

*Scott Shera
Drain*
MILLER OLLON

DRAIN FIELD NOTES

PROJECT ENGINEER
ROBERT LEAK

KE
MINING TRANSIT BOOK

82 0023

*Scott Shera
Drain*

LEVEL BOOK
SCOTT SHERA

PAGE #1

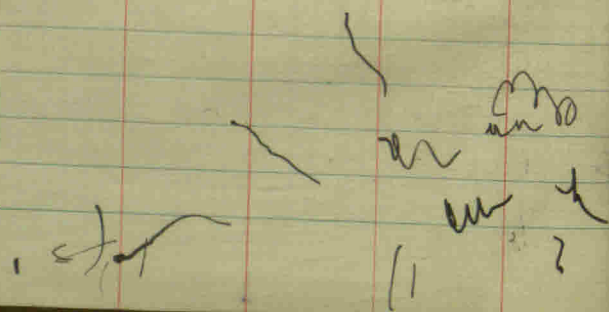
BM#1 ON TOP OF N. END OF 18"
CMP. CULVERT ON EW Rd.
N. END OF DITCH ELEV 100.00

BM#2 Nail E. Side 24" MADE ON E.
SIDE OF DITCH AND IN FENCE
LINE S. SIDE OF DILLOW WOODS
STA. 15+66 ELEV. 102.31

BM#3 L ON S. END OF E. HEADWALL
OF BRIDGE ON N. S. of Rd.
ELEV. 99.09

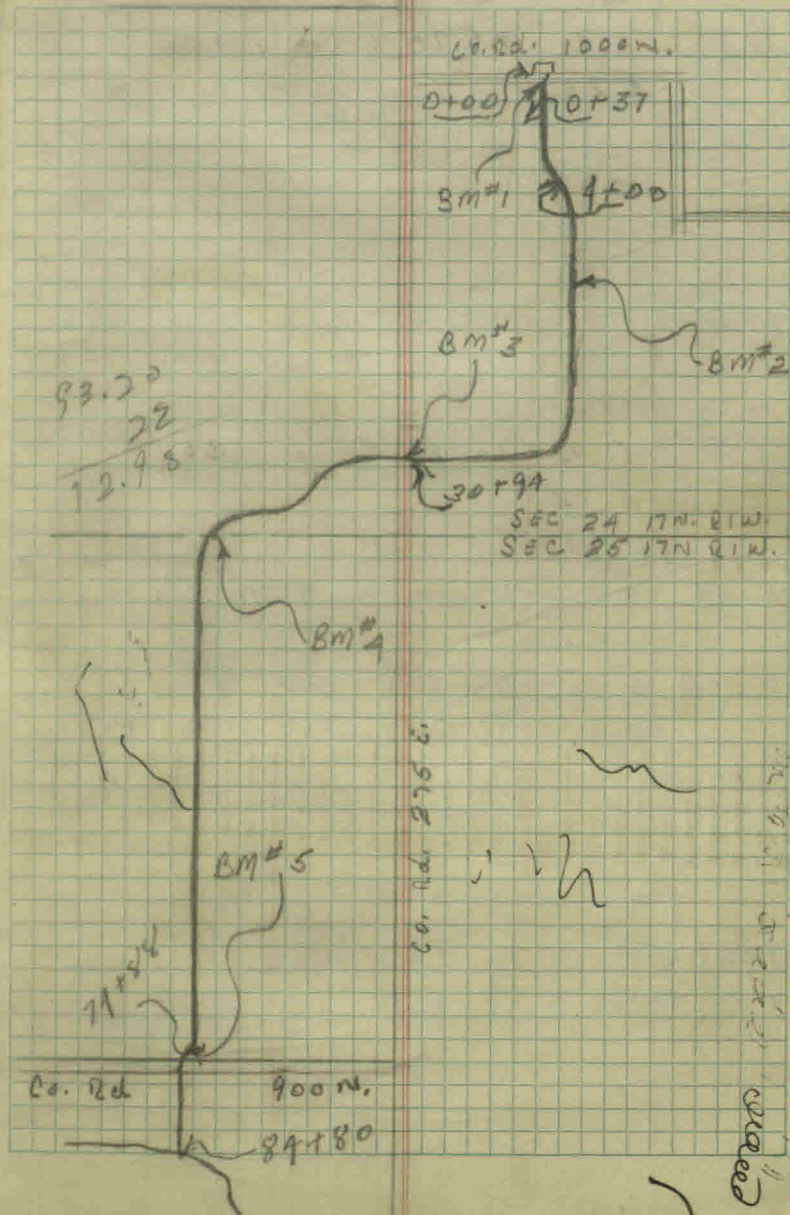
BM#4 Nail in E. Side of 14" Asp. on
W. bank of ditch at 90° turn
to S. - STA. 50+50 ELEV. 93.73

