81

LEVEL BOOK

743

TABLE FOR REDUCING PERCHES TO FEET AND INCHES.

PERCH	FEET.	PERCH.	FEET.	PERCH.	FEET.	PERCH.	FEET.	PERCH.	FEET.
1	16.6 in.	21	3.46 6 in.	41	6.76.6 in.	61	10.06.6 in.	81	13.36.6
2	33.0	22	3 63.0	42	6.93.0	62	10.23.0	82	13.53.0
3	49.6	23	3.79.6	43	7.09 6	63	10.39.6	83	[illegible]
4	66.0	24	3.96.0	44	7.26.0	64	10.56.0	84	[illegible]
5	82.6	25	4 12.6	45	7 42.6	65	10.72.6	85	02.6
6	99.0	26	4.29.0	46	7.59.0	66	10.89.0	86	[illegible]
7	1.15.6	27	4.45 6	47	7.75.6	67	11.05.6	87	14.2[illegible]
8	1.32.0	28	4.62.0	48	7.92.0	68	11.22.0	88	[illegible].52
9	1.48.6	29	4.78.6	49	8.08.6	69	11.38.6	89	[illegible].68.6
10	1.65.0	30	4.95.0	50	8.25.0	70	11.55.0	90	[illegible].85.0
11	1.81.6	31	5 11.6	51	8.41.6	71	11.71.6	91	[illegible].01.6
12	1.98 0	32	5.28 0	52	8.58.0	72	11.88.0	92	[illegible]
13	2.14.6	33	5.44.6	53	8.74.6	73	12.04 6	93	[illegible]
14	2.31.0	34	5.61 0	54	8.91.0	74	12.21.0	94	15.[illegible]1.0
15	2.47.6	35	5.77 6	55	9.07 6	75	12.37.6	95	15.[illegible]
16	2.64.0	36	5.94.0	56	9.24.0	76	12.54.0	96	[illegible]
17	2.80.6	37	6.10.6	57	9.40.6	77	12.70.6	97	16.[illegible]
18	2.97.0	38	6.27 0	58	9.57.0	78	12.87.0	98	16.17.0
19	3.13.6	39	6.43.6	59	9.73.6	79	13.03.6	99	16.33.6
20	3.30.0	40	6.60.0	60	9.90.0	80	13.20.0	100	16.50.0

B. K. ELLIOTT COMPANY, PITTSBURG, PA.
DRAWING MATERIALS AND SURVEYING INSTRUMENTS

PLEASE RETURN TO
GEAUGA COUNTY ENGINEER
COURT HOUSE
CHARDON, O.
PHONE 250-X

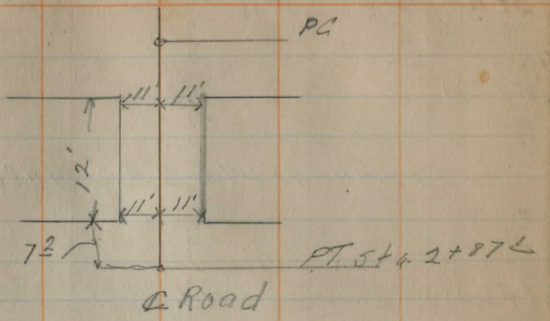
Bainbridge Road CH. 97
Levels. Pg. 2-30
X-Sections Pg. 31-38
Slope Stakes Pg. 39-49

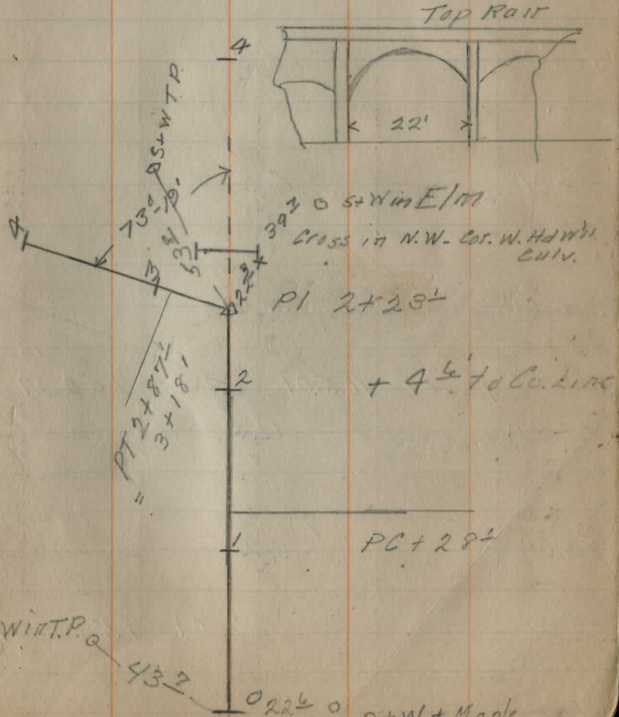
Survey for storm drainage at RR
Underpass on Chagrin Rd Pg 50-54

Levels Bainbridge Road

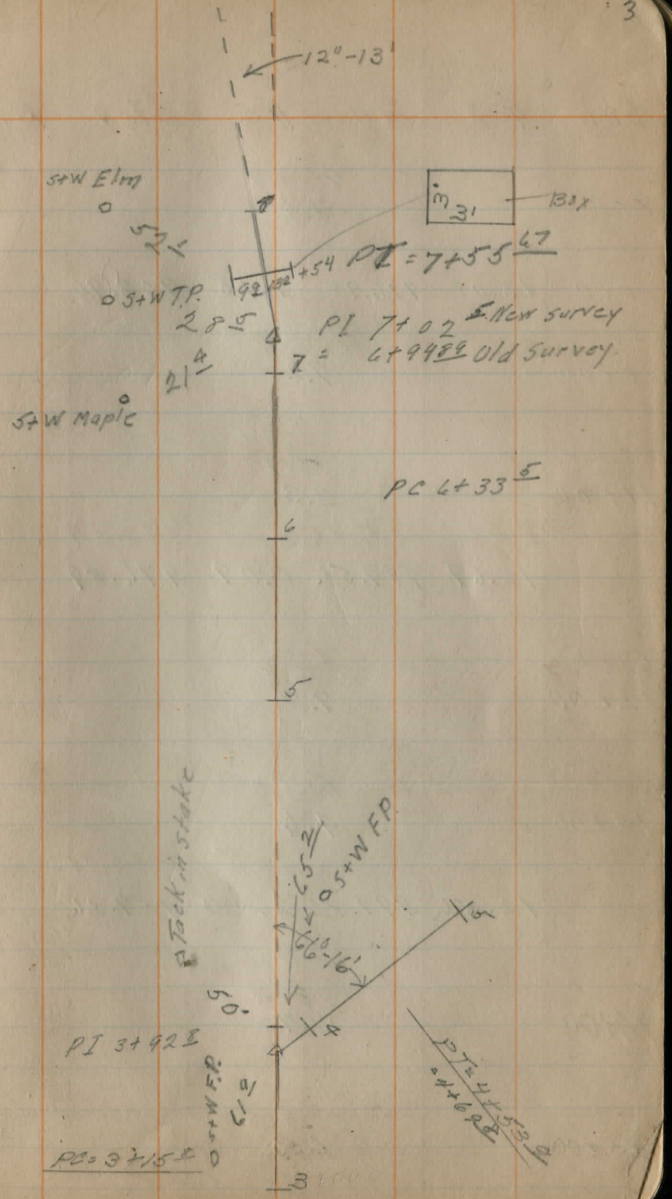
Sta	BS	HI	FS	Elev	B.M.
	9.59	942.86			933.27
Co. Line		938.8	4.1		
0+00		938.3	4.6		
1+00		934.7	8.2		
1+50		935.2	7.7		
2+00		935.8	7.1		
2+50		937.2	5.7		
3+00		938.8	4.1	Under Arch	
Sorfitt		955.5	12.6	Keystone	

