

GRADE
165

WASTY

FIELD BOOK

No. 335

	7.3	10.7
243.3	<u>2.2</u>	2.2
<u>241.1</u>	7.1	<u>8.5</u>
22	10.8	243.3
	<u>2.2</u>	<u>242.9</u>
	8.6	0.4
	4.3	6.6
	<u>13.1</u>	

0.4

242.9	16.6
<u>239.3</u>	
3.6	
11.8	
<u>15.4</u>	

B.M. 240.85

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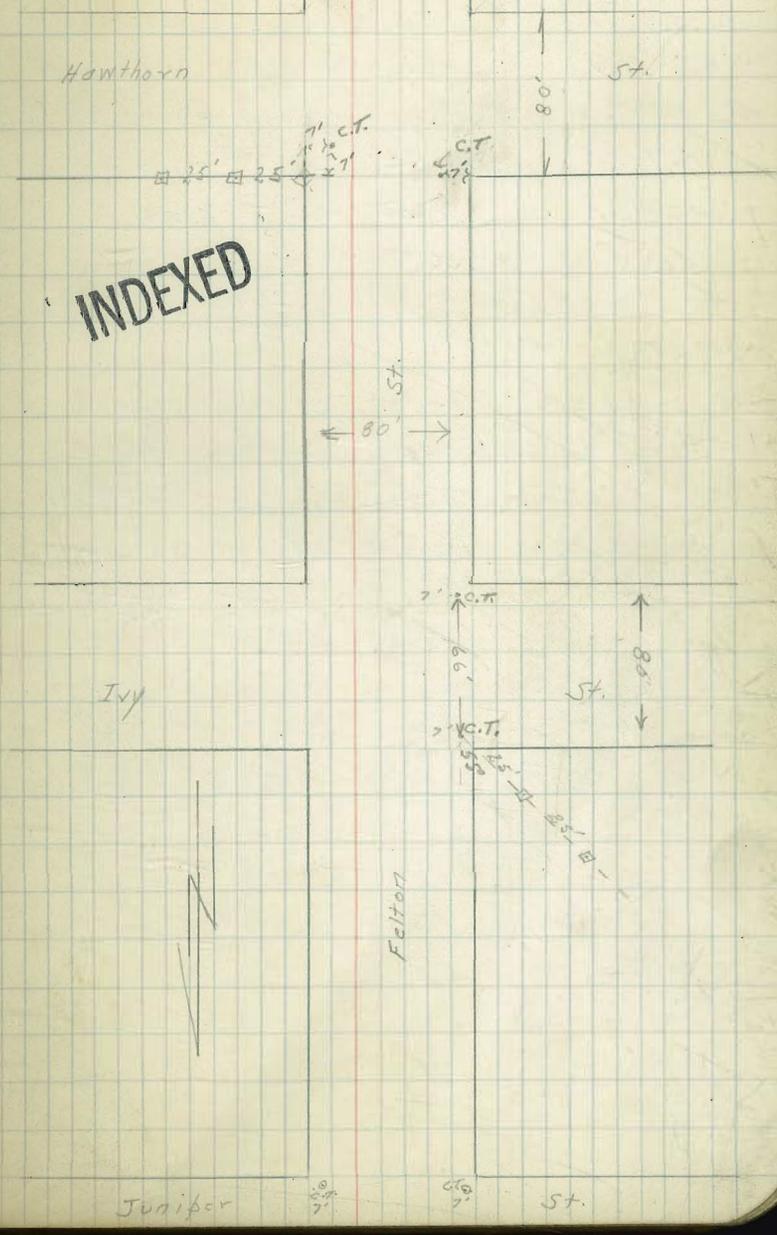
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J.C. Bliss Sewer Grades in Felton.
 9-6-29 St. Juniper to Hawthorn

Felton Ties

2

Sta	Grade	Cut	Cut
D.E. 40' S of St. Juniper	246.0	5.00	5.68
+40	241.67	6.31	6.52
+80	237.33	7.74	7.66
+200 B.K.	233.0	7.97	10.00
+454	231.48	4.82	6.71
+488 = Pier	229.97	1.00	F 5.80
+400 = Pier	229.44	0.30	F 4.5
+412 = Pier	228.91	0.30	F 0.34
+450	227.22	4.47	11.65
+400 = M.H. #1	225.0	9.01	14.26
+440	229.25	6.85	11.73
+480	233.50	6.32	9.93
+420	237.75	6.94	2.13
+462 = B.K.	242.0	5.69	5.64
+405	243.83	5.82	7.81
+450	245.66	5.21	8.74
+495 = D.E.	247.5		8.66
Felton to E.L. Felton at Ivy			
M.H. #1	225.0		
+426 = Pier	223.65		0.04
+438 = Pier	222.93		F 4.3V
+440 = E.L. Felton	223.03		F 5.18



Water Piers Felton St. between Ivy & Juniper

N.L. Ivy = 0+00	235.5	
+ 47 = Pier	236.06	F7.92
+ 59 = Pier	236.20	F9.98
+ 71 = Pier	236.34	F13.02
+ 84 = Pier	236.49	F3.69
1401 = BxK	236.7	

255.48 - S.E. Top Wall Juniper & Felton

0.45				
255.93	255.93	255.93	255.93	243.22
12.69	246.0	241.67	237.38	233.0
243.25	9.93	14.26	18.00	10.22
-0.08	4.93	7.5	10.80	2.85
243.22	5.00	6.31	7.94	7.97
1.37				
24.85	243.22	243.22	243.22	243.22
12.50	231.48	229.97	228.91	227.22
234.39	11.74	13.25	14.31	16.00
10.93	6.92	12.25	14.01	11.53
243.46	4.82	1.00	0.30	4.47
	243.22	243.22	243.22	254.39
	225.0	229.25	233.50	237.75
	18.22	13.97	9.72	16.64
	9.21	7.2	3.40	9.20
	9.01	6.85	6.32	6.94
	254.39	254.39	254.39	254.39
	242.0	243.85	245.66	247.5
	12.39	10.56	8.73	6.89
	6.20	4.24	3.52	2.61
	5.69	5.82	5.21	4.28

25439
26
251.78

B.M. 255.48 - S.E. B.P. Top Wall Juniper & Felton

B.M. 255.35 - N.W. B.P. Felton & Northmore

3.36	245.70	247.19	247.19
258.71	144	67	393
258.71	247.19	240.59	245.44
1.501			
224.570			
258.71	258.71	258.71	258.71
247.5	245.66	243.83	242.0
11.21	13.05	14.88	16.71
2.55	4.31	7.30	11.07
8.66	8.74	7.58	5.64
247.19	247.19	247.19	247.19
237.75	233.50	229.25	225.0
9.44	13.69	17.94	22.19
2.31	4.26	6.21	7.93
7.13	8.93	11.73	14.26

B.M. 255.48 - S.E. B.P. Top Wall Felton & Juniper

0.22			
255.74	255.74	255.74	255.74
12.75	246.9	241.67	237.33
T.P. 242.99	9.74	14.07	18.41
0.80	4.06	7.55	10.75
T 243.29	5.68	6.52	7.66
12.30			
T.P. 230.99	255.74	243.29	243.29
0.18	233.0	231.48	236.49
T 231.17	22.74	11.81	6.80
0.52	12.25	5.10	0.53
T.P. 306.0	10.00	6.71	W.O.
+ 13.08	W.P.	W.P.	W.O.
T 243.68	T 231.17	T 231.17	T 231.17
0.37	236.34	-30.3	248.9
B.M. 243.41 - N.W. 25' Tie	-5.17	4.95	3.05
Correct 243.44	2.85	F 9.98	F 7.92
	F 13.02		

S.P.	850	S.P.	1018	S.P.	1231.17
T 231.17	229.97	T 231.17	229.44	T 231.17	228.71
1.20	F 7.30	1.73	F 8.45	2.26	
				2.60	
T 231.17	231.17	231.17	233.55	243.68	
223.03	8.24	7.52	5.44	227.22	
8.14	12.56	12.56	12.56	16.46	
F 3.18	F 4.32			4.81	
				11.65	

9-13-29

J.C. Bliss

Catch basin + Culvert #1
at Felton + Ivy

Sta	Grade	Cut
Top curb of cb Inlet	240.0	FH 8.63
Flowline of Inlet	213.0	18.37
" " Culvert at Inlet	213.0	14.19
+25.33	208.0	11.10
+50.66	203.0	6.99
+76.00 = End culvert	198.0	2.30

Culvert + cb Inlet #2

	Grade	
Top of Inlet	230.0	F 3.03
Flowline Inlet	227.5	
+25 = End culvert - flowline	217.0	

Catch Basin #1

Top of South end	240.0	F 5.23
" " North end	240.12	

INDEXED

223.69 = Top sewer pier at Sta 26'E of k Felton at Ivy

232.79
+9.10
4.98
227.81 = B.M. set for Holly Park

4

240.00	232.79	232.79	T 232.79	T 211.03
232.79	7.21	213.0.0	12.50	0.74
1.42	1.42	19.79	TO 220.29	TP 210.29
8.63	1.42	18.37	0.28	9.58
			220.57	219.87
			10.59	1.29
19.79	220.57	220.57	TP 209.98	
5.00	208.0	203.0	10.5	B.M. 218.58 -
14.19	12.57	17.57	T 211.03	Lower sewer pier
	1.42	10.58	8.49	Sta k Felton at
	11.10	6.99	B.M. 202.54 -	211 - Correct 219.61
211.03				
1980				
130.3				
10.73				
2.30				

255.35 - N.W.B.P. Felton + Hawthorne

4.89	234.90	234.90
T 260.24	230.00	227.5
3.21	4.90	7.40
B.M. 257.03 - NE 25' Tie Felton + Hawthorne	7.95	
	3.05	
T 260.24		
12.92		
TP 247.32		
8.05		
T 247.57		
13.07		
B.M. 234.30 - East 25' cb line tie - South end		
2.60		
T 234.90		
0.16		
TP 234.74		
12.96		
T 247.70		
0.83		
TP 246.87		
11.45		
B.M. 257.32		
1.98		
233.34 - B.M. N.W.B.P. Felton + Hawthorne		

243.44 N.W. 25' Tie Felton + Ivy	
0.96	
T 244.40	

244.40	9.03
240.0	4.40
4.40	5.23

244.40	8.95
240.12	4.28
4.28	4.67

Slope States Felton Sd Fill

East side Felton

Sta	Grade	Fill	Out
Sl. Timber cut-off			
2+20	240.6	20.1	F13.3-20'
2+61.25	240.3	17.4	F25.4-38'
3+02.50	240.0	16.5	F34.5-52'
3+43.75	240.3	11.1	F41.6-62.4'
3+80.0	240.5	F12.9	F32.7-49'

2278 B.M. P₇ 4
 $\begin{array}{r} 59 \\ 2233.7 \\ \hline 2278 \\ \hline 240.4 \end{array}$

240.6
 $\begin{array}{r} 2227.8 \\ 12.8 \\ 7.3 \\ \hline 20.1 \\ 240.0 \\ 227.8 \\ \hline 12.2 \\ 4.3 \\ \hline 16.5 \end{array}$
 240.4
 $\begin{array}{r} 240.5 \\ \hline 0.1 \end{array}$

5
 $\begin{array}{r} 240.3 \\ 227.8 \\ \hline 12.5 \\ 4.9 \\ \hline 17.4 \end{array}$
 240.4
 $\begin{array}{r} 240.3 \\ \hline 1 \\ 11.0 \\ \hline 11.1 \end{array}$

Angle Pt. 10' South Ivy 241.1

" " 40' " " 242.9

INDEXED

6-18-29

J.C. Bliss

INDENTED

6

Rough Grades - Felton - Juniper to 120' S of Hawthorn W.L.