BM#5 NE. CORNER of N. HEADWALL of
BRIDGE ON E-W Rd. NEAR
S. END OF OPEN DITCH ELEV.
92.83



Co. Rd. 1025 N.

TEMP. 40° PAGE #2



TEMPERATURE AT FERRIS HEIGHT 30°

	+	π	-	Elev.
B.M.#	5.20	105.20		100.00
	5.20			

0+37

4+00

AT STUMP ACROSS FENCE

T.P.#		105.82	5.60	99.60
	5.72			

8+00

12+00

PAGE #3

16'	128.4' EW	4' EW	8'	16'
3.94	3.80	6.40	7.05	6.50
101.26	101.40	98.80	98.15	98.70
				100.50
				100.61

16'	8'	10'	3'	4'	8'	16'
5.39	3.79	7.26	7.34	7.02	3.72	3.96
99.81	101.91	97.94	97.86	98.18	101.98	101.34

16'	8'	14'	4'	4'	8'	16'
3.26	3.18	7.40	7.90	7.38	2.90	
102.06	102.14	97.92	97.92	97.94	102.42	

16'	8'	12'	5'	6'	8'	16'	26'
4.22	4.76	7.17	8.82	8.08	4.49	5.48	
101.10	100.56	98.15	96.50	97.24	100.83	99.84	

	B +	π	F -	Elev.
T.P. 2		105.09	3.21	101.61
16+00	3.48			

20+00

1.52.20+00

T.P. 3		103.24	2.65	102.99
	.82			

24+00

28+00

L +

Q

R +

Page # 4

	B	EW		EW	B	
14'	10'	2'		3'	10'	18'
3.47	3.34	8.10	8.20	7.90	3.38	4.04
101.62	101.73	96.99	96.89	97.19	101.71	101.05

	B	EW		EW	B	
16'	12'	8'		2'	10'	17'
4.25	4.05	3.93	9.59	9.00	9.76	3.25
100.82	101.04	101.16	96.51	96.09	96.33	101.89
						101.11

	16'	9'	3'		3'	11'	19'
	3.22	2.80	7.96	7.44	9.05	2.15	3.0
	100.02	100.41	95.28	95.80	95.19	101.09	100.24

	16'	10'	4'		3'	10'	14'
	3.39	3.99	7.5	8.17	7.63	3.75	4.28
	99.35	99.25	95.74	95.07	95.61	99.49	98.96

	B+	π	F-	C/ov.
B.M. 3.			2.84	100.40
	3.08	103.48		

32+00

36+00

T.P. 4.

5.79 103.09

6.18 97.30

40+00

44+00

T.P. 5

6.23 101.47

7.85 95.24

L+

E

R+

PAGE #
5

16'	12'	4'		3'	11'	14'
4.95	5.0	9.65	9.08	9.04	5.15	5.5
98.53	98.48	94.83	94.40	94.64	98.33	97.98

20'	12'	4'		5'	12'	20'
5.23	5.83	9.6	9.93	9.7	6.02	5.76
98.25	97.65	93.89	93.55	93.78	97.46	97.72

24'	12'	4'		3'	10'	16'
5.33	5.05	9.79	10.3	9.89	6.08	6.04
97.86	97.44	93.30	93.06	93.21	97.01	97.05

20'	10'	4'		4'	12'	14'
6.4	6.72	10.18	10.68	10.45	6.62	7.13
96.69	96.37	92.91	92.41	92.64	96.47	95.96

B+ π F- Elev.

