14th N of L St
" " " G St
" S " " "
K St E of 14th St
G St W of 15 " "
B St E 14th St
C St " " " "
F St W of 15th St
I St TRANSIT
H St " " " "

F.B. 651

651

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

Minutes.	Lks.	Minutes.	Lks.	Minutes.	Lks.
1	2⅓	21	49	41	95⅔
2	4⅔	22	51⅓	42	98
3	7	23	53⅔	43	100⅓
4	9⅓	24	56	44	102⅔
5	11⅔	25	58⅓	45	105
6	14	26	60⅔	46	107⅓
7	16⅓	27	63	47	109⅔
8	18⅔	28	65⅓	48	112
9	21	29	67⅔	49	114⅓
10	23⅓	30	70	50	116⅔
11	25⅔	31	72⅓	51	119
12	28	32	74⅔	52	121⅓
13	30⅓	33	77	53	123⅔
14	32⅔	34	79⅓	54	126
15	35	35	81⅔	55	128⅓
16	37⅓	36	84	56	130⅓
17	39⅔	37	86⅓	57	133
18	42	38	88⅔	58	135⅓
19	44⅓	39	91	59	137⅔
20	46⅔	40	93⅓	60	140

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Table for Running on Slopes.

In the following table the first column shows the angle, the second, the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

Angle.	Cor. in links	Angle.	Cor. in links.	Angle.	Cor. in links.	Angle.	Cor. in links.
°		°		°		°	
4	0·24	11	1·88	18	5·14	25	10·54
5	0·38	12	2·24	19	5·76	26	11·26
6	0·55	13	2·63	20	6·42	27	12·24
7	0·76	14	3·06	21	7·11	28	13·37
8	0·98	15	3·53	22	7·85	29	14·34
9	1·24	16	4·02	23	8·64	30	15·47
10	1·55	17	4·56	24	9·47	35	22·07

14th St with Branch to 15th on K
G. St. East of 15th St 14" Not G.
14th South of G.

Book V 2

INDEX

14 ft Q of Z

Sta.	Elev	Grade	Cut		
1	5.50	3.60	1.90	1'	10 3/8
+ 10	5.18	3.69	1.49	1'	5 7/8
+ 20	5.12	3.78	1.34	1'	8 5/8
+ 31	5.51	3.87	1.64	1'	7 3/4
+ 42	5.35	3.96	1.39	1'	4 3/4
+ 50	5.19	4.05	1.14	1'	1 3/4
+ 66	4.93	4.11	0.82	0'	9 7/8
+ 81	5.40	4.15	1.35	1'	4 5/8
+ 96	5.34	4.38	.96	0'	11 1/2
1 + 11	5.84	4.60	1.24	1'	2 7/8
+ 26	6.69	4.83	1.86	1'	10 1/2
+ 41	6.89	5.06	1.83	1'	10
+ 56	6.74	5.28	1.46	1'	5 1/2
2 + 11	8.33	5.51	2.82	2'	9 7/8
+ 26	8.28	5.73	2.55	2'	6 1/2
+ 41	8.26	5.96	2.30	2'	3 5/8
+ 56	7.92	6.19	1.73	1'	8 3/4
3 + 01	7.79	6.41	1.38	1'	4 5/8
+ 36	7.86	6.64	1.24	1'	2 7/8
+ 52	7.46	6.82	0.64	0'	7 3/4
74	7.62	7.00	0.62	0'	7 1/2

.9042.180

See Page 26 Reloid

3+36 A L 2.4

PT

A + L

A L K (Grade 12.00)

3+54 6" T C for K to I & Patin.

K to

14th St – North Z

Sta	Elev	Grade	cut	
3+96	7.66	7.33	0.33	0'4
4+16	8.58	7.67	0.91	0'10⅞
+41	9.28	8.08	1.20	1'2⅜
+66	9.78	8.50	1.28	1'3⅜
+91	10.36	8.91	1.45	1'5⅝
5+16	12.30	9.33	2.97	2'11⅞
+41	12.83	9.75	3.08	3'1
+66	12.54	10.16	2.38	2'4⅝
+91	12.65	10.58	2.07	2'0⅞
6+16	13.41	11.00	2.41	2'4⅞
+41	13.99	11.41	2.58	2'7
+66	14.79	11.83	2.96	2'11½
+91	16.57	12.25	4.26	4'3⅛
7+17	15.01	12.68	2.33	2'4
+37	13.86	13.01	0.85	0'10¼
+57	13.73	13.34	0.39	0'4¾
+77	13.95	13.68	0.27	0'3¼
+97	14.39	14.00	0.39	0'4¾ X
8+22	16.63	15.17	1.46	1'5½
+47	16.99	16.33	0.66	0'7

Bl. 12.99

N Z K St – Angle

A Z St (Grade 21.30)
Is Cutin.

N Z St – Angle

14th St - No 2

Sta.	Elv	Grade	Cut		
8+72	20.10	17.50	2.60	2' 7 1/4	
+97	22.41	18.67	3.74	3' 8 7/8	
9+22	27.02	19.83	7.19	7' 2 1/4	
+47	34.72	21.00	13.72	13' 8 7/8	
+72	34.80	22.17	12.63	12' 7 5/8	
+97	34.78	23.33	11.45	11' 5 3/8	
10+22	34.28	24.50	9.78	9' 9 3/8	
+47	34.44	25.67	8.77	8' 9 1/4	
+72	34.26	26.83	7.43	7' 5 1/8	
+97	33.21	28.00	5.21	5' 2 1/2	
11+17	28.53	28.73	-0.20	-0' 2 3/8	Fill
+37	32.63	29.46	3.17	3' 2	
+57	33.66	30.20	3.46	3' 5 1/2	
+77	34.88	30.93	3.95	3' 11 3/8	
12+02	36.81	31.84	4.97	4' 11 5/8	
+27	39.12	32.76	6.36	6' 4 3/8	
+52	41.25	33.68	7.57	7' 6 7/8	
+77	42.95	34.59	8.36	8' 3 3/8	
13+02	44.20	35.50	8.70	8' 8 3/8	
+27	45.18	36.42	8.76	8' 9 1/8	

Sta. 8+72 to 9+97 Fill 4.99'

Sta. 9+97 to 11+17 Cut 3.99'

