

1591

STEELE

No. 20



# EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and  
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

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

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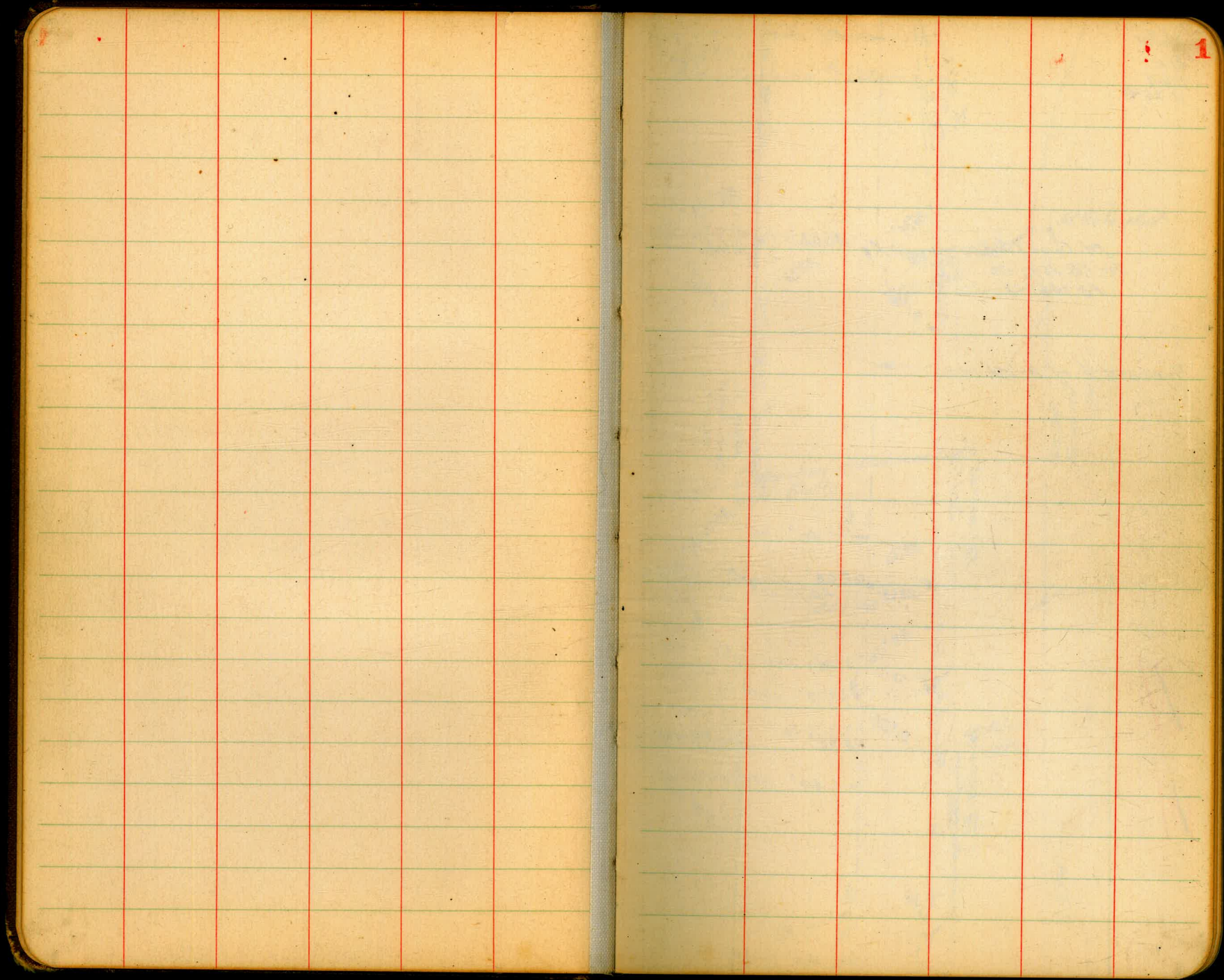
# 1591

ENGINEERING DEPARTMENT  
CITY OF SAN DIEGO,  
CALIFORNIA.

The paper stock of this book is made of a high grade 50% rag paper having a water resisting surface and is sewed with Bing Special Enamel Waterproof Thread.

Made in U. S. A.

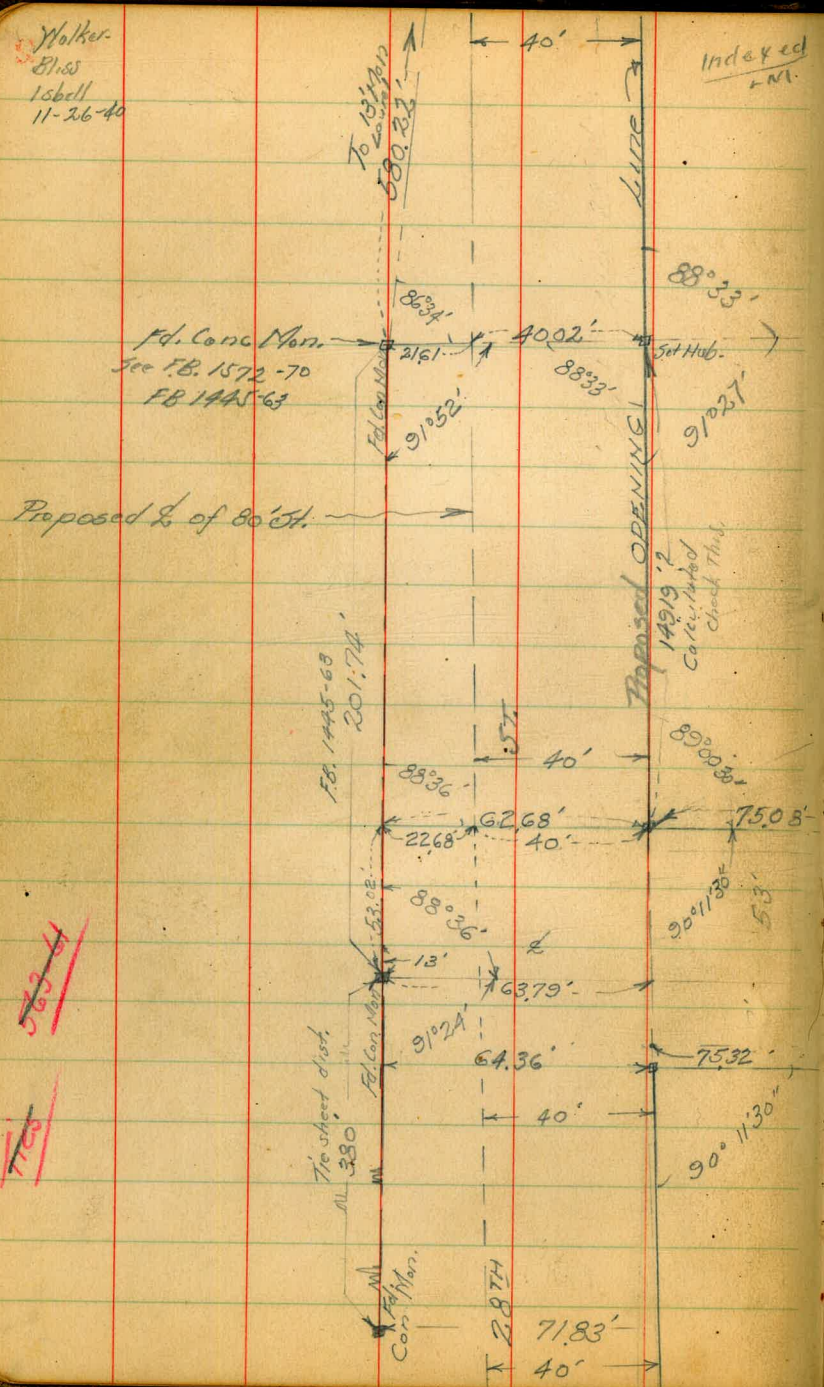






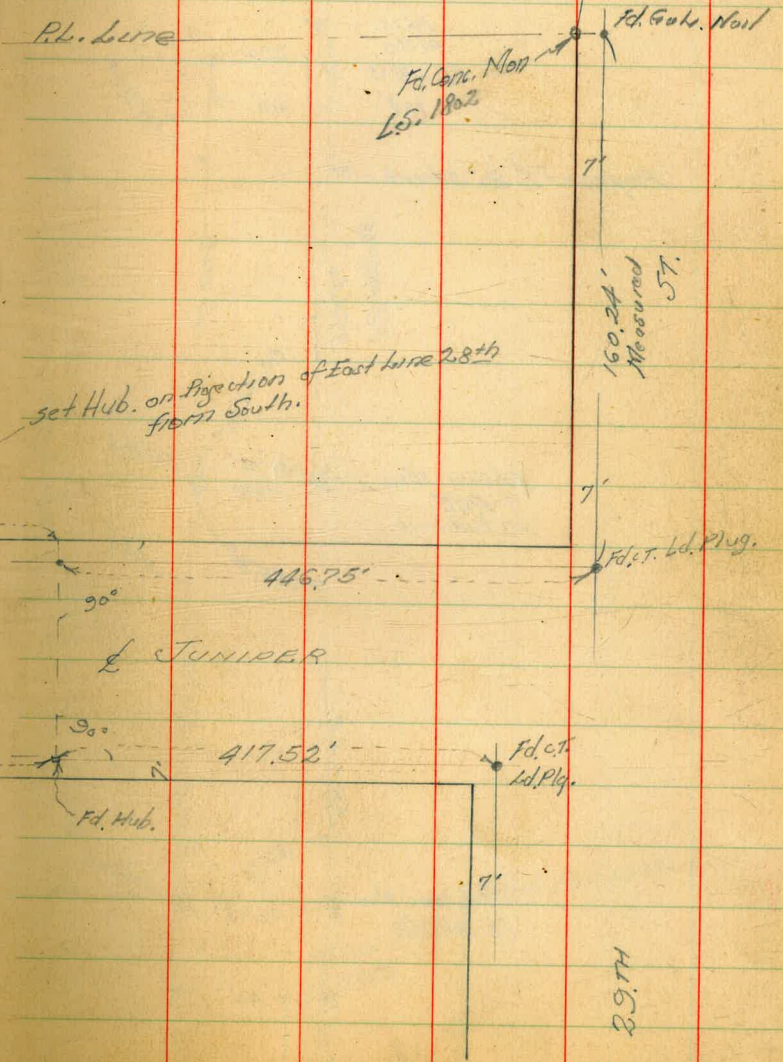
Walker  
Bliss  
Isbell  
11-26-40

Indexed  
L.M.

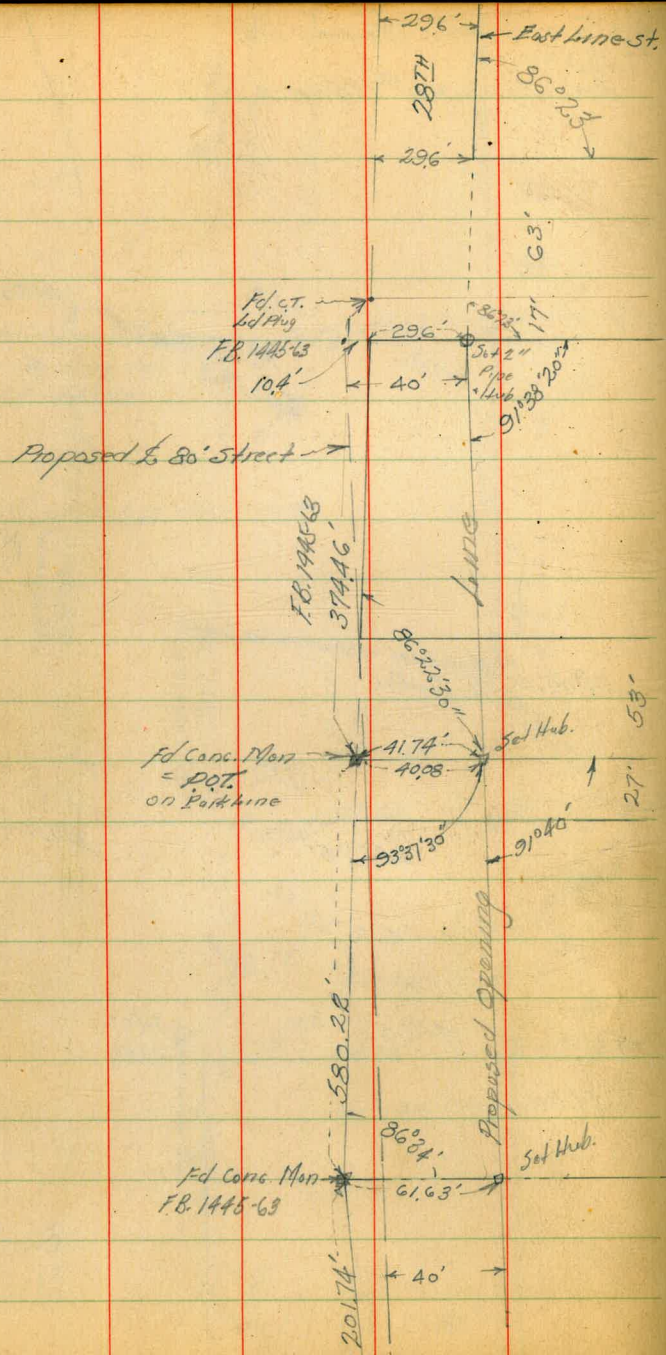


SURVEY for OPENING  
28TH ST.  
Bet. JUNIPER and MAPLE.

P.L. Line







MAPLE

LAUREL

Ph. Lane

Fd. Conc. Man  
LS 1802

Fd. Gate No. 117 Walk



Walker  
Bliss  
18 ball  
11-28-40

Levels 28th St.  
From Date St. To MAPLE St.

L<sub>1</sub> = 40' West of East line 28th  
From Date to N.W. Corner  
And Bet. Juniper & Maple St.  
L<sub>2</sub> = 40' West of Proposed Opening line  
05 per Sketch Page 2-3.

SW. B.P. Date & Grade	12.30	220.25		207.95
S line Date	4.2	216.0	✓	
L <sub>1</sub> "	4.2	216.0	✓	
N.W. "	4.6	215.6	✓	
+00	5.8	214.4	✓	
+50	8.6	211.2	✓	
+35	12.0	208.2	✓	
TP	0.05	207.83	12.47	207.78
+50	1.8	206.0	✓	
+65	4.1	203.7	✓	
+85	9.3	198.5	✓	
2+00	14.5	193.3	✓	
TP	0.04	195.56	12.31	195.52
+25	12.0	183.6	✓	
TP	0.1	182.9	12.8	182.8
+50	6.5	176.4	✓	
+68 = bottom channel	11.5	171.4	✓	

Reduced 12-2-40

INDEXED  
EFG

195.56 = T Inst.  
182.9 = Hand Level

4

2+85	11.2	171.7	✓	
3+00	10.0	172.9	✓	
TP	13.0	185.9	H. Level	
3+20.6 = Skinn Elm	11.5	174.4	✓	
South +14'	9.3	176.6	✓	
S Elm	1.5	184.4	✓	
N.W. Elm = 0+00	195.56	1.0	194.6	
TP	12.31	207.79	0.08	195.48
0+20	5.0	202.8	✓	
TP	12.98	220.49	0.28	207.51
0+40	12.2	208.3	✓	
+60	6.7	213.8	✓	
+75	3.8	216.7	✓	
+100	1.8	218.7	✓	
TP	5.23	225.10	0.62	219.87
+50	5.6	219.5	✓	
2+00	5.6	219.5	✓	
+50	6.7	218.4	✓	
3+00	11.3	213.8	✓	
3+21 = Skinn Elm St.	11.9	213.2	✓	



22510

L. Fir St.		12.8	212.3
T.P. 363	216.13	12.60	212.50
N.L. Fir St. = 0+00		4.9	211.2 ✓
+25		6.0	210.1 ✓
+37		11.8	204.3 ✓
+48 - Bottom Wash		12.3	203.8 ✓
+60		7.5	208.6 ✓
+73		1.0	215.1 ✓
T.P. 897	225.10	0.00	216.13
T.P. 12.83	232.75	5.18	219.92
1+00		13.0	219.7 ✓
+80		10.2	222.5 ✓
+60		8.8	223.9 ✓
2+00		7.6	225.1 ✓
+50		6.5	226.2 ✓
3+00		5.4	227.3 ✓
+77 = SL Grape		4.8	227.9 ✓
L. Grape		4.0	228.7 ✓
N.L. Grape = 0+00		3.5	229.2 ✓
T.P. 0.59	233.16	0.18	232.57