48+00

52+00

T.P. 6. 3.40 98.67 6.20 95.27

T.P. 7. 3.99 94.68

56+00 6.86 101.54

T.P. 8. 7.70 93.84

6.90 100.74

60+00

64+00

L+ E R+ Page 6

23'	13'	3'	4'	10'	20'
5.16	4.53	9.12	9.59	9.37	5.64
96.31	96.94	92.29	91.88	92.10	95.83

10'	14'	4'	6'	16'	29'
5.10	4.98	10.12	10.33	9.99	4.93
96.39	96.59	91.35	91.14	91.58	96.54

18'	16'	6'	3'	15'	25'
6.16	6.17	9.34	10.29	9.8	8.16
95.38	95.37	92.20	91.25	91.74	93.38

13'	3'	4'	12'	21'
6.01	10.09	10.65	9.63	6.67
94.73	90.65	90.09	91.11	94.07

23'	3'	3'	15'	21'
3.9	11.13	11.74	10.73	5.36
96.84	89.61	89.00	90.01	95.11

	B+	π	-	Elev.
T.P. 9.	5.04		7.04	93.70
	5.04	98.74		

68+00

72+00

76+00

T.P. 10.			6.48	92.26
	7.03	92.29		

80+00

84+00

L+

Q

R+

P

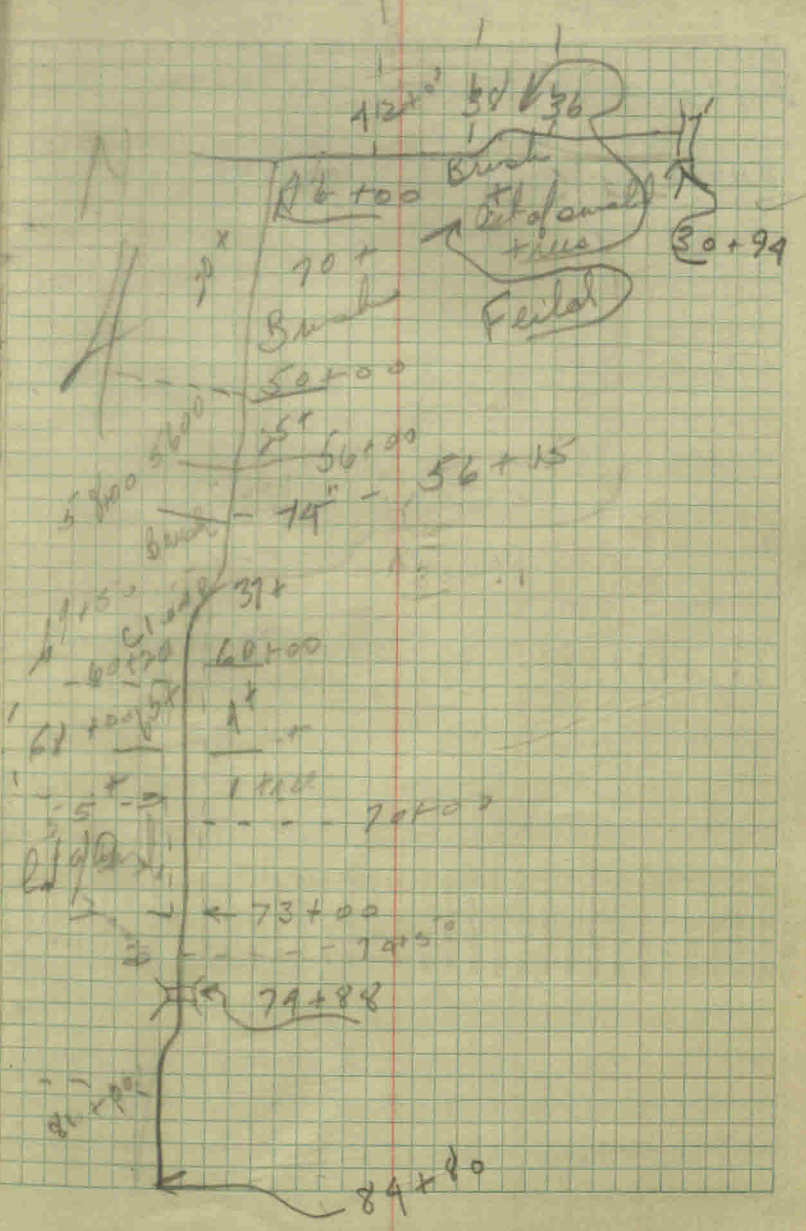
10'	2'	3'	15'	25'
7.3	9.52	10.12	9.82	4.2
91.44	89.22	88.62	88.92	94.54
				94.07

