

400
LEVEL
F.B. 399

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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	2 $\frac{1}{2}$	21	49	41	95 $\frac{1}{2}$
2	4 $\frac{1}{2}$	22	51 $\frac{1}{2}$	42	98
3	7	23	53 $\frac{1}{2}$	43	100 $\frac{1}{2}$
4	9 $\frac{1}{2}$	24	56	44	102 $\frac{1}{2}$
5	12	25	58 $\frac{1}{2}$	45	105
6	14	26	60 $\frac{1}{2}$	46	107 $\frac{1}{2}$
7	16 $\frac{1}{2}$	27	63	47	109 $\frac{1}{2}$
8	18 $\frac{1}{2}$	28	65 $\frac{1}{2}$	48	112
9	21	29	67 $\frac{1}{2}$	49	114 $\frac{1}{2}$
10	23 $\frac{1}{2}$	30	70	50	116 $\frac{1}{2}$
11	25 $\frac{1}{2}$	31	72 $\frac{1}{2}$	51	119
12	28	32	74 $\frac{1}{2}$	52	121 $\frac{1}{2}$
13	30 $\frac{1}{2}$	33	77	53	123 $\frac{1}{2}$
14	32 $\frac{1}{2}$	34	79 $\frac{1}{2}$	54	126
15	35	35	81 $\frac{1}{2}$	55	128 $\frac{1}{2}$
16	37 $\frac{1}{2}$	36	84	56	130 $\frac{1}{2}$
17	39 $\frac{1}{2}$	37	86 $\frac{1}{2}$	57	133
18	42	38	88 $\frac{1}{2}$	58	135 $\frac{1}{2}$
19	44 $\frac{1}{2}$	39	91	59	137 $\frac{1}{2}$
20	46 $\frac{1}{2}$	40	93 $\frac{1}{2}$	60	140

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
0		0		0		0	
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



LEVEL BOOK

No. 400

Return to City Engineers Office
City Hall, San Diego, Cal.



MANUFACTURED BY

H.S. Crocker Co.

SAN FRANCISCO
and
SACRAMENTO

Section for station E. side from center
 line of Chestnut st to Jackson & Chestnut
 sections taken for 30' on each side of center
 line the right & left from $\frac{1}{2}$ survey runs from Chestnut
 section taken at right angles from $\frac{1}{2}$

S. Cunniff
 No. 34
 No. 34
 1

S.M. Brassley Men Cande & Whitman 215.07
 N.A. 12.17 227.24

T.P. 12.69 238.45 1.48 235.76

0+0 = center Men Chestnut's AV1378

0+0 Center Chestnut 50' wide

R. 6.4 237.0

+5 = N.L. Aristo 50' wide 5.7 232.7

cut 3.7 234.7 ✓

1/4 3.2 235.2

1/4 238.45 2.4 236.0

1/4 1.3 237.1

cut 1.1 237.3

S.L. 0.2 238.2

+5 = L 70.9 238.8

W 1/4

L 0.5 237.9

+5 = S.L. 0.9 237.5

cut 1.4 237.0

1/4 1.7 236.7

1/4 2.9 235.5

1/4 4.6 233.8

cut 4.9 233.5

N.L. 6.0 232.4

+5 = R. 6.8 231.6

m. cork

R	238.45	7.4	231.0
+5=N.L.		6.7	231.7
orb		5.4	233.0
1/4		4.6	233.8
M		3.1	235.3
1/4		1.9	236.5
orb		1.6	236.8
S.L.		0.9	237.5
+5=L		0.6	237.8

0+25=N.L. Chestnut

L		1.3	237.1
+5=S.L.		1.7	236.7
orb		2.3	236.1
1/4		2.5	235.9
M		3.2	234.6
1/4		5.3	233.1
orb		6.1	232.3
N.L.		7.5	230.9
+5=R		8.3	230.1

0+50

R	238.45	2.0	229.4
+5=N.L.		2.5	229.9
orb		7.1	231.3
1/4		6.5	231.9
M		5.2	233.2
1/4		3.8	234.6
orb		3.4	235.0
S.L.		2.8	235.6
+5=L		2.5	235.9

0+75

L		3.8	234.6
+5=S.L.		4.2	234.2
orb		5.0	233.4
1/4		5.2	233.2
M		6.7	231.7
1/4		8.1	230.3
orb		8.6	229.8
N.L.		9.6	228.8
+5=R		10.2	228.2

57
75.40

140

A.	238.45	11.7	226.7
+5 = N.L.		11.1	227.3
cb		10.1	228.3
"A		9.7	228.7
M		8.8	229.6
"A		7.6	230.8
cb		7.2	231.2
S.L.		6.2	232.2
+5 = L.		5.9	233.0

1425

L.		6.6	231.8
+5 = S.L.		7.3	231.1
cb		8.8	229.6
"A		9.1	229.3
M		10.2	228.2
"A		11.3	227.1
cb		11.9	226.5
N.L.		13.5	224.9
+5 = R.		14.4	224.0

1450

A.	238.45	15.6	226.8
+5 = N.L.		15.0	223.4
cb		13.5	224.9
"A		12.8	225.6
M		11.5	226.9
"A		10.1	228.3
cb		9.8	228.6
S.L.		8.8	229.6
+5 = L.		8.0	230.4

1475

L.		10.2	228.2
+5 = S.L.		10.7	227.7
cb		11.8	226.6
"A		12.2	226.2
M		13.5	224.9
"A		13.8	224.6
cb		12.3	226.1
N.L.		15.5	222.9
+5 = R.		16.2	222.2

238.45

2+0

R	238.45	17.9	221.0
+5=N.L.		16.3	222.1
erb		15.2	223.2
1/4		15.0	223.4
M		14.5	223.9
1/4		13.4	225.0
erb		12.9	225.6
S.L.		12.0	226.4
+5=L		11.6	226.8

T.P. 0.54 226.58 12.41 226.09

2+25 = P.C. Blvd / Express 2100 57

L	226.58	0.1	226.5
+5=S.L.		0.4	226.2
erb		2.0	224.6
1/4		2.4	224.2
M		3.4	223.2
1/4		3.6	223.0
erb		3.8	222.8
N.L.		5.0	221.6
+5=R		5.7	220.9

2+50

R	226.6	6.5	220.1
+10		5.5	221.1
+16		4.3	222.3
+20		4.1	222.5
Φ		3.7	222.9
+10		2.7	223.9
+20		2.5	224.1
+30=L		2.0	224.6

2+75

L	226.6	3.5	223.1
+10		3.7	222.9
+20		3.8	222.8
Φ		4.2	222.4
+8		4.5	222.1
+10		4.9	221.7
+20		6.1	220.5
R		7.2	219.4

224.0

222.8

221.1

3+0

R	226.6	6.5	220.1	
+10		6.0	220.6	
+20		5.5	221.1	220.8
Q		4.9	221.7	
+10		4.4	222.2	
+20		4.3	222.3	222.3
L		4.2	222.4	

3+25

L		4.4	222.2	
+10		4.6	222.0	
+20		4.6	222.0	222.0
Q		5.0	221.6	
+10		5.4	221.2	
+20		5.7	220.9	221.0
R		6.3	220.3	

3+50

R	226.6	8.4	218.2	
+10		6.3	220.3	
+20		5.5	221.1	220.7
Q		5.0	221.6	
+10		5.0	221.6	
+20		4.8	221.8	221.7
L		4.7	221.9	

3+75

L		4.2	222.4	
+10		5.0	221.6	
+20		6.0	220.6	221.1
Q		7.1	219.5	
+10		8.2	218.4	
+20		9.3	217.3	217.8
R		11.3	215.3	

	217.01			
	4+90			
R.	217.0	12.0	205.0	
+10		12.9	204.1	
+20		13.2	203.8	203.9
⊘		14.2	202.8	
+10		13.9	203.1	
+20		13.8	203.2	203.1
L		13.7	203.3	
T.P.	1.87	206.36	12.54	209.47
	5+0			
L		4.5	201.9	
+10		4.4	202.0	
+15		4.5	201.9	201.9
+20		2.1	199.3	
⊘		7.5	198.6	
+10		9.9	196.5	
+20		2.3	197.1	196.8
R		8.8	197.6	

	5+10			
R	206.4	1.7	204.5	
+10		7.3	199.1	
+20		10.4	196.0	197.5
⊘		13.0	193.4	
+10		10.5	195.9	
+20		7.9	198.5	197.2
L		5.5	200.9	
	5+25			
L		13.0	193.4	
+5		16.3	190.1	
+10		13.6	192.8	
+20		10.8	195.6	194.2
⊘		5.4	201.0	
+10		3.6	202.8	
+20		2.2	204.2	203.5
R		1.5	204.9	

5+50

R	206.4	2.3	204.1	
+10		3.4	203.0	
+20		4.2	202.2	202.6
Φ		5.1	201.3	
+10		6.2	200.2	
+20		15.1	191.3	195.7
+25		12.5	187.9	
L		13.5	187.9	

5+75

L		13.3	193.1	
+8		7.4	199.0	
+10		7.2	199.2	
+20		6.4	200.0	199.6
Φ		5.6	200.8	
+10		4.7	201.7	
+20		4.1	202.3	202.0
R		3.2	203.2	

6+05⁹⁹ = P.T.

R	206.4	3.5	202.9	
+10		4.4	202.0	
+20		5.0	201.4	201.7
Φ		5.8	200.6	
+10		7.1	199.3	
+20		2.9	198.5	198.9
L		2.0	197.4	

6+25

L		10.3	196.1	
+3		8.1	197.3	
+10		8.1	198.3	
+20		7.2	199.2	198.7
Φ		6.1	200.3	
+10		5.1	201.3	
+20		4.0	202.4	201.8
R		2.6	203.8	

6+50

R	206.4	1.2	205.2	
+10		2.3	204.1	
+20		3.4	203.0	203.5
Q		4.7	201.7	
+10		6.3	200.1	
+20		7.7	198.7	199.4
+25		8.4	198.0	
L		11.1	195.3	

6+75

L		13.4	193.0	
+10		7.9	198.5	
+20		5.5	200.9	199.7
Q		4.1	202.3	
+10		2.7	203.7	
+20		1.3	205.1	204.4
			3.0	
R		0.3	205.1	

7+0

R	206.4	0.9	205.5	
+10		2.2	204.2	
+20		3.7	202.7	203.4
Q		5.0	201.4	
+10		6.4	200.0	
+20		8.4	198.0	199.0
+25		9.5	196.6	
L		12.2	194.2	

7+35²⁸ = P.C.