North of Zero

SZ to St - Grade 35.50

St -

NZ to St

14th St – N of Z

Sta	Elev	Grad	cut		
13+52	45.89	37.34	8.55	8 6/8	
+77	46.55	38.25	8.30	8 3/8	
14+02	46.94	39.17	7.77	7 9/4	
+27	47.28	40.08	7.20	7 2/8	
+52	47.55	41.00	6.55	6 6/8	
+77	Total length of pipe		14+57		

Grade 46.00 ✓
Grade Point 45.50

S Z St –

H St –

N Z St –

K St East of 14th

Sta	Elev.	Grade	Cut.		
0	7.44	7.10	0.34	0' 4 1/8	
+10	7.50	7.16	0.34	0' 4 1/8	
+20	15.03	7.22	7.81	7' 9 3/4	
+36	14.84	7.27	7.57	7' 6 7/8	
+40	14.58	7.33	7.25	7' 3	0+41 = E. S. 14th St.
+50	14.31	7.39	6.92	6' 11	
+56	14.21	7.43	6.78	6' 9 3/8	
+66	13.95	7.48	6.47	6' 5 5/8	
+91	13.95	7.63	6.32	6' 3 7/8	
1+16	14.07	7.78	6.29	6' 3 1/2	
+41	13.98	7.92	6.06	6' 0 3/4	
+66	14.36	8.07	6.29	6' 3 1/2	
+91	14.51	8.21	6.30	6' 3 5/8	
2+16	14.65	8.36	6.29	6' 3 1/2	
+39	14.47	8.49	5.98	5' 11 3/4	
+62	14.30	8.63	5.67	5' 8.	
+87	14.46	8.77	5.69	5' 8 1/4	
3+12	15.04	8.92	6.12	6' 1 1/2	
+37	15.19	9.06	6.13	6' 1 5/8	
+62	15.39	9.21	6.18	6' 2 1/8	
+87	15.86	9.35	6.51	6' 6 1/2	
4+12	16.44	9.50	6.94	6' 11 1/4	

Total length of pipe 4+17

G 21 — W 15th

Sta	Elev.	Grade	Cut.		
0	34.39	23.48	10.99	10' 11 7/8	
+10	27.97	23.67	4.30	4' 3 5/8	x
+20	28.01	23.95	4.06	4' 0 3/4	
+30	27.92	24.22	3.70	3' 8 3/8	
+40	34.79	24.49	10.30	10' 3 5/8	
+50	34.90	24.76	10.14	10' 1 1/4	
+56	34.93	24.93	10.00	10' 0	
+67	34.84	25.23	9.61	9' 7 5/8	
+92	34.81	25.91	8.90	8' 10 7/8	
1+17	34.95	26.59	8.36	8' 4 3/8	
+42	35.01	27.27	7.74	7' 8 7/8	
+67	35.22	27.95	7.27	7' 3 1/4	
+92	35.51	28.63	6.88	6' 10 1/2	
2+17	35.59	29.32	6.27	6' 3 1/4	
+42	36.95	30.00	6.95	6' 11 3/8	x
+67	37.07	30.94	6.13	6' 1 5/8	
+92	38.16	31.84	6.28	6' 3 3/8	
3+17	40.22	32.83	7.39	7' 4 3/4	
+42	40.06	33.77	6.29	6' 3 1/2	
+67	40.96	34.71	6.25	6' 3	
+92	42.20	35.65	6.55	6' 6 5/8	

2.7272 / 100

2.7685 / 100

42 W 21 15 Y

P.I.

8" Pipe

G St N. of 15th

Sta	Elev.	Grade	Cut	
4+08	42.57	36.26	6.31	6' 3¾
+19	43.25	36.67	6.58	6' 7
+30	43.50	37.09	6.41	6' 4⅞
+40	43.84	37.50	6.34	6' 4⅝

Total length of pipe 4+49

Drop .41 to ✓

Grade for drop 42,20

P C 35 E of E Z 14½ St

H ERH E Z 14½ St 8+67 For 14½ St S of G

K L G St

P I

14th St Nof G

Sta	Elev.	Grade	Cut		
0	43.84	37.50	6.34	6	4
+11	44.33	37.69	6.64	6	7
+22	44.39	37.87	6.52	6	6
+33	44.53	38.06	6.47	6	5
+44	44.93	38.24	6.69	6	8
+55	46.22	38.43	7.79	7	9
+66	46.66	38.61	8.05	8	0
+77	47.55	38.80	8.75	8	9
+88	48.41	38.98	9.43	9	5
+91	46.56	39.03	7.53	7	6
1+06	49.01	39.29	9.72	9	8
+31	50.03	39.71	10.32	10	3
+56	47.95	40.13	9.52	9	6
+81	49.78	40.55	9.23	9	2
2+06	50.40	40.97	9.43	9	5
+31	50.69	41.39	9.30	9	3
+56	51.89	41.81	10.08	10	1
+81	53.07	42.23	10.84	10	10
3+06	52.45	42.66	9.79	9	9
+31	50.55	43.08	7.47	7	5
+56	48.50	43.50	5.00	5	0

E.Z. 14th St - Curve G to 14th North

0+56 N.Z. G.ST. Y Lateral

0+81 Y Lateral

P.I 86' N of N.Z. G. ST.
Y Lateral

S.Z. F 43.50 Grade 4.96

Dr. Sp. 49.00

S.Z. F. ST. Grade 49.60

12+ Survey

Sta	Elev	Grade	cut	
3+76	49.19	43.57	5.62	5 7½
+96	49.50	43.63	5.87	5 10½
4+16	49.19	43.70	5.49	5 5⅞
+36	49.90	43.76	6.14	6 1¾
+61	50.13	43.84	6.29	6 3½
+86	51.11	43.92	7.19	7 2¼
5+11	50.60	44.01	6.59	6 7⅛
+36	50.68	44.09	6.59	6 7⅛
+61	50.46	44.17	6.29	6 3½
+86	50.69	44.25	6.44	6 5¼
6+11	51.56	44.33	7.23	7 2¾
+36	51.64	44.41	7.23	7 2¾
+61	51.95	44.49	7.46	7 5½
+86	52.54	44.58	7.96	7 11½
7+11	52.89	44.66	8.23	8 2¾
+36	52.31	44.74	7.57	7 6⅞
+56	51.73	44.80	6.93	6 11⅛
+76	50.56	44.87	5.69	5 8¼
+96	48.74	44.93	3.81	3 9¾
8+16	47.20	45.00	2.20	2 2⅜