12'	13'	5'	4'	12'	22'
5.31	5.2	9.94	10.54	10.09	5.36
93.43	93.54	88.80	88.20	88.65	93.38
					93.16

24'	14'	7'	6'	16'	24'
6.48	6.4	10.14	10.46	10.63	5.84
92.26	92.34	88.60	88.28	88.11	92.90
					92.78

16'	10'	3'	4'	10'	19'
5.45	5.94	12.0	12.52	12.04	7.83
93.84	93.35	87.29	86.77	87.25	91.46
					93.01

22'	12'	7'	6'	16'
8.94	8.7	10.68	13.62	11.38
90.35	90.59	88.61	85.67	87.91
				90.39



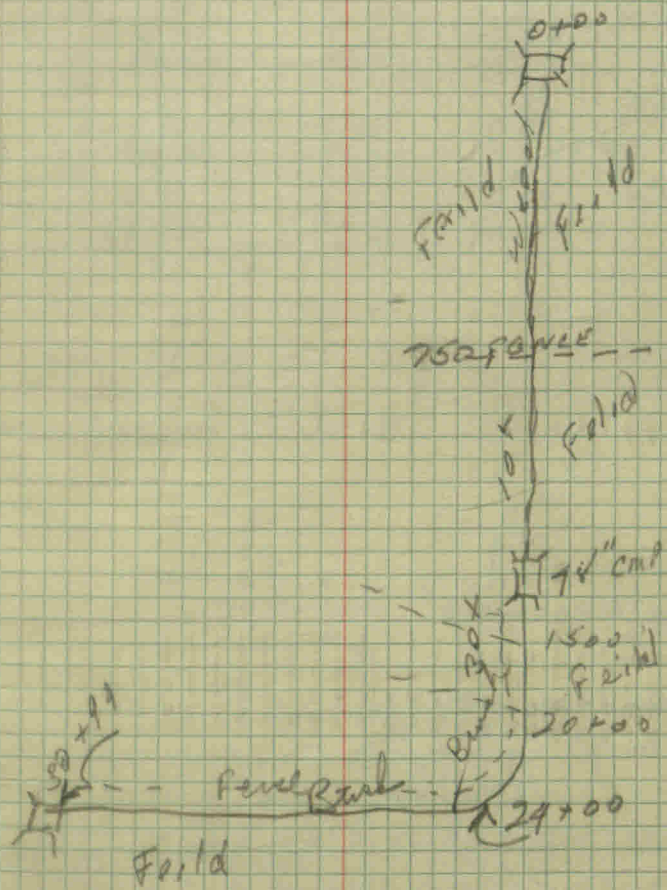
	B ₊	I ₊	I ₋	Elev.
B.M.5	4.74	97.57		92.83

84+80

L+

R+

16'	4'	1'	1'	16'
9.20	15.23	15.26	15.24	10.16
88.39	82.34	82.31	82.33	87.51



	B+	F-	Elev.
B.M. 1	105.89		100.00
	5.89		

D+00

D-05

D+22

(Notations:)

"No HEADWALLS"

SIZE OF CMP. - 18"

DIST. FROM EDGE OF RD. TO TILE -

DIST. FROM R/W TO TILE -

DIST. FROM E TO CMP - 11.9'

DIST. FROM CMP TO R/W - 8.6'

DIST. FROM BANK TO EDGE OF RD. - 6.5'

SIZE OF TILE

OPEN DITCH AT EDGE OF RD.
LOCATED 12' FROM E OF RD.