233.16

chk S.S. B.P. Grape & Grapes	0.10	233.06	
		232.95	
		0.11 = Error	
0+50	233.16	4.8	228.4 ✓
1+00		6.7	226.5 ✓
+50		8.9	224.3 ✓
+85		12.2	221.0 ✓
T.P. 0.92	221.67	12.41	220.75
2+00		3.1	218.6 ✓
+25		6.9	214.8 ✓
+50		9.5	212.2 ✓
+75		13.9	207.8 ✓
T.P. 0.12	208.83	12.96	208.71
3+05		6.9	201.9 ✓
3+ = Hawthorn		13.7	195.1 ✓
T.P. 0.09	196.04	12.88	195.95
S 7' Line Hawthorn on Hub.		3.79	192.25
L. Hawthorn		9.6	186.9 ✓
N.L. Hawthorne = 0+00 = 20 ft of S.		11.5	184.5 ✓
0+15 = Bottom Wash		13.0	183.0 ✓
+41		13.8	182.2 ✓
+58		9.4	186.6 ✓



196.04

0+80			6.5	189.5
1+00			12.9	183.1
+14			14.9	181.1
+31			14.8	181.2
+55			7.9	188.1
TP	12.22	207.61	0.65	195.39
1+80			9.6	198.0
2+00			1.8	205.8
TP	12.02	219.30	0.33	207.28
2+25			4.2	215.1
+50			1.7	217.6
+78			3.0	216.3
3+00			7.0	212.3
+35			13.7	205.6
TP	0.24	206.42	13.12	206.18
3+75			10.2	196.2
TP	0.24	193.65	13.01	193.41
4+00			3.1	190.5
+30			10.8	182.8
TP	5.27	185.81	13.11	180.54

185.81

4+50			9.3	176.5
+63 = South Bottom Wash			15.9	169.9
+71 = " " "			15.9	169.9
+95			8.0	177.8
5+01			4.7	181.1
+30			1.3	184.5
TP	8.24	193.60	0.45	185.36
5+65			6.1	187.5
6+00			4.7	188.9
+50			3.9	189.7
7+00 = SB Juniper			3.7	189.9
+40 = " "			4.6	189.0
TP	8.01	194.26	7.35	186.25
7+80 = H+L Juniper = 0+00			6.8	187.5
+27			6.8	187.5
+38			9.6	184.7
+64			10.2	184.1
+78			14.3	180.0
TP	1.89	183.15	12.70	181.56
1+00			5.8	177.3



183.15

1+29			8.4	174.7	✓
+48			10.1	173.0	✓
+73			12.6	170.5	✓
2+00			12.3	170.8	✓
+50			11.6	171.5	✓
+60			12.2	170.9	✓
+90			8.6	174.5	✓
3+00			7.9	175.2	✓
TP	12.84	184.50	11.49	171.66	
3+30			12.2	172.3	✓
+65 = ELY edge Golf Course			17.4	167.1	✓
4+00	"	"	17.4	167.5	✓
+50	"	"	16.4	168.1	✓
5+00	"	"	19.9	169.6	✓
+50	"	"	13.5	171.0	✓
6+00	"	"	12.4	172.1	✓
40' Lt. = Toe Green			10.9	174.1	
60' " on ELY edge Green			4.2	180.3	
6+30			9.4	176.1	✓
+75			9.5	175.0	✓

184.50

7+00			4.0	180.5	✓
TP	12.84	197.00	0.34	184.16	
+25			11.8	185.2	✓
7+	13' Line Level on Conc. Mon.		11.39	185.61	
7+50			8.6	188.4	✓
+75			4.1	192.9	✓
8+00			0.3	196.7	✓
TP	13.07	210.05	0.02	196.98	
+25			9.3	200.7	✓
+60			6.5	203.5	✓
TP	12.91	222.91	0.05	210.00	
9+00			10.5	212.4	✓
+25			5.9	217.0	✓
TP	12.85	235.63	0.13	222.78	
9+50			13.1	222.5	✓
+75			7.8	227.8	✓
10+00			2.9	232.7	✓
TP	12.76	248.01	0.38	235.25	
+25			9.0	239.0	✓
+45			4.0	244.0	✓



248.01

TP	12.83	260.41	0.93	247.58
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10+75			11.0	249.9 ✓
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+82 ± = Sh. Maple			7.6	252.8
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TP	9.68	267.22	2.87	257.54
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10+97			5.2	262.0
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11+02 ± = scb			5.12	262.10
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Cross Section Lafayette  
 Brandywine to Moreno Blvd.  
 See Sketch Book # 563 Page 61

INDEXED  
 LM

Dec 21-40  
 S. L. Sisson  
 North 6000  
 St. Moore

2+25

2+0

TP 3.07 92.76 11.99 89.69

1+50

1+0

0+50

0+0: S. L. Brandywine

BM 3.75 101.68

97.93

SF Prop. Hub  
 Brandywine  
 Lafayette

86.8	84.5	81.3	82.0	81.4	79.6	78.6
6.0 30	8.5 15	16.5	10.8	11.4 19	13.2 30	14.3 40

87.9	86.0	83.8	83.6	82.8	80.9	80.1
4.9 30	6.8 17	9.0 13	9.2	10.0 18	11.9 30	12.7 40

92.76

92.0	90.2	86.9	86.5	86.0	82.8	82.5
9.7 30	11.5 17	14.8 12	15.2	15.7 16	18.9 30	19.2 40

95.4	92.5	90.3	89.2	87.9	86.1	85.0	84.0
6.3 30	9.2 18	11.4 13	12.5	13.8 18	15.6 25	16.7 30	17.7 40

98.3	95.6	92.5	91.6	90.8	88.1	86.5
8.1 30	6.1 17	9.2 12	10.1	10.9 12	12.6 30	13.2 40

95.0	96.7	93.4	92.0	91.2	89.7	88.0
3.7 30	5.0 18	8.2 12	9.7	10.5 15	12.0 30	12.7 40

101.68



3755

TP 1.82 72.54 12.41 70.72

3745

3710

2+95.77 F.L. Morcano on X

TP 2.45 82.13 12.08 80.68

2+50

92.76

F S W

69.8	68.8	67.1	66.8	68.2	67.5	66.4	65.4	
27 40	37 30-Bad	5.4 15	5.7 30-Ditch	4.2 19	5.0 15	6.1 30	7.6 40	
72.54								
69.4	70.0	70.7	70.5	70.1	69.3	65.0	66.0	
137 40-Bot Ditch	131 30	124 30	126 30	130	138 10	181 22-Bot Ditch	171 30	182 40
79.8	79.7	79.0	75.7	74.8	74.3	71.2	71.1	
83 40	84 30	81 15	74 10	83	88	119 30	120 35	131 50
81.7	80.3	76.5	75.7	75.3	73.0	64.2		
14 60	28 17	66 10	74	78 20	10.1 30	190 40		
82.13								
85.0	83.6	79.5	78.2	78.3	80.0	79.1	78.1	
78 30	97 17	122 10	146 6	145	128 5	127 30	147 30	143 43-400 Cor
92.76								



BM

12.83

59.71

Hail Pole  
St Bunkerhill  
Morano  
59.72

4+09.01 = F.L. Morano of F

3+75 = Conc Apron East

3+60

72.54

5.0 40	5.5 30	5.7 15	6.1	6.3 17	6.4	6.5 21	6.6 26.5	6.7 30	6.8 30	6.9 30	7.0	7.1 30	7.2 30	7.3 30	7.4 30	7.5 30	7.6 30	7.7 30	7.8 30	7.9 30	8.0 30	8.1 30	8.2 30	8.3 30	8.4 30	8.5 30	8.6 30	8.7 30	8.8 30	8.9 30	9.0 30	9.1 30	9.2 30	9.3 30	9.4 30	9.5 30	9.6 30	9.7 30	9.8 30	9.9 30	10.0 30
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69.82  
272  
19-54  
St Garage  
Conc Apron

6.4 40	6.5 30	6.6 15	6.7 4.5	6.8 15	6.9 15	7.0 30	7.1 30	7.2 30	7.3 30	7.4 30	7.5 30	7.6 30	7.7 30	7.8 30	7.9 30	8.0 30	8.1 30	8.2 30	8.3 30	8.4 30	8.5 30	8.6 30	8.7 30	8.8 30	8.9 30	9.0 30	9.1 30	9.2 30	9.3 30	9.4 30	9.5 30	9.6 30	9.7 30	9.8 30	9.9 30	10.0 30
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72.54



Cross Section Paul Jones  
 3.1 Brandywine to Moreno Blvd  
 See FB 563-61.  
 " FB 2346-9.

INDEXED  
 LM

1775

1750

1725

TP 112 111.27 12.12 110.15

170

0750

070 = SL Brandywine

BM 4.59 122.27 119.68

Reduced & plotted  
 1-15-41 E.L.B.

Hub S.W. Prop  
 Brandywine  
 Paul Jones

60 Wide

12

106.7 4.6 10	103.3 8.0 30	102.1 9.2 20	103.5 8.8 15	102.3 9.0 15	102.1 9.2 15	100.1 11.2 15	99.8 11.5 30	100.4 10.7 45
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101.9 8.4 15	102.7 8.6 30	102.7 8.6 20	103.7 7.6 15	103.8 7.5 12	104.3 8.1 17	103.7 7.0 30	103.8 7.5 10
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104.3 7.0 60 9/1/63	105.9 5.4 50	107.3 4.0 30	106.9 4.4 15	107.3 4.0 10	106.7 4.6 12	107.9 3.4 15	107.0 4.3 30	107.2 4.1 40
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111.27

110.7 11.6 40	110.9 11.4 30	111.6 10.7 20	110.5 11.8 12	110.6 11.7 10	110.7 11.6 15	110.3 12.0 30	110.0 12.0 40
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117.3 5.0 40	117.3 5.0 30	117.1 5.2 20	116.1 6.2 17	115.8 6.5 15	115.9 6.4 15	115.9 6.4 30	115.5 6.8 40
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121.2 5.0 30	120.8 1.4 18	119.2 3.1 15	118.7 3.6 15	118.2 4.1 15	117.7 4.6 30
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122.27



4+0

TP 4.31 111.18 440 106.87

2+50

2+0

2+50

2+25

2+0

111.27

110.4	110.3	110.2	107.0	106.9	106.8	107.8	105.9	104.7
0.8	0.9	1.0	4.2	4.4	4.4	3.4	5.5	6.5
40	30	19	15	12	16	30	40	40

111.18

110.2	109.5	108.7	106.9	106.7	106.2	105.2	104.0
1.1	1.8	2.6	4.4	4.6	5.1	6.1	7.5
40	30	19	15	15	30	40	45

109.8	108.9	107.8	106.6	105.7	105.6	100.8	99.6
1.6	2.4	3.5	4.7	5.6	5.7	10.6	12.7
40	30	20	16	15	15	30	30

109.9	108.3	107.0	106.7	104.2	104.0	101.0	97.0	90.9
1.4	3.0	4.3	6.6	7.1	7.6	10.0	14.5	20.4
40	30	20	18	15	15	30	30	55

109.2	107.3	105.4	103.6	103.2	102.7	99.1	94.3	89.2	88.5
2.1	4.0	5.9	7.7	8.1	8.6	12.2	17.0	22.1	22.8
40	30	20	17	15	15	15	25	30	40

108.9	106.6	103.1	102.2	96.0	96.5	96.0	97.5
2.4	4.7	8.2	9.1	15.3	14.8	15.5	13.8
40	30	15	15	10	21	30	50

111.27



Paul Jones

5+92

5+8007-HL Bunkerbill

TP 2.46 101.25 12.39 98.79 ✓

5+50

5+0

4+50

4+25

111.18

14

F

S

X

92.8  
8.5  
30

91.1  
10.5  
50

89.4  
11.9  
15

87.7  
13.6  
30

83.9

97.3  
4.0  
30

95.4  
5.9  
17

92.4  
8.9  
14

90.8  
10.5  
11

90.4  
10.9  
11

90.9  
10.4  
15

88.1  
12.7  
30

101.25

102.0

101.2  
9.2  
40

100.0  
11.2  
19

94.4  
16.8  
13

94.7  
16.5  
14

94.9  
16.6  
14

93.0  
18.2  
21

92.1  
19.1  
30

91.3  
19.9  
40

104.6  
6.6  
40

103.5  
7.7  
30

103.0  
8.2  
25

99.9  
11.2  
20

98.8  
13.1  
13

98.5  
11.7  
12

98.9  
12.3  
12

100.5  
10.7  
17

100.1  
11.1  
25

99.0  
12.2  
30

13.3  
13.3  
40

108.1  
3.1  
40

108.0  
3.7  
30

107.7  
3.5  
19

104.7  
6.5  
14

104.3  
6.9  
14

104.1  
7.1  
14

104.9  
6.6  
20

104.0  
7.7  
30

103.5  
7.7  
40

109.7  
1.5  
40

109.7  
3.5  
30

109.9  
1.6  
20

106.2  
5.0  
15

106.3  
4.9  
10

105.7  
5.5  
10

106.6  
1.6  
14

104.9  
6.8  
30

104.1  
7.1  
40

111.18



0+75

TP 1.43 78.24 12.35 76.81

0+50

0+25

BM

1.79 87.27

SET Hub  
Bun & or hill  
& Pool Song

6+1007 = 0+0 - 5/4 Bunkerhill

TP 0.19 89.16 12.28 88.97

6+1007 = 1/2 Bunkerhill

101.25

18 10	24.8 30	12.7 19	1.0 14	1.1 14	1.2 8.0	65.2 20	63.4 30	62.0 25
----------	------------	------------	-----------	-----------	------------	------------	------------	------------

78.24

81.4 7.8 10	80.4 30	78.5 18	76.4 14	75.9 13	74.4 5	75.8 11	72.6 30	70.2 45
-------------------	------------	------------	------------	------------	-----------	------------	------------	------------

85.4 30	84.0 30	82.7 17	81.3 14	80.3 8	79.2 6	80.1 13	78.5 30	76.7 40
------------	------------	------------	------------	-----------	-----------	------------	------------	------------

87.3 19 30	85.8 34 17	84.0 5.2 12	83.0 6.2	82.1 7.1	83.0 6.2 8	82.5 6.7 15	80.8 8.4 30
------------------	------------------	-------------------	-------------	-------------	------------------	-------------------	-------------------

89.16

91.5 9.8 30	89.0 12.2 15	87.2 14.1	85.7 15.4 15	83.2 18.1 30
-------------------	--------------------	--------------	--------------------	--------------------

101.25



Poul Jones.

2+7825 - FL Marco 02 W

2+50

2+25

2+0

1+50

TP 2.13 6835 1208 6628

1+15

7821

66.3	66.0	64.8	61.6	61.4	61.4	60.0	58.7
2.1	2.4	2.6	2.8	2.9	2.9	2.4	2.7
40	30	15	12	10	7.0	15	30

67.1	66.6	65.7	61.3	63.1	61.9	62.4	61.7	58.6
1.3	1.0	2.7	2.1	5.3	6.5	6.0	6.7	9.8
40	30	17	12	5.3	15	30	35	40

66.0	65.1	64.0	63.5	63.4	62.2	59.2	58.5	
2.1	3.3	4.1	4.9	5.0	6.2	9.2	9.2	9.9
40	30	25	15	5.0	17	27	30	40

64.4	63.8	63.7	63.4	62.1	59.6	59.3	58.8
4.0	4.6	4.7	5.0	6.3	8.8	9.1	9.6
40	30	15	5.0	16	23	30	45

65.3	64.7	64.1	63.6	61.6	60.0	59.0
3.1	3.7	4.3	4.8	6.8	8.4	9.4
45	30	15	4.8	15	30	45

6835

65.2	64.5	64.2	65.2	65.2	64.5	60.1	59.6	59.0	
1.2	1.7	1.4	1.2	1.0	1.7	1.1	1.8	1.8	1.9
40	30	18	15	15	11	30	30	45	

7821



BM

8.62 59.73

Nail Pole  
SE 80' Starhill  
+ Moreno  
59.73

BM

10.09 58.26

SE 7' Hub  
Moreno Blvd  
Pool 52' 1/4

3+91.49 = EL. Moreno on F

3+70

3+50

3+0

68.05

E

S

W

60.4	59.5	58.5	58.1	58.1	49.6
7.6	8.9	9.9	10.0	10.0	1.88
10	30	15		16	28
56.2.6	57.9	58.9	58.8	58.1	58.2
8.8	8.5	9.5	9.6	10.5	10.2
	30	15		15	22
					26
					50.1
					38.8
					30
63.4	63.0	62.6	59.5	59.1	57.6
5.0	5.1	5.8	8.9	9.3	9.8
40	30	22	16		15
					10.8
					30
65.0	64.4	63.9	60.7	60.8	59.1
3.1	3.7	4.5	7.7	7.6	9.0
40	30	19	13		10
					58.1
					10.2
					30

68.35



Cross Section Ethon Allen Ave INDEXED  
 Brandywine to Ticonderoga LM  
 60 ft wide

Dec 26-40  
 S. L. Brandywine  
 Northham  
 N. School

1+50

143.5	142.5	140.3	140.1	138.7	137.7	136.8
4.5 40	5.5 30	7.7 15	7.9	9.6 15	10.6 30	11.2 40

1+0

144.4	145.4	143.5	140.8	140.2	139.0	137.6	136.5
1.6 40	7.6 30	4.5 18	7.2 12	7.8	9.0 15	10.4 30	11.5 40

0+75

Reduced, & plotted  
 1-15-41 E.L.B.