L' to Spring Line

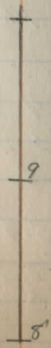




Sta	BS	HI	FS	Elev.	BM
		940.1			
5+50		2.8			
	12.44	952.45	2.85	940.01	
		940.9			
6+00		11.4			
		942.2			
6+50		10.3			
		944.2			
5+00		8.3			
		945.7			
6+00		3.8			
	12.74	946.01	0.18	952.27	
		953.7			
7+00		11.3			
		956.8			
8+00		8.2			
			7.01	948.00	948.0 BM



Sta	BS	HI	FS	Elev	BM
		960.8			
9+00		7.2			
	13.08	976.98	1.16	963.90	
		967.8			
10+00		9.2			
		974.7			
11+00		2.3			
	12.47	989.54	0.09	976.89	
		979.8			
12+00		9.8			
		985.0			
13+00		4.6			
	12.54	999.82	2.30	987.24	
		989.1			
14+00		10.7			
		993.57			
15+00		6.3			



Sta	BS	HI	FS	Elev	BM
		995.9			
16+00		3.9			
		997.7			
17+00		2.1			
		999.4			
18+00		0.4			
	7.92	1007.46	0.28	999.54	
		1000.8			
19+00		4.7			
		1002.5			
20+00		5.0			
			1.65	1005.81	1005.78
		1004.2			
21+00		3.3			
		1005.7			
22+00		1.8			

Stg	BS	HI	FS	Elev	BM
23+00		1006.0 1.5			
	6.79	1013.06	1.14	1006.27	
24+00		1006.8 6.3			
25+00		1007.8 5.3			
26+00		1008.7 4.4			
27+00		1007.1 6.0			
28+00		1005.2 7.9			
29+00		1005.6 7.5			
30+00		1007.6 5.5			

Sta	BS	HI	FS	Elev	BM.
		1012.0			
31+00		1.1			
	12.23	1025.29	0.0	1013.06	
		1018.5			
32+00		6.8			
		1024.3			
33+00		1.0			
	11.94	1036.64	0.59	1024.70	
		1028.7			
34+00		7.9			
		1032.9			
35+00		3.7			
	10.20	1044.99	1.85	1034.79	
35+00					
		1037.0			
36+00		8.0			
		1039.4			
37+00		5.6			

Sta	BS	HI	FS	Elev	BM
		1040.4			
38+00		4.4			
		1041.4			
39+00		3.4			
		1043.4			
40+00		1.4			
	12.18	1057.02	0.15	1044.84	
		1046.7			
41+00		10.3			
		1050.7			
42+00		6.3			
		1054.4			
43+00		2.6			
			3.23	1053.79	1053.75
	11.39	1067.38	0.99	1055.99	

Sta	BS	HI	FS	Elev	BM
		(1063.4)	19.2	1059.4	
44+00			4.0		
	11.55	1078.56	0.37	1067.01	
45+00		1061.3	17.3		
46+00		1070.2	8.4		Gross Sec. to here
47+00		1076.6	2.6		
	9.46	1086.46	1.76	1076.80	
48+00		1078.7	7.8		
49+00		1078.4	8.1		
50+00		1078.5	8.0		

Sta	BS	HI	FS	Elev	BM
		1079.8			
51+00		6.7			
		1081.3			
52+00		5.0			
		1082.1			
53+00		4.4			
		1082.9			
54+00		3.4			
	10.35	1094.81	2.00	1084.46	
		1085.1			
55+00		9.7			
		1085.4			
56+00		6.4			
		1090.1			
57+00		4.7			
		1092.4			
58+00		2.2			

Sta	BS	HI	FS	Elev	BM
	7.45	1101.12	1.14	1093.67	
59+00		1095.4	5.7		
60+00		1095.7	5.4		
61+00		1095.2	5.9		
62+00		1096.1	5.0		
			4.49	1096.63	1096.60
63+00		1096.6	5.1		
	8.39	1104.68	4.80	1096.29	
64+00		1096.3	8.4		

Sta	BS	HI	FS	Elev	BM
65+00		1097.3	7.4		
66+00		1098.8	5.9		
67+00		1100.0	4.7		
68+00		1101.6	3.1		
69+00		1103.3	1.4		
	10.09	1113.21	1.54	1103.12	
70+00		1105.1	8.1		
71+00		1107.3	5.9		
72+00		1109.8	3.4		

Sta	BS	HI	FS	Elev	BM	
			1.71	1111.56	1111.44	Could not find nail in tree root.
73+00		1112.3	0.9			
	6.68	1119.29	0.60	1112.61		
74+00		1113.1	6.2			
75+00		1113.3	5.8			
76+00		1113.8	5.5			
77+00		1113.3	5.8			
78+00		1112.8	6.5			
79+00		1112.7	6.6			

Sta	BS	HI	FS	Elev	BM
	7.57	1121.21	5.65	1113.64	
80+00			8.0	1113.2	
81+00			7.3	1113.9	
82+00			6.8	1114.7	
83+00			5.3	1115.9	
84+00			4.1	1117.1	
85+00			2.7	1118.5	
86+00			0.8	1120.4	

Sta	BS	HI	FS	Elev	BM.
	10.17	1131.23	0.15	1121.06	
87+00			1122.7 8.5		
88+00			1124.8 6.4		
89+00			1127.0 4.2		
90+00			1129.5 1.7		
	9.24	1139.42	1.05	1130.18	
91+00			1131.9 7.5		
92+00			1133.7 5.7		
93+00			1135.0 4.4		

Sta	BS	HI	FS	Elev	BM
		1136.6			
94+00		2.8			
		1137.1			
95+00		2.3			
	4.93	1142.04	2.31	1137.11	
		1137.4			
96+00		4.6			
		1136.8			
97+00		5.2			
			4.71	1137.33	1137.34
		1134.8			
98+00		7.2			
		1133.3			
99+00		8.7			
		1131.6			
100+00		10.4			
	1.84	1133.23	10.65	1131.39	

True has overgrown nail about .1'

Sta	BS	HI	FS	Elev	BM
		1128.8			
101+00		4.4			
		1127.0			
102+00		6.2			
		1125.2			
103+00		8.0			
		1124.2			
104+00		9.0			
	4.03	1128.13	9.13	1124.10	
		1123.6			
105+00		4.5			
		1122.7			
106+00		5.4			
		1121.2			
107+00		6.9			
		1120.0			
108+00		8.1			

Sta	BS	HI	FS	Elev	BM.	
	1.24	1121.22	8.15	1119.98		
109+00			1119.5 1.7			
110+00			1119.2 2.0			Corr. Elev.
111+00			1116.7 4.5			
112+00			1115.3 6.9			
113+00			1111.4 9.8			
			13.12	1108.10	1108.21	.1' error due to darkness
	0.73	1108.94		1108.21		
114+00			1107.2 1.7			

Sta	BS	HI	FS	Elev	BM
115+00		1107.8 9.1			
116+00		1100.9 8.0			
117+00		1096.5 12.4			
	0.62	1097.98	11.58	1097.36	
118+00		1090.9 7.1			
119+00	0.17	1085.79	12.36	1085.62	
		1083.7 2.1			
120+00		1076.4 9.4			
	0.01	1073.16	12.64	1073.15	

Sta	BS	HI	FS	Elev	BM
		1069.8			
121+00		3.4			
			0.67	1072.49	1072.51
[illegible]					
		1062.6			
122+00		10.6			
	0.0	1060.39	12.79	1060.39	
		1052.7			
123+00		7.7			
	0.10	1047.50	12.99	1047.40	
		1043.8			
124+00		3.7			
	0.13	1035.14	12.49	1035.01	
[illegible]					
		1034.0			
125+00		1.1			
		1024.9			
126+00		10.2			

