75 60.49 7.39 53.10 47.21 5.89

8 7.07 53.42 47.52 5.90

8+25 6.53 53.96 47.80 6.13

9 5.13 55.36 48.73 6.61

10 4.45 56.04 50.00 6.04

11 3.70 56.79 50.21 6.59

12 5.65 62.38 3.76 56.73 50.42 6.33

13 5.20 57.18 50.60 6.58

Hobs
BR A

0 62.38 5.20 57.18 51.10 6.08

1 5.13 57.25 52.80 4.65

1.570

1+12 4.98 57.40 52.78 4.62

End BR A

Main 2 Cont.

14 62.38 4.62 57.76 50.81 6.96

15 4.39 57.99 51.00 6.99

16 3.95 58.43 51.20 7.23

Gots given Hansen
6/24/21

1.20
1.2
240
120
1440

1.50
12
300
150
18

Main #2 - Cont

Sta	B.S.	I.I	S	Elev	Gr	Cut
B.M. ^H 7	3.23	64.74		61.51		
16			6.30	58.44	51.20	7.
16+38			5.48	59.26	51.28	7.
16+43			5.99	58.75	51.29	7.
16+48			6.47	58.27	51.30	6.9
17			6.26	58.48	51.40	7.0
18			5.69	59.05	51.60	7.4
19			5.69	59.05	51.80	7.
20			5.51	59.23	52.00	7.2
21	5.62	64.73	5.13	59.11	52.20	6.
22			4.90	59.83	52.40	7.
23			5.78	58.95	52.60	6.0
24			5.30	59.43	52.80	6.
25			4.86	59.87	53.00	6.
26			3.82	60.91	53.35	7.
27	5.47	66.98	3.22	61.51	53.70	7.
28			5.21	61.77	54.05	7.

7/9/21

$$\begin{array}{r} 38 \\ + 2 \\ \hline 40 \end{array}$$

Gap in tile sta 22-23

VOID — 6' W

519 B.S. H.I. -5 Elev Gr. Cut.

29 66.98 4.75 62.23 54.40 7.83

30 5.00 61.98 54.95 7.23

31 5.14 61.84 55.10 6.94

32 7.39 69.41 4.96 62.02 55.45 6.57

33 7.53 61.88 55.84 6.08

34 6.79 62.62 56.13 6.44

35 6.58 62.82 56.51 6.33

36 6.45 62.96 56.85 6.11

37 6.30 63.11 57.70 5.41

38 5.17 64.24 58.55 5.69

BM^{#8} 3.74 65.64

Void -

Set line over 6' W.

Top N. end C.I. pipe thru RR E side

Sta B.S. H.I. - S Elev Gr Cut

3.8

.2

3.6

BM*7 3.39 64.90 61.51

16 6.45 58.45 51.20 7.25

16+38 5.62 59.28 51.27 8.01

16+43 6.33 58.57 51.28 7.29

16+48 7.44 57.46 51.30 6.16

16+51 7.76 57.14 51.30 5.84

Est. size for Main (Private)

16+55 7.74 57.16 51.31 5.85

West of 24' Inlet Main #2

17 7.40 57.50 51.40 6.10

Gr Elev. at Inlet = 51.50

18 5.60 59.30 51.60 7.70

Elev Bot Deepst Pond = 60.00

19 6.13 58.77 51.80 6.97

Dist. from Inlet = 1500.0

20 6.28 58.62 52.00 6.62

Depth under pond = 4.0'

21 6.28 58.62 52.20 6.42

Fall in 1500' = 4.5'

22 6.75 ~~64.93~~ 5.72 58.18 52.40 6.78

Fall per 100' = 0.3 in. 3%

65.93

(use 2.5%)

23 7.53 58.40 52.60 5.80

Average Approx = 70

24 7.20 58.73 52.80 5.93

Size of Main $\frac{3}{8}$ P.O. = Bot 8" x 10"