Sta	W.L.	Cut	E.L.	Cut	W.L.	E.L.
SL. Juniper = +00	255.45 ✓		253.27		240.9	260.9
+40	251.7	2.5	251.0		251.5	252.3
+90	248.05	1.6	247.45		251.1	250.2
+40	244.4	2.0	243.9		251.1	250.2
+60	243.1		242.55		251.7	250.7
+80	242 ✓	F0.3	241.6		251.7	250.7
+90			241.32	F1.8	251.7	250.7
2+00	241.5		240.95		251.7	250.7
+20	241.2 ✓	F2.0	240.6		251.7	250.7
+60	240.9 ✓	F1.0	240.3		251.7	250.7
3+00 = N.L. Ivy	240.6	1.4	240.0		251.7	250.7
SL. Ivy = +00	241.0	3.7	240.5		251.7	250.7
Ivy	243.0	1.7			251.7	250.7
+50	243.97	4.2	242.87	13.0	251.7	250.7
+100	246.94	5.0	246.43	F5.7	251.7	250.7
+140	249.3 ✓	7.2	248.8	F4.0	251.7	250.7
+60	250.3		249.8		251.7	250.7
+80	251.2 ✓	7.8	250.7	F0.9	251.7	250.7
2+00	251.8		251.3		251.7	250.7
+20	252.2 ✓	8.2	251.7	L 2.2	251.7	250.7
+40	252.4		251.8		251.7	250.7
+60	252.3 ✓	5.6	251.8	L 5.2	251.7	250.7
+85	251.7		251.5		251.7	250.7
3+00 = N.L. Hawthorn	251.5	3.1	251.1	6.9	251.7	250.7
Hawthorn		3.1	250.2	7.8	251.7	250.7

248.2 248.2 248.2 242.9 7.7
 244.0 241.0 235.2 235.2 3.9
 4.2 7.2 7.7 7.7 11.2
 0.0 3.5 5.3
 4.2 3.7 F13.0
 248.2 243.44 248.37
 243.0 4.93 228.91
 3.2 248.37 19.46
 3.5 236.06
 1.7 -12.31 - South water Pier
 to Grade 1946
 11.46
 C 8'00" - South

SEWER PIER

	W.L.		E.L.	
SL. Hawthorn 2000 -	246.5	0.8	247.0	2.8
+40	241.0	F0.7	241.33	3.4
+80	235.5	F1.8	235.66	4.2
1420 End improvement	230.0	F4.2	230.0	2.1

S.W. Return

Southern	246.5	0.8		
1/4	248.6			
1/4	250.0	F0.2		
3/4	250.8			
Wend	251.1	F2.2		

Collect #2 - 4 Catch Basin #1

Top cb. Inlet	155.24			
Bottom "	150.8			
End collect	152.0			

7

	W.L.		E.L.	
13.1				
8.9	238.9	251.4	238.9	238.9
4.2	235.5	241.0	230.0	235.7
	3.4	10.4	8.9	3.2
	5.2	11.1	6.8	0.0
	1.8	F0.7	2.1	3.2
251.4	251.4	251.4	251.4	251.4
246.5	250.0	251.1	247.0	248.8
4.9	1.4	0.3	4.4	2.6
4.1	1.6	2.5	2.6	1.6
0.8	20.2		2.8	1.0

8425548 - SE BR Felton + Juniper

0.3				
2556.1	2556.1	2556.1	245.6	245.6
11.37	2554.8	243.9	241.3	241.3
2440.4	0.164	11.7	4.3	6.1
1.60				F1.8
2456.4	255.61	255.6		
220	251.7	248.0		
243.44	3.9	7.6		
	1.4	6.0		
	2.5	1.6	245.6	245.6
	2556.1	255.6	243.0	243.0
	244.4	242.2	2.6	239.5
	11.2	13.4	3.6	
	9.8		F1.0	
			240.6	
	245.6	245.6	237.5	
	242.2	241.2	1.1	
	3.7	4.4		
	3.7	6.4		
	F0.3	F2.0		
	245.6	245.6		
	240.9	240.6		
	4.7	3.0		
	5.7	3.6		
	F1.0	F1.4		

Water Grades Felton
Juniper to Hawthorn

S.L. Juniper	250.0		
+40	247.5	2.8	
+90	244.0	2.8	
1740	240.4	2.8	
1770	238.4		
N.L. Hawthorn	247.4	3.0	
+40	248.1	3.4	
+80	248.1	2.8	
1720	247.0	3.0	
1760	245.1	3.1	
2400	243.4	2.7	N.L. Felton 247.0 5.6
N.L. Hawthorn +30 South	247.0	3.0	775 East 247.0 3.4
+50	245.5	3.5	
S.L. Hawthorn +30 North	245.5	2.6	
El. Felton	245.5	2.8	
S.L. Hawthorn	243.8	2.7	
+50.	236.8	2.5	
1400	229.8	2.3	
1720	226.8	2.8	

2234.30 - East 25° ob. line T.C. 120' South Hawthorn

8.15
242.53
0.04
17242.31
12.05
17254.56

8.1 255.48 - S.E. B.P. Felton & Juniper
0.03
255.51

INDEXED

8
242.5 242.5 242.5 2546
226.8 229.8 236.8 243.8
15.7 12.7 5.7 10.8
12.9 10.2 3.2 8.1
2.8 2.3 2.5 2.7

2546 9.1 9.1 2546
2455 6.3 5.6 247.0
9.1 2.8 3.5 7.6
6.5 4.6
2.6 3.0

76 76 2546 2546
42 2.0 2434 248.1
34 5.6 7.2 6.5
4.2 3.1
3.0 3.4

2546 2546 2546
248.1 242.0 245.1
6.5 7.6 9.5
3.7 4.6 6.3
2.8 3.0 3.1

2546 2555 2555
243.2 2500 243.5
17.4 5.5 8.0
8.7 7.8 5.2
2.7 3.7 2.8

255.5 255.5 255.5
244.0 240.4 238.4
17.5 15.1 17.1
8.7 12.3 15.1
2.8 2.8 2.0

10-14-29

Senior Laterals - Felton Hawthorn
to Juniper.

J. C. Bliss

INDEXED

Sta	Grade	Cut
1	246.0	5.00
2	237.0	8.00
3	233.0	8.7
4	236.2	4.1
5	241.5	4.3
6	244.5	5.2
7	248.3	4.1
8	234.0	8.7
9	246.6	6.5
10	242.6	6.1
11	239.0	5.0
12	236.5	2.4
13	235.0	6.2
14	236.0	5.5
15	242.0	4.8
16	245.0	5.6
17	248.4	4.1
Extra #18	235.1	7.9

SM. 255.48 - SE-B.P. Felton + Ivy

0.22
<u>255.70</u>
13.01
<u>242.69</u>
8.80
<u>251.49</u>
0.20
<u>251.29</u>
1.52
<u>252.81</u>
7.9
<u>244.9</u>

255.70	255.70
<u>246.00</u>	<u>237.00</u>
9.70	18.70
<u>4.70</u>	<u>10.70</u>
5.00	8.00

255.70	255.70
<u>246.6</u>	<u>242.6</u>
9.10	13.1
<u>2.60</u>	<u>2.0</u>
6.50	6.1

255.7	255.7	251.6
<u>239.0</u>	<u>235.1</u>	<u>230.0</u>
16.7	20.6	18.5
<u>11.7</u>	<u>12.7</u>	<u>9.8</u>
5.0	7.9	8.7

251.5	251.5	251.5
<u>236.5</u>	<u>235.0</u>	<u>236.0</u>
15.0	16.5	15.5
<u>12.6</u>	<u>10.3</u>	<u>10.0</u>
2.4	6.2	5.5

251.5	251.5	251.5
<u>242.0</u>	<u>245.0</u>	<u>236.2</u>
9.5	6.5	15.3
<u>4.7</u>	<u>0.9</u>	<u>11.2</u>
4.8	5.6	4.1

251.5	251.5	252.8
<u>241.5</u>	<u>244.5</u>	<u>248.3</u>
10.0	7.0	4.5
<u>5.7</u>	<u>1.8</u>	<u>0.4</u>
4.3	5.2	4.1

252.8	252.8
<u>248.4</u>	<u>234.0</u>
4.4	18.8
<u>0.3</u>	<u>1.01</u>
4.1	8.7

B St. Ties

1130.36

B Street

50'

57
52
52

Relocated
Property

Hub - 2"x2" Red Wood

4376

ST.

J.C. Bliss Ludington Lane Grades
9-30-29

INDEXED

W.L. Ludington = 0+00

	N.L.		S.L.	
0+00	166.25	F.11.138	166.5	100.
+10	166.05	F0.70	166.2	1.36
+20	165.5	F0.05	165.6	1.96
+30	164.65	0.31	164.85	2.64
+40	163.6	0.93	163.8	3.59
+50	162.35	1.64	162.55	4.44
+60	160.85	2.46	161.05	2.67
+70	159.3	4.17	159.5	3.45
+80	157.95	2.21	158.15	2.87
+90	156.8	1.33	157.0	2.42
+115	155.14	Grade	155.14	F.1.90

Culvert #2 + Catch Basin #1

Top 'cb Inlet	155.14	F0.80
Flowline "	1520	C 2.34
End Culvert	1511	G0.50

BM. 170.80 - S.E. Top Hydrant Lnd. Lane + Lnd. Place Garage Floor 15785

$$\begin{array}{r} 0.03 \\ 170.83 \\ \hline 170.80 \end{array}$$

$$\begin{array}{r} 158.13 \\ 2.16 \\ \hline 160.29 \\ 0.09 \\ \hline 160.20 \\ 11.00 \\ \hline 171.20 \end{array}$$

13

	N.L.		S.L.	
170.83	170.83	170.83	170.83	170.83
166.25	166.05	165.5	166.5	166.2
4.38	4.98	5.33	4.33	4.63
5.98	5.48	5.38	3.32	3.27
1.38	10.70	100.5	1.00	7.36
170.83	170.83	170.83	170.83	170.83
164.65	163.6	162.35	164.35	163.8
6.18	7.23	8.48	5.98	7.03
5.87	6.30	6.84	3.34	3.44
0.31	0.93	1.64	2.67	3.59
170.83	170.83	170.83	170.83	170.83
160.85	159.3	157.95	161.05	159.5
9.98	11.53	12.88	9.78	11.33
7.52	7.36	10.67	7.11	7.88
2.46	4.17	2.21	2.67	3.45
170.83	160.29		170.83	7.05
156.8	155.14		157.0	5.15
14.03	5.15		13.83	F.1.90
13.20			11.41	
1.33			2.42	
545-R	160.29	160.29		
515-G-R	151.1	152.0		
F0.80	9.19	8.29		
	8.69	5.95		
	20.50	2.34		

Culvert #1

E. cb Line Ludington = 0+90	161.0	5.5
+15	154.0	6.7
+65	143.8	5.9
1+15	138.65	4.0
1+60	124.5	4.0
2+10	115.06	4.3
2+55	106.6	2.9
3+10	84.0	

Retaining Walls

W.L. Ludington	166.92	F 2.05
+10	166.87	0.11
Westend Wall	166.47	F 1.92
Corner Wall	166.07	F 6.13
South end Wall	167.0	C 1.07
cb at St. Ludington Lane	167.23	
S.W. Return		
South end	167.99	v
+	167.4	v
Westend	167.07	Cut 0.50

B.M. 170.80
0.40
171.20
- 13.02
158.18
+ 0.33
158.51
- 13.00
145.51
+ 0.07
145.58
- 12.92
132.66
+ 0.32
132.98
- 12.76
120.22
+ 0.15
120.37
- 13.11
107.26
+ 0.29
107.49
- 12.92
94.57
+ 0.36
94.93