Sta	BS	HI	FS	Elev	BM	
	1.68	1023.96	12.86	1022.28		
127+00		1018.2 5.8				
128+00		1014.4 9.6				
129+00		1012.5 11.5				
	6.40	1018.41	11.95	1012.01		
130+00		1011.6 6.8				
130+60			6.73	1011.68	1011.68	Old Bench destroyed. New Bench
131+00		1011.5 6.9				
132+00		1013.5 4.9				

Sta	BS	HI	FS	Elev	BM.	
133+00			1013.0 5.4			
	6.95	1018.63			1011.68	B.M.
134+00			1009.2 9.4			
135+00			1010.3 8.3			
136+00			1012.0 6.6			
137+00			1015.6 3.0			
	12.15	1027.88	2.90	1015.73		
138+00			1023.0 4.9			Curve Sta
	12.91	1040.78	0.01	1027.88		
139+00			1033.2 7.6			

Sta	BS	HI	FS	Elev	BM.	
		1040.8				
140+00		0.0				
	12.74	1053.05	0.47	1040.31		
			8.44	1044.61	1044.61	BM No 11 Sta 139+75
		1046.3				
141+00		6.8				
		1050.4				
142+00		2.7				
	12.87	1065.07	0.85	1052.20		
		1056.1				
143+00		9.0				
		1062.4				
144+00		2.7				
	12.70	1077.27	0.50	1064.57		
		1070.8				
145+00		6.4				

Sta	BS	HI	FS	Elev.	BM
	13.14	1090.21	0.20	1077.07	
146+00			1078.2 12.0		
147+00			1085.7 4.5		
	12.71	1102.59	0.33	1089.88	
148+00			1094.8 7.8		
	12.44	1114.05	0.97	1101.62	
149+00			1104.3 9.8		
			7.54	1106.54	1106.52
	12.84	1126.49	0.43	1113.63	

Sta	BS	HI	FS	Elev	BM
150+00		1116.0 10.0			
151+00		1124.3 2.2			
	13.08	1138.89	0.48	1125.81	
152+00		1132.1 6.8			
153+00		1136.3 2.6			
	10.44	1149.13	0.20	1138.69	
154+00		1140.3 8.8			
155+00		1146.1 3.0			
	11.12	1158.63	1.62	1147.51	
			7.15	1151.48	1151.43

New B.M. Old can not be found

Sta	BS	HI	FS	Elev	BM
156+00		1150.5 8.1			
157+00		1154.8 3.8			
158+00		1158.4 0.2			
	7.20	1165.08	0.75	1157.88	
159+00		1159.9 5.2			
160+00		1161.0 4.1			
161+00		1163.5 1.6			
	10.91	1174.84	1.15	1163.93	
162+00		1166.2 8.6			
163+00		1169.4 5.4			

Sta	BS	HI	FS	Elev	BM
164+00		1172.6	2.2		
	9.33	1183.62	0.58	1174.29	
165+00		1176.0	7.6		
166+00		1178.1	5.5		
167+00		1178.3	5.3		
168+00		1178.5	5.1		
169+00		1179.6	4.0		
170+00		1180.3	3.3		
	4.38	1184.62	3.38	1180.24	

Sta	BS	HI	FS	Elev	BM
171+00		1180.4	4.0		
172+00		1180.9	3.7		
173+00		1181.7	2.9		
174+00		1180.8	3.8		
175+00		1177.7	6.9		
176+00		1175.1	9.5		
177+00		1174.6	10.4		
	3.62	1178.02	10.22	1174.40	
178+00		1174.11	3.91 4.0	1174.11	1174.09

BM. 3' E/m 25' Lt Sta 179+20

Sta	BS	HI	FS	Elev	BM.
		1172.3			
179+00		5.7			
		1170.7			
180+00		7.3			
		1168.8			
181+00		9.2			
	3.18	1171.78	9.46	1168.60	
		1167.6			
182+00		4.2			
		1164.8			
183+00		5.0			
		1167.1			
184+00		4.7			
		1168.0			
185+00		3.8			
	2.39	1170.58	3.59	1168.19	

Sta	BS	HI	FS	Elev	BM
			1164.4		
186+00			4.0		
			1164.5		
187+00			6.1		
			1164.8		
188+00			5.8		
			1166.6		
188+48			4.6		
			1167.8		
	100' East Rd.		2.8		
			1164.2		
	100' South Rd.		4.4		
			1165.4		
	100' North Rd.		5.0		
			4-39	1166.19	1164.18

Cross Sections

Sta 133+00 to 140+00

Sta	BS	HI	FS	Elev	BM
	2.95	1047.56			1044.61
140+00					
	1.42	1036.20	12.78	1034.78	
139+00					
138+00					
	0.54	1024.35	12.39	1023.81	
137+00					
	3.88	1016.06	12.17	1012.18	

Lt. 1041.5 Rt.

25 19 16 14 11 4 7 11 14 18 20 25
4.3 4.0 6.4 6.4 5.9 6.1 6.2 5.8 6.3 6.4 6.1 4.8

1033.2

25 22 18 17 14 13 8 5 6 8 18 25
+1.4 1.2 2.2 3.5 4.0 2.9 3.0 3.1 4.1 8.1 +3.3 +3.6

Note Bank begins at 138+20

1023.0

25 22 18 11 10 4 3 6 7 13 25
12.1 12.7 12.4 12.8 13.3 13.2 14.2 14.2 13.6 11.4 8.1

1015.6

25 22 20 16 14 9 8 7 9 10 25
10.4 10.6 11.6 10.7 8.5 8.8 8.8 9.5 10.9 9.6 9.2

Br. 1013.6

136+23 4 10.8

1014.6 10.9 to Stream Bed

136+54 4 9.9

1016.06

Sta	BS	HI	FS	Elev.	BM
136+00					
135+00					
134+00					
133+00					

1012.2

25/8.9 23/9.3 19/9.1 2/3.7 9/3.9 7/3.7 16/8.3 25/8.8

1010.4

35/6.7 12/7.5 10/6.9 6/6.9 4/5.7 6/5.3 13/6.9 17/7.1 31/6.2 25/6.4

1009.4

25/6.7 17/7.1 4/6.7 4/6.2 4/5.7 21/5.8 25/6.7

133+05 End of knoll

1012.8

+ 25/2.0 15/+2.2 6/3.9 5/3.4 4/3.3 4/3.2 12/3.5 16/00 25/+1.5 35/+1.5

high point in bank +6.0

132+40 beginning of knoll

133+25 end of knoll

high point in bank +5.5

132+10 beginning of knoll

Cross sections Sta 28+00 to Sta 46+00

Sta	BS	HI	FS	Elev	BM
	7.05	1060.80			1053.75
43+00					
44+00					
	11.49	1072.26	0.23	1060.57	
45+00					
46+00					
	2.92	1056.67			1053.75
42+00					
41+00					

1054.3

25/5.8 13/7.0 9/6.9 6/6.4 2/6.7 9/6.5 2/6.2 7/6.5 10/6.2 14/6.6 18/8.2 21/7.6 25/8.1

1058.2

25/1.2 22/2.2 14/2.9 12/3.5 10/3.1 6/3.2 4/2.6 3/2.3 13/2.2 17/3.5 21/2.4 25/2.6

1063.3

25/5.5 11/5.9 17/9.1 12/9.1 9/8.2 7/5.8 4/9.0 4/8.3 10/8.5 12/8.2 14/8.2 16/8.9 18/7.2 25/7.0

1070.2

25/42.3 20/41.8 14/2.7 10/2.4 4/2.1 3/1.9 6/2.2 10/1.8 17/2.0 15/2.4 18/40.7 25/40.8