147.2	146.1	144.5	140.8	140.0	138.9	137.5	135.9
0.8 40	1.9 30	5.5 18	7.2 14	8.0	9.1 18	10.5 30	12.1 40

0+50

145.9	145.0	142.2	139.4	138.8	137.3	134.5	132.7
2.1 40	3.0 30	5.8 20	8.6 12	9.2	10.7 17	12.5 30	15.2 40

0+25

143.1	140.8	138.0	137.6	136.2	132.1	128.9
4.9 30	7.7 17	10.0 11	10.4	11.8 20	15.9 30	19.1 30

0+0 = S.L. Brandywine

141.0	136.9	136.5	135.9	133.9
7.0 30	11.1 10	11.5	12.1 15	14.1 30

B.M.

6.66

147.99

141.32

Hub S.F.P. Co  
 Cor. 7th  
 Brandywine  
 Ticonderoga

147.99



TP 0.40 124.59 124.6 124.19

4+0

3+50

3+0

TP 1.05 126.65 123.9 125.60

2+50

2+0

147.99

125.6  
11.1  
40

125.2  
11.5  
30

125.0  
11.7  
8

123.4  
13.2  
11

124.2  
12.5

122.4  
14.3  
12

122.1  
14.6  
30

121.7  
15.0  
40

130.6  
6.1  
40

129.8  
8.6  
30

128.8  
7.9  
15

127.9  
8.8  
12

127.9  
8.8

126.8  
9.9  
12

125.9  
10.8  
30

125.4  
11.3  
40

135.0  
1.7  
40

134.2  
2.5  
30

133.2  
3.5  
16

132.1  
4.6  
13

132.2  
4.5

130.9  
5.8  
12

130.3  
6.4  
30

129.7  
6.9  
40

136.65

138.0  
10.0  
40

137.2  
10.8  
30

136.0  
12.0  
17

135.3  
12.7  
14

135.5  
12.5

134.0  
14.0  
15

133.2  
14.8  
30

132.6  
15.4  
40

140.6  
7.4  
40

139.8  
8.2  
30

138.4  
9.6  
15

138.3  
9.7

136.6  
11.4  
15

136.0  
12.0  
30

135.1  
12.9  
40

147.99



6+10.23 = 2 Bunkerhill

TP 0.22 100.93 12.05 100.71

5+80.23 = 11.2 Bunkerhill

5+50

TP 0.21 112.76 12.04 112.55

5+0

4+50

124.59

99.7  
12  
30

98.3  
26  
30

97.7  
32  
30

95.1  
58  
30

97.8  
31  
30

94.0  
29  
30

97.5  
59  
30

100.93

102.2  
106  
45

101.6  
112  
30

101.2  
116  
30

101.6  
112  
30

100.5  
123  
30

102.8  
100  
30

102.2  
106  
30

103.7  
91  
45

104.6  
82  
30

106.4  
64  
30

104.9  
88  
30

106.0  
68  
30

105.7  
71  
30

104.9  
79  
30

106.7  
61  
30

106.1  
67  
30

105.5  
73  
30

112.76

111.8  
128  
45

113.9  
107  
30

113.5  
111  
30

110.1  
115  
30

112.1  
125  
30

112.5  
121  
30

110.9  
137  
30

113.1  
115  
30

112.6  
140  
30

112.1  
125  
30

119.8  
48  
40

119.5  
55  
30

119.1  
55  
18

117.9  
67  
30

115.9  
87  
11

118.0  
66  
9

118.5  
61  
30

117.1  
75  
12

118.0  
64  
18

117.9  
67  
30

117.3  
73  
40

124.59



0+90

0+75

0+50

0+25

B.M

6+10.23-0+0 = St. Bankerhill

6+25

100.93

412

96.81

Hubb. 2 72/100  
Banker Hill  
4 2500 #100

96.9	96.0	94.9	93.3	92.4	91.6	88.3	75.8
40	36	30	17	8.5	9.3	12.6	25.1
40	36	30	17	8.5	9.3	12.6	25.1

98.0	97.3	96.7	94.2	92.9	91.9	90.6	83.7	74.3	79.4
29	36	42	67	80	9.0	10.6	17.8	26.6	21.5
30	30	19	16	15	15	30	30	42	50

98.6	97.8	94.4	93.4	90.2	93.4	92.0	99.9	82.7	84.4
26	25	65	7.5	10.7	7.5	7.8	2.0	18.2	16.5
30	25	17	9	8	1	7.8	30	35	50

98.9	95.6	94.8	92.9	93.4	83.4	89.2	88.7	88.1
21	35	6.1	7.0	7.5	17.5	11.7	12.2	12.8
40	30	15	15	15	13	30	30	45

96.8	96.4	87.9	94.9	94.0	94.2
41	45	12.0	6.0	6.0	6.7
30	11	15	15	15	30

98.3	96.4	89.9	90.4	96.1	96.3	96.4
26	45	11.0	10.5	4.8	4.6	4.5
30	11	6	2	15	15	30

100.93



TP 0.71 7860 11.88 77.89

3+07 15 Fajr W.L. N.E. Cor Lath Fence

3+0

2+50

2+0

TP 0.29 89.77 11.45 89.48

1+50

1+15

100.93

79.8	79.6	79.4	78.9	79.3	77.9	77.3	76.5
9.9	10.7	10.4	10.9	10.5	11.9	12.5	13.2
40	30	16	30	15	15	30	35

83.9	83.4	82.9	82.4	82.2	80.5	80.1	79.7
6.9	6.1	6.9	7.4	7.6	9.3	9.7	10.1
40	30	15	15	15	15	30	40

88.0	87.3	86.8	85.9	86.0	84.9	83.9	83.4
1.8	2.5	2.0	2.9	2.8	4.9	5.9	6.1
40	30	18	14	15	15	30	40

89.77

89.24	91.8	90.1	89.5	88.2	86.9	83.8
8.2	9.1	10.8	11.4	12.7	14.0	17.1
40	30	14	13	13	30	45

95.4	94.6	93.5	92.4	91.5	89.9	86.9	79.9
5.5	6.3	7.4	8.5	9.4	11.0	14.0	21.0
40	30	19	17	14	15	30	50

100.93



BM

1.85

67.59

1727 Hob  
Tico's derago  
+ Projector  
67.61

6+00.10-NL Tico's derago

5+50

TP

3.15

69.44

12.31

66.29

5+0

4+50

4+03 14' E of N.H. = 5' for both fence

4+0

3+50

78.60

E

S

W

58.6  
10.8  
30.

58.7  
10.7  
9.

59.7  
9.7  
15.

59.5  
9.9  
30.

59.7  
9.7  
30.

62.1  
7.3  
45.

62.7  
6.7  
30.

63.0  
6.4  
12.

64.4  
5.0  
4.

64.5  
4.9  
15.

63.8  
5.6  
22.

64.3  
5.1  
30.

62.8  
5.6  
45.

69.44

67.2  
11.4  
40.

67.6  
11.0  
30.

67.2  
11.4  
13.

68.1  
10.5  
10.

68.0  
10.6  
5.

67.8  
10.8  
15.

66.2  
12.4  
30.

64.6  
14.0  
25.

64.3  
14.3  
30.

62.6  
16.0  
45.

70.3  
8.3  
40.

70.7  
7.9  
30.

70.4  
8.2  
15.

70.1  
8.5  
12.

70.3  
8.1  
5.

70.3  
8.5  
15.

68.8  
9.8  
15.

68.1  
10.5  
30.

65.6  
13.0  
45.

74.1  
4.5  
40.

74.1  
4.5  
30.

73.7  
4.9  
15.

73.2  
5.4  
13.

73.5  
5.1  
8.

73.1  
5.5  
14.

71.9  
6.7  
30.

71.2  
7.4  
40.

70.1  
8.5  
40.

77.4  
1.8  
40.

77.0  
1.6  
30.

76.2  
2.4  
13.

76.5  
2.1  
13.

75.2  
2.4  
13.

74.6  
4.0  
30.

74.1  
4.5  
40.

78.60



Cross Section Princeton Ave.  
Bradywine to Ticonderoga

60' wide

INDEXED  
LM

F

S

W

24

TP 0.52 158.06 12.34 157.54

2+0

1+50

TP 1.03 169.88 12.02 168.85

1+0

0+50

0+0 = S.L. Bradywine

BM 5.64 180.87

175.23

Notes 2191  
Bradywine  
147 to Princeton

Reduced & plotted  
1-15-41 E.L.A.

158.8  
111 117 120 147 127 122 123 124 120 118  
40 30 17 10 8 12 12 20 30 40

167.2 166.8 166.1 163.9 164.5 165.0 164.2 164.7 164.4 164.3  
27 31 38 60 52 49 57 52 55 56  
40 30 19 15 12 11 17 20 20 40

169.88

172.8 172.1 171.4 169.9 170.3 170.4 169.0 168.8 167.9  
81 88 95 110 106 105 119 121 120  
40 30 18 15 11 13 15 30 40

176.5 174.0 175.2 173.7 174.4 173.9 172.9 171.6 170.7  
44 49 57 72 65 70 80 92 102  
40 30 21 15 11 15 15 30 40

179.2 179.0 177.2 177.0 175.9 174.6  
17 19 27 29 35 36  
30 23 13 13 13 30

180.87



3+50

3+25

3+0

TP 6.53 152.90 11.69 146.37

2+75

2+50

2+28

158.06

	F	S	H
151.5	150.0	148.7	
1.4/40	2.9/30	4.2/20	5.8/12
			6.5/12
			8.7/5
			11.8/30
			141.1
			135.3
			176/50

153.7	151.5	149.3	147.2	146.4	144.4	143.0	139.7	136.5	132.4
1.8/40	1.4/30	2.6/16	5.7/11	6.5/11	8.5/10	9.0/30	13.2/50	16.4/40	20.5/40
									46.8/100

151.9	149.7	147.9	145.9	145.0	143.2	140.4	139.4	133.9	139.4
1.0/40	2.2/30	5.0/18	7.0/11	7.9/11	9.7/10	12.5/30	13.5/27	19.0/30	13.5/50
								130.0/100	130.0/100

152.90

51.6	147.6	146.6	146.3	144.9	142.9	143.3	145.1
6.5/40	10.5/30	11.5/26	11.8/15	13.2/13	15.2/15	14.8/30	13.0/45

148.4	148.7	148.6	148.9	148.3	149.0	149.5
9.7/50	9.4/30	9.5/15	9.2/15	9.8/15	9.1/30	8.0/45

153.0	153.0	153.5	152.2	151.9	153.1	152.8	152.6	152.8
5.1/45	5.1/30	4.6/19	5.8/17	6.3/10	5.0/15	5.8/15	5.7/30	5.1/40

158.06



5+80.18.11 L Bunkerbill

TP 1.12 130.41 12.38 129.29

5+50

5+0

TP 1.01 141.67 12.24 140.66

4+50

4+0

152.90

F A H

128.9	130.4	130.4	129.8	129.0	128.2	127.2
15/30	00/35	0.0/19	0.6/15	1.4	1.5/15	0.8/30

130.41

134.6	133.5	133.0	131.9	131.4	130.7	129.7	128.5
7.1/40	8.2/30	8.7/17	9.8/14	10.3	11.0/15	12.0/30	13.2/40

139.9	138.3	137.6	136.4	136.6	135.8	134.2	133.2
1.9/40	0.4/30	4.1/18	5.3/14	5.1	5.9/10	7.5/30	8.5/40

141.67

143.9	142.9	142.2	140.8	140.8	139.7	137.5	137.1
9.0/40	10.0/30	10.7/26	14.1/15	12.1	13.2/15	15.4/30	15.8/40

147.7	146.8	145.5	143.6	143.7	142.4	140.8	139.4
5.2/40	6.1/30	7.4/17	9.3/13	9.2	10.5/15	12.1/30	13.5/40

152.90







TP 0.25 96.24 12.36 95.99

3+50

3+0

2+50

TP 0.65 108.35 11.90 107.70

2+0

1+50

119.60

F	Z	Y
99.2 92 40	98.3 10.1 30	97.2 11.2 20
95.7 12.7 15	96.0 12.4 10	94.2 13.2 15
93.9 14.5 15	92.1 16.3 30	91.4 17.0 40
104.4 40 40	103.7 4.7 30	102.3 6.1 18
101.1 7.3 10	100.2 8.2 10	99.0 9.4 10
97.9 10.6 20	96.3 12.1 30	95.4 13.0 40
108.7 10.3 40	108.0 0.4 30	106.8 1.6 19
105.4 5.0 14	104.6 3.8 30	103.4 5.0 10
102.1 6.3 20	101.0 7.4 30	100.2 8.2 40
108.35		
112.6 7.0 40	111.6 8.0 30	111.0 8.6 24
109.5 10.1 15	108.7 10.9 15	107.3 12.3 15
105.8 13.8 30	104.8 14.8 40	
115.9 3.7 40	115.2 4.4 20	113.9 5.7 17
113.1 6.5 14	112.7 6.9 15	111.5 8.1 15
110.1 9.5 30	108.9 10.7 40	

119.60



5+50

5+20

5+0

4+80

TP

0.57

84.53

12.28

82.96

4+50

4+0

96.24

81.7	80.5	79.0	76.3	76.1	74.3	73.1	71.5	72.3
2.8	4.0	5.1	8.2	8.4	10.2	11.4	13.0	12.2
40	30	20	14	14	10	17	25	30

82.7	81.5	80.1	78.5	77.5	76.	73.2	76.0	75.4
1.8	3.1	4.4	6.0	7.0	7.7	11.3	8.5	9.1
40	30	30	15	15	9	15	21	30

83.7	83.0	81.7	79.9	79.0	75.8	75.2	77.9	76.6
0.8	1.5	2.8	4.6	5.5	8.7	9.2	7.2	7.9
40	30	20	15	15	15	15	25	30

83.4	82.9	81.4	78.	81.0	80.7	80.1	76.5	78.8
1.1	1.6	3.1	5.8	5.5	0.8	4.4	8.0	5.7
40	30	30	12	15	15	8	14	19

84.53

87.6	86.8	86.0	83.2	85.0	84.2	82.4	82.1	80.5
8.6	9.4	10.7	12.0	11.7	12.0	13.6	14.1	15.7
40	30	20	15	10	10	10	30	30

93.5	92.3	91.3	89.3	90.4	90.0	89.2	87.5	88.5
2.7	3.9	4.9	6.9	5.7	6.2	7.0	8.7	7.7
40	30	20	13	16	12	12	16	19

96.24



Princeton Ave

F

Z

W

30

BM

8.91

67.59

NW 7/16  
Ticonderoga  
+ Princeton  
67.61

549993 = N.L. Ticonderoga

TP

2.69

76.50

11.72

72.81

84.53

74.8  
17  
36

73.5  
30  
20

71.9  
46  
15

71.1  
54

69.7  
6.8  
15

68.2  
8.3  
30

76.50

84.53



Cross Section Buckner Hill St.  
 Morana Blvd to Treaton Ave

Indexed  
 I.M.