25 6.24 59.69 53.00 6.69

26 5.81 60.12 53.35 6.77

Sta B.S. H.I. - S Elev Gr Cut

27 65.93 5.42 60.50 53.70 6.80

28 5.37 66.59 4.71 61.22 54.05 7.17

29 5.04 61.53 54.40 7.15

30 5.27 61.32 54.73 6.57

31 5.58 61.01 55.10 5.91

32 5.51 61.08 55.45 5.63

33 5.28 61.31 55.85 5.51

T.P. 7.08 70.58 3.09 63.50

x line of stakes here

34 7.36 63.22 56.15 7.07

35 8.23 62.35 56.55 5.85

36 8.32 62.26 56.85 5.41

37 7.63 62.95 57.70 5.25

38 6.93 63.65 58.55 5.10

39 2.29 68.29 59.48 8.89

BM #8 4.89 65.69

Sta	B.S.	H.I.	-S	Elev	Gr	Cut
24	5.15	66.75 68.74		63.60		
25	4.97	68.73		63.76	57.40	6.36
+25			4.78	63.96	57.73	6.23
+50			4.86	63.88	58.05	5.83
+75			4.95	63.79	58.38	5.41
26			4.91	63.83	58.70	5.13
+50			4.69	64.05	59.35	4.70
27			4.14	64.60	60.00	4.60
+50			3.39	65.15	60.65	4.50
28			2.88	65.86	61.30	4.56
+25			2.22	66.52	61.63	4.89
+50			2.27	66.47	61.95	4.52
+75			2.11	66.63	62.28	4.35
29	7.15	74.02	1.87	66.87	62.60	4.27
30			6.05	67.97	63.90	4.07
31			4.80	69.22	65.20	4.02
32			3.44	70.58	66.50	4.08
33			-1.17	74.19	67.80	6.39

8/17/21

Hott
Hill

1.00

.33 2) 1.33
65

5/4 25.33
13.09
6.11

Auto given 8/17/21 CPH

End.

Sta B.S. H.I. -5 Elev G Cut

8/28/14

B.M. #9 4.23 76.01 71.78

N.E. Cor N. wing Conc Cut by school

43+15 6.03 69.98 62.93

7.05

+50

7.01 69.00 63.11

5.89

44

7.04 68.97 63.65

5.32

45

5.48 70.53 64.82

5.71

46

4.34 71.67 65.99

5.68

47

4.05 71.96 67.16

4.80

48

9.16 81.97 3.20 72.81 68.38

4.48

49

8.11 73.86 69.50

4.36

50

6.80 75.17 70.67

4.50

51

5.15 76.82 71.85

4.97

52

2.87 77.15 74.35

4.80

53

3.34 84.89 0.42 81.55 74.85

4.70

53+48

2.32 82.57 78.05

4.52

+61

1.38 83.51 78.37

4.14

Cut 5 to 5/450
Even 8/25/14

End

2.5	2.5
48	.61
200	2.5
100	1.50
1200	52.5

BM ^u 9	3.38	75.16	71.78	
0		5.18	69.98	63.20 6.78
0+05		6.59	68.57	63.22 5.35
0+10		6.93	68.23	63.23 5.00
0+50		7.11	68.05	63.33 4.72
1		6.60	68.56	63.45 5.11
2		6.04	69.12	63.70 5.42
3		5.80	69.36	63.95 5.41
4		5.35	69.81	64.20 5.61
5		5.12	70.04	64.45 5.59
6		5.05	70.11	64.70 5.41

.25%

9/10/21

Hoff Hansen

5	5.56	76.70	70.04	
6	5.47	75.59 76.58	70.11	
7		4.92	70.67	64.95 5.72
8		5.20	70.39	65.20 5.19
9		4.94	70.65	65.45 5.20
10	5.26	76.31	4.56	71.03 68.70 5.33

Tile Check Main #1

Tile Check Main #1

Sta	B.S.	H.I.	-S	Elev	Between	Sta	B.S.	H.I.	-S	Elev	7/29/21 Matt Simpson
BM #2	1.57	63.95		62.4							
Hub - 6											
T.P.	3.85	58.50	8.80	55.15							
		53.45		41.28	11.30						
0			12.17								
0+50			11.55								
1			10.84	42.61	42.58						
+60			10.05								
2+20			9.52								
+50			9.09								
3			9.27	45.18	45.1						
+50			7.84								
4+15			7.02								
4+50			6.60								
5			5.44	48.01	48.40						
5+50			4.73								
6			4.15	49.30	49.50						
L Hub	9.13	64.28	3.35	55.15							
+50			9.45								

Cont. to p. 5105
 Estimated length 205' Outside 716 Dia 100'

