Chillicothe Road

Bainbridge Twp.

Sec. B

30

DIETZGEN

TRADE MARK

ENGINEERS'

LEVEL BOOK

No. 410

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
2	10.0	10.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10.8	10.9	2
3	11.0	11.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.8	11.9	3
4	12.0	12.1	[illegible]	[illegible]	[illegible]	[illegible]	12.6	[illegible]	12.8	12.9	4
5	13.0	13.1	[illegible]	[illegible]	[illegible]	[illegible]	13.6	[illegible]	13.8	13.9	5
6	14.0	14.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14.8	14.9	6
7	15.0	15.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

CHILLICOTHE RD. - BAIN. TWP.
Slopes, grades, etc, 1-41

NEW U.S.G.S. B.M. at Bainbridge
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LOWE DITCH - BAIN. TWP. 42-52

NEW B.Ms. CHILLICOTHE RD
BAIN. TWP. 73-74

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5/26/29 Railway Land Kiser

Sta	B.S.	H.I.	F.S.	Elev.	
B.M 145+00	1.69	1171.00			1169.31
147			4.52	1166.48	
148			4.05	1166.95	
149			2.73	1168.27	
	10.35	1179.72	1.63	1169.37	
150			9.40	1170.32	
151			7.24	1172.48	
152			5.08	1174.64	
153			2.92	1176.80	
	6.93	1184.52	2.13	1177.59	
154			5.56	1178.96	
155			3.40	1181.12	

F 2.7 / 20.3

E 2.1 / 21.0

E 0.1 / 22.8

F 1.5 / 21.8

C 2.5 / 26.4

C 2.1 / 27.4

C 1.7 / 26.5

C 2.4 / 27.7

C 0.9 / 25.6

C 1.7 / 26.8

F 0.1 / 24.0

C 0.8 / 25.3

F 1.7 / 21.2

C 0.3 / 24.9

F 2.2 / 21.0

C 0.7 / 25.0

F 3.3 / 20.7

C 0.5 / 24.9

		1189.52				
156			1.24	1183.28	F0.8 224	C0.2 24.0
	9.34	1193.26	0.60	1183.92		
157				1185.44	21.9	25.0
158				1187.60	26.5	26.5
BM#16			2.51	1190.75	1190.83	
159				1189.26	25.2	25.5
160				1191.56	23.7	22.1
161				1192.65	22.8	21.6
BM#17					1192.25	
162				1193.03	23.8	22.2

6/14/29

M Richey
F Richey
G Griendd
C Rand

Work Stakes

B.M. 172+95		5.03	1186.17		1181.14
1717+50	R			0.00	1186.17 - F0.5
	L			0.00	1186.17 -
172	R			2.31	1183.86 - F0.5
	L			1.85	1184.32 -
172+50	R			5.56	1180.61 - F0.5
	L			4.64	1181.53 - F1.0
173	R			9.63	1176.44 - F0.5
	L			8.81	1177.26 -
		0.74	1174.45	12.46	1172.71
+50	R			2.64	1171.81 - F1.5
	L			1.72	1172.73 - F0.5
174	R			7.26	1167.19 - F0.5
	L			6.62	1167.83 - F1.5
+50	R			11.89	1162.56 -
	L			11.62	1162.83 - F0.5
175	R				1158.07
	L				1157.94
+50					1153.74
					1153.31

		6/14/29		M Richey F Richey G Griswold C Rand
Reset Slopes				
		117445		
174+50			11.75	1162.70
174+00			7.12	1167.33
173+50				1171.95
173+00				1176.58

C 5.3 / 30.7		C 6.1 / 35.2
C 3.9 / 28.0		C 5.9 / 35.9
—		—
—		—

6/16/29

BM #21	1.75	1056.31			1054.56
	8.02	1062.30	2.03	1054.28	
191	R			1.68	1060.62	1.62
	L				
190+75	R			1.98	1060.32
	L			1.98	1060.32
190+50	R			2.58	1059.72
	L			2.13	1060.17
190+25	R			3.14	1059.16
	L			2.24	1060.06
190+00	R			3.70	1058.60
	L			2.35	1059.95
189+75	R			4.42	1057.88
	L			2.62	1059.68
189+50	R			5.17	1057.13
	L			3.37	1058.93
189+25	R			6.08	1056.22
	L			4.28	1058.02

		1062.30		
189+00	R		7.08	1055.22
	L		5.28	1057.02
188+75	R		8.11	1054.19
	L		6.54	1055.76
188+50	R		9.10	1053.20
	L		7.96	1054.34
188+25	R		9.86	1052.44
	L		9.18	1053.12
188+00	R		10.35	1051.95
	L		10.12	1052.18
187+75	R		10.44	1051.86
	L		10.61	1051.69
		5.57 1058.19	9.68	1052.62
187+50	R		5.96	1052.23
	L		6.47	1051.72
187+25	R		5.34	1052.85
	L		6.20	1051.99
187+00	R		4.49	1053.70
	L		5.70	1052.49

xcut on NW & E Curb bridge 187+90

		1058.19		
186+75	R		3.53	1054.66
	L		4.92	1053.27
186+50	R		2.52	1055.67
	L		3.91	1054.28
186+25	R		1.26	1056.93
	L		2.65	1055.54
		12.06 1069.36	0.89	1057.30
186+00	R		10.90	1058.46
	L		12.29	1057.07
185+75	R		9.13	1060.23
	L		10.52	1058.84
185+50	R		7.09	1062.27
	L		8.48	1060.88
185+25	R		4.83	1064.53
	L		6.22	1063.14
185+00	R		2.52	1066.84
	L		3.91	1065.45
184+75	R		0.20	1069.16
	L		1.59	1067.77
		12.50 1081.66	0.20	1069.16