Sta. 0 @ 2.3

F ST

N Z F St

S I E ST Grade 57.50
Insp 57.00

E ST

N Z F St

14th St N of G

Sta	Elev	Grade	Cut		
8+41	46.89	45.36	1.53	1'	6 3/8
+66	46.82	45.72	1.10	1'	1 1/4
+91	47.30	46.09	1.21	1'	2 1/2
9+16	47.45	46.45	1.00	1'	00
+41	47.60	46.81	0.79	0'	9 1/2
+66	49.34	47.17	2.27	2'	3 1/4
+91	49.66	47.58	2.33	2'	4
10+16	50.76	47.89	2.87	2'	10 1/2
+41	50.33	48.26	2.07	2'	0 7/8
+66	50.62	48.62	2.00	2'	0
+91	51.20	48.98	2.22	2'	2 5/8
11+16	53.75	49.34	4.41	4'	4 7/8
+36	55.96	49.63	6.33	6'	4
+56	57.50	49.92	7.58	7'	7
+76	56.23	50.21	6.02	6'	0 1/4
+96	56.76	50.50	6.26	6'	3 1/8
12+21	55.51	51.88	3.63	3'	7 7/8
+46	56.12	53.25	2.87	2'	10 1/2
+71	57.72	54.63	3.09	3'	1 1/8
+96	58.32	56.00	2.32	2'	2 7/8

49.85

49.50

S L D St - Grade 57.02

8+61 E + Mer - Drop. 56.80 1193c Ranch

D Lt -

N L D St -

14th St N of L

Sta	Elev	Grade	Cut		
13+21	59.25	57.38	1.87	1' 10½"	
+46	60.71	58.75	1.96	1' 11½"	
+71	61.62	60.13	1.69	1' 8"	
+96	63.76	61.50	2.26	2' 3"	
14+21	64.55	62.88	1.67	1' 8"	
+46	65.80	64.25	1.55	1' 6⅝"	
+71	67.88	65.63	2.25	2' 3"	
+96	69.77	67.00	2.77	2' 9¼"	X
15+16	71.75	67.50	4.25	4' 3"	14+14
+36	74.99	68.00	6.99	6' 11⅞"	
+56	76.74	68.50	8.24	8' 2⅝"	
+76	80.19	69.00	11.19	11' 2¼"	X
16+01	83.28	71.63	11.65	11' 7¾"	
+26	85.64	74.25	11.39	11' 4⅝"	
+51	88.52	76.88	11.64	11' 7¾"	
+76	91.03	79.50	11.53	11' 6⅝"	
17+01	93.51	82.13	11.38	11' 4⅜"	
+26	96.53	84.75	11.78	11' 9⅜"	
+51	98.80	87.38	11.42	11' 5"	
+76	101.01	90.00	11.01	11' 0⅛"	

76.88
3
77.4
76.5
9
72.9
80
73.4

N Z C Grade 73.50 ✓
6x6 I East Drafs. 73.00
C 51-

N Z C 51-

14th St – N of G

Sta	Elev	Grade	Cut		
18+01	103.05	92.63	10.42	10' 5	
+26	104.97	95.25	9.32	9' 3⅞	
+51	105.94	97.88	8.06	8' 0¾	
+76	107.99	100.60	7.49	7' 4⅞	
+96	109.51	100.88	8.63	8' 7⅛	
19+16	111.32	101.25	10.07	10' 0¾	
+36	111.40	101.63	9.77	9' 9¼	
+56	112.79	102.00	10.79	10' 9½	
+81	114.54	104.41	10.13	10' 1½	
20+06	116.65	106.82	9.83	9' 10	
+31	118.90	109.23	9.67	9' 8	
+56	121.12	111.64	9.48	9' 5¾	
+81	122.33	114.05	8.28	8' 3⅜	
21+06	125.01	116.45	8.56	8' 6¾	
+31	126.67	118.86	7.81	7' 9¾	
+56	128.44	121.27	7.17	7' 2	
+81	130.13	123.68	6.45	6' 5⅜	
22+06	132.11	126.09	6.02	6' 0¼	
+31	134.51	128.50	6.01	6' 0⅛	
+56	136.86	132.00	4.06	4' 0¾	

Total length of line 22+61

9.69 / 1.87 / 9.69

1 Z B St – Grade 107.00 ✓
6×6 I East. Insp. 106.50
B St –
K Z B St – –

(Completion to 20+06 Apl 30/38)

S T A Tibet Grade Point 137.00

14th St S. of G.

Sta	Elev	Grade	Cut	
0	43.82	38.00	5.82	5' 9 7/8
+6	43.91	38.04	5.87	5' 10 1/2
+16	44.24	38.10	6.14	6' 1 3/4
+26	44.63	38.17	6.46	6' 5 1/2
+36	44.77	38.23	6.54	6' 7 3/4
+45	44.70	38.29	6.41	6' 4 7/8
+53	44.88	38.35	6.53	6' 6 3/8
+66	45.47	38.42	7.05	7' 0 7/8
+74	46.78	38.47	8.31	8' 3 3/4
+87	47.96	38.56	9.40	9' 4 7/8
1+12	50.27	38.70	11.57	11' 6 7/8
+37	50.82	38.88	11.94	11' 11 1/2
+62	50.89	39.04	11.85	11' 10 1/4
+87	50.54	39.20	11.34	11' 4 1/8
2+12	49.93	39.36	10.57	10' 6 7/8
+37	49.65	39.52	10.13	10' 1 7/8
+62	49.08	39.68	9.40	9' 4 3/4
+87	48.88	39.84	9.04	9' 0 1/2
3+12	48.68	40.00	8.68	8' 8 5/8
+37	48.61	40.75	7.86	7' 10 3/8
+62	48.15	41.50	6.65	6' 7 7/8

Total length of pipe 3+67

1+61.52 to S-T

PI

T

Let 46.00 ✓

N I + Flush Tank Grade 46.50

R. St. East of 14th

Sta	Elev	Grade	Cut	
0	109.89	101.20	8.69	8 8/4
+10	110.94	101.76	9.18	9 2/8
+20	111.37	102.32	9.05	9 0/8
+30	112.53	102.88	9.65	9 7/8
+40	113.60	103.44	10.16	10 2
+50	114.64	104.00	10.64	10 7/8
+56	115.08	104.33	10.75	10 9
+68	115.94	105.00	10.94	10 11/8
+93	118.36	106.40	11.96	11 11/2
+18	119.77	107.80	11.97	11 11/8
+43	121.85	109.20	12.65	12 7/8
+68	123.54	110.60	12.94	2 1/8
+93	124.44	112.00	12.44	12 5/8
2+18	125.76	114.00	11.76	11 9/8
+23				

Total length of pipe 2+23

0+43 E. Line 14th St

C.S.