171.20	171.20
161.0	154.0
10.20	17.2
4.7	10.5
5.50	6.7
158.51	145.58
143.8	133.63
14.7	11.93
8.8	7.9
5.9	4.0
132.98	120.37
124.5	115.06
8.5	5.31
4.5	1.0
4.0	4.3
94.9	120.37
84.0	106.6
10.9	1.38
8.6	1.09
2.3	2.9

B.M. 170.80	172.15	172.15	172.15	172.15	172.15
1.35	167.99	167.4	166.87	166.47	166.07
172.15	4.16	4.75	5.28	5.68	6.08
172.15			5.17		
167.97			6.01	7.60	12.21
5.08				5.68	6.08
				1.92	6.13
			172.15	172.15	
			167.0	167.25	
			5.15	4.90	
			5.08		
			6.07		

10-1-29
J.C. Bliss

Sewer Grades in Alley-Block 209-
Hoels Sub. Between Main & Filbert. - Wades
to Yama

INDEXED

Sta	Grade	Cut
M.H. # Nodenz #100	0.19	7.95
+50	0.39	7.95
+100	0.59	7.90
+50	0.79	6.73
+200	0.99	6.12
+50	1.19	5.08
+300	1.39	6.02
+30 = M.H. #1 = 0+00	1.51	4.83
+50	1.71	2.06
+400 = Pier #1	1.91	F0.11
+12 #2	1.96	F0.66
+24 #3	2.01	F0.68
+36 #4	2.06	F0.86
+48 #5	2.11	F1.79
+60 #6	2.16	F0.85
+72 #7	2.21	F1.30
+84 #8	2.25	F0.99
+86 = O.R.	2.26	

B.M. 10.46 - N.W.B.P. Main & Wadett

2.48
~~12.97~~
 5.55
 7.12 39
~~1.68~~
 9.07
~~1.11~~
 10.79 6
 5.13
 13.09
 8.63
 10.46

12.94	12.85	12.15
0.39	4.45	5.42
<u>12.55</u>	<u>7.90</u>	<u>6.73</u>
4.60		
<u>7.95</u>		
11.95	4.75	9.07
5.85	6.67	1.89
<u>6.12</u>	<u>5.08</u>	<u>7.68</u>
		<u>1.68</u>
		<u>6.02</u>
9.07	7.36	7.27
<u>1.51</u>	<u>5.30</u>	<u>7.16</u>
<u>7.56</u>	<u>2.06</u>	F0.11
2.73		
<u>4.83</u>		
7.77	7.74	7.87
<u>7.11</u>	<u>7.06</u>	<u>7.01</u>
F0.66	F0.68	F0.86
		<u>1.79</u>
7.76	8.16	7.80
<u>6.91</u>	<u>6.84</u>	<u>6.81</u>
<u>0.85</u>	<u>1.30</u>	<u>F.99</u>
		6.80

10-4-29

Water Grades - Alleys - Blocks 68-81

J.C. Bliss

95-109-124 - City Heights

16

INDEXED

Sta	Grade	Cut
Existing Line in Wightman	339.8	2.9
S.L. Wightman 002000	339.53	2.8
460	336.73	2.2
1420	335.63	1.7
1466.66	335.46	2.1
2413.33	335.30	3.4
2460	335.13	3.7
3400	334.48	3.9
3440	333.83	3.7
3485	332.58	3.1
4430	331.33	2.6
4490	326.03	3.3
5420	323.6	3.2
5460	323.46	2.5
6400 = NL Landis	323.33	3.8
S.L. Landis = 0+00	323.33	2.6
425	302.33	F3.2
447.5	298.0	1.6
453.5	300.0	0.6
463.5	310.0	Grade
473.5	317.0	F4.3
1400	326.0	1.4
1440	327.21	3.0
1480	328.43	2.8

B.M. 34309 - 40th + Wightman N.M.S.P.

370	3468	3468	3468
1 346.79	3398	339.5	336.7
- 813	70	7.5	70.1
TP 338.66	41	4.5	2.9
1 119	2.9	2.8	2.2
1 339.85	3 468	3 46.8	3 468
713.03	3 356	335.5	355.5
TP 326.82	112	77.3	11.5
4.44	9.5	9.2	8.3
1 331.26	1.7	2.1	3.2
- 3.86	3398	3398	339.8
TR 327.40 - Stake 100-3 of 2000	335.1	334.5	333.8
1 331.26	47	5.3	6.0
12.63	1.0	1.4	2.3
318.63	3.7	3.9	3.7
10.78	3398	3398	339.8
319.41	332.6	331.3	326.0
TP 327.40	7.2	8.5	13.8
9.48	41	5.9	10.5
1 336.88	3.1	2.6	3.3
7.37	3398	331.3	331.3
329.51	323.6	323.5	323.3
	16.2	7.8	8.0
	13.0	5.3	4.2
	3.2	2.5	3.8
	80	331.3	319.4
	54	326.0	317.0
	26	5.3	2.4
		3.9	6.7
		1.4	
	319.4	319.4	319.4
	307.3	300.0	298.0
	12.1	19.4	21.4
	12.7	18.8	19.8
		0.6	1.6
	319.4	15.3	336.9
	307.3	12.1	237.2
	12.1	3.2	9.7
			6.8
			3.0
			8.3
			5.7
			2.8

2+40	328.93	2.7	336.9	336.9	336.9	336.9	336.9
2+90	328.76	3.0	328.9	328.8	328.6	328.4	328.5
3+40	328.59	3.5	8.0	8.1	8.3	8.5	8.6
3+90	328.43	4.2	5.3	5.1	4.8	4.3	4.4
4+40	328.26	4.2	2.7	3.0	3.5	4.2	4.2
4+90	328.09	3.9	336.9	336.9	336.9	320.0	320.0
5+40	327.93	3.7	328.1	327.9	326.1	315.2	315.9
6+00 = N.L. Dwight	326.13	3.4	8.8	9.0	10.8	4.8	4.1
♀ Dwight	324.93	2.8	4.9	5.3	7.4	1.6	1.0
S.L. Dwight = 0+00	325.73	4.1	3.9	3.7	3.4	3.2	3.1
+60	327.53	3.6	0.5	0.4	13.9	3.1	3.3
1+20	327.33	3.1	3.4	3.3	10.4	3.5	3.3
1+70	326.33	3.2	9.9	8.9	7.9	8.9	5.9
2+20	325.33	3.3	6.6	5.8	4.8	3.4	4.9
2+70	324.33	3.1	3.3	3.1	3.1	3.3	3.2
3+20	323.33	3.1	332.2	332.2	332.2	332.2	332.2
3+70	322.33	3.3	325.7	325.9	326.1	326.1	327.5
4+20	321.33	3.3	6.5	6.3	6.1	6.1	4.7
4+70	320.33	3.3	2.4	3.5	2.8	2.7	1.8
5+20	319.33	3.1	4.1	2.8	3.3	3.2	3.1
5+60	318.33	3.5					1.1
6+00 = N.L. Myrtle	316.33	3.3					3.6
+40	316.13	3.4					
S.L. Myrtle = 0+00	315.93	3.1					
0+50	315.18	3.2					

1400	314.43	2.8
1457.5	312.98	2.9
2115	311.53	3.1
2472.5	310.08	3.3
3430	308.63	3.1
3487.5	307.18	3.2
4445	305.23	3.3
5402.5	304.28	3.7
5460	302.83	3.9
6400 - N.W. Thorn	299.83	3.2
+ 50-Plug	299.39	2.9
S.L. Thorn = 0-00	299.13	2.9
0440	298.78	3.3
0480	298.43	3.2
1420	297.82	3.2
1460	297.21	2.5
2400	296.60	2.1
2460	296.60	2.6
3410	298.46	3.3
3460	300.33	4.1
4410	301.38	3.9
4460	302.43	3.9 ✓
5400	302.78	4.1
5440	303.13	3.0
6400 - N.W. Redwood	302.23	3.3

756	310.6	310.6	310.6	310.6
8.85	301.2	301.7	302.2	308.1
19301 78	7.4	8.9	8.4	7.5
6.25	6.5	5.9	5.1	4.6
308.53	3.0	3.0	3.3	3.0
0.55	310.6	310.6	310.6	310.6
19307 98	302.8	302.4	301.4	300.3
12.00	7.8	8.2	7.2	10.3
319.98	3.7	4.3	5.3	6.2
0.33	4.1	3.9	3.9	4.1
319.65	310.6	308.5	308.5	308.5
112.54	298.5	296.6	296.6	297.2
1332.19	12.1	11.9	11.9	11.3
2.83	8.8	7.8	7.8	10.7
329.36	3.3	1.3	2.1	8.8
		2.6	2.1	2.5
	308.5	308.5	308.5	308.5
	298.4	298.8	299.1	299.4
	10.1	9.7	9.4	9.1
	6.9	6.4	6.5	6.2
	3.2	3.3	3.9	2.9
	308.5	308.5	308.5	320.0
	299.8	302.8	304.3	305.7
	8.7	5.7	4.2	14.3
	5.5	1.8	0.5	11.0
	3.2	3.9	3.7	3.3
	320.0	320.0	320.0	320.0
	307.2	308.6	310.1	311.5
	12.8	11.4	9.9	8.5
	9.6	8.3	6.6	5.4
	3.2	3.1	3.8	3.1
	320.0	320.0		
	313.0	314.4		
	9.0	5.6		
	4.1	2.8		
	2.9	2.8		