		1081.66			
184+50	R		10.20	1071.46	✓
	L		11.59	1070.07	✓
184+25	R		7.99	1073.67	✓
	L		9.28	1072.38	✓
184+00	R		6.02	1075.64	✓
	L		6.96	1074.70	✓
183+75	R		4.05	1077.61	✓
	L		4.65	1077.01	✓
183+50	R		2.09	1079.57	✓
	L		2.34	1079.32	✓
183+32.4	R		0.70	1080.96	✓
		11.95	0.20	1081.46	
	L		12.45	1080.96	✓
BM 184+00		11.42 1093.38	11.42	1081.99	1081.96
183+00	R		9.44	1083.94	✓
	L		9.44	1083.94	✓
182+50	R		4.82	1088.56	✓
	L		4.82	1088.56	✓

		1093.38		
182+00	R		0.19	1093.19
	L	13.03	1106.22	0.19 1093.19 T.P.
181+82.37	R		11.40	1094.82
	L		11.40	1094.82
181+75	R		10.68	1095.54
	L		10.72	1095.50
181+50	R		8.22	1098.00
	L		8.41	1097.81
181+25	R		5.76	1100.46
	L		6.10	1100.12
181+00	R		3.30	1102.92
	L		3.79	1102.43
180+75	R		0.88	1105.34
	L	10.37	1115.11	1.48 1104.74
180+50	R		7.46	1107.65
	L		8.06	1107.05
180+25	R		5.15	1109.96
	L		5.75	1109.36

		1115.11		
180+00 R			2.83	1112.28
L			3.43	1111.68
179+75 R			0.52	1114.59
L			1.12	1113.99
	11.56	1126.15	0.52	1114.59
179+50 R			9.25	1116.90
L			9.85	1116.30
179+25 R			6.94	1119.21
L			7.54	1118.61
179+00 R			4.63	1121.52
L			5.23	1120.92
178+75 R			2.32	1123.83
L			2.92	1123.23
	11.21	1137.18	0.18	1125.97
178+50 R			11.04	1126.14
L			11.64	1125.54
178+25 R			8.73	1128.45
L			9.33	1127.85
178+00 R			6.41	1130.77
L			7.01	1130.17

		1137.18			
177+75	R		4.10	1133.08	
	L		4.70	1132.48	
177+50	R		1.78	1135.40	
	L	12.78	1147.58	2.38	1134.80
		8.44	1155.06	0.96	1146.62
177+25	R				1137.71
BM				4.16	1150.90 1151.08
	L				1137.11
177+00	R				1140.03
	L				1139.43
176+75	R				1142.33
	L				1141.73
176+50	R				1144.65
	L				1144.05
176+25	R				1146.96
	L				1136.36
176+00	R				1149.28
	L				1148.68
175+75	R				1151.56
	L				1150.99

		Ridley Grimold	Rand Parks	reset line Grades	
BM# 21	5.21	1059.77			1054.56
187+50R			7.54	1052.23	✓
L			8.05	1051.72	✓
187+25R			6.92	1052.85	✓
L			7.78	1051.99	✓
187+00R			6.07	1053.70	✓
L			7.28	1052.49	✓
186+75R			5.11	1054.66	✓
L			6.50	1053.27	✓
186+50R			4.10	1055.67	✓
L			5.49	1054.28	✓
186+25R			2.84	1056.93	✓
L			4.23	1055.54	✓
186+00R			1.31	1058.46	✓
L	11.08	1068.15	2.70	1057.07	✓
185+75R			7.92	1060.23	✓
L			9.31	1058.84	✓
185+50R			5.88	1062.27	✓
L			7.27	1060.88	✓

		1068.15			
185+25 R			3.62	1064.53	✓
L			5.01	1062.14	✓
185+00 R			1.31	1066.84	✓
L	10.44	1075.89	2.70	1065.45	✓
184+75 R			6.73	1069.16	✓
L			8.12	1067.77	✓
184+50 R			4.43	1071.46	✓
L			5.82	1070.07	✓
184+25 R			2.22	1073.67	✓
L			3.51	1072.38	✓
184+00 R			0.25	1075.64	✓
L			1.19	1074.70	✓
BM 184+80	6.51	1088.47			1081.96
183+75 R				1077.61	✓
L			11.46	1077.01	✓
183+50 R			8.90	1079.57	✓
L			9.15	1079.32	✓ C1.0
183+32.39 R			7.51	1080.96	✓ C0.5
L			7.51	1080.96	✓ C1.0

		1088.47			
183+00 R			4.53	1083.94	—
L			4.53	1083.94	—
	12.09	1098.16	2.40	1086.07	
182+50 R			9.60	1088.56	—
L			9.60	1088.56	—
182+00 R			4.97	1093.19	—
L			4.97	1092.19	—
181+82.37 R			3.34	1094.82	—
L			3.34	1094.82	—
181+75 R			2.62	1095.54	—
L			2.66	1095.50	—
181+50 R			0.16	1098.00	—
L			0.35	1097.81	—
	12.56	1110.56	0.16	1098.00	
181 R			7.59	1102.97	7.65
			8.13	1102.43	8.15
			5.22	1105.34	5.23
	11.34	1121.30	0.60	1109.96	
BM 179+12			7.68	1113.62	1113.83

B.M.#21	8.76	1063.02		1054.56
187+50 R			10.79	1052.23
L			11.30	1051.72
187+25 R			10.17	1052.85
L			11.03	1051.99
187+00 R			9.32	1053.70
L			10.53	1052.49
186+75 R			8.36	1054.66
L			9.75	1053.27
186+50 R			7.35	1055.67
L			8.74	1054.28
186+25 R			6.09	1056.93
L			7.48	1055.54
186+00 R			4.56	1058.46
L			5.95	1057.07
185+75 R			2.79	1060.23
L			4.18	1058.84
185+50 R			0.75	1062.27
L	12.48	1073.36	2.14	1060.88