L	E	R+
6.13 99.76	7.6 98.5	3' 7.78 98.11
6.20 99.69	6.12 99.77	3' 6.08 99.81
6.81 99.08	7.21 98.33	8' 5.53 100.36

98.50
94.90
3.60
97.90
97.40
99.90
3.60

	B+	A	F-	Elev.	NEW Bottom
74+99					
B.M # 5	3.15	95.99		92.83	
76+00			4.26	91.72	85.5
80+00			3.26	92.72	84.0
84+00			6.44	89.54	82.6
84+80					82.31
B.M # 5	NE CORNER				
74+88	4.18	97.01		92.83	
72+00				86.20	
68+00				76.80	

Cut

	8+	π	F-	Elev.		
64+00			3.62	89.40	93.52	5.99
T.P. #1	6.00	99.39	3.62			
60+00			5.28	88.00	94.11	6.11
56+00			5.58	88.60	93.8	5.21
52+00			5.24	89.20	94.15	4.95
48+00			4.06	89.80	95.33	5.53
44+00			2.94	90.40	96.45	6.05
40+00			2.58	91.00	96.81	5.81

B+	π	F-	Elev.	
36+00			91.60 98.30	4.80
32+00			91.90 98.20	4.90
B.A. #3 102.31 30+94				
28+00			92.10 98.90	4.22
24+00			92.50 99.50	3.58
20+00			92.90 100.20	2.84
16+00			93.30 101.58	1.54
T.P. #1	5.92	103.12	1.54	
12+00			93.70 100.90	6.52
8+00			94.10 102.70	4.76

B+ π/ F- Elev.

4+00

94.50 102.88

4.62

0+00

94.90 101.82

6.48

B.M. 1

107.50

7.50

BA. 2 Brass Plug on S/W Headwall Bridge
Sta. 36+29 El. 106.46

Scott
Shera

Drainage

	B+	A	F-	Top St. Elev.	Bot. Ditch Elev.
--	----	---	----	------------------	---------------------

B.M. 2

42+96

Flow line
90.15

44+00

90.35

46+00

90.75

48+00

91.15

50+00

91.56

52+00

91.96

Top of stake Cut to bottom of Ditch

B+	π	F-	Top St. Elev.	Bt. D. Elev.
54+00				92.36
56+00				92.76
58+00				93.17
60+00				93.57
62+00				93.97
64+00				94.37

Top of Stake

Cut to bottom of Ditch

B+	A	F-	Top St. Elev.	Bt. Ditch Elev.
----	---	----	------------------	--------------------

80400

97.59

Top of Stake Cut to Bt. of Ditch

6.28

4.97

103.56

244

	B+	A	F-	Top St. Elev.	Bt. Ditch Elev.
--	----	---	----	---------------	-----------------

91+45 B.M. 3	2.24	116.86			114.62
-----------------	------	--------	--	--	--------

90+00				99.60	
-------	--	--	--	-------	--

T.P. #1	4.23	109.84	11.25	105.61	
---------	------	--------	-------	--------	--

88+00				99.20	
-------	--	--	--	-------	--

86+00				98.79	
-------	--	--	--	-------	--

84+00				98.39	
-------	--	--	--	-------	--

82+00				97.99	
-------	--	--	--	-------	--

Top of Stake	Cut to Bt. of Ditch
--------------	---------------------

11.25	6.01
105.61	

5.0	
104.84	5.64

5.76	
104.08	5.29

4.84	
105.00	6.61

6.89	
102.95	4.96

	B+	K	F-	Top St. Elev.	Bt. Dt. Elev.
91+45 B.M. 3	.67	115.29			114.62
92+00					99.99
94+00					100.40
T.P. #1	6.5	113.16	8.63	106.66	
96+00					100.80
98+00					101.21
100+00					101.61
T.P. #2			4.68		
B.M. #3	1.63	116.25			114.62
102+00					102.10