1050.7

25/4.9 15/5.9 7/5.4 6/6.3 4/6.0 1/5.8 18/6.7 21/6.2 25/6.8

1046.8

25/8.9 17/10.9 11/9.9 8/10.3 4/9.9 12/10.1 14/10.4 4/10.6 17/10.0 25/10.3

Sta	BS	HI	FS	Elev	BM
	2.33	1048.47	10.53	1046.14	
40+00					
39+00					
38+00					
	0.60	1040.49	8.58	1039.89	
37+00					
36+00					
35+00					
34+00					

1043.5

25/4.9 10/4.9 9/5.1 4/5.0 9/5.0 13/4.7 14/4.0 25/4.4

1041.6

25/6.2 17/7.1 14/8.1 15/6.9 8/6.9 12/7.0 25/8.7

1040.4

25/8.0 21/8.4 6/8.5 4/8.1 8/8.1 9/8.2 11/8.1 25/10.0

1039.4

25/1.2 15/2.0 11/1.3 10/1.6 5/1.1 4/1.1 8/1.2 11/2.0 14/1.6 25/2.8

1037.1

25/1.5 18/2.2 16/3.7 14/4.4 6/3.9 4/3.6 8/3.4 10/3.6 13/4.6 15/4.4 18/4.2 25/2.0

1032.7

25/4.4 20/4.3 11/8.8 8/8.0 6/7.8 8/7.7 11/8.0 14/9.2 20/4.2 25/3.8

1028.8

25/7.7 20/7.8 14/11.6 11/11.8 7/12.7 8/11.7 11/12.0 14/13.3 19/9.4 25/9.4

Sta	BS	HI	FS	Elev	BM
	0.30	1028.67	12.12	1028.37	
33+00					
32+00					
	2.07	1018.38	12.34	1016.31	
31+00					
30+00					
29+00					
28+00					

1024.4

25 / 0.7 | 20 / 2.0 | 16 / 4.5 | 11 / 4.5 | 10 / 5.8 | 9 / 5.8 | 7 / 5.0 | 8 / 4.3 | 11 / 4.6 | 14 / 5.4 | 20 / 1.2 | 25 / 0.9

1018.4

25 / 6.3 | 22 / 6.2 | 15 / 10.5 | 12 / 10.5 | 10 / 12.3 | 7 / 10.4 | 8 / 10.3 | 9 / 10.1 | 12 / 10.3 | 15 / 11.1 | 22 / 6.9 | 25 / 6.3

1012.1

25 / 7.7 | 17 / 7.2 | 12 / 7.3 | 8 / 6.4 | 8 / 6.3 | 11 / 6.2 | 14 / 8.2 | 17 / 8.2 | 22 / 8.4 | 25 / 8.3

1007.7

25 / 14.7 | 17 / 13.7 | 12 / 11.1 | 8 / 10.7 | 8 / 10.8 | 15 / 13.7 | 20 / 14.0

1005.6

25 / 15.3 | 15 / 15.2 | 8 / 13.1 | 8 / 12.8 | 8 / 13.1 | 14 / 14.4 | 25 / 15.2

1005.3

25 / 10.1 | 18 / 13.2 | 14 / 13.2 | 14 / 14.0 | 8 / 13.1 | 8 / 13.1 | 9 / 13.4 | 15 / 14.5 | 18 / 14.5 | 21 / 14.0 | 25 / 13.7

Depth of Fill

Sta.	Material	Width	Depth	Dist from ℄ Right	Left
0+00	Slag	13'	7"	7'	6'
10+00	Gravel+Slag	10'	6"	10'	0'
20+00	Limestone	10'	6"	10'	0'
30+00	Limestone	10'	7"	8'	2'
40+00	Limestone	9'	5"	9'	0'
50+00	Limestone	10'	6"	10'	0'
60+00	Gravel	10'	5"	13' 3' Rt. ℄	0'
70+00	Sandstone+Gravel	11'	6"	11' 1' Rt ℄	0'
80+00	Limestone	11'	5½"	11'	0'
90+00	Limestone	10'	3"	8'	2'
100+00	Gravel	9'	6½"	8'	1'
110+00	Clay	N.G.			

Sta	Material	Width	Depth	Dist from ℄ Right	Left
120+00	Gravel	10' N.G.	6"	4'	6'
130+00	Gravel	10 N.G.	7"	2'	8'
140+00	Sandstone Gravel	No Good	3"		
150+00	Sand-Gravel	10'	4"	10'	0'
160+00	Gravel OK	9'	4"	9'	0'
170+00	Sand + Gravel	No Good			

Slope Stakes

Honna
Grau
Andrews

Sta.	B.S.	H.I.	F.S.	Elev.
B.M.	3.44	1169	62	1166.18
188			3.41	66.21
187			2.98	66.64
186			2.55	67.07
T.P.	3.94	1171	15	2.41	1167.21
185			3.70	67.45
184			3.65	67.50
183			3.65	67.50
182			3.18	67.97
T.P.	7.90	1176	48	2.57	1168.58
181			7.11	69.37
180			5.24	71.24
				74.09
B.M.	2.42	1176	51	2.42	1174.06
179			3.39	73.12
178			1.86	74.65
T.P.	8.44	1183	73	1.22	1175.29
177			8.68	75.03

6-24-24
Hot

Grade Stakes

set 1 out

Alum. Tablet

Ground

3.41 / 5.7 / 2.5	F2.5 / 16.0	F2.6 / 15.0	F1.0 / 15.5	F1.0 / 16.5	3.41 / 5.41 / 1.00
2.98 / 2.68 / 0.3	C0.9 / 19.0	C0.7 / 18.0	F2.1 / 16.0	F2.2 / 15.1	2.98 / 5.18 / 2.2
2.55 / 1.25 / 1.3	C1.2 / 17.3	C0.9 / 18.3	F0.6 / 16.1	F0.6 / 17.1	2.55 / 3.15 / 0.6
3.70 / 2.0 / 1.7	C1.7 / 2.0	C1.5 / 19.2	C0.2 / 17.3	C0.4 / 18.3	3.70 / 3.3 / 0.4
3.65 / 2.55 / 1.1	C1.1 / 18.9	C0.6 / 17.9	F1.2 / 15.2	F0.6 / 16.2	3.65 / 4.25 / 0.6
3.65 / 2.75 / 1.1	F1.1 / 16.1	F1.3 / 15.1	F1.8 / 14.3	F1.5 / 15.3	3.65 / 5.15 / 1.5
3.18 / 2.88 / 0.3	C0.3 / 18.3	C0.2 / 17.3	F1.2 / 15.2	F0.6 / 16.2	3.18 / 3.78 / 0.6
7.11 / 7.01 / 0.1	F0.2 / 17.5	F0.3 / 16.5	F0.4 / 16.4	F0.0 / 17.4	7.11
5.24 / 4.82 / 0.4	C0.4 / 18.3	C0.2 / 17.3	F1.2 / 15.1	F0.8 / 16.2	5.24 / 2.04 / 0.8
3.39 / 1.09 / 0.1	F0.7 / 17.0	F0.7 / 16.0	F2.2 / 14.3	F2.0 / 15.3	3.39 / 5.3 / 2.0
1.86 / 1.82 / 0	0.0 / 17.9	F0.1 / 16.9	F0.7 / 16.0	F0.7 / 17.0	1.86 / 2.56 / 0.7
8.68 / 9.11 / 0.5	F0.5 / 17.0	F0.7 / 16.0	F1.8 / 14.3	F1.8 / 15.3	8.68 / 10.48 / 1.8

		1183	73		
176				7.41	76.32
175				5.02	78.71
174				3.31	80.42
173				2.41	81.32
T.P.	3.71	1184	93	2.51	1181.22
172				3.63	81.40
171				4.18	80.75
T.P.	4.37	1184	42	4.88	1180.05
170				~~4.26~~	80.16
169				4.55	79.87
T.P.	3.97	1182	95	5.09	1179.38
168				3.20	79.75
167	4:30 PM			3.69	79.26
T.P.				4.39	1178.56
	4.42	1182.98			1178.56
166				4.97	1178.01