		1073.36			
185+25 R			8.83	1064.53	✓
L			10.22	1062.14	✓
185+00 R			6.52	1066.84	✓
L			7.91	1065.45	✓
184+75 R			4.20	1069.16	✓
L			5.59	1067.77	✓
184+50 R			1.90	1071.46	✓
L	12.47	1082.54	3.29	1070.07	✓
184+25 R			8.87	1073.67	✓
L			10.16	1072.38	✓
184+00 R			6.90	1075.64	✓
L			7.84	1074.70	✓
183+75 R			4.93	1077.61	✓
L	10.50	1087.51	5.53	1077.01	✓
					1081.96
183+50 R				1079.57	
L				1079.32	
183+22.24 R				1080.96	
L				1080.96	

BM 1	4.49	1155.57			1151.08
176+50 R			10.92	1144.65	
L			11.52	1144.05	✓
176+25 R			8.61	1146.96	✓
L			9.21	1146.36	✓
176+00 R			6.29	1149.28	✓
L			6.89	1148.68	✓
175+75 R			4.01	1151.56	✓
L			4.58	1150.99	✓
175+50 R			1.84	1153.73	✓
L			2.26	1153.31	✓
T.P.	0.00	1142.55	13.02	1142.55	
176+75 R			0.22	1142.33	✓
L			0.82	1141.73	✓
177+00 R			2.52	1140.03	✓
L			3.12	1139.43	✓
177+25 R			4.84	1137.71	✓
L			5.44	1137.11	✓

		1142.55		
177+50 R			7.15	1135.40
L			7.75	1134.80
177+75 R			9.47	1133.08
L			10.07	1132.48
T.P.	0.21	1130.97	11.79	1130.76
178+00 R			11.78	1130.77
L			10.80	1130.17
178+25 R			2.52	1128.45
L			3.12	1127.85
178+50 R			4.83	1126.14
L			5.43	1125.54
178+75 R			7.14	1123.83
L			7.74	1123.23
179+00 R			9.45	1121.52
L			10.05	1120.92
179+25 R			11.76	1119.21
L	0.45	1119.06	12.36	1118.61
T.P.	0.08	1130.84		1130.76
	0.49	1119.10	12.23	1118.61

	1119.10		
179+50 R	2.20	1116.90	✓
L	2.80	1116.30	✓
179+75 R	4.51	1114.59	✓
L	5.11	1113.99	✓
180+00 R	6.82	1112.28	✓
L	7.42	1111.68	✓
	5.30	1113.80	1113.83
180+25 R	9.14	1109.96	✓
L	9.74	1109.36	✓
180+50 R	11.45	1107.65	✓
T.P. L	12.05	1107.05	✓
180+75 R		1105.34	
L		1104.74	
181+00 R		1102.92	
L		1102.43	
181+25 R		1100.46	
L		1100.12	
181+50 R		1098.00	
L		1097.81	

		0/20/29	Rodney Rand Griswold		
BM	1.69	1115.52		1113.83	
180+25R			10.18	1105.34	✓
L			10.78	1104.74	✓
181+00R			12.60	1102.92	✓
L	0.83	1103.26	13.09	1102.43	✓
181+25R			2.80	1100.46	✓
L			3.14	1100.12	✓
181+50R			5.26	1098.00	✓
L			5.45	1097.81	✓
181+75R			7.72	1095.54	✓
L			7.76	1095.50	✓
181+82.27R			8.44	1094.82	✓
L			8.44	1094.82	✓
182+00R			10.07	1093.19	✓
L	1.16	1094.35	10.07	1093.19	✓
182+50R			5.79	1088.56	✓
L			5.79	1088.56	✓
183+00R			10.41	1083.94	✓
L			10.41	1083.94	

6/20/29 Richey Rand Grimwold

B.M.	10.87	1161.95		1151.08	
	8.26	1169.85	0.36	1161.59	
174+75 R			9.60	1160.25	✓
L			9.56	1160.29	✓
174+25 R			4.98	1164.87	✓
L			4.48	1165.37	✓
174+00 R			2.66	1167.19	✓
L			2.02	1167.83	✓
173+75 R	12.81	1182.31	0.35	1169.50	✓ TP
L			11.89	1170.42	✓
173+50 R			10.60	1171.71	✓
L			9.68	1172.63	✓
173+25 R			8.34	1173.97	✓
L			7.42	1174.89	✓
173+00 R			6.07	1176.24	✓
L			5.15	1177.16	✓
172+75 R			3.93	1178.38	✓
L			3.01	1179.30	✓
172+50 R			2.00	1180.31	✓
L	6.80	1188.03	1.08	1181.23	✓

		1188.03			
BM172+45	6.90	1188.04	6.90	1181.13	1181.14
172+25 R			6.03	1182.01	✓
L			5.34	1182.70	✓
172+00 R			4.58	1183.46	✓
L			4.12	1183.92	✓
171+75 R			3.33	1184.71	✓
L			3.10	1184.94	✓
171+50 R			2.37	1185.67	✓
L			2.37	1185.67	✓
171+00			0.98	1187.06	✓
170+50	7.50	1195.48	0.06	1187.98	✓
170+00			6.57	1188.91	✓
169+50			5.61	1189.87	✓
169+00			4.85	1190.63	✓ C 1.0
168+50			4.13	1191.35	✓ C 1.0
168+00			3.50	1191.98	✓
167+50			3.01	1192.47	✓
167+00	4.06	1196.82	2.72	1192.76	✓
166+50			3.90	1192.92	✓

		1196.82			
166+00			3.85	1192.97	✓
165+50			3.86	1192.96	✓
165+00			3.87	1192.95	✓
164+50			3.88	1192.94	✓
164+00	3.82	1196.75	3.89	1192.93	✓
163+50			3.83	1192.92	✓
163+00			3.84	1192.91	✓
162+50				1192.90	
162+00				1192.89	
BM #17			4.45	1192.30	1192.25