1+0

0+75

TP 11.35 80.31 0.43 68.96

0+50

0+25

0+0 = Fly Morana on South

0-31.79 07N = Fly Morana  
 0+0 07 South

BM 9.67 69.39

54 Nail Pole  
 Buckner Hill  
 + Morana

60' Width

N

S

S

Dec. 31, 1931

S. J. Moore  
 S. J. Moore

80.7	79.7	77.3	76.2	76.0	70.7	69.5	67.3
+0.4	0.6	0.2	4.1	4.3	9.6	10.8	13.0
30	25	22	41	43	23	30	45

79.2	78.3	73.2	73.2	72.4	67.9	66.0	62.3
+0.1	0.2	0.1	7.1	7.9	12.4	14.3	18.0
30	26	23	71	70	23	30	45

80.31

75.4	74.7	69.4	68.9	68.5	62.9	61.5	58.8
+0.0	+0.0	0.0	0.5	0.9	6.5	7.9	10.6
30	25	22	23	23	23	30	45

71.9	70.8	65.7	64.8	64.4	59.8	58.5	57.7
+0.5	+1.4	0.7	4.6	5.6	9.6	10.9	11.7
30	26	21	46	47	23	30	40

67.9	66.3	65.9	60.9	60.9	60.3	58.0	56.6
+1.5	0.0	0.5	0.0	0.0	9.1	11.4	13.8
40	30	27	21	26	9	30	40

61.9	60.8	59.8	57.6	57.3	58.0	58.0
+0.4	0.6	0.6	9.8	10.1	11.4	11.4
34	24	21	21	12	34	34

69.39



2+0

2+75

2+40

TP 11.99 103.59 0.27 91.60

2+07.53 FL Paul Jones

1+17.53 FL Paul Jones

1+25

TP 11.76 91.87 0.20 80.11  
80.31

H	D	S
104.4 70.8 30	103.6 0.0 21	99.9 5.7 19
99.7 0.7 8	99.1 4.5 8	97.5 6.1 20
94.0 9.6 40	95.9 7.7 30	

H	D	S
103.2 30 24	102.6 1.0 25	98.4 5.5 20
98.4 5.7 12	95.0 8.6 30	102 40

H	D	S
101.7 1.9 30	101.0 2.6 21	95.6 8.0 19
96.1 7.5 10	95.6 8.0 10	93.7 9.9 20
89.4 14.2 40	91.5 12.1 30	

103.59

H	D	S
84.9 7.0 20	84.8 7.1 27	80.7 11.2 21
80.1 11.8 10	79.7 12.2 10	76.9 15.0 30
75.8 16.6 40		

91.87



Bunker Hill St

5+40

TP 12.34 109.18 675 -96.84

5+12.66 = F.L. F4502 Allen

4+52.66 = W.L. F4502 Allen

4+25

4+0

3+50

103.59

SE 7' Hub  
Bunker Hill  
F.L. F4502 Allen  
96.84

106.0	106.1	105.4	103.9	104.0	102.8	102.3	102.1	103.1	103.4	103.6
32/10	31/30	30/27	31/18	32/10	31/5.4	30/15	31/18	31/21	30/30	31/40

109.18

98.9	97.4	96.7	95.8	93.5	92.6	91.2
47/30	62/20	69/15	78/15	101/30	110/30	124/40

100.0	99.2	97.9	97.3	96.6	95.0	93.0	91.2	89.9
26/30	41/30	57/22	63/20	70/20	86/15	106/23	124/30	137/40

101.5	101.1	98.9	98.2	97.5	96.6	94.0	92.5
21/30	25/26	47/23	54/20	61/10	70/12	96/30	111/40

103.59



8+1779 - EL Princeton

7+5779 - WL Princeton

7+30

7+0

TP 11.76 131.86 0.26 120.10

6+50

6+0

TP 11.39 120.36 0.21 108.97

5+70

109.18

4

2

5

34

123.3	124.3	124.1	118.4	122.7	122.2	121.8	119.6	120.9	120.2
6.6	7.6	7.8	13.5	9.1	9.7	10.1	12.3	11.0	11.7
40	30	27	22	18	3	3	3	13	20

123.3	122.5	116.9	121.1	120.6	118.9	116.7	118.3	117.9	116.9
8.4	9.4	15.0	10.8	11.3	13.0	15.2	13.6	14.0	15.0
40	30	23	19	14	14	18	20	30	40

131.86

119.7	118.9	118.6	115.8	117.2	116.6	115.5	112.9	115.3	114.5	113.4
0.7	1.5	1.8	4.6	3.7	3.8	4.9	7.5	5.1	5.9	7.0
40	30	26	23	20	28	11	15	17	30	40

114.7	113.6	113.1	109.4	111.1	110.9	110.0	108.1	110.1	109.8	109.3
5.7	6.8	7.3	11.0	9.3	9.5	10.4	12.3	10.3	10.6	11.1
40	30	25	20	12	10	10	15	20	30	40

120.36

111.8	110.9	110.4	106.0	107.0	106.9	105.7	105.1	106.8	106.2	105.8
12.6	11.7	11.2	2.7	2.7	2.2	3.5	4.1	2.4	3.0	3.4
40	30	27	18	15	15	10	17	20	30	40

109.18



Bank Hill St.  
11+47.82 = F L Moultrie

10+87.82 = H L Moultrie

10+50

10+0

TP 11.34 154.06 0.15 142.72

9+50

9+0

8+50

TP 11.20 142.87 0.19 131.67

131.86

5 Jan 2-41

35

151.9	150.7	150.2	147.3	149.0	147.7	148.1	142.5	147.7	146.9	146.4
22	34	39	6.8	9.1	4.4	6.0	11.6	6.4	7.2	7.7
40	30	21	17	9	17	13	18	21	30	40

149.0	148.7	147.4	144.9	145.8	146.0	144.4	143.8	142.8
5.1	5.4	6.7	9.2	8.3	8.1	9.7	10.6	11.3
40	36	22	19	9	8	10	30	40

154.06

146.2	143.4	142.9	140.1	141.2	141.4	140.4	138.9	139.1	138.5
7.3	7.5	8.0	7.8	7.7	7.5	7.5	4.0	3.8	4.1
40	30	34	15	12	15	9	18	30	40

139.9	138.3	137.3	133.4	136.3	136.4	135.3	134.2	133.8	133.4
2.0	4.6	5.6	9.5	6.6	6.5	7.6	8.7	9.1	9.5
40	30	24	13	12	6.5	12	17	30	40

134.7	134.0	132.2	127.9	131.2	131.4	129.9	129.7	129.5	128.4
8.7	8.9	9.7	15.0	11.7	11.5	13.0	13.2	13.4	14.5
40	36	23	15	11	11	15	10	36	40

142.87



1370

TP 11.60 188.31 0.52 176.71

12+50

12+20

TP 11.85 177.23 0.19 165.38

1480

TP 12.06 165.57 0.55 153.51

BM

2.25 151.81  
154.06

5M 7' Hub  
Bankert Hill  
+ 151.82  
151.82

181.4	182.0	101.4	177.3	179.5	189.1	178.6	177.6	176.9
69	63	69	110	88	82	97	107	114
40	30	25	19	15		13	30	40

188.31

178.3	176.8	176.9	173.5	175.5	175.9	174.5	174.2	173.7
11	04	03	37	17	13	26	30	25
40	30	23	18	14		13	30	40

173.7	173.4	172.6	168.2	171.2	171.8	169.2	171.3	171.5	171.3
25	38	46	90	60	57	80	59	57	59
40	30	34	20	15		9	14	30	40

177.23

167.7	166.6	166.3	159.4	164.5	165.2	164.5	161.0	164.0	162.8	164.7	164.7
21	10	07	69	61	04	11	46	16	18	09	09
40	30	24	17	9		7	10	18	18	36	40

165.57







Cross Section Brandywine St  
 Moreno Blvd. to Trenton  
 Cross Sectioned 60' Wide From South Side

Indexed  
 LM

38

170

0770

TP 1173 8437 0.25 7264

0785

0710

070 = Fly Moreno on South

0-31.79 0717 = Fly Moreno  
 070 075 = Fly Moreno

B.M. 1226 7289

60.63

Hub 52  
 Brandywine  
 Fly Moreno

Reduced & Plotted  
 1-16-41 E.L.B.

80.9 80.5 80.1 77.8 80.0 80.0 79.9 77.7 81.5 81.8 81.2  
 3.5 3.8 4.3 6.6 4.4 4.4 4.5 6.7 2.9 4.6 2.2  
 10 30 20 17 15 15 15 18 20 30 40

74.4 74.7 76.4 75.9 76.2 75.1 75.4 77.4 77.6 77.8  
 10.0 9.7 8.0 8.5 8.2 8.3 9.0 7.0 6.8 6.6  
 40 30 24 15 13 13 20 22 30 40

84.37

70.9 70.7 72.2 71.7 71.3 71.3 68.4 71.6 72.5 71.6 71.4  
 2.0 2.7 0.7 1.2 1.6 1.6 1.5 1.9 0.4 1.8 1.5  
 10 30 19 13 16 16 11 15 20 30 40

68.8 69.1 69.2 68.4 68.0 67.4 63.5 68.2 67.5 65.9 61.0  
 4.1 5.0 5.7 4.5 4.9 5.5 9.4 4.7 5.4 7.0 11.9  
 40 30 16 19 10 12 14 15 30 30 45

67.7 67.4 67.7 66.5 65.7 62.1 64.7 64.6 60.9  
 7.7 6.5 6.2 6.4 7.2 10.8 8.2 8.3 12.0  
 40 30 15 14 12 18 20 27 30

66.8 64.6 64.2 64.5 64.2 60.9  
 6.1 8.3 8.7 8.4 8.7 12.0  
 34 14 19 19 25 34

72.89



2+16.93 = E-L Lafayette

TP 11.86 107.41 0.27 95.55

2+0.5

1+98

1+86.93 = L Lafayette

1+56.93 = H-L Lafayette

TP 11.71 95.82 0.26 84.11  
84.37

95.5	95.7	95.0	92.8	95.2	94.7	94.0	95.0	97.7	97.9
119	117	124	146	133	127	134	124	97	95
40	30	20	17	13		13	20	23	30

107.41

93.6	92.8	94.0	96.5	96.8
87.2	83.0	1.8	10.7	7.0
11	18	22	30	30

92.9	91.8	93.2	93.0
87.9	4.0	1.6	2.8
11	11	20	30

92.0	92.2	92.2	91.3	92.1	91.8	91.3	92.0	92.0
87.8	87.6	87.6	4.6	87.7	4.0	4.5	87.8	87.8
40	30	25	19	15		15	20	30

88.3	88.1	87.0	88.0	88.2	87.8	87.7	87.9	88.0	88.7
75	77	98	78	76	8.0	8.1	9.9	7.8	6.1
40	30	25	23	15		8	9	17	23

95.82



4+87 = W.L. Paul Jones

4+50

4+0

7P 1179 11874 0.46 106.95

3+50

3+0

2+50

107.41

118.7	118.4	117.7	115.8	117.4	117.0	116.5	117.8	117.6
00 40	03 30	10 13	29 10	15 80	17 17	22 17	0.9 31	1.1 30
115.5	114.7	114.8	113.4	114.9	114.7	113.9	115.7	115.4
02 40	10 30	09 13	53 10	08 80	10 10	18 18	30 22	0.0 30
110.4	110.4	109.7	106.7	109.9	110.0	109.6	111.0	111.1
80 40	80 30	90 15	120 12	88 10	8.7 14	9.1 14	7.7 33	7.6 30
11874 ✓								
106.3	106.2	105.8	102.0	106.0	106.0	105.8	106.5	106.8
1.1 40	1.2 30	1.6 17	5.4 14	1.7 17	1.4 14	1.6 18	0.9 20	0.6 30
101.0	101.8	102.0	99.2	102.1	101.6	101.7	103.5	103.4
6.1 40	5.6 30	5.7 18	8.2 15	5.5 13	5.8 13	5.7 17	5.9 31	7.0 30
98.1	98.1	97.9	96.1	97.8	97.6	96.8	97.6	100.9
92 40	97 30	95 19	1.5 16	9.6 13	9.8 13	10.6 13	9.8 30	6.5 23
107.41								
							101.1	101.6
							6.3 30	5.8 40



7+0

TP 11.57 141.04 0.20 129.47

6+50

6+0

5+17 = EL Paul Jones

5+17 = L Paul Jones

TP 12.00 129.67 1.07 117.67  
118.74

Hub SWGT  
Brandywine  
+ Paul Jones  
117.68

7.39  
40

138.4	137.6	134.6	131.1	130.9	129.7	128.4	127.9	126.9
2.6 40	6.3 30	6.4 12	9.9 6	10.1	11.0 18	12.6 24	13.1 30	14.1 40
132.7	131.2	129.0	127.5	128.5	128.2	127.5	127.5	125.8
7.20 30	7.5 15	0.7 11	2.7 6	1.2 4	1.5	2.2 17	2.2 22	3.9 30
128.7	127.9	127.0	125.2	123.2	125.4	124.2	123.7	122.6
10 40	1.8 30	2.7 17	4.6 11	6.5 8	4.0 6	4.6	5.5 17	6.0 30
123.5	121.9	122.0	119.2	121.7	121.4	120.3	121.6	121.2
6.7 40	7.8 30	7.7 14	10.5 11	8.0 8	8.3	9.1 15	8.1 23	8.5 30
120.3	120.1	119.9	118.2	119.4	119.2	118.6	118.5	
9.1 40	9.6 30	9.8 13	11.5 9	10.8 8	10.4	11.1 15	11.2 30	

129.67



9+0

TP 11.80 152.32 0.52 140.52

8+51.91 = F.L. Ethen Allen

8+21.91 = F. Ethen Allen

7+91.91 = H.L. Ethen Allen

7+70

7+40

141.04

146.5  
 $\begin{array}{r} 145.0 \\ 1.5 \\ \hline 146.5 \end{array}$   
 143.1  
 $\begin{array}{r} 141.6 \\ 1.5 \\ \hline 143.1 \end{array}$   
 143.5  
 $\begin{array}{r} 142.0 \\ 1.5 \\ \hline 143.5 \end{array}$   
 144.8  
 $\begin{array}{r} 143.3 \\ 1.5 \\ \hline 144.8 \end{array}$   
 144.6  
 $\begin{array}{r} 143.1 \\ 1.5 \\ \hline 144.6 \end{array}$   
 148.1  
 $\begin{array}{r} 146.6 \\ 1.5 \\ \hline 148.1 \end{array}$   
 147.9  
 $\begin{array}{r} 146.4 \\ 1.5 \\ \hline 147.9 \end{array}$

152.32

145.1  
 $\begin{array}{r} 143.6 \\ 1.5 \\ \hline 145.1 \end{array}$   
 139.8  
 $\begin{array}{r} 138.3 \\ 1.5 \\ \hline 139.8 \end{array}$   
 139.3  
 $\begin{array}{r} 137.8 \\ 1.5 \\ \hline 139.3 \end{array}$   
 138.5  
 $\begin{array}{r} 137.0 \\ 1.5 \\ \hline 138.5 \end{array}$   
 138.6  
 $\begin{array}{r} 137.1 \\ 1.5 \\ \hline 138.6 \end{array}$   
 139.5  
 $\begin{array}{r} 138.0 \\ 1.5 \\ \hline 139.5 \end{array}$   
 139.4  
 $\begin{array}{r} 137.9 \\ 1.5 \\ \hline 139.4 \end{array}$   
 141.0  
 $\begin{array}{r} 139.5 \\ 1.5 \\ \hline 141.0 \end{array}$

143.0  
 $\begin{array}{r} 141.5 \\ 1.5 \\ \hline 143.0 \end{array}$   
 138.5  
 $\begin{array}{r} 137.0 \\ 1.5 \\ \hline 138.5 \end{array}$   
 137.0  
 $\begin{array}{r} 135.5 \\ 1.5 \\ \hline 137.0 \end{array}$   
 136.6  
 $\begin{array}{r} 135.1 \\ 1.5 \\ \hline 136.6 \end{array}$   
 136.3  
 $\begin{array}{r} 134.8 \\ 1.5 \\ \hline 136.3 \end{array}$   
 136.4  
 $\begin{array}{r} 134.9 \\ 1.5 \\ \hline 136.4 \end{array}$

141.9  
 $\begin{array}{r} 140.4 \\ 1.5 \\ \hline 141.9 \end{array}$   
 137.1  
 $\begin{array}{r} 135.6 \\ 1.5 \\ \hline 137.1 \end{array}$   
 134.7  
 $\begin{array}{r} 133.2 \\ 1.5 \\ \hline 134.7 \end{array}$   
 134.4  
 $\begin{array}{r} 132.9 \\ 1.5 \\ \hline 134.4 \end{array}$   
 133.9  
 $\begin{array}{r} 132.4 \\ 1.5 \\ \hline 133.9 \end{array}$   
 134.4  
 $\begin{array}{r} 132.9 \\ 1.5 \\ \hline 134.4 \end{array}$   
 134.1  
 $\begin{array}{r} 132.6 \\ 1.5 \\ \hline 134.1 \end{array}$