L		14.2	192.2	
+10		12.3	194.1	
+20		10.9	195.5	194.8
Q		9.3	197.1	
+10		7.6	198.8	
+20		5.4	201.0	199.9
			3.2	
R		4.1	202.3	

65

	200.36			
	7+75			
R	206.4	6.7	199.7	
+10		7.3	199.1	
+20		9.6	196.8	197.9
Q		11.7	194.7	
+10		14.8	191.6	
+20		17.1	189.3	190.4
L		17.9	186.5	
T.P	6.52	200.33	12.55	193.81
		8+0		
L	200.2	15.7	184.6	
+10		12.5	187.8	
+20		9.7	190.6	189.2
Q		6.7	193.6	
+10		9.3	196.0	
+20		2.7	197.6	196.8
R ₁		1.7	198.6	

10

	8+25			
R	200.3	4.5	195.8	
+10		4.6	195.7	
+20		5.0	195.3	195.5
Q		6.7	193.6	
+10		10.2	190.1	
+20		13.3	187.0	188.5
L		15.4	184.9	
		8+50		
L		18.7	181.6	
+10		15.5	184.8	
+20		12.9	187.9	186.3
Q		10.6	189.7	
+10		8.9	191.4	
+20		7.5	192.8	192.1
R		6.5	193.8	

200.33

8+88⁸⁸ - P.T

R	2003	9.6	190.7	
+10		10.6	189.7	
+20		12.1	188.2	188.9
Φ		14.0	186.3	
+10		17.4	182.9	
+20		20.9	179.4	184.6
L		25.5	174.8	
	9+25			
L		29.3	171.0	
+10		29.8	175.5	
+20		20.7	179.6	177.6
Φ		17.2	183.1	
+10		14.1	186.2	
+20		12.4	187.9	187.0
R		12.0	188.3	
T.P.	0.99	188.78	12.52	187.81

11

189.75
9+46⁸⁵ - P.C.

R	188.8	2.2	186.6	
+10		3.0	185.8	
+20		4.8	184.0	184.4
Q		7.0	181.5	
+10		10.8	178.0	
+20		14.6	174.2	176.1
			19	
L ₁		18.5	170.3	

9+75

L		16.6	172.2	
+10		12.9	175.9	
+20		10.3	178.5	177.4
			76	
Q		7.6	181.2	
+10		5.6	183.2	
+20		4.7	184.1	183.7
R		4.0	184.8	

12

10+0

R ₁	188.8	4.6	184.2	
+10		6.0	182.8	
+20		7.6	181.2	182.0
Q		10.3	178.5	
+10		13.3	175.5	
+20		14.0	171.8	173.6
			3.8	
L		20.7	168.1	

10+25

L		25.3	163.5	
+10		21.1	167.7	
+20		16.2	172.6	170.1
			5.7	
Q		12.1	176.7	
+10		8.9	179.9	
+20		6.6	182.2	181.0
R		5.2	183.6	

188.78

10495²⁷ = P.T.

R ₁	188.8	6.1	182.7	
+10		7.1	181.7	
+20		8.7	180.1	180.9
Φ		11.8	177.0	
+10		15.1	173.7	
+20		19.0	169.8	171.8
L ₁		23.5	165.3	

10456⁷² = P.C.

L		24.7	167.1	
+10		18.0	170.8	
+20		14.2	174.6	176.7
Φ		10.8	178.0	
+10		8.9	179.9	
+20		8.1	180.7	180.3
R ₁		7.3	181.5	

Quintec

23.98

54

13

10475

R	188.8	7.7	181.1	
+10		8.2	180.6	
+20		8.9	179.9	180.2
Φ		10.1	178.7	
+10		11.9	176.9	
+20		12.2	176.6	176.7
L		13.8	170.0	
				117.0
Z		15.5	173.3	
+10		13.7	175.1	
+20		12.6	176.2	175.6
Φ		11.4	177.4	
+10		10.3	178.5	
+20		10.0	178.8	178.6
R		10.0	178.8	
T.P.	0.28	177.43	11.63	177.15

11+25

R	177.4	0.4	177.0	
+10		0.5	176.9	
+20		1.7	175.7	176.3
Φ		3.0	174.4	
+10		3.9	173.5	
+20		5.1	172.3	172.9
L		6.0	171.4	

11+55^A = P.T.

L		10.5	166.9	
+10		9.0	168.4	
+20		7.5	169.9	169.2
Φ		5.9	171.5	
+10		4.0	173.4	
+20		3.2	174.2	173.8
R		2.4	175.0	

11+98^A = P.C

R	177.4	4.2	173.2	
+10		6.0	171.4	
+20		7.3	170.1	170.7
Φ		8.8	168.6	
+10		10.7	166.7	
+20		12.7	164.7	165.7
L		14.0	163.4	

12+25

L		15.1	162.3	
+10		13.7	163.7	
+20		11.8	165.6	164.6
Φ		10.8	166.6	
+10		9.5	167.9	
+20		7.8	169.6	168.7
R		6.2	171.2	

	177.93			
	12+50			
R	177.4	8.8	168.8	
+10		9.5	167.9	
+20		11.0	166.4	167.2
Q		12.4	165.0	
+10		13.9	163.5	
+20		14.5	162.9	163.2
L		16.2	161.2	

	12+75			
L		18.5	158.9	
+10		16.6	160.8	
+20		14.8	162.6	161.7
Q		13.5	163.9	
+10		12.2	165.2	
+20		10.8	166.6	165.9
R		9.6	167.8	
T.P	2.23	170.61	9.05	168.38

	13+0			
R	170.6	2.6	168.0	
+10		3.1	167.5	
+20		5.1	165.5	166.5
Q		6.3	164.3	
+10		7.8	162.8	
+20		9.5	161.1	162.0
L		11.3	159.3	

	13+25			
L		10.9	159.5	
+10		9.3	161.3	
+20		7.7	162.9	162.1
Q		6.0	164.6	
+10		4.1	166.5	
+20		2.1	168.5	167.5
R		1.3	169.3	

P
Ta
MD
1
2
3
4
5
6
7
8
9
10
11
12

170.61

13750

R	170.6	1.0	169.6	
+10		2.6	168.0	
+20		3.2	169.4	167.7
+26		2.7	167.9	
Φ		5.5	165.1	
+5		8.7	161.7	
+10		7.8	162.8	
+20		9.4	161.2	162.0
L		11.5	159.1	

13786.66 - P.T.

L		13.5	159.1	
+10		11.1	159.5	
+20		9.9	161.2	160.3
Φ		8.4	162.2	
+10		6.8	163.8	
+20		5.8	164.8	164.3
+24		4.0	166.6	
R		3.7	166.9	

14725

R	170.6	8.4	162.2	
+6		2.6	162.0	
+10		9.9	160.7	
+20		10.5	160.1	160.4
Φ		12.3	158.3	
+10		13.7	156.9	
+20		14.7	155.9	156.4
L		16.8	153.8	

14750

L		17.6	153.0	
+10		16.3	154.3	
+20		15.7	154.9	154.6
Φ		14.7	155.9	
+10		13.8	156.8	
+20		12.4	158.2	157.5
R		11.4	159.2	
T.P.	2.69	161.31	11.99	158.12

Pu
 M
 Tab
 MIN
 1.
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 17.
 18.
 19.
 20.

	161.31			
	14+75			
R	161.3	3.6	157.7	
+10		4.6	156.7	
+20		6.1	155.2	156.0
⊖		7.5	153.8	
+10		8.5	152.8	
+20		9.0	152.3	152.6
L		9.4	151.9	
	15+0			
L		8.6	152.7	
+10		8.0	153.3	
+20		7.9	153.4	153.3
⊖		7.5	153.8	
+10		6.3	155.0	
+20		5.7	155.6	155.3
R		4.5	156.5	

	15+18 ⁵⁶			
	161.3	4.0	157.3	
R		4.5	156.8	
+10		5.6	155.7	156.2
⊖		6.7	154.6	
+10		7.8	153.5	
+20		9.5	151.8	152.6
L		11.3	150.0	
	15+50			
L		12.4	146.9	
+10		12.2	149.1	
+20		10.3	151.0	150.1
⊖		8.5	152.8	
+10		8.0	153.3	
+20		6.5	154.8	154.1
R		4.7	156.6	

15+75

R	161.3	6.4	154.9	
+10		7.6	153.7	
+20		8.5	152.8	153.3
Φ		9.7	151.6	
+10		11.2	149.5	
+20		13.3	148.0	148.7
L		13.9	147.4	

16+0

L	161.3	16.5	144.8	
+6		17.5	143.8	
+10		18.9	143.4	
+20		15.6	145.7	145.6
Φ		11.0	150.3	
+10		9.7	151.6	
+20		8.7	152.6	152.1
R		7.8	153.5	

16+25

R	161.3	6.8	154.5	
+10		7.8	153.5	
+20		9.2	152.1	152.8
Φ		10.5	150.8	
+10		12.9	148.4	
+15		12.9	147.4	147.4
+20		17.8	143.5	
+25		18.4	142.9	
L		16.1	145.2	
		17.1	144.2	

16+50

L		21.0	140.3	
+10		17.0	144.0	
+20		13.5	149.5	145.2
Φ		11.1	150.2	
+10		10.1	151.2	
+20		8.2	153.1	152.1
R		6.0	155.3	

161.31

16+75

R	161.3	6.3	155.0	
+10		8.6	152.7	
+20		10.9	150.4	151.6
Q		13.3	148.0	
+10		15.4	145.9	
+20		18.5	142.8	144.4
L		22.5	138.8	

17+0

L		26.1	135.2	
+10		22.8	138.5	
+20		19.4	141.9	140.2
E		15.8	145.5	
+10		11.5	149.8	
+20		9.0	152.3	151.1
R		6.5	154.8	

19

17+25

R	161.3	8.2	153.1	
+10		11.2	150.1	
+20		14.2	147.1	148.6
E		18.8	142.5	
+10		21.3	140.0	
+20		23.6	137.7	138.8
L		27.9	133.4	

17+68⁵⁶ = A

L		29.7	131.6	
+10		26.3	135.0	
+20		23.4	129.9	136.5
E		19.7	141.6	
+10		16.4	144.9	
+20		14.2	147.1	146.0
R		10.8	150.5	
T.R	4.64	153.19	12.76	148.55

153.19

18700

R	153.2	2.5	150.7	
+10		4.9	148.3	
+20		8.3	144.9	146.6
Q		11.5	141.7	
+10		15.5	137.7	
+20		19.3	133.9	135.8
L		22.9	130.3	

18725

L		24.8	128.4	
+10		21.1	132.1	
+20		16.4	136.8	134.4
Q		12.7	140.5	
+10		9.1	144.1	
+20		4.0	149.2	146.7
R		1.0	152.2	

18750

R	153.2	1.1	152.1	
+10		5.0	148.2	
+20		9.0	144.2	146.2
Q		13.7	139.8	
+10		18.0	135.2	
+20		22.0	131.2	133.2
L		26.9	126.3	

18775

L	153.2	27.9	123.3	
+10		24.7	128.5	
+20		19.6	133.6	131.0
Q		14.6	138.6	
+10		10.5	142.7	
+20		6.1	147.1	145.5
R		2.1	151.1	

153.19

19+18⁵⁶ = P.C.