BM #17	4.07	1196.32		1192.25
162+50			3.28	1193.04 ✓
162			3.29	1192.03 ✓
+50			3.39	1192.93 ✓
161			3.67	1192.65 ✓
+50			4.12	1192.20 ✓
160			4.76	1191.56 ✓
+50	1.94	1192.67	5.59	1190.78 ✓
159			2.91	1189.76 ✓
BM #16	1.81	1192.64	1.81	1190.86 1190.83
+50			3.96	1188.68 ✓
158			5.04	1187.60 ✓
+50			6.12	1186.52 ✓
157			7.20	1185.44 ✓
+50	1.42	1185.78	8.28	1184.36 ✓
156			2.50	1183.28 ✓
+50			3.58	1182.20 ✓
155			4.66	1181.12 ✓
+50			5.74	1180.04 ✓
154			6.82	1178.96 ✓
	1.26	1180.21	6.83	1178.95

		1180.21		
+50			2.33	1177.88
153			3.41	1176.80
+50			4.49	1175.72
152			5.57	1174.64
+50			6.65	1173.56
151	1.89	1174.37	7.73	1172.48
+50			2.97	1171.40
150			4.05	1170.32
+50			5.13	1169.24
149			6.10	1168.27
+50			6.87	1167.50
148			7.42	1166.95
	4.13	1171.07	7.43	1166.94
147+50 R			4.47	1166.60
L			4.47	1166.60
147 R			4.59	1166.48
L			4.59	1166.48

		1171.07				
End of diagonal Road.			4.98	1166.09		
146+50	R			1166.56		
	L			1166.56		
146	R		4.32	1166.75	←	
	L		4.32	1166.75	✓	
145+50	R		4.13	1166.94	✓	
	L		4.13	1166.94	✓	
145	R		3.94	1167.13	✓	
	L		3.94	1167.13	✓	
B.M.#		1.77 1171.08	1.77	1169.30	1169.21	
New U.S.G.S.			4.70	New 1166.38	old 1166.18	

BM# 9	1.71	1086.76			1085.05
81			9.16	1077.60	✓
+50			8.26	1078.50	✓
82			7.36	1079.40	✓
+50			6.46	1080.30	✓
83			5.56	1081.20	✓
+50			4.63	1082.13	✓
84			3.65	1083.11	✓
+50			2.61	1084.15	✓
85				1085.24	
+50				1086.36	
86				1087.49	
+50					
87					
+50					
88					
+50					

BM #9	1.99	1087.04			1085.05
81			9.44	107760	
+50			8.54	107850	
82			7.64	107940	
+50			6.74	108030	
83			5.84	108120	
+50			4.91	108213	
84			3.93	108311	
+50			2.89	108415	
85			1.80	108524	
			0.70	1086.34	
+50	7.74	1094.08	0.68	108636	
86			6.59	108749	
+50			5.46	108862	
87			4.33	108975	
+50			3.21	109087	
88			2.08	109200	
+50	8.22	1101.34	0.96	109312	
89			7.10	109424	
+50			5.98	109536	

		1101.34		
90			4.86	1096.48
+50			3.74	1097.60
91			2.62	1098.72
+50			1.50	1099.84
92	8.27	1109.23	0.38	1100.96
+50			7.15	1102.08
93			6.03	1103.20
+50			4.91	1104.32
94			3.79	1105.44
+50			2.67	1106.56
95			1.55	1107.68
+50	7.91	1116.71	0.43	1108.80
BM #10	6.42	1116.69	6.42	1110.29 1110.27
96			6.77	1109.92
+50			5.65	1111.04
97			4.53	1112.16
+50			3.50	1113.19
98			2.37	1114.32
+50			1.24	1115.45

		1116.69			
99	7.77	1124.34	0.12	1116.57	✓
			0.11	1116.58	
+50			6.64	1117.70	✓
100			5.52	1118.82	✓
+50			4.40	1119.94	✓
101			3.28	1121.06	✓
+50			2.15	1122.19	✓
			1.04	1123.30	
102	8.31	1131.61	1.03	1123.31	✓
+50			7.16	1124.45	✓
BM #11	5.57	1131.57	5.57	1126.04	1126.00
103			5.98	1125.59	✓
+50			4.84	1126.73	✓
104			3.70	1127.87	✓
+50			2.57	1129.00	✓
			1.28	1130.29	
105	8.98	1139.27	1.27	1130.00	✓
+50			7.35	1131.92	✓
106			5.40	1133.87	✓
+60			3.11	1136.16	✓
107			0.66	1138.61	✓ T.P.

7/31

B.M.^{T}12	1.82	1171.57		1169.75
114			2.53	1169.04 ✓
+50			3.57	1168.00 ✓
113			4.71	1166.86 ✓
+50			6.39	1165.18 ✓
112			8.52	1163.05 ✓
+50	0.72	1161.43	10.86	1160.71 ✓
111			3.18	1158.25 ✓
+50			5.63	1155.80 ✓
110			8.09	1153.34 ✓
+50			10.54	1150.89 ✓
109	0.48	1148.91	13.00	1148.43 ✓
+50			2.93	1145.98 ✓
108			5.39	1143.52 ✓
+50			7.84	1141.07 ✓
107			10.30	1138.61 ✓ T.P
+50				1136.16
106				1133.87

P.M. #11	1.71	1127.71			1126.00
101			6 6 5	1121.06	✓
	0.47	1121.52	6.66	1121.05	
97			9.36	1112.16	✓

8/7/29 Richey Griswold Rand Merritt

BM#12	4.42	1174.17		1169.75
+50			4.43	1169.74 ✓
115			3.82	1170.35 ✓
+50			3.75	1170.42 ✓
116			4.14	1170.03 ✓
+50			4.75	1169.42 ✓
117			5.48	1168.69 ✓
+50	1.16	1169.13	6.20	1167.97 ✓
118			1.87	1167.26 ✓
+50			2.59	1166.54 ✓
119			3.30	1165.83 ✓
+50			4.02	1165.11 ✓
120			4.70	1164.43 ✓
+50			5.33	1163.80 ✓
121			5.77	1163.36 ✓C 1.0
+50			6.04	1163.09 ✓C 1.0
BM#13	3.04	1166.90	5.23	1163.90 1163.86
122			3.90	1163.00 ✓
+50			3.90	1163.00 ✓