+40 301.23 30

S.L. Redwood 301.23 30

Fire Hydrant Redwood between 40th & Central
304.22 00.20

Fire Hydrant Landis between 40th & Central

B.M. 343.09 N.W.B.P. 40th & Wightman
1.42
344.51

B.M. 303.07 N.W.B.P. 40th & Redwood
6.40
309.47

309.47

304.22

5.27

5.06

00.20

B.M. N.W.B.P. 40th & Wightman

343.09

1.45

344.54

11.56

332.98

1.32

334.30

3.73

330.57

B.M. N.W.B.P. 40th & Landis

334.30

326.1

8.20

7.50

.70

10-8-28.
J. C. Bliss

INDEXED

20

Curb & edge paving Grades on 10th
St. North of Johnson

281.0

281.0

281.2

282.8

282.7

282.7

282.7

282.8

283.6

2830

283.8

284.05

284.2

284

283.4

283.3

283.8

2830

283.1

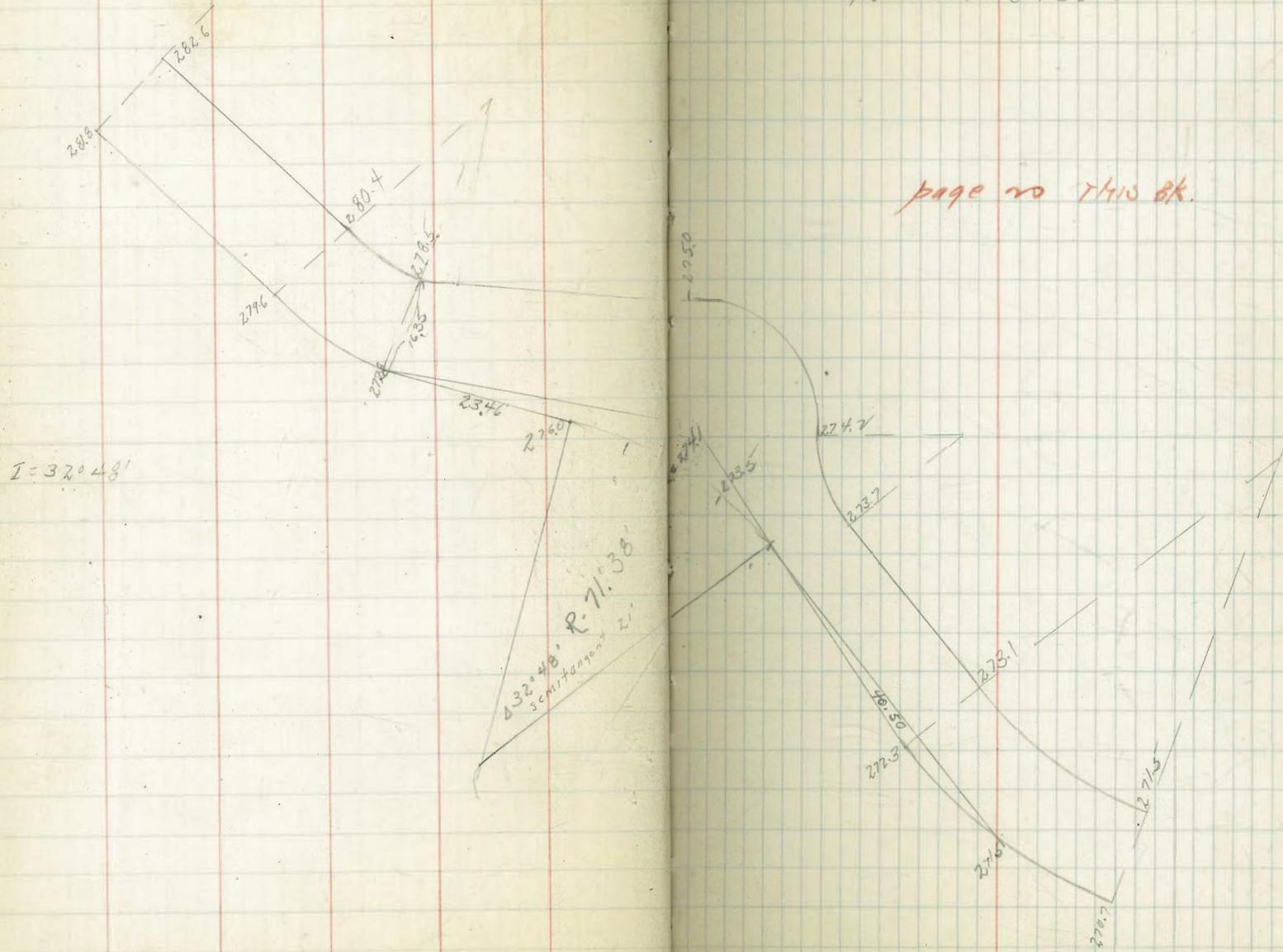
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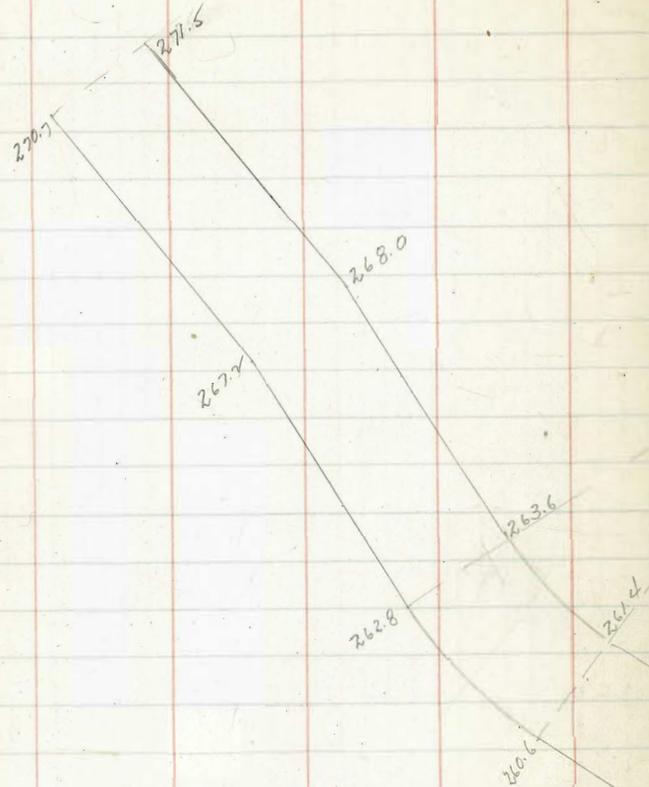
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281.8

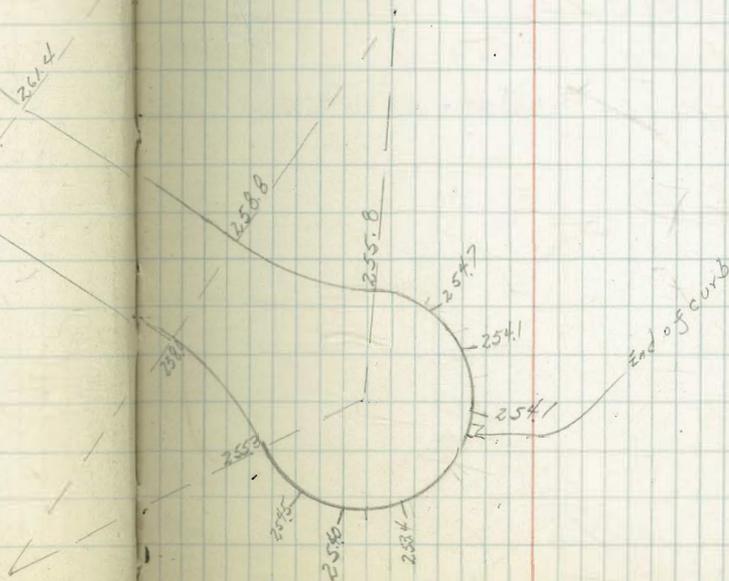
See F.B. 117N-74

page no THIS BK.





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10-70-29

J.C. Bliss

Curb grades - Menlo Ave
Dwight to Myrtle

Sta	EL.	W.L.
El. Dwight corner	338.0	337.50
+475	336.78	336.28
+95	335.54	335.04
1+42.5	334.32	333.82
1+90 B.K.	333.10	332.60 ✓
2+30 "	331.90	331.40 ✓
2+70	330.50	330.00
3+10 "	328.80	328.30
3+50 "	326.80	326.30
3+90 "	324.50	324.00
4+30 "	322.10	321.60
4+71.50	319.25	318.79
5+11.30	316.40	316.00 - Top catch Basin curb

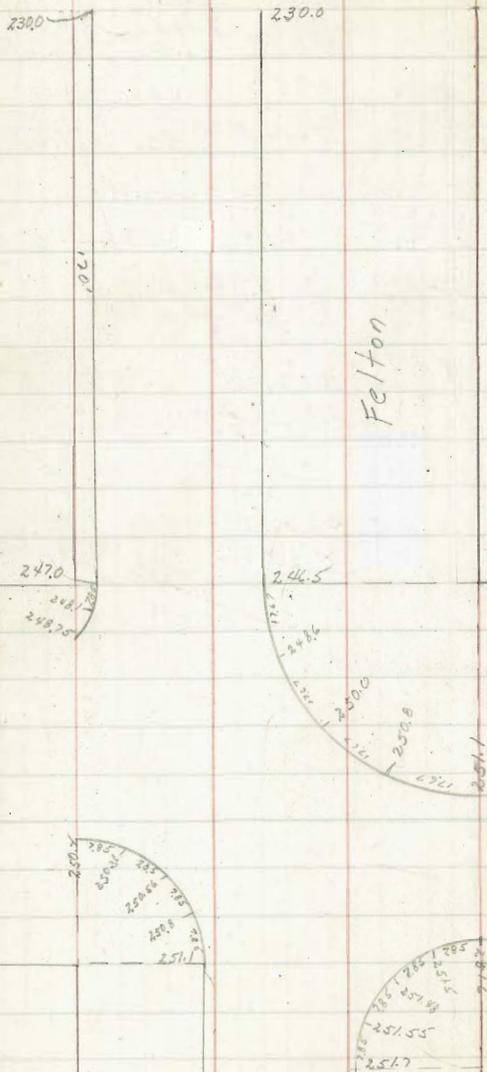
BM 324.00 - N.W. B.P. Chamoune & Dwight

EL.	INDEXED	W.L.
12.23		
336.23	341.69	341.69
-0.54		
TP 335.69	341.69	341.69
8.00	337.50	337.50
	3.19	7.09
TP 341.69		10.29
-11.19		
TP 330.50	341.69	341.69
+0.35	338.10	338.10
TP 330.85	8.59	9.79
-8.75		11.09
TP 322.10	341.69	341.69
3.48	330.85	330.85
	330.50	330.50
	11.19	2.05
TP 325.58		6.85
-3.48	330.85	330.85
TP 322.10	330.85	330.85
48.92	326.80	326.80
TP 331.02	322.10	322.10
-0.42	8.75	325.58
TP 330.60		316.40
+11.28		9.10
341.88		323.33
6.34		211.6
335.54		1.73
0.41		0.9
336.15		8.3
12.18		

BM 323.97 - N.W. B.P. Chamoune & Dwight

10-17-29
J.C. Blas
Robert
Roemer

Felton St. Curb Grades



BM 23430 - East 25' End of Tie 120' South Hawthorn 09 Felton

8.27
242.57
2.03
240.54
12.85
255.39
6.45
248.94

INDEXED

24

242.57	255.39	255.39
230.0	246.5	248.6
12.57	18.89	6.79
255.39	255.39	255.39
250.0	250.8	251.1
5.39	4.59	4.29
N	N.W. 4	N
255.39	255.39	255.39
251.7	251.48	251.6
3.69	3.91	3.79

N.E.		
N	E	E
255.39	255.39	255.39
251.1	250.56	250.4
4.29	4.83	5.19

S.E.

S	47.85	E.L. Felton
255.39	255.39	255.39
243.0	248.1	248.75
8.39	7.27	6.64

E.L.

255.39	255.39	255.39
251.4	251.8	251.7
3.99	3.59	3.69
255.39	255.39	255.39
251.3	250.9	249.8
4.09	4.49	5.59

255.39
248.8
6.59

W.L.

255.39	255.39	255.39	255.39	255.39
252.3	252.4	252.2	251.8	251.2
3.09	2.99	3.19	3.59	4.19

255.39	255.39
250.3	249.3
5.09	6.09

Hawthorn

Felton St Carb Grades

251.1

251.4

251.8

251.8

251.7

251.3

250.7

249.8

248.8

Felton

E.V.C.