Stakes set

7.41 / 8.41 / 1.0	F1.0 / 16.2	F1.2 / 15.2	F1.9 / 14.2	F1.5 / 15.2	7.41 / 8.91 / 1.5
5.02 / 3.22 / 1.8	C1.8 / 20.1	C1.4 / 19.1	F0.3 / 16.6	C0.1 / 17.6	5.02 / 4.92 / 0.1
3.31 / 1.21 / 1.7	C1.7 / 20.7	C1.6 / 19.4	0.0 / 17.0	C0.0 / 18.0	3.31
2.41 / 2.21 / 0.1	C0.2 / 18.0	0.0 / 17.0	F0.6 / 16.1	F0.4 / 17.1	2.41 / 2.81 / 0.4
3.53 / 5.23 / 1.7	F1.7 / 15.3	F1.8 / 14.3	F2.2 / 14.2	F2.3 / 15.2	3.53 / 5.83 / 2.3
4.18 / 5.38 / 1.2	F1.2 / 16.2	F1.2 / 15.2	F1.7 / 14.4	F1.8 / 15.4	4.18 / 5.98 / 1.8
4.26 / 5.46 / 1.2	F0.9 / 16.8	F0.8 / 15.8	F1.5 / 14.8	F1.6 / 15.8	4.26 / 5.86 / 1.6
4.55 / 5.55 / 1.0	F1.0 / 16.5	F1.0 / 15.5	F1.8 / 14.8	F1.3 / 15.8	4.55 / 5.85 / 1.3
3.20 / 5.20 / 1.8	F1.8 / 15.3	F1.8 / 14.3	F2.2 / 14.2	F2.1 / 15.2	3.20 / 5.30 / 2.1
3.69 / 5.59 / 1.9	F1.9 / 15.3	F1.8 / 14.3	F2.2 / 14.2	F2.1 / 15.2	3.69 / 5.79 / 2.1

Spike in top stump 70 Rt, Sta 167+15

6.52	F1.0 / 17.4	F1.2 / 16.4	F1.6 / 15.8	F1.2 / 16.0	

1182.98

				1176.03
165			6.95	
	4.55	1176.41	11.12	1171.86
164			3.11	1173.30
	5.48	1174.96	6.93	1169.48
163			4.76	1170.20
162			7.86	1167.10
	3.11	1167.57	10.50	1164.46
161			3.13	1164.44

	C 0.7 / 20.5	F. 29 / 19.5	F.44 / 19.0	F 0.2 / 10
3.51 : 3-11 / 3.11 / 1.0 / 2.41 / .50	C 0.5 / 21.2	C.11 / 20.2	F 0.9 / 17.5	F 0.7 / 19.5
	C 0.8 / 25.0	C 0.67 / 24.0	F.72 / 21.0	F 0.7 / 22.0
	C 0.0 / 23.0	C 0.0 / 22.0	F 0.34 / 21.5	C 0.2 / 22.5
	F 0.3 / 23.3	F 4.5 / 22.3	F.57 / 22.0	F 0.3 / 23.0

1167.57

160			4.90	1162.67
159			6.62	1160.95
	2.60	1162.44	7.73	1159.84
158			3.94	1158.50
157			7.15	1155.29
156			11.11	1151.33
			10.11	1152.33
	3.80	1155.23		1151.43
155			8.23	1147.00

F2.6 / 16.2	F2.6 / 15.2	F2.77 / 15.5	F2.6 / 16.5
F3.7 / 18.2	F3.6 / 17.2	F2.32 / 14.7	F2.3 / 15.7
0.0 / 18.0	F0.1 / 17.0	C0.91 / 18.4	C1.0 / 19.4
C.00 / 17.8	F0.17 / 16.8	C1.0 / 18.5	C1.0 / 19.5
C1.0 / 19.3	C.86 / 18.3	C2.36 / 20.5	C2.46 / 21.5
F1.30 / 16.0	F1.4 / 15.0	C1.41 / 19.5	C1.70 / 20.5

Sta	BS	HI	FS	Elev	BM
				11.83	1061.99
	0.44	1062.93			
143				5.70	1056.73
142				11.06	1051.37
	1.42	1051.94	12.41	1049.82	
	6.87	1051.48			1044.61
141				4.73	1046.75
140				10.13	1041.35
	1.47				
139				12.40	1033.68
	0.55	1034.78	11.85	1034.23	
138				9.28	1025.10
	1.11	1023.55	12.34	1022.44	
137				5.15	1018.40
			9.22	1014.33	

C 4.0 / 23.6	C 3.7 / 22.6	C 2.2 / 20.3	C 2.4 / 21.3
C 3.1 / 22.9	C 3.0 / 21.5	C 0.6 / 18.0	C 1.1 / 19.0
C 0.9 / 19.8	C 0.6 / 18.0	F 0.6 / 14	F 1.0 / 17.0
C 2.1 / 21.0	C 1.8 / 20.0	C 0.8 / 18.2	C 0.8 / 19.2
C 3.9 / 25.0	C 3.8 / 24.0	C 6.0 / 24.0	C 6.3 / 27.0
F 1.3 / 13.8	F 1.5 / 14.8	C 2.7 / 29	C 3.1 / 30.0
F 5.1 / 22.0	F 5.4 / 21.0	F 3.1 / 16.2	F 3.0 / 17.2

Sta	BS	HI	FS	Elev	BM
	3.59	1017.92			1014.33
136				3.78	1014.14
135				5.63	1012.29
134				5.60	1012.32
			5.20	1012.70	
	7.06	1020.25	4.73	1013.19	
133	4.19			7.64	1012.61
	4.19	1016.89	5.30	1011.59	1012.70
	5.30	1017.00			1011.70
132				4.10	1012.90
	5.77	1017.47			1011.70
131				4.28	1013.19
130				3.99	1013.48
129				3.70	1013.77
128				1.54	1015.93

F7.4 / 26.0 — F7.5 / 25.0 — F6.8 / 23.0 — F6.3 / 24.0

F2.8 / 17.5 — F3.2 / 16.5 — F2.7 / 15.5 — F2.6 / 16.5

F3.3 / 17.0 — F3.5 / 17.0 — F2.2 / 14.3 — F2.0 / 15.5

C4.5 / 15.0 — C4.5 / 14.0 — C4.8 / 24.20 — C4.9 / 25.0

C0.1 / 18.0 — 0.2 / 17.0 — C0.5 / 17.8 — C0.6 / 18.8

F2.5 / 16.2 — F2.6 / 15.2 — F3.2 / 16.4 — F3.3 / 17.4

F2.5 / 14.3 — F2.6 / 15.2 — F2.1 / 14.2 — F2.0 / 15.2

F1.5 / 16.0 — F1.6 / 15.0 — F0.2 / 16.7 — C0.0 / 17.7

F5.6 / 22.4 — F5.7 / 21.4 — F4.0 / 18.0 — F4.1 / 19.0

Sta	BS	HI	FS	Elev	BM				
		1017.47							
	11.84	1029.74	0.43	1017.90					
127				9.24	1020.50	F 6.0 / 23.0	F 7.0 / 21.0	F 1.6 / 14.8	F 1.7 / 15.8
126				2.72	1027.02	F 1.5 / 16.0	F 1.3 / 15.0	C 2.0 / 20.0	C 2.2 / 23.0
	13.04	1042.41	0.39	1029.37					
125				6.41	1035.80	F 1.3 / 15.6	F 1.6 / 14.6	C 3.7 / 22.4	C 4.5 / 25.0
	12.46	1054.48	0.39	1042.02					
124				9.28	1045.20	C 0.3 / 16.5	F 1.0 / 15.5		C 6.1 / 31
	12.24	1066.68	0.04	1054.44					
123	1.01			12.18	1054.50	C 1.7 / 20.5	C 1.5 / 19.5		5.7 / 30.6
	1.04	1073.57			1072.51				
122				10.5	1063.07	F 0.7 / 14.4	F 0.2 / 15.6	C 3.4 / 22.5	C 9.6 / 23.3
121				3.66	1070.91	F 1.2 / 16.2	F 1.2 / 15.2	C 2.9 / 21.4	C 3.1 / 22.4
	11.86	1085.04	0.39	1073.18					