		1166.90			
123			3.90	1163.00	✓
+50			3.90	1163.00	✓
124			3.90	1163.00	✓
+50			390	1163.00	✓
125	4.35	1167.35	3.90	1163.00	✓
+50			4.27	1163.08	✓
126			4.18	1163.17	✓
+50			4.10	1163.25	✓
127			4.01	1163.34	✓
+50			3.93	1163.42	✓
128			3.85	1163.50	✓
BM #14	2.63	1167.42	2.59	1164.76	1164.79
+50			3.84	1163.58	✓
129			3.75	1163.67	✓
+50			3.67	1163.75	✓
130			3.59	1163.83	✓
+50			3.74	1163.68	✓
131			4.38	1163.04	✓
+50			5.49	1161.93	✓

		1167.42		
132	1.90	1162.24	7.08	1160.34 ✓
+50			3.74	1158.50 ✓
133			5.32	1156.92 ✓
+50			6.41	1155.83 ✓
134			6.99	1155.25 ✓
BM #15	6.77	1160.62	8.36	1153.88 1153.85
+50			5.49	1155.13 ✓
135			5.10	1155.52 ✓
+50			4.12	1156.50 ✓
136			2.79	1157.83 ✓
			1.46	1159.16 T.P.
+50	10.27	1169.43	1.45	1159.17 ✓
137			8.83	1160.60 ✓
+50			7.40	1162.03 ✓
138			5.96	1163.47 ✓
+50			4.53	1164.90 ✓
139			3.00	1166.43 ✓
+50			1.65	1167.78 ✓
			0.70	1168.73 T.P.
140	3.52	1172.25	0.69	1168.74 ✓
+50			3.23	1169.02 ✓

		1172.25		
141			3.43	1168.82
+50			3.72	1168.53
142			4.01	1168.24
+50			4.19	1168.06
143			4.37	1167.88
+50	2.92	1170.61	4.56	1167.69
144			3.11	1167.50
+50			3.29	1167.32
BM			1.34	1169.27 1169.31

BM.	1.02	1170.33		1169.31
147+75 R			3.60	1166.73 ✓
L			3.60	1166.73 ✓
147+50 R			3.83	1166.50 ✓
L			3.83	1166.50 ✓
147+25 R			3.94	1166.39 ✓
L			3.94	1166.39 ✓
147+00 R			4.05	1166.28 ✓
L			4.05	1166.28 ✓
146+75 R			4.06	1166.27 ✓
L			4.06	1166.27 ✓
146+50 R			4.07	1166.26 ✓
L		Not set	4.07	1166.26
146+25 R			3.93	1166.40 ✓
L			3.93	1166.40 ✓
146+00 R			3.78	1166.55 ✓
L			3.78	1166.55 ✓

		1170.33			
14+75 R			3.64	1166.69	✓
L			3.64	1166.69	✓
14+50 R			3.49	1166.84	✓
L			3.49	1166.84	✓
14+25 R			3.35	1166.98	✓
L			3.35	1166.98	✓
14+00 R			3.20	1167.13	✓
L			3.20	1167.13	✓
BM	1.50	1170.81		1169.31	
			4.38	1166.43	1166.38

B.M.	1.50	1170.81			1169.31	
			4.38	1166.43		
USGSBM	4.99	1170.92			1166.43	← N66
			1.59	1169.33	1169.31	
B.M.	1.52	1170.83			1169.31	
			4.42	1166.41		OK
USGSBM	4.41	1170.82			1166.41	
			1.51	1169.31	1169.31	OK.

Elevation of New USGSBM 1166.41
Monument set in West headwall of
culvert 100 ft North of intersection.