251.7

252.3

252.4

252.2

251.9

251.7

250.3

249.3



248.91

EVC

249.3

Felton St. curb Grades

B.M. 243.44 - N.W. 25' Tie Felton x Ivy

6.74
250.18

S.W. Felton x Ivy

250.18	250.18	250.18	250.18	250.18
243.0	242.0	241.2	240.9	241.0
7.18	8.18	8.98	9.28	9.18

Angle Point East Side Felton South of Ivy

250.18
242.92
7.26

B.M. 243.44 - N.W. 25' Tie Felton x Ivy

3.30
246.74

246.74	245.74
240.47	239.8
6.27	6.94

246.74
243.0
3.74

243.44
1.60
245.04

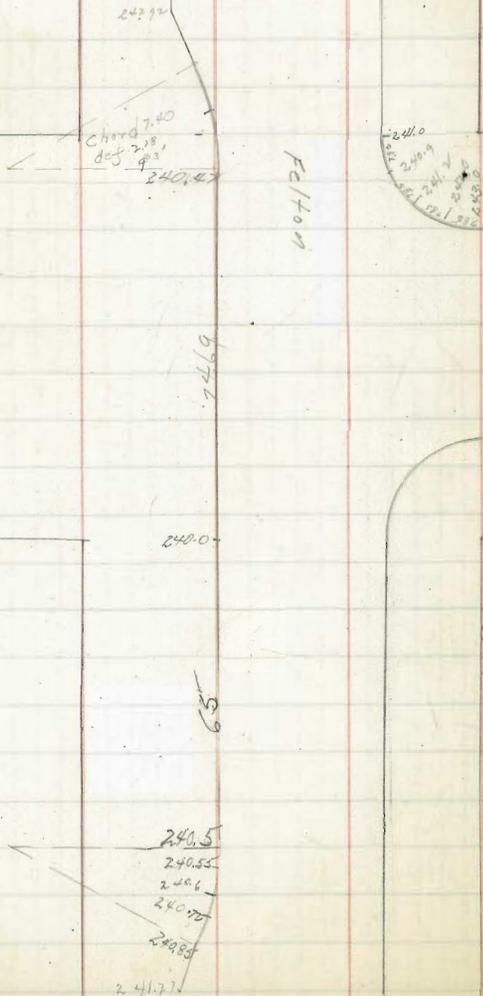
243.44
5.48
248.92

245.04	245.04
240.5	240.53
4.54	4.47

245.04	245.04
240.6	240.72
4.44	4.32

245.04
241.27
3.77

245.04
240.85
4.19

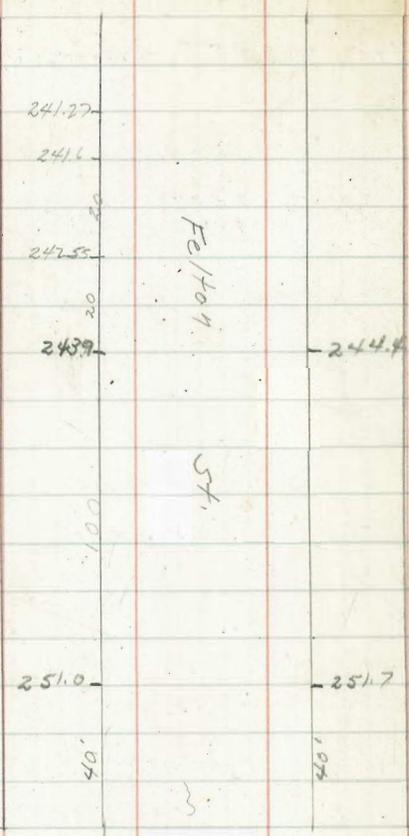


Ivy

Felton

St

Felton St. Curb Grades



B.M. 255.48
 $\frac{1.00}{\hline} \tau 256.48$

$\frac{256.48}{251.7} \hline 4.78v$

$\frac{256.48}{251.0} \hline 5.48$

$\frac{256.48}{243.9} \hline 12.58$

$\frac{256.48}{244.4} \hline 12.08$

$\frac{248.9v}{243.9} \hline 5.0v$

$\frac{248.9v}{242.55} \hline 6.37$

$\frac{248.9v}{241.6} \hline 7.3v$

$\frac{248.9v}{241.27} \hline 7.65$

Juniper

Street

10-23-29

Water stakes Alley Block 2

J.C. Bliss
Drebert
Romer

Blairs Highland Odd.

Sta	Grade	Ct
St. Redwood-0100	313.3	
+40-B.K	314.9	2.6
+85	314.57	2.6
1430	314.44	2.8
1475	314.32	2.7
2420-B.K	314.2	3.0
2165	313.6	3.1
3410	313.0	3.2
3455	312.4	2.7
4400-B.K	311.8	2.5
+529	311.6	3.0
5405.8	311.4	3.4
5458.8	311.2	3.0
N.H. Palm-100	309.8	

INDEXED

28

B.M. 319.95 - S.E. B.P. 29th + Redwood

3.75
 $\overline{+ 323.70}$
 5.47
 $\overline{+ 318.23}$
 1.95
 $\overline{+ 320.18}$
 - 7.01

$\overline{+ 313.17}$
 6.84
 320.01
 5.87
 $\overline{314.94}$ B.M. N.E. B.P.

22nd Palm

323.70 323.70
 $\overline{314.70}$ $\overline{314.60}$
 9.00 9.10
 $\overline{6.4}$ $\overline{6.50}$
 2.60 2.60

323.70 323.70
 $\overline{314.4}$ $\overline{314.3}$
 9.30 9.40
 $\overline{6.5}$ $\overline{6.7}$
 2.8 2.7

320.2 320.2
 $\overline{314.2}$ $\overline{313.6}$
 6.0 6.6
 3.0 3.5
 $\overline{3.0}$ $\overline{3.1}$

320.2 320.2
 $\overline{313.0}$ $\overline{312.4}$
 7.2 7.8
 $\overline{4.0}$ $\overline{5.1}$
 3.2 2.7

320.2 320.2 320.2
 $\overline{311.8}$ $\overline{311.6}$ $\overline{311.4}$
 8.4 8.6 8.8
 $\overline{5.9}$ $\overline{5.6}$ $\overline{5.4}$
 2.5 3.0 3.4

320.2
 $\overline{311.2}$
 9.0
 $\overline{6.0}$
 3.0

J.C. Bliss Sewer - North Shore Highlands.
10-24-29 Blocks 13-20-21-22

B.M. 118.94 - SE. Top Hydrant W. 160' + Berry!

+9.97
128.91
5.19
1123.72
+111.02
1134.74
-0.47
1134.27
12.91
1147.18
11.55
1135.63
0.05
1135.68
12.46
1123.22
8.53
1123.75
4.86
B.M. 118.89 - Starting

INDEXED

29

	Block 13	Cut
Flowline M.H. in Gresham		✓
E.L. Gresham = +100	112.96	7.95
+50	113.31	9.53
+100	113.66	9.88
+50	114.01	9.71
2+00	114.36	9.70
+50	114.71	9.74
3+00 - M.H. #3	115.06	9.75
+45	115.37	8.23
+90 = D.E.	115.69	7.42

Block 20

	Block 20	Cut
Flowline M.H. in Gresham		
E.L. Gresham	128.99	8.07
+50	129.34	10.07
+100	129.69	9.31
+150	130.04	8.68
2+10 = D.E.	130.46	8.18
M.H. #1	128.0	
+55	128.55	7.29
+10 = D.E.	129.1	8.92

128.91	128.91	128.91
115.69	115.37	115.06
13.22	13.54	13.85
5.80	5.31	4.10
7.42	8.23	9.75
128.91	128.91	128.91
114.71	114.36	114.01
14.20	14.33	14.90
4.46	4.85	5.19
9.74	9.70	9.71
134.74	134.74	134.74
113.66	113.31	112.96
21.08	21.43	21.78
11.20	11.90	13.83
9.88	9.53	7.95
147.18	147.18	147.18
128.99	129.34	129.69
18.19	17.84	17.99
10.12	2.77	8.18
8.67	10.07	9.31
147.18	147.18	147.18
130.04	130.46	129.1
17.14	16.72	16.08
8.76	8.54	9.16
8.68	8.18	8.92
147.18	147.18	
128.55	128.0	
18.63	19.18	
11.34	11.70	
7.29	7.48	

Block 20

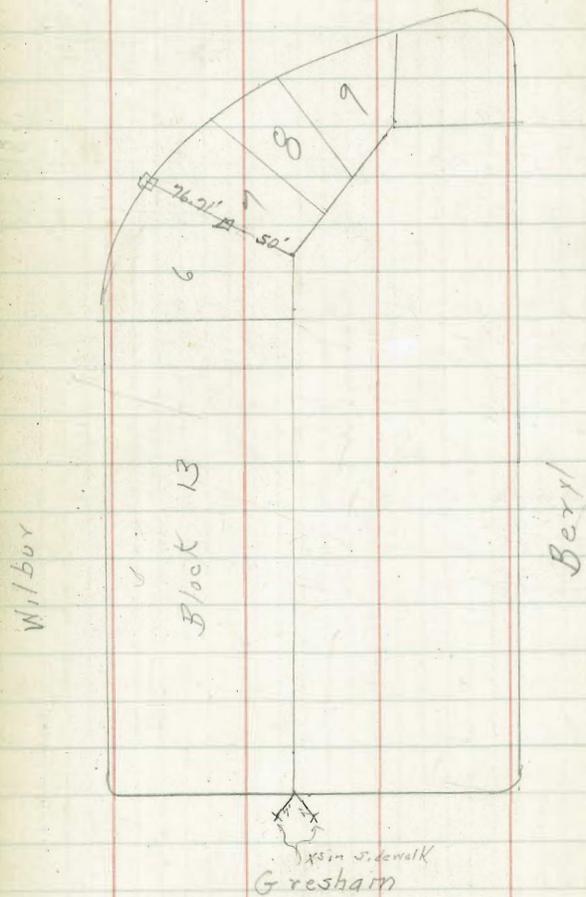
Flowline M.H. in Loring

S.L. Loring=0+00	136.76	9.91
+ 44.86	133.84	11.64
+ 89.72	130.92	6.56
1434.6 = M.H. #1 = 0+00	128.0	7.48
+ 51.14	127.02	7.01
1+02.28	126.04	9.59
1+ 53.42	125.06	9.25
2+ 04.56	124.08	8.05
2+ 55.7 = N.L. 10' Right of Hwy	123.1	✓
0+00 SL	122.95	✓
+ 40	122.59	7.96
+ 80	122.23	8.79
1+00	121.87	9.09
1+60 = M.H. #2 = 0+00	121.51	9.66
+ 55.15	118.04	8.97
1+ 103 = E.L. Wilbur	114.56	6.28
M.H. #2	125.0	6.17
+ 50	126.0	6.28
1+00	127.0	7.25
1+50	128.0	6.96
2+00 = D.E.	129.0	5.88

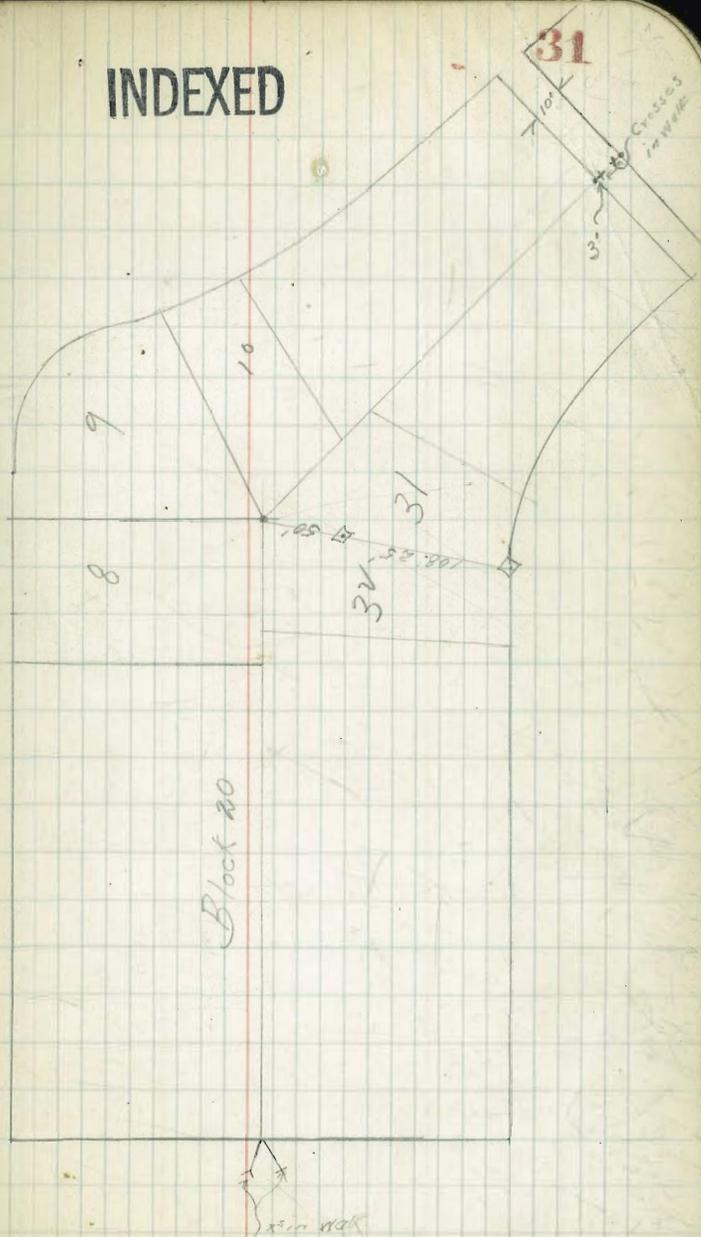
147.18	147.18	147.18	147.18	147.18
130.92	133.84	136.76	127.02	126.04
16.26	13.34	10.42	20.16	21.74
9.70	1.70	0.51	13.15	11.55
6.56	11.64	9.91	7.01	9.59
135.68	135.68	135.68	135.68	135.68
125.06	124.08	123.0	122.59	122.23
10.62	11.60	12.68	13.09	13.45
1.32	3.55		5.13	4.66
9.25	8.05		7.96	8.79
135.68	135.68	135.68	135.68	135.68
121.87	121.51	125.0	118.04	114.56
13.81	14.17	10.68	12.64	21.12
4.22	4.51	4.51	8.67	
9.09	9.66	6.17	8.97	
135.68	135.68	135.68	6.68	
126.0	127.0	128.0	0.80	
9.68	8.68	7.68	5.88	
3.40	1.43	0.72		
6.28	7.25	6.96		
123.75				
114.56				
9.19				
2.91				
6.28				

North Shore Highlands. Ties.