Sta	BS	HI	FS	Elev	BM
		1085.04			
120				7.22	1077.82
	11.82	1096.52	0.34	1084.70	
119				11.79	1084.73
	8.05	1101.09	3.48	1093.04	
118				9.58	1091.51
117				3.67	1097.42
	11.39	1111.71	0.77	1100.32	
116				9.38	1102.33
115				5.46	1106.25
114				2.41	1109.30
	10.81	1121.81	1.71	1111.00	
113				9.60	1112.21
112				6.78	1115.03
111				4.54	1117.27
			0.78	1121.03	

C0.5 / 16.5 — C1.2 / 17.5 — C2.2 / 20.3 — C2.4 / 21.5

F1.5 / 15.8 — F2.4 / 14.8 — C3.5 / 22.5 — C3.9 / 23.5

C0.4 / 16.0 — F1.7 / 15.0 — C6.4 / 24.6 — C6.4 / 27.6

C0.0 / 18.0 — 0.0 / 17.0 — C1.5 / 19.5 — C1.8 / 20.5

F2.1 / 16.0 — F2.4 / 15.0 — C2.1 / 20.0 — C2.3 / 21.6

F1.4 / 16.5 — F3.0 / 15.5 — F1.6 / 14.7 — F1.3 / 15.7

F2.1 / 16.0 — F2.6 / 15.2 — F2.5 / 15.0 — F1.2 / 16.0

C0.3 / 20.0 — C0.0 / 19.0 — F1.6 / 14.7 — F1.3 / 15.7

F0.3 / 16.3 — F1.0 / 15.5 — C1.3 / 19.0 — C1.4 / 20.1

0.0 / 18.0 — C0.0 / 17.0 — C1.2 / 19.0 — C1.7 / 20.0

NE Cor North Hdwll.

Sta	BS	HI	FS	Elev	BM
	3.28	1124.31		1121.03	
110				5.48	1118.83
109				4.60	1119.71
108				4.18	1120.13
	7.58	1128.61			1121.03
107				7.41	1121.20
106				6.21	1122.40
105				5.04	1123.60
104				3.81	1124.80
103				2.44	1126.17
			1.41	1127.00	
	7.90				
102				7.03	1127.87
101				5.16	1129.74

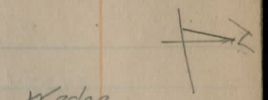
C0.2 / 16.4	C0.2 / 16.4	C0.8 / 15.2	F1.1 / 13.2
F0.9 / 16.3	F1.1 / 15.3	F0.7 / 16.0	F0.6 / 17.0
F0.8 / 16.6	F1.1 / 15.6	F0.9 / 15.6	F0.4 / 16.6
C0.3 / 18.0	C0.0 / 17.0	C0.0 / 17.0	C0.2 / 18.0
F0.3 / 17.4	F0.4 / 16.4	C0.0 / 17.0	C0.2 / 18.0
F0.3 / 16.6	F0.9 / 15.6	F0.5 / 16.2	F0.9 / 17.2
F0.9 / 16.8	F0.8 / 15.8	F0.4 / 16.0	F0.5 / 17.0
F0.9 / 16.5	F1.0 / 15.5	F0.8 / 15.8	F0.6 / 16.8
F0.8 / 16.8	F0.8 / 15.8	F0.6 / 16.1	F0.4 / 17.1
F0.8 / 16.3	F1.0 / 15.3	F0.1 / 16.8	C0.1 / 17.8

Sta	BS	HI	FS	Elev	BM
100				3.29	1131.61
			3.30	1131.60	
	9.19	1140.79			
99				7.31	1133.48
98				5.44	1135.35
97				3.73	1137.06
			3.05	1137.74	
	2.43	1140.17			
96				2.15	1138.02
95				2.08	1138.09
94				2.89	1137.28
93				4.49	1135.68
92				6.22	1133.95
91				7.94	1132.23

F0.1 / 17.5	F0.3 / 16.5	C0.4 / 17.6	C0.6 / 18.6
C0.8 / 18.9	C0.6 / 17.9	C2.0 / 17.3	C0.4 / 18.3
C0.4 / 18.3	C0.2 / 17.3	C0.5 / 17.8	C0.6 / 18.8
F0.7 / 16.8	F0.8 / 15.8	F0.1 / 16.8	C0.0 / 17.8
F0.7 / 16.5	F1.0 / 15.5	F1.4 / 14.9	F1.3 / 15.9
F0.8 / 16.3	F1.1 / 15.3	F1.5 / 14.7	F1.2 / 15.7
F0.9 / 16.3	F1.1 / 15.3	F1.1 / 15.3	F1.0 / 16.3
F0.2 / 17.5	F0.3 / 16.5	F1.1 / 15.3	F0.8 / 16.3
C0.8 / 18.6	C0.4 / 17.6	F0.6 / 16.0	F0.5 / 17.8
F0.5 / 17.1	F0.6 / 16.1	F1.1 / 15.3	F1.1 / 16.3

Observations taken on Chagrin Rd at RR underpass March 3, 1959

Temple
Merrill
Patterson



Wedge
Lumber
at rear

Bldg

No. 1 stand pipe

6' from H_2O level to top of pipe
9' to FL from inset

No. 2 Stand pipe

H_2O 1'8" deep
83 from inset to FL

No. 3 stand pipe

H_2O 1.1' deep
7.4' from inset to FL

observation cont.

28"x30" stone box from inlet NE to Most E cor of FOE bldg

under rd 30"x30" conc box culv't starts ± 30" West of inlet stone box head Northerly at said starting point

15" v.i.t running in from North

pipe adjoining W end of conc box culv't appears to 24" v.i.t.

4' E of inlet 6" water main cut thru wall bottom of main 12" from bottom of culv't deck

H_2O at present 6" deep

at E cor of FOE bldg
10" H_2O in pipe at present
culv't seems ok to W
some of the V.i.t to E should be replaced

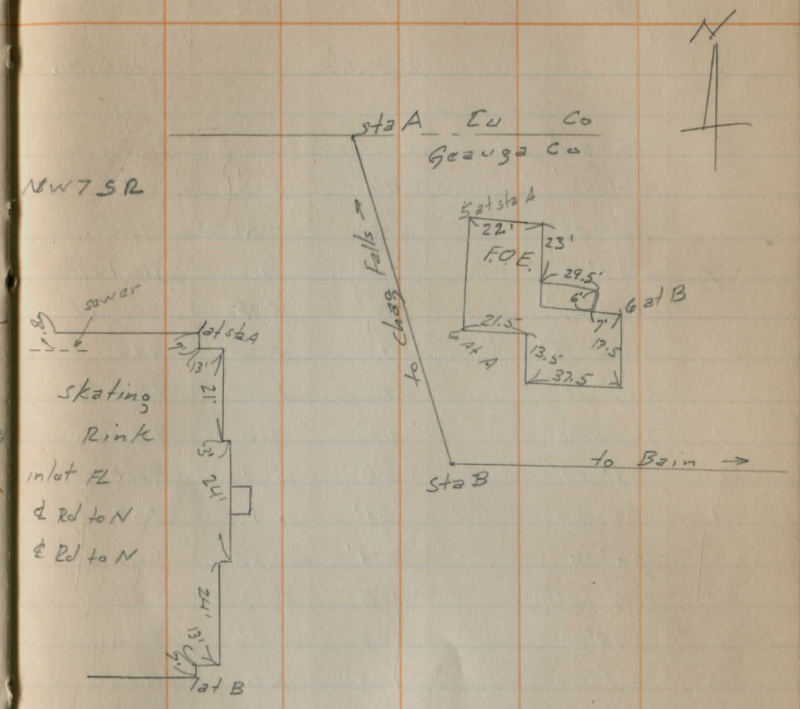
inlet refered to above is located ±50' S of FOE bldg & ±10' E of E edge pave't.