140.0  
 $\begin{array}{r} 138.5 \\ 1.5 \\ \hline 140.0 \end{array}$   
 136.4  
 $\begin{array}{r} 134.9 \\ 1.5 \\ \hline 136.4 \end{array}$   
 133.6  
 $\begin{array}{r} 132.1 \\ 1.5 \\ \hline 133.6 \end{array}$   
 133.2  
 $\begin{array}{r} 131.7 \\ 1.5 \\ \hline 133.2 \end{array}$   
 132.4  
 $\begin{array}{r} 130.9 \\ 1.5 \\ \hline 132.4 \end{array}$   
 128.8  
 $\begin{array}{r} 127.3 \\ 1.5 \\ \hline 128.8 \end{array}$   
 126.9  
 $\begin{array}{r} 125.4 \\ 1.5 \\ \hline 126.9 \end{array}$

139.4  
 $\begin{array}{r} 137.9 \\ 1.5 \\ \hline 139.4 \end{array}$   
 135.9  
 $\begin{array}{r} 134.4 \\ 1.5 \\ \hline 135.9 \end{array}$   
 132.7  
 $\begin{array}{r} 131.2 \\ 1.5 \\ \hline 132.7 \end{array}$   
 132.4  
 $\begin{array}{r} 130.9 \\ 1.5 \\ \hline 132.4 \end{array}$   
 131.2  
 $\begin{array}{r} 129.7 \\ 1.5 \\ \hline 131.2 \end{array}$   
 129.4  
 $\begin{array}{r} 127.9 \\ 1.5 \\ \hline 129.4 \end{array}$   
 126.2  
 $\begin{array}{r} 124.7 \\ 1.5 \\ \hline 126.2 \end{array}$   
 125.5  
 $\begin{array}{r} 124.0 \\ 1.5 \\ \hline 125.5 \end{array}$

141.04



TP 1247 187.74 0.10 175.27  
 Hobbs L.  
 Brady with  
 27 Princeton  
 175.23

10+9719: WA Princeton

10+50

TP 1201 175.37 0.50 163.36

10+0

9+70

TP 1202 163.86 0.48 151.84

9+35

152.35<sup>2</sup>

177.5  
~~12.9~~ 30  
 177.4  
~~12.0~~ 30  
 175.8  
~~10.1~~ 1  
 176.0  
~~1.0~~ 0.6  
 170.1  
~~1.0~~ 19  
 175.3  
~~0.1~~ 22  
 174.7  
~~0.7~~ 30

168.1  
~~7.3~~ 40  
 169.5  
~~5.9~~ 30  
 170.4  
~~5.0~~ 17  
 170.6  
~~4.8~~ 1  
 169.4  
~~6.0~~ 6  
 168.9  
~~5.5~~ 19  
 169.7  
~~5.7~~ 21  
 169.9  
~~5.5~~ 30  
 169.5  
~~5.9~~ 10

175.37

154.7  
~~9.3~~ 45  
 157.9  
~~6.0~~ 30  
 160.3  
~~5.6~~ 21  
 162.9  
~~1.0~~ 6  
 163.1  
~~0.8~~ 6  
 161.9  
~~2.0~~ 1  
 161.6  
~~2.3~~ 20  
 163.6  
~~0.3~~ 22  
 164.7  
~~10.8~~ 30

151.2  
~~12.7~~ 48  
 146.2  
~~16.8~~ 16  
 150.5  
~~13.4~~ 30  
 156.5  
~~7.4~~ 6  
 157.1  
~~6.8~~ 6  
 157.3  
~~6.6~~ 30  
 159.8  
~~4.1~~ 23  
 159.8  
~~4.1~~ 30

163.86

149.4  
~~2.9~~ 40  
 147.7  
~~4.6~~ 30  
 143.1  
~~9.7~~ 23  
 147.2  
~~5.1~~ 16  
 149.3  
~~2.0~~ 20  
 150.8  
~~1.6~~ 19  
 154.3  
~~12.0~~ 22  
 155.6  
~~12.0~~ 30

152.35<sup>2</sup>



13750

1370

TP 1197 19938 0.33 187.41

12750

1270

11457.19 =  $\frac{1}{2}$  Princeton11427.19 =  $\frac{1}{2}$  Princeton

187.74

	7	8	5
	188.9	197.9	196.5
	0.5	1.5	2.9
	30	15	8
	194.1	192.4	189.6
	5.3	7.0	9.8
	30	6	15
	189.2	188.7	187.2
	1.5	1.0	0.5
	30	15	2
	186.1	185.4	184.9
	1.6	2.3	2.9
	30	30	18
	185.5	184.7	184.8
	2.2	3.0	2.4
	30	18	20
	183.9	182.5	182.1
	5.8	5.2	5.3
	2	18	21
	181.9	181.5	181.5
	5.8	6.2	6.2
	18	30	30
	183.3	182.0	180.7
	1.4	5.7	7.0
	30	17	40
	180.8	180.1	179.1
	6.9	7.6	8.6
	2	17	30
	180.3	179.5	178.8
	7.4	8.2	8.6
	30	15	30
	178.0	177.1	177.1
	9.7	10.6	10.0
	2	40	23
	177.1	177.1	176.9
	10.6	10.0	10.8
	40	23	30
	194.7	193.9	193.3
	4.7	5.5	6.1
	15	30	40
	189.8	189.4	188.6
	9.6	10.0	10.8
	15	24	30
	188.4	188.4	188.4
	11.0	11.0	11.0
	40	40	40
	19938		
	187.74		



15750

1570

14+8720 = L Moultrie

14+5720 = L Moultrie

14+2720 = N. L. Moultrie

1410

TP

11.75

210.95

0.18

199.20

199.38

45

214.0	212.8	207.7	209.0	209.6	208.3	207.4
7.50	7.18	1.3	2.0	1.4	2.7	5.6
30	15		18	20	30	40

209.9	208.4	206.9	205.9	205.3	205.6	204.3	203.6
1.1	1.6	4.1	5.1	5.7	5.4	6.7	7.9
30	15	2	18	18	20	30	40

209.3	207.9	206.3	205.2	204.3	204.7	203.5
1.7	3.2	1.7	5.8	6.7	6.3	7.5
30	15	2	18	18	20	30

207.6	206.6	205.3	204.7	203.4	202.1	202.9	201.9
3.4	4.4	5.7	6.3	7.6	8.5	8.1	9.1
30	15	1	1	1	18	20	30

205.8	204.1	203.0	201.5	199.9	200.4	199.1	198.0
5.9	6.9	8.0	9.5	11.1	10.6	11.9	13.0
30	15	2	2	19	21	30	40

203.8	202.2	201.0	199.5	198.0	198.5	196.9	196.4
7.2	8.8	10.0	11.5	13.0	12.5	14.1	14.6
30	15	2	2	18	20	30	40

210.95



17+87

BM

7.66

226.26

Hub St.  
Brady St. 101  
2174 Trotter

17+5724 = H. L. Trotter

17+0

TP

11.18

233.92

0.15

222.74

16+50

16+0

TP

12.04

222.89

0.10

210.85

210.95

234.5  
+0.6  
30233.0  
0.9  
15232.0  
1.9  
8230.7  
0.2  
0230.3  
0.6  
0229.8  
4.1  
10228.6  
5.3  
16227.0  
6.9  
30232.9  
0.0  
30231.9  
2.0  
15230.6  
0.3  
0228.9  
5.0  
0227.9  
6.0  
14228.3  
5.6  
16226.1  
7.8  
30230.8  
0.1  
30228.6  
5.3  
15226.7  
7.9  
0224.6  
9.3  
0223.5  
10.4  
18222.8  
10.1  
30222.4  
11.5  
30211.4  
12.5  
40

233.92

225.4  
+2.5  
30223.7  
+0.8  
15221.9  
1.0  
0220.4  
2.5  
1219.2  
2.7  
30219.8  
2.1  
33218.5  
4.4  
30217.6  
5.3  
40219.2  
0.7  
30218.1  
4.8  
15216.3  
6.6  
0214.8  
8.1  
1213.6  
9.3  
18214.1  
8.8  
30212.9  
10.0  
30212.0  
10.9  
40

222.89



Cross Section Tipton Ave  
 Brandywine to 200' South of Banker Hill  
 West line as Base Line  
 Indexed  
 L.M.

2+50

2+0

1+50

TP 2.00 216.41 12.31 214.41

1+0

0+50

0+0 = S.L. Brandywine

B.M. 0.46 226.72 226.26  
 Hub 5-2  
 Brandywine  
 172 Tipton

Reduced & plotted.  
 1-16-41 E.L.B.

	F	W	W	W
206.0	209.7	210.9	211.8	211.8
10.4 50	6.7 38	5.5 10	4.6	4.6 10
203.3	208.3	209.7	210.7	211.1
13.1 50	10.0 38	6.7 10	5.7	5.3 10
202.6	209.5	211.6	212.1	212.0
13.8 50	6.9 38	4.8 10	4.3	4.4 10
		216.41		
211.1	212.2	213.0	213.8	213.7
15.6 40	14.5 38	13.7 15	12.9	12.0 10
219.5	219.7	219.6	219.4	219.5
7.2 40	7.0 38	7.1 15	7.0	7.1 10
227.1	227.1	226.2		
7.0 40	7.0 15	0.5		
		226.72		



West Liberty

F

W

192.5	193.5	193.9	193.2	193.2	193.0
12.7 50	11.7 38	11.3 20	12.0 10	12.0	12.2 10

198.1	198.9	199.2	198.4	197.6	197.1
7.1 50	6.6 38	6.0 20	6.8 10	7.6	8.1 10

205.22

201.4	202.3	202.2	201.7	201.2
15.0 50	14.1 38	14.2 10	14.7	15.2 10

205.0	206.0	205.7	205.7	205.0
11.4 50	10.4 38	10.7 16	10.7	11.4 10

206.9	208.7	208.5	209.0	208.5
9.5 50	7.7 38	7.9 16	7.4	7.9 10

207.1	209.9	210.6	211.4	211.3
9.3 50	6.5 38	5.8 10	6.0	5.1 10

216.41

TP 0.55 192.43 12.34 192.88

5+50

5+0

TP 0.69 205.22 11.88 204.53

4+50

4+0

3+50

3+0

216.41



TP 1.14 157.64 12.45 156.50

1+0

TP 0.28 168.95 12.35 168.67

0+50

TP 0.01 181.02 12.42 181.01

6+40 = 0+0 = S.L. Bunkerhill

BM 11.20 182.23

S.W. 7' Haul  
Bunkerhill  
Treston  
182.26

6+10 = 1/2 Bunkerhill

5+80 = 1/2 Bunkerhill

193.43

152.5  
12.5  
30  
158.9  
10.1  
28  
160.6  
8.4  
10  
161.8  
7.2  
162.5  
6.5  
10

168.95

166.8  
14.2  
50  
169.3  
11.7  
28  
170.5  
10.5  
15  
172.0  
9.0  
172.5  
8.5  
10

181.02

177.4  
16.0  
50  
179.6  
13.8  
28  
180.4  
13.0  
10  
181.4  
12.0

182.3  
14.0  
30  
184.2  
9.2  
28  
185.6  
7.8  
15  
186.5  
6.9

186.4  
1.7  
50  
188.9  
4.5  
28  
189.3  
4.1  
15  
190.0  
3.4

193.43



270

TP

0.29

145.54

1249

145.15

1750

157.64

F

Westling

W 30

127.5  
180  
50

127.5  
180  
58

133.5  
180  
40

138.3  
180  
70

139.7  
58

142.3  
50  
10

145.54

143.9  
187  
50

147.2  
104  
28

149.4  
80  
10

151.3  
60

152.5  
51  
10

157.64



Cross Section Trenton  
North of Ticonderoga

N H.S. 912

F Jan. 6 '41 51

1+0

115.3	119.1	122.3	125.1
20.8	17.0	13.8	11.0
15		15	28

0+75

121.1	126.6	127.7	130.7
15	11.5	8.4	5.4
15		15	28

TP

1.06 136.12 12.00 135.06

Reduced & Blotted  
1-16-41 E.L.B.

136.12

0+50

127.8	129.8	133.0	137.2
19.0	17.0	14.1	9.9
15		15	28

0+25

130.7	132.8	138.0	141.3
16.4	12.0	9.1	5.8
10		15	28

0+0 = H.L. Ticonderoga

BM

11.22 147.06

135.84

NW 7 Hds  
Ticonderoga  
+ Trenton

147.06 -



Cross Section Morena Blvd  
Ticonderoga to Brandywine

Indexed  
L.M.

67

Δ

Rt.

Jan 8-41 52

1+50

44.0  
11.5  
37

49.46  
11.05  
30.5

49.48  
11.03  
10.5

49.6  
10.9  
3

57.0  
3.5

56.9  
3.6  
20

57.0  
3.5  
10

1+0

48.1  
12.1  
37

48.92  
11.59  
30.5

48.94  
11.57  
10.5

49.3  
11.2  
3

55.4  
5.1

55.9  
4.6  
20

55.4  
5.1  
33

56.8  
5.7  
40

0+94 41.5 ft of EL = 1/4 Pond Pale

0+50

Notes Reduced & plotted  
1-15-41 E.L.B.  
Profile #1265

47.5  
12.0  
37

48.36  
12.15  
30.5

48.39  
12.12  
10.5

48.7  
11.8  
3

54.8  
5.7

54.3  
6.2  
20

53.7  
6.8  
30

52.7  
5.8  
40

0+24

46.9  
13.6  
37

48.05  
12.16  
30.5

48.09  
12.14  
10.5

48.0  
11.5  
3

54.0  
6.5

53.7  
6.8  
20

54.9  
6.6  
40

0+18

46.7  
12.8  
37

48.02  
12.19  
30.5

48.01  
12.50  
10.5

48.7  
11.8

52.8  
7.7  
3

53.3  
7.1  
20

54.3  
6.8  
40

0+0 = N.L. Ticonderoga 07E

46.7  
13.8  
37

47.89  
12.67  
30.5

47.89  
12.62  
10.5

48.4  
12.1

50.2  
10.3  
20

51.3  
9.8  
33

52.9  
7.6  
40

BM

2.25

60.51

58.26

S.F. 7' Hub  
Pool 107M  
+ 100' 00"  
20' 17"

60.51'



4+50

TP 341 59.93 3.99 56.52

4+0

2+94 42' W of EL - Hwy Pav or Pole

3+50

3+0

2+50

2+0

60.51

	Lt	L	Rt
	52.3	52.78	52.79
	7.6	7.15	7.44
	10	30.5	10.5
			52.4
			55.8
			56.0
			3.9
			20
			57.8
			3.1
			40
			59.93
	51.8	52.29	52.28
	8.7	8.22	8.23
	37	30.5	10.5
			51.1
			57.0
			57.3
			3.3
			20
			57.9
			2.6
			40
	51.6	51.71	51.73
	8.9	8.80	8.78
	37	30.5	10.5
			50.7
			57.5
			58.0
			2.5
			20
			58.5
			2.0
			40
	51.1	51.19	51.17
	9.4	9.32	9.34
	37	30.5	10.5
			50.2
			58.7
			58.5
			2.0
			20
			59.3
			1.7
			40
	50.5	50.66	50.64
	10.0	9.85	9.87
	37	30.5	10.5
			49.9
			58.0
			58.6
			1.9
			20
			59.1
			1.4
			40
	49.9	50.02	50.06
	10.6	10.49	10.45
	37	30.5	10.5
			49.6
			57.6
			58.2
			2.3
			20
			57.3
			3.2
			33
			59.0
			1.5
			40
			60.51







9+40.54 - F.L. Lafayette

9+0

8+50

8+0

TP 9.36 68.98 0.31 59.62

7+47.33 = N.L. Bunker Hill

7+1338 = Bunker Hill

59.93

L		L		R	
83	9.3	84.6	8.50	90	4.8
40	37	30.5	10.5	3	10
60.7	59.2	60.52	60.48	60.0	54.2
				66.0	
				66.7	67.0

80	9.7	90.8	9.12	96	5.4
40	37	30.5	10.5	3	10
61.0	59.2	59.90	59.82	59.2	53.6
				55.9	
				56.4	55.9
				66.3	66.3

84	10.7	99.6	9.98	108	7.6
40	37	30.5	10.5	3	10
60.6	58.3	59.02	59.00	58.2	61.4
				63.2	
				63.4	62.6

10.3	11.2	10.81	10.84	11.8	10.0
40	36	30.5	10.5	3	10
58.3	57.8	58.17	58.14	57.2	59.0
				61.1	
				60.2	62.0

68.98

74	3.8	2.71	2.71	2.8	1.1
40	36	30.5	10.5	3	10
57.5	56.1	57.22	57.22	57.1	58.8
				59.3	
				0.6	0.6

14	3.6	3.24	3.24	3.8	1.1
40	36	30.5	10.5	3	10
55.9	55.5	56.67	56.69	55.8	57.1
				57.3	
				0.7	0.7

59.93



11750

63.5	63.47	63.46	63.4	63.4	64.3
9.4	9.43	9.44	9.1	9.5	8.6
40	30.5	10.5		20	40

1170

64.6	62.5	63.21	63.15	63.4	63.2	64.3
8.3	10.1	9.69	9.85	9.5	9.7	8.6
40	36	30.5	10.5		20	40

10779

63.4	62.2	62.88	62.90	62.9	62.8	64.4
9.5	10.7	10.02	10.00	10.0	10.1	8.5
40	36	30.5	10.5		20	40

10768.69 = 24.6 Lafayette

62.3	62.77	62.70	62.8	63.2	67.9	71.7	71.7
10.6	10.13	10.20	10.1	9.7	5.0	1.0	1.0
40	30.5	10.5		20	33	37	40

10750

61.2	62.4	62.36	62.8	63.1	70.1	71.1
11.7	13.42	10.54	10.1	9.8	2.8	1.8
40	30.5	10.5		8	12	40

10704.61 = 7 Lafayette

61.4	60.7	61.62	61.56	61.8	64.5	67.0	68.4	66.2	67.5
11.5	12.3	11.28	11.34	11.1	7.4	5.9	4.5	6.7	5.4
40	37	30.5	10.5	5		10	33	37	40

TP 11.89 7290 797 61.01  
6898'

729.0



BM

4.94 60.65

Hub S.L.  
Bradywine  
Ely, W. Va.  
66.63

14+04.18 = S.L. Bradywine

13+50

13+0

TP 2.19 65.59 9.50 63.40

12+50

12+0

72.90

Lt.