Hubs Not replaced because of
very loose condition of Ground



INDEXED



INDEXED

✓

Block 21

5 L Man with 40	146.9	8.94
447.4	149.32	7.71
+9.48	151.74	4.79
1422	154.16	5.61
1+89.6	156.58	4.26
2+37	159.0	3.14

Block 22

North Line Mearmouth	137.4	6.89
445.05	148.8	10.08
+10.1	160.2	6.77
1735.15	171.6	5.64
1750.4.1474	183.0	7.42
1830	183.0	7.42
+50	187.0	11.15
1+00	191.0	10.36
1+50	195.0	10.63
2+00	199.0	10.06
2+50	203.0	5.86

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12.97	161.33	161.33	161.33
148.60	148.8	157.4	146.9
0.28	12.53	23.93	14.73
10148.32	2.45	1.04	5.49
13.01	10.08	1.89	8.94
1161.33			
0.80			
1160.53			
12.96			
1173.49	161.33	161.33	161.33
0.11	149.32	151.74	154.16
10173.38	12.01	9.59	7.17
13.15	4.30	4.80	1.56
1186.54	7.71	4.79	5.61
-0.12			
1186.42			
13.13			
1199.55	173.49	173.49	173.49
40.01	156.58	159.0	160.2
11199.56	16.91	14.49	13.29
13.13	12.65	11.35	6.52
1212.69	4.26	3.14	6.77
0.53			
212.16	186.54	199.55	199.55
12.62	171.6	183.0	187.0
1224.78	14.94	16.55	12.55
1.04	9.30	9.13	1.46
10223.74	5.64	7.42	11.15
12.72	212.69	212.69	212.69
236.46	191.0	195.0	199.0
0.34	21.69	17.69	13.69
236.12	11.33	7.06	3.63
8.49	10.36	10.63	10.06
1244.61			
40.2			
1240.59			
212.69			
203.0			
9.69			
237.71	South Top Hydrant	3.83	
	East end Pumping	5.86	
	on Loring St.		

11-5-29 Construction Alley Block 8 Watson &
 J. C. Bliss
 Courier Bidders Add. - varying with ground 2187 at
 Barber 31st to 1873 at 30th

Sta	N.L.	Cut	S.L.	Cut
EL. 30th 20400	288.5		288.3	
+40 1889	288.6	1.06	288.4	0.55
+80 1905	288.71	2.53	288.51	0.07
+100 1921	288.81	0.35	288.61	0.04
+60 1937	288.91	1.07	288.71	0.16
2400 1953	289.02	0.16	288.82	F0.54
+40 1969	289.12	1.00	288.92	F1.82
+80 1985	289.23	1.00	289.03	0.0
3420 2001	289.33	0.06	289.13	F1.49
+60 2017	289.43	0.29	289.23	F0.53
4400 2033	289.53	0.23	289.33	F0.26
+40 B.K. 2049	289.64	0.65	289.44	F0.19
+80 2064	289.85	0.65	289.23	0.15
5410 2074	290.01	0.71	289.95	0.12
5440=26 2085	290.16	0.97	290.17	0.39
5467.63 2096	290.32	0.93	290.37	0.43
5495.26 = W. 631st	290.48		290.55	

B.M. 289.71 - S.E.B.P. 30th + Kalmia

29205 S.E. 3rd + Kalmia

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TP	293.43	4.46	5.2	N.C.
TP 288.97	293.98	288.4	293.98	293.98
501	5.58	5.38	288.6	288.71
TP 293.98	5.88	5.3	5.38	5.27
5.88	5.55	5.33	4.32	2.74
TP 288.10	5.13	293.98	1.06	2.53
5.13	293.98	288.61	293.98	293.98
TP 293.23	5.80	5.47	288.91	289.02
5.80	5.40	5.37	5.07	4.96
287.43	5.007	5.33	4.00	4.80
7.63	293.98	293.23	1.07	0.16
TP 295.06	4.56	288.71	293.23	295.06
4.56	5.27	288.82	289.23	289.33
TP 290.50	5.66	5.11	4.00	5.73
5.66	5.16	4.95	4.00	5.67
TP 296.16	4.17	293.23	0.54	0.06
4.17	288.92	4.31	295.06	295.06
291.99	4.31	4.82	289.43	289.53
	2.13.23	295.06	5.63	5.42
	289.03	289.13	5.34	5.30
	4.28	5.93	0.29	0.23
		7.42		0.65
		1.49		
	295.06	295.06	295.06	296.16
	289.73	289.33	289.73	289.85
	5.83	5.73	5.21	6.31
	6.36	5.99		6.15
	0.53	F0.26		5.44
	295.06	295.06		0.71
	289.44	289.23	296.16	296.16
	5.62	5.33	290.18	290.32
	5.81	5.18	5.98	5.84
	10.19	0.15	5.01	4.91
			0.93	3.68
296.16	296.16	296.16		
289.95	290.17	290.37		
6.21	5.99	5.79		
6.09	5.60	5.36		
0.12	0.39	0.43		
296.16				
290.55				
5.61				

11-6-29

Construction Alley Block 1: Normal

J. C. Bliss
Louver
Saper

Heights - 15' wide

Sta	N.L.	Cut	S.L.	
N.L. 34 1/2 = 0+00	395.29		395.35	
+40	395.59	0.79	395.90	C0.60
+80	395.89	0.64	396.05	F0.42
+120	396.2	C0.06	396.4	F0.08
+140	396.3	F0.14	396.5	Grade
+160	395.9	C0.14	396.1	0.96
+180	395.3	0.38	395.4	0.88
EL. Mt View	395.0		394.7	

B. 7394.96 N.W. 8.D. 34 1/2 x Mt View

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Sta	N.L.	Cut	S.L.	
	395.29		395.35	
+40	395.59	0.79	395.90	C0.60
+80	395.89	0.64	396.05	F0.42
+120	396.2	C0.06	396.4	F0.08
+140	396.3	F0.14	396.5	Grade
+160	395.9	C0.14	396.1	0.96
+180	395.3	0.38	395.4	0.88
EL. Mt View	395.0		394.7	

400.23	400.23	400.23	400.23
395.29	395.89	396.2	396.4
5.24	4.34	4.03	3.83
39499	3.75	3.97	3.91
	3.75	0.79	0.00
	396.74	400.23	400.23
	5.28	395.89	396.2
	393.468.m	4.34	4.03
	N.E.D.P.	3.70	3.91
		C0.64	F0.08
		C0.06	0.00
		400.23	400.23
		396.3	395.9
		3.93	4.35
		4.07	4.19
		F0.14	0.14
		400.23	400.23
		395.3	394.7
		4.93	5.53
		4.55	
		C0.38	
		400.23	400.23
		395.0	394.5
		5.23	4.73

11-12-29 Alley Block 138. Manassas Sculler
 C. Bliss. 20' wide
 Prouey

Sta	Grade	Cut		
M.H.#1	5.71	8.00		
Sewer later #1	13.17	8.85		
" " 2	14.97	9.13		
Sta	S.L.	N.L.		
116 Sigsbee 2000	25.4	25.4		
+20 B.K.	26.1	26.1	1.37	
+40 B.K.	26.2	26.3	0.80	
L 84	25.88	25.96	0.14	
+28	25.56	25.62	1.00	
+72	25.24	25.28	1.00	
2-16	24.92	24.94	1.00	
2160 B.K.	24.6	24.6	0.32	
+80	24.1	24.1	0.13	
3+00	23.1	23.1	0.88	
+20	21.4	21.4	0.96	
+40	19.0	19.0	1.43	
3+80	13.6	13.6	1.00	
L 90	12.4	12.4	1.50	
4+00	11.5	11.5	1.50	
+10	10.9	10.9	1.00	
+20	10.6	10.65	2.00	
L 65	9.73	9.84	0.59	
+10	8.85	9.02	0.00	
+55	7.98	8.21	0.46	
6+00-E.L. 1645	7.11	7.4		

S.M. 380 N.W. 8.P. 16th & National

8.68
 12.48
 -0.26
 12.22
 12.80
 +25.02
 0.92
 122.410

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25.02
 11.31
 13.71
 36
 15.71
 11.38
 21.98
 25.02
 25.02
 25.02
 5.71
 13.17
 14.97
 19.31
 11.31
 8.00
 1.185
 3.00
 8.85
 10.06
 0.92
 9.13

S.M. 2835 Sigsbee Logan N.W. 9.