Temple
PeHerson
Diedrich

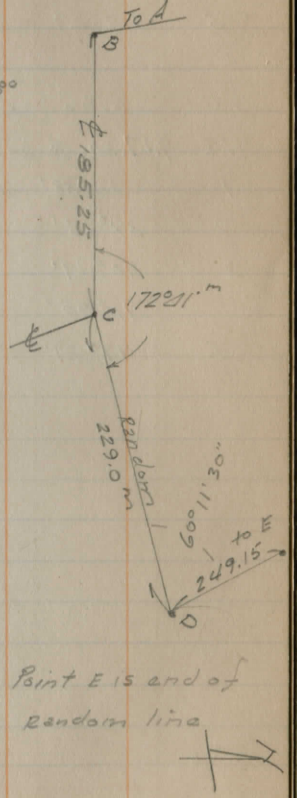
Survey for storm drainage
Chagrin Rd at RR underpass

March 59

	Hor ∠	Vert ∠	stadia rod		Elev
B/M + 7.62			HI 944.56		Elev: 936.94
HI 944.56 ⊼ at sta A	Backsite on B ∠s to right				
1.	25°48'		115'		
2	69°38'		200'		
3	74°39'	~~+1°35'~~	183'	11.98	932.58
4.	96°48'	-1°25'	166'	15.30 / 11.18	929.26
			at point A	5.4	939.16
5.	306°22'		61'	8.0	936.56
6.	336°27		70'	9.1	935.46
7.	02°42'		110'	9.2	935.36 ℄ RR
8.	351°47'	-01°~~45'~~ 57'	114'	15.31 / 11.43	929.25
9.	173°39'		70'	.68	943.88
10.	166°03'	+02°55'	223'	10.25 / 1.11	954.81
BM	+ 4.98				El 936.94
HI 941.92 ⊼ at B	backsite on A	∠s to right			
			at B	5.3	936.6
1	308°37'		90'	8.2	933.7
2	293°31'		220'	11.93	930.0
3	284°15'		220'	10.6	931.3
4	285°19'		123'	9.7	932.2
5	335°05		100'	7.79	934.1
6	29°33'		162'	9.9	932.0
7	34°54'		106'	6.9	935.0
8	02°46'		80'	6.1	935.8
9	98°03'		60'	3.6	938.3



	Hor ∠	Vert ∠	stadia	rod	Elev	
	+		HI		Elev	
BM	8.71		945.65		936.94	
HI 945.65 ℄ at C back sight on B Cs to Rt						
1	341°06'		46'	5.32	940.3	℄ traveled rd
2	310°39'		44'	7.0	938.6	8" up to pav't edge inlet to 8" storm sewer S edge pav't
3	317°02'		24'	4.51	941.1	N edge pav't
4	272°50'		56'	5.18	940.4	S " "
5	255°18'		41'	3.64	942.0	NE " "
6	247°23'		68'	2.97	942.6	E " " where dr from E int
7	247°08'		161'	1.0	944.6	E " "
8	43°51'		80'	5.1	940.5	SW 7 Lumber bldgs.
9	06°00		61'	6.1	939.5	CP
10	158°09'		24'	5.35	940.2	CP
11	159°12'		108'	5.78	939.8	SE 7 Lumber bldgs
12	178°00'		102'	5.86	939.7	CP
13	213°49'		102'	3.0	942.6	℄ dr from E
	+		HI		Elev	
BM	9.33		946.27		936.94	
TP	5.83	4.61	HI 947.49		Elev 941.66	
HI 947.49 ℄ at D backsite on C Cs to Rt						
1	311°19		80'	4.51	943.0	℄ Dr on culvt 24" RCP 20' long
				8.10	939.4	FL N end 24" RCP
2	09°12'		44'	8.36	939.1	channel int.



Point E is end of random line

	Hor ∠	Vert ∠	stadia	Rod		
HI 947.49						
3 ✓	87°41'		96' ✓	9.88	937.6	℄ channel ± 15' channel bottom
4 ✓	88°27	-01°00	136' ✓	13.62 ~~11.25~~	933.9	FI 24" storm sewer inlet
5 ✓	117°29	-00°30'	170' ✓	12.36 ~~10.88~~	935.0	FI channel to E
	+	-	HI	Elev		
TP	5.06	5.25		942.24		

HI 947.30 ⊼ at E backsite on D ∠s to Rt

1 ✓	15°38'		86' ✓	6.32	941.0	NE ⅂ Lumber bldg
2 ✓	37°15'		70' ✓	15.11	932.2	inlet No 3
3 ✓	70°29'		90' ✓	15.97	931.3	inlet No 2
4 ✓	91°55'		131'	16.88	930.4	inlet No 1
5 ✓	98°31'		184'	6.17	941.1	NW ⅂ Lumber bldg

Chagrin Falls Survey

11th 1 day
12 1/2 day
13 1/2 day
14 1 day
15 1 day
17 1 "
18 1 "
19 1 "
20 1 "
21 1 "
22 1 "

Expense Account.

Nov. 13 1 day either Co. or State

1	"	14	1 day	Co.	26	Miles	
1	"	15	"	"	7	"	
½	"	16	½	"	"	2	"
½	"	17	½	"	"	0	"
1	"	19	1	"	"	8	"
1	"	20	1	"	"	18	"
1	"	21	1	"	"	12	"
1	"	22	1	"	"	13	"
½	"	23	½	"	"	0	"
½	"	24	1	"	"	4	"
½	"	26	½	"	"	4	"
1	"	27	1	"	"	8	"
1	"	28	1	"	"	9	"
~~½~~	"	~~½~~	½	"		0	
3	"	1	1	"		0	
4	"	0	0	"		0	
5	"	~~20~~	~~0~~	"		0	
6		1	1			6	~~Fred Rob~~
7		1	1			0	Fred Rob
8		1	1			0	" "
9	Dick 1 day						
10	"	1 day					

Each have 1 day due Ross + Shorty

$109.16 from State.
$215.71 from County

Ross + Shorty	1 day		1.50	Dinners
"	"		"	
"	"	½	"	
"	"	0	"	.50
"	"	1	"	1.50
"	"	1	"	1.50
"	"	1	"	1.50
"	"	1	"	1.50
"	"	0	"	0
"	"	½	"	0
"	"	0		0
"	"	1	"	1.50
"	"	1	"	"
"	"	0		.50
"	"	1	"	1.50
"	"	0	"	0
~~"~~	~~"~~	~~0~~	~~"~~	~~0~~
		½	"	1.50
"	"	1	"	1.50
"		1	"	150

18 mi to Chardon

of House

±900 W Hole # 1 3½' gravel 4½' blue sand

± 600' W Hole # 2 3' " 3½' into " "
will require ± 500' at average 8' Lyp

Hole #3 East of House
±300' E will require 6' cut - did not
hit blue sand. all sandy gravel

Hole #4 East of House ± 700'
3½' of sandy gravel
2' of blue clay and gravel as
near as we could tell. Hole was
half full of H_2O. Seem to have
hit hard shale ledge at ±4'
with clay off end of ledge

Will require ±350 of cut
at average depth of ± 6' east
of house

At west end there will be approx 150'
with average 12' cuts; plus or minus
400' at av 4' cut

PLEASE RETURN TO
GEAUGA COUNTY ENGINEER
COURT HOUSE
CHARDON, O.
PHONE 250 X

TABLE OF INCHES REDUCED TO DECIMALS OF A FOOT.