Lt.

Rt.

57

62.4	59.5	59.93	59.96	59.6	60.3	61.0
3.7	6.1	5.66	5.63	6.0	5.5	4.6
40	36	30.5	40.5	20	20	40

62.9	60.6	61.33	61.35	61.6	61.8	62.3
2.7	5.0	4.26	4.21	4.5	4.8	5.2
40	37	30.5	40.5	20	20	40

63.4	61.6	62.33	62.38	62.2	63.1	63.4
2.2	4.0	3.26	3.21	3.4	3.5	3.2
40	37	30.5	40.5	20	20	40

65.59

62.6	63.01	63.01	63.2	62.4	63.2
10.3	9.89	9.89	9.7	10.5	9.7
40	30.5	40.5	20	20	40

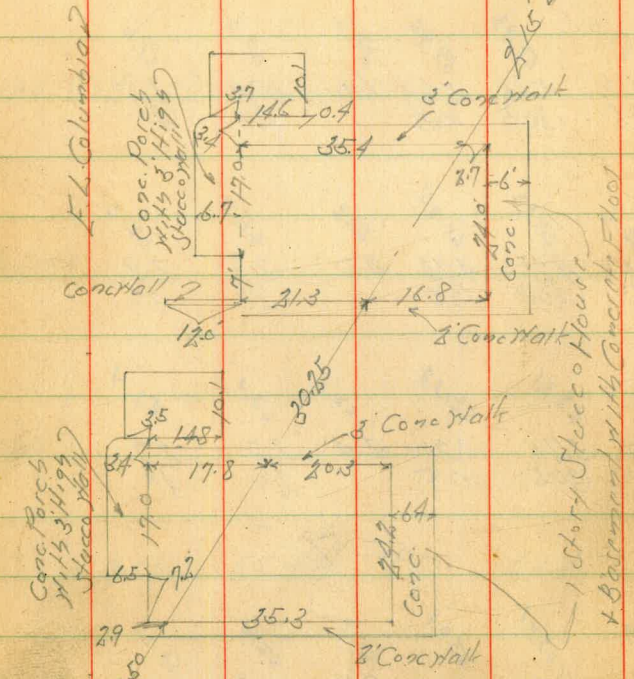
62.7	63.37	63.41	63.7	62.8	64.2
10.2	9.53	9.49	9.2	10.1	8.7
40	30.5	40.5	20	20	40

72.90



Location Storm Drain Across Block 80.  
Middletown As Opening 16215

Box 29.50  
1.6" Flow line  
5" pipe



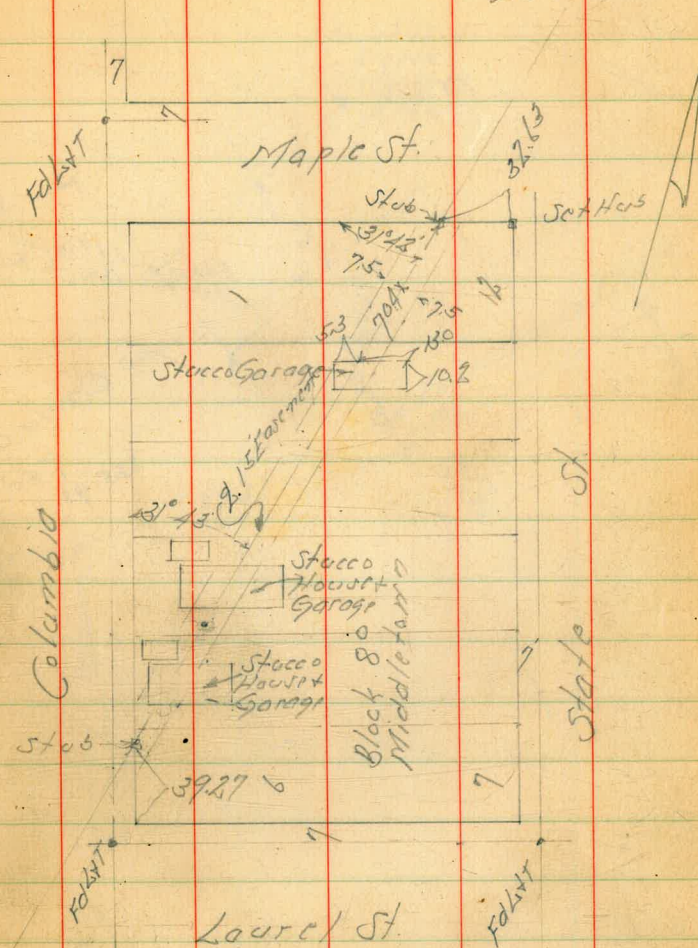
Stub 39.37

4.7' Line Kalmia

11.6 Laurel 2

Indevecl  
4.M.

March 18-41 58  
Sister  
Northman  
W. Moore



Stub 39.27

7

7

7.6" pipe 37.25

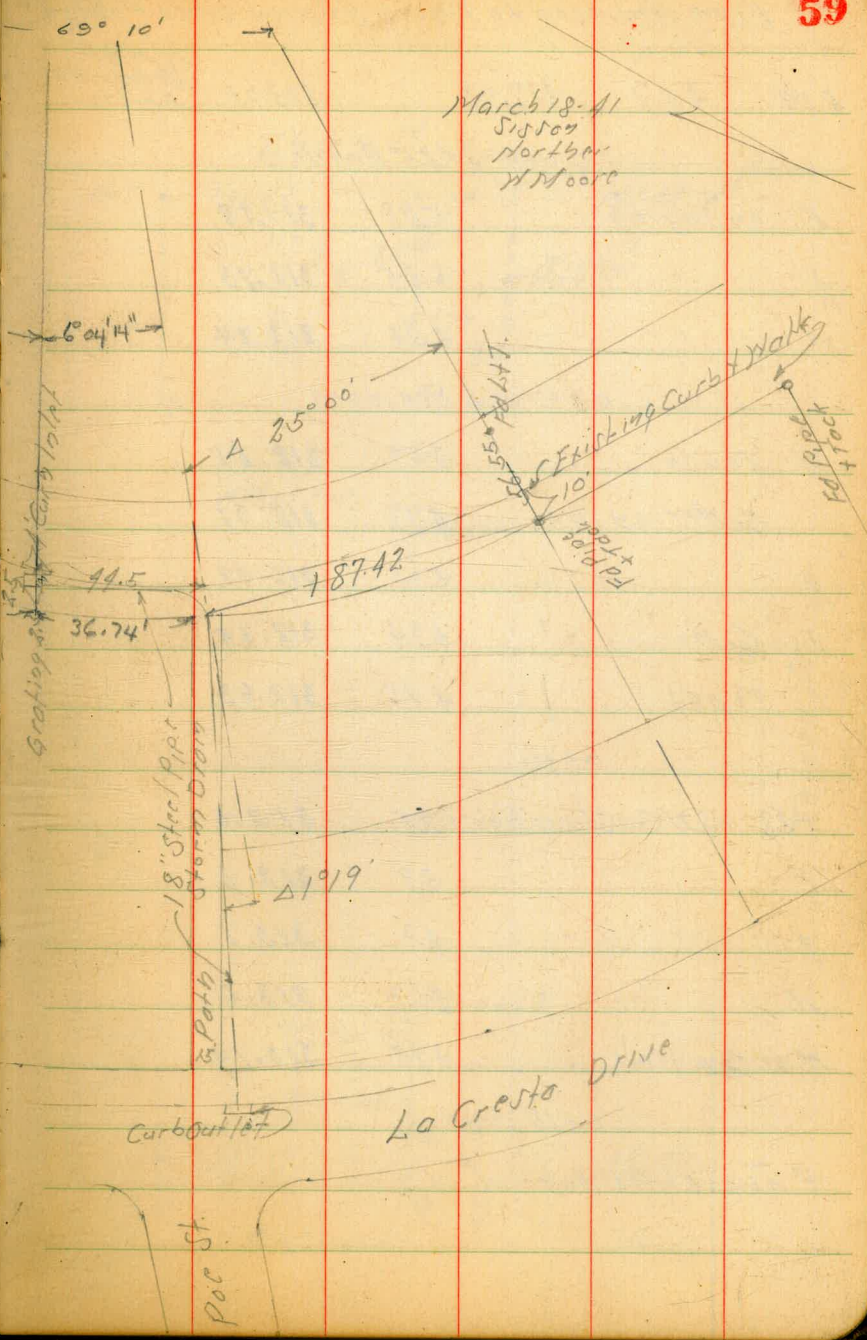
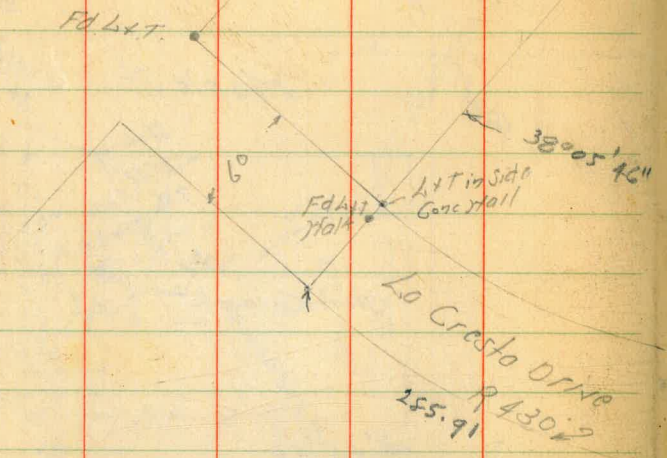
4.7' Line Kalmia

cut 23'



Location of Existing Storm Drain  
 La Cresta Terrace

Indexed  
 LMI



March 18-11  
 Sigron  
 North  
 W Moore

F.d. Walk

Existing Curb & Walk

F.d. Pipe  
 4' to C

Carb. Outlet

Poc St.

La Cresta Drive



Cross Section Alley Block J Altadena  
From Redwood to Thorn Between 33rd & Felton

BM 4.07 317.08 312.01 <sup>11/18 BP</sup> Redwood & Felton

0-10 = N/Cb Redwood

F on Pavmg 5.28 311.79  
 1/2 " " 5.35 311.73  
 1/4 " " 5.34 311.74

0+10 = N/L Redwood

1/4 TopCb 4.57 312.51  
 Gutter on Pav 4.77 312.31  
 1/2 " " 5.05 312.03  
 1/4 Gutter " 4.74 312.34  
 F TopCb 4.45 312.63

0+10

3.8 = S/W Car Stucco House 3.5 313.6  
 F 3.9 313.2  
 1/2 4.0 313.1  
 1/4 4.1 313.0  
 1/4 on Car Wall 3.98 313.10

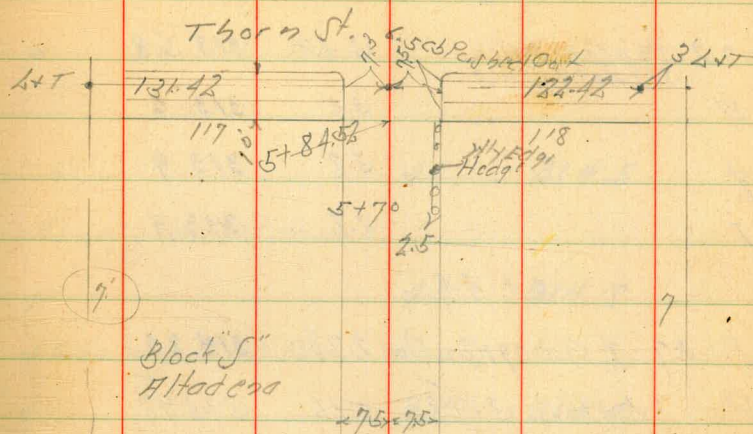
0+18

F + 0.5 = E/W Tel Pole

Inclined  
LM

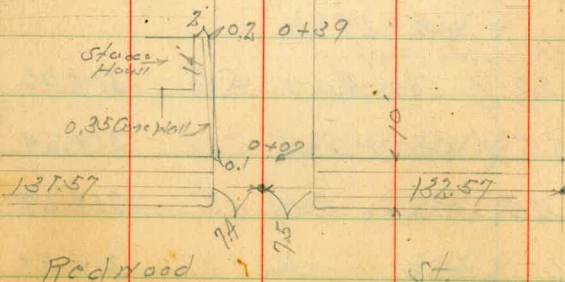
April 23-41  
Sisson  
Yorkston  
W Moore

60



33rd St

Felton St





317.08

0+39

-0.2 Top Conc Walk = Sky Lot's Fence	3.40	313.68
W	3.5	313.6
L	3.2	313.9
E	3.2	313.9

0+44

E-3.7 = 2' Garage Conc Pad	2.78	314.80
TP	5.36	319.28
	3.16	313.92

0+52

-5	4.9	314.4
E	5.2	314.1
L	5.3	314.0
+5	5.9	313.4
W	5.8	313.5
+10 = Bottom Open Ditch	5.8	313.5

0+59

W = Sky Lot's Fence		
W - 2.7 = 2' Conc Apron	5.23	314.06
W - 6.5 = 2' Garage Conc	5.09	314.24
E - 12.0 = Sky Conc Apron	4.61	314.67
E - 16.0 = 2' Garage Conc Pad	4.47	314.81

319.28

0+64

W = Sky Picket Fence		
	1+0	
-5	4.8	314.5
-0.1 = Sky Picket Fence = Sky		
W	4.8	314.5
+0.5 = Sky Picket Fence		
L	4.9	314.4
+7.3 = Sky Board Fence		
E	5.0	314.3
+10	5.0	314.3
	1+12	
W-0.2 = 2' Conc Walk	4.63	314.66
	1+50	
-10 Bot open Ditch	4.8	314.5
E	4.4	314.9
+0.2 = Sky Board Fence = Sky Lot's		
L	4.4	314.9
W = Sky Board Fence	4.4	314.9
-10	4.5	314.8



31928

2+0

-5		4.2	315.1
W = Sty Lat <sup>h</sup> Fence		4.0	315.3
Z		4.1	315.2
F		4.1	315.2
+0.1 = Lat <sup>h</sup> Fence		4.1	315.2
+1.0		4.0	315.3

2+20

F+0.2 = ~~Z~~ 2' Conc Walk 3.96 315.94 ?