R	153.2	4.8	148.4	
+7		8.5	144.7	
+10		11.0	142.2	
+20		13.3	139.9	141.0
♀		18.8	134.4	
+10		23.7	129.5	
+20		28.0	125.2	129.3
L		32.5	120.7	

19+50

L		33.4	119.8	
+10		28.2	125.0	
+20		23.8	129.4	127.2
♀		18.5	134.7	
+10		14.1	129.1	
+20		10.3	142.9	141.0
R		7.1	146.1	

T.P. 5.33 149.36 111.6 142.03

19+75⁵⁹ = P.C.

R	147.4	2.9	144.5	
+10		6.1	141.3	
+20		11.2	136.2	138.7
♀		16.0	131.4	
+10		20.9	126.5	
+20		25.4	122.0	124.2
L		31.0	116.4	

20+00

L		30.7	116.7	
+10		25.4	122.0	
+20		20.9	126.5	124.2
♀		16.4	131.0	
+10		11.1	136.3	
+20		7.4	140.0	138.1
R		2.6	144.8	

20
Sharon
Evans

147.36

20725

R	147.4	2.8	144.6
+10		7.2	140.2
+20		11.5	135.9 2B
E		15.7	131.7
+10		20.3	127.1
+20		24.9	122.5 23
L		29.6	117.8

20450

L		28.0	119.4
+10		23.2	124.2
+20		19.1	128.3
E		15.2	132.2
+10		11.4	136.0
+20		7.3	140.1
R		3.5	143.9

138.0

124.8

126.3

138.0

21

20775

R	147.4	4.1	143.3
+10		6.7	140.7
+20		10.5	136.9
E		14.5	132.9
+10		18.5	128.9
+20		22.6	124.8
L		26.7	120.7

21100

L		25.3	122.1
+10		21.5	125.9
+20		17.8	129.6
E		13.9	133.5
+10		9.9	137.5
+20		7.7	139.7
R		4.2	143.2

138.8

126.8

127.7

138.6

197.36

217.25

R	147.4	5.7	141.7	
+10		7.6	139.8	
+20		10.6	136.8	138.3
Q		14.5	132.9	
+10		17.9	129.5	
+20		21.6	125.8	127.6
L			7.8	
		24.5	122.9	

217.50

L		23.8	123.6	
+10		20.9	126.5	
+20		17.8	129.6	128.0
Q		14.4	133.0	
+10		11.8	135.6	
+20		9.9	137.5	136.6
R		8.6	138.8	
T.P.	1.50	138.91	9.95	137.41

21475

R	138.91	1.6	139.3	
+10		3.9	135.0	
+20		6.3	132.6	133.8
Q		8.8	130.1	
+10		11.5	129.4	
+20		14.9	124.0	125.7
L			17	
		17.8	121.1	

22100

L		20.5	118.4	
+10		17.7	121.2	
+20		14.9	124.5	122.9
Q		12.1	126.8	
+10		9.4	129.5	
+20		7.4	131.5	130.5
R		5.5	133.4	

132.71
 22+38⁶⁵ = P.T.
 R 138.9 9.2 129.7
 +10 11.8 127.1
 +20 13.9 125.0 126.0
 ♀ 16.4 122.5
 +10 19.5 119.4
 +20 21.3 117.6 118.7
 L. 23.9 115.0
 22+75
 L 27.8 111.1
 +10 26.0 112.9
 +20 22.6 116.3 114.6
 ♀ 19.0 119.9
 +10 17.1 121.8
 +20 15.0 123.9 122.9
 R. 12.8 126.1
 T.P 126 127.76 12.41 126.50
 22+80 P.T.

Quercus - - 23.98 - - 51
 47
 3/25 237.00
 1/10 Evans
 23
 Evans
 R 127.8 3.2 123.9
 +10 6.6 121.2
 +20 8.8 119.0 120.1
 ♀ 11.3 116.5
 +10 14.6 113.2
 +20 17.6 110.2 111.7
 L. 20.0 107.8
 23+25
 L. 22.7 105.1
 +10 19.2 108.6
 +20 16.8 111.0 109.8
 ♀ 14.4 113.4
 +10 11.8 116.0
 +20 8.5 119.3 117.7
 R 5.9 121.9

	127.76			
	23+50			
R	127.8	7.6	120.2	
+10		10.3	117.5	
+20		12.8	115.0	116.3
E		15.5	112.3	
+10		19.2	108.6	
+20		22.1	105.7	107.2
			1.5	
L.		25.1	102.7	

	23+75			
L		27.9	99.9	
+10		35.0	102.8	
+20		32.0	105.8	104.3
♀		18.4	109.4	
+10		14.9	112.9	
+20		12.4	115.4	114.2
R.		9.9	117.9	
T.P.	1.76	118.24	112.8	116.98

	24			
	24+00			
R	118.2	2.2	116.0	112.5
+10		4.6	113.6	
+20		7.2	111.0	112.3
♀		10.4	107.8	
+10		13.7	104.5	
+20		16.5	101.7	103.1
			1.5	
L.		18.2	100.0	

	24+25			
L		20.3	97.9	
+10		17.2	101.0	
+20		14.5	103.4	102.2
♀		12.3	105.9	
+10		9.5	108.7	
+20		7.1	111.1	109.9
R		4.5	113.7	

	118.24			
	29+50			
R	118.2	7.2	111.0	
+10		7.5	108.7	
+20		12.0	106.2	107.5
T.P.	5.04	112.27	110.1	107.23
♀		8.3	104.0	
+10		10.6	101.7	
+20		13.2	99.1 ₁₃	100.4
L.		14.9	97.4	
	29+75			
L		17.5	94.8	
+10		15.0	97.3 ₆	
+20		13.9	98.9	98.1
♀		11.9	100.9	
+10		8.8	103.5	
+20		7.3	105.0	104.2
R		5.5	106.8	

	112.27			
	29+87			
R	112.3	9.3	103.0	
+10		12.1	100.2	
+20		13.6	98.7	99.4
♀		15.2	97.1	
+10		16.7	95.6	
+20		19.2	93.1	95.3
L		21.6	90.7	
	25+00			
L		12.4	93.9	
+10		13.4	93.9 ₁₇	95.6
+20		15.0	97.3	
♀		13.0	99.3	
+10		12.2	100.1	
+20		8.3	104.0	102.0
R		5.8	106.5	

788

112.27

25+25

R	112.3	3.3	109.0
+10		5.0	107.3
+20		6.2	106.1
♀		8.6	103.7
+10		10.9	101.4
+20		12.7	99.6
L		15.0	97.3

25+50

L	12.7	99.6	
+10	11.3	101.0	
+20	8.6	103.7	102.3
♀	6.8	105.5	
+10	5.1	107.2	
+20	2.4	109.9	108.5
R	1.0	111.3	

23.98 - 57

26

25+75

R	112.27	+0.5	113.1
+10		1.9	110.4
+20		3.9	108.4
♀		6.1	106.2
+10		8.4	103.9
+20		9.9	102.4
L		12.3	100.0

26+0

L	11.6	100.7	
+10	10.7	101.6	
+20	8.0	104.3	102.9
♀	6.7	105.6	
+10	3.8	108.5	
+20	1.3	111.0	109.7
R	+0.3	112.6	

75.40

112.27

26+25

R	112.3	+0.6	112.9	
+10		2.3	110.0	
+20		4.3	108.0	109.0
Q		7.1	105.2	
+10		9.6	102.7	
+20		11.0	101.3	102.0
L		13.5	98.8	
T.P.	12.83	112.90	12.20	100.07
		26+50		
L		15.9	97.0	
+10		14.8	98.1	
+20		12.6	100.3	99.2
Q		10.1	102.8	
+10		7.2	105.7	
+20		4.4	108.5	107.1
R		2.0	110.9	

112.90

26+75

27 17

R	112.9	3.5	109.4	
+10		6.0	106.9	
+20		9.2	103.7	105.5
Q		12.1	100.8	
+10		14.5	98.4	
+20		16.7	96.2	98.3
L		17.6	95.3	
		27+00		
L		17.3	93.6	
+10		17.6	95.3	
+20		16.1	96.8	96.0
Q		14.1	98.8	
+10		11.3	101.6	
+20		8.4	104.5	103.1
R		5.8	107.1	

112.90
27+25

R	112.9	7.7	105.0	
+10		10.7	102.2	
+20		12.8	100.1	101.1
±		15.1	97.8	
+10		17.1	95.8	
+20		18.4	94.5	95.1
L		19.4	93.5	

27+50

L		17.5	93.4	
+10		18.5	92.1	
+20		18.0	94.9	94.5
±		16.9	96.0	
+10		14.9	98.0	
+20		12.5	100.4	99.2
R		9.9	103.0	
T.P.	0.67	102.19	11.38	101.52

572 27+92²³ = P.C.