Flush Tank. 119.00
158.50

C. St. East of 14th

Sta	Elev.	Grade	Cut.		
0	72.21	68.00	4.21	4 2½	
+10	74.40	68.57	5.83	5 10	
+20	77.74	69.15	8.59	8 7½	
+30	80.06	69.72	10.34	10 4½	
+40	81.54	70.29	11.25	11 3	0+42 E Line 4th St
+50	83.24	70.86	12.38	12 4½	
+56	83.99	71.21	12.78	12 8½	P.T.
+67	84.77	71.84	13.13	13 1½	
+92	85.85	73.27	12.28	12 3½	
+17	85.49	74.70	10.79	10 9½	
+43	85.37	76.14	9.45	9 5½	
+67	86.06	77.57	8.49	8 5½	
+92	87.19	79.00	8.19	8 2¼	
+17	86.18	80.25	7.93	7 11½	
+42	89.29	81.50	7.79	7 9½	Flush Tank. 86.00
Total length of pipe 2447					85.50

H St West of 15

Sta	Elev	Grade	cut		
0	30.80	28.00	2.80	2' 9 5/8	
+10	40.24	28.17	12.07	12' 0 7/8	X
+20	40.44	28.35	12.09	12' 1 1/8	X
+30	40.43	28.52	11.91	11' 10 7/8	X
+40	40.13	28.70	11.43	11' 5 1/8	X
+46	39.90	28.80	11.10	11' 1 1/4	X
+61	39.53	29.06	10.47	10' 5 5/8	X
+86	39.28	29.50	9.78	9' 9 3/8	
1+11	39.27	29.94	9.33	9' 3 3/4	
+36	39.13	30.37	8.76	8' 9 1/8	
+61	39.49	30.81	8.68	8' 8 1/8	
+86	39.45	31.24	8.21	8' 2 1/2	
2+11	39.89	31.68	8.21	8' 2 1/2	
+36	39.69	32.12	7.57	7' 9 1/2	
+61	40.13	32.55	7.58	7' 7	
+86	40.21	33.00	7.21	7' 2 1/2	X
3+11	41.13	33.50	6.63	6' 7 7/8	
+36	42.63	34.00	6.63	6' 7 7/8	
+61	44.17	34.50	6.67	6' 8	
+86	45.46	35.00	6.46	6' 5 1/2	

= Y 10×6 20' S of Center of 16th E

0+36 W. I 15th St

PT

F St – West of 15

Sta	Elev	Grade	cut	
4+11	46.99	40.50	6.49	6 5/8
+37	48.19	43.50	4.69	8 3/4

Total length of pipe 4+48

48.00 ✓

E Z 14 1/2 Flush Tank 48.50

J St – West of 15th

Sta.	Elev.	Grade	Cut	
0	20.92	12.50	8.42	8 5
+10	21.30	12.54	8.76	8 9½
+20	21.68	12.57	9.11	9 1⅜
+30	21.79	12.61	9.18	9 2⅛
+40	21.82	12.64	9.18	9 2⅛
+50	21.95	12.68	9.27	9 3¼
+57	21.87	12.70	9.17	9 2
+67	21.98	12.74	9.24	9 2⅞
+92	21.80	12.83	8.97	8 11½
1+17	21.68	12.92	8.76	8 9⅛
+42	21.56	13.01	8.55	8 6⅛
+67	21.53	13.10	8.43	8 5⅜
+92	21.50	13.19	8.31	8 3⅜
2+17	21.40	13.28	8.21	8 2⅛
+42	21.46	13.37	8.09	8 1⅛
+67	21.43	13.46	7.97	7 11⅞
+92	21.38	13.55	7.83	7 10
3+17	21.35	13.64	7.71	7 8½
+42	21.30	13.73	7.57	7 6⅞
+67	21.21	13.82	7.39	7 4⅜

PC 10+6 Y 22' Sof center of 15th ?

0+41 2 W.Z. 15

PT

J St - Part of 15

Sta	Elev	Grade	ents		
3+92	21.33	13.91	7+42	7'5	
4+17	21.41	14.00	7+41	7 4/8	x
+42	21.58	16.00	5.58	5 7	x
Total length of pipe				4+47	

E.Z. 14th St - First tank Grade 21.00

Sta	Elev	Grade	Cent		
3+92					
4+12					
4+42					

D 21 – West – of 15 –

0	25.25	15.40	9.45	9' 5 3/8
0+04	25.37	15.82	9.55	9' 6 7/8
+14	25.19	15.88	9.31	9' 3 3/4
+24	25.46	15.93	9.53	9' 6 3/8
+34	25.67	15.99	9.68	9' 8 1/8
+44	25.62	16.05	9.57	9' 6 7/8
+54	25.76	16.10	9.66	9' 8
+59	25.83	16.13	9.70	9' 8 3/8
+71	25.82	16.20	9.62	9' 7 1/2
+96	25.86	16.33	9.53	9' 6 3/8
1+21	25.91	16.47	9.44	9' 5 1/4
+46	25.95	16.61	9.34	9' 4 1/8
+71	26.06	16.75	9.31	9' 3 3/4
+96	26.17	16.89	9.28	9' 3 3/8
2+21	26.52	17.03	9.49	9' 5 7/8
+46	26.85	17.17	9.68	9' 8 1/8
+71	27.38	17.31	10.27	10' 3 1/4
+85	28.44	17.39	11.05	11' 0 5/8
3+05	28.85	17.60	11.35	11' 4 1/4
+21	29.47	18.89	10.58	10' 7
+46	30.35	21.07	9.28	9' 3 3/8

= Y 24' S. of Center of 15 x D 21 –
P.C.