Parsed tile this pt from #7.70 to #8.40
 Parsed tile this pt from #7.70 to #8.40

Sta B.S. H.I. -S Elev Gr given Sta B.S. H.I. -S

7 64.28 8.72 50.51 50.60
~~5.00~~

+50 59.23 8.13

8 7.57 51.66 51.75

+50 6.95

9 6.73 52.50 52.50

9+50 6.68

9+25 6.66

9+75 6.73

10 6.78 53.45 53.40

10+25 6.55

10+50 6.27

10+75 5.95

11 5.70 53.53 53.60

11+20 5.65

11+50 5.62

12 5.58 53.50

Hub 9 6.08 54.20

Hub 10 5.33 53.95

11

New Hubs Main #2
For RR Xing

Sta B.S. H.I. -5 Elev 6' Cut

BM #8 5.98 71.69 65.71 Top extreme N end C.I. pipe thru RR E side

38 7.59 64.10 58.55 5.55 Hwy app Sta 39+

38+50 6.92 64.77 58.98 5.79

39 59.40

39+50 5.41 66.28 60.14 6.14

40 5.00 66.69 60.46 6.23

Top 39+20 10.58 61.11 1.16 59.95

41 4.47 67.22 61.10 6.12

61.10

59.95

180) 1.150 1.64

7.00
4.20

61.10

1.64

60.46

82

60.14

85%
12"

6.42

6.16

28

TILEX Main #1 Cont

Sta B.5 H.I. - 6 Elev

BM #2 3.10 65.51 62.41

12 5.176

+50 5.66

13 5.85

+50 5.44

14 5.31

+50 5.21

15 5.20 60.31

T.P. 6.02 66.68 4.85 60.66

+50 6.30 60.38
7.00 59.68

16 6.10

+50 6.00

17 5.95

+50 5.84

18 5.53

+50 5.18

19 4.85

+50 4.58

Used Rod Length 5.05
1/28/21 - Hoff-Hill
66.68

20 4.33

20.50 4.27

21 4.15

+50 4.05

22 3.92 62.76

T.P. 6.23 69.38 3.53 63.15

+50 6.55 62.83

23 6.33

+50 6.23

24 6.22

+50 6.08

25 cont'd 6.26

+50 5.73

26 5.05

+50 4.36

27 3.70

+50 3.02

28 2.48

T.P. 9.79 75.77 3.40 65.98

339

75.77

28+50

8.03

29

7.40

30

6.14

31

4.85

32

3.40

33

End

2.25

Sta	B.S.	H.I.	-S	Elev	Sta	B.S.	H.I.	-S	Elev
R.P	5.50	55.79		50.29	7+50	56.27		8.73	-4
		<u>5.16</u>							
0+10	on Cor pipe	49.94	8.10	41.84 41.80	8			8.10	47.19 47.52
0+50	on S.P.		8.20		+50			7.57	46.95
1			8.00	41.94 42.00	9			6.98	48.29 48.75
+50			7.92		+50			6.21	
2			7.80	42.14 42.20	10			5.75	49.52 50.00
+50			7.65		+50			5.37	
3			7.55	42.39 42.40	11			5.25	49.87 50.20
3+50			7.52		+50			5.06	
4			7.30	42.62 42.60	12			5.00	50.12 50.40
+50			7.03		+50			4.95	
5			6.70	43.39 43.83	13			4.84	50.28 50.60
+50			5.87		106-13				
6			5.08	45.01 46.06	T.P.	5.28		3.86	(57.11)
+50			4.70						
7			4.19	45.90 46.29					
Hub-7				(52.61)					
T.P.	8.36	60.92	3.18	46.91					
		<u>55.27</u>							

OR A

0+25

5.50

0+75

5.30

1+10

5.12

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

13

56.57

13+50

6.08

14

6.00

50.52 50.80

+50

5.95

15

5.81

50.72 51.00

+50

5.75

16

5.65

50.89 51.20

+55

5.36

+65

5.48

16+75

5.48

16+95

5.41

17+05

62.39

56.69

5.65

57.04 51.40

25

24

23

22

21

20

19

18

17+50

17

16+50

16

Same Hubs

66.98

3.20

63.78

63.76

3.33

63.65

63.60

3.01

63.97

63.94

3.80

63.18

63.16

4.48

62.50

62.44

5.40

61.58

61.52

5.50

61.48

61.44

5.79

61.19

61.17

6.15

60.83

60.86

5.96

61.02

61.01

60.84

60.84

BM #2

3.30

65.71

62.41

Rock T.P.

4.10

66.98

2.83

62.88

Rock

3.26

63.72

B.M. Rock

0.48

66.50

21 H₂O

4.48

62.50

Re Check Main #2 Sta 16+55-17

16+55

11.47

+6.5

11.40

+71

11.35

+86

11.26

+95

11.29

62.25

BM# 7 3.39 64.90 61.01

17 15" 6.84

25 6.82

+50 16" 6.96

26 6.68

18 6.75

+50 6.32

+50 6.70

27 6.10

19 6.58

+50 5.98

+50 6.51

28 5.85

20 6.40

28+50
29 5.67

+50 6.31

29 6.80 63.57 5.48 56.77

21 6.20

+50 6.64

+50 6.12

30 6.55

22 6.03

+50 6.34

T.P. 7.41 66.25 6.06 58.84

31 6.06

+50 7.32

+50 5.96

23 7.22

32 5.75

+50 7.08

+50 5.56

24 7.07

33 5.34

+50 6.96

+50 5.22

62.57

34

5.05

42

3.95

+50

4.87

+50

3.55

35

4.74 68.88

T.P. 5.46 68.02 4.01 59.56

+50

9.12

36

9.13

+50

8.98

37

8.24

+50

7.83

38

7.27

+50

6.95

39

5.