R	102.2	3.1	99.1	
+10		4.7	97.5	
+20		5.8	96.4	96.9
±		7.0	95.2	
+10		7.8	94.4	
+20		8.8	93.4	93.9
L		9.4	92.8	

28+25

L		9.9	92.3	
+10		9.4	92.8	
+20		8.8	93.4	93.1
±		8.2	94.0	
+10		7.5	94.7	
+20		6.6	95.6	95.2
R		5.5	96.7	

ST. 75.40

28+50

R	102.2	6.0	96.2	
+10		6.6	95.6	
+20		7.0	94.9	95.3
Q		8.2	94.0	
+10		8.7	93.5	
+20		9.1	93.1	93.3
L		9.8	92.4	

28+91²² - P.T

L		10.6	91.6	
+10		9.8	92.4	
+20		8.9	93.3	92.9
Q		7.8	94.4	
+10		6.3	95.9	
+20		5.6	96.6	96.2
R		5.4	96.8	

29+25

R	102.2	3.6	98.6	
+10		4.0	98.2	
+20		5.4	96.8	97.5
Q		7.0	95.2	
+10		9.0	93.2	
+20		10.3	91.9	92.5
L		11.2	91.0	

29+41²² - angle

L		12.1	90.1	
+10		11.2	91.0	
+20		10.2	92.0	91.5
Q		8.3	93.9	
+10		7.2	95.0	
+20		5.9	96.5	95.8
R		4.7	97.5	

418

102.19

29+75



R	102.2	9.3	92.9	
+10		11.1	91.1	
+20		12.5	89.7	90.4
±		13.9	88.3	
+10		15.1	87.1	
+20		15.5	86.7	86.9
L		15.9	86.3	

T.P. 1.05 90.26 12.98 89.21

29+96²²=P.C.

L		3.0	87.3	
+10		5.0	85.3	
+20		5.1	85.2	85.2
±		4.4	85.9	
+10		3.5	86.8	
+20		2.6	87.7	87.2
R		1.5	88.8	

90.26

30+25

30 17

R	90.3	7.2	83.1	
+10		7.3	83.0	
+20		7.2	83.1	83.0
+25		6.2	84.1	
±		4.6	85.7	
+5		3.3	87.0	
+10		5.3	85.0	
+16		7.4	82.9	82.9
+20		7.7	82.6	
L		7.9	82.4	

30+50

L		9.2	81.1	
+10		8.5	81.8	
+20		8.2	82.1	81.9
±		6.2	84.1	
+5		6.3	84.0	
+10		8.8	81.5	
+20		12.3	78.0	79.7
+25		14.2	76.1	
+26		17.6	72.7	
R		19.9	70.4	

75.40

30+75

R	90.3	21.9	68.4	
+10		14.6	73.7	77.3
+20		9.4	80.9	
Φ		10.5	79.8	
+10		10.5	79.8	80.2
+20		9.7	80.6	
L		8.2	82.1	

30+93²² = P. 71

L		9.0	81.3	
+10		8.1	82.2	81.4
+20		8.7	80.6	
Φ		8.7	80.6	
+10		11.6	78.7	77.1
+20		14.9	75.4	
R		12.1	73.2	

31+18⁹² = P. C

R	90.3	17.5	72.8	
+10		15.5	74.8	75.6
+20		13.9	76.4	
Φ		10.0	80.3	
+10		10.6	79.7	79.5
+20		11.0	79.3	
L		11.9	78.4	

31+50

L		12.1	78.2	
+10		10.9	79.4	80.0
+20		9.7	80.6	
+25		9.4	80.9	
Φ		10.8	79.5	
+10		12.6	77.7	77.3
+20		13.5	76.8	
R		14.9	75.4	

90.26

31+75

R	90.3	21.5	68.8	
+10		17.6	72.7	
+15		14.6	75.7	75.7
+20		13.9	76.4	
Q		13.3	77.0	
+4		13.1	77.2	
+10		11.3	79.0	
+20		11.6	78.7	78.9
L		12.0	78.3	

T.P. 1.29 77.42 12.23 78.03

$32+16\frac{15}{100} = PT$

L	79.4	11.7	77.7	
+10		2.0	77.4	
+15		2.0	77.4	77.4
+20		4.9	74.5	
Q		5.7	73.7	
+10		6.3	73.1	
+16		7.6	71.8	71.8
+20		9.2	70.2	
R		12.8	66.6	

32+50

R	79.4	14.2	65.2	
+7		11.0	68.4	
+10		10.7	68.7	
+20		9.8	69.6	69.2
Q		7.4	72.0	
+3		6.5	72.9	
+10		7.0	72.4	72.7
+20		6.4	73.0	
L		7.5	71.9	

$32+63\frac{20}{100} = PC$

L		8.9	70.5	
+7		5.6	73.8	
+10		5.6	73.8	
+15		2.3	72.1	72.1
+20		2.3	72.1	
Q		8.2	71.2	
+10		10.1	69.3	
+10		10.7	68.7	
+20		11.5	67.9	68.3
R		14.2	65.2	

28

77.42

33+00

R	79.4	15.6	63.8	
+10		14.5	64.9	
+20		13.8	65.6	65.3
Q		12.4	67.0	
+10		8.5	70.9	
+20		9.5	69.9	70.4
L		10.1	69.3	

33+25

L		11.4	68.0	
+10		10.3	68.6	
+20		11.3	68.1	68.3
Q		10.1	69.3	
+10		15.2	64.2	
+20		17.3	62.1	63.1
R		21.0	58.4	

T.P. 127 69.07 11.62 67.80

28.98 - 57

69.07

33+50

33

R	69.1	5.8	63.3	
+10		4.9	64.2	
+15		2.4	66.7	66.7
+20		4.2	64.9	
E		2.1	67.0	
+10		3.3	65.8	
+20		1.9	67.2	66.5
L		2.8	66.3	

33+75

L		5.4	63.7	
+10		5.1	64.0	
+20		4.4	64.7	64.3
E		5.4	63.7	
+10		5.7	63.4	
+20		4.3	64.8	64.1
+22-R	about 200 of 30'	5.3	63.8	

Vertical text on the right edge of the page.

75.40

69.07

39+00

R	—		
+10 = edge of cliff	69.1	6.3	63.8
+20		6.1	63.0
Q		5.7	63.2
+10		6.0	63.1
+20		6.2	62.9
L		6.6	62.5

63.4

63.0

39+25

K		6.2	62.9
+5		4.2	64.9
+10		5.2	63.9
+20		1.5	67.6
Q		4.8	64.3
+10		3.1	66.0
+20		7.0	62.1
+25		7.9	61.7
R		9.2	59.9

65.7

64.1

23.98 14 - 57

34 0

39+50

R	69.1	13.2	55.9
+10		10.6	58.5
+20		9.0	60.1
Q		7.6	61.5
+10		5.9	63.7
+15		3.2	65.9
+20		4.9	64.2
L		5.2	63.9

59.3

65.9

39+75

L		7.2	61.9
+5		6.9	62.2
+10		4.9	64.2
+20		8.1	61.0
Q		9.3	59.8
+10		10.6	58.5
+20		14.2	54.9
R		15.1	54.0

62.6

56.7

ST.

75.40

		69.07			
		35+0			
R		69.1	12.7	50.4	
+10			17.3	51.8	
+20			15.6	53.5	52.6
Q			14.2	54.9	
+10			12.0	57.1	
+20			8.5	60.6	58.9
PL			8.3	60.8	
T.P	0.99	61.56	3.00	61.07	
		35+25			
L		61.6	1.4	60.2	5.1
+10			1.2	60.4	
+20			5.6	55.0	57.7
Q			9.7	51.9	
+10			10.6	51.0	
+20			10.7	50.9	50.9
R			11.0	50.6	

		Quercus		23.98	57
		35+50			
				35	47
				Erving	0
A		61.6	14.5	47.1	
+10			14.2	47.4	
+20			13.5	48.1	47.7
Q			9.8	51.8	
+10			5.0	56.6	
+20			3.2	58.4	57.5
L			4.1	57.5	
		35+75			
L			6.8	54.8	
+10			6.3	55.3	
+20			5.5	56.1	55.7
Q			9.6	52.0	
+10			12.3	49.3	
+20			16.1	45.5	47.4
R			19.2	42.4	

Washington 94
75.40

36401¹⁰ - P.T

R	61.6	14.6	49.0	
+10		11.8	49.8	
+20		9.9	52.2	51.0
Q		8.6	53.0	
+10		8.2	53.4	
+20		7.9	53.7	53.6
L		7.6	54.0	

3642867 - P.C.

L		7.0	54.6	
+10		7.3	54.3	
+20		7.7	53.9	54.1
Q		8.4	53.2	
+10		9.1	52.5	
+20		9.6	52.0	52.2
R		11.9	49.7	

36450

R	61.6	11.7	49.9	
+10		10.0	51.6	
+20		8.6	53.0	52.3
Q		7.6	54.0	
+10		6.8	54.8	
+20		6.1	55.5	55.1
L		5.5	56.1	

36475

L		4.8	56.8	
+10		6.1	55.5	
+20		7.4	54.2	54.9
Q		8.7	52.9	
+10		10.1	51.5	
+20		11.3	50.3	50.9
R		12.4	49.2	

36 0

Washington 01

75.40

	61.56			
	37+00			
R	61.6	17.8	43.8	
+10		17.7	43.9	
+20		15.0	46.6	45.3
Q		13.5	48.1	
+10		11.1	50.5	
+20		8.3	53.3	57.9
L		5.9	55.7	

37+25

L		10.5	51.1	
+10		13.1	48.5	
+20		13.8	47.8	48.1
T.P.	5.75	54.85	17.46	49.10
Q		12.0	42.8	
+10		14.0	40.8	
+20		12.5	37.3	39.1
R		22.1	34.7	

37+50

R	54.8	20.3	34.5	
+10		17.1	37.7	
+20		14.9	40.4	39.0
Q		10.7	44.1	
+10		7.8	47.0	
+20		4.1	50.7	48.8
L		1.6	53.2	

37+83²⁰ = P.C.C.

L		0.3	54.5	
+10		2.8	52.0	
+20		5.7	49.1	50.6
Q		10.1	44.7	
+10		14.6	40.2	
+20		16.3	38.5	39.3
R		17.6	37.2	

Washington 97

46.69

38490

R	46.7	21.2	25.5	
+10		19.3	27.4	
+20		17.0	29.7	28.5
Q		15.0	31.9	
+10		12.7	34.0	
+20		6.7	40.0	37.0
L		6.1	40.6	

39406⁵⁸ = P.T.