244
 T 30.79
 5.73
 25.06
 3.15
 28.21
 13.07
 213.14
 0.06
 15.20
 7.70
 107.50
 3.22
 110.72
 6.90
 S.M. 3.82
 6.11
 10.11
 3.61
 28.21
 19.0
 9.21
 13.6
 5.81
 3.32
 15.20
 1.07
 4.30
 4.14
 0.16

S.L. N.L.
 30.79 30.79 4.69 4.49 30.79 30.79
 26.1 26.2 3.32 3.68 25.96 25.62
 4.69 4.59 1.37 4.83 5.17
 3.69 3.59 1.00 4.69 4.17
 1.00 1.00 1.00 0.14 1.00
 30.79 30.79 30.79 28.21 28.21 41
 25.88 25.56 25.28 24.94 24.6 398
 4.92 5.23 5.51 3.27 3.61 3.13
 5.00 4.23 4.51 2.22 3.29
 10.08 1.00 1.00 1.00 0.32
 30.79 28.21 28.21 5.11 6.81 9.21
 25.24 24.92 14.97 4.80 5.86 7.78
 3.53 3.29 4.32 0.31 0.96 1.43
 4.55 3.61 4.08
 1.00 10.32 9.16
 3.61 28.21 1.60 2.50 3.70 4.30 4.60
 3.60 24.1 0.60 1.30 2.20 3.30 2.60
 1.00 4.11 1.00 1.50 1.50 1.00 2.00
 4.11 0.00
 15.20 15.20 15.20 15.20
 9.84 9.02 7.98 8.21
 5.36 6.18 7.22 6.99
 5.95 6.18 6.22 7.15
 10.59 0.00 1.00 10.46
 0.88 0.93
 28.21 15.20 15.20 15.20
 19.0 13.6 12.4 11.5
 9.21 1.60 3.80 3.70 15.20
 5.81 7.40 2.30 1.70 7.4
 3.32 2.00 2.50 2.00 7.80
 15.20 15.20 15.20 15.20
 1.07 1.06 9.73 8.85
 4.30 4.60 5.47 6.35
 4.14 3.12 4.47 4.35
 0.16 1.50 1.00 2.00

12.4.29 Water stakes 65th St.
J.C. Bliss 4.8" offset to East

Sto	Grade	Cut
5L Sullivan +100	382.2	3.9
447	380.0	3.5
494	377.8	3.7
1441	375.5	4.4
1488	373.2	5.3
2435	371.0	6.4
2482	368.7	7.5
3+29	366.4	8.4
3+76	364.1	8.3
4+23 Brk	361.8	6.9
4+70	360.2	3.7
5+10	359.2	2.0
5+50	358.8	1.6
5+90	359.0	1.9
6+30	360.0	2.0
6+70	361.4	2.0
7+10	363.6	2.2
7+50 Brk	366.3	2.5
7+90	369.3	2.8
8+30	372.3	2.9
8+70	375.3	2.7
9+10	378.3	2.8
9+50	381.3	3.1
9+90	384.3	3.6

B.M. 38787 Hub & Sullivan + 65th

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$\begin{array}{r} 388.08 \\ 12.98 \\ \hline 375.10 \\ 0.23 \\ \hline 375.33 \\ -0.15 \\ \hline 375.18 \\ 13.18 \\ \hline 388.36 \\ -6.52 \\ \hline 381.84 \\ 12.85 \\ \hline 400.69 \\ -0.35 \\ \hline 400.34 \\ 9.71 \\ \hline 410.05 \\ 0.50 \\ \hline 409.55 \end{array}$	$\begin{array}{r} 388.1 \\ 382.2 \\ \hline 5.9 \\ 2.0 \\ \hline 3.9 \end{array}$	$\begin{array}{r} 388.1 \\ 380.0 \\ \hline 8.1 \\ 4.6 \\ \hline 3.5 \end{array}$	$\begin{array}{r} 388.1 \\ 377.8 \\ \hline 10.3 \\ 6.6 \\ \hline 3.7 \end{array}$
$\begin{array}{r} 388.1 \\ 375.5 \\ \hline 12.6 \\ 8.2 \\ \hline 4.4 \end{array}$	$\begin{array}{r} 388.1 \\ 375.5 \\ \hline 12.6 \\ 8.2 \\ \hline 4.4 \end{array}$	$\begin{array}{r} 388.1 \\ 371.0 \\ \hline 17.1 \\ 10.7 \\ \hline 6.4 \end{array}$	$\begin{array}{r} 388.1 \\ 368.7 \\ \hline 19.4 \\ 11.9 \\ \hline 7.5 \end{array}$
$\begin{array}{r} 400.34 \\ 9.71 \\ \hline 410.05 \\ 0.50 \\ \hline 409.55 \end{array}$	$\begin{array}{r} 388.1 \\ 366.4 \\ \hline 21.7 \\ 13.3 \\ \hline 8.4 \end{array}$	$\begin{array}{r} 375.3 \\ 364.1 \\ \hline 11.2 \\ 13.5 \\ \hline 6.6 \end{array}$	$\begin{array}{r} 375.3 \\ 360.2 \\ \hline 15.1 \\ 11.4 \\ \hline 3.7 \end{array}$
$\begin{array}{r} 375.3 \\ 359.2 \\ \hline 16.1 \\ 14.1 \\ \hline 2.0 \end{array}$	$\begin{array}{r} 375.3 \\ 359.2 \\ \hline 16.1 \\ 14.1 \\ \hline 2.0 \end{array}$	$\begin{array}{r} 375.3 \\ 359.0 \\ \hline 16.3 \\ 14.4 \\ \hline 1.9 \end{array}$	$\begin{array}{r} 375.3 \\ 360.0 \\ \hline 15.3 \\ 1.33 \\ \hline 2.0 \end{array}$
$\begin{array}{r} 375.3 \\ 361.4 \\ \hline 13.9 \\ 11.9 \\ \hline 2.0 \end{array}$	$\begin{array}{r} 375.3 \\ 361.4 \\ \hline 13.9 \\ 11.9 \\ \hline 2.0 \end{array}$	$\begin{array}{r} 375.3 \\ 366.3 \\ \hline 9.0 \\ 6.5 \\ \hline 2.5 \end{array}$	$\begin{array}{r} 375.3 \\ 369.3 \\ \hline 6.0 \\ 3.2 \\ \hline 2.8 \end{array}$
$\begin{array}{r} 375.3 \\ 372.3 \\ \hline 3.0 \\ 0.1 \\ \hline 2.9 \end{array}$	$\begin{array}{r} 375.3 \\ 372.3 \\ \hline 3.0 \\ 0.1 \\ \hline 2.9 \end{array}$	$\begin{array}{r} 375.3 \\ 388.4 \\ \hline 13.1 \\ 10.4 \\ \hline 2.7 \end{array}$	$\begin{array}{r} 375.3 \\ 388.4 \\ \hline 13.1 \\ 10.1 \\ \hline 2.8 \end{array}$
$\begin{array}{r} 388.4 \\ 384.3 \\ \hline 4.1 \\ 0.5 \\ \hline 3.6 \end{array}$	$\begin{array}{r} 388.4 \\ 384.3 \\ \hline 4.1 \\ 0.5 \\ \hline 3.6 \end{array}$		

S.M. #665 Mt Eleanor

10+30	387.3	3.6
10+82 - Bx	391.2	3.2
11+22	395.45	7.3
11+62	394.35	11.9
12+02	393.7	12.0
12+42	391.7	9.2
12+86	Rated	5.1

52 Imperial = 0+00	218.4	-
+45.9	225.8	3.4
+91.8	2432.0	5.1
+37.7	235.0	6.7
+77.7	245.0	6.1
+17.7	255.0	7.3
+57.7	265.0	8.7
+97.7	275.0	8.0
+37.2	285.0	7.3
+77.7	295.0	7.4
+90.7	299.8	6.9
+410.7	304.3	6.7
+430.7	308.2	7.2
+45.0	311.8	9.2
+490	317.8	
5+86 = Nil. Modvane	322.5	

400.70	400.7	410.0	410.0	410.0
387.3	391.2	393.4	394.3	393.7
13.4	9.5	16.6	15.7	16.3
9.8	6.3	9.3	3.8	4.3
3.6	3.2	7.3	11.9	12.0

410.0
391.7
18.3
9.1
9.2

B.M. West end returns

222.50	312.74	2349	247.7	2477
13.14	00.00	2258	230.4	235.0
+234.69	312.74	9.1	17.3	12.7
9.13	12.68	5.7	12.2	6.0
234.56	325.42	3.4	5.1	6.7
13.15	11.0	280.5	228.6	286.7
+247.71	324.32	245.0	255.0	265.9
0.24	7.44	15.5	18.6	21.7
+247.49	331.76	9.4	11.3	13.0
13.07	1.12	6.1	7.3	8.7
260.54	330.64	286.7	299.7	312.7
0.06	275.0	275.0	285.0	295.0
26.48	280.54	11.7	14.7	17.7
13.11	283.59	3.6	7.4	10.3
0.05	283.54	8.0	7.4	7.4
273.54	286.71	312.7	312.7	325.4
+13.17	286.71	299.8	304.3	308.2
286.71	286.37	12.9	8.4	17.2
0.34	286.37	60.7	1.7	10.0
286.37	286.37	6.9	6.7	7.2
13.26	299.67	325.4	317.8	
299.67	299.67	317.8	317.8	
0.00	299.67	15.6		
299.67	312.74	14.4		
13.07		9.2		
312.74				

Sta	Grade	Cut						
N.L. Madrone	322.5	1.8	325.4	325.4	325.4	312.7	312.7	
+40	317.8	3.2	317.8	322.5	311.8	308.2	304.3	
+80	311.8	3.6	76	2.9	13.6	4.5	8.4	
1+00	308.2	2.8	44	1.1	10.0	1.7	6.0	
1+20	304.3	2.4	3.2	1.8	36	2.8	2.4	
1+40	299.8	2.6	8387.87	-2 Sullivan + 65 th	312.7	299.7	286.7	
1+80	289.6	2.7	8.23		299.8	289.6	279.6	
2+20	279.6	4.5	396.60	359.61	12.9	1.01	8.1	
2+60	269.6	4.1	12.64	12.79	10.3	7.4	3.6	
3+00	259.6	2.7	383.96	346.82	2.6	2.7	4.5	
3+40	249.6	1.5	0.19	0.36				
3+80	239.6	2.1	384.15	347.18	284.7	273.6	260.5	
4+459	232.0	3.5	-12.26	12.27	269.6	259.6	249.6	
			371.89	334.91	17.1	14.0	10.9	
			0.23	0.61	13.0	11.3	9.4	
			372.12	335.52	2.1	2.7	1.5	
			12.56	4.87				
			359.56	330.65	247.7	247.7		
			0.05	Madrone + 65 th	239.6	232.0		
			359.61		8.1	7.7		
					6.0	12.2		
					2.1	3.5		
N.L. Madrone	322.5							
+50	322.25	0.2	396.60	396.6	396.6	384.1	384.1	
1+00	332.0	0.9	386.7	384.6	382.5	379.6	374.6	
+50	345.0	0.7	9.9	12.0	14.1	4.5	9.5	
2+00	358.0	1.6	6.7	9.2	12.6	4.0	10.0	
+40	367.5	0.8	3.2	2.8	1.5	0.5	40.5	
+80	374.6	10.5						
3+20	379.6	0.5	372.1	372.1	347.2	335.5	335.5	
3+60	382.5	1.5	367.5	358.0	345.0	332.0	327.2	
4+10	384.6	2.8	4.6	7.7	2.2	3.5	8.3	
4+60	386.7	3.2	3.8	12.5	1.5	2.6	8.1	
			60.8	7.6	0.7	0.9	0.2	

5700	3880	5.3
740	3887	7.0
480	388.5	7.3
6720	387.7	7.0
6760	386.2	6.1
7700	384.2	4.6
7740 = St. Sullivan	382.2	

396.6	396.6	396.6	396.6	396.6
384.2	386.2	387.7	388.5	388.2
12.4	10.4	8.9	8.1	7.9
7.8	4.3	1.9	0.8	0.9
4.6	6.1	7.0	7.3	7.0
396.6				
388.0				
8.6				
3.3				
5.3				

Pav. Grades
47th St.
Dwight to Landis
W.O. 31139

1740

334.11
10.60 ✓
Moore
Boyer
Stannan 1-7-49
Bunch

GUT
Eck

1/4
4.24
4.57
33
4.90

2
~~34.65~~
4.44
4.37
33
4.70

41
GUT
W.C.B.

4.48
1.33
33
4.66

34.25
4.36

1715

334.12
10.37 ✓

34.25
1.70

4.58
1.23
33
4.56

34.75
4.06
33
4.39

4.78
1.03
33
4.36

34.65
0.30

INDEXED
WK
JAN 13 1949

0490 B.V.C.

334.72
9.94 ✓

34.65
6.20

4.93
3.88
33
4.11

35.05
3.76
33
4.09

5.03
3.78
33
4.11

34.85
6.10

B.M. 335.89 Chicago
5th Landis
8.82 47%
341.71 ✓

0460

35.10
5.88

35.07
5.88

0420

35.55
5.40

35.28
5.67

0400 = 52 Landis

335.72
8.99 ✓

336.00
4.75

6.10
7.71
33
3.08

36.05
7.76
33
3.09

585
1.15
2.96
33
3.29

335.50
F.45

T.P. 506 340.95 1.87
Sw 7 C.T. 2.82 342.76

335.89
339.94

Chisel H
E SW. Ret.
47th &
Landis

B.M.