0+46 N.Z. 15th S1–

P.T.
9.5 West of west line 15th S1–

Last in Bridge is at Σ +96 Sta 3+85 with 11 ft. 8 at
3+96 Σ 6+47 1/8 for Lateral
West – edge of Bridge

D 21- West-of 15-

Sta	Elev	Grade	cut		
3+71	31.23	23.24	7.99	7' 11 7/8	S1, 02990
+ 96	32.27	25.41	6.86	6' 10 3/8	
4+21	33.29	27.59	5.70	5' 8 3/8	
+48	34.14	29.50	4.64	4' 7 3/4	
Total length of pipe				4+48	

E I 14 4/10 SI- Flush tank

#1 — West-bd 15' W

Sta	Elev	Grade	Cut		
0	30.02	20.00	10.02	10' 0 1/4	
10	30.14	20.15	9.99	9' 11 7/8	
20	30.12	20.30	9.82	9' 9 7/8	
30	30.31	20.45	9.86	9' 10 3/8	
40	30.43	20.60	9.83	9' 10	
50	30.55	20.75	9.80	9' 9 5/8	
56	30.73	20.84	9.89	9' 10 3/4	1.492
67	30.98	21.00	9.98	9' 11 3/4	
92	31.61	21.37	10.24	10' 2 7/8	
1+17	32.69	21.75	10.94	10' 11 1/4	
+42	33.77	22.12	11.65	11' 7 7/8	
+67	34.49	22.49	12.00	12' 00	
+92	35.43	22.87	12.56	12' 6 3/4	
2+01	35.76	23.00	12.76	12' 9 1/8	x
+17	36.32	24.58	11.74	11' 8 7/8	
+42	37.31	27.05	10.26	10' 3 1/8	
+67	38.30	29.52	8.78	8' 9 3/8	1.969
+92	39.31	32.00	7.31	7' 3 3/4	x
3+17	40.37	33.41	7.10	7' 1 1/4	
+42	41.45	34.81	6.64	6' 7 3/4	

Pc Y 22' S of Curve 15-7 W

0442

P.T. 14'
23° 21' W. M. I 46'

Base in Bridge
West Line of Bridge 2' W of Bldg Line

H St – Inst of 15

Sta	Elev	Grade	ons		
3+67	42.48	36.22	6.26	6 3/8	
+92	43.49	37.63	5.86	5 10 3/16	
4+17	44.45	39.03	5.42	5 5/16	
+43	45.37	40.50	4.87	4 10 1/2	X
Total length of pipe				4+48	

E L 14 11/16 St – Flush tank

Elevs. on 14th St Sewer relaid — Apr 2 1890 — Hamlin {Carter, Williams, Kenealy}

Sta	+	H I	−	Elev
BM	5.25	14.13		8.88
1			8.90	5.23
+25			8.26	5.87
+50			7.36	6.77
+75			7.02	7.11
2			5.46	8.67
+25			5.28	8.85
+50			5.03	9.10

14th and L Sts sph in bent to bilge North line of L Sts

Elevs on 14th St Sewer relaid

Apr 2 1890

Sta	+	HI	−	Elev	
+ 25		14.13	4.77	9.36	
3			4.53	9.60	
+ 25			4.65	9.48	
+ 50			4.33	9.80	
+ 75			1.87	12.26	
4			0.26	13.87	South line of K Street
#	7.10	21.07	0.16	13.97	
+ 20			6.89	14.18	
+ 40			6.42	14.65	Center of K Street
+ 60			6.56	14.51	
+ 80			6.99	14.08	North line of K Street
5 + 05			7.40	13.67	
+ 30			7.21	13.86	
+ 55			5.25	15.82	
+ 80			4.91	16.16	
6 + 05			4.07	17.00	
+ 30			3.56	17.51	
+ 55			5.31	15.76	
+ 80			7.12	13.95	
7 + 05			6.99	14.08	
+ 30			6.48	14.59	

BM. sph in Bridge 5.64 15.48

Sta	+	HO	−	Elev	
7+55		21.07	5.45	15.62	
+60			1.24	19.83	S line of J Street
#	11.63	32.49	0.21	20.86	
8			10.83	21.66	
+20			10.01	22.48	Center of J Street
+40			9.96	22.53	
+60			10.13	22.36	North Line of J Street
+85			12.62	19.87	BM 3/4 in spring to bridge 10.36 22.13
9+06.25			9.59	22.90	B.C. curve 100' Radius
+23.68			7.59	24.90	
+41.11			6.86	25.63	
+58.54			6.59	25.90	
+60.65			6.58	25.91	P.R.C.
+75.97			5.64	26.85	
+93.40			2.36	30.13	
#	2.45	34.94	0.00	32.49	
10+10.83			0.77	34.17	
+15.06			0.38	34.56	E.C. curve 100' Radius
#	6.30	29.62	11.62	23.32	29.62 / 9.75
B.M.	14th and J St.		7.50	22.12	

Grades on 14th St N of L St

Sta	Elev	Grade	Cut	I II
1	5.23	4.00	1.23	1'-3 23/4"
+25	5.87	4.15	1.62	1'-7 1/2"
+50	6.77	4.29	2.48	2'-5 7/8"
+75	7.11	4.44	2.67	2'-8"
2	8.67	4.59	4.08	4'-1"
+25	8.85	4.74	4.11	4'-1 3/8"
+50	9.10	4.88	4.22	4'-2 5/8"
+75	9.36	5.03	4.33	4'-4"
3	9.60	5.18	4.42	4'-5"
+25	9.48	5.32	4.16	4'-2"
+50	9.80	5.47	4.33	4'-4"

0.14705 - 25
0.38823 - 100

Relaid line 1.5' East of West curb line

North line of L Street

Grades on 14th St Sewer North of L Street

Sta	Elev	Grade	Cut	I	II
+75	12.26	5.62	6.64	6-7 7/8	
4	13.87	5.76	8.11	8-1 1/4	
+20	14.18	5.89	8.29	8-3 1/2	
+40	14.65	6.00	8.65	8-7 7/8	
+60	14.51	6.38	8.13	8-1 1/2	
+80	14.08	6.76	7.32	7-3 7/8	
5+05	13.67	7.23	6.44	6-5 1/4	
+30	13.86	7.71	6.15	6-1 3/4	
+55	15.82	8.28	7.54	7-6 1/2	
+80	16.16	8.76	7.40	7-4 3/4	
6+05	17.00	9.23	7.77	7-9 1/4	
+30	17.51	9.71	7.80	7-9 5/8	
+55	15.76	10.18	5.58	5-6 7/8	
+80	13.95	10.65	3.30	3-3 5/8	
7+05	14.08	11.13	2.95	2-11 3/8	
+30	14.59	11.61	2.98	2-11 7/8	
+55	15.62	12.08	3.54	3-6 1/2	
+80	19.83	12.56	7.27	7-3 1/4	
8+0	21.66	12.94	8.72	8-8 5/8	
+20	22.48	13.32	9.16	9-1 7/8	