L	46	42.1		
+10	5.7	41.0		
R	5.8	40.9	40.9?	
+20	8.5	38.2		
Q	12.5	34.2		
+6	16.9	29.8		
+10	17.7	28.8		
+20	19.3	27.4	38.1	
R	21.2	25.5		

39

39125

R	46.7	18.7	28.0	
+10		17.7	29.0	
+20		14.8	31.9	30.5
Q		10.9	35.8	
+9		8.3	36.4	
+10		6.1	40.6	40.9
+20		5.4	41.3	
R L		4.5	42.2	

39459²⁸ = N.L. Chestnut at 50 wide

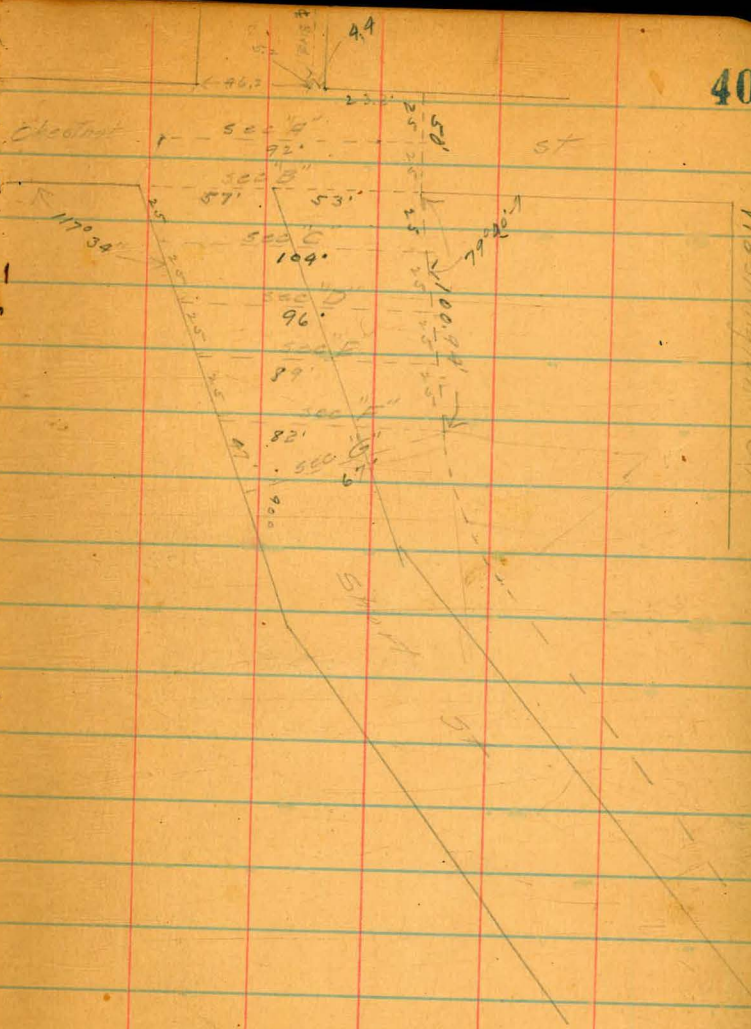
L		5.8	40.9	
+10		7.1	39.6	39.0
+20		8.3	38.4	
+20		12.3	36.4	
T.P.	2.79	36.25	12.22	33.81
Q		3.7	32.8	
+10		7.6	28.8	
+20		10.7	25.5	27.2
R		12.8	23.4	

r-sec "7"

P			
+10	36.5	22.8	13.4
+20		21.8	14.4
+30		20.5	15.4
+40		16.9	19.3
+50		15.1	21.1
+60		12.6	23.6
+70		8.4	27.8
+80		5.8	30.4
		3.9	32.3
+92=H		7.1	37.3

r-sec "8"

L			
+10	36.2	9.4	31.8
+20		6.8	29.4
+30		10.2	26.2
+40		12.5	23.7
+50		16.4	19.8
+60		15.3	17.9
+70		20.2	16.0
+80		21.7	14.3
+90		23.9	12.3
+90		24.2	12.0
H09.6=R		25.0	11.2



36.25

K-500 "C"

R	36.2	25.5	10.4
+8		25.8	10.4
+14		22.3	13.9
+20		23.6	12.6
+40		21.2	15.0
+65		17.2	19.0
+70		11.6	24.6
+90		7.8	28.4
10A-L ₁		2.5	33.7
T.P.	0.36	31.68	1.93
			34.32
			1-500 D
L	34.7	0.7	34.0
+10		4.3	30.4
+20		6.2	28.5
+30		8.7	26.0
+40		12.3	22.4
+52		13.3	21.4
+62		18.7	16.0
+77		20.3	14.4
		20.7	14.0
+90		24.9	10.3
+96=A		25.1	9.6

34.75

K-500 "F"

41

L	34.7	26.0	8.7
+8		26.0	8.7
+20		19.7	15.0
+30		19.3	15.4
+45		15.0	16.7
+50		13.7	21.0
+53		11.0	23.7
+60		9.5	25.2
+70		6.8	27.9
+80		4.7	30.0
+89=A		1.5	33.4

1-500 "F"

L	34.7	4.0	30.7
+10		6.8	27.9
+20		8.6	25.1
+30		9.3	25.4
+37		17.5	17.2
+45		18.9	16.3
+60		18.6	16.1
+82=A		25.5	8.9

3968

1-300 G

R	24.7	24.7	9.8
+2		24.7	10.0
+5		22.1	12.6
+17		18.2	16.5
+30		18.2	16.5
+40		16.5	17.9
+44		12.7	22.0
+50		10.3	24.4
+60		6.7	28.0
+67 = L		4.1	30.6

42

ST

47

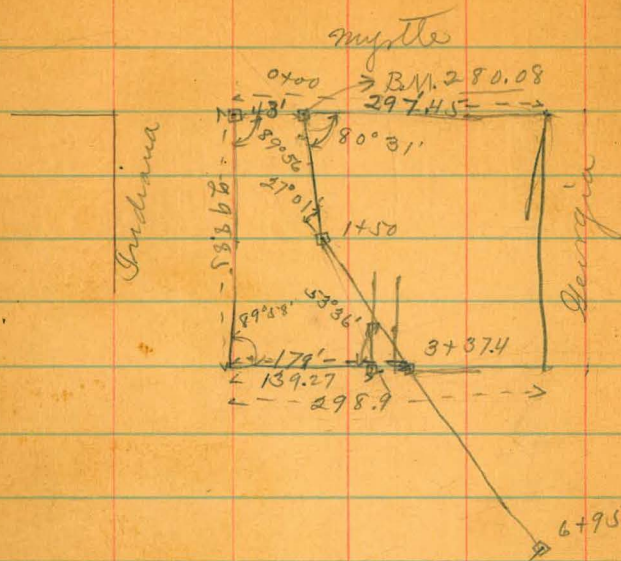
ST

ST

ST

ST

Road down



Canyon back of Country Club. (Ch. 43)
 July 20/10 Barber Taylor

J.P.	2.40	H.I.	302.95	302.57 B.M.
J.P.			12.34	292.61
	0.54	293.15		
J.P.			13.07	280.08

July 29/10
 Barber Taylor

ST
 75.40

44

Quitoc — — — 23.98 — — 57

44

47

75.40

239.67

3450			6.2	239.5
T.P.	0.94	228.51	1210	227.57
+75			1.1	227.4
3457 old				
3482 ⁵ new			3.8	227.7
440			5.7	222.8
+25			14.0	216.5
4413 ³ old				
4453 ¹ new			14.7	213.8
+75			15.8	212.7
540			12.9	215.6
+25			12.6	215.9
T.P.	0.33	216.48	1236	216.15
+50			1.5	215.0
5444 ⁷ old.				
5476 ¹ new			4.9	211.6
640			2.4	208.1
+25			13.3	203.2
T.P.	1.27	204.90	12.85	203.63
+50			5.9	199.0
+75			9.0	195.9
740			10.3	194.6
+25			10.2	194.7
7427 ³ old.				
7459 ¹⁵ new			10.3	194.6

46

308.68

E. cl (cont)

308.7

+8 5.5 303.2

d 4.9 303.9

N 4.0 304.7

E. 114

N 3.9 304.8

d 4.7 304.0

+2 5.4 303.3

114 3.9 304.8

c 3.7 305.0

114 3.8 304.9

d 3.4 305.3

S 2.7 306.0

E 32nd

S 2.4 306.3

cl 3.2 305.5

114 3.4 305.2

c 3.6 305.1

114 3.4 305.3

308.68

Palm

308.7

48

+5 4.1 304.6

+6 5.3 303.4

cl 5.4 303.8

+1 4.4 304.3

N 4.2 304.5

W. 114

N 4.2 304.5

+ 4.4 304.3

cl 5.6 303.1

+4 5.7 303.0

+5 4.0 304.7

114 3.3 305.4

c 3.4 305.3

114 3.3 305.4

cl 3.0 305.7

S 2.0 306.7

W. cl

S 1.9 306.8

308.68
W. cl (con)

		<u>308.2</u>
cl	3.0	305.7
14	3.3	305.4
c	3.4	305.3
14 ₂	3.3	305.4
+5	4.0	304.7
16	5.6	303.1
cl	5.7	303.0
+1	4.4	304.3
N	4.3	304.4

oo = W Line 32nd St.