2+50

-10		4.2	315.1
F		4.1	315.2
+0.2 = Wly Lat <sup>h</sup> Fence			
Z		3.8	315.5
+7.0 = Wly Post Pole			
W		3.8	315.5
+0.2 = Wly Lat <sup>h</sup> Fence			
+5		3.8	315.5

2+65

F+0.2 = Sty Wire Fence

2+66

W-0.1 = Sty Lat<sup>h</sup> Fence

31928

3+0

-10		3.8	315.5
-0.4 = Lat <sup>h</sup> Fence			
W		3.8	315.7
Z		3.8	315.5
+7.4 = Wire Fence			
F		3.9	315.4
+10		4.0	315.3

3+51

-10		3.2	316.1
F		3.2	316.1
Z		3.0	316.3
+6.7 = Wly Post Pole			
+7.3 = Lat <sup>h</sup> Fence			
W		3.2	316.1
+10		3.3	316.0

3+63

F = ~~Z~~ 4' Conc Walk 3.00 316.28

4+0

-10		3.0	316.3
W		2.8	316.5
+0.3 = Lat <sup>h</sup> Fence			



31928

Z		2.6	316.7
F	= Nly Wire = Sly Lat 5 Fence	2.6	316.7
+10		2.4	316.9
TP	5.59	322.30	2.57
	4+30		316.71
H	+0.3 = Nly Lat 5 Fence		
	4+44		
H	-4.0 = 1/2 Garage Conc Floor	5.67	316.63
	4+50		
-10		5.4	316.9
F		5.3	317.0
Z		5.4	316.9
H		5.4	316.9
+10		5.8	316.5
	4+51		
H	+0.5 = Nly Post Pole		
F	-0.3 = Nly Lat 5 Fence Sly Board Fence		
	4+52		
H	= Sly Picket Fence		

63

32230

	5+0		
-10		5.6	316.7
-0.6	= Nly Picket Fence		
H		5.2	317.1
Z		5.1	317.2
F		4.8	317.5
+0.4	= Nly Board Fence		
+10		4.8	317.5
	5+0.5		
F	-0.5 = Nly Conc Apron	4.95	317.35
F	-6.0 = 1/2 Garage Conc Floor	4.40	317.90
	5+0.8		
H	-4.5 = 1/2 Garage Conc Floor	4.91	317.39
	5+1.6		
F	-0.8 = Nly Conc Apron	4.98	317.32
F	-6.0 = 1/2 Garage Conc Floor	4.10	318.20
	5+2.3		
F	+0.1 = Sly Board Fence		
H	-0.7 = Sly Lat 5 Fence		



322.30

5+38

- 2.2 SW Cor House 4.4 317.9

- 0.3 Nly Board Fence

F 4.4 317.9

L 4.5 317.8

W 4.5 317.8

+5 4.5 317.8

5+42

W-0.4 Nly Lot's Fence

5+47

W-2.1 Top Case Air Vent Under House 3.85 318.45

5+70

- 2.1 Top Case Air Vent Under House 3.80 318.50

W 4.1 318.2

L 4.0 318.3

+5 3.9 318.4

F 4.2 318.1

+2 Nly House 4.2 318.1

322.30

5+84.52 = SL Thorny

F Top Cb 4.12 318.18

F Gutter on Paving 4.26 317.94

L " " 4.54 317.76

W " " 4.23 318.07

W Top Cb 4.18 318.12

5+94.52 = S Cb Thorny

W on Paving 4.89 317.41

L " " 4.76 317.54

F " " 4.53 317.77

TP 3.87 321.75 4.42 317.88

BN 6.91 314.84

S.W. RP  
Thorny  
33rd St  
314.80



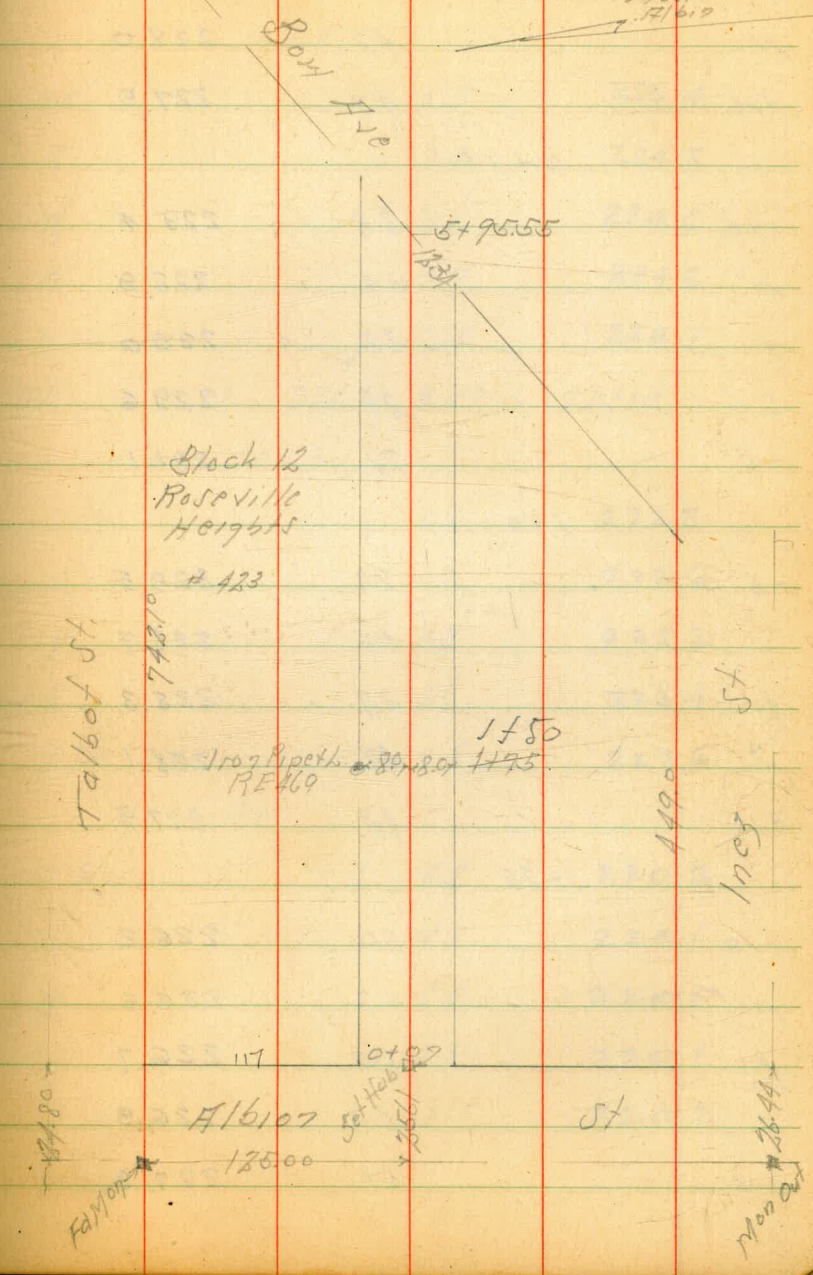
Cross Section Alley Block 12 Roseville Heights

BM	12.24	228.33	216.09	N.M.B.P. Concord + Talbot
TP	4.98	222.16	1.15	227.18
		0+0 = F.L. A16107		
-5		5.9		226.3
S		6.2		225.9
+5		7.7		224.5
+		8.0		224.2
+6		8.3		223.9
N		7.9		224.3
+10		7.3		224.9
		0+25		
-10		5.9		226.3
N		5.3		226.9
+		5.0		227.2
S		4.0		228.2
+5		3.9		228.3
		0+50		
-5		2.6		229.6
S		3.2		228.9
+		3.9		228.3

Terry Plot New Profile 7-11-41 C.P.H.

Indeved  
L.M.

July 1-41 65  
Sisson  
Northrop  
Moore  
F. B. B.





✓  
23216

N		42	228.0
+10		47	227.5
	0+75		
-10		2.8	229.4
N		3.4	228.9
8		3.2	229.0
S		26	229.6
+5		21	230.1
	1+0		
-5		2.7	229.5
S		3.5	228.7
8		3.9	228.3
N		4.1	228.1
+10		4.3	227.9
	1+25		
-10		6.0	226.2
N		5.7	226.5
8		5.5	226.7
S		5.3	226.9
+5		5.0	227.2

✓  
23216

	1+50		
-5		6.8	225.4
S		7.4	224.8
8		7.6	224.6
N		7.7	224.5
+10		7.5	224.7
TP	0.72	223.41	9.47 222.69
	1+77		
-10		0.6	222.8
N		0.8	222.6
8		1.2	222.2
S		1.0	222.4
+70	1/2 Galapagos Island Flood	0.8	222.6 ✓
	2+0		
-5		3.2	220.2
S		3.3	220.1
8		3.4	220.0
N		3.3	220.1
+10		3.1	220.3



✓  
223.41

2+30

-5	5.2	218.2
H	5.5	217.9
14	6.6	216.8
2	7.2	216.2
S	7.4	216.0
+5	8.0	215.4

2+55

-8.0 = 19' Core Found. For Garage on Top Found.	11.2	212.2 ✓
S	11.2	212.2
1/2	10.6	212.8
H	10.1	213.3
+10	8.4	215.0
TP	0.28	211.55
	12.14	211.27

2+91

S-4 = 11 1/4' Conc. Wall	1.41	210.14 ✓
--------------------------	------	----------

2+83

-10	1.3	210.3
H	1.7	209.7
2	2.1	209.5

✓  
211.55

S	2.2	209.4
+3.5 = 27' Core Landing	3.70	207.85 ✓
	3+0	
-3.2 = 11 1/2' Conc. Wall	6.22	205.33 ✓
S	5.7	205.9
1/2	5.3	206.3
H	5.8	205.8
+10	7.6	204.0

TP	0.72	200.24	11.93	199.62
	3+30			

-10	4.2	196.1
H	4.2	196.1
2	1.7	198.6
S	2.5	197.8
+10	4.1	196.2

2+50

-10	11.3	189.0
S	9.2	191.1
2	8.4	191.9
H	9.0	191.3
+10	8.9	191.4



✓  
200.34

3475

-10		132	187.1
H		137	186.6
<del>z</del>		142	186.1
S		151	185.2
+10		✓ 161	184.2
TP	0.23	188.47	1210 188.24

410

-10		6.8	181.7
S		6.3	182.2
<del>z</del>		6.4	182.1
H		6.0	182.5
+10		4.9	183.6

4130

-10		112	177.3
H		112	177.3
<del>z</del>		114	177.1
S		113	177.2
+10		117	176.8

✓  
188.47

4154

-10		14.8	173.7
S		15.0	173.5
<del>z</del>		14.7	173.8
H		14.2	174.3
+10		✓ 13.7	174.8
TP	0.54	176.93	1208 176.39

510

-10		7.4	170.5
H		7.0	169.9
<del>z</del>		7.0	169.9
S		7.7	169.2
+10		8.3	168.6

5130

-10		10.0	166.9
S		9.3	167.6
<del>z</del>		8.8	168.1
H		8.6	168.3
+10		7.8	169.1



✓  
17693

5460

-10	10.0	166.9
H	10.1	166.8
L	10.9	166.0
S	11.3	165.6
+10	12.1	164.8

5795.55 - Approximate Old Line of Bay  
Takes on Diagonal

-10	14.2	162.7
S	14.1	162.8
L	14.1	162.8
H	13.8	163.1
+10	13.7	163.2

TP	11.82	188.21	0.54	176.39
----	-------	--------	------	--------

TP	11.86	199.79	0.28	187.93
----	-------	--------	------	--------

TP	12.28	211.95	0.32	199.47
----	-------	--------	------	--------

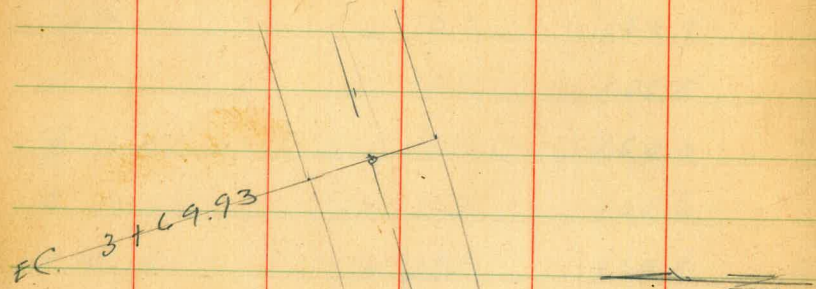
TP	8.01	218.61	1.15	210.60
----	------	--------	------	--------

BM		2.50		216.11
----	--	------	--	--------

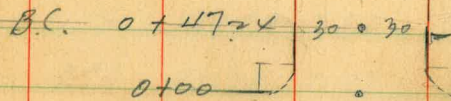
 NWBP  
 Concord +  
 Talbot  
 216.09



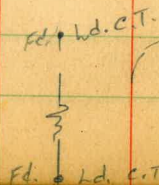
Check & Levels ON Proposed  
(Arc) de La Playa EXT. of  
Avenida



$\Delta = 18^{\circ} 49' 00''$  HT  
 $R = 1000$   
 $T = 162.76$   
 $L = 322.69$

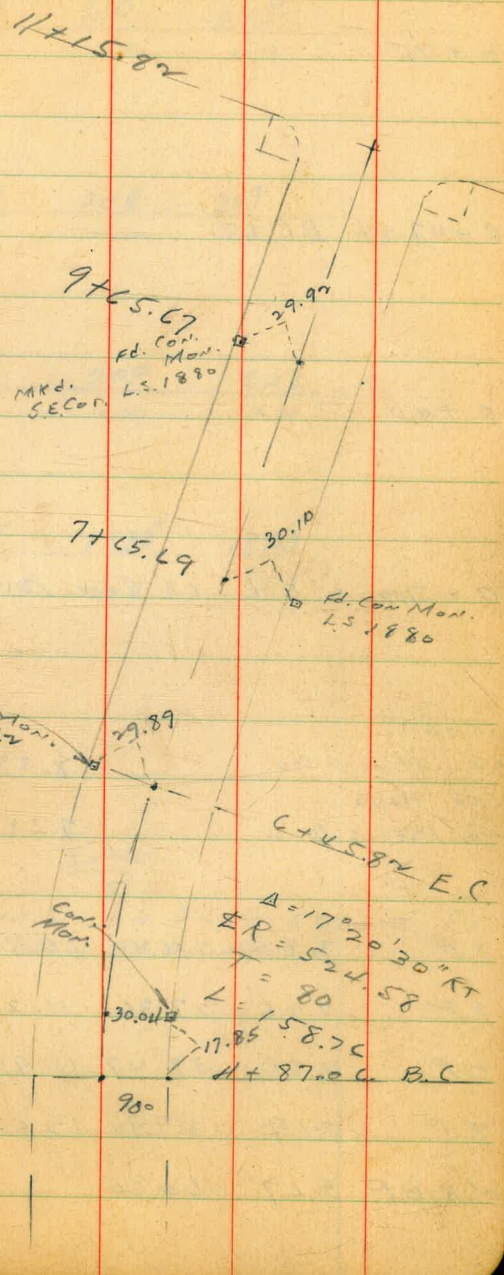


La Jolla Shores Drive



Indexed  
LM

C. Moore  
 G. Farrow  
 W. Moore  
 7-21-61



Ed. Con. Mon.  
 L.S. 1880  
 Mkd. SECOR

Ed. Con. Mon.  
 L.S. 1880

Ed. Con. Mon.  
 L.S. 1880

$\Delta = 17^{\circ} 20' 30''$  HT  
 $R = 524.58$   
 $T = 80$   
 $L = 158.70$

90°



0 + 75

0 + 47.24 BC LT.