+50

5.75

40

5.50

+50

5.15

41

4.87

+50

4.45

BM [#] 4.87	71.78	52	4.50
43+50 On 10' 4" le	7.40	53	2.10
44 On 8"	7.20	+48 L	0.75
+50	6.85		
45	6.06		
+50	5.55		
46	5.05		
+50	4.40		
47	3.88		
+50 On 6"	3.40		
48	2.80		
+50	2.33		
49	1.70		
49 Hub 10.45	2.72		
+50	8.80		
50	8.13		
51	6.98		

Sta BS H/L - S Elev Gr

~~60~~10/4/21 HOFF
HILL

BM 7 3.95 75.72

71.78

8

5.95

0+60 10' tile

6.58

+50

5.90

1

6.27

9

5.75

+50

6.12

+50

5.66

~~2~~

6.00

10

5.49

+50

5.93

+50

5.42

2

5.86

11

5.29

+50

76
5.69

+50

5.18

4

5.70

12

5.10

+50

5.58

+50

4.95

5

5.36

24.75

4.77

+50

5.28

6

5.04

+50

4.95

7

4.77

7-Hub 6.70

5.24

+50

6.06

918
428

of 90

73 " 18" E side Hwy

81" 18" E Side Hwy

44 " 10'82" Piled on W.S. Hwy at Sta 22

644 "10"x2' String on Hwy West from Cow

150 "8x2" " " " North From"

May 2

Tile laid to 349 3465

20 18' x 2 1/2' S.P. at Sta 4100 - 5

25 18" Straight File

117	16"	"	Strung along with
118	2"	"	2

55 18" " In Highway to

231	16"	"	"	"	24
-----	-----	---	---	---	----

140	12" x 2'	"	"	South of 3
-----	----------	---	---	------------

20 12" x 2 1/2 S.P. on crossing of R.R.

212 12" x 2' Street Tile North of R.R. to Conn

Sta	B.S.	H.I.	-S	Elev	Gr	Cut	H.I.	-S	Elev
Culv.									
B.M.	0.90	62.11		62.41			55.56		
11			3.06	60.05		1.28 36	420	14.95	40.61
10			4.16	58.95		768 38	Ditch Bed	15.60	39.96
9			1.90	58.21		1608	B.M. 1	5.40	50.16
8			5.72	57.39		1.28 36			
7+15			5.82	57.29		384 96		52.80 11.30 24	
7+50			6.27	56.84		4896 4992	9	11.28	
7+25			6.42	56.69		1.28 32	50.27 96	1.28	
7			6.81	56.30			51.23		
6+75			7.30	55.81					
6			7.89	55.22					
5			8.90	54.21					
4	2.07	55.56	9.62	53.49					
3			2.75	52.81					
2			4.83	50.73					
1			7.34	48.22					
0+36			9.69	45.87					
0			13.05	42.51					

O.W. Fowler.

Cuyler -

6-7

From Smiths

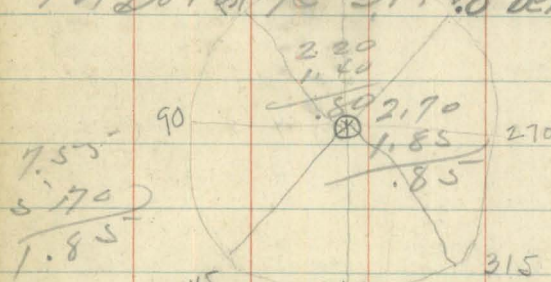
7 AM.

160
Es side Hwy

6.20 Ditch

7.60 Top 1050

Put Bot of 15' SP. 1.8' below top of 10



W side Hwy

- 5 = 5.70 Ditch

7.55 Top 1050

E side Hwy

6.85 Hwy D.

9.00 Top of 10' 7.1

6.85
2.15

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES $1\frac{1}{2}$ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julian A. Hall, M. Am. Soc. C. E.

FILED

FEB 27 '23

J. W. Baker
CHAS. E. BAKER