114.62
Top of stake Cut to Bt. of Ditch

8.47
106.82

6.83

8.63
106.66

6.26

5.95
109.21

6.41

4.05
109.11

7.90

4.68
108.48

6.87

3.24
113.01

10.91

	B+	T	F-	Top St. Elev.	R. St. Elev.
T.P.#1	.93	113.94	3.24		102.41
104+00					
106+00					102.81
108+00					103.21
110+00					103.62
T.P.#2	6.63	117.13	3.44		109.019
112+00					
114+00					109.42

Top of Stake Cut to Bt. of Ditch

3.4
110.54 8.13

3.84
110.10 7.29

2.42
111.52 8.31

3.44
110.50 6.88

4.38
112.75 3.73

3.91
113.22 3.80

B+	T	F-	Top St. Elev.	Bt. D. Elev.
				104.82
116+00				
114+00				
120+00				105.63
T.P. [#] 3	7.0	120.53	3.6	
122+00				106.029
124+00				106.43
126+00				106.83
T.P. [#] 4	1.76	120.10	2.19	
128+00				107.24

Top of Stake	Cut to Bt of Ditch
3.4 113.73	8.91
3.96 113.17	8.45
3.6 113.53	7.90
5.6 114.93	8.90
5.38 115.15	8.72
2.19 118.34	9.51
1.15 118.95	11.71

	B+	A	F-	Elev.	Bt. D+ Elev.	Top of Stake	Cut to Bt. of Ditch
T.P.#5	3.04	118.95	1.15	121.99			
130+00					107.64	5.52 116.47	8.83
132+00					108.039	5.33 116.66	8.621
134+00					108.44	4.97 117.02	8.58
T.P.#6	8.80	117.02	4.97	125.82			
136+00					109.99	9.37 116.45	7.56
138+00					109.25	6.68 119.14	9.89
140+00					109.65	6.44 119.38	9.73
T.P.#7	4.46	119.38	6.44	123.84			
142+00					110.049	4.60 119.24	9.19

B+	A	F-	Elev.	Bt. D. Elev.	Top of Stake	Cut to Bt. of Ditch
144+00				110.45	4.15 119.69	9.24
146+00				110.77	4.50 119.34	8.57
148+00				110.086	3.09 120.75	10.664
✓ 150+00				111.40	2.48 121.36	9.96
152+00				111.72	Past Station	
154+00				112.040	7.56 119.69	5.65
156+00				112.36	6.0 119.25	6.89

B+	T	F-	Elev.	Bt. D+ Elev.	Top of Stake	Cut to Bt. of Ditch
158+00				112.68	6.46 118.79	6.11
162+00				112.99	4.96 120.29	7.30
T.P. 6 [#]	4.44	120.81	5.56	125.25		
162+00				113.31	5.56 120.81	7.50
164+00				113.32	6.25 120.12	6.80
166+00				113.95	4.08 122.29	8.34
168+00				114.27	3.80 122.57	8.30
T.P. 5 [#]	4.0	122.37	5.60	126.37		
170+00				114.58	5.60 122.37	7.79

	B+	A	F-	Elev.	B+DT. Elev.
172+00					114.90
174+00					115.22
T.P. 4#	2.90	125.07	6.52	127.99	
176+00					115.54
178+00					115.86
T.P. 3#	3.16	128.43	1.70	131.59	
180+00					116.17
182+00					116.99
184+00					116.81
186+00					117.13
188+00					117.45
T.P. 2#	1.80	128.33	4.30	130.13	

Top of stake	Out to Bt. of Ditch
No Stake	
5.16 122.81	7.59
6.52 125.07	9.53
7.12 124.47	8.61
1.70 128.43	12.26
4.80 125.33	8.34
5.12 125.01	8.20
3.62 126.51	9.38
3.10 127.03	9.58