0 + 00

0 - 72 = E.L. 18' Can. Pav. Strip

11.06

w.h. shores Dr

8.37

16.03

5.06 Playa

w.h. shores Dr

7.31

17.09

T.P. 7.82 24.40 10.78 16.58

T.P. 0.26 27.36 11.37 27.10

T.P. 2.56 38.47 11.99 35.91

T.P. 0.19 47.90 12.65 47.71

N.E.B.P. 5.67 60.36 54.69

Taney Rd  
Calle d la  
Plaza

New Profile 7-23-41 SBH

30' LT

±

30' RT

71

20.3

21.0

21.5

4.1

3.4

4.9

19.5

20.4

20.9

4.9

4.0

3.5

19.4

20.0

20.2

5.0

4.4

4.7

17.75

18.35

18.73

4.65  
30

6.5

5.67  
30

2440  
3

on h.d.C.T. w.h. La Jolla shores Dr.  
Set BM. and 2 Ave de la Playa



LT	¢	RT
<u>30.2</u> ✓	<u>32.8</u> ✓	<u>34.2</u> ✓
$\frac{5.5}{30}$	2.9	$\frac{1.5}{30}$

<u>30.0</u> ✓	<u>30.5</u> ✓	<u>31.2</u> ✓
$\frac{5.7}{30}$	5.7	$\frac{4.5}{30}$

<u>28.1</u> ✓	<u>28.9</u> ✓	<u>28.0</u> ✓
$\frac{7.6}{30}$	6.8	$\frac{7.7}{30}$

<u>26.8</u> ✓	<u>27.7</u> ✓	<u>26.7</u> ✓
$\frac{8.9}{30}$	8.0	$\frac{9.0}{30}$

<u>25.4</u> ✓	<u>26.1</u> ✓	<u>25.0</u> ✓
$\frac{10.3}{30}$	9.6	$\frac{10.7}{30}$

$\frac{35.74}{2}$

<u>21.7</u>	<u>22.0</u>	<u>22.2</u>
$\frac{2.7}{30}$	2.4	$\frac{2.4}{30}$

$\frac{24.40}{2}$

3

+50

✓

+75

+50

T.P. 11.74 35.74 0.40 24.00

1+00

24.40



5

4 + 87.06 BCR<sub>7</sub>

T.P. 17.50 59.32 0.01 46.82

+50

4

2 + 49.93 = F.C.

T.P. 17.41 46.83 1.32 34.42

3 + 50

35.74

LT K RT

48.1 <sup>✓</sup>	49.2 <sup>✓</sup>	49.5 <sup>✓</sup>
<u>16.2</u>	10.1	<u>9.8</u>
30		30

46.6 <sup>✓</sup>	48.1 <sup>✓</sup>	48.7 <sup>✓</sup>
<u>12.7</u>	11.2	<u>10.6</u>
30		30

59.32

43.2 <sup>✓</sup>	44.8 <sup>✓</sup>	46.1 <sup>✓</sup>
<u>3.6</u>	2.0	<u>0.7</u>
30		30

37.2 <sup>✓</sup>	39.8 <sup>✓</sup>	41.4 <sup>✓</sup>
<u>9.6</u>	7.0	<u>5.4</u>
30		30

33.7 <sup>✓</sup>	36.6 <sup>✓</sup>	38.9 <sup>✓</sup>
<u>13.1</u>	10.2	<u>7.9</u>
30		30

46.83

32.3 <sup>✓</sup>	25.2 <sup>✓</sup>	36.1 <sup>✓</sup>
<u>3.4</u>	0.5	<u>+ 0.4</u>
30		30

35.74



7+00

+82

L + 45, 82 EC.

+39

+38

T.P 12.25 71.26 0.31 59.01

L

5+50

59.32

	LT 67.4 ✓	X 68.3 ✓	68.3 ✓		
	$\frac{3.9}{30}$	3.0	$\frac{3.0}{30}$		
65.9 ✓	65.4 ✓	66.5 ✓	67.0 ✓		
$\frac{5.4}{30}$	$\frac{5.9}{25}$	4.8	$\frac{4.3}{30}$		
66.1 ✓	63.0	62.8 ✓	63.3 ✓	60.3	61.2
$\frac{5.2}{30}$	$\frac{8.3}{27}$	8.5	$\frac{8.0}{30}$	$\frac{11.0}{38}$	$\frac{10.1}{50}$
64.4 ✓	61.9 ✓	62.1 ✓			
$\frac{6.9}{30}$	$\frac{9.4}{25}$	9.2			

61.5 ✓	62.0 ✓
$\frac{7.8}{30}$	$\frac{9.3}{30}$

	71.26				
58.7 ✓	58.0 ✓	57.6 ✓	57.6	57.8	56.0
$\frac{0.4}{30}$	1.3	$\frac{1.7}{30}$	$\frac{1.7}{33}$	$\frac{7.5}{42}$	$\frac{3.3}{54}$

53.1 ✓	53.0 ✓	52.8 ✓
$\frac{6.2}{30}$	6.3	$\frac{6.5}{30}$

59.32

IN WASH  
THAT HAS  
LEAK GILDED  
IN THE ST



T.P. 17.83 107.90 0.28 95.07

9

+50

T.P. 12.21 95.35 0.23 83.14

8

7+65.69

7+50

T.P. 12.32 83.37 0.21 71.05  
71.26

LT                      Z                      Rt

75

90.9                      90.5                      90.4

$\frac{4.5}{30}$                       4.9                       $\frac{5.0}{30}$

85.5                      85.5                      85.3

$\frac{2.9}{30}$                       9.9                       $\frac{10.1}{30}$

95.35

80.6                      80.3                      80.3

$\frac{2.8}{30}$                       3.1                       $\frac{3.1}{30}$

76.3<sup>✓</sup>                      76.6<sup>✓</sup>                      76.90<sup>✓</sup>

$\frac{7.1}{30}$                       6.8                       $\frac{6.47}{30}$  on Cor. Mod.

74.1<sup>✓</sup>                      74.5<sup>✓</sup>                      74.9<sup>✓</sup>

$\frac{7.3}{30}$                       8.9                       $\frac{8.5}{30}$

83.37  
}



107.90  
 12.83  
 95.07  
 0.60  
 95.67  
 12.54  
 83.13 ✓  
 0.51  
 83.64 ✓  
 12.59  
 71.05 ✓  
 0.04  
 71.09 ✓  
 12.07  
 59.02 ✓  
 0.30  
 59.32 ✓  
 12.48  
 46.84 ✓  
 0.64  
 47.48 ✓  
 13.03  
 34.45 ✓  
 1.54  
 35.97 ✓  
 11.94  
 24.03  
 0.87  
 24.90  
 8.30  
 16.60

11 +15.82

11

+50

10

9 +50

107.90

B.M. 11 16.58  
 C.T. 0.02

115.5	115.3	115.5
<hr/>	<hr/>	<hr/>
+7.6	+7.4	+7.6
30		30

113.5	113.5	113.7
<hr/>	<hr/>	<hr/>
+5.6	+5.6	+5.8
30		30

107.4	107.7	107.5
<hr/>	<hr/>	<hr/>
0.5	0.2	0.4
30		30

101.5	101.7	101.4
<hr/>	<hr/>	<hr/>
6.4	6.7	6.5
30		30

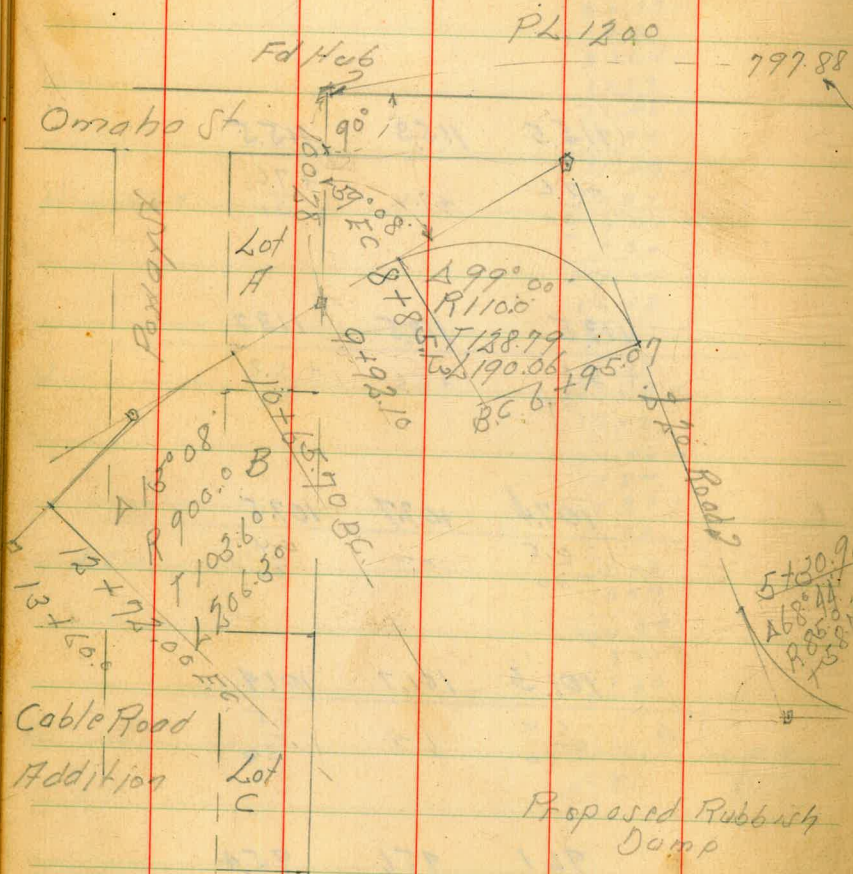
96.1	95.6	95.4
<hr/>	<hr/>	<hr/>
11.8	12.3	12.5
30		30

107.90



Proposed Rubbish Dump North Ely  
 of Present Site in Murray Canyon.  
 19 PL. 1186

Indexed  
 LM



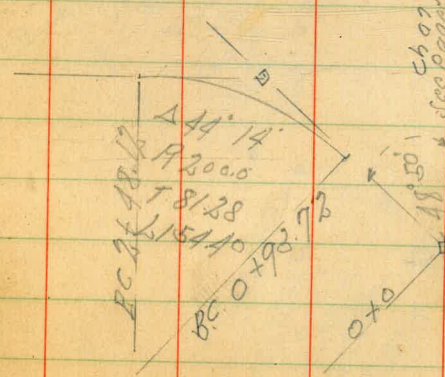
Aug 18. 41  
 S.W. 2nd  
 North  
 W. 1st

77

PL. 1186  
 As Per Moore Book  
 # 1235 Page 59

PL 1186

2106.97  
 4128.99



changed 7/23/00

Murray Canyon  
 Road Opening  
 Roll # 3597

PL. 1186  
 275.32 (distance)







Bliss  
Sommer Meyer  
Beys  
10/9/81

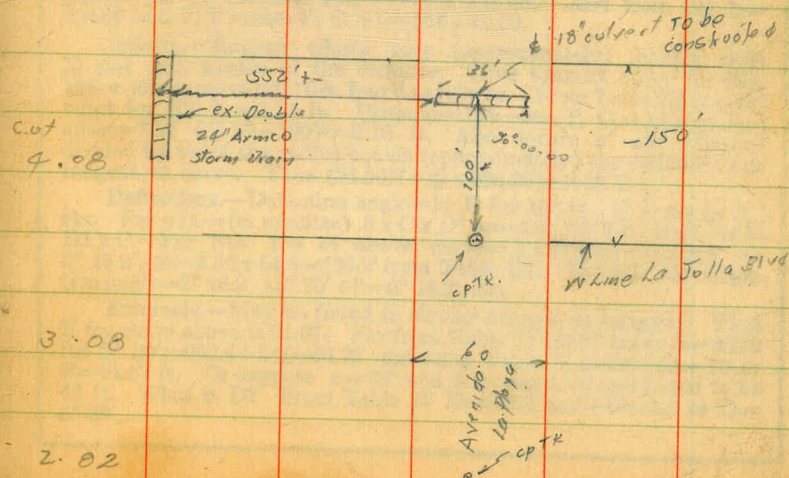
Levels for culvert Avenida De La Playa  
and La Jolla Shores Blvd.

5:50	22.08	16.58	
0700	11.74	10.34	ex. Culvert 552 N of culvert end. Flow line 28'
0400 Ground	10.6	11.5	
1+20	8.9	13.2	
" " ex. Paving	8.12	13.96	
2+00 ex. "	7.56	14.52	
2+00 Ground	7.9	14.2	
3+00 ex. Paving	6.85	15.23	
3+00 Ground	6.6	15.5	
4+00 ex. Paving	6.04	16.04	
4+00 Ground	5.1	17.0	
5+00 ex. Paving La Jolla Blvd	5.00	17.08	
" "	4.0	18.1	
5+52 Begin Culvert ex. Paving	4.10	17.98	
" "	2.3		
0+00 5' Rt. on stake	2.20	19.88	15.80
Ground	2.3	19.8	
0+18.4 Culvert	3.0	19.1	
1 5' Rt. on stake	2.70	19.38	16.30
0+36	2.9	19.2	
" 5' Rt. on stake	2.46	19.62	16.80

22.08

79

30'S of Culvert end Ground	2.6	19.5	
Cuts for Ditch North of Culvert	3.07	19.67	16.58 (BN)
0+00		10.39	Grade
1+00	6.22	13.45	11.33 - 2.1
2+00	4.51	15.16	12.32 - 2.8
3+00	3.63	16.04	13.31 - 2.7
4+00	2.33	17.34	14.30 - 2.9
5+00			
TP 551	22.09	3.09	16.58
5+00		3.50	18.59 15.29 3.3
+52. Check culvert flow	2.21	20.88	15.80 9.08





Bliss  
10/9/41

E. Profile. Avenida La Playa.  
E. Line La Jolla. BIVD 900 East.

12:15

28.73

16.58

Check B.M. Nail in Pole

7.83

20.90 = 21.41

0+00

9.0

0+724 B.C.

8.1

1+00

5.7

+50

3.2

2+00

0.6

TP

12.57

40.49

0.81

27.92

+50

10.2

3+10

7.3

+50

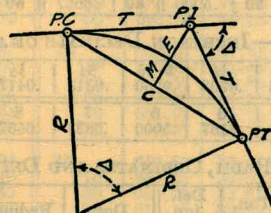
5.1

4+10

0.0

# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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## CURVE FORMULAS

Radius= $R = \frac{50}{\sin \frac{D}{2}}$  (1) Degree of Curve= $D$  and  $\sin \frac{D}{2} = \frac{50}{R}$  (2)

Tangent= $T = R \tan \frac{\Delta}{2}$  (3) Length of Curve= $L = 100 \frac{\Delta}{D}$  (4)

Middle ordinate= $M = R(1 - \cos \frac{\Delta}{2})$  (5)  $= R \text{vers } \frac{\Delta}{2}$  (6)

External= $E = T \tan \frac{\Delta}{4} = R \div \cos \frac{\Delta}{2} - R$  (8)  $= R \text{exsec } \frac{\Delta}{2}$  (9)

Long Chord= $C = 2 R \sin \frac{\Delta}{2}$  (10)  $\Delta = \text{Central Angle}$

## EXPLANATION AND USE OF TABLES

**Stations.**—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T.  $\Delta=62^\circ 10'$   $D=8^\circ 20'$ . From Table IV for  $1^\circ$  curve  $T=3454.1$  and  $+8\frac{1}{3}=414.49$  ft. From Table V correction=.36 or  $T=414.85$  ft. P. C.=Sta. P.I.— $T=157+45.50$ . Also from (4)  $L=746.00$  and P. T.=Sta. P. C. + $L=164+91.50$ .

**Offsets.**—Tangent offsets vary (approximately) directly with  $D$  and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.=7.27 ft. Distance= $158 - \text{Sta. P. C.} = 54.50$ , hence offset= $7.27 (54.50 \div 100)^2 = 2.16$  ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus  $(54.50)^2 \div (2 \times 688.26) = 2.16$  ft.

**Deflections.**—Deflection angle= $\frac{1}{2} D$  for 100 ft.,  $\frac{1}{4} D$  for 50 ft., etc. For  $c$  ft.=(in minutes)  $.3 \times C \times D^\circ$  or=def. for 1 ft. from Table III  $\times C$ . For Sta. 158 of above curve= $.3 \times 54.5 \times 8\frac{1}{3}=136.2'$  or  $2^\circ 16.2'$ , or= $2.50 \times 54.5=136.2'$  from Table III. For Sta. 159 deflection angle= $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$ , etc.

**Externals.**—May be found in similar manner to tangents. Thus  $E$  for curve above is 91.37. For from Table IV for  $1^\circ$  curve  $E=960.6$  for  $8^\circ 20' = 960.6 \div 8\frac{1}{3} = 91.27$  and from Table V correction=.10 or  $E=91.37$  ft. Or suppose  $\Delta=32^\circ$  and  $E$  is measured and found to be 42 ft. What is  $D$ ? From Table IV  $E=230.9$  and  $\div 42=5.5$  or  $D=5^\circ 30'$ .



73565  
80  
7495200

117  
16  
212  
250

117  
750  
131.50 see

7.48  
132.57  
140.05

131.57  
124.09  
7.48

131.57

100003  
300009  
50013  
830159

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2  
For Single Track Embankment.

11.74  
5.56  
5.07  
0.49

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

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