Rock Cut Cross Sections

F.A. Richey
C. Rand
Sept 17

B.M. 6.10 1187.24 1181.14

1183.4

	BS	D	B		B	D	BS
172	20	16	13	℄	18	21	24.5
	3.3	5.5	4.0	3.8	4.6	5.7	2.9

1180.8

	BS	R	D	B		B	D	R	BS
172+50	24.5	17.5	16	13	℄	18	21	24	30
	3.2	6.0	7.3	6.2	6.4	7.4	8.9	7.8	4.0

1176.7

	BS	R	D	B		B	D	R	BS
173	28.0	25.5	19	14	℄	17	20	28.5	30.0
	7.2	8.4	11.4	10.2	10.5	11.2	12.5	8.0	6.3

2.37 1176.99 12.62 1174.62

1172.2

	BS	R	D	B		B	D	R	BS
173+50	21.5	20	17	14	℄	17	21	28	31
	3.9	4.6	6.6	4.5	4.8	5.7	7.4	3.1	0.2

1167.5

	BS	R	D	B		B	D	R	BS
174	25	22.5	16	13	℄	18.5	22	27	35
	5.9	8.4	10.8	9.6	9.5	10.1	11.4	8.4	4.0

5.08 1169.12 12.95 1164.04

1162.8

	BS	R	D	B		B	D	R	BS
174+50	28	24	15.5	12.5	℄	17	22	25	33
	0.9	3.6	8.3	6.7	6.3	6.6	7.9	4.2	0.4

1158.2

	BS	R	D	B		B	D	R	BS
175	30	23	19	15	℄	15.5	18.5	26	30
	4.3	8.2	12.8	11.2	10.9	10.8	11.9	7.3	4.1

2.60 1160.30 11.42 1157.70

1160.30

BM	9.18	1160.26	9.18		1151.12		1151.08		
				1153.5					
	BS	R	D	B		B	D	R	BS
	32	24	20	17	℄	15	18	26	30
175+50	0.0	3.5	8.2	7.4	6.8	7.1	8.4	2.9	0.0
					1149.9				
	BS	R	D	B		B	D	R	BS
	31.5	23	20	16	℄	14	18	23.5	25
176	5.5	9.1	13.6	12.0	11.4	11.5	12.9	10.0	9.4
	1.98	1147.66	12.58		1147.68				
	BS	R	D	B	1144.4	B	D	R	BS
	31	22	19	15	℄	14	18	25	26
176+50	0.2	4.2	7.0	5.9	5.3	5.6	7.3	3.4	2.8
					1139.6				
	BS	R	D	B		B	D	R	BS
	31	26	20	16	℄	14	18.5	26	27
177	4.8	7.5	11.8	10.6	10.1	10.2	11.4	7.6	7.4
	3.98	1141.52	12.12		1137.54				
					1136.1				
	BS	R	D	B		B	D	R	BS
	33	27	21	17	℄	15	20.5	26	30
177+50	1.3	5.7	8.6	7.0	6.4	6.4	9.2	7.7	7.0
					1130.6				
	BS	R	D	B		B	D	R	BS
	37	27	22	18	℄	15	20	22	24
178	7.4	10.9	13.6	11.9	10.9	11.2	12.7	12.4	11.8

Cross Sections

Sept 18 F. Richey C. Rand.

BM #21	10.95	1065.51		1054.56
	10.56	1075.91	0.16	1065.35
185	35 / 3.7	20 / 11.3	17 / 10.1	℄ / 9.1
	10.51	1080.89	5.53	1070.38
184+50	36.5 / 3.6	22 / 12.5	18 / 10.9	℄ / 9.6
184	35.0 / 0.2	22 / 7.8	18 / 6.6	℄ / 5.7
	8.91	1089.53	0.27	1080.62
183+50	31 / 4.9	20 / 12.0	15 / 10.5	℄ / 10.2
183	31 / 0.7	18 / 6.8	14 / 5.4	℄ / 5.4
	7.08	1096.01	0.60	1088.93
182+50	26 / 3.9	16 / 8.8	14 / 7.5	℄ / 7.1	15 / 7.4	18 / 8.8	24 / 4.1

Lowe Ditch Bainbridge Twp

Note:- Sidestakes are set 8' Left or Southeast of ℄ of Ditch

Sta 10+00 Def Rt. 3°07'