	B+	K	F-	Elev.	Bt. D+ Elev.	Top of Stake	Cut to Bt. of Ditch
190+00					117.76	4.30 128.33	9.57
192+00					118.092	2.46 130.17	12.08
194+00					118.40	4.42 128.21	9.81
					Sta. 203 + 01 El. 136 + 60		
196+00					118.71	5.30 127.33	8.62
198+00					119.036	4.17 128.46	9.42
200+00					119.35	5.46 127.17	7.82
T.P. 1 [#]	4.50	128.13	4.47	132.63			
202+00					119.67	4.47 128.13	8.46
202+72		135.57		123.00	132.60		(132.60)
B.M. #4	3.06	139.66			136.60	(12.57)	
204+00					119.99	9.04 130.62	11.63
216+00					120.31	6.40 133.26	12.95

	B+	A	F-	Elev.	B+. D+ Elev.	Top of Stake	Cut to B. of Ditch
208+00					120.63	5.78 133.88	13.25
210+00					120.94	6.28 133.38	12.44
212+00					121.26	4.77 134.89	13.63
214+00					121.58	2.03 137.63	16.05
216+00					121.90	5.84 133.92	11.92
T.P.# 1	6.96	140.78	5.84	133.82			
218+00					122.22	4.97 135.81	13.59
220+00					122.53	4.40 136.38	13.85
222+00					122.95	6.32 134.46	11.61
222+00					134.46		
—	56.6	140.12				4.04 136.03	12.86
224+00					123.19		

B+	π	F-	Elev.	Bt. of Elev.	Top of stake	Cut to Bt. of Dt.
226+00				123.49	4.35 135.77	12.28
228+00				123.81	3.53 136.59	12.78
230+00				129.12	2.78 137.14	8.02
232+00				124.44		
234+00				124.76		
236+00				125.07		
238+00				125.40		
240+00				125.71		
242+00				126.03		
244+00				126.36		
BM # 5	0.95	142.23	141.28			
246+00				126.67	4.68 137.55	10.88
248+00	5.		3.88	138.35	2.88 138.35	11.36
—	5.37	143.72				

	B+	A	F-	Elev.	Elev.	B.M.	Top of stake	Cut to Bt. of Dt.
250+00					127.30		7.74 139.98	12.68
252+00			7.50	140.22	127.62		7.50 140.22	12.60
-	3.46	143.68						
254+00					127.94		3.75 139.93	11.99
256+00			7.80	139.88	128.21		7.80 139.88	11.62
-	2.67	142.55						
258+00			4.50	138.05	128.52		4.50 (B.P. 5.447 137.11) 138.05	9.47
-								
260+00					128.84			
				140.22				
262+00	5.28				129.11			
264+00		145.50	6.07	139.43	129.38		10.05	
266+00			5.10	140.40	129.65		10.75	
T.P. # 1	4.70	145.10	5.10					
T.P. # 2	5.16	144.97	5.29	139.17	129.92		9.25	
268+00			5.80					
270+00			4.30	140.69	130.19		10.48	
272+10			3.72	141.25	130.46		10.79	
B.M. 272+00			4.84	140.13				

B+	A	F-	ELFV.	ELFV.
274+00				130.7
276+00				131.00
278+00				131.22
280+00				131.54
282+00				131.81
284+00				132.08
286+00				132.35
288+00				132.62
290+00				132.89
292+00				133.16
294+00				133.43
296+00				133.70
298+00				133.97

TOP OF STAKE - CUT TO BL. OF DC

	B+	A	F	Elev.	Bt. Elev.
300+00					134.24
302+00					134.51
303+45					137.17
304+00			3.87	143.87	134.71
306+00			3.35	144.39	135.05
308+00			3.62	144.12	135.32
T.P. # 6	4.86	147.74	4.84		
310+00			4.84	142.88	135.59
T.P. # 5	4.89	147.72	3.97		
312+00			3.97	142.83	135.86
T.P. # 4	3.72	146.80	3.54		
B 14+00			3.54	143.08	136.13
316+00			3.47	143.15	136.40
T.P. # 3	4.90	146.62	5.05		
318+00			3.66	143.11	136.67
T.P. # 2	5.64	146.77	6.46		
320+00			5.12	142.47	136.94
T.P. # 1	3.26	147.59	2.98		
322+00			2.98	144.33	137.21
324+00			3.06	144.25	137.48

Top of stake Cut to Bt. of Ditch

Column of X X R/W ...