South line of K Street

K Street

North line of K Street

South line of J street

Center of J Street

Grades on 14th St Seven North of L Street

Sta	Elev	Grade	Cut	'	"	
+40	22.53	13.60	8.93	8 -	11 1/8	
+60	22.36	14.00	8.36	8 -	4 3/8	x
+85	19.87	15.13	4.74	4 -	8 7/8	
9+06.25	22.90	16.08	6.82	6 -	9 7/8	
+23.68	24.90	16.87	8.03	8 -	0 3/8	
+41.11	25.63	17.65	7.98	7 -	11 3/8	
+58.54	25.90	18.43	7.47	7 -	5 5/8	
+60.65	25.91	18.54	7.37	7 -	4 1/2	
+75.97	26.85	19.23	7.62	7 -	7 1/2	
+93.40	30.13	20.00	10.13	10 -	1 5/8	
10+10.83	34.17	20.80	13.37	13 -	4 1/2	
+15.06	34.56	21.00	13.56	13 -	6 3/4	x

North line of J Street

P.C. Right Radius 104'

P.R.C Left Radius 104'

EC 10+15.06 = 9+47 on old line in center of Street

North line J st.	22.0
South " " "	20.75
North " K. "	14.00
South " " "	13.5
North " L. st	9.5
South " " "	9.0

+ H 9 Gould Rod

B.M. 15.42

3.25 18.67

13.50 5.17
67 67
12.83 5.84

11.61

Sta at N line K St. 17.06

C. Moore Oct. 15, 1941.
H. Rand
G. Svelmoe

Indexed
LM

Levels on Basement Excavation at S.E. ly Cor. of Univ. Ave & Ray St.

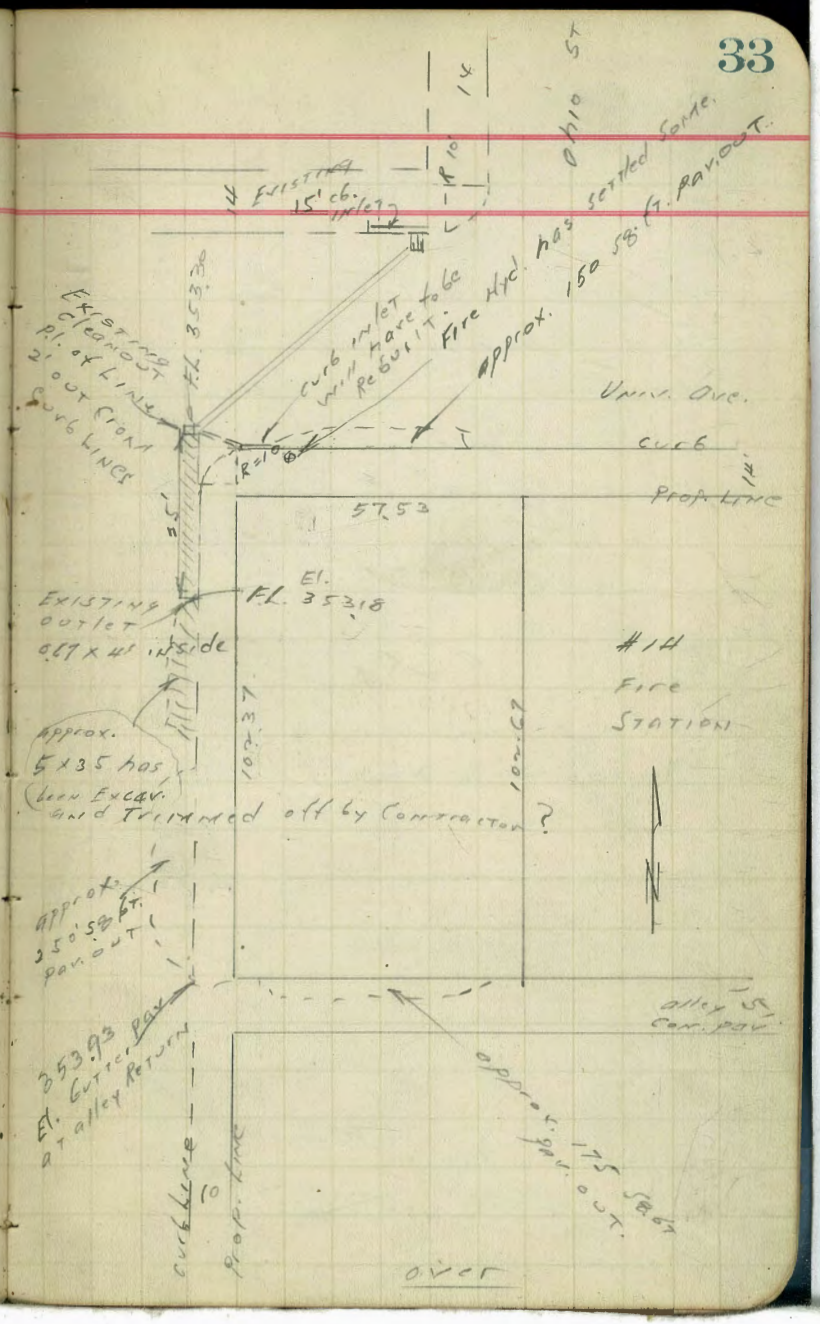
Note! Lot Meas = from Glover Plat.

			City Datum. Univ. Ohio
NW BP	Univ	359.53	355.31
NW Cor. Top Curb		4.99	354.54
NE. " " "		4.37	355.16
SE Cor. top alley Pav.		4.65	354.88
SW " " " "		5.51	354.02
approx. depth of Excav.		17.5	342.03
" Floor El. Fire Sta.		2.70	356.83

Note! First approx. 10' of Excav. = adobe
approx. Last 3' " " = Sand Stone

In my Experience, Excav. of adobe to depth of 5' or more ft. will result in Cave ins', even in the dry season. (adobe will dry out Laterly in side of Excav. and slough off in huge chunks if forms and pourings of Conc. is not completed immediately.

C.S.M.