N	4.5	304.2
+9	4.4	304.3
cl	5.5	303.2
+4	5.7	303.0
+5	3.8	304.9
14	3.1	305.6
c	3.3	305.4
14	3.1	305.6

308.68 Palm 49

		<u>308.2</u>
cl	2.9	305.8
s	2.0	306.7

25' W

s	1.9	306.8
cl	2.6	306.1
14	2.9	305.8
c	3.9	304.8
14	4.2	304.5
+5	4.5	304.2
+4	5.9	302.8
cl	4.1	302.6
+1	4.8	303.9
N	5.3	303.4

50' W

N	6.9	301.8
+7	6.0	302.7
+8	7.6	301.1
cl	7.6	301.1

	308.68		
dt1	50'W	can	<u>308.2</u> 301.1
		7.4	
+2		5.5	303.2
1/4		4.9	303.8
C		4.0	304.7
1/4		3.2	305.5
cl		2.4	306.1
S		2.7	306.0
	75'W		
S		4.0	304.7
cl		4.0	304.7
1/4		5.0	303.7
C		5.2	303.5
1/4		6.4	302.3
+8		7.0	301.7
cl		8.4	300.3
+3		9.3	299.4
+4		8.1	300.6
N		8.5	300.2
+5		8.7	300.0

	308.68		
	100'W		<u>308.7</u> 298.9
-5		9.8	298.9
N		10.6	298.1
cl		9.0	299.7
1/4		8.4	300.3
C		7.6	301.1
1/4		7.3	301.4
cl		6.6	302.1
S		6.3	302.4
	125'W		
S		7.8	300.9
cl		8.1	300.6
1/4		8.8	299.9
C		9.3	299.4
1/4		10.0	298.7
cl		10.4	298.3
N		11.5	297.2
+10		12.6	296.1

	308.68	150' W	308.2
-10		12.6	296.1
N		11.8	296.9
d		11.1	297.6
14		10.5	298.2
c		9.4	298.9
14		9.2	299.5
d		8.4	299.9
S		8.3	300.4

		175' W	
S		8.6	300.1
d		8.9	299.8
14		9.3	299.4
c		9.6	299.1
14		10.1	298.6
d		10.4	298.3
N		10.8	297.9
15		11.0	297.7

	308.68	200' W	308.2	51
N		10.6	298.7	
d		9.7	299.0	
14		9.5	299.2	
c		9.2	299.5	
14		8.9	299.8	
d		8.6	300.1	
S		8.6	300.1	

		225' W	
S		8.9	299.8
d		8.9	299.8
14		9.0	299.7
c		9.2	299.5
14		9.4	299.3
d		9.7	299.0
N		9.9	298.8

		250' W	
N		11.5	297.2
d		10.8	297.9

	308.64			308.7
	250' W (cont)			298.2
		10.5		298.5
14		10.0		298.7
e		9.7		299.0
14		9.6		299.1

270' W

		10.6		298.1
s		10.9		297.8
cl		11.4		297.3
14		12.1		296.6
e		12.7		296.0
14		13.3		295.4
d		12.80		295.88
T.P.	0.65	296.53		296.5
N		2.8		293.7

295' W

		13.6		282.9
N		7.6		288.9
cl		4.1		292.4
HL				

296.53

Palms

296.5

52

		3.6		297.9
14		2.5		294.0
e		1.8		294.7
14		0.9		295.6
cl		0.2		296.3
s				

330' W

		5.4		291.1
s		6.0		290.5
cl		7.1		289.4
14		8.4		288.1
e		10.7		285.8
14		12.8		283.7
cl		18.8		277.7
N				

50' W side
30' dia
7.5' dia

32nd St & See
From S line Palm to N. line N. line

4-24-26
mills

BM. 8.40 312.40 304.00 N.E. Palm + 32nd

000 S line Palm 312.4

E 6.1 306.3

cl 6.3 306.1

" 6.4 306.0

e 6.1 306.3

" 5.7 306.7

cl 5.6 306.8

w 5.7 306.7

25' S.

w 3.6 308.8

cl 4.1 308.3

" 4.4 308.0

e 5.2 307.2

" 5.5 306.9

cl 5.6 306.8

E 5.8 306.6

312.40

50' S

5.8 312.4
306.6

53

d 5.5 306.9

" 5.2 307.2

e 4.8 307.6

" 3.9 308.5

cl 3.0 309.4

w 1.9 310.5

75' S

w 0.5 311.9

cl 2.2 310.2

" 3.4 309.0

cl 4.1 308.3

e 5.0 307.4

" 5.6 306.8

cl 5.9 306.5

e 6.4 306.0

100' S

e 7.3 305.1

312.40
100.5 con

cl		<u>312.4</u> 305.2
"4	7.2	
	6.9	305.5
e	6.6	305.8
+1.5	5.5	306.9
"4	4.9	307.5
cl	4.2	308.2
w	3.1	309.3

125's

w	6.0	306.4
cl	6.9	305.5
"4	7.2	305.2
+6	7.5	304.9
c	8.1	304.3
"4	8.3	304.1
cl	8.3	304.1
E	8.4	304.0

150's

E	9.7	302.7
---	-----	-------

312.40

312.4
302.7

cl	9.7	
"4	9.5	302.7
e	9.3	303.1
"4	8.9	303.5
cl	8.8	303.6
w	8.7	303.7

175's

w	11.0	301.4
d	11.0	301.4
"4	10.5	301.9
c	10.6	301.8
"4	10.7	301.7
cl	10.6	301.8
E	10.6	301.8

200's

E	11.5	300.9
cl	11.7	300.7
"4	11.5	300.9

325

54

	312.40		
	200's (cont)		312.4
e		11.7	300.7
114		11.8	300.6
cl		11.8	300.6
w		12.0	300.4
	250's		
w		13.9	298.5
cl		13.8	298.6
114		13.5	298.9
e		13.6	298.8
114		13.3	299.1
d		13.4	299.0
e		13.1	299.3
T.P.	0.05	299.51	12.94 299.46
		300's	
			299.5
e		2.2	297.3
cl		2.3	297.1
114		2.2	297.3
e		2.2	297.3

	299.51		32
			55
114		2.2	299.5
			297.3
cl		2.3	297.2
w		2.4	297.1
	350's		
w		3.7	295.8
cl		3.8	295.7
114		4.1	295.4
e		4.2	295.3
114		4.2	295.3
d		4.4	295.1
e		4.3	295.2
±5		4.3	295.2
	375's		
e-5		5.4	294.1
e		5.4	294.1
cl		5.0	294.5
114		4.9	294.6
e		4.6	294.9

312.40
 299.51
 375' S (com) 299.5
 4.2 295.3
 114
 cl 3.7 295.8
 W 3.4 296.1

400' S
 W 2.6 296.9
 cl 2.8 296.7
 114 3.5 296.0
 +6 3.7 295.8
 C 4.3 295.2
 114 4.5 295.0
 d 5.0 294.5
 E 5.5 294.0
 +5 5.7 293.8

425' S
 -5 5.5 294.0
 E 5.1 294.4
 cl 4.5 295.0
 114 4.1 295.4
 C 3.8 295.7

299.51
 299.5
 56

71.5 3.2 296.3
 114 2.9 296.6
 cl 2.6 296.9
 W 2.4 297.1

450' S
 W 2.6 296.9
 cl 2.7 296.8
 114 3.0 296.5
 +6 3.2 296.3
 C 3.4 295.9
 114 3.8 295.7
 cl 4.0 295.5
 E 4.6 294.9

475' S
 E 4.8 294.7
 cl 4.5 295.0
 114 4.4 295.1
 C 4.3 295.2

	299.51	475' S (EON)	299.5
+4		3.3	296.2
14		3.3	296.2
cl		3.4	296.1
W		3.2	296.3
	500' S		
W		4.5	295.0
cl		4.6	294.9
14		5.0	294.5
E		5.5	294.0
14		5.6	293.9
d		5.4	294.1
E		5.5	294.0
	525' S		
E		6.7	292.8
cl		6.7	292.8
14		7.2	292.3
E		7.1	292.4
14		7.0	292.5

	299.51	320' S	299.5
cl		6.4	293.1
W		6.4	293.1
	550' S		
W		9.0	290.5
cl		8.6	290.9
14		9.1	290.4
E		9.7	289.8
14		9.9	289.6
+5		10.1	289.4
cl		8.8	290.7
E		8.6	290.9
	575' S		
E		11.8	287.7
+8		11.5	288.0
cl		13.1	286.4
14		13.2	286.3
E		13.0	286.5
14		13.3	286.2

	299.51		
	575'S con		
14+2		11.8	$\frac{299.5}{287.7}$
cl		12.0	287.5
W		12.2	287.3
T.P.	3.46	290.27	12.70 286.81

595.5 S. = a line 29.7 N. of P.L. = produced from E. N. Line. Noting

			290.3
W		5.6	284.7
cl		5.2	285.1
+6		5.3	285.0
11d		6.5	283.7
cl		6.5	283.8
11f		6.7	283.6
+5		6.8	283.5
cl		5.4	284.9
E		5.5	284.8

chk B.M.

4.56 285.71 = 285.72 B.M.
 SW. Say 11/18
 4 21 20

75.4 wide
10' cl. N
13' 11/2
13.4 cl. S

Nutmeg St & Sec

4/29/76
shuller

B.M. 4.24 298.32 294.08

N.E. Nutmeg
& Bancroft

50' E

298.3

00- E. Line 33rd on N.

N	5.7	292.6
cl	5.6	292.7
"4	5.4	292.9
C	4.7	293.6
+1	3.5	294.8
"4	2.0	295.3
cl	2.7	295.6
S	2.6	295.7

25' E

S	5.2	293.1
cl	5.3	293.0
"4	5.7	292.6
C	6.2	292.1
"4	7.1	291.2
cl	7.3	291.0

298.32

298.3

59

7.1

291.2

N

N

+4

+5

cl

"4

C

"4

cl

S

58' E

S

cl

"4

C

"4

cl

8.5

289.8

9.1

289.2

8.5

289.8

8.5

289.8

9.1

289.4

9.6

288.7

9.6

288.7

9.2

289.1

8.8

289.5

10.0

288.3

10.3

288.0

10.7

287.6

10.8

287.5

9.8

288.5

9.2

289.1

298.32
58' E (cont) 298.3

+6 9.8 298.5

+7 13.0 285.3

N 13.0 285.3

+5 10.7 287.6

65' E

-5 14.7 283.6

N 12.8 285.5

cl 10.7 287.6

" 10.5 287.8

+7 10.8 287.5

e 12.6 285.7

" 12.1 286.2

cl 11.4 286.9

S 10.9 287.4

75' E

S 12.5 285.8

cl 13.1 285.2

" 14.1 284.2

298.32

N 47 1/2 1/2

60

e 15.0 298.3
283.3

" 14.6 283.7

cl 16.1 282.2

N 17.2 281.1

+5 16.8 281.5

80' E

-7 18.5 279.8

N 18.4 279.9

cl 17.2 281.1

" 16.2 282.1

e 16.4 281.9

" 15.5 282.8

cl 14.3 284.0

S 13.4 284.9

T.P. 0.38 285.76 12.94 285.38

100' E

S 5.2 280.6

cl 6.2 279.6

	285.76		
10	100' E (con)	285.8	
114	6.6	279.2	
C	7.3	278.5	
+4	8.4	277.4	
+6	7.6	278.2	
114	8.0	277.8	
cl	8.5	277.3	
N	9.3	276.5	
+10	10.1	275.7	
	118' E = W Line Alley		
-12	14.5	271.3	
N	12.4	273.0	
cl	12.0	273.8	
114	11.6	274.2	
+6	11.0	274.8	
+8	11.8	274.0	
C	10.6	275.2	
114	9.8	276.0	
cl	9.1	276.7	