1+00 ℄ in ditch

0+71.5 Def. Lt. 49°31' Hub Set

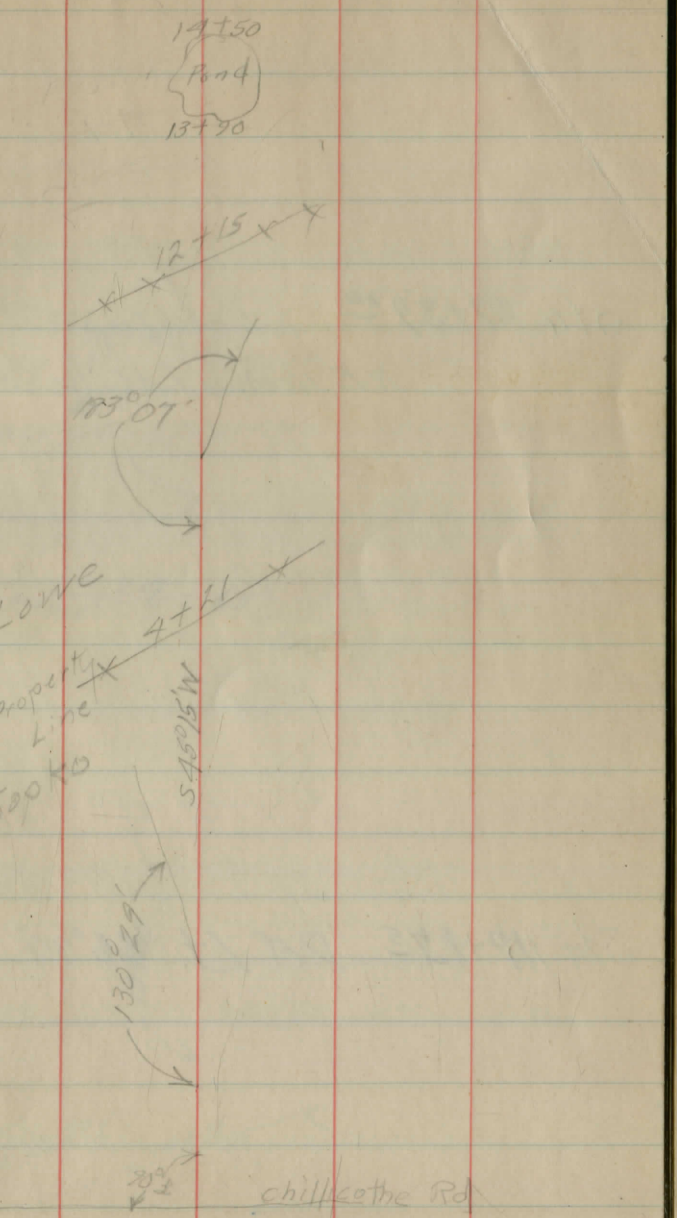
0+40 ℄ in ditch

0+00 Beginning of W Headwall Imp Culv. on Chillicothe Sta 268±

11/22/32

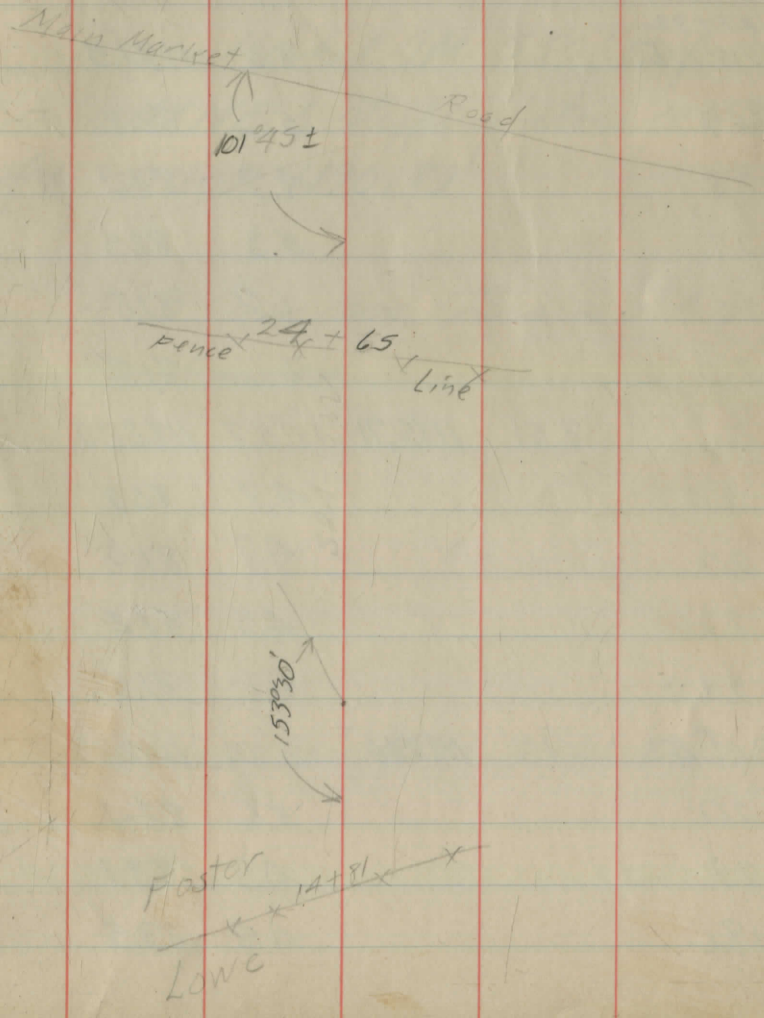
Richey
Barton
Lowe

42



Sta 29+39.00 End of Imp
NE Headwall of Culv. Main Market

Sta 19+13.5 Det Lt. 26°30' H-b Set



Lowe Ditch

BM #5	3.04	1187.77		1184.73
Flow SW			7.9	79.9
100' SW			8.2	79.6
200' SW			8.4	79.4
27+32 Flow NE			8.3	1179.5
29			5.6	82.2
28			4.9	82.9
27			5.3	82.5
26			6.0	81.8
25			6.6	81.2
	3.51	1185.71	5.57	1182.20
24			4.8	80.9
23			4.7	81.0
22			4.5	81.2
21			4.2	81.5
BM #4	5.13	1188.00	2.84	1182.87
20			5.6	82.4
19			4.9	83.1
18			4.5	83.5

N'ly & NE Headwall c&l. Main Market.

Main Market & BM. 550' E of culvert & NE & stepping stone 100' S of & E Elev. 1190.89

4x3 Conc Box extension of 4x3 Stone & Conc Box.

Spike in side 8" Hickory 45 Lt & Stg 21.10

		1188.00		
17			4.4	83.6
	5.70	1190.33	3.37	1184.63
16			6.1	84.2
15			5.1	85.2
Pond			5.7	84.6
13+90			4.1	86.2
13			4.7	85.6
12+75 Flow drive type S			6.1	84.2
Flow " " N			6.6	83.7
12			4.7	85.6
	4.73	1191.72	3.34	1186.99
11			5.2	86.5
10			6.1	85.6
Ditch at 10			6.3	85.4
BM #2			0.08	1191.64
9			5.1	86.6
8+50 Flow tile			6.1	85.6
8			4.6	87.1
7			4.1	87.6

Spike in stump 250' Rt & Sta 8+50

		1191.72		
	4.67	1193.40	2.99	1188.73
6			5.2	88.2
5			5.2	88.2
4			5.1	88.3
Flow at 4			5.9	87.5
3			5.6	87.8
2			4.3	89.1
1			4.2	89.2
Flow 00+00			5.6	87.8
Bottom box			5.9	1187.5
BM # 1			2.35	1191.05

N W. [illegible] W Headwall BM # 31 Culvert Sta 268 Chillicothe

```
        87.5
        79.5
2932 )  8.  ( .27% grade.
        5864
        21360
        20524
          8360
```

Lowe Ditch Levelson Hubs

BM #5	1.56	1186.44		1184.88
Flow NE				1179.60
Flow SW			6.9	7.95
100 "			6.5	7.99
200 "			7.0	7.94
300 "			7.2	7.92
400 "			7.4	7.90
500 "			8.7	7.77
BM #5	2.77	1187.65		1184.88
29			4.66	1182.99
28			4.58	1183.07
27			4.98	1182.67
26			5.80	1181.85
25			6.62	1181.03
24	5.00	1186.05	6.60	1181.05
23			4.89	1181.16
22			4.58	1181.47
BM #4			3.16	1182.89 (1182.87)
21			4.53	1181.52

NE of N Headwall

Top. Footer

Top. Footer

channel

Spike in side 8" Hickory 40' Lt ± Sta 21 + 10

		118605			
20			3.43	118262	
19+50			3.07	118298	
19+13	4.99	118844	2.60	118345	
19			5.24	118323	
18			4.85	118359	channel
17			4.57	118387	
16			3.97	118445	
15	5.43	119075	3.12	118532	
14			6.62	118413	
BM #3			3.80	118695	Top 3'x2' Boulder 50' Lt & Sta 14+50
13			3.38	118737	
12			4.62	118613	
11			3.61	118714	
10			4.44	118631	
9	5.52	119221	4.06	118669	
BM #2			0.59	119162	Spike in Stump 250 Rt & Sta 8+00
8			4.74	118747	
7			4.38	118783	

		1192.21			
6			4.68	1187.53	
5			4.49	1187.72	
4	5.02	1193.77	3.46	1188.75	
3			4.71	1189.06	
2			4.64	1189.13	
1			5.30	1188.47	
0+40			4.32	1189.45	
0	Topopening		4.8	Flow = 87.50	
BM #1			2.72	1191.05	1191.05