Ins.	Dec.	Ins.	Dec.	Ins.	Dec.	Ins.	Dec.	Ins.	Dec.	Ins.	Dec.	Ins.	Dec.	Ins.	Dec.	Ins.	Dec.	Ins.	Dec.
$\frac{1}{16}$	.0052	$\frac{5}{16}$	.0260	$2\frac{9}{16}$	.2135	$3\frac{13}{16}$	.3177	$5\frac{1}{16}$	.4219	$6\frac{5}{16}$	.5260	$7\frac{9}{16}$	.6302	$8\frac{13}{16}$	.7344	$10\frac{1}{16}$	.8385	$11\frac{5}{16}$	.9427
$\frac{1}{8}$	.0104	$\frac{3}{8}$	.0313	$\frac{5}{8}$	.2188	$\frac{7}{8}$	.3229	$\frac{1}{8}$	.4271	$\frac{3}{8}$	.5313	$\frac{5}{8}$	.6354	$\frac{7}{8}$	.7396	$\frac{1}{8}$	.8438	$\frac{3}{8}$	.9479
$\frac{3}{16}$	.0156	$\frac{7}{16}$	.0365	$\frac{11}{16}$	.2240	$\frac{15}{16}$	.3281	$\frac{3}{16}$	.4323	$\frac{7}{16}$	.5365	$\frac{11}{16}$	.6406	$\frac{15}{16}$	.7448	$\frac{3}{16}$	.8490	$\frac{7}{16}$	.9531
$\frac{1}{4}$	.0208	$\frac{1}{2}$	.0417	$\frac{3}{4}$	.2292	4—	.3333	$\frac{1}{4}$	.4375	$\frac{1}{2}$	.5417	$\frac{3}{4}$	.6458	9—	.7500	$\frac{1}{4}$	.8542	$\frac{1}{2}$	.9583
$\frac{5}{16}$	.0260	$\frac{9}{16}$	.0469	$\frac{13}{16}$	.2344	$\frac{1}{16}$	.3385	$\frac{5}{16}$	.4427	$\frac{9}{16}$	.5469	$\frac{13}{16}$	.6510	$\frac{1}{16}$	.7552	$\frac{5}{16}$	.8594	$\frac{9}{16}$	.9635
$\frac{3}{8}$	.0313	$\frac{5}{8}$	.0521	$\frac{7}{8}$	.2396	$\frac{1}{8}$	.3438	$\frac{3}{8}$	.4479	$\frac{5}{8}$	.5521	$\frac{7}{8}$	.6563	$\frac{1}{8}$	.7604	$\frac{3}{8}$	.8646	$\frac{5}{8}$	.9688
$\frac{7}{16}$	.0365	$\frac{11}{16}$	.0573	$\frac{15}{16}$	.2448	$\frac{3}{16}$	.3490	$\frac{7}{16}$	.4531	$\frac{11}{16}$	.5573	$\frac{15}{16}$	.6615	$\frac{3}{16}$	.7656	$\frac{7}{16}$	.8698	$\frac{11}{16}$	.9740
$\frac{1}{2}$	.0417	$\frac{3}{4}$	.0625	3—	.2500	$\frac{1}{4}$	.3542	$\frac{1}{2}$	.4583	$\frac{3}{4}$	.5625	8—	.6667	$\frac{1}{4}$	.7708	$\frac{1}{2}$	.8750	$\frac{3}{4}$	.9792
$\frac{9}{16}$	.0469	$\frac{13}{16}$	.0677	$\frac{1}{16}$	.2552	$\frac{5}{16}$	.3594	$\frac{9}{16}$	.4635	$\frac{13}{16}$	.5677	$\frac{1}{16}$	.6719	$\frac{5}{16}$	.7760	$\frac{9}{16}$	8802	$\frac{13}{16}$	9844
$\frac{5}{8}$	.0521	$\frac{7}{8}$	.0729	$\frac{1}{8}$	.2604	$\frac{3}{8}$	.3646	$\frac{5}{8}$	.4688	$\frac{7}{8}$	.5729	$\frac{1}{8}$	.6771	$\frac{3}{8}$	.7813	$\frac{5}{8}$	.8854	$\frac{7}{8}$	.9896
$\frac{11}{16}$	.0573	$\frac{15}{16}$	.0781	$\frac{3}{16}$	.2656	$\frac{7}{16}$	.3698	$\frac{11}{16}$	.4740	$\frac{15}{16}$	.5781	$\frac{3}{16}$	.6823	$\frac{7}{16}$	.7865	$\frac{11}{16}$	.8906	$\frac{15}{16}$	9948
$\frac{3}{4}$	.0625	$\frac{1}{4}$	.0833	$\frac{1}{4}$	.2708	$\frac{1}{2}$	.3750	$\frac{3}{4}$	.4792	7—	.5833	$\frac{1}{4}$	.6875	$\frac{1}{2}$	.7917	$\frac{3}{4}$	.8958		
$\frac{13}{16}$	.0677	$\frac{5}{16}$	.0885	$\frac{5}{16}$	.2760	$\frac{9}{16}$	.3803	$\frac{13}{16}$	.4844	$\frac{1}{16}$	.5885	$\frac{5}{16}$	.6927	$\frac{9}{16}$	.7969	$\frac{13}{16}$	.9010		
$\frac{7}{8}$	.0729	$\frac{3}{8}$	.0938	$\frac{3}{8}$	.2813	$\frac{5}{8}$	.3854	$\frac{7}{8}$	.4896	$\frac{1}{8}$	.5938	$\frac{3}{8}$	.6979	$\frac{5}{8}$	.8021	$\frac{7}{8}$	.9063		
$\frac{15}{16}$	.0781	$\frac{7}{16}$	.1042	$\frac{7}{16}$	.2865	$\frac{11}{16}$	.3906	$\frac{15}{16}$	4948	$\frac{3}{16}$	.5990	$\frac{7}{16}$	.7031	$\frac{11}{16}$	.8073	$\frac{15}{16}$	.9115		
1	.0833	$\frac{1}{2}$	.1094	$\frac{1}{2}$	.2917	$\frac{3}{4}$	.3958	6—	.5000	$\frac{1}{4}$	.6042	$\frac{1}{2}$	.7083	$\frac{3}{4}$	.8125	11—	.9167		
$\frac{1}{16}$	.0885	$\frac{9}{16}$	.1146	$\frac{9}{16}$	.2969	$\frac{13}{16}$	.4010	$\frac{1}{16}$	.5052	$\frac{5}{16}$	.6094	$\frac{9}{16}$	.7135	$\frac{13}{16}$	.8177	$\frac{1}{16}$	.9219		
$\frac{1}{8}$	.0938	$\frac{5}{8}$	.1198	$\frac{5}{8}$	.3021	$\frac{7}{8}$	.4063	$\frac{1}{8}$	.5104	$\frac{3}{8}$	.6146	$\frac{5}{8}$	.7188	$\frac{7}{8}$	.8229	$\frac{1}{8}$	.9271		
$\frac{3}{16}$	.0990	$\frac{11}{16}$	.1250	$\frac{11}{16}$	.3073	$\frac{15}{16}$	.4115	$\frac{3}{16}$	.5156	$\frac{7}{16}$	.6198	$\frac{11}{16}$	.7240	$\frac{15}{16}$	.8281	$\frac{3}{16}$	.9323		
$\frac{1}{4}$	.1042	$\frac{3}{4}$	.1302	$\frac{3}{4}$	.3125	5—	.4167	$\frac{1}{4}$	.5208	$\frac{1}{2}$	.6250	$\frac{3}{4}$	.7292	10—	.8333	$\frac{1}{4}$	.9375		

B. K. ELLIOTT COMPANY, PITTSBURG, PA.
DRAWING MATERIALS AND SURVEYING INSTRUMENTS

8.9
2.98
16.68

7.35
2.76
15.11

8.2
7.22
15.97