	285.76		Nutmeg
		285.8	
S		277.2	
+5		8.4	277.4
	133' E = E. Line Alley		
-5		11.2	274.6
S		11.4	274.4
cl		11.8	274.0
114		12.4	273.4
C		13.3	272.5
+5		14.3	271.5
+8		13.8	272.0
114		14.0	271.8
cl		14.5	271.3
N		15.4	270.4
+15		16.9	268.9
	148' E		
N-25		25.7	260.1 E wash
-13		22.2	263.6
N		19.9	265.9

285.76

148' E

		285.8
d	18.0	267.8
+4	16.8	269.0
14	16.6	269.2
+6	16.7	269.1
+8	18.4	267.4
+10	16.6	269.2
c	15.9	269.9
14	15.2	270.6
d	14.6	271.2
s	14.0	271.8
+5	14.1	271.7
	158' E	
-10	15.5	270.3
s	15.6	270.2
d	16.4	269.4
14	17.1	268.7
+9	18.3	267.5
c	19.9	265.9

285.76

Not used

		285.8	
+4	21.1	264.7	
+5	20.0	265.8	
14	19.1	266.7	
d	21.8	264.0	
N	22.5	263.3	
+11	25.6	260.2	
+16	25.6	260.2	♀ wash
+19	25.3	260.5	
+26	22.3	263.5	
	164' E		
-20	22.5	263.3	
-14	25.4	260.4	
-7	26.0	259.8	♀ wash
N	26.1	259.7	
d	24.2	261.6	
14	22.2	263.6	
+8	21.3	264.5	
+9	24.4	261.4	

62

285.76

E	164' E (con)	285.8
	24.3	261.5
+2	22.1	263.7
4	20.5	265.3
cl	18.7	267.1
S	17.7	268.1
+10	17.1	268.7
	174' E	
-10	19.9	265.9
S	20.8	265.0
+4	20.9	264.9
d	23.7	262.1
14	25.0	260.8
C	27.2	258.7
+3	27.3	258.5
+4	26.0	259.8
14	26.6	259.2
cl	28.0	257.8
N	26.4	259.4
+20	19.0	266.8

E wash

285.76

NUT MEY

63

-20	181' E	285.8
	17.7	268.1
N	22.6	263.2
cl	26.0	259.8
14	28.2	257.6
+2	28.2	257.6
+11	28.7	257.1
+12	30.5	255.3
C	30.5	255.3
+3	31.2	254.6
+4	29.0	256.8
14	29.0	256.8
cl	26.3	259.5
S	23.6	262.2
+10	22.2	263.6
	194' E	
-15	26.5	259.3
S	28.5	257.3
+3	30.2	255.6

E wash

	285.76		
	194' E	295.8	
+9	32.3	253.5	♀ Wash
cl	31.5	254.3	
1/4	28.4	257.4	
+9	25.5	260.3	
C	25.8	260.0	
+5	25.9	259.9	
+6	24.7	261.1	
1/4	23.1	262.7	
cl	21.4	264.4	
N	20.4	265.4	
+10	17.8	268.0	
	204.		
-10	15.9	269.9	
N	18.0	267.8	
cl	20.3	265.5	
1/4	21.5	264.3	
C	23.2	262.6	
1/4	25.0	260.8	

	285.76	Nutmeg	64
cl	27.2	285.8 258.6	
S	32.8	253.0	♀ Wash
+6	32.8	253.0	
+15	30.0	255.8	
+25	27.3	258.5	
	215' E		
-25	31.4	254.4	
-11	33.8	252.0	♀ Wash
S	28.4	257.4	
cl	24.5	261.3	
1/4	23.0	262.8	
C	21.5	264.3	
1/4	19.4	266.4	
cl	17.4	268.4	
N	16.0	269.8	
+7	14.8	271.0	

285.76
225' E

-7	13.5	285.8
		277.3
N	14.5	271.3
cl	16.5	269.3
1/4	17.7	268.1
0	20.0	265.8
1/4	21.8	264.0
cl	22.9	263.0
S	26.1	259.7
+22	34.4	251.4
+25	34.4	251.4
+32	34.6	251.2

280' E - W. Line Filton ^{50' wide} _{10' deep} 25' 1/4"

-15	25.0	260.8
S	20.9	264.9
cl	18.8	267.0
1/4	17.0	268.8
0	15.4	270.4
1/4	13.9	272.0

285.76

cl	12.4	285.8
		273.4
N	10.8	275.0
W. cl		
N	9.3	276.5
cl	10.5	275.3
1/4	12.6	273.2
0	13.7	272.1
1/4	15.3	270.5
cl	17.2	268.6
S	18.8	267.0
+12	21.3	264.5

W. 1/4

-10	18.8	267.0
S	17.6	268.2
cl	16.1	269.7
1/4	14.4	271.4
0	12.0	273.8
1/4	10.8	275.0

88

	285.76	
cl	W. 14	285.8 276.2
N	9.6	277.1
	8.7	
	Feltan	
N	7.7	278.1
cl	8.8	277.0
1/4	9.9	275.9
c	10.8	275.0
1/4	11.9	273.9
+8	12.5	273.3
cl	14.6	271.2
S	16.3	269.5
+10	17.7	268.1
	E. 14	
-10	16.5	269.3
S	15.1	270.7
cl	12.6	273.2
1/4	11.2	274.6
c	10.0	275.8

285.76

Nittmeg

66

	285.76	
1/4	9.1	285.8 276.7
cl	7.7	278.1
N	6.8	279.0
	E. cl	
N	6.1	279.7
cl	6.9	278.9
1/4	8.2	277.6
c	9.3	276.5
1/4	10.5	275.3
cl	11.8	274.0
S	13.4	272.4
+10	14.6	271.2
	E. Lime Feltan	
-10	13.2	272.6
S	12.2	273.6
cl	10.6	275.2
1/4	9.5	276.3
c	8.6	277.2

14

285.76

7.0

~~285.8~~
278.8

d

5.7

280.1

v

4.6

281.2

Nutley

67

LONG BRANCH Cross Section 10' cbs
Abbott St. West 1/4

50' wide
Moore
11/4/16

11.77

Location	11.77	10.13	Brighton Abbott	07.50	11.8
n.w. cor 164	11.77	10.13	Brighton Abbott	-5	9.6
W/L Abbott - 00		11.8		S	9.5
S	8.1	3.7		cb	9.5
1/2 top corr cb	8.0	3.8		1/4	10.1
1/4	8.6	3.2		c	9.6
e	8.6	3.2		1/4	9.5
1/4	8.9	2.9		cb	9.7
cb top corr cb	9.07	2.7		N	9.6
N	8.8	3.0		+5	9.6
0+10				0+79	
N	9.2	2.6		-5	9.8
cb	9.2	2.6		N	9.7
1/4	9.2	2.6		cb	10.0
c	9.2	2.6		1/4	9.8
1/4	9.1	2.7		e	9.7
cb	9.0	2.8		1/4	10.1
S	8.7	3.1		cb	10.0

1177 11.8

S	9.7	2.1
+J	9.5	2.3
0+84		
-J	9.7	2.3
S	9.6	2.2
cb	10.0	1.8
1/2	10.1	1.7
c	9.7	2.1
1/4	9.8	2.0
cb	10.7	1.7
N in yard	8.8	3.0
1+15		
N " "	9.0	2.8
cb	10.0	1.8
1/2	10.0	1.8
c	10.0	1.8
1/4	10.4	1.4
cb	10.5	1.3

1177 Long Branch 11.8 69

S	10.0	1.8
+J	9.9	1.9
1+20		
-J	10.3	1.5
S	10.2	1.6
cb	10.5	1.3
1/4	10.5	1.3
c	10.0	1.8
1/4	9.9	1.9
cb	9.9	1.9
N	10.0	1.8
+J	10.0	1.8
1+70		
-J	10.3	1.5
N	10.2	1.6
cb	10.1	1.7
1/4	10.1	1.7
c	10.7	1.1

	11.77		11.8
cb	8.3		3.5
1/4	8.3		3.5
c	8.4		3.4
1/4	8.4		3.4
cb	8.6		3.4
J	8.3		3.5

2+15

J	7.6		4.2
+5	8.5		3.3
cb	8.5		3.3
1/5	8.4		3.6
c	8.0		3.8
1/4	7.9		3.9
+5	7.7		4.1
cb	7.0		4.8
N	6.4		5.6

2+75

N	4.5		7.3
---	-----	--	-----

cb	5.8		6.0
1/4	7.5		4.3
c	8.4		3.4
1/4	8.5		3.3
cb	8.0		3.8
J	7.1		4.7

2+87

J	4.0		7.8
cb	7.6		4.2
1/4	8.6		3.2
+5	8.6		3.2
c	8.0		3.8
1/4	8.1		3.7
cb	7.0		4.8
+5	6.6		5.2
N	5.6		6.2

3+00

N	5.7		6.1
---	-----	--	-----

11.77

45	7.0	$\frac{11.8}{4.8}$
cb	7.6	4.2
1/4	8.0	3.8
c	8.7	3.1
1/4	8.7	3.1
cb	7.7	4.1
S	7.0	4.8

3+25

S	6.8	5.0
cb	7.5	4.3
1/3	8.4	3.4
c	8.5	3.3
1/4	8.1	3.7
cb	6.9	4.9
S	6.0	5.8

3+50

N	6.0	5.8
45	5.8	6.0

11.77

Long Branch
11.8

72 3

cb	7.6	4.2
1/4	8.0	3.8
c	9.9	1.9
45	9.7	2.1
1/4	9.0	2.8
cb	7.0	4.8
S	7.2	4.6

3+75

S	8.1	3.7
cb	8.5	3.7
1/4	8.8	3.0
c	9.7	2.1
1/4	9.4	2.3
cb	9.0	2.8
N	7.9	3.9

4+100

N	8.1	3.7
cb	9.4	2.4

11.77

1/4 10.2 $\frac{11.8}{1.6}$

e 10.0 1.8

1/4 9.7 2.1

eb 9.2 2.6

S 9.1 2.7

4+15

S 9.1 2.7

eb 10.0 1.8

1/4 9.9 1.9

e 10.3 1.5

1/4 10.3 1.5

eb 10.3 1.5

N 8.2 3.6

4+25

x/ 10.0 1.8

eb 10.4 1.4

1/4 10.6 1.2

e 10.5 1.3

11.77

Long Branch

73

1/4 9.8 $\frac{11.8}{2.0}$

eb 10.0 1.8

S 10.1 1.7

4+40

S 10.5 1.3

eb 10.7 1.1

1/4 10.7 1.1

e 10.5 1.4

1/4 10.4 1.4

eb 10.6 1.4

N 10.6 1.4

Sewer levels & alley
14 Frank Ave

Indexed
C.S.K.