292 338.81

335.89

Landis + Roselawn
F.B. 1715-32

4770

4740

T.P. NW
B.P.

508

345.17

5.67

340.09

340.09

FB. 1715

4710 EYC

40.94
5.72

40.80
4.96

41.11 41.27
4.12 3.96
33 33
4.45 4.29

41.29
3.94
33
4.27

41.15
4.61

3785

40.89
3.82

40.72
5.04

41.05 41.22
4.18 4.01
33 33
4.51 4.34

41.25
3.98
33
4.31

41.12
4.64

3766

40.75
3.96

40.55
5.21

40.90 41.08
4.33 4.15
32 33
4.66 4.48

41.13
4.10
33
4.43

41.00
4.76

3735

40.32
4.39

40.10
5.66

40.45
4.78
33
5.11

40.65
4.58
33
4.91

40.70
4.53
33
4.86

40.60
5.16

T.P.

522

345.76

0.41

340.54

340.95

344.717

E. 97

1/4

2

1/4

43

W 97

40.55
4.72

40.70
4.87

40.64
4.55

40.93
4.25 ✓

345.23

H.I. for staking

SubGrade

E 97 1/2 1/2 1/2 N 97

6 + 27.4 = NL Dwight

339.62
5.09 47.00/100

339.55 9.85 39.95 9.8x 339.54
5.62 5.38 5.28 5.39 5.63 04

6 + 08.7

39.66
5.51

39.68
5.49

5 + 90

39.76
5.41

39.82
5.35

5 + 60

39.9x
5.23

40.04
5.13

5 + 30

40.11
5.06

40.26
4.91

5 + 00

40.28
4.99

40.48
4.69

344.71

345.23

Moore 1-4-49. W.D. 60204
 Beag
 Sheehan Sewer Const.
 Bunche Santa Rita Pl. by City

1400 - 4.00
 11.32
 7.95
 C 3.37

INDEXED

WK

JAN 13 1949

175 - 4.25

11.57
 8.09
 C 3.48

T.P. on stub 846 7.32 499 - 1.14

1504 - 4.50
 8.35
 4.99
 C 3.36

0725 - 4.75
 8.60
 5.04
 C 3.56

0400 M.H. #2 - 5.00
 8.86
 4.94
 C 3.91

0-275 - 4.75
 8.60
 5.14
 C 3.46

0-55 D.E. - 4.50
 8.35
 5.13
 C 3.22

NEBP 5.58 3.85 - 1.73
 MISSION + Pac. B. Dr.

45

Sea Wall

3410 M.H. #1

Strandway



alley

15 15

M.H. #2 0400 81 Ex. M.H.

DE. 0-55

MISSION BLVD.

3 + 10 M.H. 41

$$\begin{array}{r} F.L. \\ -1.90 \\ \underline{9.22} \\ 2.39 \\ C 6.83 \end{array}$$

3

$$\begin{array}{r} -2.00 \\ \underline{9.32} \\ 2.48 \\ C 6.84 \end{array}$$

+ 75

$$\begin{array}{r} -2.25 \\ \underline{9.57} \\ 2.78 \\ C 6.79 \end{array}$$

+ 50

$$\begin{array}{r} -2.50 \\ \underline{9.82} \\ 3.51 \\ C 6.31 \end{array}$$

+ 25

$$\begin{array}{r} -2.75 \\ \underline{10.07} \\ 4.45 \\ C 5.62 \end{array}$$

2

$$\begin{array}{r} -3.00 \\ \underline{10.32} \\ 5.53 \\ C 4.79 \end{array}$$

+ 75

$$\begin{array}{r} -3.25 \\ \underline{10.57} \\ 6.50 \\ C 4.07 \end{array}$$

+ 50

$$\begin{array}{r} -3.50 \\ \underline{10.82} \\ 7.20 \\ C 3.62 \end{array}$$

+ 25

$$\begin{array}{r} -3.75 \\ \underline{11.07} \\ 7.65 \\ C 3.42 \end{array}$$
737

check to start BIM.

v. 61

-1.72

-1.73

0.01

T.P 386 289

477

-0.97

0 + 81 = EX. M.H.

-5.84

9.64

C 4.67

PLAN

-6.00

-1.6 High

0 + 54

-5.56

9.364.94

C 4.42

0 + 27

-5.28

9.084.68

C 4.40

0 + 00 M.H. 22 v nly

-5.00

T.P
P. 45

x. 94

3.80

-1.14

Santa Rita Pl.
Sewer lat-
+ #1

47

T.P. ^P 45 7.68 6.54 - 1.14
1.14

1

- 3.90
10.44
7.40
C 3.04

2

- 4.30
10.84
7.52
C 3.32

3

- 3.80
10.34
7.47
C 2.87

4

- 2.52
9.06
4.26
C 4.80

5

- 0.04
6.58
1.26
C 5.30

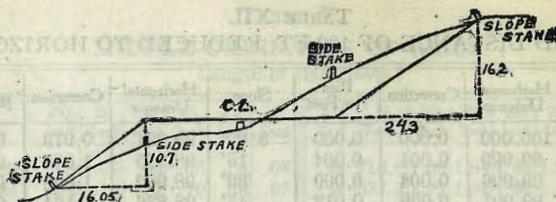
74

DIRECTIONS FOR USE OF TABLES

Distance of slope from side or shoulder stake for any width of slope 1/2 to 1. If ground is nearly level cut or fill at side stake is located by the only method in left column and top row.

IMPROVED TABLES AND INFORMATION

To find Tangent and External for curve of any other degree, divide by degree of curve and add connection found in column. Degree of curve with a given tangent may be found by dividing tangent (or external) opposite T by given tangent (or external). The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.



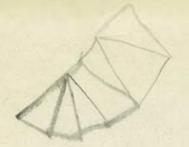
DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

SLOPE 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0 30	0 45	0 60	0 75	0 90	1 05	1 20	1 35	0
1	1 50	1 05	1 20	1 35	1 50	1 65	1 80	1 95	2 10	2 25	1
2	3 00	3 15	3 30	3 45	3 60	3 75	3 90	4 05	4 20	4 35	2
3	4 50	4 65	4 80	4 95	5 10	5 25	5 40	5 55	5 70	5 85	3
4	6 00	6 15	6 30	6 45	6 60	6 75	6 90	7 05	7 20	7 35	4
5	7 50	7 65	7 80	7 95	8 10	8 25	8 40	8 55	8 70	8 85	5
6	9 00	9 15	9 30	9 45	9 60	9 75	9 90	10 05	10 20	10 35	6
7	10 50	10 65	10 80	10 95	11 10	11 25	11 40	11 55	11 70	11 85	7
8	12 00	12 15	12 30	12 45	12 60	12 75	12 90	13 05	13 20	13 35	8
9	13 50	13 65	13 80	13 95	14 10	14 25	14 40	14 55	14 70	14 85	9
10	15 00	15 15	15 30	15 45	15 60	15 75	15 90	16 05	16 20	16 35	10
11	16 50	16 65	16 80	16 95	17 10	17 25	17 40	17 55	17 70	17 85	11
12	18 00	18 15	18 30	18 45	18 60	18 75	18 90	19 05	19 20	19 35	12
13	19 50	19 65	19 80	19 95	20 10	20 25	20 40	20 55	20 70	20 85	13
14	21 00	21 15	21 30	21 45	21 60	21 75	21 90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23 10	23 25	23 40	23 55	23 70	23 85	15
16	24 00	24 15	24 30	24 45	24 60	24 75	24 90	25 05	25 20	25 35	16
17	25 50	25 65	25 80	25 95	26 10	26 25	26 40	26 55	26 70	26 85	17
18	27 00	27 15	27 30	27 45	27 60	27 75	27 90	28 05	28 20	28 35	18
19	28 50	28 65	28 80	28 95	29 10	29 25	29 40	29 55	29 70	29 85	19
20	30 00	30 15	30 30	30 45	30 60	30 75	30 90	31 05	31 20	31 35	20
21	31 50	31 65	31 80	31 95	32 10	32 25	32 40	32 55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33 60	33 75	33 90	34 05	34 20	34 35	22
23	34 50	34 65	34 80	34 95	35 10	35 25	35 40	35 55	35 70	35 85	23
24	36 00	36 15	36 30	36 45	36 60	36 75	36 90	37 05	37 20	37 35	24
25	37 50	37 65	37 80	37 95	38 10	38 25	38 40	38 55	38 70	38 85	25
26	39 00	39 15	39 30	39 45	39 60	39 75	39 90	40 05	40 20	40 35	26
27	40 50	40 65	40 80	40 95	41 10	41 25	41 40	41 55	41 70	41 85	27
28	42 00	42 15	42 30	42 45	42 60	42 75	42 90	43 05	43 20	43 35	28
29	43 50	43 65	43 80	43 95	44 10	44 25	44 40	44 55	44 70	44 85	29
30	45 00	45 15	45 30	45 45	45 60	45 75	45 90	46 05	46 20	46 35	30
31	46 50	46 65	46 80	46 95	47 10	47 25	47 40	47 55	47 70	47 85	31
32	48 00	48 15	48 30	48 45	48 60	48 75	48 90	49 05	49 20	49 35	32
33	49 50	49 65	49 80	49 95	50 10	50 25	50 40	50 55	50 70	50 85	33
34	51 00	51 15	51 30	51 45	51 60	51 75	51 90	52 05	52 20	52 35	34
35	52 50	52 65	52 80	52 95	53 10	53 25	53 40	53 55	53 70	53 85	35
36	54 00	54 15	54 30	54 45	54 60	54 75	54 90	55 05	55 20	55 35	36
37	55 50	55 65	55 80	55 95	56 10	56 25	56 40	56 55	56 70	56 85	37
38	57 00	57 15	57 30	57 45	57 60	57 75	57 90	58 05	58 20	58 35	38
39	58 50	58 65	58 80	58 95	59 10	59 25	59 40	59 55	59 70	59 85	39
40	60 00	60 15	60 30	60 45	60 60	60 75	60 90	61 05	61 20	61 35	40
41	61 50	61 65	61 80	61 95	62 10	62 25	62 40	62 55	62 70	62 85	41
42	63 00	63 15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64 35	42
43	64 50	64 65	64 80	64 95	65 10	65 25	65 40	65 55	65 70	65 85	43
44	66 00	66 15	66 30	66 45	66 60	66 75	66 90	67 05	67 20	67 35	44
45	67 50	67 65	67 80	67 95	68 10	68 25	68 40	68 55	68 70	68 85	45
46	69 00	69 15	69 30	69 45	69 60	69 75	69 90	70 05	70 20	70 35	46
47	70 50	70 65	70 80	70 95	71 10	71 25	71 40	71 55	71 70	71 85	47
48	72 00	72 15	72 30	72 45	72 60	72 75	72 90	73 05	73 20	73 35	48
49	73 50	73 65	73 80	73 95	74 10	74 25	74 40	74 55	74 70	74 85	49
50	75 00	75 15	75 30	75 45	75 60	75 75	75 90	76 05	76 20	76 35	50

Computed by L. Leland Locke.

478 474 449
 463 448 434 419 404



521.525 550

248 8
 240.5
 8.3

324.00
 336.15
 324.00
 121.5

140 8.30
 7.00
 1.300

26.3
 24.6
 57.74

1833
 16
 1889
 16
 1905
 16
 1921
 16
 1937

0.59
 41
 0.59
 236
 2.419
 240.5
 2.42
 242.92
 590
 54

11.38

999
 999
 999
 999