NW & W Head wall culvert Sta 268 on Chillicothe

91.05
87.50
3.55 from top wall
Sta 0+50

move line to East	14	0.0
	15	0.5
	16	1.0
	17	1.5
	18	2.0
	19	2.5
	19+13	2.56

Cuts from hubs

Station	Cut	Station	Cut
29+391	.00	14	1.47
29	3.33	13	337
28	333	12	2.80
27	2.85	11	3.47
26	1.95	10	231
25	1.05	9	2.34
24	0.99	8	277
23	1.02	7	278
22	1.25	6	2.13
21	1.22	5	1.97
20	1.98	4	2.65
19+50	2.17	3	2.61
19	2.25	2	2.33
18	2.28	1	132
17	222	0+40	2.09
16	2.46	0	
15	3.00		

2.09
2.81/4

Station		Cut			
B.M	2.58	1187.56			1184.98
			8.0	79.6	
1			5.17	82.39	
2			6.48	81.08	
3			6.05	81.51	
1+70			7.91	79.65	
4			8.32	79.24	
5			8.77	78.79	

BM	3.05	1188.03			1184.98
1			5.62	1182.41	
2			5.85	1182.18	
3			7.64	1180.39	

	Hub	Grade	Cut
	82.4	78.8	3.6
	82.2	78.7	3.5
8.7	80.39	78.6	1.8

1184.98
2.45
1187.43
10.
77.3

Flood. 7.4
rock 7.4
channel 8.2
1st rock 7.2

Bench Marks replacing old or destroyed BM's

New BM #3 Sta 21+45
Spike in root 18" Elm
30' Left ℄
Elev - 1109.76

New BM #7 Sta 67+00
Spike in root 30" Elm
35' Lt of ℄
Elev - 1054.53

New BM #11 Sta 103+36
spike in root 24" Maple
100' Rt of ℄
Elev - 1126.00

CHILLICOTHE RD
BAIN. TWP.

New BM No 15 Sta 134+00
Spike in root 40" Maple
30' Rt of ℄
Elev 1153.85

New BM Sta 145+00
Spike in root 30" Elm
40' Rt of ℄
Elev - 1164.31

New USGS BM Sta 147+08
Brass plate in West headwall
new culvert 20' Lt of ℄
Elev - 1166.41

New BM Sta 172+45
Spike in root 18" Maple
100' Rt of ℄
Elev 1181.14

New BM # 19 Sta 176+65
Spike in side 6" Cherry
100' Lt of ℄
Elev - 1151.08

New BM # 20 Sta 179+10
Spike in root Trim 15"
Ash 50' Rt of ℄
Elev - 1113.83

New BM # Sta 184+00
Spike in root 20" Apple
100' Lt of ℄
Elev - 1082.07

New BM # 23 Sta 197+80
Spike in root 18" Maple
35' Lt of ℄
Elev - 1063.32

4.59 1164.98 1160.39

6.45 78.53

BM 1+10	7.68	1121.51			1113.83
	11.68	1132.76	0.43	1121.08	
	12.79	1145.51	0.04	1132.72	
	12.63	1157.09	1.05	1144.46	
BM			5.96	1151.13	

R = 1396
Z = 14.1
T = 64.4

1119.94 / 7.77

BM	10.67	1065.23			1054.56
	10.41	1075.04	0.60	1064.63	
	10.45	1085.24	0.25	1074.79	
BM.			3.17	1082.07	1081.96

BM.	9.91	1091.87			1081.96
	1.41	1081.70	11.58	1080.29	
	1.80	1071.85	11.65	1070.05	
	2.10	1062.95	11.00	1060.85	
				8.39	1054.56

BM 21	13.08	1067.62		1054.56	
	11.39	1078.20	0.81	1066.81	
	10.88	1088.51	0.57	1077.63	
			6.51	1082.00	1081.96

	12.10	1125.93		1113.83	
	0.14	1114.87	11.20	1114.73	
	0.42	1105.29	10.00	1104.87	
	1.81	1095.12	11.98	1093.31	
			13.02	1082.10	1181.96
BM 172+45	4.45	1185.59			1181.14
	0.03	1173.52	12.10	1173.49	
	0.83	1161.24	13.11	1160.41	
BM 176+65			10.15	1151.09	1151.08
	0.31	1149.41	12.14	1149.10	
	1.05	1138.62	11.84	1137.57	
	0.16	1126.46	12.32	1126.30	
BM 179+10	2.06	1115.89	12.61	1113.85	1113.83
	0.95	1103.98	12.86	1103.03	
	1.29	1092.62	12.65	1091.33	
BM 184+00			10.55	1082.07	1081.96

Pierce	Church	Geary	Hunt	Best	NBP
~~25~~	~~25~~	~~25~~	~~25~~	~~25~~	~~25~~
~~40~~	-50	~~50~~	0	0	~~50~~
55	64	~~60~~	~~+10~~	~~+25~~	~~35~~
6	+14	~~50~~	0	~~+30~~	~~20~~
-49		49	~~+10~~	+25	~~25~~
		82	+9	1	~~35~~
		+30		+26	30
					-30

9.93
7.83

30
14
9
26
~~89~~

49
30
79

1115.89
11.07
1104.82

4.5
12.5
4.5
3.0

1081.96

26.45
13.83
12.62

84.98
5.25
79.73

1054.56

1052.62

~~78.96~~
79.73
78.96

1040

.77

Sta 97 and about 100+50

1241
1240
1239
1238
1237 } See if on sheriff sale.

Table IX.—Calculation of Earthwork.

Width	HEIGHT														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if w =16.2 and h =5.3, cu. yds. =1.48+.028+.089 =1.597 cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) =h, and ½ the roadbed =w, add the triangles formed by taking the distance out to each break in turn (=w's) by the difference between the cuts (or fills) on each side of it (=h's) always subtracting the outer from the inner.

Distances from Center of Roadway for Cross-Sectioning

Roadway 16 feet wide. Side Slopes 1 on 1½.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20—16)÷2 or 2 ft. added to 41.9 =43.9. For slopes of 1 on 1 see inside of front cover.

Made in Germany.