Corner of X X R/W NW + W N/4 W SW. 10 May 92

B+	K	F-	Elev.	B.O. Elev.	Top of stake	Out to Bt. of Ditch
----	---	----	-------	------------	--------------	---------------------

~~Hammer point~~

B.M. #6						
327+16		147.31	6.74		140.57	

Pipe-327+00						
Elev.		11.24		136.07		

Flowline of Bridge		12.10		135.21		
--------------------	--	-------	--	--------	--	--

End of Scott
Shera Drain

BM #42.14 138.74 - ELEV 136.60

204+00

206+00

208+00 4.83 133.91

— 5.02 138.93

210+00

212+00

214+00

216+00 4.52 134.41

— 4.71 139.12

218+00

220+00

222+00

224+00 3.74 135.38

— 4.74 140.12

224+00 140.12 4.09 136.03

226+00 4.35 135.77

228+00 3.53 136.59

230+00 2.98 137.14

(B.P. 5.62 134.50)

Corner of X & R/W on + W R/W 10.10.10 10.10.10 92

Fayette Quadrangle
 S+4+E Bench Mark at Corner of
 County Rd 275 E and County Rd.
 800 N which is S. of interstate
 74 the elevation of said pt. is
 938

CURVE TABLES

Published by KEUFFEL & ESSER CO.

HOW TO USE CURVE TABLES

Table I. contains Tangents and External to a 1° curve. Tan. and Ext. to any other radius may be found nearly enough, by dividing the Tan. or Ext. opposite the given Central Angle by the given degree of curve.
 To find Deg. of Curve, having the Central Angle and Tangent: Divide Tan. opposite the given Central Angle by the given Tangent.
 To find Deg. of Curve, having the Central Angle and External: Divide Ext. opposite the given Central Angle by the given External.
 To find Nat. Tan. and Nat. Ex. Sec. for any angle by Table I.: Tan. or Ext. of twice the given angle divided by the radius of a 1° curve will be the Nat. Tan. or Nat. Ex. Sec.

EXAMPLE

Wanted a Curve with an Ext. of about 12 ft. Angle of Intersection or I. P. = $23^\circ 20'$ to the R. at Station 542+72.

Ext. in Tab. I opposite $23^\circ 20' = 120.87$
 $120.87 \div 12 = 10.07$. Say a 10° Curve.

Tan. in Tab. I opp. $23^\circ 20' = 1183.1$
 $1183.1 \div 10 = 118.31$.

Correction for A. $23^\circ 20'$ for a 10° Cur. = 0.16
 $118.31 + 0.16 = 118.47 =$ corrected Tangent.

(If corrected Ext. is required find in same way)
 Ang. $23^\circ 20' = 23.33^\circ \div 10 = 2.3333 =$ L. C.

$2^\circ 19\frac{1}{2}' =$ def. for sta.	542	I. P. = sta.	542+72
$4^\circ 49\frac{1}{2}' =$ " " "	+50	Tan. =	118.47
$7^\circ 19\frac{1}{2}' =$ " " "	543	B. C. = sta.	541+53.53
$9^\circ 49\frac{1}{2}' =$ " " "	+50	L. C. =	2.3333
$11^\circ 40' =$ " " "	543+	E. C. = Sta.	543+86.86
	86.86		

$100 - 53.53 = 46.47 \times 3' (\text{def. for 1 ft. of } 10^\circ \text{ Cur.}) = 139.41' =$

$2^\circ 19\frac{1}{2}' =$ def. for sta. 542.

Def. for 50 ft. = $2^\circ 30'$ for a 10° Curve.

Def. for 36.86 ft. = $1^\circ 50\frac{1}{2}'$ for a 10° Curve.