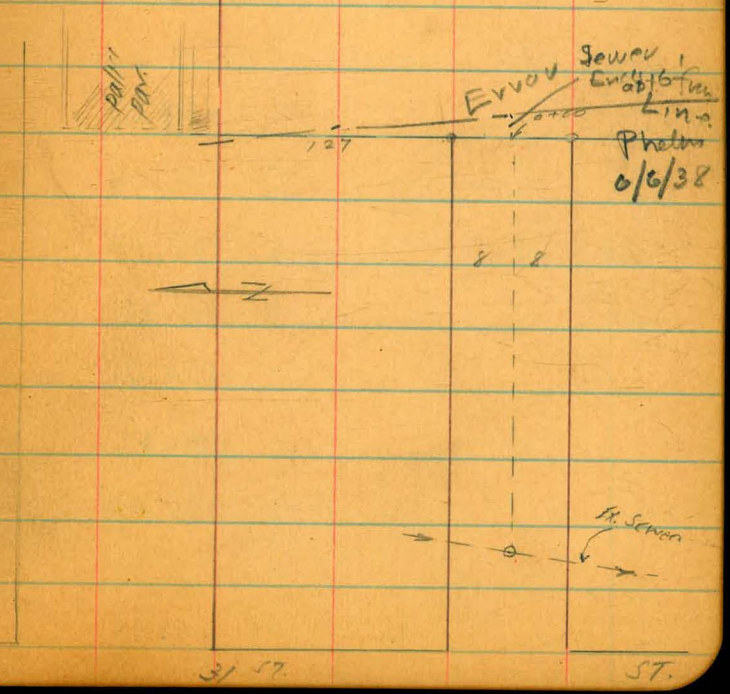
NEBP	0.12	304.15		304.03	1st
Side Palm & Pvedolano	8.09			296.06	Top 26
N. side alley	"	"	7.92	296.23	" pipe
0+00	Erron.				
0+00		8.2		295.95	
0+25		10.0		294.15	
0+45		12.3		291.85	
0+50		13.5		290.65	
T.P.	0.46	291.55	13.06	291.09	
0+60			7.0	284.55	
0+75			14.6	276.95	
T.P.	0.23	279.08	12.70	278.85	
0+90			9.9	268.18	
T.P.	0.07	266.22	12.93	266.15	
1+05			5.3	260.92	
1+20			12.7	253.52	
T.P.	0.29	253.01	12.90	253.32	
1+40			8.2	245.91	

253.61

July 28

74

1+60		15.2		238.41
1+70		16.8		236.81
T.P.	0.33	242.50	11.44	244.17
1+84	M.H. Rim	8.40		234.10
"	"	"	FL.	13.10 229.40

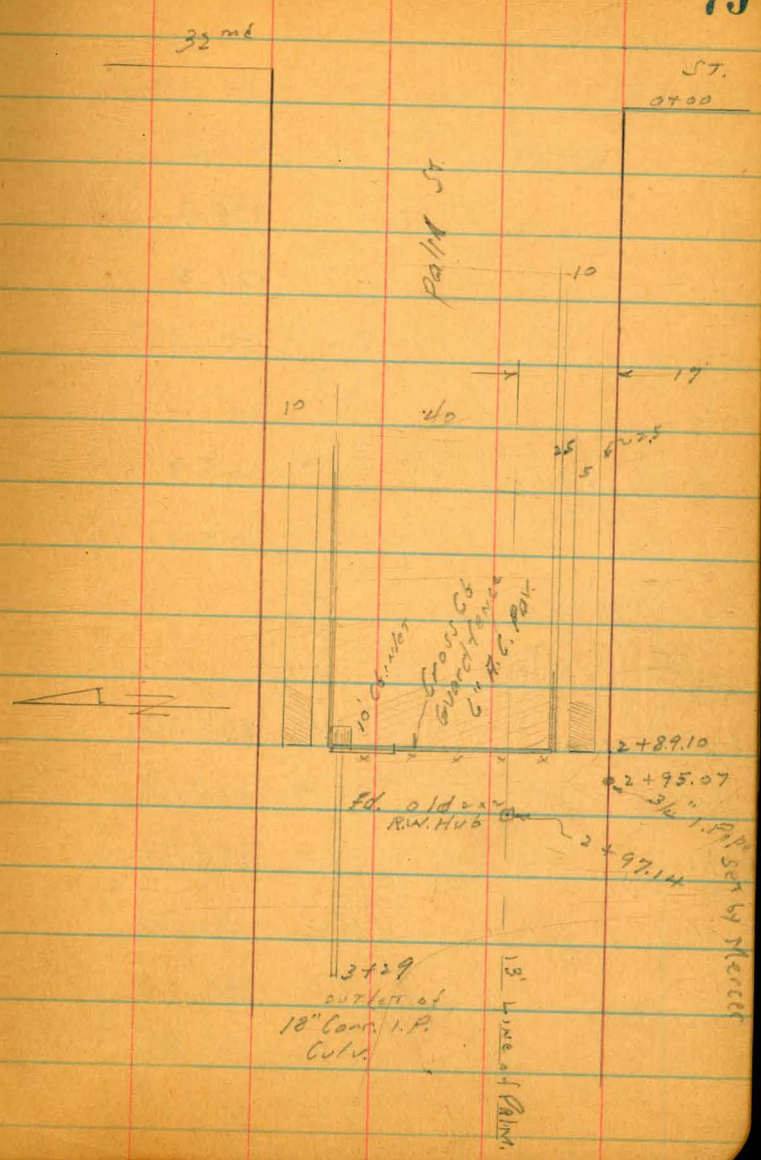


3/12

ST.

X 500 30' W of end of
Palm St W of 32nd St.

Top B.M. Curb 447	300.53	296.06	Top cb S. Side Palm St P 74
v + 79.10			
S cb	4.21	296.32	
S gut par.	4.88	295.65	
c "	5.39	295.14	
N gut "	6.15	294.38	
N cb	5.28	295.25	
v + 89.10 = Wly end of Paving			
N cb	5.47	295.06	
N gut. grate inlet	6.47	294.06	
FL. Box of CB inlet	11.18	289.35	
C Top cb. cross ST	5.02	295.51	
C par	5.82	294.71	
S cb " gut	5.12	295.41	
S cb	4.47	296.06	
v + 95.07			
S.L. Top 3/4 pipe	4.32	296.21	



300.53

3404/10

S	5.0	295.23
cb	5.5	295.0
C	5.6	294.9
+12	6.0	294.5
cb	8.6	291.9
N	13.5	287.0
+20	24.7	265.8
+40	36.0	264.53

3419/10

-45 same slope rate as N to -20

-20	31.8	268.73
N	21.4	279.13
cb	17.1	283.43
+10	10.2	290.33
C	9.8	290.73
cb	7.7	292.83
S	7.4	293.13

300.53

76

3429 on Nly curb line of Palm.

F.L. 18" Corr. 1. Pipe Culi. 21.10 279.43
OUTLET

77

78



#400

3.88
3.88

13.38
268.08 249.58

0.17 10.17 2.47
3.38 4.17
12.55
7.14 9.08 5.77
8.47
14.74 9.47
193 12.47

215.58+
0.24
3.1
3.94
4
3.74 7.74 1.03
7.24 11.74 3.57

1.57
0.74
0.83
0.66
3.5
12.57+

7.83
9.40 - 217.08
189.08
3.98
7.98
11.98
15.98
170.08

189.08
3.98
7.98
11.98
15.98
170.08

7.38

280.08 8.38

0.38 H.I.
280.46 H.I.
12.86
267.60 J.P.
0.95
268.55 H.I.
12.95
255.60 J.P.
0.22
255.82 H.I.
12.82
243.00 J.P.
0.60

243.65 H.I.
12.45
231.20 J.P.
0.34
231.54 H.I.
8.20
223.34 J.P.
1.57
224.91 H.I.
10.72
214.19 J.P.
1.49
215.68 H.I.
12.43
203.25 J.P.

208.85
7.60
3.60
11.60

205.63 H.I.
12.27
192.66 J.P.
0.40
193.06 H.I.
11.23
181.93 J.P.
4.62
156.55 H.I.

204
3.76
7.60
208.85

197.08
8.38

170.08

27.57
 154.53
 123.35
 46.3 = NEAR = 97

360.00
 27.57
 154.53
 3775.20
 123.35
 3706.58
 47.50
 3754.08

264.96
 3.45
 267.91
 6.3
 25000
 91672
 50000
 71436
 238168

3781
 3706.58
 3706.58
 261.6
 306.98
 29.98
 287.00
 25200
 120
 180
 90
 84
 192
 97
 205
 75
 249
 59
 233
 41
 269
 42
 267

120
 90
 84
 58
 36
 68
 50
 51

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TRAVERSE TABLE FOR TRANSIT BOOK.
 From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		1/2 DEGREE.		1/2 DEGREE.		1/2 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.	DEGREES.		1/2 DEGREE.		1/2 DEGREE.		1/2 DEGREE.		Degrees.
	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	
	DEGREES.		1/2 DEGREE.		1/2 DEGREE.		1/2 DEGREE.		