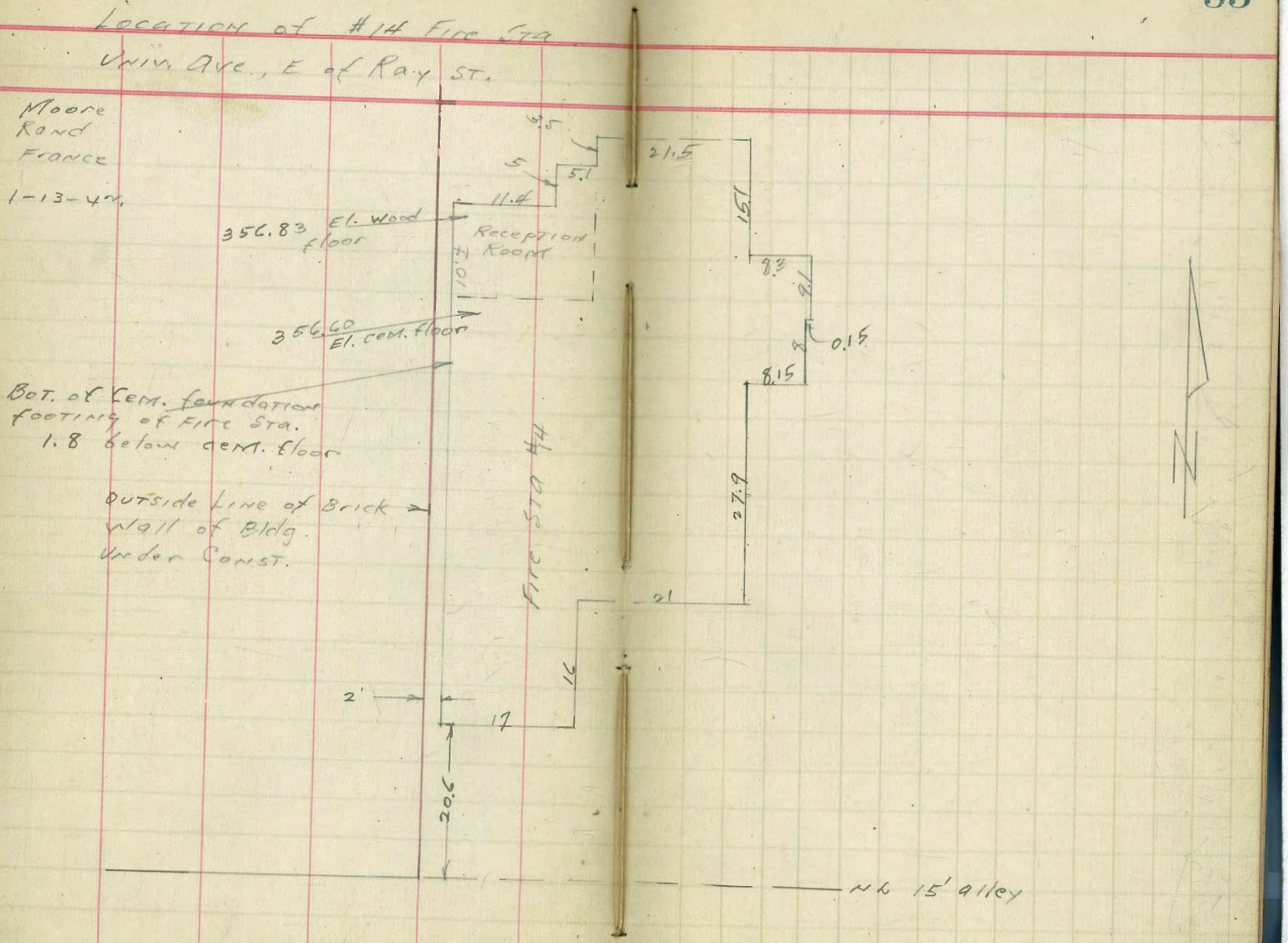
Note! See p 33

approx. 5 x 35 par had sloughed, South of drain outlet and paving has been cut to line parallel to curb. Who did this trimming and was it done before or after the rain of Oct. 17-21 ?

Note! Excav. was begun about Sept. 15, 21. and foundation forms are only now about 1/4 completed

See p 35

Location of #14 Fire Sta
Univ. Ave., E of Ray St.

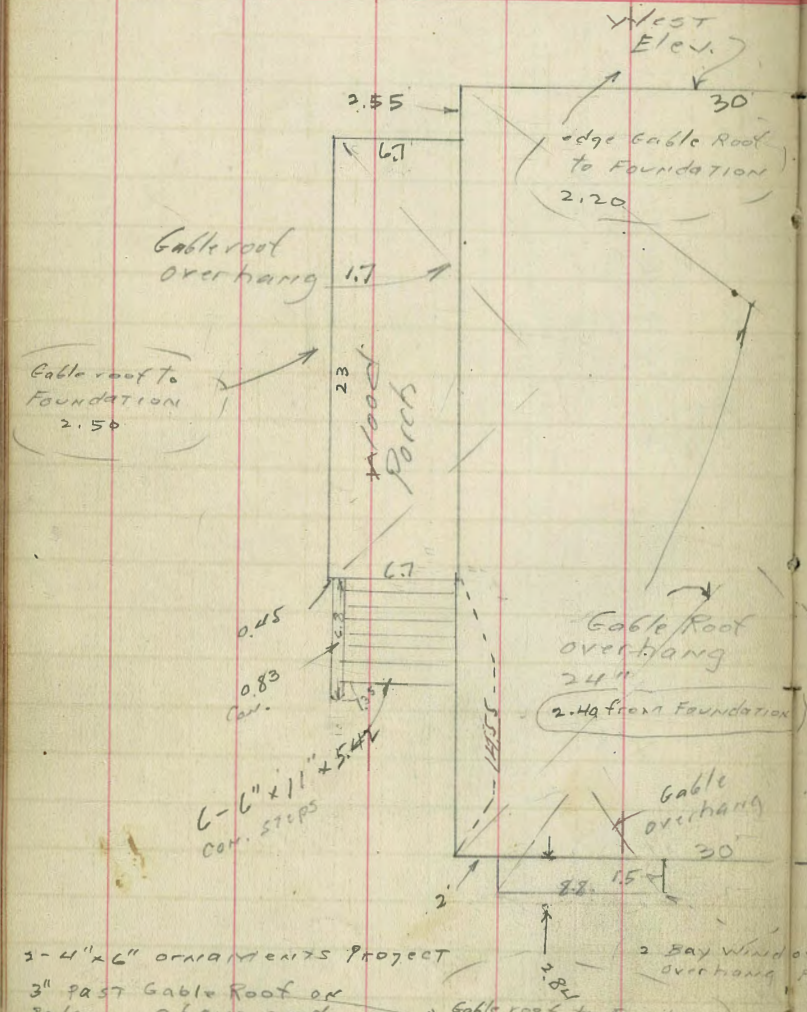


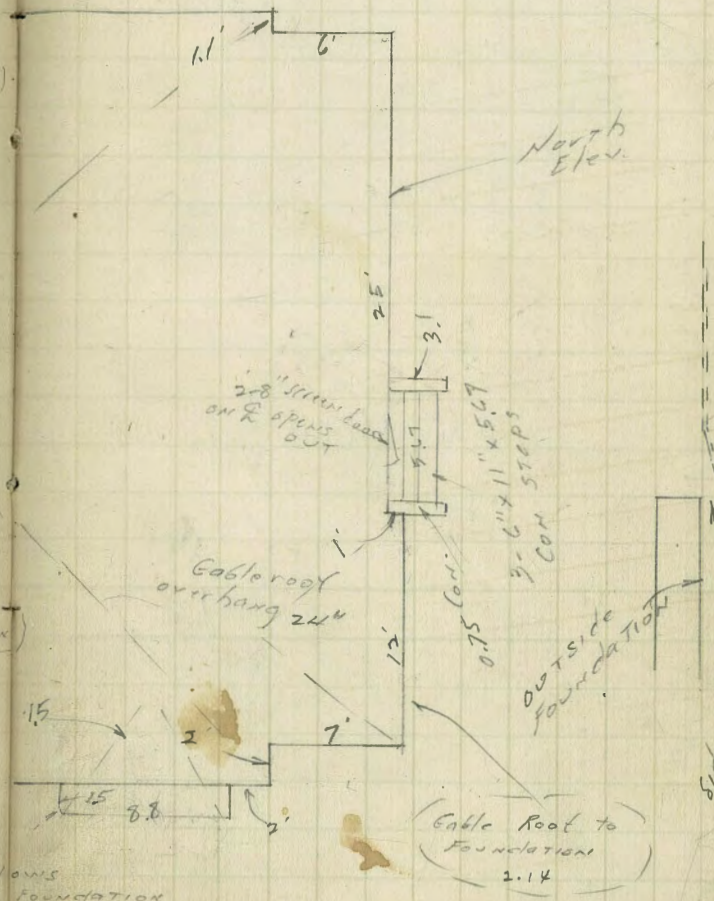
Foundation Meas.
of Folsom House
#4036 Richmond

Moore
Rand
1-19-42.

Inked
C.S.K.

Outside Meas. of Brick Foundation





#4036 Richmond

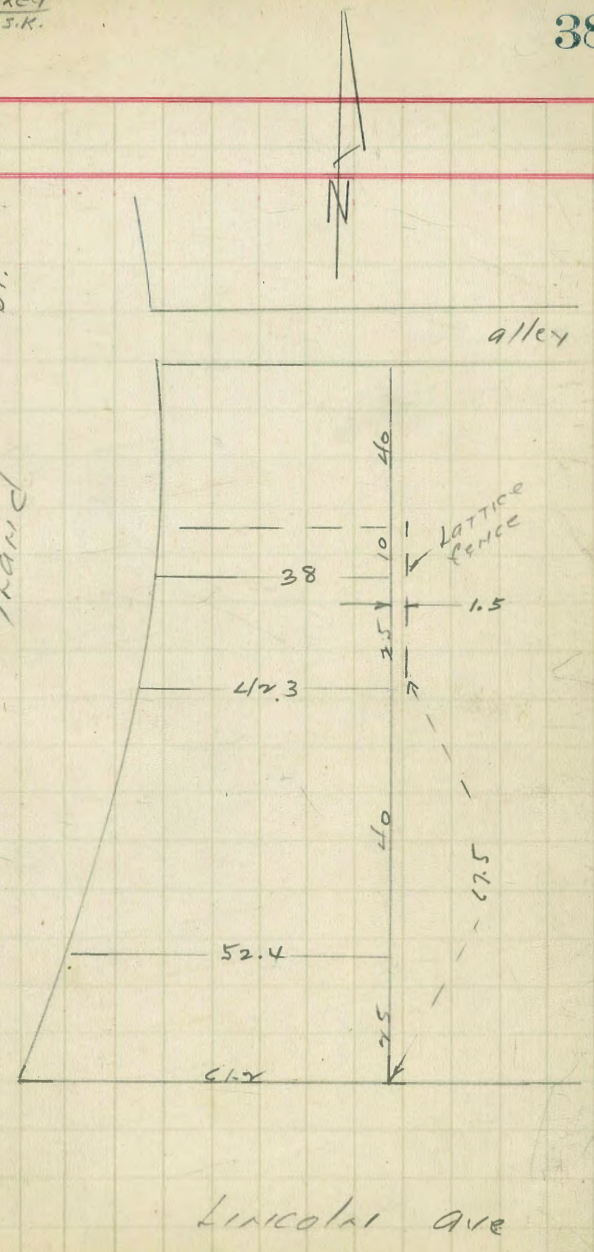
Moore
Rand
1-19-44.

Approx. Survey

Lot 14/139 Univ. Hts

to see if house at # 4036 Richland would meet set back etc.

Indexed
C.S.K.



4-19-42

E Side N Ave Monroe to Madis

Set back Line to curb

1704 Monroe			16.0
4519 North	Ave		29.0
4529	"		25.5
4533	"	—	26.0
4539	"	—	22.7
4553	—	—	34.4
4561			34.4
4575	—	—	75.0
4585	—	—	26.0
1701 Madison	—	—	20.6

8) 278 [34.01+

Mississippi – Mission Ave to Monroe

		Curb to setback	
2401 Mission Ave	—	22.5 ft	
4539 Mississippi		26.5	23.9
4521	"	22.6	
4519	"	22.6	
2204 Monroe	—	24.5	

8) 71.7

23.9

TRAVERSE TABLE FOR TRANSIT BOOK,

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19 94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91 18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90 26	43.05	90.07	43 44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49 24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82 66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78 26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67 88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

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